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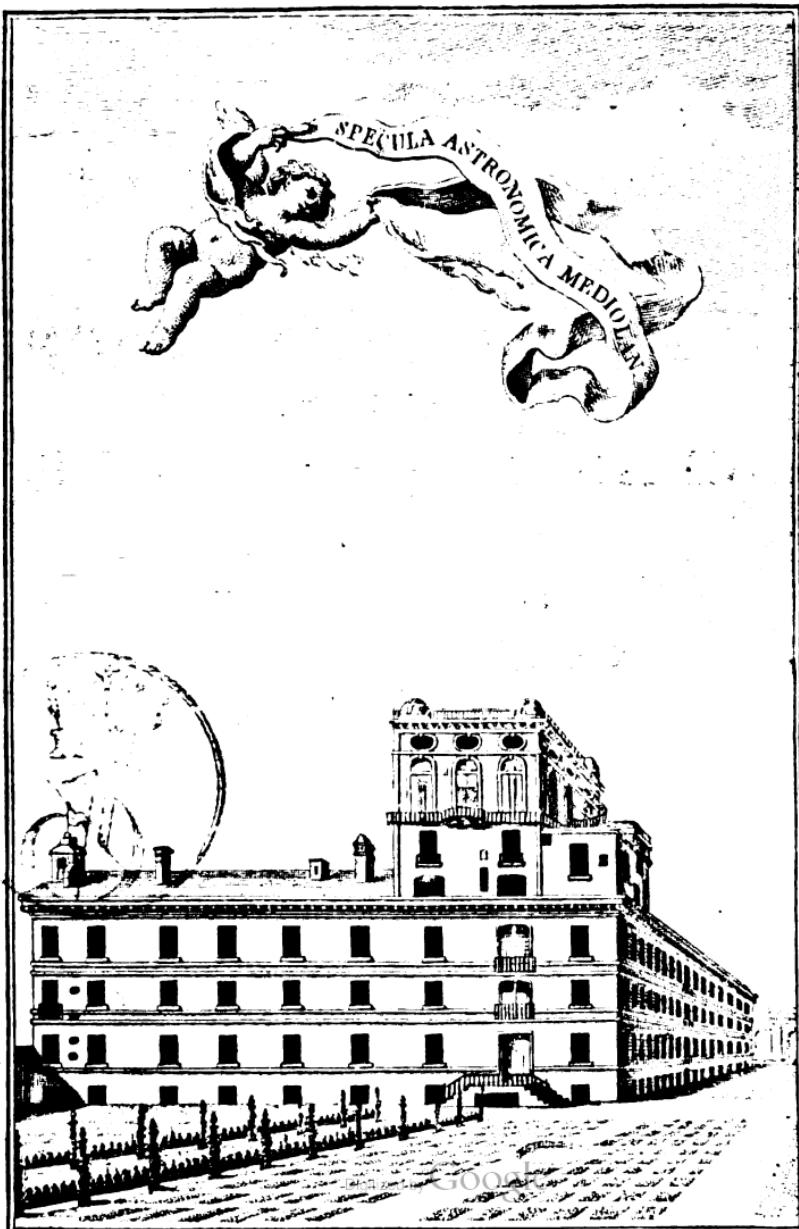












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# EPHEMERIDES

ASTRONOMICAE

Anni 1783.

AD MERIDIANUM MEDIOLANENSEM

SUPPUTATAE

AB ANGELO DE CESARIS



## ACCEDIT APPENDIX

Cum Observationibus & Opusculis  
&c. &c. &c.



MEDIOLANI. MDCCCLXXXI.

APUD JOSEPH GALEATIUM REGIUM TYPOGRAPHUM.  
*Superiorum permisso.*



*In Appendice ad Ephemerides habentur,  
quae sequuntur.*

- De latitudine Speculae Astron. Mediol. Comitent. D. REGGIO.  
De media praecectione aequinotiorum ex veterum Astronomorum observationibus collecta a D. ORIANI.  
Observationes & anni 1778. & 1779. institutae a D. ORIANI.  
Observatio opposit.  $\frac{1}{2}$  cum  $\frac{1}{2}$  anni 1780. peracta a D. REGGIO.  
Observatio opposit.  $\frac{1}{2}$  cum  $\frac{1}{2}$  anni 1780. peracta a D. REGGIO.  
Observationes Veneris prope maximam ejus digressionem a Sole anni 1780. peracta a D. REGGIO.  
Observatio opposit.  $\frac{1}{2}$  cum  $\frac{1}{2}$  anni 1781. peracta a D. REGGIO.  
Observatio oppositionis  $\frac{1}{2}$  mense Maii 1781. a D. ALLODIO.  
Oppositio  $\sigma$  anni 1781. determinata a D. DE CESARIS.  
Oppositio Saturni anni 1781. determinata a D. ORIANI.  
Observationes Mercurii circa ejus maximam digressionem a Sole an. 1781. peractae a D. REGGIO.  
Observationes Veneris antea & post ejus conjunctionem superiorem cum Sole an. 1781. institutae a D. ALLODIO.  
Observationes Cometae mense Martii an. 1781. detecti & adhuc apparentis habitae a D. ORIANI.  
Observatio Eclips.  $\frac{1}{2}$  diei 16. Oct. an. 1781. habitæ a D. ORIANI.  
Observationes Satellitum  $\frac{1}{2}$  habitæ tubo Gregor. duorum pedum a D. REGGIO, & D. DE CESARIS comparatae cum præcipuis correspondentibus, & cum tabulis a Cl. WARGENTIN.  
Observationes Satellitum Jovis habitæ tubo achromatico Dollondiano octo pedum a D. ORIANI.  
Observationes Meteorologicae an. 1780. habitæ in Specula Astronomica Mediolanensi a D. REGGIO.

## FESTA MOBILIA.

|                             |                    |                |
|-----------------------------|--------------------|----------------|
| Septuagesima                | - - - - -          | 16. Februarii  |
| Dies Cinerum                | - - - - -          | 5. Martii      |
| Pascha Resurrectionis       | - - - + + - -      | 20. Aprilis    |
| Rogationes Ritu Romano      | - - - 26. 27. 28.) | Maji           |
| Ascensio Domini             | - - - - -          | 29.)           |
| Rogationes Ritu Ambrosiano  | - - - 2. 3. 4.)    |                |
| Pentecottes                 | - - - - -          | 8. Junii       |
| Dominica SS. Trinitatis     | - - - - -          | 15. Junii      |
| Solemnitas Corporis Christi | - - - - -          | 19.)           |
| Adventus Ritu Ambrosiano    | - - - - -          | 16.) Novembris |
| Adventus Ritu Romano        | - - - - -          | 30.)           |

## CYCLORUM NUMERI.

|                |            |                     |         |
|----------------|------------|---------------------|---------|
| Numerus aureus | - - - 17   | Indictio Romana     | - - - 1 |
| Cyclus Solaris | - - - 28   | Littera Dominicalis | - E     |
| Epacta         | - - - XXVI |                     |         |

## QUATUOR ANNI TEMPORA.

|         |           |                       |
|---------|-----------|-----------------------|
| Vere    | - - - - - | 12. 14. 15. Martii    |
| Æstate  | - - - - - | 11. 13. 14. Junii     |
| Autumno | - - - - - | 17. 19. 20. Septembri |
| Hyeme   | - - - - - | 17. 19. 20. Decembris |

## OBliquitas ECLIPTICÆ.

|             |               |
|-------------|---------------|
| I. Januarii | 23° 28' 13"5  |
| I. Aprilis  | 23. 28. 13 ,4 |
| I. Julii    | 23. 28. 13 ,2 |
| I. Octobris | 23. 28. 12 ,9 |

## ECLIPSES ANNI 1783.

- 3 Martii. Eclipsis Solis Mediolani invisibilis: conjunctio  $7^{\text{h}} 50'$  mane.
- 18 Martii. Eclipsis Lunae Mediolani visibilis: oppositio  $9^{\text{h}} 59'$  vespere.  
Initium eclipsis  $8^{\text{h}} 10'$   
Immersio totalis  $9^{\text{h}} 10'$   
Initium emersionis  $10^{\text{h}} 50'$   
Finis eclipsis  $11^{\text{h}} 50'$   
Quantitas eclipsis  $21\frac{1}{2}$  digit. in partibus umbrae australibus.
- 1 Aprilis. Eclipsis Solis Mediolani invisibilis: conjunctio  $9^{\text{h}} 17'$  vespere.
- 27 Augusti. Eclipsis Solis Mediolani invisibilis: conjunctio  $11^{\text{h}} 17'$  vespere.
- 10 Septembris. Eclipsis Lunae Mediolani visibilis: oppositio  $12^{\text{h}} 16'$ .  
Initium eclipsis  $10^{\text{h}} 27'$   
Immersio totalis  $11^{\text{h}} 26'$   
Initium emersionis  $13^{\text{h}} 26'$   
Finis eclipsis  $14^{\text{h}} 6'$   
Quantitas eclipsis 21. digit. in partibus umbrae australibus.
- 26 Septembris. Eclipsis Solis Mediolani invisibilis.
- N. B. Occultatio π Scorpī, quae notata est pag. 33, sic legi debet  
Immers.  $12^{\text{h}} 9'\frac{1}{2}$  Dist. min.  $1\frac{1}{6}$   
Emers.  $13^{\text{h}} 24'$



*Dicitur Phænomena & Observationes Solis*

- Sol  
 5 in parallelo  $\gamma$  Leporis culmin. 10<sup>h</sup> 29'  
 9 in parall.  $\epsilon$  Corvi culm. 16<sup>h</sup> 57'  
 10 in parall.  $\gamma$  Hydr. culm. 17<sup>h</sup> 38'  
 11 in nodo descendente Saturni  
 13 in parall.  $\epsilon$  Corvi culm. 16<sup>h</sup> 16'  
 16 in parall.  $\epsilon$  Leporis culm. 9<sup>h</sup> 24'  
 17 in parall.  $\delta$  Leporis culm. 9<sup>h</sup> 43'  
 19 in signo Aquarii 14<sup>h</sup> 24'  
 24 in parall.  $\delta$  Ceti culm. 4<sup>h</sup> 14'  
 in parall.  $\delta$  Scorp. culm. 19<sup>h</sup> 22'  
 29 in parall.  $\epsilon$  Leporis culm. 9<sup>h</sup> 34'  
 in parall.  $\beta$  Canis culm. 9<sup>h</sup> 23'

*Dicitur Phænomena & Observationes Planetarum*

- 1 Venus ad Jovis differ. latit. 34'  
 3 Mars ad  $\lambda$  Librae diff. lat. 18'  
 Venus in conjunct. Super. 20<sup>h</sup> 10'  
 5 Mercurius ad Jovis differ. lat. 10 29'  
 7 Mars ad  $\beta$  Scorpii diff. lat. 29'  
 9 Mars ad  $\sigma$  Scorpii diff. lat. 10 40'  
 12 Mercurius in conjunct. Super. 5h 0'  
 17 Mercurius ad Veneris diff. lat. 10 36'  
 18 Jupiter ad  $\pi$  Sagittarii diff. lat. 10 23'  
 24 Venus in Aphelio 9<sup>h</sup> 41'  
 25 Venus ad  $\theta$  Capricorni differ. lat. 44'  
 29 Mercurius ad  $\delta$  Capricorni diff. 10 36'  
 31 Venus ad  $\gamma$  Capric. differ. 10 10'

*Dicitur Phænomena & Observationes Lunæ*

- Luna  
 1 ad  $\gamma$  Sagittarii 20<sup>h</sup> 48'  
 2 ad  $\delta$   $\epsilon$   $\tau$  Sagitt. 2<sup>h</sup> 16', 11<sup>h</sup> 15', 18<sup>h</sup> 29' Novilunium 20<sup>h</sup> 15'  
 4 ad  $\gamma$  Capri & Veneris 15<sup>h</sup> 13', & 10<sup>h</sup> 15'  
 5 ad  $\gamma$  &  $\delta$  Capri 6<sup>h</sup> 10', & 9<sup>h</sup> 23'  
 6 ad  $\sigma$  Aquarii 5<sup>h</sup> 41'  
 9 ad  $\epsilon$  Piscium 11<sup>h</sup> 3'  
 Primus Quadrans 2<sup>h</sup> 12'  
 12 ad  $\zeta$  Arietis 7<sup>h</sup> 17'  
 13 ad  $\chi$  Tauri 16<sup>h</sup> 3'  
 14 Apogea ad  $\beta$  Tauri 21<sup>h</sup> 18'  
 15 ad 136 Tauri 9<sup>h</sup> 18'  
 17 ad  $\iota$ ,  $\nu$ ,  $\phi$  Geminor. 3<sup>h</sup> 58', 6<sup>h</sup> 47', 14<sup>h</sup> 26'  
 18 Plenilunium 2<sup>h</sup> 51'  
 21 ad  $\chi$  Leo. Im. 11<sup>h</sup> 20') dist. B. 6'  
 22 ad  $\beta$  Virginis 12<sup>h</sup> 16': fortasse occultat.  
 24 ad  $\alpha$  Virginis 12<sup>h</sup> 46'  
 Ultimus Quadrans 15<sup>h</sup> 30'  
 27 ad  $\sigma$  &  $\omega$  Scorpii 16<sup>h</sup> 8' & 19<sup>h</sup> 24'  
 28 Perigea ad 43 Ophiuci 15<sup>h</sup> 16'  
 29 ad  $\gamma$  &  $\delta$  Sagitt. 6<sup>h</sup> 23', & 12<sup>h</sup> 2'

*Planetae in parallelis fixarum*  
 Saturnus  $\epsilon$  Capric.,  $\gamma$  Leporis  
 Jupiter initio mensis in radiis solaribus, 7 in parall. 1.  $\gamma$  Sagitt., 10  $\pi$ .  $\gamma$  Sagitt. &  $\sigma$  Ophii., 18  $\beta$  Capricorni., 29  $\gamma$  Leporis  
 Mars 1 in parall.  $\gamma$  Scorpii, &  $\chi$  Librae, 3  $\epsilon$  Ceti, &  $\epsilon$  Scorpii., 7. 6 Capricorni, 9. 54 Eridani, 14  $\delta$  Leporis, 19  $\epsilon$  Corvi,  $\delta$  Scorpii, 27  $\epsilon$  Corvi  
 Venus 25 in parall.  $\gamma$  Scorpii, 27  $\gamma$  Capricorni., 30  $\delta$  Aquarii  
 Mercur. 19  $\epsilon$  Corvi, 20  $\gamma$  Hydr., 21  $\mu$  Sagitt.,  $\epsilon$  Capric., 23  $\lambda$  Librae, 24  $\gamma$  Scorpii, 26  $\gamma$  Capric., 27  $\delta$  Aquarii, 29  $\epsilon$  Capric.,  $\gamma$  Ophiuci, 31  $\gamma$  Librae

## JANUARIUS 1783.

| Dies<br>habet<br>dominum<br>meritis | <i>Aequatio<br/>addenda<br/>tempori<br/>vero<br/>ut habeatur<br/>medium</i> | <i>Diffe-<br/>rentia</i> | <i>Longitudo<br/>Solis</i> | <i>Ascensio recta<br/>Solis</i> | <i>Declinatio<br/>Solis<br/>Australis</i> |
|-------------------------------------|---|--------------------------|----------------------------|---------------------------------|---|
| M.                                  | S.  | S.                       | S. G. M. S.                | G. M.                           | S. G. M. S.                               |
| 1 Mer.                              | 4. 6, 6   | 28, 2                    | 9. 11. 2. 49               | 282. 0. 54                      | 23. 0. 36                                 |
| 2 Jov.                              | 4. 34, 8  | 28, 0                    | 9. 12. 4. 2                | 283. 7. 9                       | 22. 55. 18                                |
| 3 Ven.                              | 5. 2, 8   | 27. 6                    | 9. 13. 5. 14               | 284. 13. 18                     | 22. 49. 32                                |
| 4 Sat.                              | 5. 30, 4  | 27, 1                    | 9. 14. 6. 26               | 285. 19. 20                     | 22. 43. 19                                |
| 5 Dom                               | 5. 57, 5  | 26, 5                    | 9. 15. 7. 39               | 286. 25. 16                     | 22. 36. 39                                |
| 6 Lun.                              | 6. 24, 0  | 26, 0                    | 9. 16. 8. 50               | 287. 31. 5                      | 22. 29. 32                                |
| 7 Mar.                              | 6. 50, 0  | 25, 6                    | 9. 17. 10. 2               | 288. 36. 46                     | 22. 21. 59                                |
| 8 Mer.                              | 7. 15, 6  | 25, 1                    | 9. 18. 11. 12              | 289. 42. 19                     | 22. 13. 59                                |
| 9 Jov.                              | 7. 40, 7  | 24, 5                    | 9. 19. 12. 22              | 290. 47. 44                     | 22. 5. 33                                 |
| 10 Ven.                             | 8. 5, 2   | 23, 9                    | 9. 20. 13. 32              | 291. 53. 0                      | 21. 56. 41                                |
| 11 Sat.                             | 8. 29, 1  | 23, 2                    | 9. 21. 14. 40              | 292. 58. 7                      | 21. 47. 24                                |
| 12 Dom                              | 8. 52, 3  | 22, 6                    | 9. 22. 15. 48              | 294. 3. 5                       | 21. 37. 41                                |
| 13 Lün.                             | 9. 14, 9  | 21, 9                    | 9. 23. 16. 56              | 295. 7. 53                      | 21. 27. 33                                |
| 14 Mar.                             | 9. 36, 8  | 21, 2                    | 9. 24. 18. 2               | 296. 13. 31                     | 21. 17. 0                                 |
| 15 Mer.                             | 9. 58, 0  | 20, 5                    | 9. 25. 19. 7               | 297. 16. 59                     | 21. 6. 3                                  |
| 16 Jov.                             | 10. 18, 5   | 19, 8                    | 9. 26. 20. 12              | 298. 21. 16                     | 20. 54. 42                                |
| 17 Ven.                             | 10. 38, 3   | 19, 1                    | 9. 27. 21. 16              | 299. 25. 22                     | 20. 42. 57                                |
| 18 Sat.                             | 10. 57, 4   | 18, 3                    | 9. 28. 22. 18              | 300. 29. 17                     | 20. 30. 49                                |
| 19 Dom                              | 11. 15, 7   | 17, 6                    | 9. 29. 23. 21              | 301. 33. 1                      | 20. 18. 17                                |
| 20 Lun.                             | 11. 33, 3   | 16, 9                    | 10. 0. 24. 22              | 302. 36. 34                     | 20. 5. 23                                 |
| 21 Mar.                             | 11. 50, 2   | 16, 1                    | 10. 1. 25. 23              | 303. 39. 56                     | 19. 52. 6                                 |
| 22 Mer.                             | 12. 6, 3  | 16, 1                    | 10. 2. 26. 23              | 304. 43. 7                      | 19. 38. 27                                |
| 23 Jov.                             | 12. 21, 6   | 15, 3                    | 10. 3. 27. 22              | 305. 46. 6                      | 19. 24. 26                                |
| 24 Ven.                             | 12. 36, 1   | 14, 5                    | 10. 4. 28. 21              | 306. 48. 53                     | 19. 10. 3                                 |
| 25 Sat.                             | 12. 49, 9   | 13, 8                    | 10. 5. 29. 19              | 307. 51. 28                     | 18. 55. 19                                |
| 26 Dom                              | 13. 2, 9  | 13, 0                    | 10. 6. 30. 17              | 308. 53. 51                     | 18. 40. 15                                |
| 27 Lun.                             | 13. 15, 1   | 12, 2                    | 10. 7. 31. 13              | 309. 56. 3                      | 18. 24. 51                                |
| 28 Mar.                             | 13. 26, 4   | 11, 3                    | 10. 8. 32. 9               | 310. 58. 3                      | 18. 9. 6                                  |
| 29 Mer.                             | 13. 36, 9   | 10, 5                    | 10. 9. 33. 5               | 311. 59. 51                     | 17. 53. 6                                 |
| 30 Jov.                             | 13. 46, 7   | 9, 8                     | 10. 10. 33. 59             | 313. 1. 27                      | 17. 36. 39                                |
| 31 Ven.                             | 13. 55, 7   | 9, 0                     | 10. 11. 34. 52             | 314. 2. 50                      | 17. 19. 57                                |
|                                     |   | 8, 3                     |                            |                                 |   |

| <i>Diis<br/>se<br/>mer<br/>si</i> | <i>Distantia<br/>Sectionis V<br/>a Sole</i> | <i>Diffe<br/>rentia</i> | <i>Ini<br/>tiu<br/>Crepu<br/>sculi</i> | <i>Ortu<br/>Centri<br/>Solis</i> | <i>Ocea<br/>sus<br/>Centri<br/>Solis</i> | <i>Finis<br/>Crepu<br/>sculi</i> | <i>Hora<br/>Italica<br/>Meridi<br/>di</i> |
|-----------------------------------|---|-------------------------|--|----------------------------------|--|----------------------------------|---|
|                                   |   | <i>H. M. S.</i>         | <i>M. S.</i>                           | <i>H. M.</i>                     | <i>H. M.</i>                             | <i>H. M.</i>                     | <i>H. M.</i>                              |
| 1 Mer.                            | 5. 11. 56,4                                 |                         | 5. 50                                  | 7. 39                            | 4. 21                                    | 6. 10                            | 19. 9                                     |
| 2 Jov.                            | 5. 7. 31,4                                  | 4. 25,6                 | 5. 49                                  | 7. 38                            | 4. 22                                    | 6. 11                            | 19. 8                                     |
| 3 Ven.                            | 5. 3. 6,8                                   | 4. 24,6                 | 5. 49                                  | 7. 38                            | 4. 22                                    | 6. 11                            | 19. 8                                     |
| 4 Sat.                            | 4. 58. 42,7                                 | 4. 24,1                 | 5. 48                                  | 7. 37                            | 4. 23                                    | 6. 12                            | 19. 7                                     |
| 5 Dom                             | 4. 54. 19,9                                 | 4. 23,8                 | 5. 48                                  | 7. 37                            | 4. 23                                    | 6. 12                            | 19. 7                                     |
| 6 Lun.                            | 4. 49. 55,7                                 | 4. 23,2                 | 5. 47                                  | 7. 36                            | 4. 24                                    | 6. 13                            | 19. 6                                     |
| 7 Mar.                            | 4. 45. 32,9                                 | 4. 22,8                 | 5. 47                                  | 7. 35                            | 4. 25                                    | 6. 13                            | 19. 5                                     |
| 8 Mer.                            | 4. 41. 10,7                                 | 4. 22,2                 | 5. 46                                  | 7. 34                            | 4. 26                                    | 6. 14                            | 19. 4                                     |
| 9 Jov.                            | 4. 36. 49,1                                 | 4. 21,6                 | 5. 45                                  | 7. 34                            | 4. 26                                    | 6. 15                            | 19. 4                                     |
| 10 Ven.                           | 4. 32. 28,0                                 | 4. 21,1                 | 5. 45                                  | 7. 33                            | 4. 27                                    | 6. 15                            | 19. 3                                     |
| 11 Sat.                           | 4. 28. 7,5                                  | 4. 20,5                 |  |                                  |  |                                  |   |
| 12 Dom                            | 4. 23. 47,6                                 | 4. 19,9                 | 5. 44                                  | 7. 32                            | 4. 28                                    | 6. 16                            | 19. 2                                     |
| 13 Lun.                           | 4. 19. 28,4                                 | 4. 19,2                 | 5. 43                                  | 7. 32                            | 4. 29                                    | 6. 17                            | 19. 2                                     |
| 14 Mar.                           | 4. 15. 9,9                                  | 4. 18,5                 | 5. 43                                  | 7. 31                            | 4. 29                                    | 6. 17                            | 19. 1                                     |
| 15 Mer.                           | 4. 10. 52,1                                 | 4. 17,8                 | 5. 42                                  | 7. 30                            | 4. 30                                    | 6. 18                            | 19. 0                                     |
| 16 Jov.                           | 4. 6. 35,0                                  | 4. 17,1                 | 5. 41                                  | 7. 29                            | 4. 31                                    | 6. 19                            | 18. 59                                    |
| 17 Ven.                           | 4. 2. 18,6                                  | 4. 16,4                 | 5. 41                                  | 7. 28                            | 4. 32                                    | 6. 19                            | 18. 58                                    |
| 18 Sat.                           | 3. 58. 2,9                                  | 4. 15,7                 | 5. 40                                  | 7. 26                            | 4. 34                                    | 6. 20                            | 18. 56                                    |
| 19 Dom                            | 3. 53. 47,9                                 | 4. 15,0                 | 5. 39                                  | 7. 25                            | 4. 35                                    | 6. 21                            | 18. 55                                    |
| 20 Lun.                           | 3. 49. 33,7                                 | 4. 14,2                 | 5. 39                                  | 7. 24                            | 4. 36                                    | 6. 21                            | 18. 54                                    |
| 21 Mar.                           | 3. 45. 20,2                                 | 4. 13,5                 | 5. 38                                  | 7. 23                            | 4. 37                                    | 6. 22                            | 18. 53                                    |
| 22 Mer.                           | 3. 41. 7,5                                  | 4. 12,7                 | 5. 37                                  | 7. 21                            | 4. 39                                    | 6. 23                            | 18. 51                                    |
| 23 Jov.                           | 3. 36. 55,6                                 | 4. 11,9                 | 5. 36                                  | 7. 20                            | 4. 40                                    | 6. 24                            | 18. 50                                    |
| 24 Ven.                           | 3. 32. 44,5                                 | 4. 11,1                 | 5. 35                                  | 7. 19                            | 4. 41                                    | 6. 25                            | 18. 49                                    |
| 25 Sat.                           | 3. 28. 34,2                                 | 4. 10,3                 | 5. 34                                  | 7. 18                            | 4. 42                                    | 6. 26                            | 18. 48                                    |
| 26 Dom                            | 3. 24. 24,6                                 | 4. 9,6                  | 5. 33                                  | 7. 17                            | 4. 43                                    | 6. 27                            | 18. 47                                    |
| 27 Lun.                           | 3. 20. 15,8                                 | 4. 8,8                  | 5. 32                                  | 7. 16                            | 4. 44                                    | 6. 28                            | 18. 46                                    |
| 28 Mar.                           | 3. 16. 7,8                                  | 4. 8,0                  | 5. 31                                  | 7. 15                            | 4. 45                                    | 6. 29                            | 18. 45                                    |
| 29 Mer.                           | 3. 12. 0,6                                  | 4. 7,2                  | 5. 30                                  | 7. 14                            | 4. 46                                    | 6. 30                            | 18. 44                                    |
| 30 Jov.                           | 3. 7. 54,2                                  | 4. 6,4                  | 5. 29                                  | 7. 13                            | 4. 47                                    | 6. 31                            | 18. 43                                    |
| 31 Ven.                           | 3. 3. 48,6                                  | 4. 5,6                  | 5. 28                                  | 7. 12                            | 4. 48                                    | 6. 32                            | 18. 42                                    |
|                                   |   | 4. 4,7                  | 5. 27                                  | 7. 11                            | 4. 49                                    | 6. 33                            | 18. 41                                    |

## JANUARIUS 1783.

| Dier<br>mensis<br>Dier<br>bebbomade | Longitude<br>Lunæ<br>Meridie | Latitudo<br>Lunæ<br>Meridie | Dia-<br>meter<br>bori-<br>zonta-<br>lis<br>Lunæ<br>Merid. | Paral-<br>laxis<br>bori-<br>zonta-<br>lis<br>Lunæ<br>Merid. | Declina-<br>tio Lunæ | Transi-<br>tus Lunæ<br>per Me-<br>ridianum |
|-------------------------------------|------------------------------|-----------------------------|---|---|----------------------|--|
|                                     | S. G. M. S.                  | G. M. S.                    | M. S.   | M. S.   | G. M.                | H. M.                                      |
| 1 Mer.                              | 8. 14. 53. 46                | 4. 47. 58 A                 | 33. 20  | 61. 2   | 27. 23 A             | 10. 0 M                                    |
| 2 Jov.                              | 9. 0. 5. 37                  | 5. 0. 26                    | 33. 24  | 61. 9   | 28. 28               | 11. 6                                      |
| 3 Ven.                              | 9. 15. 16. 43                | 4. 51. 44                   | 33. 17  | 60. 56  | 27. 23               | 0. 14 V                                    |
| 4 Sat.                              | 10. 0. 16. 4                 | 4. 22. 56                   | 33. 1   | 60. 26  | 24. 40               | 1. 15                                      |
| 5 Dom                               | 10. 14. 54. 22               | 3. 37. 18                   | 32. 36  | 59. 41  | 19. 51               | 2. 12                                      |
| 6 Lun.                              | 10 29. 5. 27                 | 2. 39. 18                   | 32. 7   | 58. 48  | 14. 18               | 3. 5                                       |
| 7 Mar.                              | 11. 12. 46. 45               | 1. 33. 46                   | 31. 35  | 57. 51  | 8. 15                | 3. 51                                      |
| 8 Mer.                              | 11. 25. 59. 8                | 0. 25. 14                   | 31. 5   | 56. 54  | 2. 2                 | 4. 36                                      |
| 9 Jov.                              | 0. 8. 45. 38                 | 0. 42. 28 B                 | 30. 37  | 56. 3   | 4. 6 B               | 5. 18                                      |
| 10 Ven.                             | 0. 21. 10. 51                | 1. 46. 21                   | 30. 13  | 55. 20  | 9. 53                | 5. 59                                      |
| 11 Sat.                             | 1. 3. 19. 47                 | 2. 43. 59                   | 29. 55  | 54. 46  | 15. 10               | 6. 41                                      |
| 12 Dom                              | 1. 15. 17. 47                | 3. 23. 25                   | 29. 42  | 54. 22  | 19. 50               | 7. 25                                      |
| 13 Lun.                             | 1. 27. 9. 48                 | 4. 13. 10                   | 29. 34  | 54. 8   | 23. 39               | 8. 11                                      |
| 14 Mar.                             | 2. 9. 0. 8                   | 4. 21. 52                   | 29. 31  | 54. 3   | 26. 29               | 8. 59                                      |
| 15 Mer                              | 2. 20. 52. 26                | 4. 58. 26                   | 29. 33  | 54. 6   | 28. 7                | 9. 50                                      |
| 16 Jov.                             | 3. 2. 49. 21                 | 5. 2. 5                     | 29. 38  | 54. 15  | 28. 29               | 10. 42                                     |
| 17 Ven.                             | 3 14. 52. 51                 | 4. 52. 21                   | 29. 46  | 54. 31  | 27. 29               | 11. 33                                     |
| 18 Sat.                             | 3. 27. 4 8                   | 4. 29. 12                   | 29. 56  | 54. 49  | 25. 10               | 4. 4                                       |
| 19 Dom                              | 4. 9. 24. 0                  | 3. 53. 10                   | 30. 9   | 55. 13  | 21. 41               | 0. 22 M                                    |
| 20 Lun.                             | 4. 21. 52. 52                | 3. 5. 32                    | 30. 23  | 55. 38  | 17. 10               | 1. 10                                      |
| 21 Mar.                             | 5. 4. 31. 37                 | 2. 7. 56                    | 30. 38  | 56. 6   | 11. 52               | 1. 56                                      |
| 22 Mer.                             | 5. 17. 21. 23                | 1. 3. 5                     | 30. 55  | 56. 37  | 5. 58                | 2. 40                                      |
| 23 Jov.                             | 6. 0. 23. 3                  | 0. 6. 17 A                  | 31. 12  | 57. 9   | 0. 14 A              | 3. 23                                      |
| 24 Ven.                             | 6. 13. 38. 52                | 1. 16. 42                   | 31. 32  | 57. 44  | 6. 35                | 4. 7                                       |
| 25 Sat.                             | 6. 27. 10. 26                | 2. 24. 15                   | 31. 51  | 58. 19  | 12. 45               | 4. 53                                      |
| 26 Dom                              | 7 10. 59. 21                 | 3. 24. 59                   | 32. 10  | 58. 54  | 18. 23               | 5. 42                                      |
| 27 Lun.                             | 7. 25. 6. 7                  | 4. 14. 36                   | 32. 28  | 59. 27  | 22. 13               | 6. 35                                      |
| 28 Mar.                             | 8. 9. 30. 0                  | 4. 49. 20                   | 32. 43  | 59. 55  | 26. 39               | 7. 34                                      |
| 29 Mer.                             | 8. 24. 7. 59                 | 5. 5. 54                    | 32. 52  | 60. 14  | 28. 25               | 8. 37                                      |
| 30 Jov.                             | 9. 8. 54. 43                 | 5. 2. 26                    | 32. 58  | 60. 22  | 28. 10               | 9. 44                                      |
| 31 Ven.                             | 9. 23. 42. 56                | 4. 38. 50                   | 32. 55  | 60. 16  | 25. 57               | 10. 47                                     |

| Dies<br>meridi- | Domi-<br>nica<br>hectomoda | Longitudo<br>Lunæ media<br>nocte |     | Latitudo<br>Lunæ media<br>nocte |    | Dia-<br>meter<br>horiz.<br>Lunæ<br>med.<br>noct. | Paral-<br>laxis<br>horiz.<br>Lunæ<br>med.<br>noct. | Ortus<br>Lunæ | Occasus<br>Lunæ |
|-----------------|----------------------------|----------------------------------|-----|---------------------------------|----|--|--|---------------|-----------------|
|                 |                            | S.                               | G.  | M.                              | S. | G.   | M.   | H.            | M.              |
| 1               | Mer.                       | 8.                               | 22. | 29.                             | 1  | 4.   | 56.  | 52            | A               |
| 2               | Jov.                       | 9.                               | 7.  | 41.                             | 55 | 4.   | 58.  | 46            |                 |
| 3               | Ven.                       | 9.                               | 22. | 48.                             | 50 | 4.   | 39.  | 37            |                 |
| 4               | Sat.                       | 10.                              | 7.  | 38.                             | 20 | 4.   | 1.   | 57            |                 |
| 5               | Dom                        | 10.                              | 22. | 3.                              | 35 | 3.   | 9.   | 31            |                 |
| 6               | Lun.                       | 11.                              | 5.  | 59.                             | 50 | 2.   | 7.   | 9             |                 |
| 7               | Mar.                       | 11.                              | 19. | 26.                             | 26 | 0.   | 59.  | 35            |                 |
| 8               | Mer.                       | 0.                               | 2.  | 25.                             | 21 | 0.   | 8.   | 56            | B               |
| 9               | Jov.                       | 0.                               | 15. | 0.                              | 37 | 1.   | 15.  | .5            |                 |
| 10              | Ven.                       | 0.                               | 27. | 17.                             | 1  | 2.   | 16.  | 8             |                 |
| 11              | Sat.                       | 1.                               | 9.  | 19.                             | 50 | 3.   | 9.   | 50            |                 |
| 12              | Dom                        | 1.                               | 21. | 14.                             | 19 | 3.   | 54.  | 36            |                 |
| 13              | Lun.                       | 2.                               | 3.  | 4.                              | 46 | 4.   | 28.  | 59            |                 |
| 14              | Mar.                       | 2.                               | 14. | 56.                             | 0  | 4.   | 51.  | 44            |                 |
| 15              | Mer.                       | 2.                               | 26. | 50.                             | 9  | 5.   | 1.   | 56            |                 |
| 16              | Jov.                       | 3.                               | 8.  | 50.                             | 11 | 4.   | 58.  | 55            |                 |
| 17              | Ven.                       | 3.                               | 20. | 57.                             | 29 | 4.   | 42.  | 26            |                 |
| 18              | Sat.                       | 4.                               | 3.  | 13.                             | 0  | 4.   | 22.  | 46            |                 |
| 19              | Dom                        | 4.                               | 15. | 37.                             | 16 | 3.   | 30.  | 40            |                 |
| 20              | Lun.                       | 4.                               | 28. | 10.                             | 56 | 2.   | 37.  | 49            |                 |
| 21              | Mar.                       | 5.                               | 10. | 55.                             | 9  | 1.   | 36.  | 16            |                 |
| 22              | Mer.                       | 5.                               | 23. | 50.                             | 14 | 0.   | 28.  | 47            |                 |
| 23              | Jov.                       | 6.                               | 6.  | 59.                             | 7  | 0.   | 41.  | 35            | A               |
| 24              | Ven.                       | 6.                               | 20. | 52.                             | 34 | 1.   | 51.  | 3             |                 |
| 25              | Sat.                       | 7.                               | 4.  | 2.                              | 39 | 2.   | 55.  | 46            |                 |
| 26              | Dom                        | 7.                               | 18. | 0.                              | 30 | 3.   | 51.  | 28            |                 |
| 27              | Lun.                       | 8.                               | 2.  | 16.                             | 2  | 4.   | 34.  | 7             |                 |
| 28              | Mar.                       | 8.                               | 16. | 47.                             | 29 | 5.   | 0.   | 7             |                 |
| 29              | Mer.                       | 9.                               | 1.  | 30.                             | 39 | 5.   | 6.   | 48            |                 |
| 30              | Jov.                       | 9.                               | 16. | 19.                             | 6  | 4.   | 53.  | 8             |                 |
| 31              | Ven.                       | 10.                              | 1.  | 5.                              | 1  | 4.   | 20.  | 10            |                 |
|                 |                            |                                  |     |                                 |    | 32.  | 50.  | 60.           |                 |

| Dies<br>mensis | Longitudo<br>Planetarum | Latitudo<br>Planeta-<br>rum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Transi-<br>tus Pla-<br>netarum<br>per Me-<br>ridianum | Occasus<br>Plane-<br>tarum. |
|----------------|-------------------------|-----------------------------|---------------------------------|--------------------------|---|-----------------------------|
|                | S. G. M.                | G. M.                       | G. M.                           | H. M.                    | H. M.   | H. M.                       |

## S A T U R N U S .

|    |             |            |          |       |         |         |
|----|-------------|------------|----------|-------|---------|---------|
| 1  | 9. 4. 21, 3 | 0. 42, 1 B | 22. 42 A | 7. 8M | 11. 31M | 3. 54 V |
| 7  | 9. 5. 12, 2 | 0. 41, 8   | 22. 40   | 6. 46 | 11. 9   | 3. 32   |
| 13 | 9. 5. 51, 4 | 0. 41, 6   | 22. 39   | 6. 23 | 10. 46  | 3. 9    |
| 19 | 9. 6. 33, 0 | 0. 41, 4   | 22. 37   | 6. 0  | 10. 23  | 2. 46   |
| 25 | 9. 7. 12, 7 | 0. 41, 2   | 22. 36   | 5. 37 | 10. 0   | 2. 23   |

## J U P I T E R .

|    |              |           |         |        |         |         |
|----|--------------|-----------|---------|--------|---------|---------|
| 1  | 9. 10. 35, 1 | 0. 2, 8 A | 23. 6 A | 7. 37M | 11. 58M | 4. 19 V |
| 7  | 9. 12. 4, 4  | 0. 3, 6   | 22. 59  | 7. 17  | 11. 38  | 3. 59   |
| 13 | 9. 13. 26, 0 | 0. 4, 4   | 22. 51  | 6. 55  | 11. 18  | 3. 41   |
| 19 | 9. 14. 48, 7 | 0. 5, 1   | 22. 43  | 6. 35  | 10. 58  | 3. 21   |
| 25 | 9. 16. 11, 0 | 0. 5, 8   | 22. 35  | 6. 15  | 10. 39  | 3. 3    |

## M A R S .

|    |              |            |          |       |        |         |
|----|--------------|------------|----------|-------|--------|---------|
| 1  | 7. 26. 1, 4  | 0. 26, 3 B | 18. 52 A | 4. 6M | 8. 47M | 1. 28 V |
| 7  | 7. 29. 57, 2 | 0. 23, 4   | 19. 47   | 4. 0  | 8. 37  | 1. 14   |
| 13 | 8. 3. 59, 7  | 0. 19, 0   | 20. 39   | 3. 55 | 8. 28  | 1. 1    |
| 19 | 8. 8. 2, 3   | 0. 15, 2   | 21. 25   | 3. 50 | 8. 19  | 0. 48   |
| 25 | 8. 12. 6, 6  | 0. 11, 5   | 22. 5    | 3. 45 | 8. 11  | 0. 37   |

## V E N U S .

|    |               |            |          |        |         |         |
|----|---------------|------------|----------|--------|---------|---------|
| 1  | 9. 10. 25, 0  | 0. 36, 5 A | 23. 39 A | 7. 40M | 11. 58M | 4. 16 V |
| 7  | 9. 17. 48, 5  | 0. 48, 3   | 23. 6    | 7. 43  | 0. 4 V  | 4. 25   |
| 13 | 9. 25. 21, 1  | 1. 0, 0    | 22. 5    | 7. 44  | 0. 10   | 4. 36   |
| 19 | 10. 3. 4, 0   | 1. 8, 7    | 20. 37   | 7. 44  | 0. 17   | 4. 50   |
| 25 | 10. 10. 31, 3 | 1. 17, 0   | 18. 52   | 7. 52  | 0. 83   | 5. 14   |

## M E R C U R I U S .

|    |               |            |          |        |         |         |
|----|---------------|------------|----------|--------|---------|---------|
| 1  | 9. 4. 29, 2   | 1. 14, 5 A | 24. 38 A | 7. 21M | 11. 33M | 3. 45 V |
| 7  | 9. 13. 57, 0  | 1. 38, 7   | 24. 22   | 7. 34  | 11. 48  | 4. 2    |
| 13 | 9. 23. 44, 1  | 1. 58, 8   | 23. 20   | 7. 45  | 0. 4 V  | 4. 23   |
| 19 | 10. 3. 52, 6  | 2. 0, 3    | 21. 16   | 7. 51  | 0. 21   | 4. 51   |
| 25 | 10. 14. 21, 0 | 1. 51, 2   | 18. 21   | 7. 53  | 0. 38   | 5. 23   |

ECLIPSES SATELLITUM JOVIS  
nequeunt hoc mense observari.

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>horarius<br>Solis | Logaritmus<br>distantiae<br>Solis a terra<br>posita media<br>100000 | Longitudo<br>Nodi Luna |
|------|-------------------|---|----------------------------|---|------------------------|
|      | M. S.             | M. S.                                       | M. S.                      |   | S. G. M.               |
| 1    | 32. 35, 8         | 2. 21, 6                                    | 2. 32, 9                   | 4. 992646   | 0. 2. 0                |
| 4    | 32. 35, 7         | 2. 21, 3                                    | 2. 32, 9                   | 4. 992673   | 0. 1. 50               |
| 7    | 32. 35, 5         | 2. 21, 0                                    | 2. 32, 9                   | 4. 992718   | 0. 1. 41               |
| 10   | 32. 35, 2         | 2. 20, 6                                    | 2. 32, 8                   | 4. 992784   | 0. 1. 31               |
| 13   | 32. 34, 7         | 2. 20, 0                                    | 2. 32, 8                   | 4. 992868   | 0. 1. 22               |
| 16   | 32. 34, 2         | 2. 19, 4                                    | 2. 32, 7                   | 4. 992975   | 0. 1. 12               |
| 19   | 32. 33, 7         | 2. 18, 8                                    | 2. 32, 7                   | 4. 993182   | 0. 1. 3                |
| 22   | 32. 33, 1         | 2. 18, 2                                    | 2. 32, 6                   | 4. 993247   | 0. 0. 53               |
| 25   | 32. 32, 4         | 2. 17, 6                                    | 2. 32, 5                   | 4. 993410   | 0. 0. 44               |
| 28   | 32. 31, 5         | 2. 16, 9                                    | 2. 32, 3                   | 4. 993590   | 0. 0. 24               |

SATELLITES JOVIS  
nequeunt hoc mense observari.

| <i>Phaenomena &amp; Observationes<br/>Solis</i>        | <i>Phaenomena &amp; Observationes<br/>Lunae</i>                             |
|--|---|
| Sol  | Luna  |
| 2 in parallelo Sirii culm. 9 <sup>h</sup> 28'          | 1 Novilunium 7 <sup>h</sup> 30'   |
| 3 in parall. γ Corvi culm. 14 <sup>h</sup> 52'         | ad s & z Capri 14 <sup>h</sup> 12' & 16 <sup>h</sup> 27'                    |
| 5 in paral. ζ Ophiuci culm. 19 <sup>h</sup> 36'        | ad Veneris 19 <sup>h</sup> 40'  |
| 6 in parall. γ Canis culm. 9 <sup>h</sup> 30'          | 2 ad Mercurii 9 <sup>h</sup> 48'  |
| item δ Corvi culmin. 14 <sup>h</sup> 54'               | 3 ad h & x Aquar. 7 <sup>h</sup> 30' & 11 <sup>h</sup> 40'                  |
| 7 in parall. α Librae culm. 17 <sup>h</sup> 9'         | 8 Primus Quadrans 18 <sup>h</sup> 9'  |
| 8 in parall. ξ Eridani culm. 6 <sup>h</sup> 57'        | ad ζ Arietis 14 <sup>h</sup> 27'  |
| 10 in parall. γ Eridani culm. 6 <sup>h</sup> 9'        | 9 ad x Tauri 23 <sup>h</sup>  |
| item γ Librae culm. 17 <sup>h</sup> 42'                | 11 Apogea   |
| 14 in parallelo ε Ceti culm. 4 <sup>h</sup> 35'        | 14 ad γ Cancer 21 <sup>h</sup> 22'  |
| 15 in parall. λ Virginis culm. 16 <sup>h</sup> 5'      | 16 Plenilunium 19 <sup>h</sup> 45'  |
| 18 in signo Piscium 5 <sup>h</sup> 15'                 | 17 ad x Leonis 19 <sup>h</sup> 30'  |
| in parallelo γ Ceti culm. 2 <sup>h</sup> 47'           | 18 ad τ Leonis 7 <sup>h</sup> 20'   |
| 20 in parall. δ Eridani culm. 5 <sup>h</sup> 14'       | 20 ad i Virginis 19 <sup>h</sup> 30'  |
| 22 in parall. α Virgin. culm. 14 <sup>h</sup> 45'      | 23 ad τ Scorpii 13 <sup>h</sup> 51' cum oc-<br>cultat. Mediolani invisibili |
| item x Orionis culm. 7 <sup>h</sup> 11'                | ad δ Sagittarii 19 <sup>h</sup> 12'   |
| 23 in parall. ξ Eridani culm. 4 <sup>h</sup> 36'       | Perigea, ad Martis 22 <sup>h</sup> 50'                                      |
| 24 in parall. x Virg. culm. 15 <sup>h</sup> 26'        | ad Saturni 10 <sup>h</sup> 15'  |
| 26 in parall. β Librae culm. 16 <sup>h</sup> 22'       |   |
| item Rigel culm. 6 <sup>h</sup> 23'                    |   |
| 28 in parall. α Hydrael culm. 10 <sup>h</sup> 27'      |   |
| <i>Phaenomena &amp; Observationes<br/>Planetarum</i>   | <i>Planetae in parallelis fixarum</i>                                       |
| Mars ad s Ophiuci dif. lat. 2° 8'                      | Saturnus mense toto parallelos  |
| Venus ad μ Capri diff. lat. 43'                        | γ Leporis & β Corvi   |
| Mars ad s Ophi. diff. lat. 1° 50'                      | Jupiter initio mensis prope pa-   |
| Mars ad B Ophiuci diff. lat. 55'                       | ral. γ Leporis, 9 β Corvi,  |
| Venus ad i Aquarii diff. lat. 42'                      | 13 α Sagittarii & γ Hydrael,  |
| Mars ad e & c Ophiuci diff. lat.<br>31' & 38'          | 16 δ Scorpi., tunc prope s Corvi  |
| Mercurius ad λ Aquarii d. l. 35'                       | Mars initio mensis prope parall.  |
| Mercurius in elongat. maxima                           | γ Leporis, sub finem mensis   |
| Venus ad ~ Aquarii diff. lat. 15'                      | prope α Corvi & β Navis   |
| Mars ad b diff. lat. 25'                               | Venus i in parallelo Sctii, 3 γ   |
| Saturnus ad l. ~ Sagitt. d. l. 32'                     | Ophiuci γ Canis & Corvi,  |
| Mars ad a Sagitt. diff. lat. 54'                       | α Librae, 7 γ Eridani & γ Li-   |
| Saturnus ad s. ~ Sagitt. dif. l. 29'                   | brae, 9 α Ceti, 10 λ Virginis   |
| Venus ad l. 2. 3 h Aquarii diff.<br>lat. 13' 17' & 30' | 13 α Ceti, 15 α Virginis & x  |
| Venus ad φ Aquarii diff. lat. 29'                      | Orionis, 17 x Virginis, 19 3  |
| Saturnus ad E Sagitt. d. l. 1. 0 2'                    | Orionis, 21 α Eridani, 25 β   |
| Mercur. in conjunct. cum Sole                          | Erid., 27 α Virg., 28 δ Ophiuci   |

| Dier<br>mensis | Dier<br>hebdomadae | Aequatio<br>adenda<br>temporis<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitudo<br>Solis | Ascensio recta<br>Solis |        |             | Declinatio<br>Solis<br>Australis |
|----------------|--------------------|---|------------------|--------------------|-------------------------|--------|-------------|----------------------------------|
|                |                    |   |                  |                    | M. S.                   | S.     | S. G. M. S. |                                  |
| 1 Sat.         | 14.                | 4, 0  | 7, 3             | 10. 12. 35. 45     | 315.                    | 4. 1   | 17. 2. 56   |                                  |
| 2 Dom.         | 14.                | 11. 3   | 6, 5             | 10. 13. 36. 36     | 316.                    | 5. 0   | 16. 45. 37  |                                  |
| 3 Lun.         | 14.                | 17. 8   | 5, 7             | 10. 14. 37. 26     | 317.                    | 5. 46  | 16. 28. 1   |                                  |
| 4 Mar.         | 14.                | 23. 5   | 4, 8             | 10. 15. 38. 15     | 318.                    | 6. 20  | 16. 10. 8   |                                  |
| 5 Mer.         | 14.                | 28. 3   |                  | 10. 16. 39. 3      | 319.                    | 6. 41  | 15. 51. 58  |                                  |
| 6 Jov.         | 14.                | 32. 3   | 4, 0             | 10. 17. 39. 49     | 320.                    | 6. 50  | 15. 33. 32  |                                  |
| 7 Ven.         | 14.                | 35. 5   | 3, 2             | 10. 18. 40. 34     | 321.                    | 6. 47  | 15. 14. 50  |                                  |
| 8 Sat.         | 14.                | 37. 9   | 2, 4             | 10. 19. 41. 16     | 322.                    | 6. 32  | 14. 55. 53  |                                  |
| 9 Dom.         | 14.                | 39. 5   | 1, 6             | 10. 20. 41. 57     | 323.                    | 6. 4   | 14. 36. 41  |                                  |
| 10 Lun.        | 14.                | 40. 3   | 0, 8             | 10. 21. 42. 37     | 324.                    | 5. 24  | 14. 17. 14  |                                  |
| 11 Mar.        | 14.                | 40. 3   | 0, 0             | 10. 22. 43. 14     | 325.                    | 4. 32  | 13. 57. 33  |                                  |
| 12 Mer.        | 14.                | 40. 3   | 0, 8             | 10. 23. 43. 50     | 326.                    | 3. 28  | 13. 37. 39  |                                  |
| 13 Jov.        | 14.                | 39. 5   | 1, 6             | 10. 24. 44. 24     | 327.                    | 2. 12  | 13. 17. 32  |                                  |
| 14 Ven.        | 14.                | 37. 9   | 2, 3             | 10. 25. 44. 56     | 328.                    | 0. 45  | 12. 57. 12  |                                  |
| 15 Sat.        | 14.                | 32. 5   | 3, 1             | 10. 26. 45. 26     | 329.                    | 59. 6  | 12. 36. 39  |                                  |
| 16 Dom.        | 14.                | 28. 7   | 3, 8             | 10. 27. 45. 55     | 330.                    | 57. 16 | 12. 15. 54  |                                  |
| 17 Lun.        | 14.                | 24. 1   | 4, 6             | 10. 28. 46. 21     | 331.                    | 55. 15 | 11. 54. 58  |                                  |
| 18 Mar.        | 14.                | 18. 7   | 5, 4             | 10. 29. 46. 46     | 332.                    | 53. 4  | 11. 33. 51  |                                  |
| 19 Mer.        | 14.                | 12. 7   | 6, 0             | 11. 0. 47. 9       | 333.                    | 50. 42 | 11. 12. 33  |                                  |
| 20 Jov.        | 14.                | 6. 1  | 6, 6             | 11. 1. 47. 31      | 334.                    | 48. 10 | 10. 51. 4   |                                  |
| 21 Ven.        | 13.                | 58. 8   | 7, 3             | 11. 2. 47. 51      | 335.                    | 45. 28 | 10. 29. 25  |                                  |
| 22 Sat.        | 13.                | 50. 9   | 8, 6             | 11. 3. 48. 10      | 336.                    | 42. 37 | 10. 7. 36   |                                  |
| 23 Dom.        | 13.                | 42. 3   | 9, 2             | 11. 4. 48. 27      | 337.                    | 39. 37 | 9. 45. 38   |                                  |
| 24 Lun.        | 13.                | 33. 1   | 9, 8             | 11. 5. 48. 42      | 338.                    | 36. 28 | 9. 23. 31   |                                  |
| 25 Mar.        | 13.                | 23. 3   | 10, 3            | 11. 6. 48. 56      | 339.                    | 33. 10 | 9. 1. 16    |                                  |
| 26 Mer.        | 13.                | 13. 0   | 10, 7            | 11. 7. 49. 9       | 340.                    | 29. 44 | 8. 38. 53   |                                  |
| 27 Jov.        | 13.                | 2. 3  | 11, 3            | 11. 8. 49. 20      | 341.                    | 26. 10 | 8. 16. 22   |                                  |
| 28 Ven.        | 13.                | 51. 0   | 11, 8            | 11. 9. 49. 30      | 342.                    | 22. 28 | 7. 53. 43   |                                  |

| Dier<br>betum<br>meridie | Sectionis<br>a Sole | Diffen-<br>tia | Initi-<br>tium<br>Crep-<br>sculi | Ortu<br>Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crep-<br>sculi | Hora<br>Italica<br>Meridi-<br>ei |
|--------------------------|---------------------|----------------|----------------------------------|-------------------------|---------------------------------|-------------------------|----------------------------------|
|                          |                     |                |                                  |                         |                                 |                         |                                  |
| H. M. S.                 | M. S.               | H. M.          | H. M.                            | H. M.                   | H. M.                           | H. M.                   | H. M.                            |
| 1 Sat.                   | 2. 59. 43,1         | 4. 3. 9        | 5. 26                            | 7. 9                    | 4. 51                           | 6. 34                   | 18. 39                           |
| 2 Dom.                   | 2. 55. 40,0         | 4. 3. 1        | 5. 25                            | 7. 8                    | 4. 52                           | 6. 35                   | 18. 38                           |
| 3 Lun.                   | 2. 51. 36,9         | 4. 2. 2        | 5. 24                            | 7. 6                    | 4. 54                           | 6. 36                   | 18. 36                           |
| 4 Mar.                   | 2. 47. 34,7         | 4. 1. 4        | 5. 23                            | 7. 5                    | 4. 55                           | 6. 37                   | 18. 35                           |
| 5 Mer.                   | 2. 43. 33,3         | 4. 0. 6        | 5. 21                            | 7. 3                    | 4. 57                           | 6. 39                   | 18. 33                           |
| 6 Jov.                   | 2. 39. 32,7         | 3. 59. 8       | 5. 20                            | 7. 2                    | 4. 58                           | 6. 40                   | 18. 31                           |
| 7 Ven.                   | 2. 35. 32,9         | 3. 59. 0       | 5. 19                            | 7. 1                    | 4. 59                           | 6. 41                   | 18. 31                           |
| 8 Sat.                   | 2. 31. 33,9         | 3. 58. 2       | 5. 17                            | 7. 0                    | 5. 0                            | 6. 43                   | 18. 30                           |
| 9 Dom.                   | 2. 27. 35,7         | 3. 57. 3       | 5. 16                            | 6. 58                   | 5. 2                            | 6. 44                   | 18. 28                           |
| 10 Lun.                  | 2. 23. 38,4         | 3. 56. 5       | 5. 15                            | 6. 57                   | 5. 3                            | 6. 45                   | 18. 27                           |
| 11 Mar.                  | 2. 19. 41,9         | 3. 55. 7       | 5. 13                            | 6. 55                   | 5. 5                            | 6. 47                   | 18. 25                           |
| 12 Mer.                  | 2. 15. 46,2         | 3. 54. 9       | 5. 12                            | 6. 54                   | 5. 6                            | 6. 48                   | 18. 24                           |
| 13 Jov.                  | 2. 11. 51,3         | 3. 54. 1       | 5. 11                            | 6. 52                   | 5. 8                            | 6. 49                   | 18. 22                           |
| 14 Ven.                  | 2. 7. 57,2          | 3. 53. 4       | 5. 10                            | 6. 51                   | 5. 9                            | 6. 50                   | 18. 21                           |
| 15 Sat.                  | 2. 4. 3,8           | 3. 52. 7       | 5. 8                             | 6. 49                   | 5. 11                           | 6. 52                   | 18. 19                           |
| 16 Dom.                  | 2. 0. 11,1          | 3. 52. 0       | 5. 7                             | 6. 48                   | 5. 12                           | 6. 53                   | 18. 18                           |
| 17 Lun.                  | 1. 56. 9,1          | 3. 51. 3       | 5. 5                             | 6. 46                   | 5. 14                           | 6. 55                   | 18. 16                           |
| 18 Mar.                  | 1. 52. 27,8         | 3. 50. 6       | 5. 4                             | 6. 45                   | 5. 15                           | 6. 56                   | 18. 15                           |
| 19 Mer.                  | 1. 48. 37,2         | 3. 49. 9       | 5. 2                             | 6. 43                   | 5. 17                           | 6. 58                   | 18. 13                           |
| 20 Jov.                  | 1. 44. 47,3         | 3. 49. 2       | 5. 1                             | 6. 42                   | 5. 18                           | 6. 59                   | 18. 12                           |
| 21 Ven.                  | 1. 40. 58,1         | 3. 48. 6       | 4. 59                            | 6. 40                   | 5. 20                           | 7. 11                   | 18. 10                           |
| 22 Sat.                  | 1. 37. 9,5          | 3. 48. 0       | 4. 58                            | 6. 38                   | 5. 22                           | 7. 2                    | 18. 8                            |
| 23 Dom.                  | 1. 33. 21,5         | 3. 47. 4       | 4. 56                            | 6. 37                   | 5. 22                           | 7. 4                    | 18. 7                            |
| 24 Lun.                  | 1. 29. 34,1         | 3. 46. 8       | 4. 55                            | 6. 35                   | 5. 25                           | 7. 5                    | 18. 5                            |
| 25 Mar.                  | 1. 25. 47,3         | 3. 46. 0       | 4. 53                            | 6. 34                   | 5. 26                           | 7. 7                    | 18. 4                            |
| 26 Mer.                  | 1. 22. 1,0          | 3. 45. 7       | 4. 52                            | 6. 32                   | 5. 28                           | 7. 8                    | 18. 2                            |
| 27 Jov.                  | 1. 18. 15,3         | 3. 45. 2       | 4. 50                            | 6. 31                   | 5. 29                           | 7. 10                   | 18. 1                            |
| 28 Ven.                  | 1. 14. 30,1         | 3. 44. 7       | 4. 49                            | 6. 29                   | 5. 31                           | 7. 11                   | 17. 59                           |

| Dies<br>mensis | Dier<br>sidomini | Longitude<br>Luna<br>Meridie |     |    | Latitude<br>Luna<br>Meridie |     |      | Dia-<br>meter<br>bori-<br>zonta-<br>lis<br>Luna<br>Merid. | Paral-<br>laxis<br>bori-<br>zonta-<br>lis<br>Luna<br>Merid. | Declina-<br>tio Luna<br>Merid. | Trans-<br>itus Luna<br>per Me-<br>ridianum |     |      |
|----------------|------------------|------------------------------|-----|----|-----------------------------|-----|------|---|---|--------------------------------|--|-----|------|
|                |                  | S.                           | G.  | M. | S.                          | G.  | M.   | S.  | M.  | S.                             | G.   | H.  |      |
| 1 Sat.         | 10.              | 8.                           | 24. | 22 | 3.                          | 56. | 53 A | 32.   | 44  | 59.                            | 56   | 21. | 58 A |
| 2 Dom          | 10.              | 22.                          | 51. | 5  | 3.                          | 0.  | 18   | 32.   | 26  | 59.                            | 23   | 16. | 45   |
| 3 Lun.         | 11.              | 6.                           | 56. | 57 | 1.                          | 53. | 47   | 32.   | 1   | 58.                            | 39   | 10. | 45   |
| 4 Mar.         | 11.              | 20.                          | 38. | 15 | 0.                          | 42. | 19   | 31.   | 34  | 57.                            | 49   | 4.  | 23   |
| 5 Mer.         | 0.               | 3.                           | 53. | 49 | 0.                          | 29. | 25 B | 31.   | 6   | 56.                            | 58   | 1.  | 59 B |
| 6 Jov.         | 0                | 16.                          | 45. | 4  | 1.                          | 37. | 37   | 30.   | 41  | 56.                            | 10   | 8.  | 2    |
| 7 Ven.         | 0.               | 29.                          | 15. | 4  | 2.                          | 39. | 18   | 30.   | 17  | 55.                            | 27   | 13. | 39   |
| 8 Sat.         | 1.               | 11.                          | 28. | 3  | 3.                          | 32. | 18   | 29.   | 59  | 54.                            | 53   | 18. | 37   |
| 9 Dom          | 1.               | 23.                          | 28. | 51 | 4.                          | 15. | 6    | 29.   | 46  | 54.                            | 29   | 22. | 46   |
| 10 Lun.        | 2.               | 5.                           | 22. | 29 | 4.                          | 46. | 18   | 29.   | 38  | 54.                            | 15   | 25. | 54   |
| 11 Mar.        | 2.               | 17.                          | 13. | 58 | 5.                          | 5.  | 12   | 29.   | 36  | 54.                            | 12   | 27. | 54   |
| 12 Mer.        | 2.               | 29.                          | 7.  | 36 | 5.                          | 11. | 4    | 29.   | 39  | 54.                            | 17   | 28. | 39   |
| 13 Jov.        | 3.               | 11.                          | 7.  | 20 | 5.                          | 3.  | 28   | 29.   | 47  | 54.                            | 32   | 28. | 2    |
| 14 Ven.        | 3.               | 23.                          | 16. | 15 | 4.                          | 42. | 11   | 29.   | 59  | 54.                            | 53   | 26. | 6    |
| 15 Sat.        | 4.               | 5.                           | 36. | 31 | 4.                          | 7.  | 31   | 30.   | 13  | 55.                            | 20   | 22. | 54   |
| 16 Dom         | 4.               | 18.                          | 9.  | 22 | 3.                          | 20. | 25   | 30.   | 30  | 55.                            | 50   | 18. | 37   |
| 17 Lun.        | 5.               | 0.                           | 55. | 23 | 2.                          | 22. | 26   | 30.   | 47  | 56.                            | 22   | 13. | 24   |
| 18 Mar.        | 5.               | 13.                          | 54. | 33 | 1.                          | 16. | 3    | 31.   | 4   | 56.                            | 53   | 7.  | 31   |
| 19 Mer.        | 5.               | 27.                          | 6.  | 26 | 0.                          | 4.  | 26   | 31.   | 20  | 57.                            | 23   | 1.  | 14   |
| 20 Jov.        | 6.               | 10.                          | 30. | 17 | 1.                          | 8.  | 37 A | 31.   | 35  | 57.                            | 51   | 5.  | 13 A |
| 21 Ven.        | 6.               | 24.                          | 5.  | 39 | 2.                          | 18. | 56   | 31.   | 49  | 58.                            | 16   | 11. | 32   |
| 22 Sat.        | 7.               | 7.                           | 51. | 49 | 3.                          | 22. | 14   | 32.   | 1   | 58.                            | 37   | 17. | 21   |
| 23 Dom         | 7.               | 21.                          | 47. | 58 | 4.                          | 14. | 24   | 32.   | 11  | 58.                            | 56   | 22. | 20   |
| 24 Lun.        | 8.               | 5.                           | 53. | 15 | 4.                          | 51. | 56   | 32.   | 19  | 59.                            | 11   | 26. | 16   |
| 25 Mar.        | 8.               | 20.                          | 6.  | 0  | 5.                          | 12. | 0    | 32.   | 26  | 59.                            | 23   | 28. | 17   |
| 26 Mer.        | 9.               | 4.                           | 24. | 6  | 5.                          | 12. | 59   | 32.   | 29  | 59.                            | 29   | 28. | 37   |
| 27 Jov.        | 9.               | 18.                          | 44. | 20 | 4.                          | 54  | 54   | 32.   | 28  | 59.                            | 28   | 26. | 59   |
| 28 Ven         | 10.              | 9.                           | 2.  | 42 | 4.                          | 17. | 53   | 32.   | 24  | 59.                            | 20   | 23. | 40   |

| Dies<br>mens. | Longitudo<br>Luna media<br>nocte |     |     | Latitudo<br>Luna media<br>nocte |    |     | Dia-<br>meter<br>horiz.<br>Luna<br>med.<br>noct. | Paral-<br>laxis<br>horiz.<br>Luna<br>med.<br>noct. | Ortus<br>Luna<br>med. | Occidens<br>Luna |
|---------------|----------------------------------|-----|-----|---------------------------------|----|-----|--|--|-----------------------|------------------|
|               | S.                               | G.  | M.  | S.                              | G. | M.  | S.   | H.   | M.                    | H.               |
| 1 Sat.        | 10.                              | 15. | 40. | 1                               | 3. | 30. | 14 A   | 32.  | 36                    | 59. 41           |
| 2 Dom.        | 10.                              | 29. | 56. | 55                              | 2. | 27. | 59   | 32.  | 14                    | 59. 2            |
| 3 Lun.        | 11.                              | 13. | 50. | 50                              | 1. | 18. | 20   | 31.  | 48                    | 58. 15           |
| 4 Mar.        | 11.                              | 27. | 19. | 12                              | 0. | 6.  | 12   | 31.  | 20                    | 57. 24           |
| 5 Mer.        | 0.                               | 10. | 22. | 20                              | 1. | 4.  | 12 B   | 30.  | 53                    | 56. 33           |
| 6 Jov.        | 0.                               | 23. | 2.  | 30                              | 2. | 9.  | 27   | 30.  | 29                    | 55. 47           |
| 7 Ven.        | 1.                               | 5.  | 23. | 23                              | 3. | 6.  | 59   | 30.  | 7                     | 55. 9            |
| 8 Sat.        | 1.                               | 17. | 39. | 41                              | 3. | 55. | 5  | 29.  | 52                    | 54. 40           |
| 9 Dom.        | 1.                               | 29. | 26. | 13                              | 4. | 32. | 11   | 29.  | 41                    | 54. 21           |
| 10 Lun.       | 2.                               | 11. | 18. | 14                              | 4. | 57. | 21   | 29.  | 36                    | 54. 12           |
| 11 Mar.       | 2.                               | 28. | 10. | 14                              | 5. | 9.  | 48   | 29.  | 31                    | 54. 13           |
| 12 Mer.       | 3.                               | 5.  | 6.  | 29                              | 5. | 9.  | 0  | 29.  | 42                    | 54. 23           |
| 13 Jov.       | 3.                               | 17. | 10. | 27                              | 4. | 54. | 34   | 29.  | 53                    | 54. 42           |
| 14 Ven.       | 3.                               | 29. | 24. | 52                              | 4. | 26. | 30   | 30.  | 6                     | 55. 6            |
| 15 Sat.       | 4.                               | 11. | 51. | 18                              | 3. | 45. | 29   | 30.  | 21                    | 55. 35           |
| 16 Dom.       | 4.                               | 24. | 30. | 41                              | 2. | 52. | 40   | 30.  | 38                    | 56. 6            |
| 17 Lun.       | 5.                               | 7.  | 22. | 20                              | 1. | 50. | 7  | 30.  | 55                    | 56. 37           |
| 18 Mar.       | 5.                               | 20. | 28. | 57                              | 0. | 40. | 41   | 31.  | 12                    | 57. 8            |
| 19 Mer.       | 6.                               | 2.  | 46. | 52                              | 0. | 32. | 11 A   | 31.  | 28                    | 57. 37           |
| 20 Jov.       | 6.                               | 17. | 16. | 34                              | 1. | 44. | 24   | 31.  | 42                    | 58. 4            |
| 21 Ven.       | 7.                               | 0.  | 57. | 26                              | 2. | 51. | 46   | 31.  | 55                    | 58. 28           |
| 22 Sat.       | 7.                               | 14. | 48. | 40                              | 3. | 49. | 59   | 32.  | 6                     | 58. 48           |
| 23 Dom.       | 7.                               | 28. | 49. | 31                              | 4. | 35. | 15   | 32.  | 15                    | 59. 5            |
| 24 Lun.       | 8.                               | 12. | 58. | 54                              | 5. | 4.  | 20   | 32.  | 23                    | 59. 18           |
| 25 Mar.       | 8.                               | 27. | 14. | 53                              | 5. | 14. | 58   | 32.  | 28                    | 59. 26           |
| 26 Mer.       | 9.                               | 11. | 34. | 11                              | 5. | 6.  | 14   | 32.  | 29                    | 59. 29           |
| 27 Jov.       | 9.                               | 25. | 53. | 59                              | 4. | 38. | 26   | 32.  | 27                    | 59. 25           |
| 28 Ven.       | 10.                              | 10. | 9.  | 49                              | 3. | 53. | 27   | 33.  | 20                    | 59. 12           |
|               |                                  |     |     |                                 |    |     |  |  |                       | 5. 15            |
|               |                                  |     |     |                                 |    |     |  |  |                       | 1. 57            |

| <i>Dier<br/>mensis</i> | <i>Longitudo<br/>Planetarum</i> | <i>Latitudo<br/>Planeta-<br/>rum</i> | <i>Declina-<br/>tio Pla-<br/>netarum</i> | <i>Ortus<br/>Plane-<br/>tarum</i> | <i>Transi-<br/>tus Pla-<br/>netarum<br/>per Me-<br/>ridianum</i> | <i>Occasus<br/>Plane-<br/>tarum</i> |
|------------------------|---------------------------------|--------------------------------------|--|-----------------------------------|--|-------------------------------------|
|                        | <i>S. G. M.</i>                 | <i>G. M.</i>                         | <i>G. M.</i>                             | <i>H. M.</i>                      | <i>H. M.</i>   | <i>H. M.</i>                        |
| S A T U R N U S .      |                                 |                                      |  |                                   |  |                                     |
| 1                      | 9. 7. 57, 2                     | 0. 41, 3 B                           | 22. 33 A                                 | 5. 11 M                           | 9. 35 M  | 1. 59 V                             |
| 7                      | 9. 8. 34, 6                     | 0. 41, 2                             | 22. 30                                   | 4. 49                             | 9. 13  | 1. 37                               |
| 13                     | 9. 9. 10, 0                     | 0. 41, 4                             | 22. 28                                   | 4. 28                             | 8. 52  | 1. 16                               |
| 19                     | 9. 9. 41, 7                     | 0. 41, 1                             | 22. 26                                   | 4. 7                              | 8. 31  | 0. 55                               |
| 25                     | 9. 10. 11, 3                    | 0. 40, 6                             | 22. 25                                   | 3. 46                             | 8. 10  | 0. 34                               |
| J U P I T E R .        |                                 |                                      |  |                                   |  |                                     |
| 1                      | 9. 17. 42, 5                    | 0. 6. 3 A                            | 22. 24 A                                 | 5. 53 M                           | 10. 17 M   | 2. 41 V                             |
| 7                      | 9. 19. 2, 3                     | 0. 6, 8                              | 22. 14                                   | 5. 23                             | 9. 58  | 2. 23                               |
| 13                     | 9. 20. 16, 0                    | 0. 7, 4                              | 22. 3                                    | 5. 14                             | 9. 40  | 2. 6                                |
| 19                     | 9. 21. 31, 7                    | 0. 8, 1                              | 21. 53                                   | 4. 56                             | 9. 22  | 1. 48                               |
| 25                     | 9. 22. 41, 9                    | 0. 8, 8                              | 21. 42                                   | 4. 37                             | 9. 4   | 1. 31                               |
| M A R S .              |                                 |                                      |  |                                   |  |                                     |
| 1                      | 8. 16. 50, 3                    | 0. 5, 1 B                            | 22. 44 A                                 | 3. 41 M                           | 8. 3 M   | 0. 25 V                             |
| 7                      | 8. 20. 53, 2                    | 0. 0, 3                              | 23. 9                                    | 3. 35                             | 7. 56  | 0. 17                               |
| 13                     | 8. 24. 59, 6                    | 0. 4, 6 A                            | 23. 27                                   | 3. 31                             | 7. 50  | 0. 9                                |
| 19                     | 8. 29. 2, 3                     | 0. 9, 7                              | 23. 37                                   | 3. 27                             | 7. 45  | 0. 3                                |
| 25                     | 9. 3. 7. 7                      | 0. 16, 0                             | 23. 42                                   | 3. 23                             | 7. 40  | 11. 57 M                            |
| V E N U S .            |                                 |                                      |  |                                   |  |                                     |
| 1                      | 10. 19. 23, 0                   | 1. 22, 4 A                           | 16. 20 A                                 | 7. 36 M                           | 0. 29 V  | 5. 22 V                             |
| 7                      | 10. 26. 54, 3                   | 1. 26, 0                             | 13. 55                                   | 7. 31                             | 0. 34  | 5. 37                               |
| 13                     | 11. 4. 24, 6                    | 1. 27, 9                             | 11. 17                                   | 7. 24                             | 0. 39  | 5. 53                               |
| 19                     | 11. 11. 55, 8                   | 1. 26, 8                             | 8. 27                                    | 7. 18                             | 0. 44  | 6. 11                               |
| 25                     | 11. 19. 23, 0                   | 1. 22, 4                             | 5. 28                                    | 7. 11                             | 0. 49  | 6. 27                               |
| M E R C U R I U S .    |                                 |                                      |  |                                   |  |                                     |
| 1                      | 10. 26. 33, 1                   | 1. 9, 5 A                            | 13. 48 A                                 | 7. 53 M                           | 0. 57 V  | 6. 1 V                              |
| 7                      | 11. 6. 0, 7                     | 0. 4, 4                              | 9. 23                                    | 7. 44                             | 1. 7   | 6. 30                               |
| 13                     | 11. 12. 49, 8                   | 1. 20, 5 B                           | 5. 30                                    | 7. 32                             | 1. 10  | 6. 48                               |
| 19                     | 11. 14. 41, 5                   | 2. 50, 3                             | 3. 25                                    | 7. 3                              | 0. 49  | 6. 35                               |
| 25                     | 11. 20. 49, 0                   | 3. 37, 7                             | 4. 9                                     | 6. 27                             | 0. 10  | 5. 53                               |

ECLIPSES SATELLITUM JOVIS.

| Dies<br>menfis | I. Satelles.     |     |    | Dies | II. Satelles.    |     |    | Dies | III. Satelles. |     |    |  |  |
|----------------|------------------|-----|----|------|------------------|-----|----|------|----------------|-----|----|--|--|
|                | Immersiones      |     |    |      | Immersiones      |     |    |      | Immersiones    |     |    |  |  |
|                | H.               | M.  | S. |      | H.               | M.  | S. |      | H.             | M.  | S. |  |  |
| 2              | 19.              | 5.  | 21 | 4    | 10.              | 1.  | 25 | 5    | 22.            | 35. | 9  |  |  |
| 4              | 13.              | 33. | 37 | 7    | 23.              | 19. | 40 | 13   | 2.             | 24. | 47 |  |  |
| 6              | 8.               | 1.  | 55 | 11   | 12.              | 37. | 55 | 20   | 6.             | 34. | 0  |  |  |
| 8              | 2.               | 30. | 15 | 15   | 1.               | 56. | 25 | 27   | 10.            | 33. | 24 |  |  |
| 9              | 20.              | 58. | 37 | 18   | 15.              | 15. | 0  |      |                |     |    |  |  |
| 11             | 15.              | 27. | 0  | 22   | 4.               | 33. | 48 |      |                |     |    |  |  |
| 13             | 9.               | 55. | 25 | 25   | 17. <sup>+</sup> | 52. | 30 |      |                |     |    |  |  |
| 15             | 4.               | 23. | 53 |      |                  |     |    |      |                |     |    |  |  |
| 16             | 22.              | 52. | 22 |      |                  |     |    |      |                |     |    |  |  |
| 18             | 17. <sup>*</sup> | 20. | 48 |      |                  |     |    |      |                |     |    |  |  |
| 20             | 11.              | 49. | 25 |      |                  |     |    |      |                |     |    |  |  |
| 22             | 6.               | 18. | 0  |      |                  |     |    |      |                |     |    |  |  |
| 24             | 0.               | 46. | 38 |      |                  |     |    |      |                |     |    |  |  |
| 25             | 19.              | 15. | 16 |      |                  |     |    |      |                |     |    |  |  |
| 27             | 13.              | 43. | 55 |      |                  |     |    |      |                |     |    |  |  |

IV. Satelles.  
Imers. Emer. S.

Dies

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>borarius<br>Solis | Logaritmus<br>distantia<br>Solis a terra<br>posita media<br>100000 | Longitudo<br>Nodi Luna |     |    |
|------|-------------------|---|----------------------------|--|------------------------|-----|----|
|      |                   |   |                            |  | M.                     | G.  | M. |
| 1    | 32. 30, 0         | 2. 16, 0                                    | 2. 32, 0                   | 4. 993860  | 0.                     | 0.  | 21 |
| 4    | 32. 28, 8         | 2. 15, 3                                    | 2. 31, 9                   | 4. 994082  | 0.                     | 0.  | 12 |
| 7    | 32. 27, 8         | 2. 14, 6                                    | 2. 31, 7                   | 4. 994321  | 0.                     | 0.  | 3  |
| 10   | 32. 26, 6         | 2. 13, 9                                    | 2. 31, 6                   | 4. 994572  | 11.                    | 29. | 53 |
| 13   | 32. 25, 4         | 2. 13, 2                                    | 2. 31, 4                   | 4. 994840  | 11.                    | 29. | 44 |
| 16   | 32. 24, 2         | 2. 12, 6                                    | 2. 31, 2                   | 4. 995121  | 11.                    | 29. | 34 |
| 19   | 32. 23, 0         | 2. 12, 0                                    | 2. 31, 0                   | 4. 995414  | 11.                    | 29. | 24 |
| 22   | 32. 21, 7         | 2. 11, 5                                    | 2. 30, 8                   | 4. 995722  | 11.                    | 29. | 15 |
| 25   | 32. 20, 3         | 2. 11, 0                                    | 2. 30, 6                   | 4. 996038  | 11.                    | 29. | 5  |
| 28   | 32. 18, 8         | 2. 10, 6                                    | 2. 30, 4                   | 4. 996367  | 11.                    | 28. | 56 |

## POSITIONES SATELLITUM JOVIS

Oriens

6<sup>h</sup> Mane

Occidens

|    |     |          |            |       |
|----|-----|----------|------------|-------|
| 1  | 4.  | 0.       | ○ 2.       | 1.    |
| 2  | 4.  | 2.σ 1.   | ○          |       |
| 3  | 4.  |          | ○ 1. 2.    |       |
| 4  | 4.  |          | ○ 2.       | 1. 2. |
| 5  |     |          | ○ 2. 1.    | 1.    |
| 6  | 10. |          | ○ 2.       | 1.    |
| 7  |     | 1. 2.    | ○ 2.       | 4.    |
| 8  |     | 1. 2.    | ○ 2.σ 1.   | 1.    |
| 9  |     | 2. 3. 1. | ○          | 4.    |
| 10 | 10. |          | ○ 2.       | 1.    |
| 11 |     |          | ○ 2.       | 1.    |
| 12 |     | 2. 1. 1. | ○          | 1. 4. |
| 13 |     | 1. 2.    | ○ 1.σ 1.   | 4.    |
| 14 |     | 1. 2.    | ○ 1. 2.    |       |
| 15 | 10. | 4.       | ○ 2. 1.    |       |
| 16 | 4.  | 1. 2.    | ○          |       |
| 17 | 4.  | 1. 2. 3. | ○ 1.       |       |
| 18 | 4.  | 1. 2.    | ○ 1. 2.    | 1.    |
| 20 | 4.  | 1. 2.    | ○ 1. 2.    | 1.    |
| 21 | 4.  | 1. 2. 1. | ○ 1. 2.    |       |
| 22 | 1.  | 1. 2.    | ○ 2. 1. 2. |       |
| 23 |     | 1. 2.    | ○ 1. 2.    |       |
| 24 |     | 2. 3. 1. | ○ 1.       | 4.    |
| 25 |     | 1. 2.    | ○ 1. 2.    | 1.    |
| 26 |     |          | ○ 2. 1. 1. | 1.    |
| 27 | 10. | 2.       | ○ 1.       | 4.    |
| 28 |     | 1. 2.    | ○ 1.       |       |

Positiones Satellitum tempore eclipsium.

|    |    |            |     |    |
|----|----|------------|-----|----|
| 19 | 4. | ○ 1..      | 1.. | 2. |
| 26 |    | ○ 2. 1. 1. | 1.. | 4. |

|    | <i>Phænomena &amp; Observationes<br/>Solis</i>                      |  | <i>Phænomena &amp; Observationes<br/>Lunæ</i> |
|----|---|--|---|
|    | Sol in parallelo  |  | Luna  |
| 2  | Eclipsis Solis. Vide supra.   | 1 ad x Capri   | 1h 30'  |
| 3  | 8 Aquarii culm. 22h 17'   | 2 Novilunum  | 19h 50'                                       |
| 4  | Orionis culm. 6h 19'  | 3 ad Veneris   | 18h 36'                                       |
| 6  | Eridani culm. 5h 46'  | 5 ad s Pisc. Im. 6h 18'  | Dif. B. 10 $\frac{2}{3}$                      |
|    | item & Antinoi culm. 19h 40'  | Em. 7h 0'  |   |
| 9  | Ophiuchi culm. 16h 42'  | 7 ad ξ Arietis   | 22h 45'                                       |
| 10 | Serpentis culm. 18h 21'   | 8 ad z Tauri   | 15h   |
| 11 | Ophiuchi culm. 16h 31'  | 9 ad x Tauri   | 7h 36'  |
| 12 | & Serpentis culm. 18h 34'   | 10 Apogea  |   |
|    | & 16h 2'  | Primus Quadrans  | 14h 42'                                       |
| 13 | Orionis & γ Aquarii culm.<br>5h 36' & 22h 30'                       | 14 ad γ Cancri   | 6h 10'  |
| 14 | Orionis culm. 5h 45'  | 17 ad x & τ Leonis   | 4h 10' & 16h 40'                              |
| 15 | Antinoi culm. 19h 38'   | 18 Plenilunum  | 9h 59'  |
| 16 | Antin., x Aquar., & Orion.<br>culm. 20h 10', 22h 4', & 5h 37'       | Eclipsis Lunæ. Vide supra.   |   |
| 18 | Ceti & δ Orionis culm. 2h 33',<br>& 5h 44'                          | 19 ad g Virginis   | 18h 30'                                       |
| 20 | in signo Arietis 5h 23'   | 21 ad τ Scorpii  | 19h 50'                                       |
| 21 | Antinoi, ζ & τ Virg. culm.<br>19h 32', 13h 16', & 12h 1'            | 22 ad σ Scorpii  | 9h 45'  |
| 25 | Ceti culm. 2h 12'   | 23 ad γ Sagittarii   | 18h 50'                                       |
| 26 | Aquila & γ Ophiuchi culm.<br>18h 47', & 17h 10'                     | 24 Perigea   |   |
| 27 | 5 Virg. & α Ceti culm. 11h 10'<br>& 2h 24'                          | 25 ad Saturni  | 18h 45'                                       |
| 30 | in media distantia a terra  | Ultimus Quadrans   | 6h 24'  |
| 31 | 5 Virg. & β Ophiuchi 12h 0', &<br>16h 47'                           | 26 ad Martis & Jovis   | 13h 33', &<br>21h 56'                         |
|    |   | 28 & x Capri   | 7h & 9h                                       |
|    | <i>Phænomena &amp; Observationes<br/>Planatarum</i>                 |  |   |
| 6  | Mars ad 1. & 2. , Sagitt. diff. lat.<br>35' & 38'                   | Planetae in parallelis fixarum.  |   |
| 9  | Mars ad Saturni diff. lat. 1.º 6'                                   | Saturnus γ Leporis, β Corvi,<br>σ Sagitt., γ Hydræ, δ Scorpii  |   |
| 15 | Mars ad 1. 2. 3. -x Sagitt. diff. lat.<br>1.º 50', 1.º 45', 1.º 18' | Jupiter ζ Corvi & τ Sagittarii,<br>17 μ Sagittarii, 22 β & δ Leporis,<br>31 b Canis.   |   |
| 17 | Venus ad e Piscium d.l. 15' & 35'                                   | Mars 1. , Navis, 7 α Corvi, 25<br>γ Leporis & 5 Corvi, 28 σ Sagittarii, γ Hydræ, δ Scorpii   |   |
| 19 | ad ξ Piscium diff. lat. 37'   | Venus 2 δ Ophiuchi & , Serpent.,<br>4 ξ Orionis, 7 δ Orionis, 8 ξ<br>& , Virg., 13 β Virg., 17 δ Virg.<br>& δ Ophiu., 19 Proc., β Aqnil.<br>& γ Orionis, 22 α Serp., & α<br>Orionis, 24 α Aquil., 25 β Ca-<br>nis, 29 α Leonis, 31 ε Virg. |   |
| 25 | Saturnus ad σ Sagitt. diff. lat. 15'                                | Mercur. 5 α Hydr., 7 β Orionis,<br>11 ξ Eridani, 12 & 25 x Orion.<br>& α Virg., 30 β Orionis   |   |
| 29 | Venus ad e Piscium diff. l. 1.º 2'                                  |  |   |
|    | Mercurius in elongat. maxima  |  |   |

| D <small>ies</small><br>bris<br>mense | Equatio<br>addenda<br>tempori<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitudo<br>Solis | Ascensio recta<br>Solis |        |          | Declinatio<br>Solis<br>Australis |
|---------------------------------------|--|------------------|--------------------|-------------------------|--------|----------|----------------------------------|
|                                       |  |                  |                    | M. S.                   | S.     | G. M. S. |                                  |
| 1 Sat.                                | 12. 39, 2  | 12, 4            | 11. 10. 49. 38     | 342.                    | 18. 38 |          | 7. 30. 57                        |
| 2 Dom                                 | 12. 26, 8  | 12, 8            | 11. 11. 49. 45     | 343.                    | 14. 41 |          | 7. 8. 5                          |
| 3 Lun.                                | 12. 14, 0  | 13, 3            | 11. 12. 49. 50     | 344.                    | 10. 37 |          | 6. 45. 7                         |
| 4 Mar.                                | 12. 0, 7   | 13, 7            | 11. 13. 49. 53     | 345.                    | 6. 26  |          | 6. 22. 4                         |
| 5 Mer.                                | 11. 47, 0  | 14, 2            | 11. 14. 49. 54     | 346.                    | 2. 8   |          | 5. 58. 55                        |
| 6 Jov.                                | 11. 32, 8  | 14, 6            | 11. 15. 49. 54     | 346.                    | 57. 43 |          | 5. 35. 41                        |
| 7 Ven.                                | 11. 18, 2  | 15, 0            | 11. 16. 49. 51     | 347.                    | 53. 12 |          | 5. 12. 23                        |
| 8 Sat.                                | 11. 3, 2   | 15, 3            | 11. 17. 49. 47     | 348.                    | 48. 35 |          | 4. 48. 59                        |
| 9 Dom                                 | 10. 47, 9  | 15, 6            | 11. 18. 49. 40     | 349.                    | 43. 52 |          | 4. 25. 33                        |
| 10 Lun.                               | 10. 32, 3  | 16, 0            | 11. 19. 49. 31     | 350.                    | 39. 4  |          | 4. 2. 4                          |
| 11 Mar.                               | 10. 16, 3  | 16, 4            | 11. 20. 49. 19     | 351.                    | 34. 11 |          | 3. 38. 32                        |
| 12 Mer.                               | 9. 59, 9   | 16, 7            | 11. 21. 49. 5      | 352.                    | 29. 13 |          | 2. 14. 57                        |
| 13 Jov.                               | 9. 43, 2   | 17, 0            | 11. 22. 48. 49     | 353.                    | 24. 10 |          | 2. 51. 20                        |
| 14 Ven.                               | 9. 26, 2   | 17, 3            | 11. 23. 48. 31     | 354.                    | 19. 2  |          | 2. 27. 42                        |
| 15 Sat.                               | 9. 8, 9  | 17, 6            | 11. 24. 48. 10     | 355.                    | 13. 50 |          | 2. 4. 3                          |
| 16 Dom                                | 8. 51, 3   | 17, 8            | 11. 25. 47. 47     | 356.                    | 8. 35  |          | 1. 40. 23                        |
| 17 Lun.                               | 8. 33, 5   | 18, 0            | 11. 26. 47. 21     | 357.                    | 3. 16  |          | 1. 16. 42                        |
| 18 Mar.                               | 8. 15, 5   | 18, 2            | 11. 27. 46. 54     | 357.                    | 57. 54 |          | 0. 53. 1                         |
| 19 Mer.                               | 7. 57, 3   | 18, 3            | 11. 28. 46. 23     | 358.                    | 53. 29 |          | 0. 29. 20                        |
| 20 Jov.                               | 7. 39, 0   | 18, 4            | 11. 29. 45. 51     | 359.                    | 47. 2  |          | 0. 5. 39                         |
| 21 Ven.                               | 7. 20, 6   | 18, 5            | 0. 0. 45. 17       | 0.                      | 41. 33 |          | 0. 18. 1                         |
| 22 Sat.                               | 7. 2, 1  | 18, 6            | 0. 1. 44. 41       | 1.                      | 36. 2  |          | 0. 41. 40                        |
| 23 Dom                                | 6. 43, 5   | 18, 7            | 0. 2. 44. 4        | 2.                      | 30. 30 |          | 1. 5. 18                         |
| 24 Lun.                               | 6. 24, 8   | 18, 7            | 0. 3. 43. 24       | 3.                      | 24. 57 |          | 1. 28. 54                        |
| 25 Mar.                               | 6. 6, 1  | 18, 7            | 0. 4. 42. 42       | 4.                      | 19. 24 |          | 1. 52. 28                        |
| 26 Mer.                               | 5. 47, 4   | 19, 8            | 0. 5. 41. 59       | 5.                      | 13. 51 |          | 2. 16. 0                         |
| 27 Jov.                               | 5. 28, 6   | 19, 7            | 0. 6. 41. 14       | 6.                      | 8. 18  |          | 2. 39. 29                        |
| 28 Ven.                               | 5. 9, 9  | 19, 6            | 0. 7. 40. 28       | 7.                      | 2. 46  |          | 3. 2. 55                         |
| 29 Sat.                               | 4. 51, 3   | 19, 5            | 0. 8. 39. 39       | 7.                      | 57. 14 |          | 3. 26. 18                        |
| 30 Dom                                | 4. 32, 8   | 19, 4            | 0. 9. 38. 48       | 8.                      | 51. 43 |          | 3. 49. 37                        |
| 31 Lun.                               | 4. 14, 4   | 19, 3            | 0. 10. 37. 58      | 9.                      | 46. 14 |          | 4. 12. 52                        |

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| Dier<br>nominata | Distantia<br>sectionis Y<br>a Sole | Diffe-<br>rentia | In-<br>ti-<br>tum<br>Crepus-<br>culi | Ortu-<br>s<br>Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepus-<br>culi | Hora<br>Italica<br>Meridi-<br>diei |
|------------------|------------------------------------|------------------|--------------------------------------|-------------------------------|---------------------------------|--------------------------|------------------------------------|
|                  | B. M. S.                           | M. S.            | H. M.                                | H. M.                         | H. M.                           | H. M.                    | H. M.                              |
| 1 Sat.           | 1. 10. 45,4                        |                  | 4. 47                                | 6. 27                         | 5. 33                           | 7. 13                    | 17. 57                             |
| 2 Dom            | 1. 7. 1,2                          | 3. 44,2          | 4. 46                                | 6. 25                         | 5. 35                           | 7. 14                    | 17. 55                             |
| 3 Lun.           | 1. 3. 17,5                         | 3. 43,7          | 4. 44                                | 6. 24                         | 5. 36                           | 7. 16                    | 17. 54                             |
| 4 Mar.           | 0. 59. 43,3                        | 3. 43,2          | 4. 43                                | 6. 22                         | 5. 38                           | 7. 17                    | 17. 52                             |
| 5 Mer            | 0. 55. 51,5                        | 3. 42,8          | 4. 42                                | 6. 21                         | 5. 39                           | 7. 18                    | 17. 51                             |
| 6 Jov.           | 0. 52. 9,1                         | 3. 42,4          |                                      |                               |                                 |                          |                                    |
| 7 Ven.           | 0. 48. 27,2                        |                  | 4. 40                                | 6. 19                         | 5. 41                           | 7. 20                    | 17. 49                             |
| 8 Sat.           | 0. 44. 45,7                        | 3. 41,9          | 4. 39                                | 6. 18                         | 5. 42                           | 7. 21                    | 17. 48                             |
| 9 Dom            | 0. 41. 4,6                         | 3. 41,5          | 4. 37                                | 6. 16                         | 5. 44                           | 7. 23                    | 17. 46                             |
| 10 Lun.          | 0. 37. 23,8                        | 3. 41,1          | 4. 35                                | 6. 15                         | 5. 45                           | 7. 25                    | 17. 45                             |
| 11 Mar.          | 0. 33. 43,3                        | 3. 40,8          | 4. 34                                | 6. 13                         | 5. 47                           | 7. 26                    | 17. 43                             |
| 12 Mer.          | 0. 30. 3,2                         | 3. 40,5          |                                      |                               |                                 |                          |                                    |
| 13 Jov.          | 0. 26. 23,4                        |                  | 4. 32                                | 6. 12                         | 5. 48                           | 7. 28                    | 17. 42                             |
| 14 Ven.          | 0. 22. 43,9                        | 3. 39,8          | 4. 30                                | 6. 10                         | 5. 50                           | 7. 30                    | 17. 40                             |
| 15 Sat.          | 0. 19. 4,6                         | 3. 39,5          | 4. 28                                | 6. 9                          | 5. 51                           | 7. 32                    | 17. 38                             |
| 16 Dom           | 0. 15. 25,6                        | 3. 39,3          | 4. 26                                | 6. 7                          | 5. 53                           | 7. 34                    | 17. 36                             |
| 17 Lun.          | 0. 11. 46,9                        | 3. 39,0          | 4. 25                                | 6. 5                          | 5. 55                           | 7. 35                    | 17. 34                             |
| 18 Mar.          | 0. 8. 8,4                          |                  |                                      |                               |                                 |                          |                                    |
| 19 Mer.          | 0. 4. 30,0                         | 3. 38,7          | 4. 23                                | 6. 4                          | 5. 56                           | 7. 37                    | 17. 32                             |
| 20 Jov.          | 0. 0. 51,8                         | 3. 38,5          | 4. 21                                | 6. 2                          | 5. 58                           | 7. 39                    | 17. 30                             |
| 21 Ven.          | 23. 57. 13,8                       | 3. 38,4          | 4. 19                                | 6. 1                          | 5. 59                           | 7. 41                    | 17. 28                             |
| 22 Sat.          | 23. 53. 35,9                       | 3. 38,2          | 4. 17                                | 5. 59                         | 6. 0                            | 7. 42                    | 17. 26                             |
| 23 Dom           | 23. 49. 58,0                       | 3. 38,0          | 4. 15                                | 5. 58                         | 6. 2                            | 7. 43                    | 17. 24                             |
| 24 Lun.          | 23. 46. 20,2                       |                  |                                      |                               |                                 |                          |                                    |
| 25 Mar.          | 23. 43. 42,4                       | 3. 37,9          | 4. 14                                | 5. 56                         | 6. 4                            | 7. 46                    | 17. 22                             |
| 26 Mer.          | 23. 39. 4,6                        | 3. 37,8          | 4. 12                                | 5. 54                         | 6. 6                            | 7. 48                    | 17. 20                             |
| 27 Jov.          | 23. 35. 26,8                       | 3. 37,9          | 4. 10                                | 5. 55                         | 6. 7                            | 7. 50                    | 17. 18                             |
| 28 Ven.          | 23. 31. 49,0                       | 3. 37,8          | 4. 8                                 | 5. 51                         | 6. 9                            | 7. 52                    | 17. 16                             |
| 29 Sat.          | 23. 28. 11,1                       | 3. 37,9          | 4. 7                                 | 5. 49                         | 6. 11                           | 7. 53                    | 17. 14                             |
| 30 Dom           | 23. 24. 33,1                       |                  |                                      |                               |                                 |                          |                                    |
| 31 Lun.          | 23. 20. 55,1                       | 3. 38,1          | 3. 57                                | 5. 41                         | 6. 19                           | 8. 1                     | 17. 6                              |
|                  |                                    | 3. 38,2          | 4. 55                                | 5. 40                         | 6. 20                           | 8. 3                     | 17. 4                              |
|                  |                                    |                  |                                      |                               |                                 |                          |                                    |
|                  |                                    |                  | 3. 38,2                              |                               |                                 |                          |                                    |

| Dies<br>be-<br>domi-<br>nae<br>menis | Longitude<br>Lunæ<br>Meridie |     |     | Latitudo<br>Lunæ<br>Meridie |    |     | Dia-<br>metr. bori-<br>zonta-<br>lis<br>Lunæ<br>Merid. | Paral-<br>laxis bori-<br>zonta-<br>lis<br>Lunæ<br>Merid. | Declina-<br>tio Lunæ<br>Merid. | Transi-<br>tus Lunæ<br>per Me-<br>ridianum |          |          |
|--------------------------------------|------------------------------|-----|-----|-----------------------------|----|-----|--|--|--------------------------------|--|----------|----------|
|                                      | S.                           | G.  | M.  | S.                          | G. | M.  |  |  |                                |  |          |          |
|                                      |                              |     |     |                             |    |     |  |  |                                |  |          |          |
| 1 Sat.                               | 10.                          | 17. | 14. | 44                          | 3. | 25. | 30 A   | 32.  | 14                             | 59. 2                                      | 18. 55 A | 10. 30 M |
| 2 Dom                                | 11.                          | 1.  | 15. | 43                          | 2. | 21. | 21   | 32.  | 0                              | 58. 36                                     | 13. 15   | 11. 23   |
| 3 Lun.                               | 11.                          | 15. | 1.  | 44                          | 1. | 9.  | 58   | 31.  | 42                             | 58. 2                                      | 6. 58    | 0. 11 V  |
| 4 Mar.                               | 11.                          | 28. | 29. | 45                          | 0. | 3.  | 56 B   | 31.  | 20                             | 57. 23                                     | 0. 32    | 0. 57    |
| 5 Mer                                | 0.                           | 11. | 38. | 15                          | 1. | 15. | 55   | 30.  | 57                             | 56. 41                                     | 5. 46 B  | 1. 41    |
| 6 Jov.                               | 0                            | 34. | 27. | 11                          | 2. | 22. | 16   | 30.  | 35                             | 56. 0                                      | 11. 41   | 2. 24    |
| 7 Ven.                               | 1.                           | 6.  | 57. | 51                          | 3. | 20. | 15   | 30.  | 19                             | 55. 23                                     | 16. 59   | 3. 9     |
| 8 Sat.                               | 1.                           | 19. | 13. | 8                           | 4. | 7.  | 49   | 29.  | 58                             | 54. 52                                     | 21. 30   | 3. 56    |
| 9 Dom                                | 2.                           | 1.  | 16. | 20                          | 4. | 43. | 33   | 29.  | 46                             | 54. 30                                     | 25. 3    | 4. 43    |
| 10 Lun.                              | 2.                           | 13. | 11. | 54                          | 5. | 6.  | 40   | 29.  | 39                             | 54. 18                                     | 27. 29   | 5. 32    |
| 11 Mar.                              | 2.                           | 29. | 4.  | 25                          | 5. | 16. | 34   | 29.  | 38                             | 54. 16                                     | 28. 41   | 6. 24    |
| 12 Mer                               | 3.                           | 6.  | 58. | 37                          | 5. | 12. | 57   | 29.  | 43                             | 54. 24                                     | 28. 29   | 7. 16    |
| 13 Jov.                              | 3.                           | 18. | 59. | 3                           | 4. | 55. | 46   | 29.  | 53                             | 54. 42                                     | 27. 0    | 8. 8     |
| 14 Ven.                              | 4.                           | 1.  | 9.  | 54                          | 4. | 25. | 7  | 30.  | 7                              | 55. 9                                      | 24. 13   | 8. 59    |
| 15 Sat.                              | 4.                           | 13. | 34. | 53                          | 5. | 41. | 33   | 30.  | 26                             | 55. 43                                     | 20. 17   | 9. 47    |
| 16 Dom                               | 4.                           | 26. | 16. | 22                          | 2. | 46. | 18   | 30.  | 48                             | 56. 22                                     | 15. 21   | 10. 34   |
| 17 Lun                               | 5.                           | 9.  | 16. | 5                           | 1. | 41. | 13   | 31.  | 9                              | 57. 2                                      | 9. 40    | 11. 20   |
| 18 Mar.                              | 5.                           | 22. | 34. | 21                          | 0. | 29. | 10   | 31.  | 31                             | 57. 42                                     | 3. 25    | *        |
| 19 Mer.                              | 6.                           | 6.  | 10. | 8                           | 0. | 46. | 4 A  | 31.  | 50                             | 58. 18                                     | 3. 10 A  | 0. 5 M   |
| 20 Jov.                              | 6.                           | 20. | 1.  | 16                          | 2. | 0.  | 2  | 32.  | 6                              | 58. 47                                     | 9. 42    | 0. 51    |
| 21 Ven                               | 7.                           | 4.  | 4.  | 37                          | 3. | 7.  | 48   | 32.  | 18                             | 59. 8                                      | 15. 51   | 1. 40    |
| 22 Sat.                              | 7.                           | 18. | 16. | 27                          | 4. | 4.  | 43   | 32.  | 25                             | 59. 21                                     | 21. 13   | 2. 31    |
| 23 Dom                               | 8.                           | 2.  | 32. | 50                          | 4. | 46. | 50   | 32.  | 28                             | 59. 26                                     | 25. 28   | 3. 28    |
| 24 Lun                               | 8.                           | 16. | 50. | 18                          | 5. | 11. | 15   | 32.  | 27                             | 59. 25                                     | 27. 57   | 4. 28    |
| 25 Mar                               | 9.                           | 1.  | 5.  | 27                          | 5. | 16. | 29   | 32.  | 23                             | 59. 17                                     | 28. 45   | 5. 31    |
| 26 Mer.                              | 9.                           | 15. | 15. | 36                          | 5. | 2.  | 29   | 32.  | 17                             | 59. 6                                      | 27. 36   | 6. 34    |
| 27 Jov.                              | 9.                           | 29. | 18. | 39                          | 4. | 30. | 29   | 32.  | 8                              | 58. 50                                     | 24. 44   | 7. 35    |
| 28 Ven                               | 10.                          | 13. | 12. | 50                          | 3. | 42. | 50   | 31.  | 58                             | 58. 31                                     | 20. 26   | 8. 31    |
| 29 Sat.                              | 10.                          | 26. | 56. | 48                          | 2. | 42. | 59   | 31.  | 45                             | 58. 8                                      | 15. 5    | 9. 23    |
| 30 Dom                               | 11.                          | 10. | 29. | 7                           | 1. | 34. | 44   | 31.  | 29                             | 57. 41                                     | 9. 7     | 10. 12   |
| 31 Lun.                              | 11.                          | 23. | 48. | 54                          | 0. | 22. | 21   | 31.  | 14                             | 57. 31                                     | 2. 46    | 10. 58   |

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| Dies<br>z. Luna | Longitudo<br>Luna media<br>nocte |     |     | Latitudo<br>Luna media<br>nocte |    |     | Dia-<br>meter<br>horiz.<br>Luna<br>med.<br>noct. | Paral-<br>laxis<br>horiz.<br>Luna<br>med.<br>noct. | Ortus<br>Luna | Occulus<br>Luna |    |     |      |     |      |
|-----------------|----------------------------------|-----|-----|---------------------------------|----|-----|--|--|---------------|-----------------|----|-----|------|-----|------|
|                 | S.                               | G.  | M.  | S.                              | G. | M.  | S.   | H.   | M.            |                 |    |     |      |     |      |
| 1 Sat.          | 10.                              | 24. | 16. | 53                              | 2. | 54. | 37 A   | 32.  | 8             | 58.             | 50 | 5.  | 48 M | 3.  | 23 V |
| 2 Dom.          | 11.                              | 8.  | 10. | 45                              | 1. | 46. | 15   | 31.  | 51            | 58.             | 20 | 6.  | 15   | 4.  | 41   |
| 3 Lun.          | 11.                              | 21. | 48. | 10                              | 0. | 33. | 0  | 31.  | 32            | 57.             | 43 | 6.  | 38   | 5.  | 55   |
| 4 Mar.          | 0.                               | 5.  | 6.  | 27                              | 1. | 40. | 29 B   | 31.  | 9             | 57.             | 2  | 6.  | 57   | 7.  | 8    |
| 5 Mer.          | 0.                               | 18. | 5.  | 10                              | 1. | 50. | 2  | 30.  | 46            | 56.             | 20 | 7.  | 14   | 8.  | 19   |
| 6 Jov.          | 1.                               | 0.  | 44. | 37                              | 2. | 52. | 29   | 30.  | 24            | 55.             | 41 | 7.  | 31   | 9.  | 30   |
| 7 Ven.          | 1.                               | 13. | 7.  | 16                              | 3. | 45. | 28   | 30.  | 6             | 55.             | 7  | 7.  | 52   | 10. | 40   |
| 8 Sat.          | 1.                               | 25. | 15. | 58                              | 4. | 27. | 14   | 29.  | 51            | 54.             | 40 | 8.  | 14   | 11. | 50   |
| 9 Dom.          | 2.                               | 7.  | 14. | 48                              | 4. | 56. | 44   | 29.  | 42            | 54.             | 23 | 8.  | 36   | *   | *    |
| 10 Lun.         | 2.                               | 19. | 8.  | 14                              | 5. | 13. | 18   | 29.  | 38            | 54.             | 16 | 9.  | 8    | 0.  | 57 M |
| 11 Mar.         | 3.                               | 1.  | 1.  | 1                               | 5. | 16. | 28   | 29.  | 39            | 54.             | 19 | 9.  | 54   | 1.  | 58   |
| 12 Mer.         | 3.                               | 12. | 57. | 49                              | 5. | 6.  | 5  | 29.  | 47            | 54.             | 32 | 10. | 48   | 2.  | 54   |
| 13 Jov.         | 3.                               | 25. | 3   | 53                              | 4. | 42. | 8  | 29.  | 59            | 54.             | 54 | 11. | 48   | 3.  | 38   |
| 14 Ven.         | 4.                               | 7.  | 20. | 28                              | 4. | 4.  | 55   | 30.  | 16            | 55.             | 25 | 0.  | 59 X | 4.  | 16   |
| 15 Sat.         | 4.                               | 19. | 53. | 24                              | 3. | 15. | 20   | 30.  | 37            | 56.             | 2  | 2.  | 9    | 4.  | 47   |
| 16 Dom.         | 5.                               | 2.  | 43. | 52                              | 2. | 14. | 52   | 30.  | 58            | 56.             | 42 | 3.  | 2    | 5.  | 10   |
| 17 Lun.         | 5.                               | 15. | 52. | 55                              | 1. | 5.  | 51   | 31.  | 20            | 57.             | 23 | 4.  | 35   | 5.  | 29   |
| 18 Mar.         | 5.                               | 29. | 20. | 7                               | 0. | 8.  | 17 A   | 31.  | 41            | 58.             | 4  | 5.  | 48   | 5.  | 50   |
| 19 Mer.         | 6.                               | 13. | 3.  | 56                              | 1. | 23. | 32   | 31.  | 59            | 58.             | 33 | 7.  | 3    | 6.  | 8    |
| 20 Jov.         | 6                                | 27. | 1.  | 37                              | 2. | 35. | 1  | 32.  | 13            | 58.             | 59 | 8.  | 19   | 6.  | 27   |
| 21 Ven.         | 7.                               | 11. | 9.  | 45                              | 3. | 37. | 56   | 32.  | 22            | 59.             | 16 | 9.  | 38   | 6.  | 48   |
| 22 Sat.         | 7.                               | 25. | 24. | 18                              | 4. | 27. | 55   | 32.  | 27            | 59.             | 25 | 11. | 8    | 7.  | 14   |
| 23 Dom.         | 8.                               | 9.  | 41. | 41                              | 5. | 1.  | 26   | 32.  | 28            | 59.             | 27 | *   | *    | 7.  | 47   |
| 24 Lun.         | 8.                               | 23. | 58. | 21                              | 5. | 16. | 21   | 32.  | 26            | 59.             | 23 | 0.  | 19 M | 8.  | 30   |
| 25 Mar.         | 9                                | 8.  | 11. | 17                              | 5. | 21. | 53   | 32.  | 20            | 59.             | 12 | 1.  | 35   | 9.  | 28   |
| 26 Mer.         | —                                |     |     | —                               |    |     | —  |  |               | —               |    |     |      |     |      |
| 27 Jov.         | 9.                               | 22. | 18. | 9                               | 4. | 48. | 38   | 32.  | 13            | 58.             | 59 | 2.  | 36   | 10. | 33   |
| 28 Ven.         | 10.                              | 6.  | 16. | 56                              | 4. | 8.  | 26   | 32.  | 3             | 58.             | 41 | 3.  | 31   | 11. | 50   |
| 29 Sat.         | 10.                              | 20. | 6.  | 12                              | 3. | 14. | 13   | 31.  | 52            | 58.             | 19 | 3.  | 58   | 1.  | 12 V |
| 30 Dom.         | 11.                              | 23. | 44. | 27                              | 2. | 9.  | 38   | 31.  | 37            | 57.             | 54 | 4.  | 26   | 2.  | 30   |
| 31 Lun.         | 0.                               | 0.  | 23. | 42                              | 0. | 14. | 4 B  | 31.  | 56.           | 55              | 5. | 8   | 5.   | 0   |      |

| <i>Di-<br/>se-<br/>mber</i> | <i>Longitudo<br/>Planetary</i> | <i>Latitudo<br/>Planeta-<br/>rum</i> | <i>Declina-<br/>tio Pla-<br/>netarum</i> | <i>Orsus<br/>Plane-<br/>tarum</i> | <i>Transi-<br/>tus Pla-<br/>netarum<br/>per Me-<br/>ridianum</i> | <i>Ocensus<br/>Plane-<br/>tarum</i> |
|-----------------------------|--------------------------------|--------------------------------------|--|-----------------------------------|--|-------------------------------------|
|                             | <i>S. G. M.</i>                | <i>G. M.</i>                         | <i>G. M.</i>                             | <i>H. M.</i>                      | <i>H. M.</i>   | <i>H. M.</i>                        |
| S A T U R N U S .           |                                |                                      |  |                                   |  |                                     |
| 1                           | 9. 10. 36, 4                   | 0. 40, 3 B                           | 22. 23 A                                 | 3. 33 M                           | 7. 57 M  | 0. 21 V                             |
| 7                           | 9. 11. 0, 0                    | 0. 40, 8                             | 22. 21                                   | 3. 13                             | 7. 37  | 0. 1                                |
| 13                          | 9. 11. 21, 3                   | 0. 40, 0                             | 22. 19                                   | 2. 52                             | 7. 16  | 11. 40 M                            |
| 19                          | 9. 11. 40, 2                   | 0. 39, 8                             | 22. 17                                   | 2. 30                             | 6. 55  | 11. 20                              |
| 25                          | 9. 11. 58, 2                   | 0. 39, 8                             | 22. 16                                   | 2. 40                             | 6. 35  | 11. 0                               |
| J U P I T E R .             |                                |                                      |  |                                   |  |                                     |
| 1                           | 9. 23. 35, 3                   | 0. 9, 3 A                            | 21. 33 A                                 | 4. 24 M                           | 8. 53 M  | 1. 22 V                             |
| 7                           | 9. 24. 41, 2                   | 0. 9, 6                              | 21. 23                                   | 4. 6                              | 8. 35  | 1. 4                                |
| 13                          | 9. 25. 44, 7                   | 0. 10, 0                             | 21. 12                                   | 3. 48                             | 8. 18  | 0. 48                               |
| 19                          | 9. 26. 45, 0                   | 0. 10, 4                             | 21. 1                                    | 3. 29                             | 8. 0   | 0. 31                               |
| 25                          | 9. 27. 40, 9                   | 0. 10, 7                             | 20. 50                                   | 3. 10                             | 7. 42  | 0. 14                               |
| M A R S .                   |                                |                                      |  |                                   |  |                                     |
| 1                           | 9. 5. 50, 2                    | 0. 20, 5 A                           | 23. 41 A                                 | 3. 19 M                           | 7. 36 M  | 11. 53 M                            |
| 7                           | 9. 9. 56, 4                    | 0. 26, 3                             | 23. 32                                   | 3. 13                             | 7. 32  | 11. 51                              |
| 13                          | 9. 14. 2, 0                    | 0. 33, 0                             | 23. 17                                   | 3. 8                              | 7. 28  | 11. 48                              |
| 19                          | 9. 18. 7, 7                    | 0. 39, 5                             | 22. 53                                   | 3. 2                              | 7. 24  | 11. 46                              |
| 25                          | 9. 22. 13, 8                   | 0. 46, 0                             | 22. 23                                   | 2. 55                             | 7. 19  | 11. 43                              |
| V E N U S .                 |                                |                                      |  |                                   |  |                                     |
| 1                           | 11. 24. 22, 4                  | 1. 18, 7 A                           | 3. 28 A                                  | 7. 5 M                            | 0. 51 V  | 6. 37 V                             |
| 7                           | 0. 1. 49, 2                    | 1. 12, 0                             | 0. 22                                    | 6. 58                             | 0. 57  | 6. 56                               |
| 13                          | 0. 9. 15, 6                    | 1. 2, 1                              | 2. 43 B                                  | 6. 52                             | 1. 3   | 7. 14                               |
| 19                          | 0. 16. 42, 2                   | 0. 50, 7                             | 5. 47                                    | 6. 45                             | 1. 8   | 7. 31                               |
| 25                          | 0. 24. 8, 0                    | 0. 37, 5                             | 8. 48                                    | 6. 40                             | 1. 15  | 7. 50                               |
| M E R C U R I U S .         |                                |                                      |  |                                   |  |                                     |
| 1                           | 11. 6. 45, 2                   | 3. 35, 4 B                           | 5. 42 A                                  | 6. 3 M                            | 11. 40 M   | 5. 17 V                             |
| 7                           | 11. 1. 45, 0                   | 2. 29, 7                             | 8. 32                                    | 5. 34                             | 11. 0  | 4. 26                               |
| 13                          | 11. 0. 29, 7                   | 1. 5, 2                              | 10. 18                                   | 5. 17                             | 10. 36   | 3. 55                               |
| 19                          | 11. 2. 32, 9                   | 0. 15, 3 A                           | 10. 50                                   | 5. 8                              | 10. 23   | 3. 38                               |
| 25                          | 11. 6. 55, 1                   | 1. 17, 7                             | 10. 12                                   | 5. 0                              | 10. 19   | 3. 38                               |

## ECLIPSES SATELLITUM JOVIS.

| Dies<br>mensis | I. Satelles. |     |    | Dies | II. Satelles. |     |    | Dies | III. Satelles. |               |     |    |   |
|----------------|--------------|-----|----|------|---------------|-----|----|------|----------------|---------------|-----|----|---|
|                | Imersiones   |     |    |      | Imersiones    |     |    |      | Imers. Evers.  |               |     |    |   |
|                | H.           | M.  | S. |      | H.            | M.  | S. |      | H.             | M.            | S.  |    |   |
| 1              | 8.           | 12. | 36 | 1    | 7.            | 11. | 39 | 6    | 14.            | 33.           | 21  | I  |   |
| 3              | 2.           | 41. | 18 | 4    | 20.           | 30. | 46 | 6.   | 17.            | 49.           | 10  | E  |   |
| 4              | 21.          | 10. | 1  | 8    | 9.            | 49. | 57 | 13   | 18.            | 33.           | 38  | I  |   |
| 6              | 15.          | 38. | 46 | 11   | 23.           | 9.  | 11 | 13   | 21.            | 49.           | 53  | E  |   |
| 8              | 9.           | 7.  | 30 | 15   | 12.           | 28. | 38 | 20   | 22.            | 34.           | 10  | I  |   |
| 10             | 4.           | 36. | 15 | 19   | 1.            | 47. | 45 | 21   | 1.             | 51.           | 20  | E  |   |
| 11             | 23.          | 5.  | 5  | 22   | 15.           | 7.  | 2  | 28   | 2.             | 34.           | 43  | I  |   |
| 13             | 17.*         | 34. | 2  | 26   | 4.            | 26. | 24 | 28   | 5.             | 52.           | 36  | E  |   |
| 15             | 12.          | 2.  | 48 | 29   | 17.*          | 45. | 48 |      |                |               |     |    |   |
| 17             | 6.           | 31. | 39 |      |               |     |    |      | IV. Satelles.  |               |     |    |   |
| 19             | 1.           | 0.  | 31 |      |               |     |    |      | Dies           | Imers. Evers. |     |    |   |
| 20             | 19.          | 29. | 23 |      |               |     |    |      |                |               |     |    |   |
| 22             | 13.          | 50. | 14 |      |               |     |    |      | 2              | 14.           | 3.  | I  |   |
| 24             | 8.           | 27. | 4  |      |               |     |    |      | 2              | 18.           | 2.  | 51 | E |
| 26             | 2.           | 55. | 59 |      |               |     |    |      | 19             | 8.            | 6.  | 28 | I |
| 27             | 21.          | 24. | 46 |      |               |     |    |      | 19             | 18.           | 10. | 26 | E |
| 29             | 15.*         | 53. | 34 |      |               |     |    |      |                |               |     |    |   |
| 31             | 10.          | 22. | 27 |      |               |     |    |      |                |               |     |    |   |

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>horarius<br>Solis | Logaritmus<br>distantia<br>Solis a terra<br>posita media<br>100000 | Longitudo<br>Nodi Luna |     |    |
|------|-------------------|---|----------------------------|--|------------------------|-----|----|
|      |                   |   |                            |  | M.                     | S.  | G. |
|      | M.                | S.  | M.                         | S.   |                        |     |    |
| 1    | 32. 18. 0         | 2. 10. 4                                    | 2. 30. 1                   | 4. 996477  | II.                    | 28. | 58 |
| 4    | 32. 16. 9         | 2. 10. 0                                    | 2. 29. 9                   | 4. 996815  | II.                    | 28. | 42 |
| 7    | 32. 15. 1         | 2. 9. 6                                     | 2. 29. 7                   | 4. 997168  | II.                    | 28. | 33 |
| 10   | 32. 14. 0         | 2. 9. 3                                     | 2. 29. 4                   | 4. 997521  | II.                    | 26. | 23 |
| 13   | 32. 12. 4         | 2. 9. 0                                     | 2. 29. 2                   | 4. 997881  | II.                    | 28. | 43 |
| 16   | 32. 10. 8         | 2. 8. 8                                     | 2. 29. 0                   | 4. 998244  | II.                    | 28. | 4  |
| 19   | 32. 9. 2          | 2. 8. 6                                     | 2. 28. 8                   | 4. 998619  | II.                    | 27. | 55 |
| 22   | 32. 7. 4          | 2. 8. 5                                     | 2. 28. 5                   | 4. 998993  | II.                    | 27. | 45 |
| 25   | 32. 5. 7          | 2. 8. 4                                     | 2. 28. 2                   | 4. 999368  | II.                    | 27. | 36 |
| 28   | 32. 4. 1          | 2. 8. 5                                     | 2. 28. 0                   | 4. 999743  | II.                    | 27. | 27 |

MARTIUS 1783.

## POSITIONES SATELLITUM JOVIS

Oriens

5<sup>h</sup> Mane

Occidens

|    | 1.  | 2. | 3.      | 4.         |
|----|-----|----|---------|------------|
| 1  |     |    | O.      |            |
| 2  |     | 3. | 2.3.    | O.         |
| 3  |     |    | 2.0' 3. | O.         |
| 4  |     |    | 4.      | O. 2.0'    |
| 5  |     |    |         | O.         |
| 6  | 4.  |    | 2.0' .1 | O.         |
| 7  | 4.  |    | 2.0' .2 | O.         |
| 8  | 4.  | 1. | 0.1.    | 2.         |
| 9  | 4.  | 1. | 1.0' .2 | O.         |
| 10 | 4.  |    | 2.0' .3 | O.         |
| 11 |     |    | 1.0' .3 | 2.0' .3    |
| 12 |     |    | 0.1.    | 1.0' .3    |
| 13 |     |    | 2.0' .2 | O.         |
| 15 | 10. |    | 0.1.    | .2         |
| 16 | 4.  |    | 1.0' .2 | O.         |
| 17 |     | 1. | 0.3.2   | O.         |
| 18 |     |    | 1.0' .3 | O.         |
| 19 |     |    | O.      | 1.2.4.0' 3 |
| 20 | 4.  |    | 2.0' .2 | O.         |
| 21 |     | 4. | 0.1.    | 1.0' .1    |
| 22 | 4.  |    | 0.1.    | 2.         |
| 23 | 4.  |    | 1.0' .2 | O.         |
| 24 | 4.  |    | 0.1.2   | O.         |
| 25 | 4.  |    | 1.0' .2 | O.         |
| 26 | 4.  |    | 0.1.    | 1.0' .2    |
| 27 |     | 4. | 2.0' .1 | O.         |
| 28 |     |    | 0.1.2   | O.         |
| 29 |     |    | 1.0' .1 | 0.1.2      |

Positiones Satellitum tempore eclipsium.

D *Phænomena & Observations  
Solis*

|   |  |
|---|--|
| Sol in parallelo  |  |
| 1 Eclipsis Solis. Vide supra.   |  |
| 2 Serpentis culm. 14 <sup>h</sup> 49'   |  |
| 3 Procyon, & $\beta$ Aquilæ culm.<br>6 <sup>h</sup> 33' & 18 <sup>h</sup> 48'   |  |
| 4 $\gamma$ Orionis culm. 4 <sup>h</sup> 16'   |  |
| 7 Serpentis, & $\alpha$ Orion. culm.<br>14 <sup>h</sup> 25', & 4 <sup>h</sup> 36'   |  |
| 10 $\alpha$ Aquilæ culm. 18 <sup>h</sup> 16'  |  |
| 11 $\beta$ Canis, & $\epsilon$ Pegasi culm.<br>& 20 <sup>h</sup> 8'   |  |
| 14 $\zeta$ Pegasi & $\beta$ Cauri culm. 20 <sup>h</sup><br>54', & 6 <sup>h</sup> 30'  |  |
| 15 $\gamma$ Aquilæ culm. 17 <sup>h</sup> 56'  |  |
| 16 $\alpha$ Leonis & $\delta$ Delphini culm.<br>8 <sup>h</sup> 39' & 18 <sup>h</sup> 38'                                      |  |
| 18 $\gamma$ Serpentis culm. 13 <sup>h</sup> 34'   |  |
| 19 in signo Tauri 18 <sup>h</sup> 28'   |  |
| 21 $\epsilon$ Virginis culm. 10 <sup>h</sup> 50'  |  |
| 23 $\tau$ Ophiuci culm. 15 <sup>h</sup> 15'   |  |
| 24 $\gamma$ Leonis culm. 7 <sup>h</sup> 45'   |  |
| 26 $\delta$ & $\zeta$ Delphini & $\gamma$ Pegasi culm.<br>18 <sup>h</sup> 8', 18 <sup>h</sup> 6', & 21 <sup>h</sup> 41'       |  |
| 28 $\gamma$ Delphini culm. 14 <sup>h</sup> 8'   |  |
| 29 $\alpha$ Herentis, $\zeta$ Bootis, $\alpha$ Aquilæ<br>culm. 14 <sup>h</sup> 33', 11 <sup>h</sup> 59' & 16 <sup>h</sup> 18' |  |
| 30 $\gamma$ Tauri & $\alpha$ Delphini culm.<br>1 <sup>h</sup> 34' & 17 <sup>h</sup> 54'                                       |  |

D *Phænomena & Observ. Planet.*

|  |  |
|--|--|
| 1 Mercur. ad $\chi$ Aquarii diff. lat. 45'     |  |
| 6 Mars ad Jovis diff. lat. 49'                 |  |
| 7 Jupiter ad $\sigma$ Capri diff. lat. 42'     |  |
| 8 Venus ad $\alpha$ Arietis diff. lat. 32'     |  |
| 9 Venus ad $\tau$ Arietis d. l. 1.° 17'        |  |
| 9 Venus ad $\tau$ Arietis d. l. 1.° 4'         |  |
| 10 Venus ad $\rho$ Arietis diff. lat. 54'      |  |
| 12 Mars ad $\sigma$ Capri diff. lat. 1.° 25'   |  |
| 19 Mars ad $\tau$ Capri diff. lat. 1.° 36'     |  |
| 22 Venus ad A Tauri diff. lat. 35'             |  |
| 26 Mars ad $\sigma$ Capri diff. lat. 10°       |  |
| Mercur. ad $\sigma$ Piscium diff. lat. 2°      |  |
| 27 Ven. ad 2 & 3 $\times$ Taur. d l. 20° & 15° |  |
| Ven. ad 1 & 2 Taur. d l. 14° & 22°             |  |

D *Phænomena & Observations  
Lunæ*

| Luna  |                      |
|---|----------------------|
| 1 Novilunium  | 9 <sup>h</sup> 27'   |
| 3 ad Veneris  | 3 <sup>h</sup> 6'    |
| 4 ad $\zeta$ Arietis  | 7 <sup>h</sup> 30'   |
| 5 ad $\alpha$ Tauri   | 15 <sup>h</sup> 10'  |
| 6 ad $\beta$ Tauri  | 20 <sup>h</sup> 50'  |
| 7 Apogea ad informem Aurigæ<br>8 <sup>h</sup> 30'                                   |                      |
| 9 Primus Quadrans   | 10 <sup>h</sup> 14'  |
| 10 ad $\gamma$ Canceris   | 16 <sup>h</sup> 0'   |
| 13 ad $\alpha$ Leonis   | 13 <sup>h</sup> 44'  |
| 14 ad $\tau$ Leonis   | 2 <sup>h</sup> 15'   |
| 16 Plenilunium  | 21 <sup>h</sup> 120' |
| 19 ad $\tau$ Scorpii  | 16 <sup>h</sup> 30'  |
| 21 Perig. ad $\delta$ Sagitt.   | 6 <sup>h</sup> 30'   |
| 22 ad Saturni   | 1 <sup>h</sup> 27'   |
| 23 Ultimus Quadrans   | 13 <sup>h</sup> 2'   |
| ad Jovis  | 9 <sup>h</sup> 0'    |
| 24 ad $\phi$ , $\epsilon$ & $\alpha$ Capri  | 3 <sup>h</sup> 12'   |
| ad Martis   | 4 <sup>h</sup> 36'   |
| 26 ad 1. 2. 3. h Aquarii  | 7 <sup>h</sup> 40'   |
| 30 Novilunium   | 23 <sup>h</sup> 52'  |
| Planetae in parallelis fixarum  |                      |
| Saturnus $\gamma$ Leporis   | $\beta$ Corvi,       |
| $\epsilon$ Sagitt., $\gamma$ Hydræ, $\delta$ Scorpii                                |                      |
| Jupiter prope parallelos $\beta$ & $\delta$ Leporis                                 |                      |
| b Canis, $\varsigma$ Eridani  |                      |
| Mars $\alpha$ Corvi & $\tau$ Sagittarii,  |                      |
| 6 $\mu$ Sagittarii, 7 $\beta$ & $\delta$ Leporis,                                   |                      |
| 9 b Canis, 13. $\varsigma$ Eridani, 18 $\lambda$ Librae,                            |                      |
| 19 $\theta$ & $\beta$ Ceti, & $\beta$ Scorp., 22 $\sigma$ Scorp. & $\alpha$ Librae, |                      |
| 27 $\alpha$ Lep. & $\beta$ Canis, 28 $\gamma$ Capri                                 |                      |
| Venus 1 $\epsilon$ Virg., 2 $\alpha$ Canceris & $\alpha$ Ophiuci,                   |                      |
| 3 $\alpha$ Leonis, 7 $\alpha$ Herculis,   |                      |
| $\zeta$ Bootis, 10 $\beta$ Leonis   |                      |
| & $\alpha$ Tauri, 13 $\delta$ Tauri, 19 $\tau$ Bootis & $\gamma$ Herc., 22 Arcturi, |                      |
| 26 $\delta$ Leonis & $\beta$ Herculis   |                      |
| Mercurius init. prope $\beta$ Orionis,  |                      |
| 1 $\alpha$ Hydr., 4 $\sigma$ Orionis, 7 $\beta$ Erid.,                              |                      |
| 10 $\zeta$ Serp., 2 $\zeta$ Orionis, 15 $\delta$ Orionis,                           |                      |
| 19 $\gamma$ Ceti, 23 Procyon & $\beta$ Aquilæ, 25 $\alpha$ Orionis,                 |                      |
| 27 $\beta$ Canis, 29 $\delta$ Serpentis   |                      |

| Dies<br>mensis | Dies<br>hebdomadis | Æquatio<br>addenda<br>tempori<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitude<br>Solis | Ascensio recta<br>Solis | Declinatio<br>Solis<br>Borealis |
|----------------|--------------------|--|------------------|--------------------|-------------------------|---------------------------------|
|                |                    | M. S.  | S.               | S. G. M. S.        | G. M. S.                | G. M. S.                        |
| 1              | Mar.               | 3. 56. 1   | 18. 2            | 0. 11. 37. 4       | 10. 40. 47              | 4. 36. 2                        |
| 2              | Mer.               | 3. 37. 9   | 18. 1            | 0. 12. 36. 9       | 11. 35. 22              | 4. 59. 7                        |
| 3              | Jov.               | 3. 19. 8   | 17. 9            | 0. 13. 35. 11      | 12. 29. 58              | 5. 22. 7                        |
| 4              | Ven.               | 3. 1. 8  | 17. 8            | 0. 14. 34. 12      | 13. 24. 36              | 5. 45. 1                        |
| 5              | Sat.               | 2. 44. 1   |                  | 0. 15. 33. 11      | 14. 19. 17              | 6. 7. 49                        |
| 6              | Dom                | 2. 26. 4   | 17. 7            | 0. 16. 32. 8       | 15. 14. 1               | 6. 30. 31                       |
| 7              | Lun.               | 2. 8. 9  | 17. 5            | 0. 17. 31. 2       | 16. 8. 48               | 6. 53. 6                        |
| 8              | Mar.               | 1. 51. 7   | 17. 3            | 0. 18. 29. 54      | 17. 3. 58               | 7. 15. 34                       |
| 9              | Mer.               | 1. 34. 8   | 16. 9            | 0. 19. 28. 44      | 17. 58. 31              | 7. 37. 55                       |
| 10             | Jov.               | 1. 18. 1   | 16. 7            | 0. 20. 27. 32      | 18. 53. 26              | 8. 0. 8                         |
| 11             | Ven.               | 1. 1. 7  | 16. 4            |                    |                         |                                 |
| 12             | Sat.               | 0. 45. 5   | 16. 2            | 0. 21. 26. 17      | 19. 48. 28              | 8. 22. 13                       |
| 13             | Dom                | 0. 29. 6   | 15. 9            | 0. 22. 24. 59      | 20. 43. 32              | 8. 44. 9                        |
| 14             | Lun.               | 0. 13. 9   | 15. 7            | 0. 23. 23. 40      | 21. 38. 41              | 9. 5. 56                        |
| 15             | Mar.               | 0. 1. 5  | 15. 4            | 0. 24. 22. 18      | 22. 33. 55              | 9. 27. 34                       |
|                | subtr.             |  | 15. 0            | 0. 25. 20. 54      | 23. 29. 13              | 9. 49. 2                        |
| 16             | Mer.               | 0. 16. 5   | 14. 6            | 0. 26. 19. 26      | 24. 24. 36              | 10. 10. 22                      |
| 17             | Jov.               | 0. 31. 1   | 14. 2            | 0. 27. 17. 59      | 25. 20. 4               | 10. 31. 31                      |
| 18             | Ven.               | 0. 45. 3   | 13. 7            | 0. 28. 16. 29      | 26. 15. 38              | 10. 52. 29                      |
| 19             | Sat.               | 0. 59. 0   | 13. 4            | 0. 29. 14. 56      | 27. 11. 18              | 11. 13. 17                      |
| 20             | Dom                | 1. 12. 4   | 13. 0            | 1. 0. 13. 22       | 28. 7. 4                | 11. 33. 54                      |
| 21             | Lun.               | 1. 25. 4   | 12. 6            | 1. 1. 11. 46       | 29. 2. 57               | 11. 54. 20                      |
| 22             | Mar.               | 1. 38. 0   | 12. 1            | 1. 2. 10. 9        | 29. 58. 57              | 12. 14. 34                      |
| 23             | Mer.               | 1. 50. 1   | 11. 6            | 1. 3. 8. 30        | 30. 55. 4               | 12. 34. 36                      |
| 24             | Jov.               | 2. 1. 7  | 11. 1            | 1. 4. 6. 49        | 31. 51. 18              | 12. 54. 25                      |
| 25             | Ven.               | 2. 12. 8   | 10. 5            | 1. 5. 5. 7         | 32. 47. 40              | 13. 14. 2                       |
| 26             | Sat.               | 2. 23. 3   | 10. 0            | 1. 6. 3. 24        | 33. 44. 10              | 13. 33. 27                      |
| 27             | Dom                | 2. 33. 3   | 9. 5             | 1. 7. 1. 39        | 34. 40. 48              | 13. 52. 59                      |
| 28             | Lun.               | 2. 42. 8   | 9. 0             | 1. 7. 59. 53       | 35. 37. 33              | 14. 11. 37                      |
| 29             | Mar.               | 2. 51. 8   | 8. 5             | 1. 8. 58. 6        | 36. 34. 26              | 14. 30. 21                      |
| 30             | Mer.               | 3. 0. 3  | 7. 9             | 1. 9. 56. 17       | 37. 31. 27              | 14. 48. 50                      |

APRILIS 1783.

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| <i>Dies<br/>mensis</i>     | <i>Distantia<br/>sectionis Y<br/>a Sole</i> | <i>Diffe-<br/>rentia</i> | <i>Ini-<br/>tium<br/>Crepus-<br/>culi</i> | <i>Ortu-<br/>s Centri<br/>Solis</i> | <i>Occa-<br/>sus Centri<br/>Solis</i> | <i>Finis<br/>Crepu-<br/>sculi</i> | <i>Hora<br/>Italica<br/>Meridi-<br/>diei</i> |
|----------------------------|---|--------------------------|---|-------------------------------------|---------------------------------------|-----------------------------------|--|
| <i>Dies<br/>hebdomadae</i> | <i>H. M. S.</i>                             | <i>M. S.</i>             | <i>H. M.</i>                              | <i>H. M.</i>                        | <i>H. M.</i>                          | <i>H. M.</i>                      | <i>H. M.</i>                                 |
| 1                          | Mar. 23. 17. 16,9                           | 3. 38,3                  | 3. 54                                     | 5. 39                               | 6. 21                                 | 8. 6                              | 17. C  |
| 2                          | Mer. 23. 13. 38,6                           | 3. 38,4                  | 3. 52                                     | 5. 37                               | 6. 23                                 | 8. 8                              | 16. 58                                       |
| 3                          | Jov. 23. 10. 0,2                            | 3. 38,6                  | 3. 50                                     | 5. 36                               | 6. 24                                 | 8. 10                             | 16. 56                                       |
| 4                          | Ven. 23. 6. 21,6                            | 3. 34,7                  | 3. 48                                     | 5. 34                               | 6. 26                                 | 8. 12                             | 16. 54                                       |
| 5                          | Sat. 23. 2. 42,9                            | 3. 38,9                  | 3. 46                                     | 5. 33                               | 6. 27                                 | 8. 14                             | 16. 55                                       |
| 6                          | Dom. 22. 59. 4,0                            | 3. 39,1                  | 3. 44                                     | 5. 31                               | 6. 29                                 | 8. 16                             | 16. 53                                       |
| 7                          | Lun. 22. 55. 24,9                           | 3. 39,4                  | 3. 42                                     | 5. 30                               | 6. 30                                 | 8. 18                             | 16. 51                                       |
| 8                          | Mar. 22. 51. 45,5                           | 3. 39,6                  | 3. 34                                     | 5. 28                               | 6. 32                                 | 8. 21                             | 16. 49                                       |
| 9                          | Mer. 22. 48. 5,9                            | 3. 39,8                  | 3. 37                                     | 5. 26                               | 6. 34                                 | 8. 23                             | 16. 47                                       |
| 10                         | Jov. 22. 44. 26,1                           | 3. 40,0                  | 3. 35                                     | 5. 24                               | 6. 36                                 | 8. 25                             | 16. 45                                       |
| 11                         | Ven. 22. 40. 46,1                           | 3. 40,3                  | 3. 33                                     | 5. 23                               | 6. 37                                 | 8. 27                             | 16. 43                                       |
| 12                         | Sat. 22. 37. 5,8                            | 3. 40,6                  | 3. 32                                     | 5. 21                               | 6. 39                                 | 8. 28                             | 16. 41                                       |
| 13                         | Dom. 22. 33. 25,2                           | 3. 40,9                  | 3. 30                                     | 5. 19                               | 6. 41                                 | 8. 30                             | 16. 39                                       |
| 14                         | Lun. 22. 29. 44,3                           | 3. 41,2                  | 3. 28                                     | 5. 18                               | 6. 42                                 | 8. 32                             | 15. 38                                       |
| 15                         | Mar. 22. 26. 3,1                            | 3. 41,5                  | 3. 26                                     | 5. 16                               | 6. 44                                 | 8. 34                             | 16. 36                                       |
| 16                         | Mer. 22. 22. 21,6                           | 3. 41,9                  | 3. 24                                     | 5. 14                               | 6. 46                                 | 8. 36                             | 16. 34                                       |
| 17                         | Jov. 22. 18. 39,7                           | 3. 42,2                  | 3. 22                                     | 5. 13                               | 6. 47                                 | 8. 38                             | 16. 32                                       |
| 18                         | Ven. 22. 14. 57,5                           | 3. 42,6                  | 3. 20                                     | 5. 11                               | 6. 49                                 | 8. 40                             | 16. 30                                       |
| 19                         | Sat. 22. 11. 14,9                           | 3. 43,1                  | 3. 18                                     | 5. 10                               | 6. 50                                 | 8. 42                             | 16. 28                                       |
| 20                         | Dom. 22. 7. 31,8                            | 3. 43,5                  | 3. 15                                     | 5. 8                                | 6. 52                                 | 8. 45                             | 16. 26                                       |
| 21                         | Lun. 22. 3. 48,3                            | 3. 44,0                  | 3. 13                                     | 5. 7                                | 6. 53                                 | 8. 47                             | 16. 24                                       |
| 22                         | Mar. 22. 0. 4,3                             | 3. 44,5                  | 3. 11                                     | 5. 5                                | 6. 55                                 | 8. 49                             | 16. 22                                       |
| 23                         | Mer. 21. 56. 19,8                           | 3. 45,0                  | 3. 9                                      | 5. 3                                | 6. 57                                 | 8. 51                             | 16. 20                                       |
| 24                         | Jov. 21. 52. 34,5                           | 3. 45,5                  | 3. 7                                      | 5. 2                                | 6. 58                                 | 8. 53                             | 16. 19                                       |
| 25                         | Ven. 21. 48. 49,3                           | 3. 46,0                  | 3. 5                                      | 5. 1                                | 6. 59                                 | 8. 55                             | 16. 17                                       |
| 26                         | Sat. 21. 45. 3,3                            | 3. 46,5                  | 3. 2                                      | 5. 0                                | 7. 0                                  | 8. 58                             | 16. 15                                       |
| 27                         | Dom. 21. 41. 16,8                           | 3. 47,0                  | 3. 0                                      | 4. 58                               | 7. 2                                  | 9. 0                              | 16. 13                                       |
| 28                         | Lun. 21. 37. 29,8                           | 3. 47,5                  | 2. 58                                     | 4. 57                               | 7. 3                                  | 9. 2                              | 16. 12                                       |
| 29                         | Mar. 21. 33. 42,3                           | 3. 48,1                  | 2. 56                                     | 4. 56                               | 7. 4                                  | 9. 4                              | 16. 13                                       |
| 30                         | Mer. 21. 29. 54,2                           | 3. 48,6                  | 2. 54                                     | 4. 54                               | 7. 6                                  | 9. 6                              | 16. 8  |

| Dies<br>mensis | Dies<br>dominicae | Longitudo<br>Lunæ<br>Meridie |     |     | Latitudo<br>Lunæ<br>Meridie |    |     | Diameter<br>horizo-<br>ntalis<br>Lunæ<br>Merid. | Paral-<br>laxis<br>horizo-<br>ntalis<br>Lunæ<br>Merid. | Declina-<br>tio Lunæ | Trans-<br>itus Lunæ<br>per Me-<br>ridianum |     |    |     |    |   |     |     |   |
|----------------|-------------------|------------------------------|-----|-----|-----------------------------|----|-----|---|--|----------------------|--|-----|----|-----|----|---|-----|-----|---|
|                |                   | S.                           | G.  | M.  | S.                          | G. | M.  |   |  | H.                   |  |     |    |     |    |   |     |     |   |
| 1 Mar.         |                   | 0.                           | 6.  | 55. | 4                           | 0. | 49. | 54  | B  | 30.                  | 57   | 36. | 39 | 3.  | 31 | B | 11. | 41  | M |
| 2 Mer.         |                   | 0.                           | 19. | 47. | 18                          | 1. | 58. | 17  |  | 30.                  | 38   | 56. | 6  | 9.  | 34 |   | 0.  | 26  | V |
| 3 Jov.         |                   | 1.                           | 2.  | 25  | 25                          | 2. | 59. | 29  |  | 30.                  | 22   | 55. | 35 | 15. | 8  |   | 1.  | 10  |   |
| 4 Ven.         |                   | 1.                           | 14. | 50. | 0                           | 3. | 51. | 0   |  | 30.                  | 6  | 55. | 5  | 19. | 59 |   | 1.  | 55  |   |
| 5 Sat.         |                   | 1.                           | 27. | 2   | 38                          | 4. | 31. | 7   |  | 29.                  | 52   | 54. | 41 | 23  | 55 |   | 2.  | 43  |   |
| 6 Dom.         | 2                 | 9.                           | 5.  | 18  |                             | 4. | 58. | 33  |  | 29.                  | 42   | 54. | 23 | 26. | 45 |   | 3.  | 32  |   |
| 7 Lun.         | 2.                | 21.                          | 0.  | 58  |                             | 5. | 12. | 47  |  | 29.                  | 37   | 54. | 14 | 28. | 23 |   | 4.  | 23  |   |
| 8 Mar.         | 3.                | 2.                           | 53. | 25  |                             | 5. | 13. | 33  |  | 29.                  | 37   | 54. | 13 | 28. | 40 |   | 5.  | 16  |   |
| 9 Mer.         | 3.                | 14.                          | 46. | 55  |                             | 5. | 0.  | 55  |  | 29.                  | 42   | 54. | 23 | 27. | 37 |   | 6.  | 7   |   |
| 10 Jov.        | 3.                | 26.                          | 45. | 53  |                             | 4. | 35. | 12  |  | 29.                  | 53   | 54. | 43 | 25. | 17 |   | 6.  | 57  |   |
| 11 Ven.        | 4.                | 8.                           | 55. | 23  |                             | 5. | 56. | 48  |  | 30.                  | 9  | 55. | 32 | 21. | 51 |   | 7.  | 46  |   |
| 12 Sat.        | 4.                | 21.                          | 19. | 45  |                             | 3. | 6.  | 36  |  | 30.                  | 31   | 55. | 52 | 17. | 21 |   | 8.  | 23  |   |
| 13 Dom.        | 5.                | 4.                           | 3.  | 9   |                             | 2. | 6.  | 14  |  | 30.                  | 55   | 56. | 37 | 12. | 0  |   | 9.  | 19  |   |
| 14 Lun.        | 5.                | 17.                          | 8.  | 43  |                             | 0. | 57. | 38  |  | 31.                  | 24   | 57. | 30 | 5.  | 57 |   | 10. | 4   |   |
| 15 Mar.        | 6.                | 0.                           | 38. | 8   |                             | 0. | 16. | 7 A   |  | 31.                  | 50   | 58. | 16 | 0.  | 55 | A | 10. | 49  |   |
| 16 Mer.        | 6.                | 14.                          | 31. | 7   |                             | 1. | 30. | 48  |  | 32.                  | 14   | 59. | 1  | 7.  | 8  |   | 11. | 38  |   |
| 17 Jov.        | 6.                | 28.                          | 45. | 25  |                             | 2. | 41. | 54  |  | 32.                  | 34   | 59. | 38 | 13. | 35 |   | *   | *   |   |
| 18 Ven.        | 7.                | 13.                          | 16. | 19  |                             | 3. | 43. | 44  |  | 32.                  | 48   | 60. | 3  | 19. | 27 |   | 0.  | 28  | M |
| 19 Sat.        | 7.                | 27.                          | 57. | 18  |                             | 4. | 31. | 39  |  | 32.                  | 54   | 60. | 15 | 24. | 9  |   | 1.  | 25  |   |
| 20 Dom.        | 8.                | 12.                          | 40  | 43  |                             | 5. | 1.  | 43  |  | 32.                  | 53   | 60. | 13 | 27. | 20 |   | 2.  | 26  |   |
| 21 Lun.        | 8                 | 27.                          | 19. | 53  |                             | 5. | 11. | 43  |  | 32.                  | 47   | 60. | 0  | 28. | 38 |   | 3.  | 30. |   |
| 22 Mar.        | 9                 | 11.                          | 49. | 9   |                             | 5. | 1.  | 51  |  | 32.                  | 34   | 59. | 38 | 7.  | 57 |   | 4.  | 35  |   |
| 23 Mer.        | 9.                | 26.                          | 4.  | 15  |                             | 4. | 33. | 26  |  | 32.                  | 19   | 59. | 9  | 25. | 24 |   | 5.  | 37  |   |
| 24 Jov.        | 10.               | 10.                          | 2   | 24  |                             | 3. | 49. | 11  |  | 32.                  | 1  | 58  | 37 | 21. | 24 |   | 6.  | 35  |   |
| 25 Ven.        | 10.               | 23.                          | 43. | 56  |                             | 2. | 52  | 39  |  | 31.                  | 42   | 58. | 3  | 16. | 20 |   | 7.  | 27  |   |
| 26 Sat.        | 11.               | 7.                           | 9.  | 33  |                             | 1. | 47. | 34  |  | 31.                  | 24   | 57. | 30 | 10. | 34 |   | 8.  | 17  |   |
| 27 Dom.        | 11.               | 20.                          | 20. | 0   |                             | 0. | 38. | 1   |  | 31.                  | 6  | 56. | 57 | 4.  | 26 |   | 9.  | 2   |   |
| 28 Lun.        | 0.                | 3.                           | 16. | 47  |                             | 0. | 32. | 9 B   |  | 30.                  | 49   | 56. | 25 | 1.  | 49 | B | 9.  | 45  |   |
| 29 Mar.        | 0.                | 16.                          | 1.  | 24  |                             | 1. | 39. | 54  |  | 30.                  | 33   | 55. | 55 | 7.  | 52 |   | 10. | 28  |   |
| 30 Mer.        | 0.                | 28.                          | 34. | 58  |                             | 2. | 40. | 59  |  | 30.                  | 17   | 55. | 27 | 13. | 30 |   | 11. | 11  |   |

| Dies<br>sebdomadis<br>mensis | Longitudo<br>Lunæ media<br>nocte | Latitudo<br>Lunæ media<br>nocte | Dia-<br>meter<br>horiz.<br>Lunæ<br>med.<br>noct. | Paral-<br>laxis<br>boriz.<br>Lunæ<br>med.<br>noct. | Ortus<br>Lunæ | Occasus<br>Lunæ |
|------------------------------|----------------------------------|---------------------------------|--|--|---------------|-----------------|
|                              | S. G. M. S.                      | G. M. S.                        | M. S.  | M. S.  | H. M.         | H. M.           |
| 1 Mar.                       | 0. 13. 22. 57                    | 1. 24. 50 B                     | 30. 47   | 56. 23   | 5. 28 M       | 6. 8 V          |
| 2 Mer.                       | 0. 26. 8. 7                      | 2. 30. 0                        | 30. 30   | 55. 50   | 5. 43         | 7. 23           |
| 3 Jov.                       | 1. 8. 39. 18                     | 3. 24. 35                       | 30. 14   | 55. 19   | 6. 1          | 8. 35           |
| 4 Ven.                       | 1. 20. 57. 43                    | 3. 12. 36                       | 29. 59   | 54. 52   | 6. 28         | 9. 44           |
| 5 Sat.                       | 2. 3. 5. 6                       | 4. 46. 28                       | 29. 46   | 54. 31   | 6. 47         | 10. 52          |
| 6 Dom.                       | 2. 15. 3. 49                     | 5. 7. 20                        | 29. 39   | 54. 17   | 7. 18         | 11. 57          |
| 7 Lun.                       | 2. 26. 57. 20                    | 5. 14. 51                       | 29. 36   | 54. 12   | 7. 55         | * - *           |
| 8 Mar.                       | 3. 8. 49. 49                     | 5. 8. 54                        | 29. 39   | 54. 17   | 8. 47         | 0. 52 M         |
| 9 Mer.                       | 3. 20. 45. 23                    | 4. 49. 42                       | 29. 47   | 54. 32   | 9. 46         | 1. 43           |
| 10 Jov.                      | 4. 2. 49. 4                      | 4. 17. 34                       | 30. 0  | 54. 57   | 10. 48        | 2. 23           |
| 11 Ven.                      | 4. 15. 5. 26                     | 3. 33. 6                        | 30. 20   | 55. 32   | 11. 58        | 2. 54           |
| 12 Sat.                      | 4. 27. 38. 51                    | 2. 37. 38                       | 30. 43   | 56. 14   | 1. 11 V       | 3. 19           |
| 13 Dom.                      | 5. 10. 33. 1                     | 1. 32. 9                        | 31. 9  | 57. 3  | 2. 23         | 3. 41           |
| 14 Lun.                      | 5. 23. 50. 26                    | 0. 21. 9                        | 31. 37   | 57. 53   | 3. 35         | 4. 1            |
| 15 Mar.                      | 6. 7. 31. 44                     | 0. 53. 34 A                     | 32. 2  | 58. 39   | 4. 48         | 4. 80           |
| 16 Mer.                      | 6. 21. 35. 50                    | 2. 7. 12                        | 32. 25   | 59. 20   | 6. 5          | 4. 37           |
| 17 Jov.                      | 7. 5. 59. 5                      | 3. 14. 19                       | 32. 42   | 59. 52   | 7. 22         | 4. 59           |
| 18 Ven.                      | 7. 20. 36. 5                     | 4. 9. 47                        | 32. 52   | 60. 11   | 8. 46         | 5. 21           |
| 19 Sat.                      | 8. 5. 19. 6                      | 4. 49. 12                       | 32. 54   | 60. 15   | 10. 12        | 5. 53           |
| 20 Dom.                      | 8. 20. 1. 13                     | 5. 9. 19                        | 32. 51   | 60. 8  | 11. 38        | 6. 32           |
| 21 Lun.                      | 9. 4. 36. 4                      | 5. 9. 16                        | 32. 41   | 59. 50   | *             | 7. 26           |
| 22 Mar.                      | 9. 18. 58. 48                    | 4. 49. 51                       | 32. 27   | 59. 24   | 0. 38 M       | 8. 31           |
| 23 Mer.                      | 10. 3. 5. 26                     | 4. 13. 5                        | 32. 10   | 58. 53   | 1. 29         | 9. 50           |
| 24 Jov.                      | 10. 16. 55. 13                   | 3. 22. 14                       | 31. 52   | 58. 20   | 2. 9          | 11. 9           |
| 25 Ven.                      | 11. 0. 28. 44                    | 2. 20. 55                       | 31. 33   | 57. 47   | 3. 37         | 0. 27 V         |
| 26 Sat.                      | 11. 13. 46. 34                   | 1. 13. 6                        | 31. 15   | 57. 14   | 3. 3          | 1. 48           |
| 27 Dom.                      | 11. 26. 49. 58                   | 0. 2. 47                        | 30. 57   | 56. 41   | 3. 21         | 2. 55           |
| 28 Lun.                      | 0. 9. 40. 31                     | 1. 6. 26 B                      | 30. 41   | 56. 10   | 3. 37         | 4. 5            |
| 29 Mar.                      | 0. 23. 19. 31                    | 2. 11. 14                       | 30. 25   | 55. 41   | 3. 56         | 5. 14           |
| 30 Mer.                      | 1. 4. 47. 49                     | 3. 8. 37                        | 30. 10   | 55. 14   | 4. 13         | 6. 23           |

| Dier<br>mejſis | Longitudo<br>Planetaryum | Latitudo<br>Planeta-<br>rum | Declina-<br>tio Pla-<br>netaryum | Ortus<br>Plane-<br>tarum | Transi-<br>tus Pla-<br>netaryum<br>per Me-<br>ridianum | Occidus<br>Plane-<br>tarum |
|----------------|--------------------------|-----------------------------|----------------------------------|--------------------------|--|----------------------------|
|                | S. G. M.                 | G. M.                       | G. M.                            | H. M.                    | H. M.  | H. M.                      |

## S A T U R N U S .

|    |              |            |          |          |         |          |
|----|--------------|------------|----------|----------|---------|----------|
| 1  | 9. 12. 18, 0 | 0. 39, 7 B | 22. 14 A | 0. 45 V  | 6. 10 M | 11. 35 M |
| 7  | 9. 12. 26, 5 | 0. 39, 6   | 22. 13   | 0. 25    | 5. 50   | 11. 15   |
| 13 | 9. 12. 37, 2 | 0. 39, 6   | 22. 12   | 0. 4     | 5. 29   | 10. 54   |
| 19 | 9. 12. 39, 4 | 0. 39, 5   | 22. 12   | 11. 41 M | 5. 6    | 10. 31   |
| 25 | 9. 12. 38, 3 | 0. 39, 5   | 22. 12   | 11. 19   | 4. 44   | 10. 9    |

## J U P I T E R .

|    |              |            |          |         |         |          |
|----|--------------|------------|----------|---------|---------|----------|
| 1  | 9. 28. 48, 2 | 0. 11, 4 A | 20. 36 A | 2. 47 M | 7. 21 M | 11. 55 M |
| 7  | 9. 29. 33, 4 | 0. 12, 3   | 20. 29   | 2. 29   | 7. 3    | 11. 37   |
| 13 | 10. 0. 15 0  | 0. 13, 4   | 20. 23   | 2. 9    | 6. 44   | 11. 19   |
| 19 | 10. 0. 50, 1 | 0. 14 5    | 20. 16   | 1. 48   | 6. 23   | 10. 59   |
| 25 | 10. 1. 20, 0 | 0. 15, 7   | 20. 9    | 1. 27   | 6. 3    | 10. 39   |

## M A R S .

|    |              |            |          |         |         |          |
|----|--------------|------------|----------|---------|---------|----------|
| 1  | 9. 26. 59, 7 | 0. 55, 1 A | 21. 41 A | 2. 46 M | 7. 13 M | 11. 40 M |
| 7  | 10. 1. 6, 2  | 1. 2, 6    | 20. 57   | 2. 38   | 7. 9    | 11. 40   |
| 13 | 10. 5. 31, 0 | 1. 11, 5   | 20. 9    | 2. 29   | 7. 4    | 11. 39   |
| 19 | 10. 9. 14, 6 | 1. 21, 3   | 19. 17   | 2. 20   | 6. 59   | 11. 38   |
| 25 | 10. 13. 19 0 | 1. 29, 9   | 18. 17   | 2. 9    | 6. 53   | 11. 37   |

## V E N U S .

|    |              |            |         |         |         |        |
|----|--------------|------------|---------|---------|---------|--------|
| 1  | 1. 2 42; 4   | 0. 21, 0 A | 18. 5 B | 6. 31 M | 1. 19 V | 8. 7 V |
| 7  | 1. 10. 4, 2  | 0. 4, 6    | 14. 46  | 6. 27   | 1. 27   | 8. 27  |
| 13 | 1. 17. 24, 0 | 0. 18, 0 B | 17. 14  | 6. 23   | 1. 34   | 8. 45  |
| 19 | 1. 24. 43, 1 | 0. 28, 5   | 19. 24  | 6. 20   | 1. 41   | 9. 2   |
| 25 | 2. 2. 2, 0   | 0. 45, 0   | 21. 18  | 6. 19   | 1. 49   | 9. 19  |

## M E R C U R I U S .

|    |               |           |         |         |          |         |
|----|---------------|-----------|---------|---------|----------|---------|
| 1  | 11. 14. 40, 0 | 2. 4, 9 A | 7. 59 A | 4. 55 M | 10. 23 M | 3. 51 V |
| 7  | 11. 22. 28, 5 | 2. 28, 6  | 5. 16   | 4. 53   | 10. 32   | 4. 18   |
| 13 | 0. 1. 27, 4   | 2. 34, 1  | 1. 47   | 4. 50   | 10. 43   | 4. 36   |
| 19 | 0. 11. 30, 1  | 2. 21, 0  | 2. 24 B | 4. 48   | 10. 57   | 5. 6    |
| 25 | 0. 22. 30, 0  | 1. 44, 3  | 7. 10   | 4. 46   | 11. 15   | 5. 44   |

## ECLIPSES SATELLITUM JOVIS.

| Dies<br>mensis | I. Satelles. |     |    | II. Satelles. |     |     | III. Satelles. |    |              |
|----------------|--------------|-----|----|---------------|-----|-----|----------------|----|--------------|
|                | Immerfiones  |     |    | Immerfiones   |     |     | Immerf. Emerf. |    |              |
|                | H.           | M.  | S. | H.            | M.  | S.  | H.             | M. | S.           |
| 2              | 4.           | 50. | 17 | 2             | 7.  | 4.  | 59             | 4  | 6. 35. 13 I  |
| 3              | 23.          | 20. | 6  | 5             | 20. | 24. | 16             | 4  | 9. 53. 51 E  |
| 5              | 17.          | 48. | 55 | 9             | 9.  | 43. | 33             | 11 | 10. 35. 42 I |
| 7              | 12.          | 17. | 43 | 12            | 23. | 2.  | 40             | 11 | 13. 55. 6 E  |
| 9              | 6.           | 46. | 30 | 16            | 12. | 21. | 43             | 18 | 14. 35. 48 I |
| 11             | 1.           | 15. | 17 | 20            | 1.  | 40. | 40             | 18 | 17. 56. 2 E  |
| 12             | 19.          | 44. | 4  | 23            | 14. | 59. | 25             | 25 | 18. 35. 35 I |
| 14             | 14.*         | 12. | 39 | 27            | 10. | 18. | 11             | 25 | 17. 56. 2 E  |
| 16             | 8.           | 41. | 34 | 30            | 18. | 36. | 50             |    |              |
| 18             | 3.           | 10. | 18 |               |     |     |                |    |              |
| 19             | 21.          | 39. | 1  |               |     |     |                |    |              |
| 21             | 16.*         | 7.  | 50 |               |     |     |                |    |              |
| 23             | 10.          | 36. | 24 |               |     |     |                | 5  | 1. 52. 25 I  |
| 25             | 5.           | 5.  | 3  |               |     |     |                | 5  | 1. 41. 25 E  |
| 26             | 23.          | 33. | 39 |               |     |     |                | 21 | 19. 58. 47 I |
| 28             | 18.          | 2.  | 15 |               |     |     |                | 21 | 23. 53. 15 E |
| 30             | 12.          | 50. | 50 |               |     |     |                |    |              |

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>boravius<br>Sulis | Logaritmus<br>distantia<br>Solis a terra<br>posita media<br>100000 | Longitudo<br>Nodi Luna |       |       |
|------|-------------------|---|----------------------------|--|------------------------|-------|-------|
|      |                   |   |                            |  | S. G. M.               |       |       |
|      |                   |   |                            |  | M. S.                  | M. S. | M. S. |
| 1    | 32. 1, 8          | 2. 8, 6                                     | 2. 27, 6                   | 5. 000247  | 11. 27. 14             |       |       |
| 4    | 32. 0, 1          | 2. 8, 7                                     | 2. 27, 3                   | 5. 000622  | 11. 27. 4              |       |       |
| 7    | 31. 58, 3         | 2. 8, 8                                     | 2. 27, 0                   | 5. 000994  | 11. 26. 55             |       |       |
| 10   | 31. 56, 7         | 2. 9, 1                                     | 2. 26, 8                   | 5. 001364  | 11. 26. 45             |       |       |
| 13   | 31. 55, 1         | 2. 9, 4                                     | 2. 26, 6                   | 5. 001731  | 11. 26. 36             |       |       |
| 16   | 31. 53, 5         | 2. 9, 7                                     | 2. 26, 4                   | 5. 002090  | 11. 26. 26             |       |       |
| 19   | 31. 52, 0         | 2. 10, 0                                    | 2. 26, 2                   | 5. 002442  | 11. 26. 17             |       |       |
| 22   | 31. 50, 4         | 2. 10, 4                                    | 2. 26, 0                   | 5. 002792  | 11. 26. 7              |       |       |
| 25   | 31. 48, 8         | 2. 10, 8                                    | 2. 25, 8                   | 5. 003130  | 11. 25. 58             |       |       |
| 28   | 31. 47, 3         | 2. 11, 2                                    | 2. 25, 5                   | 5. 003461  | 11. 25. 48             |       |       |

POSITIONES SATELLITUM JOVIS

|               |                           |                 |
|---------------|---------------------------|-----------------|
| <i>Oriens</i> | <i>2<sup>h</sup> Mane</i> | <i>Occidens</i> |
|---------------|---------------------------|-----------------|

|    | <i>Oriens</i> | <i>2<sup>h</sup> Mane</i> | <i>Occidens</i> |
|----|---------------|---------------------------|-----------------|
| 1  | 2.0           | -1.0                      | -4              |
| 2  |               | ○ -1.2 σ <sup>3</sup>     | 4.              |
| 3  |               | 1.2. ○                    | -1 4.           |
| 4  |               | -2 ○ -1                   | 3. 4.           |
| 5  |               | -1. ○ 2.                  | 4.              |
| 6  |               | 3. ○ 4.                   | 1.2.            |
| 7  |               | -3 4. 2. -1 ○             |                 |
| 8  | 4.            | -2 -2 ○                   | 10              |
| 9  | 4.            | ○ -2 -2 σ <sup>3</sup>    |                 |
| 10 | -4            | 1.2. ○                    | -3              |
| 11 | -4            | -2 ○ -1                   | 3.              |
| 12 | -4            | 1. ○ -2                   |                 |
| 13 |               | -1 -4 ○                   | 2. 2.           |
| 14 |               | -1 -3 2. -4 ○             |                 |
| 15 |               | -1 -2 ○                   | 1. -4           |
| 16 |               | ○ -2 -3 -2                | -4              |
| 17 | 2.0           | 1. ○                      | -3 4.           |
| 18 |               | -2 ○ -1                   | 1. 4.           |
| 20 |               | 3. ○                      | -1 4.           |
| 21 |               | -3 2. -1 ○                | 4.              |
| 23 |               | 4. ○ -2 -3                | 10              |
| 25 | 4.            | -2 ○ -1                   | 3.              |
| 26 | 4.            | 1. ○ 1 σ <sub>2</sub>     |                 |
| 27 | -4            | 1. ○ 1. 2.                |                 |
| 28 | -4            | 1. ○ σ <sub>1</sub>       |                 |
| 29 | -4            | -1 -2 ○                   |                 |
| 30 | -4            | -1 -1 ○ -1 -2             |                 |

Positiones Satellitum tempore eclipsium.

|           |              |    |
|-----------|--------------|----|
| <b>15</b> | -1.2 ○ 1. -4 |    |
| <b>19</b> | -1. ○ 1. 2.  | 4. |
| <b>22</b> | -1.2 ○ 1. 4. |    |

| Phænomena & Observationes<br>Solis  |  | Phænomena & Observationes<br>Lunæ |  |
|---|--|-----------------------------------|--|
| Sol in parallelo  |  | Luna.                             |  |
| 1 > Delphini culm. 17h 56'  | 1 ad ξ Arietis 15h 6'  |                                   |  |
| 2 & Leonis culm. 8h 56'   | 2 ad & x Tauri 7h & 23h 30'  |                                   |  |
| 3 = Tauri & ♀ Serp. culm. 1h 39' & 12h 50'  | 4 Apgea ad informem Aurigae 15h 30'  |                                   |  |
| 5 > Serp., > Geminor., & ♀ Leonis enim. 12h 52', 3h 33', & 8h 9'  | 7 ad γ Canceris 22h 30'  |                                   |  |
| 6 in nodo ascend. Mercurii  | 9 Primus Quadrans 3h 29'   |                                   |  |
| 8 in nodo ascend. Martis  | 10 ad x Leonis 20h 30'   |                                   |  |
| 17 > Bootis, & γ Herculis culm. 1h 4', & 12h 32'  | 11 ad ♀ Leonis 8h 30'  |                                   |  |
| 20 in signo Geminorum 19h 4'  | 13 ad g & i Virginis 14h & 22h 30'   |                                   |  |
| 21 Arcturi culm. 1ch 12'  | 16 Plenilunium 6h, 3'  |                                   |  |
| 24 > Leonis culm. 6h 1'   | ad ♀ Scorpiorum { Immers. 12h 41' Emerg. 13h 25'   |                                   |  |
| 29 & Leonis culm. 6h 34'  |  |                                   |  |
| 30 & Herculis culm. 21h 48'   | 17 ad τ Scorpiorum Dist. minima Bor. 2' 2  |                                   |  |
| Phænomena & Observationes<br>Planetarum   |  | Planetae in parallelis fixorum    |  |
| 1 Venus ad τ Tauri diff. lat. 20'   | 19 ad Saturni 8h 15'   |                                   |  |
| 3 Mars ad γ Capri diff. lat. 50'  | 20 ad Jovis 17h 40'  |                                   |  |
| 4 Venus ad κ Tauri diff. lat. 1.° 12'   | 21 ad x & φ Capri 6h 15' & 9h 0'   |                                   |  |
| 5 Mars ad δ Capri diff. lat. 47'  | 22 Ultimus Quadrans 20h 18'  |                                   |  |
| 8 Mercur. in coniunct. cum Sole   | ad Martis 19h 50'  |                                   |  |
| Jupiter ad ♀ Capri d. l. 1.° 32'  | 23 ad h Aquarii 13h 15'  |                                   |  |
| 10 Mars ad μ Capri diff. lat. 1.° 13'   | 30 Novilunium 14h 40'  |                                   |  |
| 11 Jupiter ad o Capri diff. lat. 45'  | Saturnus prope δ Scorp., & Hydræ, o Sagitt., & Corvi, γ Lep.                                   |                                   |  |
| 13 Mars ad i Aquarii diff. lat. 11'   | Jupiter mense toto 54 Erid., tum prope b Canis & λ Libras                                      |                                   |  |
| 18 Saturnus ad o Sagittarii d. l. 16'   | Mars initio. x Crateria, δ Capri   |                                   |  |
| 24 Mars ad σ Aquarii diff. lat. 51'   | & δ Aquarii, 5 Sirii & γ Corvi   |                                   |  |
| Venus ad s Geminorum d. l. 13'  | 7 φ Ophiu., ξ & θ Libr., 10 β Capri, γ Ophiu., 11 γ Canis & δ Corvi, 13 α Libr., 14. 53 Erid., |                                   |  |
| 28 Venus ad x & Geminor. d. l. 23'  | 18 γ Erid. & γ Libr., 21 α Capri,  |                                   |  |
| 29 Venus ad m & n Gemin. diff. lat. 13' & 24'   | 23 α Ceti, 25 λ Virg., 30 α Ceti   |                                   |  |
| Venus init. prope μ Gemin. 4° Tauri, 11 ζ Leonis, 13 α Leonis, 19 & 25 δ Herculis, 28 ε Leonis, 31 ξ Leonis |  |                                   |  |
| Mercurius 17 τ Tauri, 19 ξ Leonis, 20 α Leonis, 24 δ Herculis, 25 ε Geminorum                               |  |                                   |  |

| Dies<br>seculis | Dies<br>hebreorum | Equatio<br>subtrahenda<br>a tempore<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitude<br>Solis | Ascensio recta<br>Solis |        |             | Declinatio<br>Solis<br>Borealis |
|-----------------|-------------------|--|------------------|--------------------|-------------------------|--------|-------------|---------------------------------|
|                 |                   |  |                  |                    | M. S.                   | S.     | S. G. M. S. |                                 |
| 1               | Jov.              | 8. 8. 2  | 7. 3             | 1. 10. 54. 26      | 38.                     | 28. 36 | 15. 7. 5    |                                 |
| 2               | Ven.              | 2. 15. 5   | 6. 8             | 1. 11. 53. 34      | 39.                     | 25. 53 | 15. 25. 5   |                                 |
| 3               | Sat.              | 3. 22. 3   | 6. 3             | 1. 12. 50. 41      | 40.                     | 23. 19 | 15. 42. 50  |                                 |
| 4               | Dom.              | 3. 28. 6   | 5. 7             | 1. 13. 48. 49      | 41.                     | 20. 54 | 16. 0. 20   |                                 |
| 5               | Lun.              | 3. 34. 3   | 5. 1             | 1. 14. 46. 49      | 42.                     | 18. 37 | 16. 17. 34  |                                 |
| 6               | Mar.              | 3. 39. 4   | 4. 6             | 1. 15. 44. 50      | 43.                     | 16. 28 | 16. 34. 31  |                                 |
| 7               | Mer.              | 3. 44. 0   | 4. 0             | 1. 16. 42. 50      | 44.                     | 14. 27 | 16. 51. 12  |                                 |
| 8               | Jov.              | 3. 48. 0   | 3. 5             | 1. 17. 40. 47      | 45.                     | 12. 35 | 17. 7. 36   |                                 |
| 9               | Ven.              | 3. 51. 5   | 2. 9             | 1. 18. 38. 43      | 46.                     | 10. 51 | 17. 23. 43  |                                 |
| 10              | Sat.              | 3. 54. 4   | 2. 3             | 1. 19. 36. 37      | 47.                     | 9. 15  | 17. 39. 32  |                                 |
| 11              | Dom.              | 3. 56. 7   | 1. 8             | 1. 20. 24. 29      | 48.                     | 7. 47  | 17. 55. 4   |                                 |
| 12              | Lun.              | 3. 58. 5   | 1. 4             | 1. 21. 32. 19      | 49.                     | 6. 28  | 18. 10. 18  |                                 |
| 13              | Mar.              | 4. 59. 9   | 0. 8             | 1. 22. 30. 8       | 50.                     | 5. 18  | 18. 25. 13  |                                 |
| 14              | Mer.              | 4. 0. 7  | 0. 2             | 1. 23. 27. 54      | 51.                     | 4. 16  | 18. 39. 49  |                                 |
| 15              | Jov.              | 4. 0. 9  | 0. 4             | 1. 24. 25. 40      | 52.                     | 3. 23  | 18. 54. 7   |                                 |
| 16              | Ven.              | 4. 0. 6  | -1. 0            | 1. 25. 23. 24      | 53.                     | 2. 38  | 18. 8. 6    |                                 |
| 17              | Sat.              | 3. 59. 5   | 1. 5             | 1. 26. 21. 6       | 54.                     | 2. 1   | 19. 21. 45  |                                 |
| 18              | Dom.              | 3. 58. 0   | 2. 1             | 1. 27. 18. 46      | 55.                     | 1. 33  | 19. 35. 5   |                                 |
| 19              | Lun.              | 3. 56. 9   | 2. 7             | 1. 28. 16. 25      | 56.                     | 1. 11  | 19. 48. 5   |                                 |
| 20              | Mar.              | 3. 53. 2   | 3. 3             | 1. 29. 14. 3       | 57.                     | 0. 59  | 20. 0. 45   |                                 |
| 21              | Mer.              | 2. 49. 9   | 3. 8             | 2. 0. 11. 41       | 58.                     | 0. 56  | 20. 13. 4   |                                 |
| 22              | Jov.              | 2. 46. 1   | 4. 3             | 2. 1. 9. 17        | 59.                     | 1. 1   | 20. 25. 3   |                                 |
| 23              | Ven.              | 2. 41. 8   | 4. 8             | 2. 2. 6. 52        | 60.                     | 1. 14  | 20. 36. 41  |                                 |
| 24              | Sat.              | 2. 37. 0   | 5. 4             | 2. 3. 4. 27        | 61.                     | 1. 36  | 20. 47. 58  |                                 |
| 25              | Dom.              | 2. 31. 6   | 5. 9             | 2. 4. 2. 1         | 62.                     | 2. 6   | 20. 58. 54  |                                 |
| 26              | Lun.              | 3. 25. 7   | 6. 4             | 2. 4. 59. 34       | 63.                     | 3. 44  | 21. 9. 25   |                                 |
| 27              | Mar.              | 3. 19. 3   | 7. 0             | 2. 5. 57. 6        | 64.                     | 3. 39  | 21. 19. 40  |                                 |
| 28              | Mer.              | 3. 12. 3   | 7. 5             | 2. 6. 54. 38       | 65.                     | 4. 22  | 21. 29. 30  |                                 |
| 29              | Jov.              | 3. 4. 8  | 7. 9             | 2. 7. 52. 9        | 66.                     | 5. 22  | 21. 38. 58  |                                 |
| 30              | Ven.              | 2. 56. 9   | 8. 3             | 2. 8. 49. 40       | 67.                     | 6. 29  | 21. 48. 3   |                                 |
| 31              | Sat.              | 2. 48. 6   | 8. 8             | 2. 9. 47. 9        | 68.                     | 7. 43  | 21. 56. 46  |                                 |

| Di-<br>se<br>ni-<br>gi | Dis-<br>tanci-<br>a Sole | sec-<br>tio-<br>nis Y | Diffe-<br>ren-<br>tia | Ini-<br>ti-<br>um<br>Crepu-<br>sculi | Ortu-<br>s<br>Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepu-<br>sculi | Hora<br>Italica<br>Meridi-<br>dis |
|------------------------|--------------------------|-----------------------|-----------------------|--------------------------------------|-------------------------------|---------------------------------|--------------------------|-----------------------------------|
|                        |                          |                       |                       |                                      |                               |                                 |                          |                                   |
|                        |                          |                       | H. M. S.              | M. S.                                | H. M.                         | H. M.                           | H. M.                    | H. M.                             |
| 1                      | Jov.                     | 21. 26. 5,6           |                       | 3. 49,2                              | 2. 52                         | 4. 53                           | 7. 7                     | 9. 8 16. 6                        |
| 2                      | Ven.                     | 21. 22. 16,4          |                       | 3. 49,7                              | 2. 50                         | 4. 52                           | 7. 8                     | 9. 10 16. 5                       |
| 3                      | Sat.                     | 21. 18. 26,7          |                       | 3. 50,3                              | 2. 58                         | 4. 50                           | 7. 10                    | 9. 12 16. 3                       |
| 4                      | Dom                      | 21. 14. 36,4          |                       | 3. 50,9                              | 2. 46                         | 4. 49                           | 7. 11                    | 9. 14 16. 1                       |
| 5                      | Lun.                     | 21. 10. 45,5          |                       | 3. 51,4                              | 2. 44                         | 4. 48                           | 7. 12                    | 9. 16 16. 0                       |
| 6                      | Mar.                     | 21. 6. 54,1           |                       | 3. 51,9                              | 2. 41                         | 4. 46                           | 7. 14                    | 9. 19 15. 58                      |
| 7                      | Mer.                     | 21. 3. 2,2            |                       | 3. 52,5                              | 2. 39                         | 4. 45                           | 7. 15                    | 9. 21 15. 57                      |
| 8                      | Jov.                     | 20. 59. 9,7           |                       | 3. 53,0                              | 2. 37                         | 4. 44                           | 7. 16                    | 9. 23 15. 55                      |
| 9                      | Ven.                     | 20. 55. 16,7          |                       | 3. 53,6                              | 2. 34                         | 4. 43                           | 7. 17                    | 9. 26 15. 54                      |
| 10                     | Sat.                     | 20. 51. 23,1          |                       | 3. 54,2                              | 2. 32                         | 4. 41                           | 7. 19                    | 9. 28 15. 52                      |
| 11                     | Dom                      | 20. 47. 28,9          |                       | 3. 54,8                              | 2. 30                         | 4. 40                           | 7. 20                    | 9. 30 15. 51                      |
| 12                     | Lun.                     | 20. 43. 34,1          |                       | 3. 55,3                              | 2. 28                         | 4. 39                           | 7. 21                    | 9. 32 15. 49                      |
| 13                     | Mar.                     | 20. 39. 38,8          |                       | 3. 55,9                              | 2. 26                         | 4. 38                           | 7. 22                    | 9. 34 15. 47                      |
| 14                     | Mer.                     | 20. 35. 42,9          |                       | 3. 56,4                              | 2. 24                         | 4. 37                           | 7. 23                    | 9. 36 15. 46                      |
| 15                     | Jov.                     | 20. 31. 46,5          |                       | 3. 57,0                              | 2. 22                         | 4. 36                           | 7. 24                    | 9. 38 15. 44                      |
| 16                     | Ven.                     | 20. 27. 49,5          |                       | 3. 57,5                              | 2. 20                         | 4. 34                           | 7. 26                    | 9. 40 15. 43                      |
| 17                     | Sat.                     | 20. 23. 52,0          |                       | 3. 58,1                              | 2. 18                         | 4. 33                           | 7. 27                    | 9. 42 15. 42                      |
| 18                     | Dom                      | 20. 19. 53,9          |                       | 3. 58,6                              | 2. 16                         | 4. 32                           | 7. 28                    | 9. 44 15. 40                      |
| 19                     | Lun.                     | 20. 15. 55,3          |                       | 3. 59,2                              | 2. 14                         | 4. 31                           | 7. 29                    | 9. 46 15. 38                      |
| 20                     | Mar.                     | 20. 11. 56,1          |                       | 3. 59,8                              | 2. 12                         | 4. 30                           | 7. 30                    | 9. 48 15. 37                      |
| 21                     | Mer.                     | 20. 7. 56,3           |                       | 4. 0,3                               | 2. 10                         | 4. 29                           | 7. 31                    | 9. 50 15. 35                      |
| 22                     | Jov.                     | 20. 3. 56,0           |                       | 4. 0,9                               | 2. 8                          | 4. 28                           | 7. 32                    | 9. 52 15. 34                      |
| 23                     | Ven.                     | 19. 59. 55,1          |                       | 4. 1,5                               | 2. 6                          | 4. 27                           | 7. 33                    | 9. 54 15. 32                      |
| 24                     | Sat.                     | 19. 55. 53,6          |                       | 4. 2,0                               | 2. 4                          | 4. 26                           | 7. 34                    | 9. 56 15. 31                      |
| 25                     | Dom                      | 19. 51. 51,6          |                       | 4. 2,5                               | 2. 3                          | 4. 25                           | 7. 35                    | 9. 58 15. 30                      |
| 26                     | Lun.                     | 19. 47. 49,1          |                       | 4. 3,0                               | 2. 0                          | 4. 24                           | 7. 36                    | 10. 0 15. 28                      |
| 27                     | Mar.                     | 19. 43. 45,1          |                       | 4. 3,5                               | 1. 58                         | 4. 23                           | 7. 37                    | 10. 2 15. 27                      |
| 28                     | Mer.                     | 19. 39. 42,6          |                       | 4. 4,0                               | 1. 56                         | 4. 22                           | 7. 38                    | 10. 4 15. 26                      |
| 29                     | Jov.                     | 19. 35. 38,6          |                       | 4. 4,5                               | 1. 54                         | 4. 21                           | 7. 39                    | 10. 6 15. 25                      |
| 30                     | Ven.                     | 19. 31. 34,1          |                       | 4. 4,9                               | 1. 52                         | 4. 20                           | 7. 40                    | 10. 8 15. 24                      |
| 31                     | Sat.                     | 19. 27. 29,2          |                       | 4. 5,2                               | 1. 50                         | 4. 19                           | 7. 41                    | 10. 10 15. 23                     |

| Dier<br>mēnūs | Di-<br>st. hebdome-<br>dade | Longitudo<br>Lunæ<br>Meridie |    |        | Latitudo<br>Lunæ<br>Meridie |         |        | Dia-<br>meter<br>bori-<br>zonta-<br>lis |        | Paral-<br>laxis<br>bori-<br>zonta-<br>lis |    | Declina-<br>tio Lunæ |    | Transi-<br>tus Lunæ<br>per Me-<br>ridianum |    |
|---------------|-----------------------------|------------------------------|----|--------|-----------------------------|---------|--------|---|--------|---|----|----------------------|----|--|----|
|               |                             | S.                           | G. | M.     | S.                          | G.      | M.     | M.                                      | S.     | M.  | S. | G.                   | M. | H.   | M. |
| 1 Jov.        | 1. 10. 58. 17               | 3. 33. 44                    | B  | 30. 4  | 55.                         | 2       | 18. 32 | B                                       | 11. 56 | M   |    |                      |    |  |    |
| 2 Ven.        | 1. 23. 12. 35               | 4. 15. 52                    |    | 29. 52 | 54.                         | 40      | 22. 43 |   | 0. 42  | V   |    |                      |    |  |    |
| 3 Sat.        | 2. 5 18 10                  | 4. 45. 56                    |    | 29. 42 | 54.                         | 22      | 25. 54 |   | 1. 31  |   |    |                      |    |  |    |
| 4 Dom.        | 2. 17. 17. 14               | 5. 3. 0                      |    | 29. 35 | 54.                         | 10      | 27. 54 |   | 2. 23  |   |    |                      |    |  |    |
| 5 Lun.        | 2. 29. 11. 12               | 5. 6. 48                     |    | 29. 32 | 54.                         | 5       | 28. 35 |   | 3. 14  |   |    |                      |    |  |    |
| 6 Mar.        | 3. 11. 2. 44                | 4. 57. 24                    |    | 29. 33 | 54.                         | 7       | 27. 56 |   | 4. 5   |   |    |                      |    |  |    |
| 7 Mer.        | 3. 22. 55. 12               | 4. 35. 12                    |    | 29. 40 | 54.                         | 18      | 26. 2  |   | 4. 54  |   |    |                      |    |  |    |
| 8 Jov.        | 4. 4. 52. 34                | 4. 0. 54                     |    | 29. 50 | 54.                         | 39      | 22. 57 |   | 5. 43  |   |    |                      |    |  |    |
| 9 Ven.        | 4. 16. 59. 24               | 3. 15. 24                    |    | 30. 8  | 55.                         | 10      | 18. 51 |   | 6. 29  |   |    |                      |    |  |    |
| 10 Sat.       | 4. 29. 20. 39               | 2. 19. 57                    |    | 30. 30 | 55.                         | 50      | 13. 53 |   | 7. 14  |   |    |                      |    |  |    |
| 11 Dom.       | 5. 12. 0. 59                | 1. 16. 23                    |    | 30. 55 | 56.                         | 38      | 8. 13  |   | 7. 58  |   |    |                      |    |  |    |
| 12 Lun.       | 5. 25. 4. 53                | 0. 6. 58                     |    | 31. 25 | 57.                         | 31      | 2. 5   |   | 8. 42  |   |    |                      |    |  |    |
| 13 Mar.       | 6. 8. 35. 38                | 1. 5. 7 A                    |    | 31. 56 | 58.                         | 18      | 4. 23  | A                                       | 9. 28  |   |    |                      |    |  |    |
| 14 Mer.       | 6. 22. 34. 38               | 2. 15. 27                    |    | 32. 25 | 59.                         | 21      | 10. 52 |   | 10. 17 |   |    |                      |    |  |    |
| 15 Jov.       | 7. 7. 0. 29                 | 3. 19. 27                    |    | 32. 49 | 60.                         | 7       | 17. 0  |   | 11. 11 |   |    |                      |    |  |    |
| 16 Ven.       | 7. 21. 48. 46               | 4. 11. 42                    |    | 33. 8  | 60.                         | 41      | 22. 17 |   | * *    |   |    |                      |    |  |    |
| 17 Sat.       | 8. 6. 51. 47                | 4. 47. 24                    |    | 33. 18 | 60.                         | 58      | 26. 12 |   | 0. 10  | M   |    |                      |    |  |    |
| 18 Dóm.       | 8. 21. 59. 43               | 5. 3. 14                     |    | 33. 18 | 60.                         | 58      | 23. 14 |   | 1. 16  |   |    |                      |    |  |    |
| 19 Lun.       | 9. 7. 2. 9                  | 4. 58. 5                     |    | 33. 9  | 60.                         | 41      | 28. 14 |   | 2. 23  |   |    |                      |    |  |    |
| 20 Mar.       | 9. 21. 50. 25               | 4. 32. 53                    |    | 32. 52 | 60.                         | 11      | 26. 8  |   | 3. 28  |   |    |                      |    |  |    |
| 21 Mer.       | 10. 6. 18. 11               | 3. 50. 41                    |    | 32. 31 | 59.                         | 33      | 22. 25 |   | 4. 29  |   |    |                      |    |  |    |
| 22 Jov.       | 10. 20. 22. 31              | 2. 55. 25                    |    | 32. 6  | 58.                         | 46      | 17. 28 |   | 5. 25  |   |    |                      |    |  |    |
| 23 Ven.       | 11. 4. 3. 4                 | 1. 51. 27                    |    | 31. 40 | 57.                         | 59      | 11. 44 |   | 6. 16  |   |    |                      |    |  |    |
| 24 Sat.       | 11. 17. 21. 28              | 0. 43. 3                     |    | 31. 16 | 57.                         | 14      | 5. 39  |   | 7. 2   |   |    |                      |    |  |    |
| 25 Dom.       | 0. 0. 20. 21                | 2. 25. 53 B                  |    | 30. 53 | 56.                         | 31      | 0. 33  | B                                       | 7. 45  |   |    |                      |    |  |    |
| 26 Lun.       | 0. 13. 2. 53                | 3. 32. 0                     |    | 30. 38 | 55.                         | 55      | 6. 35  |   | 8. 29  |   |    |                      |    |  |    |
| 27 Mar.       | 0. 25. 32. 5                | 4. 32. 24                    |    | 30. 15 | 55.                         | 23      | 12. 16 |   | 9. 11  |   |    |                      |    |  |    |
| 28 Mer.       | 1. 7. 50. 45                | 4. 24. 37                    |    | 30. 1  | 54.                         | 57. 17. | 21     |   | 9. 54  |   |    |                      |    |  |    |
| 29 Jov.       | 1. 20. 1. 6                 | 5. 16. 48                    |    | 29. 49 | 54.                         | 35 21.  | 44     |   | 10. 40 |   |    |                      |    |  |    |
| 30 Ven.       | 2. 2. 4. 52                 | 4. 37. 22                    |    | 29. 39 | 54.                         | 18 25.  | 7      |   | 11. 28 |   |    |                      |    |  |    |
| 31 Sat.       | 2. 14. 3. 22                | 4. 55. 22                    |    | 29. 32 | 54.                         | 6 27.   | 25     |   | 0. 16  | V   |    |                      |    |  |    |

| Dier<br>bevolmde<br>Dier<br>inclusif | Longitudo<br>Luna media<br>nocte | Latitudo<br>Luna media<br>nocte | Dia-<br>meter<br>horiz.<br>Luna<br>med.<br>noct. | Paral-<br>laxis<br>horiz.<br>Luna<br>med.<br>noct. | Ortus<br>Luna | Occasus<br>Luna |
|--------------------------------------|----------------------------------|---------------------------------|--|--|---------------|-----------------|
|                                      | S. G. M. S.                      | G. M. S.                        | M. S.  | M. S.  | H. M.         | H. M.           |
| 1 Jov.                               | 1. 17. 6. 28                     | 3. 56. 16 B                     | 29. 59   | 54. 50   | 4. 34 M       | 7. 32 V         |
| 2 Ven.                               | 1. 29. 16. 11                    | 4. 32. 30                       | 29. 47   | 54. 31   | 4. 56         | 8. 41           |
| 3 Sat.                               | 2. 11. 18. 28                    | 4. 56. 7                        | 29. 38   | 54. 16   | 5. 25         | 9. 47           |
| 4 Dom.                               | 2. 23. 14. 43                    | 5. 6. 34                        | 29. 33   | 54. 7  | 6. 3          | 10. 49          |
| 5 Lun.                               | 3. 5. 7. 6                       | 5. 3. 44                        | 29. 32   | 54. 5  | 6. 45         | 11. 43          |
| 6 Mar.                               | 3. 16. 58. 38                    | 4. 47. 52                       | 29. 36   | 54. 12   | 7. 39         | *               |
| 7 Mer.                               | 3. 28. 53. 2                     | 4. 19. 32                       | 29. 44   | 54. 27   | 8. 40         | 0. 25 M         |
| 8 Jov.                               | 4. 10. 54. 30                    | 3. 39. 31                       | 29. 58   | 54. 53   | 9. 47         | 0. 58           |
| 9 Ven.                               | 4. 23. 7. 57                     | 2. 48. 52                       | 30. 19   | 55. 29   | 10. 55        | 1. 26           |
| 10 Sat.                              | 5. 5. 38. 8                      | 1. 49. 7                        | 30. 42   | 56. 13   | 0. 4 V        | 1. 49           |
| 11 Dom.                              | 5. 18. 29. 46                    | 0. 42. 17                       | 31. 10   | 57. 4  | 1. 15         | 2. 9            |
| 12 Lun.                              | 6. 1. 46. 45                     | 0. 28. 59 A                     | 31. 41   | 58. 0  | 2. 26         | 2. 27           |
| 13 Mar.                              | 6. 15. 31. 38                    | 1. 40. 44                       | 32. 11   | 58. 55   | 3. 40         | 2. 45           |
| 14 Mer.                              | 6. 29. 44. 21                    | 2. 48. 37                       | 32. 38   | 59. 45   | 4. 58         | 3. 4            |
| 15 Jov.                              | 7. 14. 22. 10                    | 3. 47. 25                       | 33. 0  | 60. 26   | 6. 21         | 3. 24           |
| 16 Ven.                              | 7. 29. 18. 56                    | 4. 31. 57                       | 33. 14   | 60. 51   | 7. 46         | 3. 50           |
| 17 Sat.                              | 8. 14. 25. 46                    | 4. 59. 0                        | 33. 19   | 61. 0  | 9. 11         | 4. 26           |
| 18 Dom.                              | 8. 29. 32. 9                     | 5. 3. 21                        | 33. 15   | 60. 52   | 10. 25        | 9. 18           |
| 19 Lun.                              | 9. 14. 28. 34                    | 4. 47. 52                       | 33. 1  | 60. 28   | 11. 24        | 6. 21           |
| 20 Mar.                              | 9. 29. 7. 8                      | 4. 13. 42                       | 32. 42   | 59. 53   | *             | 7. 36           |
| 21 Mer.                              | 10. 14. 23. 23                   | 3. 24. 24                       | 32. 18   | 59. 9  | 0. 10 M       | 8. 56           |
| 22 Jov.                              | 10. 27. 15. 42                   | 2. 24. 14                       | 31. 53   | 58. 22   | 0. 42         | 10. 17          |
| 23 Ven.                              | 11. 10. 44. 54                   | 1. 17. 32                       | 31. 88   | 57. 36   | 1. 8          | 11. 35          |
| 24 Sat.                              | 11. 23. 53. 8                    | 0. 8. 25                        | 31. 4  | 56. 52   | 1. 27         | 0. 48 V         |
| 25 Dom.                              | 0. 6. 43. 28                     | 0. 59. 31 B                     | 30. 42   | 56. 13   | 1. 44         | 1. 59           |
| 26 Lun.                              | 0. 14. 18. 56                    | 2. 3. 6                         | 30. 23   | 55. 38   | 2. 2          | 3. 9            |
| 27 Mar.                              | 1. 1. 43. 34                     | 2. 59. 39                       | 30. 8  | 55. 9  | 2. 19         | 4. 17           |
| 28 Mer.                              | 1. 13. 56. 49                    | 3. 47. 5                        | 29. 55   | 54. 45   | 2. 37         | 5. 26           |
| 29 Jov.                              | 1. 26. 3. 43                     | 4. 23. 37                       | 29. 44   | 54. 26   | 2. 59         | 6. 34           |
| 30 Ven.                              | 2. 8. 4. 40                      | 4. 48. 0                        | 29. 35   | 54. 11   | 3. 27         | 7. 42           |
| 31 Sat.                              | 2. 20. 1. 3                      | 4. 59. 30                       | 29. 30   | 54. 24   | 3. 4          | 8. 43           |

| Dies<br>mensis      | Longitudo<br>Planetarum | Latitudo<br>Planeta-<br>rum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Trans-<br>itus PLA-<br>netarum<br>per Me-<br>ridianum | Occlusus<br>Plane-<br>tarum |
|---------------------|-------------------------|-----------------------------|---------------------------------|--------------------------|---|-----------------------------|
|                     | S. G. M.                | G. M.                       | G. M.                           | H. M.                    | H. M.   | H. M.                       |
| S A T U R N U S .   |                         |                             |                                 |                          |   |                             |
| 1                   | 9. 12. 32, 7            | 0. 39, 4 B                  | 22. 13 A                        | 11. 55 V                 | 4. 20 M   | 8. 45 M                     |
| 7                   | 9. 12. 25, 9            | 0. 39, 3                    | 22. 14                          | 11. 32                   | 3. 57   | 8. 22                       |
| 13                  | 9. 12. 16, 3            | 0. 39, 1                    | 22. 15                          | 11. 8                    | 3. 33   | 7. 58                       |
| 19                  | 9. 12. 3, 0             | 0. 38, 8                    | 22. 17                          | 10. 43                   | 3. 8  | 7. 33                       |
| 25                  | 9. 11. 44, 5            | 0. 38, 6                    | 22. 19                          | 10. 18                   | 2. 43   | 7. 8                        |
| J U P I T E R .     |                         |                             |                                 |                          |   |                             |
| 1                   | 10. 1. 45, 3            | 0. 16, 8 A                  | 20. 4 A                         | 1. 6 M                   | 5. 42 M   | 10. 18 M                    |
| 7                   | 10. 2. 2, 0             | 0. 18, 0                    | 20. 2                           | 0. 44                    | 5. 20   | 9. 56                       |
| 13                  | 10. 2. 17, 8            | 0. 19, 1                    | 19. 59                          | 0. 22                    | 4. 58   | 9. 34                       |
| 19                  | 10. 2. 24, 4            | 0. 20, 3                    | 19. 58                          | 11. 59 V                 | 4. 35   | 9. 11                       |
| 25                  | 10. 2. 23, 2            | 0. 21, 7                    | 19. 59                          | 11. 35                   | 4. 11   | 8. 47                       |
| M A R S .           |                         |                             |                                 |                          |   |                             |
| 1                   | 10. 17. 20, 3           | 1. 38, 3 A                  | 17. 13 A                        | 1. 59 M                  | 6. 48 M   | 11. 37 M                    |
| 7                   | 10. 21. 22, 6           | 1. 48, 3                    | 16. 7                           | 1. 47                    | 6. 41   | 11. 35                      |
| 13                  | 10. 25. 21, 1           | 1. 57, 4                    | 14. 56                          | 1. 35                    | 6. 34   | 11. 33                      |
| 19                  | 10. 29. 18, 0           | 2. 7, 6                     | 13. 43                          | 1. 21                    | 6. 25   | 11. 29                      |
| 25                  | 11. 3. 15, 2            | 2. 8, 0                     | 12. 19                          | 1. 6                     | 6. 16   | 11. 26                      |
| V E N U S .         |                         |                             |                                 |                          |   |                             |
| 1                   | 9. 9. 17, 3             | 1. 0, 2 B                   | 22. 51 B                        | 6. 19 M                  | 1. 57 V   | 9. 35 V                     |
| 7                   | 9. 16. 30, 5            | 1. 15, 0                    | 24. 1                           | 6. 21                    | 2. 5  | 9. 49                       |
| 13                  | 9. 23. 44, 3            | 1. 28, 1                    | 24. 47                          | 6. 25                    | 2. 13   | 10. 1                       |
| 19                  | 9. 30. 55, 0            | 1. 40, 3                    | 25. 8                           | 6. 30                    | 2. 20   | 10. 10                      |
| 25                  | 9. 3. 8, 3, 1           | 1. 50, 0                    | 25. 3                           | 6. 38                    | 2. 27   | 10. 16                      |
| M E R C U R I U S . |                         |                             |                                 |                          |   |                             |
| 1                   | 1. 4. 38, 3             | 0. 55, 4 A                  | 12. 8 B                         | 4. 47 M                  | 11. 36 M  | 6. 25 V                     |
| 7                   | 1. 17. 35, 0            | 0. 8, 7 B                   | 17. 15                          | 4. 52                    | 0. 3 V  | 7. 14                       |
| 13                  | 2. 0. 34, 4             | 1. 9, 0                     | 21. 26                          | 5. 1                     | 0. 32   | 8. 3                        |
| 19                  | 2. 12. 52, 1            | 1. 55, 7                    | 24. 17                          | 5. 16                    | 1. 1  | 8. 46                       |
| 25                  | 2. 22. 47, 0            | 2. 12, 5                    | 25. 3 D                         | 5. 32                    | 1. 24   | 9. 16                       |

## ECLIPSES SATELLITUM JOVIS.

| Dies<br>mensis | I. Satelles.     |     |    | II. Satelles. |                  |     | III. Satelles. |    |                           |
|----------------|------------------|-----|----|---------------|------------------|-----|----------------|----|---------------------------|
|                | Immersiones      |     |    | Immersiones   |                  |     | Immers. Emerg. |    |                           |
|                | H.               | M.  | S. | H.            | M.               | S.  | H.             | M. | S.                        |
| 2              | 6.               | 59. | 25 | 4             | 6.               | 55. | 19             | 8  | 23. 35. 16 I              |
| 4              | 1.               | 27. | 55 | 7             | 20.              | 13. | 45             | 3  | 1. 56. 36 E               |
| 5              | 19.              | 56. | 25 | 11.           | 9.               | 81. | 55             | 10 | 2. 34. 22 I               |
| 7              | 15. <sup>*</sup> | 24. | 50 | 14            | 22.              | 50. | 0              | 10 | 5. 56. 22 E               |
| 9              | 8.               | 53. | 19 | 18            | 12.              | 7.  | 53             | 17 | 6. 33. 3 I                |
| 11             | 3.               | 11. | 25 | 23            | 1.               | 25. | 41             | 17 | 9. 55. 43 E               |
| 13             | 21.              | 50. | 10 | 25            | 14. <sup>*</sup> | 43. | 15             | 24 | 10. 31. 25 I              |
| 14             | 17.              | 18. | 32 | 29            | 4.               | 0.  | 51             | 24 | 13. <sup>*</sup> 54. 40 E |
| 16             | 10.              | 46. | 53 |               |                  |     |                | 31 | 14. <sup>*</sup> 29. 19 I |
| 18             | 5.               | 15. | 12 |               |                  |     |                | 31 | 17. 53. 13 E              |
| 19             | 23.              | 43. | 29 |               |                  |     |                |    |                           |
| 21             | 18.              | 11. | 46 |               |                  |     |                |    |                           |
| 23             | 12. <sup>*</sup> | 39. | 57 |               |                  |     |                |    |                           |
| 25             | 7.               | 8.  | 16 |               |                  |     |                |    |                           |
| 27             | 1.               | 36. | 28 |               |                  |     |                | 8  | 14. <sup>*</sup> 3. 47 I  |
| 28             | 20.              | 4.  | 38 |               |                  |     |                | 8  | 18. 2. 51 E               |
| 29             | 14. <sup>*</sup> | 32. | 48 |               |                  |     |                | 25 | 8. 6. 28 I                |
|                |                  |     |    |               |                  |     |                | 25 | 12. 10. 26 E              |

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>horarius<br>Solis | Logaritmus<br>distantia<br>Solis a terra<br>posita media<br>100000 | Longitudo<br>Nodi Lunæ |       |       |
|------|-------------------|---|----------------------------|--|------------------------|-------|-------|
|      |                   |   |                            |  | M. S.                  | M. S. | M. S. |
| 1    | 31. 45. 9         | 2. 11. 6                                    | 2. 25. 3                   | 5. 003781  | 11. 25. 39             |       |       |
| 4    | 31. 44. 8         | 2. 12. 1                                    | 2. 25. 1                   | 5. 004093  | 11. 25. 39             |       |       |
| 7    | 31. 43. 7         | 2. 12. 6                                    | 2. 24. 9                   | 5. 004392  | 11. 25. 39             |       |       |
| 10   | 31. 42. 5         | 2. 13. 1                                    | 2. 24. 7                   | 5. 004680  | 11. 25. 39             |       |       |
| 13   | 31. 41. 1         | 2. 13. 6                                    | 2. 24. 5                   | 5. 004955  | 11. 25. 3              |       |       |
| 16   | 31. 40. 0         | 2. 14. 1                                    | 2. 24. 3                   | 5. 005217  | 11. 24. 51             |       |       |
| 19   | 31. 38. 9         | 2. 14. 6                                    | 2. 24. 1                   | 5. 005465  | 11. 24. 41             |       |       |
| 22   | 31. 37. 8         | 2. 15. 0                                    | 2. 24. 0                   | 5. 005700  | 11. 24. 32             |       |       |
| 25   | 31. 36. 8         | 2. 15. 4                                    | 2. 23. 9                   | 5. 005918  | 11. 24. 23             |       |       |
| 28   | 31. 35. 9         | 2. 15. 8                                    | 2. 23. 8                   | 5. 006121  | 11. 24. 14             |       |       |

POSITIONES SATELLITUM JOVIS

*Oriens*                    *2<sup>h</sup> Mane*                    *Occidens*

|    |    |    |   |    |    |    |
|----|----|----|---|----|----|----|
| 1  | 10 | 4  | ○ | 2. | 1. |    |
| 2  |    | 2. | ○ | 3. | 4. | 5. |
| 3  |    |    | ○ | 1. | 2. | 3. |
| 4  |    |    | ○ | 1. | 2. | 3. |
| 5  |    | 3. | ○ | 2. | 1. | 4. |
| 6  |    | 3. | ○ | 2. | 1. | 4. |
| 7  |    |    | ○ | 1. | 2. | 3. |
| 10 |    |    | ○ | 1. | 2. |    |
| 11 |    | 4. | ○ | 3. | 2. |    |
| 12 | 4. | 3. | ○ | 1. |    | 2. |
| 13 | 4. |    | ○ | 1. | 2. |    |
| 14 | 4. |    | ○ | 1. | 2. |    |
| 15 | 4. |    | ○ | 1. | 2. |    |
| 16 | 4. |    | ○ | 1. | 2. |    |
| 17 | 4. |    | ○ | 1. | 2. |    |
| 18 | 4. |    | ○ | 1. | 2. |    |
| 19 |    | 1. | ○ |    | 4. | 2. |
| 20 |    | 3. | ○ | 2. |    | 4. |
| 21 |    |    | ○ | 1. |    | 4. |
| 22 |    |    | ○ | 1. | 2. | 4. |
| 23 |    |    | ○ | 1. | 2. | 4. |
| 27 |    | 1. | ○ | 2. | 1. |    |
| 28 |    | 4. | ○ | 1. |    | 2. |
| 29 | 4. |    | ○ | 1. | 2. |    |
| 30 | 4. |    | ○ | 1. |    |    |
| 31 | 4. |    | ○ | 1. |    |    |

Positiones Satellitum tempore eclipsium.

|    |  |  |   |    |    |    |    |
|----|--|--|---|----|----|----|----|
| 8  |  |  | ○ | 1. | 2. | 3. | 4. |
| 9  |  |  | ○ | 4. |    | 3. | 2. |
| 24 |  |  | ○ | 3. | 2. | 1. | 4. |
| 25 |  |  | ○ | 1. | 2. | 3. | 4. |

*Dicitur Phænomena & Observationes Solis*

| Sol in parallelo                  |                        |
|-----------------------------------|------------------------|
| 1. γ Canceris                     | culm. 3h 50'           |
| 3. δ Geminor. & α Arietis         | culm. 2h 29', & 21h 4' |
| 4. & μ Geminorum                  | culm. 1h 9' & 1h 17'   |
| 5. in nodo Veneris                |                        |
| 16. ι Tauri                       | culm. 21h 50'          |
| 21. in signo Canceris             | 3h 48'                 |
| 30. in nodo Jovis, item in Apogeo |                        |

*Dicitur Phænomena & Observationes Lunæ*

| Luna                       |                   |
|----------------------------|-------------------|
| 1. Apogeia ad Mercurii     | 18h 12'           |
| 2. ad Veneris              | 17h 6'            |
| 3. ad α Geminorum          | 1h 0'             |
| 4. ad γ Canceris           | 6h 40'            |
| 6. ad β Leonis             | 14h 20'           |
| 7. Primus Quadrans         | 17h 35'           |
| ad χ & τ Leonis            | 6h 40' & 19h 40'  |
| 10. ad i Virginis          | 7h 50'            |
| 12. ad σ Scorpis           | 23h 40'           |
| 13. ad ε Scorpis           | 11h 6'            |
| 14. Plenilunium            | 13h 6'            |
| ad γ Sagittarii            | 20h 0'            |
| 15. Perigea ad Saturni     | 15h 30'           |
| 16. ad φ Sagittarii        | 10h 30'           |
| 17. ad χ & φ Capri         | 14h 30' & 17h 10' |
| 20. ad Martis              | 10h 24'           |
| 21. Ultimus Quadrans       | 5h 32'            |
| 25. ad ζ Arietis & ι Tauri | 4h & 19h          |
| 28. Apogeia                |                   |
| 29. Novilunium             | 5h 36'            |
| ad A Geminorum             | 21h 40'           |
| ad Mercurii                | 19h 24'           |

*Planetae in parallelis fixarum Satur. prope parall. δ Scorpis, γ Hydr., σ Sagit., δ Corvi, γ Lep.*

|  |            |
|--|------------|
| Jupiter initio mensis  | 54 Eridani |
| & χ Capri, sub finem ε Capri,  |            |
| b Canis, & τ Capri   |            |
| Mars init. σ Ceti, 4 δ Erid. , 6 ε Erid., ξ Ophiu. & α Virg., 10 κ Virg., 13 β Librae & 3 Orion.,  |            |
| 17. δ Hydr., 19 φ Aqu., 23 δ Aqu. & : Or., 27 κ Antin., 29 ε Virg. & : Ophiu., 30 σ Ceti & ξ Serp. |            |
| Venus 1 η Leonis, 7 τ Tauri, 11 μ & τ Gem., 12 α Ariet., δ Gem. & γ Canc., 13 β Herc. & δ Leo.     |            |
| 16 ζ Gemin., 19 Αρτuri, 21 γ Herc. & τ Bootis, 23 δ Cancri,  |            |
| 25 γ Arietis, 28 α Sagittae  |            |
| Mercur. 1 σ Gemin., 3 δ Herc., 5 ε & η Leon., 11 τ Tauri, 14 μ & τ Gem., 16 β Herc., 22 Αρτ.,      |            |
| 25 τ Bootis, 28 δ Cancri   |            |

| Dies<br>meritis | Dies<br>calendarii | Equatio<br>subtrahenda<br>a tempore<br>vero<br>ut habeatur<br>medium | Differe-<br>rentia | Longitudo<br>Solis | Ascensio recta<br>Solis |            | Declinatio<br>Solis<br>Borealis |
|-----------------|--------------------|--|--------------------|--------------------|-------------------------|------------|---------------------------------|
|                 |                    |  |                    |                    | M. S.                   | G. M. S.   |                                 |
| 1               | Dom                | 2. 39, 8   | 9, 2               | 2. 10. 44. 37      | 69. 9. 3                | 22. 5. 7   |                                 |
| 2               | Lun.               | 2. 30, 6   | 9, 6               | 2. 11. 42. 5       | 70. 10. 29              | 22. 13. 5  |                                 |
| 3               | Mar.               | 2. 21, 0   | 9, 9               | 2. 12. 39. 31      | 71. 12. 2               | 22. 20. 39 |                                 |
| 4               | Mer.               | 2. 11, 1   | 10, 2              | 2. 13. 36. 57      | 72. 13. 39              | 22. 27. 49 |                                 |
| 5               | Jov.               | 2. 0, 9  | 10, 5              | 2. 14. 34. 21      | 73. 15. 21              | 22. 34. 36 |                                 |
| 6               | Ven.               | 1. 50, 4   | 10, 9              | 2. 15. 31. 44      | 74. 17. 8               | 22. 40. 59 |                                 |
| 7               | Sat.               | 1. 39, 5   | 11, 2              | 2. 16. 29. 7       | 75. 19. 0               | 22. 46. 58 |                                 |
| 8               | Dom                | 1. 28, 3   | 11, 4              | 2. 17. 26. 28      | 76. 20. 56              | 22. 52. 33 |                                 |
| 9               | Lun.               | 1. 16, 9   | 11, 6              | 2. 18. 23. 48      | 77. 22. 56              | 22. 57. 46 |                                 |
| 10              | Mar.               | 1. 5, 3  | 11, 8              | 2. 19. 21. 7       | 78. 24. 59              | 23. 2. 33  |                                 |
| 11              | Mer.               | 0. 53, 5   | 11, 9              | 2. 20. 18. 35      | 79. 27. 5               | 23. 6. 56  |                                 |
| 12              | Jov.               | 0. 41, 6   | 12, 1              | 2. 21. 15. 41      | 80. 29. 14              | 23. 10. 54 |                                 |
| 13              | Ven.               | 0. 29, 5   | 12, 3              | 2. 22. 12. 58      | 81. 31. 25              | 23. 14. 28 |                                 |
| 14              | Sat.               | 0. 17, 2   | 12, 5              | 2. 23. 10. 13      | 82. 33. 39              | 23. 17. 38 |                                 |
| 15              | Dom                | 0. 4, 7  | 12, 7              | 2. 24. 7. 28       | 83. 35. 55              | 23. 20. 23 |                                 |
| 16              | Lun.               | 0. 8, 0  | 12, 8              | 2. 25. 4. 42       | 84. 38. 13              | 23. 22. 43 |                                 |
| 17              | Mar.               | 0. 20, 8   | 12, 8              | 2. 26. 1. 56       | 85. 40. 33              | 23. 24. 38 |                                 |
| 18              | Mer.               | 0. 33, 6   | 12, 8              | 2. 26. 59. 10      | 86. 42. 54              | 23. 26. 9  |                                 |
| 19              | Jov.               | 0. 46, 4   | 12, 9              | 2. 27. 56. 24      | 87. 45. 16              | 23. 27. 15 |                                 |
| 20              | Ven.               | 0. 59, 3   | 12, 9              | 2. 28. 53. 37      | 88. 47. 38              | 23. 27. 56 |                                 |
| 21              | Sat.               | 1. 12, 2   | 12, 9              | 2. 29. 50. 51      | 89. 50. 1               | 23. 28. 12 |                                 |
| 22              | Dom                | 1. 25, 1   | 12, 9              | 3. 0. 48. 4        | 90. 52. 24              | 23. 29. 4  |                                 |
| 23              | Lun.               | 1. 38, 0   | 12, 9              | 3. 1. 45. 18       | 91. 54. 47              | 23. 27. 31 |                                 |
| 24              | Mar.               | 1. 50, 9   | 12, 9              | 3. 2. 42. 31       | 92. 57. 9               | 23. 26. 33 |                                 |
| 25              | Mer.               | 2. 3, 8  | 12, 8              | 3. 3. 39. 45       | 93. 59. 30              | 23. 25. 10 |                                 |
| 26              | Jov.               | 2. 16, 6   | 12, 7              | 3. 4. 36. 58       | 95. 1. 50               | 23. 23. 23 |                                 |
| 27              | Ven.               | 2. 29, 3   | 12, 5              | 3. 5. 34. 12       | 96. 4. 8                | 23. 21. 11 |                                 |
| 28              | Sat.               | 2. 41, 8   | 12, 2              | 3. 6. 31. 26       | 97. 6. 24               | 23. 18. 24 |                                 |
| 29              | Dom                | 2. 54, 0   | 12, 0              | 3. 7. 28. 40       | 98. 8. 37               | 23. 15. 32 |                                 |
| 30              | Lun.               | 2. 6, 0  | 11, 8              | 3. 8. 25. 54       | 99. 10. 47              | 23. 12. 6  |                                 |

| D<br>ie<br>s<br>e<br>c<br>t<br>i<br>o<br>n<br>is<br>m<br>e<br>t<br>r<br>o<br>p<br>h<br>y | Dis<br>tan<br>tia<br>se<br>ctio<br>nis<br>a<br>Sole | Diff<br>er<br>ent<br>ia | Ini<br>ti<br>um<br>Crep<br>u<br>scu<br>li | Or<br>ta<br>s<br>e<br>n<br>t<br>ri<br>S<br>o<br>l<br>i<br>s | Oct<br>a<br>-<br>s<br>u<br>s<br>e<br>n<br>t<br>ri<br>S<br>o<br>l<br>i<br>s | Fin<br>is<br>Crep<br>u<br>scu<br>li | H<br>o<br>r<br>a<br>Ital<br>ica<br>Mer<br>idi<br>es |
|--|---|-------------------------|---|---|--|-------------------------------------|---|
|  |   |                         |   |   |  |                                     |   |
|  | H. M. S.  | M. S.                   | H. M.                                     | H. M.   | H. M.  | H. M.                               | H. M.   |
| 1 Dom.   | 19. 23. 23,9  |                         | 1. 48                                     | 4. 19   | 7. 41  | 10. 12                              | 15. 22  |
| 2 Lun.   | 19. 19. 18,1  | 4. 5,8                  | 1. 46                                     | 4. 18   | 7. 42  | 10. 14                              | 15. 21  |
| 3 Mar.   | 19. 15. 11,9  | 4. 6,2                  | 1. 44                                     | 4. 18   | 7. 42  | 10. 16                              | 15. 20  |
| 4 Mer.   | 19. 11. 5,4   | 4. 6,5                  | 1. 43                                     | 4. 17   | 7. 43  | 10. 17                              | 15. 19  |
| 5 Jov.   | 19. 6. 58,6   | 4. 6,8                  | 1. 42                                     | 4. 16   | 7. 44  | 10. 18                              | 15. 18  |
| 6 Ven.   | 19. 8. 51,5   | 4. 7,1                  | 1. 41                                     | 4. 16   | 7. 44  | 10. 19                              | 15. 17  |
| 7 Sat.   | 18. 58. 44,0  | 4. 8,7                  | 1. 40                                     | 4. 15   | 7. 45  | 10. 20                              | 15. 16  |
| 8 Dom.   | 18. 54. 36,3  | 4. 8,0                  | 1. 39                                     | 4. 15   | 7. 45  | 10. 21                              | 15. 16  |
| 9 Lun.   | 18. 50. 28,3  | 4. 8,2                  | 1. 38                                     | 4. 14   | 7. 46  | 10. 22                              | 15. 15  |
| 10 Mar.  | 18. 46. 20,1  | 4. 8,4                  | 1. 37                                     | 4. 14   | 7. 46  | 10. 23                              | 15. 14  |
| 11 Mer.  | 18. 43. 11,7  | 4. 8,6                  | 1. 36                                     | 4. 14   | 7. 46  | 10. 24                              | 15. 14  |
| 12 Jov.  | 18. 38. 3,1   | 4. 8,8                  | 1. 35                                     | 4. 13   | 7. 47  | 10. 25                              | 15. 13  |
| 13 Ven.  | 18. 33. 54,3  | 4. 8,9                  | 1. 34                                     | 4. 13   | 7. 47  | 10. 26                              | 15. 13  |
| 14 Sat.  | 18. 29. 45,4  | 4. 9,1                  | 1. 34                                     | 4. 13   | 7. 47  | 10. 26                              | 15. 13  |
| 15 Dom.  | 18. 25. 26,3  | 4. 9,2                  | 1. 33                                     | 4. 13   | 7. 47  | 10. 27                              | 15. 13  |
| 16 Lun.  | 18. 21. 27,1  |                         | 1. 33                                     | 4. 13   | 7. 47  | 10. 27                              | 15. 13  |
| 17 Mar.  | 18. 17. 17,8  | 4. 9,3                  | 1. 32                                     | 4. 12   | 7. 48  | 10. 28                              | 15. 12  |
| 18 Mer.  | 18. 13. 8,4   | 4. 9,4                  | 1. 32                                     | 4. 12   | 7. 48  | 10. 28                              | 15. 12  |
| 19 Jov.  | 18. 8. 58,9   | 4. 9,5                  | 1. 31                                     | 4. 12   | 7. 48  | 10. 29                              | 15. 12  |
| 20 Ven.  | 18. 4. 49,4   | 4. 9,5                  | 1. 31                                     | 4. 12   | 7. 48  | 10. 29                              | 15. 12  |
| 21 Sat.  | 18. 0. 39,9   | 4. 9,5                  | 1. 31                                     | 4. 12   | 7. 48  | 10. 29                              | 15. 12  |
| 22 Dom.  | 17. 56. 30,4  | 4. 9,5                  | 1. 31                                     | 4. 12   | 7. 48  | 10. 29                              | 15. 12  |
| 23 Lun.  | 17. 52. 20,9  | 4. 9,5                  | 1. 32                                     | 4. 12   | 7. 48  | 10. 28                              | 15. 12  |
| 24 Mar.  | 17. 48. 21,4  | 4. 9,5                  | 1. 32                                     | 4. 12   | 7. 48  | 10. 28                              | 15. 12  |
| 25 Mer.  | 17. 44. 2,0   | 4. 9,3                  | 1. 32                                     | 4. 12   | 7. 48  | 10. 28                              | 15. 12  |
| 26 Jov.  | 17. 39. 52,7  | 4. 9,2                  | 1. 33                                     | 4. 13   | 7. 47  | 10. 27                              | 15. 13  |
| 27 Ven.  | 17. 35. 43,5  | 4. 9,1                  | 1. 33                                     | 4. 13   | 7. 47  | 10. 27                              | 15. 13  |
| 28 Sat.  | 17. 31. 34,4  | 4. 8,9                  | 1. 34                                     | 4. 13   | 7. 47  | 10. 26                              | 15. 13  |
| 29 Dom.  | 17. 27. 25,5  | 4. 8,6                  | 1. 34                                     | 4. 13   | 7. 47  | 10. 26                              | 15. 13  |
| 30 Lun.  | 17. 23. 16,9  | 4. 8,6                  | 1. 35                                     | 4. 13   | 7. 47  | 10. 25                              | 15. 13  |

| Dies<br>mensis | Dies<br>hebdomadae | Longitudo<br>Lunæ<br>Meridie | Latitudo<br>Lunæ<br>Meridie | Dia-<br>meter<br>bori-<br>zonta-<br>lis<br>Lunæ<br>Merid. | Paral-<br>laxis<br>bori-<br>zonta-<br>lis<br>Lunæ<br>Merid. | Declina-<br>tio Lunæ | Trans-<br>itus Lunæ<br>per Me-<br>ridianum |
|----------------|--------------------|------------------------------|-----------------------------|---|---|----------------------|--|
|                |                    | S. G. M. S.                  | G. M. S.                    | M. S.   | M. S.   | G. M.                | H. M.                                      |
| 1              | Dom                | 2. 25. 58. 0                 | 5. 0. 22 B                  | 29. 29  | 53. 59  | 28. 25 B             | 1. 6 V                                     |
| 2              | Lun.               | 2. 7. 50. 3                  | 4. 52. 19                   | 29. 28  | 53. 58  | 28. 5                | 1. 58                                      |
| 3              | Mar.               | 3. 19. 41. 20                | 4. 31. 36                   | 29. 31  | 54. 3   | 26. 30               | 2. 48                                      |
| 4              | Mer.               | 3. 1. 34. 20                 | 3. 59. 0                    | 29. 38  | 54. 16  | 23. 43               | 3. 37                                      |
| 5              | Jov.               | 4. 13. 32. 3                 | 3. 15. 43                   | 29. 49  | 54. 37  | 29. 54               | 4. 24                                      |
| 6              | Ven.               | 4. 25. 38. 27                | 2. 23. 0                    | 30. 6   | 55. 7   | 15. 14               | 5. 8                                       |
| 7              | Sat.               | 5. 7. 57. 47                 | 1. 22. 43                   | 30. 27  | 55. 45  | 9. 54                | 5. 51                                      |
| 8              | Dom                | 5. 20. 34. 51                | 0. 16. 58                   | 30. 52  | 56. 31  | 4. 0                 | 6. 33                                      |
| 9              | Lun.               | 6. 3. 34. 19                 | 0. 51. 33 A                 | 31. 21  | 57. 24  | 2. 17 A              | 7. 16                                      |
| 10             | Mar.               | 6. 17. 0. 15                 | 1. 59. 28                   | 31. 52  | 58. 21  | 8. 30                | 8. 2                                       |
| 11             | Mer.               | 7. 0. 55. 20                 | 3. 2. 43                    | 32. 23  | 59. 18  | 14. 58               | 8. 52                                      |
| 12             | Jov.               | 7. 15. 19. 50                | 3. 56. 36                   | 32. 52  | 60. 10  | 20. 11               | 9. 48                                      |
| 13             | Ven.               | 8. 0. 10. 42                 | 4. 36. 19                   | 33. 14  | 60. 51  | 24. 40               | 10. 50                                     |
| 14             | Sat.               | 8. 15. 20. 56                | 4. 57. 36                   | 33. 28  | 61. 17  | 27. 33               | 11. 56                                     |
| 15             | Dom                | 9. 0. 40. 36                 | 4. 57. 52                   | 33. 31  | 61. 23  | 28. 24               | * *  |
| 16             | Lun.               | 9. 15. 57. 49                | 4. 36. 53                   | 33. 25  | 61. 10  | 27. 3                | 1. 4 M                                     |
| 17             | Mar.               | 10. 1. 1. 24                 | 3. 56. 49                   | 33. 8   | 60. 40  | 23. 47               | 2. 9                                       |
| 18             | Mer.               | 10. 15. 43. 10               | 3. 1. 48                    | 32. 45  | 59. 57  | 18. 59               | 3. 9                                       |
| 19             | Jov.               | 10. 29. 58. 6                | 1. 56. 48                   | 32. 16  | 59. 5   | 13. 16               | 4. 5                                       |
| 20             | Ven.               | 11. 13. 45. 1                | 0. 46. 51                   | 31. 46  | 58. 9   | 7. 5                 | 4. 53                                      |
| 21             | Sat.               | 11. 27. 5. 21                | 0. 23. 35 B                 | 31. 16  | 57. 15  | 0. 48                | 5. 39                                      |
| 22             | Dom                | 0. 10. 2. 8                  | 1. 30. 41                   | 30. 49  | 56. 26  | 5. 24 B              | 6. 22                                      |
| 23             | Lun.               | 0. 22. 39. 25                | 2. 31. 38                   | 30. 26  | 55. 43  | 11. 10               | 7. 4                                       |
| 24             | Mar.               | 1. 5. 1. 16                  | 3. 24. 5                    | 30. 7   | 55. 8   | 16. 25               | 7. 47                                      |
| 25             | Mer.               | 1. 17. 11. 24                | 4. 6. 16                    | 29. 52  | 54. 40  | 20. 55               | 8. 32                                      |
| 26             | Jov.               | 1. 29. 13. 27                | 4. 36. 59                   | 29. 49  | 54. 19  | 24. 30               | 9. 20                                      |
| 27             | Ven.               | 2. 11. 10. 7                 | 4. 55. 19                   | 29. 32  | 54. 5   | 27. 0                | 10. 8                                      |
| 28             | Sat.               | 2. 23. 3. 39                 | 5. 0. 30                    | 29. 28  | 53. 58  | 28. 18               | 10. 58                                     |
| 29             | Dom                | 3. 4. 55. 41                 | 4. 52. 44                   | 29. 27  | 53. 56  | 28. 0                | 11. 49                                     |
| 30             | Lun.               | 3. 16. 47. 48                | 4. 32. 18                   | 29. 29  | 53. 59  | 26. 54               | 0. 40 V                                    |

| Dies<br>hebdomadis | Longitudo<br>Lunæ media<br>nocte |     | Latitudo<br>Lunæ media<br>nocte |    | Dia-<br>meter<br>boriz.<br>Lunæ<br>med.<br>noct. | Paral-<br>laxis<br>boriz.<br>Lunæ<br>med.<br>noct. | Ortus<br>Lunæ | Occafus<br>Lunæ |        |
|--------------------|----------------------------------|-----|---------------------------------|----|--|--|---------------|-----------------|--------|
|                    | S.                               | G.  | M.                              | S. |  |  |               |                 |        |
| 1 Dom.             | 3.                               | 1.  | 54.                             | 14 | 4. 57.   | 58 B   | 29. 28        | 53. 58          |        |
| 2 Lun.             | 3.                               | 13. | 45.                             | 37 | 4. 43.   | 30   | 29. 29        | 54. 0           |        |
| 3 Mar.             | 3.                               | 25. | 37.                             | 29 | 4. 16.   | 43   | 29. 34        | 54. 9           |        |
| 4 Mer.             | 4.                               | 7.  | 32.                             | 21 | 3. 38.   | 40   | 29. 43        | 54. 26          |        |
| 5 J. v.            | 4.                               | 19. | 33.                             | 56 | 2. 50.   | 27   | 29. 57        | 54. 51          |        |
| 6 Ven.             | 5.                               | 1.  | 46.                             | 14 | 1. 53.   | 43   | 30. 16        | 55. 25          |        |
| 7 Sat.             | 5.                               | 14. | 13.                             | 49 | 0. 50.   | 24   | 30. 39        | 56. 7           |        |
| 8 Dom.             | 5.                               | 27. | 1.                              | 32 | 0. 17.   | 6 A  | 31. 6         | 56. 57          |        |
| 9 Lun.             | 6.                               | 10. | 13.                             | 46 | 1. 25.   | 47   | 31. 37        | 57. 53          |        |
| 10 Mar.            | 6.                               | 23. | 54.                             | 4  | 2. 31.   | 57   | 32. 8         | 58. 50          |        |
| 11 Mer.            | 7.                               | 8.  | 3.                              | 59 | 3. 31.   | 10   | 32. 38        | 59. 45          |        |
| 12 Jov.            | 7.                               | 22. | 42.                             | 18 | 4. 18.   | 26   | 33. 4         | 60. 32          |        |
| 13 Ven.            | 8.                               | 2.  | 43.                             | 51 | 4. 49.   | 33   | 33. 22        | 61. 6           |        |
| 14 Sat.            | 8.                               | 23. | 0.                              | 15 | 5. 0.  | 31   | 33. 31        | 61. 22          |        |
| 15 Dum.            | 9.                               | 8.  | 20.                             | 17 | 4. 50.   | 0  | 33. 29        | 61. 19          |        |
| 16 Lun.            | 9.                               | 25. | 31.                             | 52 | 4. 19.   | 2  | 33. 17        | 60. 57          |        |
| 17 Mar.            | 10.                              | 8   | 25.                             | 34 | 3. 30.   | 52   | 33. 57        | 60. 19          |        |
| 18 Mer.            | 10.                              | 22. | 54                              | 8  | 2. 30.   | 12   | 33. 31        | 59. 32          |        |
| 19 Jov.            | 11.                              | 6.  | 55.                             | 8  | 1. 22.   | 8  | 33. 1         | 58. 37          |        |
| 20 Ven.            | 11.                              | 20. | 28.                             | 24 | 0. 11.   | 24   | 31. 31        | 57. 42          |        |
| 21 Sat.            | 0.                               | 3.  | 36.                             | 25 | 0. 57.   | 46 B   | 31. 2         | 56. 50          |        |
| 22 Dom.            | 0.                               | 16. | 22.                             | 56 | 2.   | 2.   | 7             | 30. 37          | 56. 4  |
| 23 Lun.            | 0.                               | 28. | 52.                             | 3  | 2.   | 59.  | 3             | 30. 16          | 55. 25 |
| 24 Mar.            | 1.                               | 11. | 7.                              | 32 | 3.   | 46.  | 32            | 29. 59          | 54. 53 |
| 25 Mer.            | 1.                               | 23. | 13.                             | 15 | 4.   | 23.  | 9             | 29. 45          | 54. 29 |
| 26 Jov.            | 2.                               | 5.  | 18.                             | 17 | 4.   | 47.  | 47            | 29. 36          | 54. 12 |
| 27 Ven.            | 2.                               | 17. | 7.                              | 10 | 4.   | 59.  | 33            | 29. 30          | 54. 1  |
| 28 Sat.            | 2.                               | 28. | 39.                             | 46 | 4.   | 54.  | 16            | 29. 27          | 53. 56 |
| 29 Dom.            | 3.                               | 10. | 51.                             | 34 | 4.   | 44.  | 6             | 29. 28          | 53. 57 |
| 30 Lun.            | 3.                               | 22. | 44.                             | 12 | 4.   | 17.  | 32            | 29. 32          | 54. 4  |
|                    |                                  |     |                                 |    |  |  |               |                 |        |

| Dies<br>mensis | Longitudo<br>Planetarum | Latitudo<br>Planetarum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Trans-<br>fusus Pla-<br>netarum<br>per Me-<br>ridianum | Occan-<br>tus Pla-<br>netarum |
|----------------|-------------------------|------------------------|---------------------------------|--------------------------|--|-------------------------------|
|                | S. G. M.                | G. M.                  | G. M.                           | H. M.                    | H. M.  | H. M.                         |

## S A T U R N U S .

|    |              |            |          |         |         |       |
|----|--------------|------------|----------|---------|---------|-------|
| 1  | 9. II. 22, 0 | 0. 38, 4 B | 22. 21 A | 9. 49 V | 2. 13 M | 6. 37 |
| 7  | 9. II. 0, 5  | 0. 38, 2   | 22. 23   | 9. 23   | 1. 47   | 6. 11 |
| 13 | 9. IO. 36, 4 | 0. 38, 0   | 22. 25   | 8. 56   | 1. 20   | 5. 44 |
| 19 | 9. IO. 12, 3 | 0. 37, 7   | 22. 27   | 8. 29   | 0. 53   | 5. 17 |
| 25 | 9. 9. 45, 1  | 0. 37, 3   | 22. 30   | 8. 2    | 0. 26   | 4. 50 |

## J U P I T E R .

|    |              |            |         |         |         |       |
|----|--------------|------------|---------|---------|---------|-------|
| 1  | 10. 2. 11, 3 | 0. 22, 9 A | 20. 5 A | 11. 6 V | 3. 42 M | 8. 18 |
| 7  | 10. 1. 55, 6 | 0. 24, 0   | 20. 10  | 10. 41  | 3. 16   | 7. 51 |
| 13 | 10. 1. 32, 6 | 0. 25, 2   | 20. 16  | 10. 15  | 2. 50   | 7. 25 |
| 19 | 10. 1. 7, 8  | 0. 26, 2   | 20. 22  | 9. 49   | 2. 23   | 6. 57 |
| 25 | 10. 0. 33, 4 | 0. 27, 3   | 20. 30  | 9. 21   | 1. 55   | 6. 29 |

## M A R S .

|    |               |            |         |          |        |        |
|----|---------------|------------|---------|----------|--------|--------|
| 1  | 11. 7. 43, 5  | 2. 31, 7 A | 11. 3 A | 0. 50 M  | 6. 6 M | 11. 22 |
| 7  | 11. 11. 28, 7 | 2. 42, 5   | 9. 56   | 0. 35    | 5. 55  | 11. 15 |
| 13 | 11. 15. 13, 0 | 2. 53, 3   | 8. 50   | 0. 18    | 5. 44  | 11. 10 |
| 19 | 11. 18. 51, 0 | 3. 4, 1    | 7. 15   | 0. 2     | 5. 33  | 11. 11 |
| 25 | 11. 22. 17, 5 | 3. 15. 0   | 6. 4    | 11. 45 V | 5. 21  | 10. 57 |

## V E N U S .

|    |              |            |          |         |         |        |
|----|--------------|------------|----------|---------|---------|--------|
| 1  | 3. 16. 18, 2 | 1. 57, 5 B | 24. 24 B | 6. 50 M | 2. 35 V | 10. 20 |
| 7  | 3. 23. 20, 8 | 2. 0, 6    | 23. 26   | 7. 0    | 2. 41   | 10. 22 |
| 13 | 4. 0. 22, 0  | 2. 1, 3    | 22. 5    | 7. 12   | 2. 46   | 10. 20 |
| 19 | 4. 7. 17, 3  | 1. 58, 0   | 20. 22   | 7. 24   | 2. 50   | 10. 16 |
| 25 | 4. 14. 11, 1 | 1. 50, 5   | 18. 22   | 7. 36   | 2. 52   | 10. 8  |

## M E R C U R I U S .

|    |              |            |          |         |         |       |
|----|--------------|------------|----------|---------|---------|-------|
| 1  | 3. 3. 58, 4  | 1. 59, 7 B | 25. 25 B | 5. 50 V | 1. 41 V | 9. 32 |
| 7  | 3. 10. 40, 0 | 1. 19, 0   | 24. 21   | 6. 0    | 1. 45   | 9. 30 |
| 13 | 3. 15. 6, 6  | 0. 10, 8   | 22. 48   | 6. 1    | 1. 39   | 9. 17 |
| 19 | 3. 17. 20, 1 | 1. 17, 5 A | 21. 5    | 5. 55   | 1. 24   | 8. 53 |
| 25 | 3. 16. 43, 8 | 2. 51, 1   | 19. 35   | 5. 33   | 0. 55   | 8. 17 |

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## ECLIPSES SATELLITUM JOVIS.

| Dies | Diameter<br>Solis | Mora<br>tranitus<br>Solis per<br>Meridian. | Motus<br>borarius<br>Solis | Logaritmus<br>distantia<br>Solis a terra<br>posita media<br>100000 | Longitudo<br>Nodi Luna |
|------|-------------------|--|----------------------------|--|------------------------|
|      | M. S.             | M. S.                                      | M. S.                      |  | S. G. M.               |
| 1    | 31. 34, 8         | 2. 16, 4                                   | 2. 23, 7                   | 5. 006368  | 11. 24. 0              |
| 4    | 31. 34, 2         | 2. 16, 7                                   | 2. 23, 5                   | 5. 006534  | 11. 23. 51             |
| 7    | 31. 33, 6         | 2. 16, 9                                   | 2. 23, 4                   | 5. 006684  | 11. 23. 41             |
| 10   | 31. 33, 0         | 2. 17, 1                                   | 2. 23, 3                   | 5. 006815  | 11. 23. 32             |
| 13   | 31. 32, 4         | 2. 17, 2                                   | 2. 23, 2                   | 5. 006928  | 11. 23. 22             |
| 16   | 31. 31, 9         | 2. 17, 3                                   | 2. 23, 1                   | 5. 007026  | 11. 23. 12             |
| 19   | 31. 31, 6         | 2. 17, 4                                   | 2. 23, 0                   | 5. 007105  | 11. 23. 03             |
| 22   | 31. 31, 3         | 2. 17, 4                                   | 2. 23, 0                   | 5. 007172  | 11. 22. 53             |
| 25   | 31. 31, 1         | 2. 17, 4                                   | 2. 23, 0                   | 5. 007207  | 11. 22. 44             |
| 28   | 31. 31, 0         | 2. 17, 3                                   | 2. 23, 0                   | 5. 007230  | 11. 22. 34             |

POSITIONES SATELLITUM JOVIS

*Oriens*      12<sup>h</sup> Vespere      *Occidens*

|  |    |           |    |        |    |
|--|----|-----------|----|--------|----|
| 1  | .4 | 3.        | ○  | 3.     | .  |
| 2  | .  | 2. . 4    | ○  | 1.     | .  |
| 3  | .  | 1. . 3    | ○  | 4.     | .  |
| 4  | .  | ○ 3       | ○  | 3. . 4 | .  |
| 5  | .  | 2.        | ○  | 3.     | .  |
| 6  | .  | ○         | 3. | 1.     | .  |
| 7  | .  | 1. ○ 3    | ○  | 3.     | .  |
| 8  | 10 | 3.        | ○  | 2.     | 4. |
| 9  | 3. | 2.        | ○  | 1.     | 4. |
| 10                                       | .  | 2. 1. ○ 3 | ○  | 4.     | .  |
| 11                                       | 10 | .         | ○  | 3. . 2 | 4. |
| 12                                       | .  | 4.        | ○  | 3.     | .  |
| 13                                       | 6. | 2.        | ○  | 3.     | 1. |
| 14                                       | 4. | 2.        | ○  | 3.     | .  |
| 15                                       | 4. | 1.        | ○  | 3.     | .  |
| 17                                       | .  | 1. 2. 3.  | ○  | .      | .  |
| 18                                       | .  | 4.        | ○  | 2. . 3 | .  |
| 20                                       | .  | 2.        | ○  | 2. . 4 | 3. |
| 21                                       | .  | 1.        | ○  | 3.     | 4. |
| 22                                       | .  | 3.        | ○  | 2. . 3 | 4. |
| 24                                       | 10 | 2. 2.     | ○  | .      | 4. |
| 25                                       | .  | 1.        | ○  | 2. . 3 | 4. |
| 26                                       | .  | 1.        | ○  | 2. . 3 | 4. |
| 28                                       | .  | 4. ○ 1    | ○  | 3.     | 1. |
| 29                                       | 4. | 3.        | ○  | 2. . 3 | .  |
| 30                                       | 4. | 2. 1.     | ○  | .      | .  |
| Positiones Satellitum tempore eclipsium. |    |           |    |        |    |
| 8  | .  | 1.        | ○  | 2. . 3 | 4. |
| 16                                       | 4. | 3.        | ○  | 2.     | .  |
| 19                                       | .  | 2. . 4    | ○  | 3.     | .  |
| 23                                       | .  | 3.        | ○  | 2. . 3 | 4. |
| 27                                       | .  | 2.        | ○  | 2.     | 4. |

| Phænomena & Observationes<br>Solis          |                     |
|---|---------------------|
| <i>Sol in parallelo</i>                     |                     |
| 6 $\alpha$ & $\gamma$ Geminorum culm.       | 23 <sup>h</sup> 0'  |
| & 22 $\delta$ 52'                           |                     |
| 8 $\alpha$ Arietis & $\beta$ Geminor. culm. |                     |
| 18 <sup>h</sup> 39' & 0 <sup>m</sup> 4'     |                     |
| 9 $\gamma$ Cancri culm.                     | 1 <sup>h</sup> 13'  |
| 11 $\delta$ Herculis culm.                  | 8 <sup>h</sup> 55'  |
| 13 $\beta$ Leonis culm.                     | 3 <sup>h</sup> 29'  |
| 18 $\gamma$ Leonis culm.                    | 2 <sup>h</sup> 14'  |
| 21 $\alpha$ Arcturi culm.                   | 6 <sup>h</sup> 0'   |
| 22 $\alpha$ signo Leonis                    | 14 <sup>h</sup> 38' |
| 24 $\gamma$ Herculis culm.                  | 7 <sup>h</sup> 52'  |
| 25 $\gamma$ Bootis culm.                    | 5 <sup>h</sup> 22'  |

| Phænomena & Observationes<br>Lunæ                     |   |
|---|---|
| <i>Luna</i>   |   |
| 1 ad $\epsilon$ Canceris                              | 11 <sup>h</sup> 36'   |
| 3 ad $\alpha$ & $\rho$ Leonis                         | 7 <sup>h</sup> 30' & 20 <sup>h</sup> 30'                      |
| 4 ad $\chi$ Leonis                                    | 11 <sup>h</sup> 0'  |
| 5 ad $\tau$ Leonis                                    | 1 <sup>h</sup> 30'  |
| 7 ad $\psi$ , $\gamma$ & $\iota$ Virg. 0 <sup>m</sup> | 12 <sup>h</sup> , 7 <sup>h</sup> &<br>16 <sup>h</sup> 0'      |
| Primus Quadrans                                       |   |
| 10 ad $\pi$ Scorpii                                   | { Immerit. 10 <sup>h</sup> 20'<br>Emerit. 11 <sup>h</sup> 10' |
| Dist. min. Bor. 12'                                   |   |
| 12 Perigea ad $\gamma$ , & $\delta$ Sagitt.           | 6 <sup>h</sup> 30'<br>& 11 <sup>h</sup> 30'                   |
| ad Saturni  | 23 <sup>h</sup> 12'   |
| 13 Plenilunium  | 19 <sup>h</sup> 42'   |
| 14 ad Jovis   | 6 <sup>h</sup> 18'  |
| 15 ad $\chi$ & $\phi$ Capri.                          | 1 <sup>h</sup> 8', & 3 <sup>h</sup> 30'                       |
| 18 ad Martis  | 21 <sup>h</sup> 0'  |
| 19 ad $\epsilon$ Piscium                              | 15 <sup>h</sup> 0'  |
| 20 Ultimus Quadrans                                   | 17 <sup>h</sup> 16'   |
| ad $\pi$ Piscium                                      | 8 <sup>h</sup> 30'  |
| 22 ad $\zeta$ Arietis                                 | 10 <sup>h</sup> 12'   |
| 23 ad $\gamma$ , & $\chi$ Tauri                       | 9 <sup>h</sup> 30' & 17 <sup>h</sup> 0'                       |
| 25 Apogeia ad $\alpha$ Gemin.                         | 20 <sup>h</sup> 40'   |
| 28 Novilunium   | 20 <sup>h</sup> 32'   |
| ad $\rho$ Leonis                                      | 2 <sup>h</sup> 30'  |

| Phænomena & Observationes<br>Planetarum    |  |
|--|--|
| <i>Oppositio Saturni</i>                   |  |
| 3 Jupiter ad $\sigma$ Capri diff. lat. 58' |  |
| 4 Mercur. in conjunct. cum Sole            |  |
| Venus ad $\gamma$ Leonis d. l. 1.0 30'     |  |
| 5 Venus ad $\alpha$ Leonis d. l. 1.0 2'    |  |
| 11 Venus ad 1 $\sigma$ Leonis d. l. 1.0 8' |  |
| 12 Venus ad 2 $\sigma$ Leonis d. l. 1.0 2' |  |
| 13 Venus in elongatione maxima             |  |
| 18 Mars ad $\pi$ Piscium diff. lat. 1'     |  |
| 19 Venus ad $\chi$ Leonis diff. lat. 25'   |  |
| 20 Oppositio Jovis                         |  |
| 21 Mars ad $\pi$ Piscium diff. lat. 12'    |  |
| 24 Mercurius ad $\zeta$ Geminor. d. l. 5'  |  |
| Mercurius in elongat. maxima               |  |
| 25 Saturnus ad $\pi$ Sagitt. d. l. 5'      |  |
| 31 Venus ad $\beta$ Virginis d. l. 50'     |  |

*Planetae in parallelis fixarum*  
Satur. prop.  $\delta$  Scorp.,  $\gamma$  Hyd.  $\sigma$  Sa-  
gitt.,  $\delta$  Corvi,  $\gamma$  Lep.,  $\tau$  Sagitt.  
Jupiter initio  $\iota$  Capri,  $b$  Ca*i*,  
 $\delta$  &  $\delta$  Lep., tum  $\mu$  &  $\pi$  Sagitt.,  
 $\epsilon$  Corvi,  $\delta$  Scorp.,  $\gamma$  Hydræ  
Mars 3  $\sigma$  Virg. &  $\epsilon$  Ophiuci, 7  $\zeta$   
Serp., 13  $\gamma$  &  $\mu$  Serp., 23  $\alpha$   
Aquarii, 28  $\delta$  Ceti, 31  $\gamma$  Virg.  
Venus 1  $\alpha$  Tauri &  $\delta$  Serp., 3  $\beta$   
Leonis, 6  $\alpha$  Pegasi, 8  $\alpha$  Leonis,  
9  $\alpha$  Ophiuci, 12  $\delta$  Serp., 16  $\zeta$   
Pegasi, 19  $\alpha$  Aquilæ, 22  $\alpha$   
Orionis &  $\alpha$  Serp., 24 Procyon,  
29  $\alpha$  Ceti, 31  $\alpha$  Pisces  
Mercur. 13  $\epsilon$  Pegasi, 19  $\tau$  Bootis  
&  $\gamma$  Herculis, 22 Arcturi,  
25  $\zeta$  Tauri, 31  $\iota$  Tauri

| Dies<br>mens<br>calend<br>arum | Dies<br>breviora<br>addenda | Equatio<br>addenda<br>tempori<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitude<br>Solis | Ascensio recta<br>Solis |     |    | Declinatio<br>Solis<br>Borealis |     |    |    |    |    |
|--------------------------------|-----------------------------|--|------------------|--------------------|-------------------------|-----|----|---------------------------------|-----|----|----|----|----|
|                                |                             |  |                  |                    | M.                      | S.  | S. | G.                              | M.  | S. | G. | M. | S. |
| 1                              | Mar.                        | 3. 17. 8   | 11. 6            | 3. 9. 23. 8        | 100.                    | 12. | 54 | 23.                             | 8.  | 16 |    |    |    |
| 2                              | Mer.                        | 3. 29. 4   | 11. 3            | 3. 10. 20. 22      | 101.                    | 14. | 57 | 23.                             | 4.  | 1  |    |    |    |
| 3                              | Jov.                        | 3. 40. 7   | 11. 0            | 3. 11. 17. 35      | 102.                    | 16. | 56 | 22.                             | 59. | 22 |    |    |    |
| 4                              | Ven.                        | 3. 51. 7   | 10. 7            | 3. 12. 14. 49      | 103.                    | 18. | 50 | 22.                             | 54. | 19 |    |    |    |
| 5                              | Sat.                        | 4. 2. 4  | 10. 4            | 3. 13. 12. 1       | 104.                    | 20. | 39 | 22.                             | 48. | 52 |    |    |    |
| 6                              | Dum                         | 4. 12. 8   | 10. 0            | 3. 14. 9. 15       | 105.                    | 22. | 22 | 22.                             | 43. | 2  |    |    |    |
| 7                              | Lun.                        | 4. 22. 8   | 9. 5             | 3. 15. 6. 28       | 106.                    | 24. | 0  | 22.                             | 36. | 49 |    |    |    |
| 8                              | Mar.                        | 4. 32. 3   | 9. 1             | 3. 16. 3. 40       | 107.                    | 25. | 32 | 22.                             | 30. | 10 |    |    |    |
| 9                              | Mer.                        | 4. 41. 4   | 8. 7             | 3. 17. 0. 52       | 108.                    | 26. | 57 | 22.                             | 23. | 8  |    |    |    |
| 10                             | Jov                         | 4. 50. 1   | 8. 2             | 3. 17. 58. 4       | 109.                    | 28. | 16 | 22.                             | 15. | 43 |    |    |    |
| 11                             | Ven                         | 4. 58. 3   | 7. 8             | 3. 18. 55. 16      | 110.                    | 29. | 38 | 22.                             | 7.  | 56 |    |    |    |
| 12                             | Sat.                        | 5. 6. 1  | 7. 3             | 3. 19. 52. 39      | 111.                    | 30. | 34 | 21.                             | 59. | 47 |    |    |    |
| 13                             | Dom                         | 5. 13. 4   | 6. 9             | 3. 20. 49. 42      | 112.                    | 31. | 53 | 21.                             | 51. | 15 |    |    |    |
| 14                             | Lun.                        | 5. 20. 3   | 6. 4             | 3. 21. 46. 55      | 113.                    | 32. | 24 | 21.                             | 42. | 20 |    |    |    |
| 15                             | Mar.                        | 5. 26. 7   | 6. 0             | 3. 22. 44. 8       | 114.                    | 33. | 8  | 21.                             | 33. | 3  |    |    |    |
| 16                             | Mer.                        | 5. 32. 7   | 5. 5             | 3. 23. 41. 22      | 115.                    | 33. | 45 | 21.                             | 23. | 24 |    |    |    |
| 17                             | Jov.                        | 5. 38. 2   | 4. 9             | 3. 24. 38. 36      | 116.                    | 34. | 15 | 21.                             | 13. | 23 |    |    |    |
| 18                             | Ven.                        | 5. 43. 1   | 4. 3             | 3. 25. 35. 52      | 117.                    | 34. | 37 | 21.                             | 3.  | 0  |    |    |    |
| 19                             | Sat.                        | 5. 47. 4   | 3. 8             | 3. 26. 33. 8       | 118.                    | 34. | 51 | 20.                             | 52. | 16 |    |    |    |
| 20                             | Dom                         | 5. 51. 2   | 3. 3             | 3. 27. 30. 25      | 119.                    | 34. | 58 | 20.                             | 41. | 10 |    |    |    |
| 21                             | Lun.                        | 5. 54. 5   | 2. 9             | 3. 28. 27. 43      | 120.                    | 34. | 57 | 20.                             | 29. | 43 |    |    |    |
| 22                             | Mar.                        | 5. 57. 4   | 2. 3             | 3. 29. 25. 2       | 121.                    | 34. | 48 | 20.                             | 17. | 56 |    |    |    |
| 23                             | Mer.                        | 5. 59. 7   | 1. 7             | 4. 0. 22. 22       | 122.                    | 34. | 31 | 20.                             | 5.  | 49 |    |    |    |
| 24                             | Jov.                        | 6. 1. 4  | 1. 1             | 4. 1. 19. 43       | 123.                    | 34. | 5  | 19.                             | 53. | 21 |    |    |    |
| 25                             | Ven.                        | 6. 2. 5  | 0. 5             | 4. 8. 17. 5        | 124.                    | 33. | 31 | 19.                             | 40. | 33 |    |    |    |
| 26                             | Sat.                        | 6. 3. 0  | 0. 0             | 4. 3. 14. 28       | 125.                    | 32. | 48 | 19.                             | 27. | 26 |    |    |    |
| 27                             | Dom                         | 6. 3. 0  | 0. 6             | 4. 4. 11. 52       | 126.                    | 31. | 56 | 19.                             | 13. | 59 |    |    |    |
| 28                             | Lun.                        | 6. 2. 4  | 1. 2             | 4. 5. 9. 17        | 127.                    | 30. | 55 | 19.                             | 0.  | 13 |    |    |    |
| 29                             | Mar.                        | 6. 1. 2  | 1. 8             | 4. 6. 6. 42        | 128.                    | 29. | 45 | 18.                             | 46. | 8  |    |    |    |
| 30                             | Mer.                        | 5. 59. 4   | 2. 4             | 4. 7. 4. 9         | 129.                    | 28. | 26 | 18.                             | 31. | 45 |    |    |    |
| 31                             | Jov.                        | 5. 57. 0   | 2. 9             | 4. 8. 1. 36        | 130.                    | 26. | 58 | 18.                             | 17. | 3  |    |    |    |

| Dies<br>seculi<br>et Luna | Distantia<br>sectionis Y<br>a Sole | Diffe-<br>rentia | Ini-<br>tium<br>Crepus-<br>culi |    | Orta-<br>Centri<br>Solis |       | Occa-<br>jus<br>Centri<br>Solis |        | Finis<br>Crepus-<br>culi |    | Hora<br>Italica<br>Meridi-<br>dies |    |
|---------------------------|------------------------------------|------------------|---------------------------------|----|--------------------------|-------|---------------------------------|--------|--------------------------|----|------------------------------------|----|
|                           |                                    |                  | H.                              | M. | H.                       | M.    | H.                              | M.     | H.                       | M. | H.                                 | M. |
| 1 Mar.                    | 17. 19. 8,4                        | 4.               | 8,2                             |    | 1. 36                    | 4. 14 | 7. 46                           | 10. 24 | 15. 14                   |    |                                    |    |
| 2 Mer.                    | 17. 15. 0,2                        | 4.               | 7,9                             |    | 1. 37                    | 4. 14 | 7. 46                           | 10. 23 | 15. 14                   |    |                                    |    |
| 3 Jov.                    | 17. 10. 52,3                       | 4.               | 7,6                             |    | 1. 38                    | 4. 14 | 7. 46                           | 10. 23 | 15. 15                   |    |                                    |    |
| 4 Ven.                    | 17. 6. 44,7                        | 4.               | 7,3                             |    | 1. 39                    | 4. 14 | 7. 46                           | 10. 21 | 15. 15                   |    |                                    |    |
| 5 Sat.                    | 17. 2. 37,4                        | 4.               | 6,9                             |    | 1. 40                    | 4. 15 | 7. 47                           | 10. 20 | 15. 16                   |    |                                    |    |
| 6 Dom.                    | 16. 58. 30,5                       | 4.               | 6,5                             |    | 1. 41                    | 4. 15 | 7. 45                           | 10. 19 | 15. 16                   |    |                                    |    |
| 7 Lun.                    | 16. 54. 24,0                       | 4.               | 6,1                             |    | 1. 42                    | 4. 16 | 7. 44                           | 10. 18 | 15. 17                   |    |                                    |    |
| 8 Mar.                    | 16. 50. 17,9                       | 4.               | 5,7                             |    | 1. 43                    | 4. 16 | 7. 44                           | 10. 17 | 15. 18                   |    |                                    |    |
| 9 Mer.                    | 16. 46. 12,2                       | 4.               | 5,3                             |    | 1. 45                    | 4. 17 | 7. 43                           | 10. 15 | 15. 19                   |    |                                    |    |
| 10 Jov.                   | 16. 42. 6,9                        | 4.               | 4,8                             |    | 1. 46                    | 4. 18 | 7. 42                           | 10. 14 | 15. 20                   |    |                                    |    |
| 11 Ven.                   | 16. 38. 2,1                        | 4.               | 4,4                             |    | 1. 48                    | 4. 18 | 7. 42                           | 10. 13 | 15. 21                   |    |                                    |    |
| 12 Sat.                   | 16. 33. 57,7                       | 4.               | 3,9                             |    | 1. 50                    | 4. 19 | 7. 41                           | 10. 10 | 15. 22                   |    |                                    |    |
| 13 Dom.                   | 16. 29. 53,8                       | 4.               | 3,4                             |    | 1. 52                    | 4. 20 | 7. 40                           | 10. 8  | 15. 23                   |    |                                    |    |
| 14 Lun.                   | 16. 25. 50,4                       | 4.               | 2,9                             |    | 1. 54                    | 4. 21 | 7. 39                           | 10. 6  | 15. 24                   |    |                                    |    |
| 15 Mar.                   | 16. 21. 47,5                       | 4.               | 2,5                             |    | 1. 56                    | 4. 22 | 7. 38                           | 10. 4  | 15. 25                   |    |                                    |    |
| 16 Mer.                   | 16. 17. 45,0                       | 4.               | 2,0                             |    | 1. 58                    | 4. 23 | 7. 37                           | 10. 3  | 15. 26                   |    |                                    |    |
| 17 Jov.                   | 16. 13. 43,0                       | 4.               | 1,5                             |    | 2. 0                     | 4. 24 | 7. 36                           | 10. 0  | 15. 28                   |    |                                    |    |
| 18 Ven.                   | 16. 9. 41,5                        | 4.               | 1,0                             |    | 2. 2                     | 4. 2  | 7. 35                           | 9. 58  | 15. 29                   |    |                                    |    |
| 19 Sat.                   | 16. 5. 40,5                        | 4.               | 0,4                             |    | 2. 4                     | 4. 26 | 7. 34                           | 9. 56  | 15. 30                   |    |                                    |    |
| 20 Dom.                   | 16. 1. 40,1                        | 3.               | 59,9                            |    | 2. 6                     | 4. 27 | 7. 33                           | 9. 54  | 15. 31                   |    |                                    |    |
| 21 Lun.                   | 15. 57. 40,2                       | 3.               | 59,4                            |    | 2. 8                     | 4. 28 | 7. 32                           | 9. 52  | 15. 32                   |    |                                    |    |
| 22 Mar.                   | 15. 53. 40,8                       | 3.               | 58,9                            |    | 2. 10                    | 4. 29 | 7. 31                           | 9. 50  | 15. 34                   |    |                                    |    |
| 23 Mer.                   | 15. 49. 41,9                       | 3.               | 58,3                            |    | 2. 12                    | 4. 30 | 7. 30                           | 9. 48  | 15. 35                   |    |                                    |    |
| 24 Jov.                   | 15. 45. 43,6                       | 3.               | 57,7                            |    | 2. 14                    | 4. 31 | 7. 29                           | 9. 46  | 15. 36                   |    |                                    |    |
| 25 Ven.                   | 15. 41. 45,9                       | 3.               | 57,1                            |    | 2. 16                    | 4. 32 | 7. 28                           | 9. 44  | 15. 37                   |    |                                    |    |
| 26 Sat.                   | 15. 37. 48,8                       | 3.               | 56,5                            |    | 2. 18                    | 4. 33 | 7. 27                           | 9. 42  | 15. 39                   |    |                                    |    |
| 27 Dom.                   | 15. 33. 52,3                       | 3.               | 55,9                            |    | 2. 20                    | 4. 34 | 7. 26                           | 9. 40  | 15. 40                   |    |                                    |    |
| 28 Lun.                   | 15. 29. 56,4                       | 3.               | 55,3                            |    | 2. 22                    | 4. 35 | 7. 25                           | 9. 38  | 15. 41                   |    |                                    |    |
| 29 Mar.                   | 15. 26. 1,1                        | 3.               | 54,8                            |    | 2. 24                    | 4. 36 | 7. 24                           | 9. 36  | 15. 43                   |    |                                    |    |
| 30 Mer.                   | 15. 22. 6,3                        | 3.               | 54,2                            |    | 2. 26                    | 4. 37 | 7. 23                           | 9. 34  | 15. 44                   |    |                                    |    |
| 31 Jov.                   | 15. 18. 19,1                       | 3.               | 53,5                            |    | 2. 28                    | 4. 38 | 7. 22                           | 9. 32  | 15. 45                   |    |                                    |    |

| Dies<br>mensis | Die<br>seculorum | Longitudo<br>Luna<br>Meridie | Latitudo<br>Luna<br>Meridie | Dia-<br>meter<br>bori-<br>zonta-<br>lis<br>Luna<br>Merid. | Paral-<br>laxis<br>bori-<br>zonta-<br>lis<br>Luna<br>Merid. | Declina-<br>tio Luna<br>Merid. | Transi-<br>tus Lune<br>per Me-<br>ridianum |    |    |    |
|----------------|------------------|------------------------------|-----------------------------|---|---|--------------------------------|--|----|----|----|
|                |                  |                              |                             |   |   |                                | S.   | G. | M. | H. |
|                |                  | S. G. M. S.                  | G. M. S.                    | M. S.   | M. S.   | G. M.                          |  |    |    |    |
| 1              | Mar.             | 3. 28. 41. 17                | 3. 59. 52 B                 | 29. 34  | 54. 9   | 24. 22 B                       | 1. 29                                      | V  |    |    |
| 2              | Mer.             | 4. 10. 38. 7                 | 3. 16. 41                   | 29. 43  | 54. 22  | 20. 44                         | 2. 16                                      |    |    |    |
| 3              | Jov.             | 4. 23. 40. 24                | 3. 24. 19                   | 29. 54  | 54. 45  | 16. 15                         | 3. 0                                       |    |    |    |
| 4              | Ven.             | 5. 4. 51. 7                  | 1. 24. 37                   | 30. 9   | 55. 12  | 11. 5                          | 3. 43                                      |    |    |    |
| 5              | Sat.             | 5. 17. 13. 33                | 0. 19. 55                   | 30. 28  | 55. 47  | 5. 20                          | 4. 25                                      |    |    |    |
| 6              | Dom              | 6. 29. 51. 33                | 0. 47. 12 A                 | 30. 50  | 56. 28  | 0. 45 A                        | 5. 7                                       |    |    |    |
| 7              | Lun.             | 6. 12. 49. 21                | 1. 53. 34                   | 31. 17  | 57. 16  | 6. 52                          | 5. 50                                      |    |    |    |
| 8              | Mar.             | 6. 26. 10. 29                | 3. 56. 5                    | 31. 44  | 58. 7   | 12. 54                         | 6. 37                                      |    |    |    |
| 9              | Mer.             | 7. 9. 58. 1                  | 3. 50. 20                   | 31. 14  | 59. 1   | 18. 31                         | 7. 27                                      |    |    |    |
| 10             | Jov.             | 7. 24. 13. 2                 | 4. 32. 16                   | 32. 41  | 59. 51  | 23. 12                         | 8. 24                                      |    |    |    |
| 11             | Ven.             | 8. 8. 53. 50                 | 4. 57. 50                   | 33. 5   | 60. 34  | 26. 40                         | 9. 27                                      |    |    |    |
| 12             | Sat.             | 8. 23. 55. 37                | 5. 3. 44                    | 33. 22  | 61. 5   | 28. 22                         | 10. 34                                     |    |    |    |
| 13             | Dom              | 9. 9. 59. 55                 | 4. 48. 28                   | 33. 29  | 61. 18. 27  | 55                             | 11. 42                                     |    |    |    |
| 14             | Lun.             | 9. 24. 55. 53                | 4. 12. 33                   | 33. 27  | 61. 14. 25  | 24                             | *  |    |    |    |
| 15             | Mar.             | 10. 9. 33. 5                 | 3. 19. 16                   | 33. 14  | 60. 50. 21  | 4                              | 0. 46 M                                    |    |    |    |
| 16             | Mer.             | 10. 24. 31. 14               | 2. 13. 23                   | 32. 52  | 60. 10  | 15. 29                         | 1. 45                                      |    |    |    |
| 17             | Jov.             | 11. 8. 44. 7                 | 1. 0. 36                    | 32. 24  | 59. 19  | 9. 14                          | 2. 39                                      |    |    |    |
| 18             | Ven.             | 11. 22. 38. 44               | 0. 13. 40 B                 | 31. 53  | 58. 22  | 8. 41                          | 3. 28                                      |    |    |    |
| 19             | Sat.             | 0. 6. 5. 17                  | 1. 24. 49                   | 31. 22  | 57. 25  | 3. 43 B                        | 4. 13                                      |    |    |    |
| 20             | Dom              | 0. 19. 5. 43                 | 2. 29. 19                   | 30. 52  | 56. 31  | 9. 52                          | 4. 57                                      |    |    |    |
| 21             | Lun.             | 1. 1. 44. 21                 | 3. 24. 39                   | 30. 27  | 55. 4   | 15. 18                         | 5. 41                                      |    |    |    |
| 22             | Mar.             | 1. 14. 5. 9                  | 4. 9. 1                     | 30. 5   | 55. 6   | 20. 2                          | 6. 26                                      |    |    |    |
| 23             | Mer.             | 1. 26. 13. 0                 | 4. 41. 21                   | 29. 49  | 54. 35  | 23. 54                         | 7. 12                                      |    |    |    |
| 24             | Jov.             | 2. 8. 11. 42                 | 5. 0. 53                    | 29. 38  | 54. 16  | 26. 39                         | 8. 0                                       |    |    |    |
| 25             | Ven.             | 2. 20. 5. 15                 | 5. 7. 15                    | 29. 32  | 54. 4   | 28. 13                         | 8. 50                                      |    |    |    |
| 26             | Sat.             | 3. 1. 56. 47                 | 5. 0. 22                    | 29. 20  | 54. 0   | 28. 28                         | 9. 42                                      |    |    |    |
| 27             | Dom              | 3. 13. 48. 52                | 4. 40. 34                   | 29. 31  | 54. 3   | 27. 27                         | 10. 33                                     |    |    |    |
| 28             | Lun.             | 3. 25. 45. 28                | 4. 8. 30                    | 29. 36  | 54. 11  | 25. 6                          | 11. 23                                     |    |    |    |
| 29             | Mar.             | 4. 7. 42. 37                 | 3. 25. 10                   | 29. 43  | 54. 85  | 21. 40                         | 0. 11 V                                    |    |    |    |
| 30             | Mer.             | 4. 19. 47. 28                | 2. 32. 16                   | 29. 53  | 54. 43  | 17. 19                         | 0. 57                                      |    |    |    |
| 31             | Jov.             | 5. 1. 59. 49                 | 1. 31. 43                   | 30. 6   | 55. 6   | 12. 12                         | 1. 40                                      |    |    |    |

| Dier<br>week<br>bevolende | Longitudo<br>Luna media<br>nocte |     |     | Latitudo<br>Luna media<br>nocte |    |     | Dia-<br>meter<br>boriz.<br>Luna<br>med.<br>noct. | Paral-<br>laxis<br>boriz.<br>Luna<br>med.<br>noct. | Ortus<br>Luna | Occasus<br>Luna |     |    |     |     |     |      |
|---------------------------|----------------------------------|-----|-----|---------------------------------|----|-----|--|--|---------------|-----------------|-----|----|-----|-----|-----|------|
|                           | S.                               | G.  | M.  | S.                              | G. | M.  | S.   | M.   | H.            | M.              |     |    |     |     |     |      |
| 1 Mar.                    | 4.                               | 4.  | 39. | 0                               | 3. | 39. | 33   | B  | 29.           | 37              | 54. | 14 | 5.  | 20M | 9.  | 24 V |
| 2 Mer.                    | 4.                               | 16. | 38. | 27                              | 2. | 51. | 34   |  | 29.           | 48              | 54. | 33 | 6.  | 28  | 9.  | 51   |
| 3 Jov.                    | 4.                               | 28. | 44. | 24                              | 1. | 55. | 15   |  | 30.           | 1               | 54. | 58 | 7.  | 36  | 10. | 11   |
| 4 Ven.                    | 5.                               | 11. | 0.  | 49                              | 0. | 52. | 47   |  | 30.           | 18              | 55. | 29 | 8.  | 43  | 10. | 29   |
| 5 Sat.                    | 5.                               | 23. | 30. | 21                              | 0. | 13. | 30   | A  | 30.           | 39              | 56. | 7  | 9.  | 51  | 10. | 46   |
| 6 Dom                     | 6.                               | 6.  | 17. | 48                              | 1. | 20. | 36   |  | 31.           | 3               | 56. | 51 | 10. | 50  | 11. | 3    |
| 7 Lun.                    | 6.                               | 19. | 26. | 48                              | 2. | 25. | 37   |  | 31.           | 30              | 57. | 41 | 0.  | 9 V | 11. | 19   |
| 8 Mar.                    | 7.                               | 3.  | 0.  | 50                              | 3. | 24. | 30   |  | 31.           | 59              | 58. | 34 | 1.  | 23  | 11. | 39   |
| 9 Mer.                    | 7.                               | 17. | 2.  | 8                               | 4. | 12. | 9  |  | 32.           | 28              | 59. | 26 | 2.  | 40  | *   | *    |
| 10 Jov.                   | 8.                               | 1.  | 30. | 33                              | 4. | 47. | 24   |  | 32.           | 53              | 60. | 14 | 4.  | 3   | 0.  | 3 M  |
| 11 Ven.                   | 8.                               | 16. | 22. | 28                              | 5. | 3.  | 28   |  | 33.           | 15              | 60. | 52 | 5.  | 23  | 0.  | 36   |
| 12 Sat.                   | 9.                               | 1.  | 31. | 54                              | 4. | 58. | 52   |  | 33.           | 27              | 61. | 14 | 6.  | 38  | 1.  | 25   |
| 13 Dom                    | 9.                               | 16. | 48  | 20                              | 4. | 32. | 58   |  | 33.           | 29              | 61. | 19 | 7.  | 37  | 2.  | 33   |
| 14 Lun.                   | 10.                              | 1.  | 31. | 33                              | 3. | 47. | 50   |  | 33.           | 22              | 61. | 4  | 8.  | 22  | 3.  | 51   |
| 15 Mar.                   | 10.                              | 17. | 0.  | 2                               | 2. | 47. | 32   |  | 33.           | 3               | 60. | 31 | 8.  | 56  | 5.  | 16   |
| 16 Mer.                   | 11.                              | 1.  | 36. | 8                               | 1. | 37. | 28   |  | 32.           | 38              | 59. | 45 | 9.  | 23  | 6.  | 44   |
| 17 Jov.                   | 11.                              | 15. | 45. | 0                               | 0. | 23. | 18   |  | 32.           | 8               | 58. | 50 | 9.  | 44  | 8.  | 7    |
| 18 Ven.                   | 11.                              | 29. | 25. | 32                              | 0. | 49. | 54   | B  | 31.           | 37              | 57. | 53 | 10. | 3   | 9.  | 24   |
| 19 Sat.                   | 0.                               | 12. | 38. | 29                              | 1. | 58. | 5  |  | 31.           | 6               | 56. | 57 | 10. | 20  | 10. | 36   |
| 20 Dom                    | 0.                               | 25. | 27. | 38                              | 2. | 58. | 17   |  | 30.           | 39              | 56. | 7  | 10. | 38  | 11. | 47   |
| 21 Lun.                   | 1.                               | 7.  | 56. | 37                              | 3. | 48. | 17   |  | 30.           | 15              | 55. | 24 | 10. | 59  | 0.  | 58 V |
| 22 Mar.                   | 1.                               | 20. | 10. | 27                              | 4. | 26. | 45   |  | 29.           | 57              | 54. | 50 | 11. | 23  | 2.  | 9    |
| 23 Mer.                   | 2.                               | 2.  | 13. | 12                              | 4. | 52  | 46   |  | 29.           | 43              | 54. | 25 | 11. | 52  | 3.  | 17   |
| 24 Jov.                   | 2.                               | 14. | 8.  | 52                              | 5. | 5.  | 44   |  | 29.           | 34              | 54. | 9  | *   | *   | 4.  | 22   |
| 25 Ven.                   | 2.                               | 26. | 1.  | 4                               | 5. | 5.  | 29   |  | 29.           | 31              | 54. | 1  | 0.  | 26M | 5.  | 19   |
| 26 Sat.                   | 3.                               | 7.  | 52. | 37                              | 4. | 52. | 5  |  | 29.           | 30              | 54. | 0  | 1.  | 12  | 6.  | 11   |
| 27 Dom                    | 3.                               | 19. | 45. | 41                              | 4. | 26. | 4  |  | 29.           | 33              | 54. | 6  | 2.  | 7   | 6.  | 54   |
| 28 Lun.                   | 4.                               | 1.  | 42. | 25                              | 3. | 44. | 10   |  | 29.           | 39              | 54. | 17 | 3.  | 14  | 7.  | 28   |
| 29 Mar.                   | 4.                               | 13. | 45. | 2                               | 2. | 59. | 49   |  | 29.           | 48              | 54. | 33 | 4.  | 17  | 7.  | 54   |
| 30 Mer.                   | 4.                               | 25. | 52. | 38                              | 2. | 2.  | 49   |  | 29.           | 59              | 54. | 54 | 5.  | 24  | 8.  | 16   |
| 31 Jov.                   | 5.                               | 8.  | 9.  | 18                              | 0. | 59. | 21   |  | 30.           | 13              | 55. | 19 | 6.  | 38  | 6.  | 23   |

| Dies<br>mensis | Longitudo<br>Planetarum | Latitudo<br>Planeta-<br>rum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Transi-<br>tus Pla-<br>netarum<br>per Me-<br>ridianum | Occasus<br>Plane-<br>tarum |
|----------------|-------------------------|-----------------------------|---------------------------------|--------------------------|---|----------------------------|
| I S. G. M.     | G. M.                   | G. M.                       | H. M.                           | H. M.                    | H. M.   |                            |

## S A T U R N U S.

|    |             |            |          |         |         |         |
|----|-------------|------------|----------|---------|---------|---------|
| 1  | 9. 9. 24, 8 | 0. 36, 8 B | 22. 31 A | 7. 37 V | 12. 0 V | 4. 23 M |
| 7  | 9. 8. 52, 5 | 0. 36, 2   | 22. 34   | 7. 11   | 11. 34  | 3. 57   |
| 13 | 9. 8. 25, 1 | 0. 35, 5   | 22. 36   | 6. 44   | 11. 7   | 3. 30   |
| 19 | 9. 8. 1. 0  | 0. 34, 9   | 22. 38   | 6. 19   | 10. 41  | 3. 3    |
| 25 | 9. 7. 39, 0 | 0. 34, 2   | 22. 40   | 5. 57   | 10. 15  | 2. 37   |

## J U P I T E R.

|    |              |           |          |         |          |        |
|----|--------------|-----------|----------|---------|----------|--------|
| 1  | 9. 29. 52, 3 | 0. 28 4 A | 20. 40 A | 8. 54 V | 1. 27 M  | 6. 0 M |
| 7  | 9. 29. 13, 1 | 0. 29, 5  | 20. 50   | 8. 28   | 1. 0     | 5. 32  |
| 13 | 9. 28. 36, 0 | 0. 30, 8  | 21. 1    | 8. 1    | 0. 32    | 5. 3   |
| 19 | 9. 27. 39, 5 | 0. 32, 3  | 21. 11   | 7. 35   | 0. 5     | 4. 35  |
| 25 | 9. 26. 52, 1 | 0. 34, 0  | 21. 23   | 7. 19   | 11. 48 V | 4. 17  |

## M A R S .

|    |               |            |         |          |        |          |
|----|---------------|------------|---------|----------|--------|----------|
| 1  | 11. 25. 32, 4 | 3. 20, 3 A | 4. 55 A | 11. 28 V | 5. 8 M | 10. 48 V |
| 7  | 11. 28. 46, 0 | 3. 38, 2   | 3. 49   | 11. 12   | 4. 56  | 10. 40   |
| 13 | 0. 1. 45, 7   | 3. 50, 3   | 2. 49   | 10. 54   | 4. 42  | 10. 30   |
| 19 | 0. 4. 36, 0   | 4. 1, 6    | 1. 53   | 10. 37   | 4. 29  | 10. 21   |
| 25 | 0. 7. 5. 1    | 4. 13, 0   | 1. 0    | 10. 19   | 4. 15  | 10. 11   |

## V E N U S .

|    |              |            |         |         |         |         |
|----|--------------|------------|---------|---------|---------|---------|
| 1  | 4. 20. 58, 6 | 1. 40, 8 B | 16. 7 B | 7. 49 M | 2. 55 V | 10. 1 V |
| 7  | 4. 27. 43, 3 | 1. 25, 7   | 13. 40  | 8. 2    | 2. 57   | 9. 52   |
| 13 | 5. 4. 25, 8  | 1. 7, 5    | 10. 59  | 8. 13   | 2. 57   | 9. 41   |
| 19 | 5. 10. 52, 6 | 0. 45, 7   | 8. 13   | 8. 20   | 2. 57   | 9. 29   |
| 25 | 5. 17. 19, 0 | 0. 20, 2   | 5. 20   | 8. 35   | 2. 56   | 9. 17   |

## M E R C U R I U S .

|    |              |            |          |        |          |         |
|----|--------------|------------|----------|--------|----------|---------|
| 1  | 3. 14. 6, 3  | 4. 17, 6 A | 18. 27 B | 5. 2 M | 0. 19 V  | 7. 36 V |
| 7  | 3. 10. 17, 0 | 4. 50, 3   | 18. 15   | 4. 24  | 11. 39 M | 6. 54   |
| 13 | 3. 7. 56, 6  | 4. 30, 1   | 18. 44   | 3. 47  | 11. 4    | 6. 21   |
| 19 | 3. 8. 29, 2  | 3. 26, 2   | 19. 46   | 3. 21  | 10. 43   | 6. 5    |
| 25 | 3. 12. 35, 0 | 2. 1, 7    | 20. 51   | 2. 9   | 10. 37   | 6. 5    |

## ECLIPSES SATELLITUM JOVIS.

| Dies<br>mensis | I. Satelles.     |     |    | II. Satelles.   |                  |     | III. Satelles.  |    |    |
|----------------|------------------|-----|----|-----------------|------------------|-----|-----------------|----|----|
|                | Imersiones       |     |    | Imersf. Emersf. |                  |     | Imersf. Emersf. |    |    |
|                | H.               | M.  | S. | H.              | M.               | S.  | H.              | M. | S. |
| 1              | 10. <sup>4</sup> | 59. | 1  | 3               | 16.              | 52. | 19              | I  | 6  |
| 3              | 4.               | 57. | 18 | 7               | 6.               | 9.  | 25              | I  | 13 |
| 4              | 23.              | 55. | 32 | 10              | 19.              | 26. | 38              | I  | 20 |
| 6              | 18.              | 23. | 49 | 14              | 8. <sup>4</sup>  | 43. | 54              | I  | 28 |
| 8              | 12.              | 52. | 8  | 17              | 22.              | 1.  | 17              | I  |    |
| 10             | 7.               | 20. | 28 | 21              | 14. <sup>4</sup> | 9.  | 18              | E  |    |
| 12             | 1.               | 48. | 50 | 25              | 3.               | 27. | 3               | E  |    |
| 13             | 20.              | 17. | 14 | 28              | 16.              | 44. | 48              | E  |    |
| 15             | 14.              | 45. | 42 |                 |                  |     |                 |    |    |
| 17             | 9. <sup>4</sup>  | 14. | 5  |                 |                  |     |                 |    |    |
| 19             | 3.               | 42. | 40 |                 |                  |     |                 |    |    |
|                | Emerusiones      |     |    |                 |                  |     |                 |    |    |
| 21             | 0.               | 26. | 14 |                 |                  |     |                 |    |    |
| 22             | 18.              | 54. | 50 |                 |                  |     |                 |    |    |
| 24             | 13. <sup>4</sup> | 23. | 21 |                 |                  |     |                 |    |    |
| 26             | 7.               | 52. | 5  |                 |                  |     |                 |    |    |
| 28             | 2.               | 20. | 47 |                 |                  |     |                 |    |    |
| 29             | 20.              | 49. | 33 |                 |                  |     |                 |    |    |
| 31             | 15.              | 18. | 23 |                 |                  |     |                 |    |    |

IV. Satelles.  
Imersf. Emersf.

Dies

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>borarius<br>Solis | Logaritmus<br>distantiae<br>Solis a terra<br>posita media<br>100000 | Longitude<br>Nodi Luna | S. G. M. |       |       |
|------|-------------------|---|----------------------------|---|------------------------|----------|-------|-------|
|      |                   |   |                            |   |                        | M. S.    | M. S. | M. S. |
| 1    | 31. 31, 0         | 2. 17, 0                                    | 2. 23, 0                   | 5. 007235   | 11. 22. 25             |          |       |       |
| 4    | 31. 31, 1         | 2. 16, 8                                    | 2. 23, 0                   | 5. 007223   | 11. 22. 15             |          |       |       |
| 7    | 31. 31, 2         | 2. 16, 6                                    | 2. 23, 0                   | 5. 007190   | 11. 22. 6              |          |       |       |
| 10   | 31. 31, 4         | 2. 16, 2                                    | 2. 23, 1                   | 5. 007140   | 11. 21. 56             |          |       |       |
| 13   | 31. 31, 7         | 2. 15, 8                                    | 2. 23, 1                   | 5. 007078   | 11. 21. 47             |          |       |       |
| 16   | 31. 32, 0         | 2. 15, 4                                    | 2. 23, 1                   | 5. 006995   | 11. 21. 37             |          |       |       |
| 19   | 31. 32, 4         | 2. 15, 0                                    | 2. 23, 2                   | 5. 006880   | 11. 21. 28             |          |       |       |
| 22   | 31. 33, 0         | 2. 14, 5                                    | 2. 23, 3                   | 5. 006760   | 11. 21. 18             |          |       |       |
| 25   | 31. 33, 6         | 2. 14, 0                                    | 2. 23, 4                   | 5. 006619   | 11. 21. 9              |          |       |       |
| 28   | 31. 34, 3         | 2. 13, 5                                    | 2. 23, 5                   | 5. 006514   | 11. 20. 59             |          |       |       |

**POSITIONES SATELLITUM JOVIS**

*Oriens**11<sup>h</sup> Vespere**Occidens*

|    |    |    |      |    |
|----|----|----|------|----|
| 2  | .4 | .3 | ○ .1 | .3 |
| 3  | .4 | .3 | ○ .1 | .3 |
| 4  | .4 | .3 | ○ .1 | .3 |
| 5  | .4 | .3 | ○ .1 | .3 |
| 7  | .4 | .3 | ○ .1 | .3 |
| 8  | .3 | .2 | ○ .1 | .4 |
| 9  | .3 | .2 | ○ .1 | .4 |
| 10 | .3 | .2 | ○ .1 | .4 |
| 11 | .3 | .2 | ○ .1 | .4 |
| 12 | .3 | .2 | ○ .1 | .4 |
| 13 | .3 | .2 | ○ .1 | .4 |
| 18 | .4 | .3 | ○ .1 | .3 |
| 19 | .4 | .3 | ○ .1 | .3 |
| 20 | .4 | .3 | ○ .1 | .3 |
| 21 | .4 | .3 | ○ .1 | .3 |
| 23 | .4 | .3 | ○ .1 | .3 |
| 24 | .3 | .2 | ○ .1 | .3 |
| 26 | .3 | .2 | ○ .1 | .3 |
| 27 | .3 | .2 | ○ .1 | .3 |
| 28 | .3 | .2 | ○ .1 | .3 |
| 29 | .3 | .2 | ○ .1 | .3 |
| 30 | .3 | .2 | ○ .1 | .3 |
| 31 | .3 | .2 | ○ .1 | .3 |

**Positiones Satellitum tempore eclipsium.**

|    |    |    |    |      |
|----|----|----|----|------|
| 1  | .4 | .3 | .2 | ○ .1 |
| 6  | .4 | .3 | .2 | ○ .1 |
| 14 | .4 | .3 | .2 | ○ .1 |
| 15 | .4 | .3 | .2 | ○ .1 |
| 16 | .4 | .3 | .2 | ○ .1 |
| 17 | .4 | .3 | .2 | ○ .1 |
| 22 | .4 | .3 | .2 | ○ .1 |
| 25 | .4 | .3 | .2 | ○ .1 |

| D <i>omi</i> | P <i>henomena &amp; Observationes</i><br><i>Solis</i>   | D <i>omi</i>  | P <i>henomena &amp; Observationes</i><br><i>Lunae</i> |
|--------------|---|---|---|
|              | Sol in parallelo  |   | Luna  |
| 6            | Leonis, γ Geminor. & γ Serp.<br>culm. 1h 54', 2h 14' & 6h 37'<br>7 & Serp. & α Tauri culm. 6h 19'<br>& 19h 8' | 1 ad τ Leonis 8h 0' cum occultatione Mediolani invisibili                           |   |
| 8            | Leonis culm. 2h 22'   | 2 ad Mercurii 7h 6'   |   |
| 10           | Delphini culm. 11h 11'  | 3 ad α Virginis 19h 50'   |   |
| 11           | Delphini & γ Tauri culm.<br>11h 0' & 18h 37'  | 4 ad Veneris 18h 40'  |   |
| 12           | Aquilae, ζ Bootis & α Herc.<br>culm. 9h 17', 4h 58' & 7h 32'  | 5 Primus Quadrans 12h 44'   |   |
| 13           | Delphini culm. 10h 57'  | 6 ad τ Scorp. 17h 6'  |   |
| 14           | & γ Pegasi, ζ & β Delphini<br>culm. 11h 14', 14h 22', 10h 45'<br>& 10h 47'                                    | 7 ad τ Scorp. 7h 35' cum occultat.<br>Mediol.invisib. dif.app.lat. 3' $\frac{1}{2}$ |   |
| 15           | Leonis culm. 0h 7'  | 8 ad γ & δ Sagit. 15h 30' & 21h 12'   |   |
| 18           | Ophiuci culm. 7h 31'  | 9 Perigea ad τ Sagittarii 14h 0'  |   |
| 20           | Virginis culm. 2h 51'   | 11 ad χ & φ Sagit. 11h 30' & 14h 12'  |   |
| 22           | Signo Virginis culm. 20h 57'  | 12 Plenilunium 3h 2'  |   |
| 23           | Serpentis culm. 5h 12'  | 13 ad h φ Aquarii 14h & 18h 30'   |   |
| 25           | Delphini culm. 10h 1'   | 16 ad π Piscium 16h 54'   |   |
| 26           | Aquilae, β Cancri, ζ Pegasi<br>9h 13', 21h 39' & 12h 6'   | 18 ad ζ Arietis 16h 30'   |   |
| 30           | Pegasi & β Canis 10h 54', &<br>20h 35'  | 19 Ultimus Quadrans 7h 58'  |   |
| 31           | Aquilese culm. 8h 55'   | 23 ad τ Tauri 8h 8'   |   |
|              |   | 27 Apogea ad ρ Geminorum 20h 0'   |   |
|              |   | ad α Leonis 20h 0'  |   |
|              |   | Novilunium 11h 17'  |   |
|              |   | ad ρ Virginis 4h 54'  |   |
|              |   |   |   |
|              |   | Planetae in parallelis fixarum  |   |
|              |   | Saturnus prope γ Hydræ, φ Sa-   |   |
|              |   | gitt., β Corvi, γ Lep., α Corvi   |   |
|              |   | Jupiter μ & τ Sagitt., α Corvi,   |   |
|              |   | ε Scorp., γ Hydræ, φ Sagitt.,   |   |
|              |   | β Corvi   |   |
|              |   | Mars initio γ Virginis, α Antin.,   |   |
|              |   | ζ Virg., sub finem α Piscom   |   |
|              |   | Venus 1 α Piscium, 4 & ζ Virg.,   |   |
|              |   | α Antin., 6 δ Orionis & β Ceti,   |   |
|              |   | 8 ε Orionis & α Aquarii, 10 γ   |   |
|              |   | Aquarii, α Orion., 13 α Ophiu.,   |   |
|              |   | 19 β Aquarii, 21 α Hydræ,   |   |
|              |   | 23 δ Orionis & δ Librae, 25 ζ   |   |
|              |   | Eridani, 27 ε Eridani, 28 δ   |   |
|              |   | Eridani, 29 α Ceti  |   |
|              |   | Mercurius 1 α Tauri, 4 ζ Tauri,   |   |
|              |   | & ζ Geminor., 6 Arcturi, 10   |   |
|              |   | τ Bootis, 13 γ Arietis, cum   |   |
|              |   | in radiis solaribus   |   |

| Domi-<br>num<br>Domi-<br>nicae | Equatio<br>addenda<br>tempori<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitu-<br>do<br>Solis | Ascensio recta<br>Solis |             |             | Declinatio<br>Solis<br>Borealis |
|--------------------------------|--|------------------|-------------------------|-------------------------|-------------|-------------|---------------------------------|
|                                |  |                  |                         | M. S.                   | S.          | S. G. M. S. |                                 |
| 1                              | Ven.   | 5. 54, 1         | 3, 6                    | 4. 8. 59. 3             | 131. 25. 21 | 18. 2. 3    |                                 |
| 2                              | Sat.   | 5. 50, 5         | 4, 2                    | 4. 9. 56. 32            | 132. 23. 35 | 17. 46. 46  |                                 |
| 3                              | Dom.   | 5. 46, 2         | 4, 9                    | 4. 10. 54. 1            | 133. 21. 39 | 17. 51. 11  |                                 |
| 4                              | Lun.   | 5. 41, 3         | 5, 6                    | 4. 11. 51. 30           | 134. 19. 34 | 17. 15. 19  |                                 |
| 5                              | Mar.   | 5. 35, 7         | 6, 1                    | 4. 12. 49. 1            | 135. 17. 19 | 16. 59. 11  |                                 |
| 6                              | Mer.   | 5. 29, 6         | 6, 8                    | 4. 13. 46. 32           | 136. 14. 55 | 16. 42. 46  |                                 |
| 7                              | Jov.   | 5. 22, 8         | 7, 4                    | 4. 14. 44. 4            | 137. 12. 22 | 16. 26. 5   |                                 |
| 8                              | Ven.   | 5. 15, 4         | 7, 9                    | 4. 15. 41. 36           | 138. 9. 39  | 16. 9. 8    |                                 |
| 9                              | Sat.   | 5. 7, 5          | 8, 5                    | 4. 16. 39. 10           | 139. 6. 47  | 15. 51. 56  |                                 |
| 10                             | Dom.   | 4. 59, 0         | 9, 1                    | 4. 17. 36. 44           | 140. 3. 47  | 15. 34. 29  |                                 |
| 11                             | Lun.   | 4. 49, 9         | 9, 7                    | 4. 18. 34. 19           | 141. 0. 38  | 15. 16. 47  |                                 |
| 12                             | Mar.   | 4. 40, 2         | 10, 2                   | 4. 19. 31. 56           | 141. 57. 21 | 15. 58. 50  |                                 |
| 13                             | Mer.   | 4. 30, 0         | 10, 8                   | 4. 20. 29. 34           | 142. 53. 55 | 14. 40. 38  |                                 |
| 14                             | Jov.   | 4. 19, 2         | 11, 3                   | 4. 21. 27. 14           | 143. 50. 21 | 14. 22. 12  |                                 |
| 15                             | Ven.   | 4. 7, 9          | 11, 8                   | 4. 22. 24. 55           | 144. 46. 39 | 14. 3. 52   |                                 |
| 16                             | Sat.   | 3. 56, 1         | 12, 3                   | 4. 23. 22. 37           | 145. 42. 50 | 13. 44. 39  |                                 |
| 17                             | Dom.   | 3. 43, 8         | 12, 8                   | 4. 24. 20. 21           | 146. 38. 53 | 13. 25. 33  |                                 |
| 18                             | Lun.   | 3. 31, 0         | 13, 3                   | 4. 25. 18. 7            | 147. 34. 49 | 13. 6. 14   |                                 |
| 19                             | Mar.   | 3. 17, 7         | 13, 8                   | 4. 26. 15. 55           | 148. 30. 38 | 12. 46. 42  |                                 |
| 20                             | Mer.   | 3. 3, 9          | 14, 3                   | 4. 27. 13. 45           | 149. 26. 20 | 12. 26. 58  |                                 |
| 21                             | Jov.   | 2. 49, 7         | 14, 6                   | 4. 28. 11. 36           | 150. 21. 55 | 12. 7. 2    |                                 |
| 22                             | Ven.   | 2. 35, 1         | 15, 0                   | 4. 29. 9. 30            | 151. 17. 24 | 11. 46. 54  |                                 |
| 23                             | Sat.   | 2. 20, 1         | 15, 5                   | 5. 0. 7. 25             | 152. 12. 46 | 11. 26. 35  |                                 |
| 24                             | Dom.   | 2. 4, 6          | 15, 9                   | 5. 1. 5. 21             | 153. 4. 2   | 10. 6. 5    |                                 |
| 25                             | Lun.   | 1. 48, 7         | 16, 2                   | 5. 2. 3. 20             | 154. 3. 12  | 10. 45. 24  |                                 |
| 26                             | Mar.   | 1. 32, 5         | 16, 6                   | 5. 3. 1. 20             | 154. 58. 16 | 10. 24. 33  |                                 |
| 27                             | Mer.   | 1. 15, 9         | 17, 1                   | 5. 3. 59. 21            | 155. 53. 14 | 10. 5. 32   |                                 |
| 28                             | Jov.   | 0. 58, 8         | 17, 4                   | 5. 4. 57. 24            | 156. 48. 6  | 9. 42. 21   |                                 |
| 29                             | Ven.   | 0. 41, 4         | 17, 8                   | 5. 5. 55. 29            | 157. 42. 52 | 9. 21. 1    |                                 |
| 30                             | Sat.   | 0. 23, 6         | 18, 1                   | 5. 6. 52. 35            | 158. 37. 32 | 8. 59. 32   |                                 |
| 31                             | Dom.   | 0. 5, 5          | 18, 5                   | 5. 7. 51. 42            | 159. 22. 7  | 8. 37. 55   |                                 |

| D<br>i<br>a<br>s<br>t<br>a<br>n<br>i<br>a<br>s<br>i<br>o<br>n<br>i<br>s<br>e<br>s<br>a<br>S<br>o<br>l<br>e | Distan<br>tia<br>se<br>c<br>tio<br>ni<br>s<br>e<br>a<br>S<br>o<br>l<br>e | Diffe<br>ren<br>tia | In<br>st<br>ium<br>Cre<br>pa<br>sc<br>uli | Ortu<br>s<br>Cent<br>ri<br>Sol<br>is | Occa<br>s<br>Cent<br>ri<br>Sol<br>is | Finis<br>Crep<br>a<br>sc<br>uli | Hora<br>Italica<br>Mer<br>di<br>es |
|--|--|---------------------|---|--------------------------------------|--------------------------------------|---------------------------------|------------------------------------|
|  | H. M. S.   | M. S.               | H. M.                                     | H. M.                                | H. M.                                | H. M.                           | H. M.                              |
| 1 Ven.   | 15. 14. 18,6   | 3. 52, 9            | 2. 20                                     | 4. 40                                | 7. 20                                | 9. 30                           | 15. 47                             |
| 2 Sat.   | 15. 10. 25,7   | 3. 52, 3            | 2. 32                                     | 4. 42                                | 7. 18                                | 9. 28                           | 15. 49                             |
| 3 Dom  | 15. 6. 33,4  | 3. 51, 7            | 2. 34                                     | 4. 43                                | 7. 17                                | 9. 26                           | 15. 50                             |
| 4 Lun.   | 15. 2. 41,7  | 3. 51, 0            | 2. 36                                     | 4. 44                                | 7. 16                                | 9. 24                           | 15. 51                             |
| 5 Mar.   | 15. 58. 50,7   | 3. 50, 4            | 2. 38                                     | 4. 45                                | 7. 15                                | 9. 22                           | 15. 53                             |
| 6 Mer.   | 14. 55. 0,3  | 3. 49, 8            | 2. 41                                     | 4. 46                                | 7. 14                                | 9. 19                           | 15. 54                             |
| 7 Jov.   | 14. 51. 10,5   | 3. 49, 1            | 2. 43                                     | 4. 48                                | 7. 12                                | 9. 17                           | 15. 56                             |
| 8 Ven.   | 14. 47. 21,4   | 3. 48, 5            | 2. 45                                     | 4. 49                                | 7. 11                                | 9. 15                           | 15. 57                             |
| 9 Sat.   | 14. 43. 32,9   | 3. 48, 0            | 2. 47                                     | 4. 50                                | 7. 10                                | 9. 13                           | 16. 59                             |
| 10 Dom   | 14. 39. 44,9   | 3. 47, 4            | 2. 49                                     | 4. 52                                | 7. 8                                 | 9. 11                           | 16. 1                              |
| 11 Lun.  | 14. 35. 57,5   | 3. 46, 9            | 2. 52                                     | 4. 53                                | 7. 7                                 | 9. 8                            | 16. 3                              |
| 12 Mar.  | 14. 32. 10,6   | 3. 46, 3            | 2. 54                                     | 4. 55                                | 7. 5                                 | 9. 6                            | 16. 5                              |
| 13 Mer.  | 14. 28. 24,3   | 3. 45, 7            | 2. 56                                     | 4. 56                                | 7. 4                                 | 9. 4                            | 16. 7                              |
| 14 Jov.  | 14. 24. 38,6   | 3. 45, 2            | 2. 58                                     | 4. 58                                | 7. 2                                 | 9. 2                            | 16. 9                              |
| 15 Ven.  | 14. 20. 53,4   | 3. 44, 7            | 2. 0                                      | 4. 59                                | 7. 1                                 | 9. 0                            | 16. 11                             |
| 16 Sat.  | 14. 17. 8,7  | 3. 44, 2            | 3. 2                                      | 5. 0                                 | 7. 0                                 | 8. 58                           | 16. 12                             |
| 17 Dom   | 14. 13. 24,5   | 3. 43, 7            | 3. 4                                      | 5. 1                                 | 6. 59                                | 8. 56                           | 16. 14                             |
| 18 Lun.  | 14. 9. 40,8  | 3. 43, 3            | 3. 6                                      | 5. 3                                 | 6. 57                                | 8. 54                           | 16. 16                             |
| 19 Mar.  | 14. 5. 57,5  | 3. 42, 8            | 3. 8                                      | 5. 4                                 | 6. 56                                | 8. 52                           | 16. 18                             |
| 20 Mer.  | 14. 2. 14,7  | 3. 42, 4            | 3. 10                                     | 5. 5                                 | 6. 55                                | 8. 50                           | 16. 20                             |
| 21 Jov.  | 13. 58. 32,3   | 3. 41, 9            | 2. 13                                     | 5. 7                                 | 6. 53                                | 8. 47                           | 16. 22                             |
| 22 Ven.  | 13. 54. 50,4   | 3. 41, 5            | 3. 15                                     | 5. 8                                 | 6. 52                                | 8. 45                           | 16. 24                             |
| 23 Sat.  | 13. 51. 8,9  | 3. 41, 1            | 3. 17                                     | 5. 10                                | 6. 50                                | 8. 43                           | 16. 26                             |
| 24 Dom   | 13. 47. 27,8   | 3. 40, 7            | 3. 19                                     | 5. 11                                | 6. 49                                | 8. 41                           | 16. 28                             |
| 25 Lun.  | 13. 43. 47,1   | 3. 40, 3            | 3. 21                                     | 5. 13                                | 6. 47                                | 8. 39                           | 16. 30                             |
| 26 Mar.  | 13. 40. 6,8  | 3. 39, 8            | 3. 23                                     | 5. 14                                | 6. 46                                | 8. 37                           | 16. 32                             |
| 27 Mer.  | 13. 36. 27,0   | 3. 39, 4            | 3. 25                                     | 5. 16                                | 6. 44                                | 8. 35                           | 16. 34                             |
| 28 Jov.  | 13. 32. 47,6   | 3. 39, 0            | 3. 27                                     | 5. 17                                | 6. 43                                | 8. 33                           | 16. 35                             |
| 29 Ven.  | 13. 29. 8,6  | 3. 38, 7            | 3. 29                                     | 5. 19                                | 6. 41                                | 8. 31                           | 16. 37                             |
| 30 Sat.  | 13. 25. 29,9   | 3. 38, 4            | 3. 31                                     | 5. 21                                | 6. 39                                | 8. 29                           | 16. 39                             |
| 31 Dom   | 13. 21. 51,5   | 3. 38, 0            | 3. 33                                     | 5. 23                                | 6. 38                                | 8. 27                           | 16. 41                             |

| Dis<br>ta<br>nce<br>in<br>days | Longitudo<br>Luna<br>Meridie | Latitudo<br>Luna<br>Meridie | Di-<br>meter<br>bori-<br>zonta-<br>lis<br>Luna<br>Merid. | Paral-<br>laxis<br>bori-<br>zonta-<br>lis<br>Luna<br>Merid. | Declina-<br>tio Luna<br>Merid. | Tran-<br>sus Lunae<br>per Me-<br>ridianum |
|--------------------------------|------------------------------|-----------------------------|--|---|--------------------------------|---|
|                                |                              |                             |  |   |                                | S. G. M. S.                               |
| S. G. M. S.                    | G. M. S.                     | M. S.                       | M. S.  | M. S.   | G. M.                          | H. M.                                     |
| 1 Ven.                         | 5. 14. 21. 20                | 0. 25. 59 B                 | 30. 21   | 55. 33  | 6. 34 B                        | 2. 22 V                                   |
| 2 Sat.                         | 5. 20. 54. 11                | 0. 42. 6 A                  | 30. 38   | 56. 5   | 0. 36                          | 3. 4                                      |
| 3 Dom                          | 6. 9. 40. 54                 | 1. 49. 28                   | 30. 58   | 56. 40  | 5. 30 A                        | 3. 44                                     |
| 4 Lun.                         | 6. 22. 44. 8                 | 2. 52. 41                   | 31. 19   | 57. 19  | 11. 30                         | 4. 32                                     |
| 5 Mar.                         | 7. 6. 6. 19                  | 3. 48. 6                    | 31. 41   | 58. 1   | 17. 11                         | 5. 20                                     |
| 6 Mer.                         | 7. 19. 49. 43                | 4. 32. 5                    | 32. 4  | 58. 44  | 22. 3                          | 6. 13                                     |
| 7 Jov.                         | 8. 3. 54. 14                 | 5. 1. 2                     | 32. 27   | 59. 25  | 25. 51                         | 7. 13                                     |
| 8 Ven.                         | 8. 18. 19. 54                | 5. 12. 4                    | 32. 47   | 60. 2   | 28. 6                          | 8. 15                                     |
| 9 Sat.                         | 9. 3. 3. 4                   | 5. 2. 52                    | 33. 2  | 60. 30  | 28. 29                         | 9. 21                                     |
| 10 Dom                         | 9. 17. 58. 15                | 4. 33. 17                   | 33. 11   | 60. 45  | 26. 40                         | 10. 27                                    |
| 11 Lun.                        | 10. 2. 57. 26                | 3. 44. 58                   | 33. 11   | 60. 46  | 22. 13                         | 11. 27                                    |
| 12 Mar.                        | 10. 17. 51. 47               | 2. 41. 30                   | 33. 3  | 60. 31  | 17. 4                          | +   |
| 13 Mer.                        | 11. 2. 32. 58                | 1. 28. 5                    | 32. 46   | 60. 0   | 11. 48                         | 0. 23 M                                   |
| 14 Jov.                        | 11. 16. 53. 59               | 0. 10. 43                   | 32. 22   | 59. 16  | 5. 23                          | 1. 15                                     |
| 15 Ven.                        | 0. 0. 50. 38                 | 1. 5. 35 B                  | 31. 53   | 58. 23  | 1. 20 B                        | 2. 4                                      |
| 16 Sat.                        | 0. 14. 21. 12                | 2. 15. 43                   | 31. 25   | 57. 30  | 7. 46                          | 2. 50                                     |
| 17 Dom                         | 0. 27. 26. 34                | 3. 16. 23                   | 30. 56   | 56. 37  | 13. 40                         | 3. 36                                     |
| 18 Lun.                        | 1. 10. 9. 18                 | 4. 5. 50                    | 30. 30   | 55. 50  | 18. 45                         | 4. 22                                     |
| 19 Mar.                        | 1. 22. 32. 58                | 4. 42. 18                   | 30. 8  | 55. 10  | 22. 58                         | 5. 9                                      |
| 20 Mer.                        | 2. 4. 41. 57                 | 5. 5. 19                    | 29. 51   | 54. 40  | 26. 8                          | 5. 57                                     |
| 21 Jov.                        | 2. 16. 40. 52                | 5. 14. 38                   | 29. 40   | 54. 20  | 28. 1                          | 6. 47                                     |
| 22 Ven.                        | 2. 28. 34. 0                 | 5. 10. 23                   | 29. 34   | 54. 9   | 28. 39                         | 7. 39                                     |
| 23 Sat.                        | 3. 10. 25. 37                | 4. 52. 56                   | 29. 34   | 54. 8   | 27. 54                         | 8. 31                                     |
| 24 Dom                         | 3. 22. 19. 17                | 4. 82. 49                   | 29. 38   | 54. 15  | 25. 56                         | 9. 22                                     |
| 25 Lun.                        | 4. 4. 18. 6                  | 3. 40. 59                   | 29. 46   | 54. 29  | 22. 45                         | 10. 12                                    |
| 26 Mar.                        | 4. 16. 24. 26                | 2. 48. 49                   | 29. 56   | 54. 49  | 18. 37                         | 10. 58                                    |
| 27 Mer.                        | 4. 28. 40. 17                | 1. 48. 13                   | 30. 10   | 55. 13  | 13. 39                         | 11. 42                                    |
| 28 Jov.                        | 5. 11. 6. 56                 | 0. 41. 34                   | 30. 25   | 55. 40  | 8. 3                           | 0. 26 V                                   |
| 29 Ven.                        | 5. 23. 45. 29                | 0. 28. 8 A                  | 30. 41   | 56. 9   | 2. 2                           | 1. 8                                      |
| 30 Sat.                        | 6. 6. 36. 39                 | 1. 37. 51                   | 30. 57   | 56. 40  | 4. 8 A                         | 1. 51                                     |
| 31 Dom                         | 6. 19. 41. 14                | 2. 43. 41                   | 31. 14   | 57. 10  | 10. 14                         | 2. 37                                     |

| Dies<br>septem.<br>bris | Longitudo<br>Luna media<br>nocte | Latitudo<br>Luna media<br>nocte | Dia-<br>meter<br>horiz.<br>Luna<br>med.<br>noct. | Paral-<br>laxis<br>horiz.<br>Luna<br>med.<br>noct. | Ortus<br>Luna |         | Occasus<br>Luna |
|-------------------------|----------------------------------|---------------------------------|--|--|---------------|---------|-----------------|
|                         |                                  |                                 |  |  | M. S.         | H. M.   |                 |
| 1 Ven.                  | 5. 20. 36. 10                    | 0. 7. 55 A                      | 30. 29   | 55. 48   | 7. 49 M       | 8. 48 V |                 |
| 2 Sat.                  | 6. 3. 15. 37                     | 1. 16. 15                       | 30. 48   | 56. 22   | 8. 49         | 9. 3    |                 |
| 3 Dom                   | 6. 16. 10. 18                    | 2. 21. 49                       | 31. 8  | 56. 59   | 9. 59         | 9. 19   |                 |
| 4 Lun.                  | 6. 29. 22. 43                    | 3. 21. 36                       | 31. 30   | 57. 40   | 11. 10        | 9. 43   |                 |
| 5 Mar.                  | 7. 12. 55. 9                     | 4. 11. 48                       | 31. 53   | 58. 22   | 0. 24 V       | 10. 6   |                 |
| 6 Mer.                  | 7. 26. 49. 5                     | 4. 48. 38                       | 32. 16   | 59. 5  | 1. 41         | 10. 35  |                 |
| 7 Jov.                  | 8. 11. 3. 47                     | 5. 9. 4                         | 32. 38   | 59. 45   | 3. 1          | 11. 17  |                 |
| 8 Ven.                  | 8. 25. 39. 31                    | 5. 10. 7                        | 32. 55   | 60. 17   | 4. 14         | * 4     |                 |
| 9 Sat.                  | 9. 10. 30. 35                    | 4. 50. 27                       | 33. 7  | 60. 39   | 5. 22         | 0. 9 M  |                 |
| 10 Dom                  | 9. 25. 27. 53                    | 4. 11. 24                       | 33. 12   | 60. 47   | 6. 12         | 1. 24   |                 |
| 11 Lun.                 | 10. 10. 25. 44                   | 3. 14. 51                       | 33. 8  | 60. 46   | 6. 47         | 2. 49   |                 |
| 12 Mar.                 | 10. 25. 14. 31                   | 2. 5. 36                        | 32. 55   | 60. 17   | 7. 18         | 4. 16   |                 |
| 13 Mer.                 | 11. 9. 46. 20                    | 0. 49. 33                       | 32. 35   | 59. 39   | 7. 43         | 5. 38   |                 |
| 14 Jov.                 | 11. 23. 55. 33                   | 0. 27. 59 B                     | 32. 8  | 58. 50   | 8. 6          | 6. 58   |                 |
| 15 Ven.                 | 0. 7. 39. 12                     | 1. 41. 41                       | 31. 39   | 57. 56   | 8. 25         | 8. 15   |                 |
| 16 Sat.                 | 0. 20. 56. 55                    | 2. 47. 29                       | 31. 10   | 57. 3  | 8. 44         | 9. 29   |                 |
| 17 Dom                  | 1. 3. 50. 35                     | 3. 42. 46                       | 30. 43   | 56. 13   | 9. 4          | 10. 43  |                 |
| 18 Lun.                 | 1. 16. 23. 15                    | 4. 25. 44                       | 30. 19   | 55. 30   | 9. 26         | 11. 55  |                 |
| 19 Mar.                 | 1. 28. 38. 58                    | 4. 55. 32                       | 29. 59   | 54. 54   | 9. 55         | 1. 6 V  |                 |
| 20 Mer.                 | 2. 10. 42. 24                    | 5. 11. 42                       | 29. 44   | 54. 28   | 10. 31        | 2. 14   |                 |
| 21 Jov.                 | 2. 22. 37. 51                    | 5. 14. 12                       | 29. 37   | 54. 13   | 11. 14        | 3. 13   |                 |
| 22 Ven.                 | 3. 4. 39. 46                     | 5. 3. 18                        | 29. 34   | 54. 8  | * *           | 4. 8    |                 |
| 23 Sat.                 | 3. 16. 22. 0                     | 4. 39. 26                       | 29. 36   | 54. 11   | 0. 5 M        | 4. 53   |                 |
| 24 Dom                  | 3. 28. 17. 53                    | 4. 3. 18                        | 29. 42   | 54. 22   | 1. 5          | 5. 33   |                 |
| 25 Lun.                 | 4. 10. 20. 10                    | 3. 15. 6                        | 29. 51   | 54. 39   | 2. 11         | 6. 3    |                 |
| 26 Mar.                 | 4. 22. 31. 4                     | 2. 19. 27                       | 30. 9  | 55. 1  | 3. 18         | 6. 25   |                 |
| 27 Mer.                 | 5. 4. 52. 10                     | 1. 15. 28                       | 30. 17   | 55. 27   | 4. 25         | 6. 44   |                 |
| 28 Jov.                 | 5. 17. 24. 40                    | 0. 6. 57                        | 30. 33   | 55. 55   | 5. 35         | 7. 3    |                 |
| 29 Ven.                 | 6. 0. 9. 25                      | 1. 3. 13 A                      | 30. 49   | 56. 25   | 6. 44         | 7. 19   |                 |
| 30 Sat.                 | 6. 13. 7. 12                     | 2. 11. 30                       | 31. 6  | 56. 55   | 7. 56         | 7. 35   |                 |
| 31 Dom                  | 6. 26. 18. 45                    | 3. 13. 54                       | 31. 22   | 57. 25   | 9. 9          | 7. 55   |                 |

| Dier<br>meridi- | Longitudo<br>Planetarym | Latitudo<br>Planetarym | Declina-<br>tio Pla-<br>netarym | Ortus<br>Plane-<br>tarum | Trans-<br>itus Ple-<br>netarym<br>per Me-<br>ridianum | Occlusus<br>Plane-<br>tarum |
|-----------------|-------------------------|------------------------|---------------------------------|--------------------------|---|-----------------------------|
|                 | S. G. M.                | G. M.                  | G. M.                           | H. M.                    | H. M.   | H. M.                       |

## S A T U R N U S .

|    |             |            |          |         |         |        |
|----|-------------|------------|----------|---------|---------|--------|
| 1  | 9. 7. 10. 8 | 0. 33. 5 B | 22. 43 A | 5. 23 V | 9. 45 V | 2. 7 M |
| 7  | 9. 6. 53. 7 | 0. 32. 8   | 22. 44   | 4. 59   | 9. 21   | 1. 43  |
| 13 | 9. 6. 35. 9 | 0. 32. I   | 22. 46   | 4. 36   | 8. 58   | 1. 20  |
| 19 | 9. 6. 23. 4 | 0. 31. 5   | 22. 47   | 4. 13   | 8. 25   | 0. 57  |
| 25 | 9. 6. 13. I | 0. 31. 0   | 22. 48   | 3. 49   | 8. 11   | 0. 33  |

## J U P I T E R .

|    |              |            |          |         |         |         |
|----|--------------|------------|----------|---------|---------|---------|
| 1  | 9. 26. 1. 7  | 0. 35. 2 A | 21. 34 A | 6. 37 V | 11. 6 V | 3. 35 M |
| 7  | 9. 25. 16. 2 | 0. 35. 8   | 21. 43   | 6. 12   | 10. 40  | 3. 8    |
| 13 | 9. 24. 33. 0 | 0. 36. 2   | 21. 51   | 5. 48   | 10. 15  | 2. 42   |
| 19 | 9. 24. 0. 0  | 0. 36. 4   | 21. 57   | 5. 25   | 9. 51   | 2. 17   |
| 25 | 9. 23. 28. 5 | 0. 36. 5   | 28. 2    | 4. 59   | 9. 25   | 1. 51   |

## M A R S .

|    |              |            |         |         |         |         |
|----|--------------|------------|---------|---------|---------|---------|
| 1  | 0. 9. 42. 1  | 4. 25. 1 A | 0. 13 A | 9. 57 V | 3. 56 M | 9. 55 M |
| 7  | 0. 11. 30. 3 | 4. 35. 5   | 0. 20 B | 9. 39   | 3. 40   | 9. 41   |
| 13 | 0. 13. 6. 2  | 4. 44. 0   | 0. 50   | 9. 21   | 3. 24   | 9. 27   |
| 19 | 0. 14. 7. 1  | 4. 52. 7   | 1. 5    | 9. 2    | 3. 6    | 9. 10   |
| 25 | 0. 14. 40. 0 | 4. 57. 3   | 1. 14   | 8. 40   | 2. 45   | 8. 50   |

## V E N U S .

|    |              |            |         |         |         |        |
|----|--------------|------------|---------|---------|---------|--------|
| 1  | 5. 24. 37. 0 | 0. 14. 3 A | 1. 55 B | 8. 47 M | 2. 54 V | 9. 1 V |
| 7  | 6. 0. 42. 1  | 0. 47. 6   | 1. 1 A  | 8. 57   | 2. 53   | 8. 50  |
| 13 | 6. 6. 34. 5  | 1. 26. 0   | 3. 57   | 9. 7    | 2. 51   | 8. 36  |
| 19 | 6. 12. 8. 7  | 2. 6. 6    | 6. 45   | 9. 15   | 2. 48   | 8. 21  |
| 25 | 6. 17. 25. 1 | 2. 48. 3   | 9. 25   | 9. 22   | 2. 44   | 8. 6   |

## M E R C U R I U S .

|    |              |            |          |         |          |         |
|----|--------------|------------|----------|---------|----------|---------|
| 1  | 3. 21. 39. I | 0. 16. 6 A | 21. 26 B | 3. 17 M | 10. 48 M | 6. 19 V |
| 7  | 4. 2. 8. 8   | 0. 52. 3 B | 20. 33   | 3. 44   | 11. 10   | 6. 36   |
| 13 | 4. 13. 56. 2 | 1. 31. 5   | 18. 7    | 4. 28   | 11. 37   | 6. 52   |
| 19 | 4. 26. 7. 0  | 1. 44. 7   | 14. 28   | 5. 4    | 0. 3 V   | 7. 2    |
| 25 | 5. 7. 38. 8  | 1. 54. I   | 10. 11   | 5. 42   | 0. 23    | 7. 4    |

## ECLIPSES SATELLITUM JOVIS.

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>horarius<br>Solis | Logaritmus<br>distantiae<br>Solis a terra<br>posita media<br>100000 | Longitudo<br>Nodi Lunæ |
|------|-------------------|---|----------------------------|---|------------------------|
|      | M. S.             | M. S.                                       | M. S.                      |   | S. G. M.               |
| 1    | 31. 35, 3         | 2. 12, 8                                    | 2. 23, 6                   | \$. 006227  | II. 20. 46             |
| 4    | 31. 36, 2         | 2. 12, 3                                    | 2. 23, 7                   | \$. 006033  | II. 20. 37             |
| 7    | 31. 37, 1         | 2. 11, 8                                    | 2. 23, 9                   | \$. 005823  | II. 20. 27             |
| 10   | 31. 38, 2         | 2. 11, 3                                    | 2. 24, 1                   | \$. 005698  | II. 20. 18             |
| 13   | 31. 39, 4         | 2. 10, 8                                    | 2. 24, 3                   | \$. 005357  | II. 20. 8              |
| 16   | 31. 40, 6         | 2. 10, 4                                    | 2. 24, 4                   | \$. 005102  | II. 19. 59             |
| 19   | 31. 41, 7         | 2. 10, 0                                    | 2. 24, 6                   | \$. 004835  | II. 19. 49             |
| 22   | 31. 42, 9         | 2. 9, 6                                     | 2. 24, 8                   | \$. 004553  | II. 19. 40             |
| 25   | 31. 44, 1         | 2. 9, 2                                     | 2. 25, 0                   | \$. 004260  | II. 19. 30             |
| 28   | 31. 45, 3         | 2. 8, 8                                     | 2. 25, 2                   | \$. 003956  | II. 19. 21             |

POSITIONES SATELLITUM JOVIS

*Oriens*                    *9<sup>h</sup> Vespere*                    *Occidens*

|    |     |     |               |       |               |
|----|-----|-----|---------------|-------|---------------|
| 1  |     | 4.  | 2. . 1        | ○     | . 1           |
| 3  | 4.  | .   |               | ○ . 2 | . 2           |
| 4  | 10  |     | 3' 0' 1       | ○     | . 2           |
| 5  | . 4 | 3.  | 2.            | ○     | . 2           |
| 6  | . 4 | . 3 | 1. . 2        | ○     |               |
| 7  |     | . 4 | . 3           | ○     | . 2           |
| 8  |     |     | 1' 0' 4' 0' 2 | ○     | . 2           |
| 10 | 10  |     |               | ○     | . 2 3. . 4    |
| 12 |     | 3.  | 2.            | ○     |               |
| 13 |     | . 3 | 2. . 2        | ○     |               |
| 14 |     |     | . 3           | ○     | . 2           |
| 16 |     |     | . 2           | ○     | . 2 4. . 1 10 |
| 19 | 4.  | 3.  | 2.            | ○     | . 2           |
| 20 | 4.  | . 3 | . 2 2.        | ○     |               |
| 21 | . 4 |     | . 3           | ○     | . 2 . 3       |
| 22 | . 4 |     | . 3           | ○     |               |
| 24 |     |     | . 4 . 2       | ○     | . 2 1.        |
| 26 |     |     | 1. 2.         | ○     | . 2 . 4       |
| 27 | 1.  |     | . 2 1.        | ○     |               |
| 28 |     |     | . 3           | ○     | . 2 . 3 . 4   |
| 29 |     |     | 1.            | ○     | . 2 . 3       |
| 30 |     |     | 2.            | ○     | . 2 . 3 . 4   |
| 31 |     |     | . 1           | ○     | . 2 . 1 . 4   |

Positiones Satellitum tempore eclipsium.

|    |     |    |     |          |         |
|----|-----|----|-----|----------|---------|
| 2  |     | 4. | . 2 | 1. ○     | . 1     |
| 9  |     |    | . 2 | 1. ○     | . 4 . 2 |
| 11 |     |    |     | 1. 1. ○  | . 2 . 4 |
| 15 |     |    |     | . 1 2. ○ | . 2 4.  |
| 17 |     |    |     | . 2 1. ○ | 4. . 2  |
| 18 |     |    |     | . 4 1. ○ | . 2 . 3 |
| 23 | . 6 |    |     | 2. ○     | . 2 . 3 |
| 25 |     |    |     | 2. ○     | . 2 . 3 |

**G** *Phænomena & Observationes  
Solis*

|    |   |
|----|---|
| 3  | Sol in parallelo  |
| 3  | Orion. & $\alpha$ Serp. culm. 18 <sup>h</sup> 48'                       |
| 6  | & 4 <sup>m</sup> 40 <sup>s</sup>  |
| 6  | Orion, $\beta$ Aquilæ, & Procyon  |
|    | culm. 18 <sup>h</sup> 8', 8 <sup>h</sup> 40' & 20 <sup>h</sup> 21'      |
| 8  | Serpentis   |
|    | culm. 4 <sup>h</sup> 29'  |
| 10 | Oph. & $\delta$ Virg. 6 <sup>h</sup> 14' & 1 <sup>h</sup> 27'           |
| 14 | Ceti & $\beta$ Virg. culm. 15 <sup>h</sup> 16'                          |
|    | & 0 <sup>m</sup> 8'   |
| 15 | Ophiuci & $\delta$ Aquil. culm. 6 <sup>h</sup> 1'                       |
|    | & 7 <sup>m</sup> 38'  |
| 16 | Ceti  |
|    | culm. 14 <sup>h</sup> 51'   |
| 18 | Piscium   |
|    | culm. 14 <sup>h</sup> 2'  |
| 20 | & $\gamma$ Virg., Antin. culm. 0 <sup>h</sup> 15'                       |
|    | 1 <sup>h</sup> 30' 7 <sup>m</sup> 47'                                   |
| 22 | in signo Librae   |
|    | 17 <sup>h</sup> 32' 15'   |
| 23 | Orion. & $\delta$ Ceti 17 <sup>h</sup> 13' & 14 <sup>h</sup> 22'        |
| 25 | Orionis, $\alpha$ Aquarii, $\gamma$ Antinoi                             |
|    | culm. 17 <sup>h</sup> 11' 9 <sup>m</sup> 42' & 7 <sup>h</sup> 48'       |
| 26 | Antinoi   |
|    | culm. 7 <sup>h</sup> 9'   |
| 27 | Orionis   |
|    | culm. 17 <sup>h</sup> 8'  |
| 28 | Aquar. & $\alpha$ Orion. culm. 9 <sup>h</sup> 47'                       |
|    | 16 <sup>m</sup> 49'   |
| 29 | $\alpha$ & $\gamma$ Serp. culm. 3 <sup>h</sup> 12' & 5 <sup>h</sup> 43' |
| 30 | Ophiuci   |
|    | culm. 3 <sup>h</sup> 34'  |

**D** *Phænomena & Observationes  
Lunæ*

|    |  |
|----|--|
| 3  | Luna   |
| 3  | ad $\alpha$ Scorpii 11 <sup>h</sup> 0'                               |
| 4  | Primus Quadrans 19 <sup>h</sup> 16'                                  |
| 4  | ad $\gamma$ Sagittarii 23 <sup>h</sup> 30'                           |
| 5  | ad $\delta$ & $\phi$ Sagitt. 6 <sup>h</sup> 0' & 14 <sup>h</sup> 40' |
| 6  | Perigea ad Saturni 12 <sup>h</sup> 44'                               |
| 6  | ad $\alpha$ & $\Lambda$ Sagittarii 16 <sup>h</sup> & 17'             |
| 7  | ad Jovis 18 <sup>h</sup> 8'  |
| 7  | ad $\chi$ & $\phi$ Capri 21 <sup>h</sup> & 23 <sup>h</sup> 40'       |
| 10 | ad $\epsilon$ Aquarii 5 <sup>h</sup> 0'                              |
| 10 | Plenilunium 13 <sup>h</sup> 20'                                      |
| 12 | Eclipsis Lunæ. Vide supra.   |
| 12 | ad $\alpha$ Piscium 10 <sup>h</sup> 10'                              |
| 16 | ad Martis 7 <sup>h</sup> 50'   |
| 12 | ad $\tau$ Piscium 2 <sup>h</sup> 40'                                 |
| 16 | ad $\chi$ Tauri 17 <sup>h</sup> 10'                                  |
| 16 | ad Ultimus Quadrans 8 <sup>h</sup> 8'                                |
| 19 | Apogea ad $\tau$ Geminorum 19 <sup>h</sup> 0'                        |
| 19 | ad $\chi$ Geminorum 4 <sup>h</sup> 30'                               |
| 20 | ad $\alpha$ & $\gamma$ Leonis 4 <sup>h</sup> & 16'                   |
| 23 | Novilunium 1 <sup>h</sup> 5'   |
| 30 | ad $\delta$ & $\tau$ Scorpii 4 <sup>h</sup> 10' & 4 <sup>h</sup> 50' |

*Planetae in parallelis fixarum*

**G** *Phænomena & Observationes  
Planatarum*

|    |   |
|----|---|
| 3  | Mercurius ad $\beta$ Virg. diff. lat. 1'  |
| 6  | Mars ad Sequent. $\epsilon$ Piscium       |
|    | diff. lat. 16'                            |
| 7  | Mercurius ad $\gamma$ Virginis diff. lat. |
|    | 1 <sup>o</sup> 4'                         |
| 11 | Mars ad $\tau$ Piscium diff. lat. 5'      |
|    | Mercurius ad $\delta$ Virginis diff. lat. |
|    | 1 <sup>o</sup> 25'                        |
| 11 | Mercurius ad $\alpha$ Virginis d. l. 42   |

|          |  |
|----------|--|
| Saturnus | $\beta$ Corvi, $\gamma$ Leporis,<br>$\alpha$ Corvi   |
| Jupiter  | $\delta$ Scorpii, $\gamma$ Hydrael,<br>$\epsilon$ Sagitt., $\beta$ Corvi & $\gamma$ Lep.   |
| Mars     | initio prope $\alpha$ Piscium,<br>16 <sup>h</sup> , & $\zeta$ Virginis, $\gamma$ Antinoi;<br>sub finem $\gamma$ Virg. & $\delta$ Orion.  |
| Venus    | 2 $\epsilon$ Ceti, 3 $\alpha$ Capri, 5 $\gamma$ Eridani, 7. 53 Eridani, 10 $\beta$ Capri, 12 Siril, 16 $\gamma$ Capri,<br>& $\delta$ Canis, 22 $\delta$ Ceti, 25 54 Eridani, 30 $\beta$ Canis  |
| Mercur.  | 1 $\beta$ Ophiuci, 3 $\alpha$ Ceti,<br>4 $\delta$ Aquilæ, & $\gamma$ Ceti, 7 $\gamma$ Virginis, 10 $\zeta$ Orionis, 13 $\alpha$ Ophiuci, 16 $\tau$ Osonis & $\beta$ Aquarii, 19 $\beta$ Orionis, 24 $\gamma$ Ceti, 28 $\alpha$ Capri, 30. 53 Erid. |

| Dies mensis | Dier.<br>Solis<br>medie | Aequatio<br>subtrahenda<br>a tempore<br>vero<br>as habeatur<br>medium | Diffe-<br>rentia | Longitude<br>Solis | Ascensio recta<br>Solis | Declinatio<br>Solis<br>Borealis |
|-------------|-------------------------|---|------------------|--------------------|-------------------------|---------------------------------|
|             |                         | M. S.   | S.               | S. G. M. S.        | G. M. S.                | G. M. S.                        |
| 1           | Lun.                    | 0. -13. 0   | 18. 8            | 5. 8. 49. 50       | 160. 26. 37             | 8. 16. 10                       |
| 2           | Mar.                    | 0. 31. 8  | 19. 1            | 5. 9. 48. 0        | 161. 21. 3              | 7. 54. 16                       |
| 3           | Mer.                    | 0. 50. 9  | 19. 4            | 5. 10. 46. 11      | 162. 15. 25             | 7. 32. 15                       |
| 4           | Jov.                    | 1. 10. 3  | 19. 6            | 5. 11. 44. 24      | 163. 9. 43              | 7. 10. 7                        |
| 5           | Ven.                    | 1. 29. 9  | 19. 8            | 5. 13. 42. 38      | 164. 3. 56              | 6. 47. 52                       |
| 6           | Sat.                    | 1. 49. 7  | 20. 1            | 5. 13. 40. 54      | 164. 58. 5              | 6. 25. 31                       |
| 7           | Dom                     | 2. 9. 8   | 20. 3            | 5. 14. 39. 11      | 165. 52. 11             | 6. 3. 3                         |
| 8           | Lun.                    | 2. 30. 1  | 20. 5            | 5. 15. 37. 29      | 166. 46. 14             | 5. 40. 29                       |
| 9           | Mar.                    | 2. 50. 6  | 20. 6            | 5. 16. 35. 50      | 167. 40. 14             | 5. 17. 49                       |
| 10          | Mer.                    | 3. 11. 2  | 20. 7            | 5. 17. 34. 12      | 168. 34. 12             | 4. 55. 4                        |
| 11          | Jov.                    | 3. 31. 9  | 20. 8            | 5. 18. 32. 36      | 169. 28. 9              | 4. 32. 14                       |
| 12          | Ven.                    | 3. 52. 7  | 20. 9            | 5. 19. 31. 2       | 170. 22. 4              | 4. 9. 20                        |
| 13          | Sat.                    | 4. /13. 6   | 21. 0            | 5. 20. 29. 30      | 171. 15. 57             | 3. 46. 21                       |
| 14          | Dom                     | 4. 34. 6  | 21. 0            | 5. 21. 28. 8       | 172. 9. 49              | 3. 23. 17                       |
| 15          | Lun.                    | 4. 55. 6  | 21. 0            | 5. 22. 26. 34      | 173. 3. 41              | 2. 0. 9                         |
| 16          | Mar.                    | 5. 16. 6  | 21. 1            | 5. 23. 25. 9       | 173. 57. 33             | 2. 36. 58                       |
| 17          | Mer.                    | 5. 37. 7  | 21. 0            | 5. 24. 23. 46      | 174. 51. 25             | 2. 13. 44                       |
| 18          | Jov.                    | 5. 58. 7  | 21. 0            | 5. 25. 22. 26      | 175. 45. 18             | 1. 50. 27                       |
| 19          | Ven.                    | 6. 19. 7  | 20. 9            | 5. 26. 21. 8       | 176. 39. 12             | 1. 27. 7                        |
| 20          | Sat.                    | 6. 40. 6  | 20. 7            | 5. 27. 19. 52      | 177. 33. 6              | 1. 3. 45                        |
| 21          | Dom                     | 7. 1. 3   | 20. 6            | 5. 28. 18. 39      | 178. 27. 1              | 0. 40. 21                       |
| 22          | Lun.                    | 7. 21. 9  | 20. 6            | 5. 29. 17. 28      | 179. 20. 58             | 0. 16. 56                       |
| 23          | Mar.                    | 7. 42. 5  | 20. 5            | 6. 0. 16. 18       | 180. 14. 57             | 0. 6. 30                        |
| 24          | Mer.                    | 8. 3. 0   | 20. 3            | 6. 1. 15. 11       | 181. 8. 58              | 0. 29. 57                       |
| 25          | Jov.                    | 8. 23. 3  | 20. 2            | 6. 2. 14. 6        | 182. 3. 1               | 0. 63. 24                       |
| 26          | Ven.                    | 8. 43. 5  | 20. 0            | 6. 3. 13. 3        | 182. 57. 6              | 1. 16. 51                       |
| 27          | Sat.                    | 9. 3. 5   | 19. 7            | 6. 4. 12. 2        | 183. 51. 14             | 1. 40. 18                       |
| 28          | Dom                     | 9. 23. 2  | 19. 5            | 6. 5. 11. 3        | 184. 45. 26             | 2. 3. 44                        |
| 29          | Lun.                    | 9. 43. 7  | 19. 4            | 6. 6. 10. 5        | 185. 39. 41             | 2. 27. 9                        |
| 30          | Mar.                    | 10. 2. 1  | 19. 1            | 6. 7. 9. 9         | 186. 33. 59             | 2. 50. 33                       |

| Date<br>of<br>Month | U<br>n<br>it<br>es<br>of<br>time | Diff<br>er<br>ent<br>ia<br>sectionis<br>a Sole | Diff<br>er<br>ent<br>ia | Igi<br>tum<br>Crep<br>ta<br>sculi | Ortu<br>s<br>Centr<br>e<br>Solis | Occa<br>s<br>Centr<br>e<br>Solis | Limit<br>Crep<br>ta<br>sculi | Hora<br>Itatica<br>Meri<br>dies |
|---------------------|----------------------------------|--|-------------------------|-----------------------------------|----------------------------------|----------------------------------|------------------------------|---------------------------------|
|                     |                                  |  |                         |                                   |                                  |                                  |                              |                                 |
|                     |                                  |  |                         |                                   |                                  |                                  |                              |                                 |
|                     |                                  |  |                         |                                   |                                  |                                  |                              |                                 |
| 1 Lun.              | 13. 18. 13.6                     |  |                         | 3. 37. 7                          | 5. 23.                           | 6. 37                            | 8. 25                        | 16. 43                          |
| 2 Mar.              | 13. 14. 35.8                     |  |                         | 3. 37. 4                          | 5. 25                            | 6. 35                            | 8. 23                        | 16. 45                          |
| 3 Mer.              | 13. 10. 58.4                     |  |                         | 3. 37. 2                          | 5. 27                            | 6. 33                            | 8. 21                        | 16. 47                          |
| 4 Juv.              | 13. 7. 21.2                      |  |                         | 3. 36. 9                          | 5. 29                            | 6. 31                            | 8. 18                        | 16. 49                          |
| 5 Ven.              | 13. 3. 44.3                      |  |                         | 3. 36. 6                          | 5. 30                            | 6. 30                            | 8. 16                        | 16. 51                          |
| 6 Sat.              | 13. 0. 7.7                       |  |                         | 3. 36. 4                          | 5. 31                            | 6. 29                            | 8. 14                        | 16. 53                          |
| 7 Dom.              | 12. 56. 31.3                     |  |                         | 3. 36. 2                          | 5. 33                            | 6. 27                            | 8. 12                        | 16. 55                          |
| 8 Leo.              | 12. 52. 55.1                     |  |                         | 3. 36. 0                          | 5. 35                            | 6. 25                            | 8. 10                        | 16. 57                          |
| 9 Mar.              | 12. 49. 19.1                     |  |                         | 3. 35. 9                          | 5. 36                            | 6. 23                            | 8. 8                         | 16. 59                          |
| 10 Mer.             | 12. 45. 43.2                     |  |                         | 3. 35. 8                          | 5. 38                            | 6. 22                            | 8. 6                         | 17. 1                           |
| 11 Jov.             | 12. 42. 7.4                      |  |                         | 3. 35. 7                          | 5. 41                            | 6. 21                            | 8. 4                         | 17. 3                           |
| 12 Ven.             | 12. 38. 31.7                     |  |                         | 3. 35. 6                          | 5. 42                            | 6. 19                            | 8. 2                         | 17. 5                           |
| 13 Sat.             | 12. 34. 56.8                     |  |                         | 3. 35. 5                          | 5. 44                            | 6. 18                            | 8. 0                         | 17. 7                           |
| 14 Dom.             | 12. 31. 20.6                     |  |                         | 3. 35. 4                          | 5. 45                            | 6. 19                            | 7. 58                        | 17. 9                           |
| 15 Lun.             | 12. 27. 45.2                     |  |                         | 3. 35. 4                          | 5. 47                            | 6. 19                            | 7. 56                        | 17. 11                          |
| 16 Mar.             | 12. 24. 9.8                      |  |                         | 3. 35. 5                          | 5. 48                            | 6. 13                            | 7. 54                        | 17. 13                          |
| 17 Mer.             | 12. 20. 34.3                     |  |                         | 3. 35. 5                          | 5. 50                            | 6. 12                            | 7. 52                        | 17. 15                          |
| 18 Jov.             | 12. 16. 58.8                     |  |                         | 3. 35. 5                          | 5. 51                            | 6. 10                            | 7. 50                        | 17. 17                          |
| 19 Ven.             | 12. 13. 23.2                     |  |                         | 3. 35. 6                          | 5. 53                            | 6. 9                             | 7. 48                        | 17. 18                          |
| 20 Sat.             | 12. 9. 47.6                      |  |                         | 3. 35. 6                          | 5. 55                            | 6. 7                             | 7. 46                        | 17. 20                          |
| 21 Dom.             | 12. 6. 11.9                      |  |                         | 3. 35. 7                          | 5. 57                            | 6. 5                             | 7. 45                        | 17. 22                          |
| 22 Lun.             | 12. 2. 36.1                      |  |                         | 3. 35. 8                          | 5. 58                            | 6. 3                             | 7. 43                        | 17. 24                          |
| 23 Mar.             | 11. 59. 0.2                      |  |                         | 3. 35. 9                          | 5. 59                            | 6. 2                             | 7. 42                        | 17. 26                          |
| 24 Mer.             | 11. 55. 24.1                     |  |                         | 3. 36. 1                          | 5. 60                            | 6. 0                             | 7. 41                        | 17. 28                          |
| 25 Jov.             | 11. 51. 47.9                     |  |                         | 3. 36. 2                          | 5. 59                            | 7. 39                            | 17. 29                       |                                 |
| 26 Ven.             | 11. 48. 11.6                     |  |                         | 3. 36. 3                          | 5. 57                            | 7. 28                            | 17. 31                       |                                 |
| 27 Sat.             | 11. 44. 35.1                     |  |                         | 3. 36. 5                          | 5. 55                            | 7. 26                            | 17. 33                       |                                 |
| 28 Dom.             | 11. 40. 58.3                     |  |                         | 3. 36. 8                          | 5. 54                            | 7. 25                            | 17. 35                       |                                 |
| 29 Lun.             | 11. 37. 31.3                     |  |                         | 3. 37. 0                          | 5. 52                            | 7. 23                            | 17. 37                       |                                 |
| 30 Mar.             | 11. 33. 44.1                     |  |                         | 3. 37. 2                          | 5. 50                            | 7. 21                            | 17. 39                       |                                 |
|                     |                                  |  |                         | 3. 37. 5                          | 5. 48                            | 7. 20                            | 17. 48                       |                                 |

| Dies<br>mensis | Dier-<br>habdomada | Longitudo<br>Luna<br>Meridie | Latitudo<br>Luna<br>Meridie | Dia-<br>meter<br>boreo-<br>zonta-<br>lis<br>Luna<br>Merid. | Paral-<br>laxis<br>boreo-<br>zonta-<br>lis<br>Luna<br>Merid. | Declina-<br>tio Luna<br>Merid. | Transi-<br>tus Luna<br>per Me-<br>ridianam |
|----------------|--------------------|------------------------------|-----------------------------|--|--|--------------------------------|--|
|                |                    | S. G. M. S.                  | G. M. S.                    | M. S.  | M. S.  | G. M.                          | H. M.                                      |
| 1              | Lun.               | 7. 2. 59. 49                 | 3. 41. 45 A                 | 31. 30   | 57. 41   | 16. 0 A                        | 3. 23 V                                    |
| 2              | Mar.               | 7. 16. 32. 40                | 4. 28. 38                   | 31. 47   | 58. 11   | 21. 5                          | 4. 15                                      |
| 3              | Mer.               | 8. 0. 19. 49                 | 5. 0. 59                    | 32. 3  | 58. 40   | 25. 9                          | 5. 11                                      |
| 4              | Jov.               | 8. 14. 20. 46                | 5. 16. 9                    | 32. 17   | 59. 7  | 27. 46                         | 6. 12                                      |
| 5              | Ven.               | 8. 28. 34. 30                | 5. 12. 24                   | 32. 30   | 59. 31   | 28. 40                         | 7. 16                                      |
| 6              | Sat.               | 9. 12. 58. 19                | 4. 49. 12                   | 22. 40   | 59. 49   | 27. 38                         | 8. 19                                      |
| 7              | Dom.               | 9. 27. 28. 55                | 4. 7. 24                    | 32. 46   | 59. 59   | 24. 44                         | 9. 20                                      |
| 8              | Lun.               | 10. 12. 2. 41                | 3. 9. 40                    | 32. 46   | 59. 58   | 20. 15                         | 10. 17                                     |
| 9              | Mar.               | 10. 26. 31. 16               | 1. 59. 54                   | 32. 38   | 59. 46   | 14. 36                         | 11. 9                                      |
| 10             | Mer.               | 11. 10. 51. 52               | 0. 43. 12                   | 32. 26   | 59. 23   | 8. 12                          | 11. 59                                     |
| 11             | Jov.               | 11. 24. 58. 8                | 0. 34. 51 B                 | 32. 7  | 58. 48   | 1. 30                          | * *  |
| 12             | Ven.               | 0. 8. 46. 13                 | 1. 49. 16                   | 31. 44   | 58. 6  | 5. 9 B                         | 0. 47 M                                    |
| 13             | Sat.               | 0. 22. 13. 23                | 2. 55. 39                   | 31. 18   | 57. 20   | 11. 21                         | 1. 33                                      |
| 14             | Dom.               | 1. 5. 19. 0                  | 3. 50. 54                   | 30. 53   | 56. 33   | 16. 36                         | 2. 20                                      |
| 15             | Lun.               | 1. 18. 3. 47                 | 4. 33. 9                    | 30. 29   | 55. 49   | 21. 56                         | 3. 8                                       |
| 16             | Mar.               | 2. 0. 30. 4                  | 5. 1. 23                    | 30. 9  | 55. 12   | 25. 12                         | 3. 57                                      |
| 17             | Mer.               | 2. 12. 41. 13                | 5. 15. 22                   | 29. 53   | 54. 43   | 27. 34                         | 4. 48                                      |
| 18             | Jov.               | 2. 24. 41. 21                | 5. 15. 18                   | 29. 42   | 54. 24   | 28. 37                         | 5. 40                                      |
| 19             | Ven.               | 3. 6. 34. 53                 | 5. 1. 42                    | 29. 38   | 54. 15   | 28. 19                         | 6. 31                                      |
| 20             | Sat.               | 3. 18. 26. 52                | 4. 35. 20                   | 29. 38   | 54. 16   | 26. 43                         | 7. 23                                      |
| 21             | Dom.               | 4. 0. 21. 34                 | 3. 57. 0                    | 29. 44   | 54. 27   | 23. 55                         | 8. 12                                      |
| 22             | Lun.               | 4. 12. 23. 18                | 3. 7. 56                    | 29. 55   | 54. 47   | 20. 4                          | 9. 1                                       |
| 23             | Mar.               | 4. 24. 35. 38                | 2. 9. 41                    | 30. 9  | 55. 13   | 15. 24                         | 9. 47                                      |
| 24             | Mer.               | 5. 7. 1. 37                  | 1. 4. 20                    | 30. 28   | 55. 45   | 9. 56                          | 10. 30                                     |
| 25             | Jov.               | 5. 19. 43. 14                | 0. 5. 33 A                  | 30. 46   | 56. 19   | 4. 1                           | 11. 13                                     |
| 26             | Ven.               | 6. 2. 41. 18                 | 1. 16. 25                   | 31. 5  | 56. 54   | 2. 14 A                        | 11. 56                                     |
| 27             | Sat.               | 6. 15. 55. 50                | 2. 24. 44                   | 31. 34   | 57. 28   | 8. 29                          | 0. 42 V                                    |
| 28             | Dom.               | 6. 29. 25. 45                | 3. 26. 16                   | 31. 39   | 57. 58   | 14. 28                         | 1. 29                                      |
| 29             | Lun.               | 7. 13. 8. 50                 | 4. 16. 55                   | 31. 54   | 58. 24   | 19. 52                         | 2. 19                                      |
| 30             | Mar.               | 7. 27. 3. 23                 | 4. 53. 15                   | 32. 5  | 58. 44   | 24. 17                         | 3. 16                                      |

| Dies<br>septembris | Longitudo<br>Luna media<br>nocte |     | Latitudo<br>Luna media<br>nocte |    | Dia-<br>meter<br>horiz.<br>Luna<br>med.<br>noct. | Paral-<br>laxis<br>bariz.<br>Luna<br>med.<br>noct. | Ortus<br>Luna | Occasus<br>Luna |
|--------------------|----------------------------------|-----|---------------------------------|----|--|--|---------------|-----------------|
|                    | S.                               | G.  | M.                              | S. | M.   | S.   | H.            | M.              |
| 1 Lun.             | 7.                               | 9.  | 44.                             | 26 | 4.   | 6.   | 50 A          | 8. 15 V         |
| 2 Mar.             | 7.                               | 23. | 24.                             | 29 | 4.   | 46.  | 51            | 8. 43           |
| 3 Mer.             | 8.                               | 7.  | 18.                             | 33 | 5.   | 10.  | 54            | 9. 19           |
| 4 Jov.             | 8.                               | 21. | 26.                             | 13 | 5.   | 16.  | 45            | 10. 10          |
| 5 Ven.             | 9.                               | 5.  | 45.                             | 18 | 5.   | 3.   | 6             | 11. 14          |
| 6 Sat.             | 9.                               | 20. | 13.                             | 2  | 4.   | 30.  | 33            | *               |
| 7 Dum.             | 10.                              | 4.  | 45.                             | 19 | 3.   | 40.  | 21            | 0. 28 M         |
| 8 Lun.             | 10.                              | 19. | 17.                             | 1  | 2.   | 36.  | 0             | 1. 49           |
| 9 Mar.             | 11.                              | 3.  | 43.                             | 4  | 1.   | 22.  | 2             | 3. 13           |
| 10 Mer.            | 11.                              | 17. | 57.                             | 1  | 0.   | 3.   | 59            | 4. 34           |
| 11 Jov.            | 0.                               | 1.  | 54.                             | 38 | 1.   | 12.  | 51 B          | 5. 54           |
| 12 Ven.            | 0.                               | 15. | 32.                             | 30 | 2.   | 23.  | 49            | 7. 12           |
| 13 Sat.            | 0.                               | 28. | 48.                             | 55 | 3.   | 24.  | 51            | 8. 27           |
| 14 Dum.            | 1.                               | 11. | 43.                             | 55 | 4.   | 13.  | 45            | 9. 41           |
| 15 Lun.            | 1.                               | 24. | 19.                             | 4  | 4.   | 49.  | 4             | 10. 54          |
| 16 Mar.            | 2.                               | 6.  | 37.                             | 17 | 5.   | 10.  | 9             | 0. 6 V          |
| 17 Mer.            | 2.                               | 18. | 42.                             | 26 | 5.   | 17.  | 4             | 1. 10           |
| 18 Jov.            | 3.                               | 0.  | 38.                             | 35 | 5.   | 10.  | 10            | 2. 7            |
| 19 Ven.            | 3.                               | 12. | 30.                             | 47 | 4.   | 50.  | 5             | 2. 56           |
| 20 Sat.            | 3.                               | 24. | 23.                             | 24 | 4.   | 17.  | 37            | 3. 40           |
| 21 Dom.            | 4.                               | 6.  | 21.                             | 19 | 3.   | 33.  | 45            | 4. 10           |
| 22 Lun.            | 4.                               | 18. | 27.                             | 56 | 2.   | 39.  | 52            | 4. 36           |
| 23 Mar.            | 5.                               | 0.  | 46.                             | 46 | 3.   | 18.  | 55.           | 4. 58           |
| 24 Mer.            | 5.                               | 13. | 19.                             | 21 | 0.   | 29.  | 46            | 5. 17           |
| 25 Jov.            | 5.                               | 26. | 10.                             | 9  | 0.   | 41.  | 2 A           | 5. 34           |
| 26 Ven.            | 6.                               | 9.  | 16.                             | 35 | 1.   | 51.  | 10            | 5. 51           |
| 27 Sat.            | 6.                               | 22. | 28.                             | 53 | 2.   | 56.  | 39            | 6. 10           |
| 28 Dom.            | 7.                               | 6.  | 15.                             | 39 | 3.   | 53.  | 13            | 6. 30           |
| 29 Lun.            | 7.                               | 20. | 4.                              | 56 | 4.   | 37.  | 7             | 6. 53           |
| 30 Mar.            | 8.                               | 4.  | 3.                              | 49 | 5.   | 5.   | 9             | 7. 28           |

| Dies<br>mensis      | Longitudo<br>Planetarum | Latitudo<br>Planeta-<br>rum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Transi-<br>tus Pla-<br>netarum<br>per Me-<br>ridianum | Occsus<br>Plane-<br>tarum |
|---------------------|-------------------------|-----------------------------|---------------------------------|--------------------------|---|---------------------------|
|                     | S. G. M.                | G. M.                       | G. M.                           | H. M.                    | H. M.   | H. M.                     |
| S A T U R N U S .   |                         |                             |                                 |                          |   |                           |
| 1                   | 9. 6. 4. 3              | 0. 30. 3 B                  | 22. 50 A                        | 3. 22 V                  | 7. 44 V   | 0. 6 M                    |
| 7                   | 9. 6. 1. 0              | 0. 29. 7                    | 22. 51                          | 3. 1                     | 7. 23   | 11. 45 V                  |
| 13                  | 9. 5. 59. 2             | 0. 29. 0                    | 22. 51                          | 2. 39                    | 7. 1  | 11. 23                    |
| 19                  | 9. 6. 3. 7              | 0. 28. 3                    | 22. 52                          | 2. 17                    | 6. 39   | 11. 1                     |
| 25                  | 9. 6. 12. 5             | 0. 27. 4                    | 22. 52                          | 1. 57                    | 6. 19   | 10. 41                    |
| J U P I T E R .     |                         |                             |                                 |                          |   |                           |
| 1                   | 9. 22. 5. 5             | 0. 36. 3 A                  | 22. 5 A                         | 4. 32 V                  | 8. 58 V   | 1. 24 M                   |
| 7                   | 9. 22. 48. 0            | 0. 36. 2                    | 22. 8                           | 4. 9                     | 8. 35   | 1. 1                      |
| 13                  | 9. 22. 38. 3            | 0. 36. 8                    | 22. 10                          | 3. 47                    | 8. 12   | 0. 37                     |
| 19                  | 9. 22. 33. 1            | 0. 36. 3                    | 22. 10                          | 3. 25                    | 7. 30   | 0. 15                     |
| 25                  | 9. 22. 37. 0            | 0. 36. 3                    | 22. 10                          | 3. 4                     | 7. 25   | 11. 54 V                  |
| M A R S .           |                         |                             |                                 |                          |   |                           |
| 1                   | 0. 14. 51. 1            | 4. 58. 3 A                  | 1. 13 B                         | 8. 15 V                  | 2. 20 M   | 8. 25 M                   |
| 7                   | 0. 14. 6. 7             | 4. 57. 0                    | 1. 1                            | 7. 52                    | 1. 56   | 8. 0                      |
| 13                  | 0. 13. 5. 8             | 4. 53. 6                    | 0. 40                           | 7. 28                    | 1. 31   | 7. 34                     |
| 19                  | 0. 11. 40. 0            | 4. 43. 8                    | 0. 16                           | 7. 2                     | 1. 3  | 7. 4                      |
| 25                  | 0. 10. 0. 2             | 4. 27. 0                    | 0. 9 A                          | 6. 36                    | 0. 35   | 6. 34                     |
| V E N U S .         |                         |                             |                                 |                          |   |                           |
| 1                   | 6. 23. 10. 0            | 3. 40. 5 A                  | 12. 26 A                        | 9. 29 M                  | 2. 39 V   | 7. 49 V                   |
| 7                   | 6. 27. 29. 1            | 4. 29. 3                    | 14. 46                          | 9. 33                    | 2. 33   | 7. 33                     |
| 13                  | 7. 1. 11. 2             | 5. 14. 6                    | 16. 44                          | 9. 33                    | 2. 24   | 7. 15                     |
| 19                  | 7. 4. 3. 1              | 6. 0. 5                     | 18. 32                          | 9. 29                    | 2. 12   | 6. 55                     |
| 25                  | 7. 5. 59. 0             | 6. 44. 0                    | 19. 55                          | 9. 21                    | 1. 57   | 6. 33                     |
| M E R C U R I U S . |                         |                             |                                 |                          |   |                           |
| 1                   | 5. 20. 12. 6            | 1. 0. 1 B                   | 4. 49 B                         | 6. 25 M                  | 0. 43 V   | 7. 3 V                    |
| 7                   | 6. 0. 16. 1             | 0. 18. 7                    | 0. 13                           | 6. 57                    | 0. 58   | 6. 59                     |
| 13                  | 6. 9. 42. 4             | 0. 23. 9 A                  | 4. 12 A                         | 7. 27                    | 1. 10   | 6. 53                     |
| 19                  | 6. 18. 25. 5            | 1. 6. 6                     | 8. 16                           | 7. 52                    | 1. 19   | 6. 46                     |
| 25                  | 6. 26. 28. 0            | 1. 48. 3                    | 11. 57                          | 8. 15                    | 1. 27   | 6. 39                     |

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# ECLIPSES SATELLITUM JOVIS.

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>borarius<br>Solis | Logaritmus<br>distantia<br>Solis a terra<br>posita media<br>100000 | Longitudo<br>Nodi Luna |
|------|-------------------|---|----------------------------|--|------------------------|
|      | M. S.             | M. S.                                       | M. S.                      |  | S. G. M.               |
| 1    | 31. 47, 4         | 2. 8, 4                                     | 2. 25, 4                   | 5. 003536  | II. 19. 8              |
| 4    | 31. 48, 8         | 2. 8, 2                                     | 2. 25, 6                   | 5. 003208  | II. 18. 58             |
| 7    | 31. 50, 3         | 2. 8, 1                                     | 2. 25, 8                   | 5. 002857  | II. 18. 49             |
| 10   | 31. 51, 9         | 2. 8, 0                                     | 2. 26, 1                   | 5. 002522  | II. 18. 39             |
| 13   | 31. 53, 4         | 2. 8, 0                                     | 2. 26, 4                   | 5. 002169  | II. 18. 30             |
| 16   | 31. 54, 9         | 2. 8, 0                                     | 2. 26, 6                   | 5. 001821  | II. 18. 20             |
| 19   | 31. 56, 3         | 2. 7, 9                                     | 2. 26, 8                   | 5. 001446  | II. 18. 11             |
| 22   | 31. 57, 8         | 2. 7, 9                                     | 2. 27, 1                   | 5. 001057  | II. 18. 1              |
| 25   | 31. 59, 4         | 2. 8, 0                                     | 2. 27, 4                   | 5. 000707  | II. 17. 58             |
| 28   | 32. 1, 1          | 2. 8, 0                                     | 2. 27, 6                   | 5. 000330  | II. 17. 48             |

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**POSITIONES SATELLITUM JOVIS**  
*Oriens*                    *9<sup>h</sup> Vespere*                    *Occidens*

|    |     |                    |     |
|----|-----|--------------------|-----|
| 1  |     | ○ 1. 3. 2. 4.      |     |
| 2  |     | 3. 2. ○ 4.         | 10. |
| 3  |     | 3. 4. 2. 2. ○      |     |
| 4  |     | 4. 3. 3. ○ 1. 2.   |     |
| 5  | 4.  | 1. ○ 2. 1.         | 10. |
| 6  | .4. | 2. ○ 1. 1.         | 8.  |
| 7  | .4. | 3. 2. ○            | 1.  |
| 8  | .4. | ○ 1. 1. 2.         |     |
| 11 |     | 1. ○ 4. 2.         |     |
| 12 |     | 1. 1. ○ 2. 1.      | 4.  |
| 13 |     | 2. ○ 1. 1. 3.      | 4.  |
| 14 |     | 1. 2. ○ 1.         | 4.  |
| 15 |     | ○ 1. 1. ○ 2.       | 4.  |
| 18 |     | ○ 1. 2. 4.         |     |
| 19 | 4.  | 1. ○ 2. ○ 1.       |     |
| 20 |     | 4. 2. ○ 1. 1.      |     |
| 21 | 4.  | 1. ○ 2. ○          |     |
| 22 | 4.  | ○ 1. 1. 2. 1.      |     |
| 24 | .4. | 3. 2. ○ 1.         |     |
| 25 | .4. | 3. 1. ○ 2.         | 10. |
| 27 |     | 2. 4. ○ 1. 1.      |     |
| 28 |     | 1. ○ 2. ○ 1. 4. 3. |     |
| 29 |     | ○ 1. 2. 2. 1. 4.   |     |

**Positiones Satellitum tempore eclipsium.**

|    |     |                  |     |
|----|-----|------------------|-----|
| 9  | .4. | 1. 2. ○          | 10. |
| 10 | .3. | 2. 4. 1. ○       |     |
| 16 |     | 1. 2. 1. ○       | 4.  |
| 17 |     | 1. 1. 1. ○       | 4.  |
| 23 | 4.  | 1. 1. 1. ○       | 10. |
| 26 |     | 1. 2. 1. ○ 1. 2. |     |
| 30 |     | 1. 2. ○ 1. 2.    | 4.  |

Phænomena & Observationes  
Solis

| Sol in parallelo                    |                                |
|-------------------------------------|--------------------------------|
| 1 ζ Serpentis                       | culm. 5h 16'                   |
| in media distantia a terra          |                                |
| 3 ε Ophiuci                         | culm. 3h 26'                   |
| 5 α Antio. & β Erid.                | culm. 6h 6'                    |
| 7 δ Orionis                         | culm. 16h 27'                  |
| 9 γ Aquarii                         | culm. 8h 17'                   |
| 12 ε Hydrae                         | culm. 20h 0'                   |
| 14 Ρigel & β Librae                 | culm. 15h 42'                  |
| & 1h 45'                            |                                |
| 17 ζ Erid. & ε Orion.               | culm. 13h 31'                  |
| & 16h 3'                            |                                |
| 18 α Virginis, ζ Ophinci, & ε Erid. | culm. 1h 38', 2h 50' & 13h 45' |
| 20 δ Eridani                        | culm. 13h 48'                  |
| 22 γ Ceti                           | culm. 11h 5'                   |
| 23 in signo Scorpii                 | 1h 16'                         |
| 26 ε Ceti                           | culm. 12h 21'                  |
| 28 α Capri                          | culm. 5h 55'                   |
| 30 γ Librae & γ Erid.               | culm. 1h 12'                   |
| & 13h 25'                           |                                |

Phænomena & Observationes  
Lunæ

| Luna                            |                     |
|---------------------------------|---------------------|
| 2 ad γ & τ Sagitt.              | 4h 30' & 10h 12'    |
| ad Saturni                      | 19h 12'             |
| 3 Primus Quadrans               | 1h 21'              |
| Perigea ad σ Sagittarii & Jovis | 22h & 23h           |
| 7 ad h & φ Aquarii              | 9h 26', &<br>14h 6' |
| 9 ad Martis & ε Piscium         | 4h &<br>19h 8'      |
| 10 Plenilunium                  | oh 5'               |
| ad τ Piscium                    | 12h 18'             |
| 13 ad χ Tauri                   | 17h 54'             |
| 15 ad informem Aurigae          | 9h 15'              |
| 17 Ultimus Quadrans             | 21h 1'              |
| Apogea ad x Geminor.            | 11h 45'             |
| 18 ad γ Cancri                  | 16h 45'             |
| 20 ad α Leonis                  | 13h 26'             |
| 22 ad τ Leonis                  | 7h 12'              |
| 25 Novilunium                   | 13h 50'             |
| 27 ad τ & α Scorp.              | 12h 6', & 23h 18'   |
| 30 Perigea ad σ Sagittarii      | 6h 0'               |

## Planetae in parallelis fixarum

|   |
|---|
| Saturnus β Corvi, γ Leonis,<br>α Corvi  |
| Jupiter β Corvi, σ Sagittarii,<br>γ Hydræ, δ Scorpii  |
| Mars 1 δ Orionis & δ Ceti, tum<br>prope ζ, γ & α Aquarii, &<br>γ Antinoi  |
| Venus 1 α Capri, 4 δ Canis, 10<br>54 Eridani, 15 ε & β Ceti,<br>β Scorpii, 19 α Leporis, 23<br>Sirii, 26 γ Canis, 28 γ Erid.,<br>31 α Capri |
| Mercur. 1 γ Canis & γ Ophiuci<br>& β Capri, 4 Sirii, 7 γ Ca-<br>pri, β Canis & α Leporis,<br>13 γ Scorpii, 23 Sirii                         |

Phænomena & Observationes  
Planetarum

|                                       |
|---------------------------------------|
| 1 Oppositio Martis                    |
| 4 Venus ad Mercur. diff. lat. 3.0 26' |
| 6 Mercurius in elongat. maxima        |
| 21 Conjunctione Solis & Veneris       |
| 27 Conjunctione Solis & Mercurii      |

| Dies<br>mensis | Dis-<br>tans<br>subtrahenda | Aequatio<br>subtrahenda<br>a tempore<br>vero<br>ut babeatur<br>medium | Diffe-<br>rentia | Longitudo<br>Solis | Ascensio recta<br>Solis | Declinatio<br>Solis<br>Australis |
|----------------|-----------------------------|---|------------------|--------------------|-------------------------|----------------------------------|
|                | M. S.                       | S.  | S.               | G. M. S.           | G. M. S.                | G. M. S.                         |
| 1 Mer.         | 10. 21, 2                   | 18, 8   | 6.               | 8. 8. 15           | 187. 28. 21             | 3. 13. 55                        |
| 2 Jov.         | 10. 40, 0                   | 18, 5   | 6.               | 9. 7. 23           | 188. 22. 47             | 3. 37. 14                        |
| 3 Ven.         | 10. 58, 5                   | 18, 1   | 6.               | 10. 6. 32          | 189. 17. 17             | 4. 0. 31                         |
| 4 Sat.         | 11. 16, 6                   | 17, 8   | 6.               | 11. 5. 43          | 190. 11. 51             | 4. 23. 45                        |
| 5 Dom          | 11. 34, 4                   | 17, 5   | 6.               | 12. 4. 55          | 191. 6. 30              | 4. 46. 55                        |
| 6 Lun.         | 11. 51, 9                   | 17, 1   | 6.               | 13. 4. 9           | 192. 1. 15              | 5. 10. 1                         |
| 7 Mar.         | 12. 9, 0                    | 16, 7   | 6.               | 14. 3. 26          | 192. 56. 6              | 5. 33. 4                         |
| 8 Mer.         | 12. 25, 7                   | 16, 3   | 6.               | 15. 2. 44          | 193. 51. 7              | 5. 56. 3                         |
| 9 Jov.         | 12. 42, 0                   | 15, 9   | 6.               | 16. 2. 4           | 194. 46. 6              | 6. 18. 57                        |
| 10 Ven.        | 12. 57, 9                   | 15, 4   | 6.               | 17. 1. 27          | 195. 41. 16             | 6. 41. 46                        |
| 11 Sat.        | 13. 13, 3                   | 14, 9   | 6.               | 18. 0. 51          | 196. 36. 34             | 7. 4. 29                         |
| 12 Dom         | 13. 28, 2                   | 14, 4   | 6.               | 19. 0. 18          | 197. 31. 59             | 7. 27. 3                         |
| 13 Lun.        | 13. 42, 6                   | 13, 8   | 6.               | 19. 59. 47         | 198. 27. 32             | 7. 49. 39                        |
| 14 Mar.        | 13. 56, 4                   | 13, 2   | 6.               | 20. 59. 17         | 199. 23. 13             | 8. 12. 4                         |
| 15 Mer.        | 14. 9, 6                    | 12, 6   | 6.               | 21. 58. 52         | 200. 19. 2              | 8. 34. 23                        |
| 16 Jov.        | 14. 22, 2                   | 12, 0   | 6.               | 22. 58. 29         | 201. 15. 0              | 8. 56. 35                        |
| 17 Ven.        | 14. 34, 2                   | 11, 4   | 6.               | 24. 58. 7          | 202. 11. 7              | 9. 18. 40                        |
| 18 Sat.        | 14. 45, 6                   | 10, 7   | 6.               | 23. 57. 49         | 203. 7. 24              | 9. 40. 57                        |
| 19 Dom         | 14. 56, 3                   | 10, 0   | 6.               | 25. 57. 32         | 204. 3. 51              | 10. 2. 35                        |
| 20 Lun.        | 15. 6, 3                    | 9, 4  | 6.               | 26. 57. 18         | 205. 0. 27              | 10. 24. 4                        |
| 21 Mar.        | 15. 15, 7                   | 8, 8  | 6.               | 27. 57. 6          | 205. 57. 13             | 10. 45. 34                       |
| 22 Mer.        | 15. 24, 5                   | 8, 1  | 6.               | 28. 56. 56         | 206. 54. 9              | 11. 6. 54                        |
| 23 Jov.        | 15. 32, 6                   | 7, 5  | 6.               | 29. 56. 48         | 207. 51. 15             | 11. 28. 4                        |
| 24 Ven.        | 15. 40, 1                   | 6, 8  | 7.               | 0. 56. 42          | 208. 48. 32             | 11. 49. 4                        |
| 25 Sat.        | 15. 46, 9                   | 6, 0  | 7.               | 1. 56. 38          | 209. 46. 0              | 12. 9. 53                        |
| 26 Dom         | 15. 52, 9                   | 5, 2  | 7.               | 2. 56. 37          | 210. 43. 58             | 12. 30. 31                       |
| 27 Lun.        | 15. 58, 1                   | 4, 5  | 7.               | 3. 56. 36          | 211. 41. 27             | 12. 50. 57                       |
| 28 Mar.        | 16. 2, 6                    | 3, 8  | 7.               | 4. 56. 38          | 212. 39. 27             | 12. 32. 11                       |
| 29 Mer.        | 16. 6, 4                    | 3, 1  | 7.               | 5. 56. 41          | 213. 37. 38             | 13. 31. 12                       |
| 30 Jov.        | 16. 9, 5                    | 2, 4  | 7.               | 6. 56. 47          | 214. 36. 1              | 13. 51. 0                        |
| 31 Ven.        | 16. 11, 9                   | 1, 4  | 7.               | 7. 56. 52          | 215. 34. 35             | 14. 10. 35                       |

| Dier<br>Dier<br>sebdonade<br>meritis | Distantia<br>sectionis Y<br>a Sole | Diffe-<br>rentia | Ini-<br>tium<br>Crepus-<br>culi | Ortus<br>Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepus-<br>culi | Hora<br>Itatica<br>Meridi- |
|--------------------------------------|------------------------------------|------------------|---------------------------------|--------------------------|---------------------------------|--------------------------|----------------------------|
|                                      | H. M. S.                           | M. S.            | H. M.                           | H. M.                    | H. M.                           | H. M.                    | H. M.                      |
| 1 Mer.                               | II. 30. 6,6                        | 3. 37, 7         | 4. 31                           | 6. 11                    | 5. 49                           | 7. 29                    | 17. 40                     |
| 2 Jov.                               | II. 26. 28,9                       | 3. 38, 0         | 4. 33                           | 6. 13                    | 5. 47                           | 7. 27                    | 17. 42                     |
| 3 Ven.                               | II. 22. 50,9                       | 3. 38, 3         | 4. 35                           | 6. 15                    | 5. 46                           | 7. 25                    | 17. 44                     |
| 4 Sat.                               | II. 19. 12,6                       | 3. 38, 6         | 4. 36                           | 6. 16                    | 5. 44                           | 7. 24                    | 17. 46                     |
| 5 Dom.                               | II. 15. 34,0                       | 3. 39, 0         | 4. 38                           | 6. 17                    | 5. 43                           | 7. 22                    | 17. 47                     |
| 6 Lun.                               | II. 11. 55,0                       | 3. 39, 4         | 4. 39                           | 6. 18                    | 5. 43                           | 7. 21                    | 17. 48                     |
| 7 Mar.                               | II. 8. 15,6                        | 3. 39, 8         | 4. 41                           | 6. 20                    | 5. 40                           | 7. 19                    | 17. 50                     |
| 8 Mer.                               | II. 4. 35,8                        | 3. 40, 2         | 4. 42                           | 6. 22                    | 5. 39                           | 7. 18                    | 17. 51                     |
| 9 Jov.                               | II. 0. 55,6                        | 3. 40, 7         | 4. 44                           | 6. 23                    | 5. 37                           | 7. 16                    | 17. 53                     |
| 10 Ven.                              | II. 57. 14,9                       | 3. 41, 2         | 4. 45                           | 6. 24                    | 5. 36                           | 7. 15                    | 17. 54                     |
| 11 Sat.                              | IO. 53. 33,7                       | 3. 41, 7         | 4. 46                           | 6. 25                    | 5. 35                           | 7. 14                    | 17. 55                     |
| 12 Dom.                              | IO. 49. 52,0                       | 3. 42, 2         | 4. 48                           | 6. 27                    | 5. 33                           | 7. 12                    | 17. 57                     |
| 13 Lun.                              | IO. 46. 9,8                        | 3. 42, 7         | 4. 49                           | 6. 28                    | 5. 32                           | 7. 11                    | 17. 58                     |
| 14 Mar.                              | IO. 42. 27,1                       | 3. 43, 3         | 4. 50                           | 6. 30                    | 5. 30                           | 7. 10                    | 18. 0                      |
| 15 Mer.                              | IO. 38. 43,8                       | 3. 43, 9         | 4. 51                           | 6. 31                    | 5. 29                           | 7. 9                     | 18. 1                      |
| 16 Jov.                              | IO. 34. 59,9                       | 3. 44, 5         | 4. 53                           | 6. 32                    | 5. 28                           | 7. 7                     | 18. 2                      |
| 17 Ven.                              | IO. 31. 15,4                       | 3. 45, 1         | 4. 54                           | 6. 33                    | 5. 26                           | 7. 6                     | 18. 4                      |
| 18 Sat.                              | IO. 27. 30,8                       | 3. 45, 7         | 4. 56                           | 6. 36                    | 5. 24                           | 7. 4                     | 18. 6                      |
| 19 Dom.                              | IO. 23. 44,6                       | 3. 46, 4         | 4. 57                           | 6. 38                    | 5. 22                           | 7. 3                     | 18. 8                      |
| 20 Lun.                              | IO. 19. 58 2                       | 3. 47, 1         | 4. 59                           | 6. 40                    | 5. 20                           | 7. 1                     | 18. 10                     |
| 21 Mar.                              | IO. 16. 11,1                       | 5. 1             | 6. 42                           | 5. 18                    | 6. 59                           | 18. 12                   |                            |
| 22 Mer.                              | IO. 13. 23,4                       | 5. 2             | 6. 43                           | 5. 17                    | 6. 58                           | 18. 13                   |                            |
| 23 Jov.                              | IO. 8. 35,0                        | 5. 4             | 6. 45                           | 5. 15                    | 6. 56                           | 18. 15                   |                            |
| 24 Ven.                              | IO. 4. 45,9                        | 5. 5             | 6. 47                           | 5. 13                    | 6. 55                           | 18. 17                   |                            |
| 25 Sat.                              | IO. 0. 56,1                        | 5. 7             | 6. 48                           | 5. 12                    | 6. 53                           | 18. 18                   |                            |
| 26 Dom.                              | 9. 57. 5,5                         | 5. 8             | 6. 49                           | 5. 11                    | 6. 52                           | 18. 19                   |                            |
| 27 Lun.                              | 9. 53. 14,2                        | 5. 9             | 6. 51                           | 5. 9                     | 6. 51                           | 18. 21                   |                            |
| 28 Mar.                              | 9. 49. 22,2                        | 5. 10            | 6. 52                           | 5. 8                     | 6. 50                           | 18. 22                   |                            |
| 29 Mer.                              | 9. 45. 29,5                        | 5. 12            | 6. 54                           | 5. 6                     | 6. 48                           | 18. 24                   |                            |
| 30 Jov.                              | 9. 41. 36,0                        | 5. 13            | 6. 56                           | 5. 4                     | 6. 47                           | 18. 26                   |                            |
| 31 Ven.                              | 9. 37. 41,7                        | 5. 15            | 6. 57                           | 5. 3                     | 6. 45                           | 18. 27                   |                            |
|                                      | 5. 55, 8                           |                  |                                 |                          |                                 |                          |                            |

| Dies<br>mensis<br>hebdomade | Longitudo<br>Lunæ<br>Meridie |     |     | Latitudo<br>Lunæ<br>Meridie |    |     | Dia-<br>meter<br>bori-<br>zon-<br>ta-<br>lis | Paral-<br>laxis<br>bori-<br>zon-<br>ta-<br>lis | Declina-<br>tio Lunæ | Transi-<br>tus Lunæ<br>per Me-<br>ridianum |         |
|-----------------------------|------------------------------|-----|-----|-----------------------------|----|-----|--|--|----------------------|--|---------|
|                             | S.                           | G.  | M.  | S.                          | G. | M.  | S.   | M.   | S.                   | G.   | M.      |
| 1 Mer.                      | 8.                           | 11. | 5.  | 56                          | 5. | 12. | 26 A   | 32.  | 12                   | 58.  | 58      |
| 2 Jov.                      | 8.                           | 25. | 14. | 4                           | 5. | 12. | 56   | 32.  | 19                   | 59.  | 10 28.  |
| 3 Ven.                      | 9.                           | 9.  | 25. | 9                           | 4. | 54. | 29   | 32.  | 22                   | 59.  | 16 28.  |
| 4 Sat.                      | 9.                           | 23. | 36. | 58                          | 4. | 18. | 3  | 32.  | 23                   | 59.  | 18 25.  |
| 5 Dom                       | 10.                          | 7.  | 47. | 22                          | 3. | 25. | 57   | 32.  | 21                   | 59.  | 15 21.  |
| 6 Lun.                      | 10.                          | 21. | 54. | 15                          | 2. | 21. | 33   | 32.  | 16                   | 59.  | 5 16.   |
| 7 Mar.                      | 11.                          | 5.  | 55. | 26                          | 1. | 9.  | 7  | 32.  | 8                    | 58.  | 50 10.  |
| 8 Mer.                      | 11.                          | 19. | 48. | 19                          | 0. | 6.  | 39 B   | 31.  | 57                   | 58.  | 29 3.   |
| 9 Jov.                      | 0.                           | 3.  | 30. | 35                          | 1. | 20. | 55   | 31.  | 41                   | 58.  | 0 2.    |
| 10 Ven.                     | 0.                           | 16. | 59. | 43                          | 2. | 29. | 22   | 31.  | 23                   | 57.  | 27 8.   |
| 11 Sat.                     | 1.                           | 0.  | 13. | 53                          | 3. | 28. | 22   | 31.  | 2                    | 56.  | 49 14.  |
| 12 Dom                      | 1.                           | 13. | 11. | 28                          | 4. | 15. | 13   | 30.  | 42                   | 56.  | 12 19.  |
| 13 Lun.                     | 1.                           | 25. | 52. | 25                          | 4. | 48. | 20   | 30.  | 22                   | 55.  | 36 23.  |
| 14 Mar.                     | 2.                           | 8.  | 17. | 29                          | 5. | 7.  | I  | 30.  | 3                    | 55.  | 4 26.   |
| 15 Mer.                     | 2.                           | 20. | 28. | 39                          | 5. | 11. | 22   | 29.  | 50                   | 54.  | 39 28.  |
| 16 Jov.                     | 3.                           | 2.  | 29. | 0                           | 5. | 1.  | 56   | 29.  | 41                   | 54.  | 22 28.  |
| 17 Ven.                     | 3.                           | 14. | 22. | 24                          | 4. | 39. | 32   | 29.  | 38                   | 54.  | 15 27.  |
| 18 Sat.                     | 3.                           | 26. | 13. | 30                          | 4. | 5.  | 19   | 29.  | 40                   | 54.  | 18 24.  |
| 19 Dom                      | 4.                           | 8.  | 7.  | 15                          | 3. | 20. | 22   | 29.  | 47                   | 54.  | 32 21.  |
| 20 Lun.                     | 4.                           | 20. | 8.  | 46                          | 2. | 26. | 12   | 29.  | 59                   | 54.  | 55 17.  |
| 21 Mar.                     | 5.                           | 2.  | 22. | 50                          | 1. | 24. | 32.  | 30.  | 17                   | 55.  | 28 11.  |
| 22 Mer.                     | 5.                           | 14. | 53. | 45                          | 0. | 17. | 31   | 30.  | 39                   | 56.  | 7 6.    |
| 23 Jov.                     | 5.                           | 27. | 44. | 54                          | 0. | 52. | 0 A  | 31.  | 2                    | 56.  | 50. 6   |
| 24 Ven.                     | 6.                           | 10. | 58. | 22                          | 2. | 0.  | 34   | 31.  | 27                   | 57.  | 35 6.   |
| 25 Sat.                     | 6.                           | 24. | 34. | 0                           | 3. | 4.  | 8  | 31.  | 50                   | 58.  | 17. 12. |
| 26 Dom                      | 7.                           | 8.  | 29. | 59                          | 3. | 58. | 15   | 32.  | 9                    | 58.  | 52 18.  |
| 27 Lun.                     | 7.                           | 22. | 42. | 23                          | 4. | 38. | 45   | 32.  | 24                   | 59.  | 20 22.  |
| 28 Mar.                     | 8.                           | 7.  | 5.  | 44                          | 5. | 2.  | 14   | 32.  | 33                   | 59.  | 36 26.  |
| 22 Mer.                     | 8.                           | 21. | 33. | 41                          | 5. | 6.  | 40   | 32.  | 37                   | 59.  | 43 28.  |
| 30 Jov.                     | 9.                           | 6.  | 0.  | 51                          | 4. | 51. | 34   | 32.  | 35                   | 59.  | 39 28.  |
| 31 Ven.                     | 9.                           | 20. | 22. | 5                           | 4. | 18. | 11   | 32.  | 29                   | 59.  | 28 26.  |
|                             |                              |     |     |                             |    |     |  |  |                      |  | 10. 10. |

| Dier<br>d'elbdomende<br>meyr. | Longitudo<br>Luna media<br>nocte |     |     |    | Latitudo<br>Luna media<br>nocte |     |    |    | Dia-<br>meter<br>horiz.<br>Luna<br>med.<br>noct. | Paral-<br>laxis<br>boriz.<br>Luna<br>med.<br>noct. | Ortus<br>Luna | Occasus<br>Luna |         |
|-------------------------------|----------------------------------|-----|-----|----|---------------------------------|-----|----|----|--|--|---------------|-----------------|---------|
|                               | S.                               | G.  | M.  | S. | G.                              | M.  | S. | M. |  |  |               |                 |         |
| 1 Mer.                        | 8.                               | 18. | 9.  | 30 | 5.                              | 15. | ?  | A  | 32.  | 16   | 59.           | 4               | 0. 12 V |
| 2 Jov.                        | 9.                               | 2.  | 19. | 23 | 5.                              | 6.  | 7  |    | 32.  | 21   | 59.           | 14              | 1. 22   |
| 3 Ven.                        | 9.                               | 16. | 31. | 6  | 4                               | 38. | 26 |    | 32.  | 23   | 59.           | 18              | 2. 21   |
| 4 Sat.                        | 10.                              | 0.  | 42. | 28 | 3.                              | 53. | 48 |    | 32.  | 22   | 59.           | 17              | 3. 7    |
| 5 Dom.                        | 10.                              | 14. | 51. | 22 | 2.                              | 55. | 3  |    | 32.  | 19   | 59.           | 11              | 3. 40   |
| 6 Lun.                        | 10.                              | 28. | 55. | 43 | 1.                              | 46. | 1  |    | 32.  | 13   | 58.           | 57              | 4. 7    |
| 7 Mar.                        | 11.                              | 12. | 53. | 4  | 0.                              | 31. | 25 |    | 32.  | 5  | 58.           | 40              | 4. 29   |
| 8 Mer.                        | 11.                              | 26. | 40. | 56 | 0.                              | 44. | 17 | B  | 31.  | 49   | 58.           | 15              | 4. 50   |
| 9 Jov.                        | 0.                               | 10. | 16. | 53 | 1.                              | 56. | 9  |    | 31.  | 32   | 57.           | 44              | 5. 8    |
| 10 Ven.                       | 0.                               | 23. | 38. | 50 | 3.                              | 0.  | 17 |    | 31.  | 13   | 57.           | 8               | 5. 26   |
| 11 Sat.                       | 1.                               | 6.  | 44. | 45 | 3.                              | 53. | 27 |    | 30.  | 52   | 56.           | 30              | 5. 47   |
| 12 Uom.                       | 1.                               | 19. | 33. | 58 | 4.                              | 33. | 34 |    | 30.  | 32   | 55.           | 53              | 6. 11   |
| 13 Lun.                       | 2.                               | 2.  | 6.  | 50 | 4.                              | 59. | 31 |    | 30.  | 12   | 55.           | 19              | 6. 39   |
| 14 Mar.                       | 2.                               | 14. | 24. | 38 | 5.                              | 10. | 57 |    | 29.  | 56   | 54.           | 50              | 7. 15   |
| 15 Mer.                       | 2.                               | 26. | 29. | 57 | 5.                              | 8.  | 20 |    | 29.  | 45   | 54.           | 29              | 8. 1    |
| 16 Jov.                       | 3.                               | 8.  | 26. | 18 | 4.                              | 52. | 17 |    | 29.  | 39   | 54.           | 17              | 8. 56   |
| 17 Ven.                       | 3.                               | 20. | 17. | 57 | 4.                              | 23. | 50 |    | 29.  | 38   | 54.           | 15              | 9. 59   |
| 18 Sat.                       | 4.                               | 2.  | 9.  | 43 | 3.                              | 44. | 6  |    | 29.  | 43   | 54.           | 23              | 11. 3   |
| 19 Dom.                       | 4.                               | 14. | 6.  | 44 | 2.                              | 54. | 21 |    | 29.  | 52   | 54.           | 42              | *. *    |
| 20 Lun.                       | 4.                               | 26. | 13. | 57 | 1.                              | 56. | 13 |    | 30.  | 8  | 55.           | 11              | 0. 11 M |
| 21 Mar.                       | 5.                               | 8.  | 35. | 57 | 0.                              | 51. | 34 |    | 30.  | 28   | 55.           | 47              | 1. 19   |
| 22 Mer.                       | 5.                               | 21. | 16. | 34 | 0.                              | 17. | 7  | A  | 30.  | 50   | 56.           | 28              | 2. 28   |
| 23 Jov.                       | 6.                               | 4.  | 18. | 48 | 1.                              | 26. | 57 |    | 31.  | 15   | 57.           | 19              | 3. 39   |
| 24 Ven.                       | 6.                               | 17. | 43. | 27 | 2.                              | 33. | 16 |    | 31.  | 39   | 57.           | 56              | 4. 51   |
| 25 Sat.                       | 7.                               | 1.  | 29. | 38 | 3.                              | 32. | 40 |    | 32.  | 0  | 58.           | 36              | 6. 4    |
| 26 Dom.                       | 7.                               | 15. | 34. | 23 | 4.                              | 20. | 30 |    | 32.  | 17   | 59.           | 7               | 7. 21   |
| 27 Lun.                       | 7.                               | 29. | 53. | 9  | 4.                              | 52. | 50 |    | 32.  | 29   | 59.           | 29              | 8. 41   |
| 28 Mar.                       | 8.                               | 14. | 19. | 30 | 5.                              | 6.  | 58 |    | 32.  | 36   | 59.           | 41              | 10. 2   |
| 29 Mer.                       | 8.                               | 28. | 47. | 47 | 5.                              | 1.  | 34 |    | 32.  | 36   | 59.           | 42              | 11. 16  |
| 30 Jov.                       | 9.                               | 13. | 11. | 28 | 4.                              | 37. | 2  |    | 32.  | 32   | 59.           | 34              | 0. 20 V |
| Ven.                          | 9.                               | 27. | 29. | 30 | 3.                              | 55. | 30 |    | 32.  | 27   | 59.           | 21              | 1. 9    |
|                               |                                  |     |     |    |                                 |     |    |    |  |  |               |                 | 9. 28   |

| <i>Die mense</i> | <i>Longitudo<br/>Planetarum</i> | <i>Latitudo<br/>Planeta-<br/>rum</i> | <i>Declina-<br/>tio Pla-<br/>netarum</i> | <i>Ortus<br/>Plane-<br/>tarum</i> | <i>Transi-<br/>tus Pla-<br/>netarum<br/>per Me-<br/>ridianum</i> | <i>Occasus<br/>Plane-<br/>tarum</i> |
|------------------|---------------------------------|--------------------------------------|--|-----------------------------------|--|-------------------------------------|
|                  | <i>S. G. M.</i>                 | <i>G. M.</i>                         | <i>G. M.</i>                             | <i>H. M.</i>                      | <i>H. M.</i>   | <i>H. M.</i>                        |

## S A T U R N U S .

|    |             |            |          |         |         |          |
|----|-------------|------------|----------|---------|---------|----------|
| 1  | 9. 6. 22, 8 | 0. 26, 6 B | 22. 52 A | 1. 37 V | 5. 58 V | 10. 19 V |
| 7  | 9. 6. 37, 0 | 0. 25, 9   | 22. 53   | 1. 16   | 5. 37   | 9. 58    |
| 13 | 9. 6. 50, 1 | 0. 25, 2   | 22. 52   | 0. 55   | 5. 16   | 9. 37    |
| 19 | 9. 7. 5. 9  | 0. 24, 4   | 22. 52   | 0. 34   | 4. 55   | 9. 16    |
| 25 | 9. 7. 35, 7 | 0. 23, 6   | 22. 51   | 0. 13   | 4. 34   | 8. 55    |

## J U P I T E R .

|    |              |            |         |         |        |          |
|----|--------------|------------|---------|---------|--------|----------|
| 1  | 9. 22. 48, 0 | 0. 36, 5 A | 22. 8 A | 2. 42 V | 7. 8 V | 11. 34 V |
| 7  | 9. 23. 5, 2  | 0. 36, 7   | 22. 5   | 2. 22   | 6. 48  | 11. 14   |
| 13 | 9. 23. 36, 1 | 0. 37, 0   | 22. 1   | 2. 2    | 6. 28  | 10. 54   |
| 19 | 9. 24. 6, 0  | 0. 37, 3   | 21. 56  | 1. 42   | 6. 8   | 10. 34   |
| 25 | 9. 24. 41, 0 | 0. 37, 6   | 21. 50  | 1. 23   | 5. 47  | 10. 14   |

## M A R S .

|    |             |           |         |        |          |        |
|----|-------------|-----------|---------|--------|----------|--------|
| 1  | 0. 8. 10, 6 | 4. 9, 1 A | 0. 36 A | 6. 8 M | 0. 4 M   | 6. 4 V |
| 7  | 0. 6. 23, 1 | 3. 45, 6  | 0. 56   | 5. 41  | 11. 37 V | 5. 33  |
| 13 | 0. 4. 49, 5 | 3. 16, 9  | 1. 5    | 5. 13  | 11. 9    | 5. 5   |
| 19 | 0. 3. 40, 0 | 2. 50, 1  | 1. 9    | 4. 47  | 10. 42   | 4. 37  |
| 25 | 0. 2. 48, 1 | 2. 24. 4  | 1. 6    | 4. 19  | 10. 15   | 4. 11  |

## V E N U S .

|    |              |            |          |        |          |         |
|----|--------------|------------|----------|--------|----------|---------|
| 1  | 7. 6. 35, 8  | 7. 13, 1 A | 20. 31 A | 9. 3 M | 1. 37 V  | 6. 11 V |
| 7  | 7. 5. 52, 6  | 7. 31, 5   | 20. 53   | 8. 38  | 1. 12    | 5. 46   |
| 13 | 7. 3. 40, 1  | 7. 26, 1   | 19. 43   | 8. 5   | 0. 42    | 5. 19   |
| 19 | 7. 0. 30, 0  | 6. 51, 4   | 18. 3    | 7. 23  | 0. 8     | 4. 53   |
| 25 | 6. 26. 50, 5 | 5. 49, 6   | 15. 45   | 6. 36  | 11. 31 M | 4. 26   |

## M E R C U R I U S .

|    |              |            |         |         |         |         |
|----|--------------|------------|---------|---------|---------|---------|
| 1  | 7. 3. 26, 4  | 2. 34, 2 A | 15. 6 A | 8. 32 M | 1. 31 V | 6. 30 V |
| 7  | 7. 9. 55, 0  | 3. 11, 0   | 17. 49  | 8. 48   | 1. 34   | 6. 20   |
| 13 | 7. 12. 56, 8 | 3. 13, 5   | 18. 50  | 8. 43   | 1. 24   | 6. 5    |
| 19 | 7. 12. 41, 4 | 2. 55, 1   | 18. 28  | 8. 17   | 1. 0    | 5. 43   |
| 25 | 7. 7. 23, 6  | 1. 35, 4   | 15. 29  | 7. 22   | 0. 19   | 5. 16   |

## ECLIPSES SATELLITUM JOVIS.

| Dies<br>mensis | I. Satelles.    |     |    | II. Satelles. |                 |     | III. Satelles. |            |                        |   |
|----------------|-----------------|-----|----|---------------|-----------------|-----|----------------|------------|------------------------|---|
|                | Emerfiones      |     |    | Emerfiones    |                 |     | Imers. Emerf.  |            |                        |   |
|                | H.              | M.  | S. | H.            | M.              | S.  | H.             | M.         | S.                     |   |
| 1              | 13.             | 25. | 44 | 4             | 5.              | 38. | 25             | 7          | 14. 42. 48             | I |
| 3              | 8. <sup>*</sup> | 54. | 8  | 7             | 18.             | 57. | 25             | 7          | 18. 14. 44             | E |
| 5              | 3.              | 23. | 40 | 11            | 8. <sup>*</sup> | 15. | 51             | 14         | 18. 45. 51             | I |
| 6              | 21.             | 53. | 8  | 14            | 21.             | 34. | 23             | 14         | 21. 18. 3              | E |
| 8              | 16.             | 23. | 6  | 18            | 10.             | 52. | 44             | 21.        | 22. 48. 16             | I |
| 10             | 10.             | 52. | 3  | 22            | 0.              | 11. | 5              | 22         | 2. 30. 42              | E |
| 12             | 5.              | 21. | 27 | 20            | 13.             | 29. | 25             | 29         | 2. 50. 38              | I |
| 13             | 23.             | 50. | 47 | 29            | 2.              | 47. | 23             | 29         | 6. <sup>*</sup> 23. 14 | E |
| 15             | 18.             | 20. | 8  |               |                 |     |                |            |                        |   |
| 17             | 13.             | 49. | 28 |               |                 |     |                |            |                        |   |
| 19             | 7.              | 18. | 45 |               |                 |     |                |            |                        |   |
| 21             | 1.              | 47. | 59 |               |                 |     |                |            |                        |   |
| 22             | 20.             | 17. | 12 |               |                 |     |                |            |                        |   |
| 24             | 14.             | 46. | 23 |               |                 |     |                |            |                        |   |
| 26             | 9. <sup>*</sup> | 15. | 30 |               |                 |     |                |            |                        |   |
| 28             | 3.              | 44. | 39 |               |                 |     | 6              | 9.. 13. 51 | I                      |   |
| 29             | 22.             | 13. | 43 |               |                 |     | 6              | 13. 47. 23 | E                      |   |
| 31             | 16.             | 42. | 45 |               |                 |     | 23             | 3. 24. 42  | I                      |   |
|                |                 |     |    |               |                 |     | 23             | 8. 0. 32   | E                      |   |

| Dies | Diameter<br>Solis |       | Mora<br>transitus<br>Solis per<br>Meridian. |       | Motus<br>borarius<br>Solis |       | Logaritmus<br>distantiae<br>Solis a terra<br>posita media<br>100000 |            | Longitudo<br>Nodi Luna |  |
|------|-------------------|-------|---|-------|----------------------------|-------|---|------------|------------------------|--|
|      | M. S.             |       | M. S.                                       |       | M. S.                      |       |   |            | S. G. M.               |  |
|      |                   |       |   |       |                            |       |   |            |                        |  |
| 1    | 32.               | 2. 8  | 2.  | 8. 4  | 2.                         | 27. 8 | 4. 999954   | II. 17. 33 |                        |  |
| 4    | 32.               | 4. 5  | 2.  | 8. 7  | 2.                         | 28. 1 | 4. 999578   | II. 17. 23 |                        |  |
| 7    | 32.               | 6. 2  | 2.  | 9. 0  | 2.                         | 28. 4 | 4. 999202   | II. 17. 14 |                        |  |
| 10   | 32.               | 8. 0  | 2.  | 9. 4  | 2.                         | 28. 6 | 4. 998827   | II. 17. 4  |                        |  |
| 13   | 32.               | 9. 7  | 2.  | 9. 8  | 2.                         | 28. 9 | 4. 998454   | II. 16. 54 |                        |  |
| 16   | 32.               | 11. 3 | 2.  | 10. 3 | 2.                         | 29. 1 | 4. 998083   | II. 16. 45 |                        |  |
| 19   | 32.               | 12. 9 | 2.  | 10. 8 | 2.                         | 29. 3 | 4. 997721   | II. 16. 35 |                        |  |
| 22   | 32.               | 14. 5 | 2.  | 11. 4 | 2.                         | 29. 5 | 4. 997363   | II. 16. 26 |                        |  |
| 25   | 32.               | 16. 2 | 2.  | 12. 0 | 2.                         | 29. 8 | 4. 997011   | II. 16. 16 |                        |  |
| 28   | 32.               | 17. 7 | 2.  | 12. 6 | 2.                         | 30. 0 | 4. 996663   | II. 16. 7  |                        |  |

POSITIONES SATELLITUM JOVIS

|               |                              |                 |
|---------------|------------------------------|-----------------|
| <i>Oriens</i> | <i>7<sup>h</sup> Vespere</i> | <i>Occidens</i> |
|---------------|------------------------------|-----------------|

| I  | 3. . . 2  | ○ | 2.                                       | 4.      |
|----|-----------|---|--|---------|
| 2  | . 3       | ○ |  | 4.      |
| 4  | 2.        | ○ | . 1 . 3                                  | 4.      |
| 5  | . 2 . 1 . | ○ | 4.                                       | . 3     |
| 6  | 4.        | ○ | . 1 σ 2                                  | 3.      |
| 7  | 4.        | ○ | 3. . 2.                                  |         |
| 8  | 6.        | ○ | 2.                                       |         |
| 9  | 4.        | ○ | . 1 . 2                                  |         |
| 10 | . 4       | ○ |  | 10.     |
| 12 | . 4       | ○ | . 3 . 2.                                 | . 3     |
| 13 | . 4       | ○ | . 1 σ 2                                  | 3.      |
| 14 | 2.        | ○ | 3. . 3.                                  |         |
| 15 | 3. . 2.   | ○ | 1. . 4.                                  |         |
| 16 | 3.        | ○ | . 1 . 2                                  | . 4     |
| 17 | . 3       | ○ | 1. . 3                                   | . 4     |
| 18 | 2. . 10   | ○ | . 3                                      | . 4     |
| 19 | . 3 . 2.  | ○ |  | 4.      |
| 20 |           | ○ | . 1 σ 2                                  | 3. . 4. |
| 21 | 2.        | ○ | 3. . 2. . 4.                             |         |
| 22 | 3.        | ○ | 4.                                       |         |
| 23 | 3.        | ○ | 4. . 2 σ 1                               |         |
| 24 | 4.        | ○ | 1. . 3                                   |         |
| 25 | 4.        | ○ | . 1 . 2.                                 | 10.     |
| 27 | . 4       | ○ | . 1 σ 2                                  | . 3     |
| 28 | . 4       | ○ | . 1                                      | . 3 σ 2 |
| 29 | . 4       | ○ | . 1 σ 2                                  | . 1     |
| 30 | . 1       | ○ | . 2 σ 4 σ 1                              |         |
| 31 | . 3       | ○ | . 1 . 4 . 2                              |         |
|    |           |   | Positiones Satellitum tempore eclipsium. |         |
| 3  |           | ○ | . 1 . 2 σ 2                              | . 4     |
| 11 | . 4       | ○ | . 1 . 1                                  |         |

| D <i>z:</i>                 | <i>Phænomena &amp; Observations<br/>Solis</i> |
|-----------------------------|---|
| 1                           | Sol in parallelo                              |
| 153° Eridani                | culm. 13h 57'                                 |
| 2 α Librae                  | culm. 0h 5'                                   |
| 3 γ Corvi & γ Canis         | culm. 21h 38' & 16h 15'                       |
| 4 Oph. & δ Capri            | culm. 2h 20' & 5h 30'                         |
| 6 γ Corvi & Sirius          | culm. 21h 12' & 15h 42'                       |
| 7 in nodo descend. Mercurii |   |
| 9 α Crat. & δ Aquar.        | culm. 19h 45' & 7h 41'                        |
| 11 γ Capri & β Canis        | culm. 6h 18' & 15h 2'                         |
| 12 α Leporis                | culm. 14h 8'                                  |
| 17 β Scorp. & δ Ceti        | culm. 0h 18' 5h 57', 9h 38'                   |
| 21 in signo Sagittarii      | 21h 26'                                       |
| 54° Eridani                 | culm. 12h 38'                                 |
| 25 β & δ Lep.               | culm. 13h 32' & 13h 9'                        |
| 27 α Corvi                  | culm. 19h 40'                                 |

| D <i>z:</i>             | <i>Phænomena &amp; Observations<br/>Lunæ</i> |
|-------------------------|--|
| 1                       | Luna   |
| Primus Quadrans         | 7h 53'                                       |
| ad 1. 2. 3 x Capri      | 9h 56', 10h 46' & 10h 51' cum occultatione   |
| 3 ad φ Aquarii          | 20h 10'                                      |
| 5 ad Martis             | 5h 40'                                       |
| 6 ad ε Piscium          | 3h 24'                                       |
| ad π Piscium            | 19h 54'                                      |
| 8 Pleniūnnum            | 14h 36'                                      |
| 9 ad α Tauri            | 10h 20'                                      |
| 10 ad χ Tauri           | 2h 0'  |
| 13 Apogea ad x Geminor. | 19h 40'                                      |
| Ultimus Quadrans        | 17h 24'                                      |
| ad α Leonis             | 21h 42'                                      |
| ad π Leonis             | 10h 20'                                      |
| ad τ Leonis             | 16h 15'                                      |
| ad ψ Virginis           | 13h 0'                                       |
| ad Veneris              | 6h 36'                                       |
| ad Mercurii             | 20h 10'                                      |
| Novilunium              | 1h 22'                                       |
| Perigea ad Saturni      | 15h 24'                                      |
| ad α Sagittarii         | 10h 40'                                      |
| ad γ Capri              | 6h 3' diff. lat. 19'                         |
| Primus Quadrans         | 17h 0'                                       |

| D <i>z:</i> | <i>Phænomena &amp; Observations<br/>Planetarum</i> |
|-------------|--|
| 13          | Mercurius ad x Virg. diff. lat. 33'                |
| 14          | Mercur. in elongatione maxima                      |
|             | Mercurius ad α Virg. diff. lat. 1.° 44'            |
| 16          | Saturnus ad 1. π Sagittarii d.l. 12'               |
| 18          | Saturnus ad 2. α Sagittarii d.l. 9'                |
| 19          | Venus in nodo                                      |
| 20          | Mercurius ad μ Librae d. l. 13'                    |
| 21          | Mercurius ad ε Librae diff. lat. 1.° 31'           |
| 23          | Mercur. ad 1. 2. π Librae diff. lat. 19' & 31'     |
| 27          | Saturnus ad 2. ξ Sagitt. diff. lat. 1.° 21'        |
|             | Mercur. ad η Librae d. l. 1.° 4'                   |
| 28          | Jupiter ad π Capri diff. lat. 1.° 6'               |

| <i>Planetæ in parallelis fixarum.</i> |  |
|---------------------------------------|--|
| Saturnus                              | α Corvi, γ Leporis, & δ Corvi  |
| Jupiter                               | 1 δ Scorpii, 13 ε Corvi & π Sagittarii, 22 μ Leporis   |
| Mars                                  | 2 δ Ceti, 4 δ Orionis, 7 γ Virginis, 13 π Antinoi, 14 ζ & π Virg., 23 ε Piscium, 26 γ Ceti, 28 δ Aquilæ & γ Ophiuci      |
| Venus                                 | 1 ε Ceti, 5 π Ceti, 9 δ Eridani, 10 ε Erid. & η Ophiuci, 11 π Orionis, 13 π Virginis, 14 ζ Eridani, 20 δ Eridani & Rigel |
| Mercurius                             | 1 δ & ε Eridani, 7 δ Librae & Rigel, 13 π Orionis, 19 π Ceti, 24 γ Canis, 26 Siphi, 28 δ Canis                           |

| Dies<br>mensis | Dies<br>propositi | Equatio<br>subtrahenda<br>a tempore<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitudo<br>Solis | Ascensio recta<br>Solis | Declinatio<br>Solis<br>Australis |
|----------------|-------------------|--|------------------|--------------------|-------------------------|----------------------------------|
|                |                   | M. S.  | S.               | S G. M. S.         | G. M. S.                | G. M. S.                         |
| 1              | Sat.              | 16. 13. 3  | 0. 7             | 7. 8. 57. 0        | 216. 33. 21             | 14. 29. 57                       |
| 2              | Dom.              | 16. 14. 0  | 0. 1             | 7. 9. 57. 9        | 217. 32. 18             | 14. 49. 5                        |
| 3              | Lun.              | 16. 13. 9  | 0. 9             | 7. 10. 57. 20      | 218. 31. 27             | 15. 7. 58                        |
| 4              | Mar.              | 16. 13. 0  | 1. 6             | 7. 11. 57. 32      | 219. 30. 48             | 15. 26. 36                       |
| 5              | Mer.              | 16. 11. 8  | 2. 5             | 7. 12. 57. 46      | 220. 30. 21             | 15. 44. 58                       |
| 6              | Jov.              | 16. 8. 9   | 3. 3             | 7. 13. 58. 2       | 221. 30. 6              | 15. 3. 4                         |
| 7              | Ven.              | 16. 5. 6   | 4. 2             | 7. 14. 58. 19      | 222. 30. 4              | 16. 20. 54                       |
| 8              | Sat.              | 16. 1. 4   | 5. 0             | 7. 15. 58. 38      | 223. 30. 15             | 16. 58. 28                       |
| 9              | Dom.              | 15. 56. 4  | 5. 8             | 7. 16. 58. 59      | 224. 30. 39             | 16. 55. 46                       |
| 10             | Lun.              | 15. 50. 6  | 6. 7             | 7. 17. 59. 31      | 225. 31. 15             | 17. 12. 46                       |
| 11             | Mar.              | 15. 43. 9  | 7. 6             | 7. 18. 59. 46      | 226. 33. 4              | 17. 29. 28                       |
| 12             | Mer.              | 15. 36. 3  | 8. 4             | 7. 20. 0. 12       | 227. 33. 6              | 17. 45. 52                       |
| 13             | Jov.              | 15. 27. 9  | 9. 3             | 7. 21. 0. 40       | 228. 34. 21             | 18. 1. 58                        |
| 14             | Ven.              | 15. 18. 6  | 10. 2            | 7. 22. 1. 10       | 229. 35. 49             | 18. 17. 45                       |
| 15             | Sat.              | 15. 8. 4   | 11. 1            | 7. 23. 1. 43       | 230. 37. 31             | 18. 33. 13                       |
| 16             | Dom.              | 14. 57. 4  | 11. 9            | 7. 24. 2. 17       | 231. 39. 26             | 18. 48. 21                       |
| 17             | Lun.              | 14. 45. 4  | 12. 7            | 7. 25. 2. 53       | 232. 41. 34             | 19. 3. 9                         |
| 18             | Mar.              | 14. 38. 7  | 13. 6            | 7. 26. 3. 31       | 233. 43. 54             | 19. 17. 37                       |
| 19             | Mer.              | 14. 19. 1  | 14. 4            | 7. 27. 4. 10       | 234. 46. 27             | 19. 31. 44                       |
| 20             | Jov.              | 14. 4. 7   | 15. 2            | 7. 28. 4. 52       | 235. 49. 13             | 19. 45. 29                       |
| 21             | Ven.              | 13. 49. 5  | 16. 0            | 7. 29. 5. 35       | 236. 53. 11             | 19. 58. 53                       |
| 22             | Sat.              | 13. 33. 5  | 16. 9            | 8. 0. 6. 19        | 237. 55. 21             | 20. 11. 55                       |
| 23             | Dom.              | 13. 26. 6  | 17. 7            | 8. 1. 7. 5         | 238. 58. 43             | 20. 24. 35                       |
| 24             | Lun.              | 12. 58. 9  | 18. 5            | 8. 2. 7. 52        | 240. 2. 17              | 20. 36. 52                       |
| 25             | Mar.              | 12. 40. 4  | 19. 2            | 8. 3. 8. 40        | 241. 6. 2               | 20. 48. 46                       |
| 26             | Mer.              | 12. 31. 2  | 19. 9            | 8. 4. 9. 30        | 242. 9. 58              | 21. 0. 17                        |
| 27             | Jov.              | 12. 1. 3   | 20. 5            | 8. 5. 10. 21       | 243. 14. 5              | 21. 11. 24                       |
| 28             | Ven.              | 11. 40. 8  | 21. 2            | 8. 6. 11. 12       | 244. 18. 22             | 21. 22. 7                        |
| 29             | Sat.              | 11. 19. 6  | 21. 8            | 8. 7. 12. 5        | 245. 22. 50             | 21. 32. 25                       |
| 30             | Dom.              | 10. 57. 8  | 22. 6            | 8. 8. 12. 58       | 246. 27. 28             | 21. 42. 18                       |

| Dies<br>meritis | Distantia<br>sectionis Y<br>a Sole | Diffe-<br>rentia | Ini-<br>tium<br>Crepus-<br>culi | Orta<br>Centri<br>Solis, | Oc-<br>cas-<br>sus<br>Centri<br>Solis | Finis<br>Crepus-<br>culi | Hora<br>Italica<br>Meri-<br>dies |
|-----------------|------------------------------------|------------------|---------------------------------|--------------------------|---------------------------------------|--------------------------|----------------------------------|
|                 | H. M. S.                           | M. S.            | H. M.                           | H. M.                    | H. M.                                 | H. M.                    | H. M.                            |
| 1 Sat.          | 9. 33. 46,6                        |                  | S. 16                           | 6. 98                    | S. 2                                  | 6. 44                    | 18. 28                           |
| 2 Dom.          | 9. 29. 50,8                        | 3. 55, 8         | S. 18                           | 7. 0                     | 5. 0                                  | 6. 42                    | 18. 30                           |
| 3 Lun.          | 9. 25. 54,2                        | 3. 56, 6         | S. 19                           | 7. 1                     | 4. 59                                 | 6. 41                    | 18. 31                           |
| 4 Mar.          | 9. 21. 56,8                        | 3. 57, 4         | S. 20                           | 7. 3                     | 4. 57                                 | 6. 40                    | 18. 33                           |
| 5 Mer.          | 9. 17. 58,6                        | 3. 58, 2         | S. 21                           | 7. 4                     | 4. 56                                 | 6. 39                    | 18. 34                           |
| 6 Jov.          | 9. 13. 59,6                        |                  | S. 22                           | 7. 5                     | 4. 55                                 | 6. 38                    | 18. 35                           |
| 7 Ven.          | 9. 9. 59,7                         | 3. 59, 9         | S. 24                           | 7. 6                     | 4. 54                                 | 6. 36                    | 18. 36                           |
| 8 Sat.          | 9. 5. 59,0                         | 4. 0,7           | S. 25                           | 7. 8                     | 4. 53                                 | 6. 35                    | 18. 38                           |
| 9 Dom.          | 9. 1. 57,4                         | 4. 1,6           | S. 26                           | 7. 9                     | 4. 51                                 | 6. 34                    | 18. 39                           |
| 10 Lun.         | 9. 57. 55,0                        | 4. 2,4           | S. 27                           | 7. 10                    | 4. 50                                 | 6. 33                    | 18. 40                           |
| 11 Mar.         | 8. 53. 51,7                        |                  | S. 28                           | 7. 12                    | 4. 48                                 | 6. 32                    | 18. 42                           |
| 12 Mer.         | 8. 49. 47,6                        | 4. 41, 1         | S. 29                           | 7. 13                    | 4. 47                                 | 6. 31                    | 18. 43                           |
| 13 Jov.         | 8. 45. 42,6                        | 4. 5,0           | S. 30                           | 7. 14                    | 4. 46                                 | 6. 30                    | 18. 44                           |
| 14 Ven.         | 8. 41. 36,7                        | 4. 5,9           | S. 31                           | 7. 15                    | 4. 45                                 | 6. 29                    | 18. 45                           |
| 15 Sat.         | 8. 37. 29,9                        | 4. 6,8           | S. 32                           | 7. 16                    | 4. 44                                 | 6. 28                    | 18. 46                           |
| 16 Dom.         | 8. 33. 22,2                        |                  | S. 33                           | 7. 17                    | 4. 43                                 | 6. 27                    | 18. 47                           |
| 17 Lun.         | 8. 29. 13,7                        | 4. 8,5           | S. 34                           | 7. 19                    | 4. 41                                 | 6. 26                    | 18. 49                           |
| 18 Mar.         | 8. 25. 4,4                         | 4. 9,3           | S. 35                           | 7. 20                    | 4. 40                                 | 6. 25                    | 18. 50                           |
| 19 Mer.         | 8. 20. 54,2                        | 4. 10,2          | S. 36                           | 7. 21                    | 4. 39                                 | 6. 24                    | 18. 51                           |
| 20 Jov.         | 8. 16. 43,0                        | 4. 11,0          | S. 37                           | 7. 22                    | 4. 38                                 | 6. 23                    | 18. 52                           |
| 21 Ven.         | 8. 12. 31,1                        |                  | S. 38                           | 7. 23                    | 4. 37                                 | 6. 22                    | 18. 53                           |
| 22 Sat.         | 8. 8. 18,4                         | 4. 12, 7         | S. 38                           | 7. 24                    | 4. 36                                 | 6. 22                    | 18. 54                           |
| 23 Dom.         | 8. 4. 4,9                          | 4. 13, 5         | S. 39                           | 7. 25                    | 4. 35                                 | 6. 21                    | 18. 55                           |
| 24 Lun.         | 7. 59. 50,7                        | 4. 14, 2         | S. 40                           | 7. 26                    | 4. 34                                 | 6. 20                    | 18. 56                           |
| 25 Mar.         | 7. 55. 35,8                        | 4. 14, 9         | S. 40                           | 7. 27                    | 4. 33                                 | 6. 20                    | 18. 57                           |
| 26 Mer.         | 7. 51. 20,1                        |                  | S. 41                           | 7. 28                    | 4. 32                                 | 6. 19                    | 18. 58                           |
| 27 Jov.         | 7. 47. 3,7                         | 4. 16, 4         | S. 42                           | 7. 29                    | 4. 31                                 | 6. 18                    | 18. 59                           |
| 28 Ven.         | 7. 42. 46,5                        | 4. 17, 2         | S. 43                           | 7. 30                    | 4. 30                                 | 6. 17                    | 19. 0                            |
| 29 Sat.         | 7. 38. 28,7                        | 4. 17, 8         | S. 43                           | 7. 31                    | 4. 29                                 | 6. 17                    | 19. 1                            |
| 30 Dom.         | 7. 34. 10,2                        | 4. 18, 5         | S. 44                           | 7. 32                    | 4. 28                                 | 6. 16                    | 19. 2                            |
|                 |                                    | 4. 19, 1         |                                 |                          |                                       |                          |                                  |

| Dies<br>mensis | Longitude<br>Luna<br>Meridie | Latitudo<br>Luna<br>Meridie | Dia-<br>meter<br>bori-<br>zonta-<br>lis<br>Luna<br>Merid. | Paral-<br>laxis<br>bori-<br>zonta-<br>lis<br>Luna<br>Merid. | Declina-<br>tio Luna<br>Luna<br>Merid. | Transi-<br>tus Luna<br>per Me-<br>ridianum |
|----------------|------------------------------|-----------------------------|---|---|--|--|
|                | S. G. M. S.                  | G. M. S.                    | M. S.   | M. S.   | G. M.                                  | H. M.                                      |
| 1 Sat.         | 10. 4. 34. 18                | 3. 29. 18 A                 | 32. 20  | 59. 12  | 22. 33 A                               | 6. 19 V                                    |
| 2 Dom.         | 10. 18. 35. 43               | 2. 28. 19                   | 32. 9   | 58. 51  | 17. 38                                 | 7. 11                                      |
| 3 Lun.         | 11. 2. 25. 44                | 1. 19. 28                   | 31. 56  | 58. 28  | 11. 52                                 | 8. 1                                       |
| 4 Mar.         | 11. 16. 4. 26                | 0. 7. 8                     | 31. 42  | 58. 2   | 5. 37                                  | 8. 48                                      |
| 5 Mer.         | 11. 29. 32. 10               | 1. 4. 44 B                  | 31. 27  | 57. 35  | 0. 48 B                                | 9. 33                                      |
| 6 Jov.         | 0. 12. 48. 58                | 2. 11. 48                   | 31. 11  | 57. 7   | 7. 6                                   | 10. 17                                     |
| 7 Ven.         | 0. 25. 54. 48                | 3. 10. 53                   | 30. 56  | 56. 38  | 12. 59                                 | 11. 3                                      |
| 8 Sat.         | 1. 8. 49. 20                 | 3. 58. 57                   | 30. 39  | 56. 8   | 18. 14                                 | 11. 51                                     |
| 9 Dom.         | 1. 21. 32. 3                 | 4. 24. 22                   | 30. 22  | 55. 38  | 22. 35                                 | *  |
| 10 Lun.        | 2. 4. 2. 31                  | 4. 55. 49                   | 30. 8   | 55. 10  | 25. 50                                 | 0. 39 M                                    |
| 11 Mar.        | 2. 16. 21. 3                 | 5. 3. 4                     | 29. 55  | 54. 46  | 27. 49                                 | 1. 30                                      |
| 12 Mer.        | 2. 28. 28. 32                | 4. 56. 28                   | 29. 44  | 54. 26  | 28. 25                                 | 2. 23                                      |
| 13 Jov.        | 3. 10. 26. 39                | 4. 36. 48                   | 29. 37  | 54. 14  | 27. 39                                 | 3. 15                                      |
| 14 Ven.        | 3. 22. 18. 47                | 4. 5. 16                    | 29. 34  | 54. 9   | 25. 37                                 | 4. 6                                       |
| 15 Sat.        | 4. 4. 8. 18                  | 3. 23. 18                   | 29. 37  | 54. 13  | 22. 31                                 | 4. 54                                      |
| 16 Dom.        | 4. 15. 59. 49                | 2. 32. 22                   | 29. 45  | 54. 28  | 18. 27                                 | 5. 39                                      |
| 17 Lun.        | 4. 27. 58. 36                | 1. 34. 15                   | 29. 58  | 54. 53  | 13. 37                                 | 6. 23                                      |
| 18 Mar.        | 5. 10. 9. 50                 | 0. 30. 53                   | 30. 17  | 55. 28  | 8. 12                                  | 7. 5                                       |
| 19 Mer.        | 5. 22. 39. 32                | 0. 35. 27 A                 | 30. 42  | 56. 12  | 2. 31                                  | 7. 47                                      |
| 20 Jov.        | 6. 5. 31. 40                 | 1. 41. 52                   | 31. 9   | 57. 2   | 3. 47 A                                | 8. 29                                      |
| 21 Ven.        | 6. 18. 50. 18                | 2. 44. 51                   | 31. 38  | 57. 54  | 9. 56                                  | 9. 12                                      |
| 22 Sat.        | 7. 2. 36. 22                 | 3. 40. 27                   | 32. 7   | 58. 48  | 15. 49                                 | 10. 1                                      |
| 23 Dom.        | 7. 16. 49. 7                 | 4. 24. 10                   | 32. 32  | 59. 34  | 21. 4                                  | 10. 53                                     |
| 24 Lun.        | 8. 1. 24. 13                 | 4. 51. 58                   | 32. 52  | 60. 9   | 25. 13                                 | 11. 52                                     |
| 25 Mar.        | 8. 16. 14. 26                | 5. 0. 43                    | 33. 3   | 60. 31  | 27. 42                                 | 0. 55 V                                    |
| 26 Mer.        | 9. 1. 10. 40                 | 4. 49. 6                    | 33. 7   | 60. 37  | 28. 17                                 | 2. 1                                       |
| 27 Jov.        | 9. 16. 3. 41                 | 4. 17. 56                   | 33. 1   | 60. 27  | 26. 45                                 | 3. 5                                       |
| 28 Ven.        | 10. 0. 45. 43                | 3. 29. 55                   | 32. 49  | 60. 5   | 23. 27                                 | 4. 7                                       |
| 29 Sat.        | 10. 15. 11. 12               | 2. 29. 11                   | 32. 32  | 59. 33  | 18. 42                                 | 5. 1                                       |
| 30 Dom.        | 10. 29. 17. 32               | 1. 20. 28                   | 32. 11  | 58. 56  | 13. 8                                  | 5. 58                                      |

| Dies<br>der<br>Woche<br>oder<br>Tage<br>des<br>Monats | Longitudo<br>Luna media<br>nocte |     |     | Latitudo<br>Luna media<br>nocte |    |     | Dia-<br>meter<br>boriz.<br>Luna<br>med.<br>noct. | Paral-<br>laxis<br>boriz.<br>Luna<br>med.<br>noct. | Ortus<br>Luna | Occidens<br>Luna |    |
|---|----------------------------------|-----|-----|---------------------------------|----|-----|--|--|---------------|------------------|----|
|   | S.                               | G.  | M.  | S.                              | G. | M.  |  |  |               |                  |    |
| 1 Sat.  | 10.                              | 11. | 36. | 26                              | 3. | 0.  | 3 A  | 32.  | 15            | 59.              | 2  |
| 2 Dom   | 10.                              | 25. | 32. | 9                               | 1. | 54. | 37   | 32.  | 2             | 58.              | 39 |
| 3 Lun.  | 11.                              | 9.  | 16. | 27                              | 0. | 43. | 25   | 31.  | 49            | 58.              | 15 |
| 4 Mar.  | 11.                              | 22. | 49. | 40                              | 0. | 29. | 13 B   | 31.  | 35            | 57.              | 49 |
| 5 —   | 0.                               | 6.  | 11. | 55                              | 1. | 39. | 5  | 31.  | 19            | 57.              | 21 |
| — Mer.  |                                  |     |     |                                 |    |     |  |  |               |                  |    |
| 6 Jov.  | 0.                               | 19. | 23. | 16                              | 2. | 42. | 36   | 31.  | 3             | 56.              | 52 |
| 7 Ven.  | 1.                               | 2.  | 23. | 31                              | 3. | 36. | 25   | 30.  | 47            | 56.              | 23 |
| 8 Sat.  | 1.                               | 15. | 12. | 14                              | 4. | 18. | 23   | 30.  | 30            | 55.              | 52 |
| 9 Dom   | 1.                               | 27. | 48. | 47                              | 4. | 46. | 54   | 30.  | 15            | 55.              | 23 |
| 10 —  | 2.                               | 10. | 13. | 15                              | 5. | 1.  | 14   | 30.  | 1             | 54.              | 55 |
| — Lun.  |                                  |     |     |                                 |    |     |  |  |               |                  |    |
| 11 Mar.   | 2.                               | 22. | 26. | 7                               | 5. | 1.  | 28   | 29.  | 49            | 54.              | 35 |
| 12 Mer.   | 3.                               | 4.  | 28. | 31                              | 4. | 48. | 12   | 29.  | 40            | 54.              | 19 |
| 13 Jov.   | 3.                               | 16. | 23. | 18                              | 4. | 22. | 25   | 29.  | 35            | 54.              | 10 |
| 14 Ven.   | 3.                               | 28. | 13. | 37                              | 3. | 45. | 30   | 29.  | 35            | 54.              | 10 |
| 15 —  | 4.                               | 10. | 3.  | 28                              | 2. | 58. | 51   | 29.  | 40            | 54.              | 20 |
| — Sat.  |                                  |     |     |                                 |    |     |  |  |               |                  |    |
| 16 Dom  | 4.                               | 21. | 58. | 4                               | 2. | 4.  | 7  | 29.  | 51            | 54.              | 39 |
| 17 Lun.   | 5.                               | 4.  | 2.  | 12                              | 1. | 3.  | 7  | 30.  | 7             | 55.              | 9  |
| 18 Mar.   | 5.                               | 16. | 22. | 11                              | 0. | 2.  | 3 A  | 30.  | 29            | 55.              | 49 |
| 19 Mer.   | 5.                               | 29. | 2.  | 26                              | 1. | 8.  | 50   | 30.  | 55            | 56.              | 35 |
| 20 —  | 6.                               | 12. | 7.  | 36                              | 2. | 14. | 0  | 31.  | 23            | 57.              | 28 |
| — Jov.  |                                  |     |     |                                 |    |     |  |  |               |                  |    |
| 21 Ven.   | 6.                               | 25. | 39. | 52                              | 3. | 13. | 53   | 31.  | 53            | 58.              | 22 |
| 22 Sat.   | 7.                               | 9.  | 39. | 33                              | 4. | 4.  | 6  | 32.  | 20            | 59.              | 12 |
| 23 Dom  | 7.                               | 24. | 4.  | 13                              | 4. | 40. | 22   | 32.  | 43            | 59.              | 53 |
| 24 Lun.   | 8.                               | 8.  | 47. | 56                              | 4. | 58. | 56   | 32.  | 58            | 60.              | 22 |
| 25 —  | 8.                               | 23. | 42. | 23                              | 4. | 57. | 32   | 33.  | 6             | 60.              | 36 |
| — Mar.  |                                  |     |     |                                 |    |     |  |  |               |                  |    |
| 26 Mer.   | 9.                               | 8.  | 38. | 4                               | 4. | 34. | 54   | 33.  | 4             | 60.              | 31 |
| 27 Jov.   | 9.                               | 23. | 26. | 30                              | 3. | 55. | 48   | 32.  | 56            | 60.              | 17 |
| 28 Ven.   | 10.                              | 8.  | 0.  | 47                              | 3. | 0.  | 51   | 32.  | 41            | 59.              | 50 |
| 29 Sat.   | 10.                              | 22. | 16. | 50                              | 1. | 55. | 30   | 32.  | 28            | 59.              | 15 |
| 30 Dom  | 11.                              | 6.  | 12. | 21                              | 0. | 44. | 38   | 32.  | 0             | 58.              | 35 |

| Dies<br>mense       | Longitudo<br>Planetarum | Latitudo<br>Planeta-<br>rum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Trans-<br>itus Pla-<br>netarum<br>per Me-<br>ridianum | Occsus<br>Plane-<br>tarum |
|---------------------|-------------------------|-----------------------------|---------------------------------|--------------------------|---|---------------------------|
|                     | I. S. G. M.             | G. M.                       | G. M.                           | H. M.                    | H. M.   | H. M.                     |
| S A T U R N U S .   |                         |                             |                                 |                          |   |                           |
| 1                   | 9. 8. 8,4               | 0. 22,5 B                   | 22. 51 A                        | 11. 47 M                 | 4. 9 V  | 8. 31 V                   |
| 7                   | 9. 8. 37,3              | 0. 22,0                     | 22. 49                          | 11. 25                   | 3. 47   | 8. 9                      |
| 13                  | 9. 9. 7,7               | 0. 21,6                     | 22. 48                          | 11. 3                    | 3. 25   | 7. 47                     |
| 19                  | 9. 9. 42,1              | 0. 21,1                     | 22. 46                          | 10. 41                   | 3. 3  | 7. 25                     |
| 25                  | 9. 10. 17,3             | 0. 20,3                     | 22. 45                          | 10. 19                   | 2. 41   | 7. 3                      |
| J U P I T E R .     |                         |                             |                                 |                          |   |                           |
| 1                   | 9. 25. 29,3             | 0. 37,6 A                   | 21. 41 A                        | 0. 57 V                  | 5. 24 V   | 9. 51 V                   |
| 7                   | 9. 26. 18,1             | 0. 37,5                     | 21. 32                          | 0. 34                    | 5. 3  | 9. 32                     |
| 13                  | 9. 27. 10,0             | 0. 37,5                     | 21. 22                          | 0. 13                    | 4. 43   | 9. 13                     |
| 19                  | 9. 24. 9,2              | 0. 37,6                     | 21. 10                          | 11. 51 M                 | 4. 22   | 8. 53                     |
| 25                  | 9. 29. 11,0             | 0. 37,6                     | 20. 58                          | 11. 30                   | 4. 1  | 8. 32                     |
| M A R S .           |                         |                             |                                 |                          |   |                           |
| 1                   | 0. 2. 36,6              | 1. 53,2 A                   | 0. 43 A                         | 3. 50 V                  | 9. 47 V   | 3. 44 M                   |
| 7                   | 0. 2. 50,4              | 1. 30,4                     | 0. 16                           | 3. 24                    | 9. 23   | 3. 22                     |
| 13                  | 0. 3. 38,9              | 1. 8,7                      | 0. 24 B                         | 2. 59                    | 9. 1  | 3. 3                      |
| 19                  | 0. 4. 51,1              | 0. 50,0                     | 1. 5                            | 2. 36                    | 8. 40   | 2. 44                     |
| 25                  | 0. 6. 9,3               | 0. 31,2                     | 1. 58                           | 2. 12                    | 8. 20   | 2. 28                     |
| V E N U S .         |                         |                             |                                 |                          |   |                           |
| 1                   | 6. 23. 12,2             | 4. 12,8 A                   | 12. 55 A                        | 5. 46 M                  | 10. 54 M  | 4. 2 V                    |
| 7                   | 6. 21. 26,0             | 2. 44,0                     | 10. 54                          | 5. 10                    | 10. 26  | 3. 42                     |
| 13                  | 6. 21. 0,7              | 1. 17,6                     | 9. 25                           | 4. 40                    | 10. 2   | 3. 24                     |
| 19                  | 6. 22. 1,6              | C. 1,8                      | 8. 37                           | 4. 16                    | 9. 42   | 3. 8                      |
| 25                  | 6. 24. 17,0             | 0. 56,0 B                   | 8. 33                           | 3. 51                    | 9. 27   | 2. 53                     |
| M E R C U R I U S . |                         |                             |                                 |                          |   |                           |
| 1                   | 6. 29. 8,8              | 0. 53,7 B                   | 10. 21 A                        | 6. 3 M                   | 11. 22 M  | 4. 41 V                   |
| 7                   | 6. 27. 29,9             | 2. 3,9                      | 8. 40                           | 5. 24                    | 10. 49  | 4. 14                     |
| 13                  | 7. 1. 53,0              | 2. 21,0                     | 9. 56                           | 5. 21                    | 10. 41  | 4. 1                      |
| 19                  | 7. 9. 16,3              | 1. 55,5                     | 12. 47                          | 5. 38                    | 10. 46  | 3. 54                     |
| 25                  | 7. 18. 1,4              | 1. 22,1                     | 15. 55                          | 6. 2                     | 10. 57  | 3. 52                     |

## ECLIPSES SATELLITUM JOVIS.

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>horarius<br>Solis. | Logaritmus<br>distantia<br>Solis a terra<br>posita media<br>100000 | Longitudo<br>Nodi Luna |
|------|-------------------|---|-----------------------------|--|------------------------|
|      | M. S.             | M. S.                                       | M. S.                       |  | S. G. M.               |
| 1    | 32. 2, 8          | 2. 8, 4                                     | 2. 27, 8                    | 4. 999954  | II. 15. 54             |
| 4    | 32. 4, 5          | 2. 8, 7                                     | 2. 28, 1                    | 4. 999578  | II. 15. 45             |
| 7    | 32. 6, 2          | 2. 9, 0                                     | 2. 28, 4                    | 4. 999202  | II. 15. 35             |
| 10   | 32. 8, 0          | 2. 9, 4                                     | 2. 28, 6                    | 4. 998827  | II. 15. 25             |
| 13   | 32. 9, 7          | 2. 9, 8                                     | 2. 28, 9                    | 4. 998454  | II. 15. 16             |
| 16   | 32. 11, 3         | 2. 10, 3                                    | 2. 29, 1                    | 4. 998083  | II. 15. 6              |
| 19   | 32. 12, 9         | 2. 10, 8                                    | 2. 29, 3                    | 4. 997721  | II. 14. 57             |
| 22   | 32. 14, 5         | 2. 11, 4                                    | 2. 29, 5                    | 4. 997363  | II. 14. 47             |
| 25   | 32. 16, 2         | 2. 12, 0                                    | 2. 29, 8                    | 4. 997011  | II. 14. 38             |
| 28   | 32. 17, 7         | 2. 12, 6                                    | 2. 30, 0                    | 4. 996663  | II. 14. 28             |

## POSITIONES SATELLITUM JOVIS

Oris

6<sup>h</sup> Vespere

Occidens

|    |                |                    |            |                   |
|----|----------------|--------------------|------------|-------------------|
| 1  |                | 1 <sup>o</sup> , O | 3. .4      |                   |
| 2  |                | 2.                 | O 1.       | .3 .4             |
| 3  | 1 <sup>o</sup> |                    | 2 O        | .3                |
| 6  |                | 3.                 | 3. 7.      | O                 |
| 7  |                | .3                 | O          | 1 <sup>o</sup> 4. |
| 8  |                |                    | 3. 8.      | O 4. 3.           |
| 9  |                | 4. 2.              | O          | 1. .3             |
| 10 | 6.             |                    | 2. 1.      | O                 |
| 13 | .4             | 3.                 | .3 1.      | O                 |
| 14 | .4             | .3                 | O          | .3                |
| 15 | .4             | .3                 | O          | 2 <sup>o</sup> 1. |
| 16 |                | 3 <sup>o</sup> 4   | O          | 2. 3.             |
| 17 |                |                    | 2. 1.      | O .4              |
| 18 | 1 <sup>o</sup> |                    | O          | .3 .4             |
| 19 | 2 <sup>o</sup> |                    | O 1. 2.    | .4                |
| 20 |                | 1. 2. 2.           | O          |                   |
| 21 |                | 2.                 | O          | .3 .2             |
| 22 |                | .3 1.              | O          | .2                |
| 23 |                | 3.                 | O , 1.     | 4.                |
| 24 |                | .2. 2.             | O          | 4. .3             |
| 25 | 4 <sup>o</sup> |                    | O 1. .2 3. |                   |
| 26 | 1 <sup>o</sup> | 4.                 | O 2. 3.    |                   |
| 28 | 4.             | 3.                 | O .2. 1.   |                   |
| 29 | .4             | .3 1.              | O          | .2.               |
| 30 | .4             | 2.                 | O          | .2.               |

## Positiones Satellitum tempore eclipsium.

|    |                |                  |        |    |
|----|----------------|------------------|--------|----|
| 4  | .              | 1. O             | 2. 1.  | 4. |
| 5  | 1 <sup>o</sup> | 2. O             | .1     |    |
| 11 | 4.             | 1. O             | 2. 1.  |    |
| 12 | 4 <sup>o</sup> | 2. O             | 1. .1. |    |
| 27 | .4             | 1 <sup>o</sup> 2 | 1. O   |    |

*Phænomena & Observations  
Solis*

| Sol in parallelo                                 |
|--|
| 10 Scorpii & γ Hydrae culm.<br>32° 11' & 20° 31' |
| 18 Corvi culm. 19° 42'                           |
| γ Leporis culm. 12° 42'                          |
| in nodo descendente Veneris                      |
| 20 Corvi culm. 17° 57'                           |
| in signo Capri 9° 48'                            |
| in nodo descendente Jovis                        |
| 30 in Perigeo                                    |

*Phænomena & Observations  
Planetarum*

|   |
|---|
| 1 Mercur. ad α Librae diff. lat. 32'                  |
| 3 Mercur. ad β Scorpii diff. lat. 38'                 |
| Mercurius ad 1. 2 σ Scorpii diff.<br>lat. 9° & 19'    |
| 7 Venus ad π Virginis diff. lat. 33'                  |
| Mercurius in nodo descendente                         |
| Mercur. ad ω Ophiuchi diff. lat. 31'                  |
| 8 Mars in nodo ascendente                             |
| 11 Saturnus ad ο Sagittarii d. l. 35'                 |
| Jupiter ad σ Capri diff. l. 1. 0 3'                   |
| 17 Mars ad ε Piscium diff. lat. 49'                   |
| 18 Venus ad μ Librae diff. lat. 1. 0 3'               |
| 22 Saturnus ad ν Sagittarii diff. lat.<br>1. 0 12'    |
| Jupiter ad ν Capri diff. lat. 52'                     |
| 23 Mars ad ζ Piscium diff. lat. 36'                   |
| 24 Mercur. in conjunct. cum Sole                      |
| 27 Venus ad 1. 2 σ Librae diff. lat.<br>32° & 1'      |
| 30 Venus ad ζ & γ Librae diff. lat.<br>1. 0 12' & 57' |

*Phænomena & Observations  
Lunæ*

| Luna  |
|---|
| 1 ad φ Aquarii 2h 0'  |
| 2 ad Martis 22h 15'   |
| 3 ad ε Piscium 8h 30'   |
| 4 ad τ Piscium 9h 12'   |
| 6 ad α Tauri 17h 15'  |
| 7 ad χ Tauri 8h 54'   |
| 8 Plenilunium 7h 36'  |
| ad β Tauri 13h 20'  |
| ad A Geminorum 18h 0'   |
| 11 Apogea ad κ Geminor. 3h 36'                                    |
| 12 ad γ & δ Cancri 7h 50' & 10h 15'                               |
| 14 ad ε Leonis 5h 0'  |
| 16 Ultimus Quadrans 12h 36'                                       |
| 18 ad ψ Virginis 0h 54'   |
| 20 ad Veneris 3h 10'  |
| 21 ad τ Scorpii 7h 40'  |
| 23 Novilunium 12h 4'  |
| 24 ad Saturni 6h 26'  |
| 25 Perigea ad Jovis 16h 40'                                       |
| 26 ad γ & δ Capri 14h 28' & 17h 44'                               |
| 28 ad φ Aquarii 8h 0'   |
| 30 ad δ Piscium { Imm. 8h 45'<br>Em. 9h 57'<br>dist. minima 0° 2' |
| Primus Quadrans 5h 21'  |

*Planetae in parallelis fixarum*

|  |
|--|
| Saturnus β Corvi & γ Leporis   |
| Jupiter 4 b Canis, 7 ε Capri,<br>15. 54 Erid., sub finem mensis<br>prope γ Librae, θ & β Ceti  |
| Mars 1 β Virginis, 2 α Ceti,<br>6 θ Serpentis, 10 δ Virginis,<br>13 ε Serp., 16 Procyon, 18 β<br>Aquil. & γ Orion., 25 α Orion.,<br>29 α Aquilae, 31 β Canis |
| Venus 5 ζ Erid., 8 α Virg. & ξ<br>Ophiuci, 11 δ Erid., 19 α Virg.,<br>21 α Ceti, 27 γ Libr. & γ Erid.,<br>31 δ Corvi & γ Canis                               |
| Mercur. 1 κ Librae & ν Scorpii,<br>4. 54 Erid., 7 ε Corvi, 10 β Corvi<br>& γ Lep., 13 α Corvi &c.  |

| Dier<br>mensis | Dier<br>tributaria | Equatio<br>Subtrahenda<br>a tempore<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitudo<br>Solis | Ascensio recta<br>Solis | Declinatio<br>Solis<br>Australis |
|----------------|--------------------|--|------------------|--------------------|-------------------------|----------------------------------|
|                |                    | M. S.  | S.               | S. G. M. S.        | G. M. S.                | G. M. S.                         |
| 1              | Lun.               | 10. 35, 2  | 23, 2            | 8. 9. 13. 52       | 247. 32. 15             | 21. 51. 46                       |
| 2              | Mar.               | 10. 12, 0  | 23, 8            | 8. 10. 14. 47      | 248. 37. 11             | 22. 0. 49                        |
| 3              | Mer.               | 9. 48, 2   | 24, 3            | 8. 11. 15. 42      | 249. 42. 16             | 22. 9. 27                        |
| 4              | Jov.               | 9. 23, 9   | 24, 8            | 8. 12. 16. 39      | 250. 47. 30             | 22. 17. 40                       |
| 5              | Ven.               | 8. 59, 1   | 25, 3            | 8. 13. 17. 36      | 251. 52. 53             | 22. 25. 27                       |
| 6              | Sat.               | 8. 33, 8   | 25, 9            | 8. 14. 18. 34      | 252. 58. 24             | 22. 32. 47                       |
| 7              | Dom                | 8. 7, 9  | 26, 4            | 8. 15. 19. 32      | 254. 4. 2               | 22. 39. 40                       |
| 8              | Lun.               | 7. 41, 5   | 26, 8            | 8. 16. 20. 32      | 255. 9. 47              | 22. 46. 7                        |
| 9              | Mar.               | 7. 14, 7   | 27, 2            | 8. 17. 21. 33      | 256. 15. 38             | 22. 52. 7                        |
| 10             | Mer.               | 6. 47, 5   | 27, 7            | 8. 18. 22. 34      | 257. 21. 36             | 22. 57. 40                       |
| 11             | Jov.               | 6. 19, 8   | 28, 1            | 8. 19. 23. 36      | 258. 27. 42             | 23. 2. 45                        |
| 12             | Ven.               | 5. 51, 7   | 28, 4            | 8. 20. 24. 40      | 259. 33. 52             | 23. 7. 23                        |
| 13             | Sat.               | 5. 23, 3   | 28, 7            | 8. 21. 25. 44      | 260. 40. 8              | 23. 11. 33                       |
| 14             | Dom                | 4. 54, 6   | 29, 0            | 8. 22. 26. 49      | 261. 46. 29             | 23. 15. 16                       |
| 15             | Lun.               | 4. 25, 6   | 29, 3            | 8. 23. 27. 56      | 262. 52. 55             | 23. 18. 31                       |
| 16             | Mar.               | 3. 56, 3   | 29, 6            | 8. 24. 29. 3       | 263. 59. 25             | 23. 21. 18                       |
| 17             | Mer.               | 3. 26, 7   | 29, 8            | 8. 25. 30. 11      | 265. 5. 58              | 23. 23. 37                       |
| 18             | Jov.               | 2. 56, 9   | 29, 9            | 8. 26. 31. 20      | 266. 12. 34             | 23. 25. 28                       |
| 19             | Ven.               | 2. 27, 0   | 30, 0            | 8. 27. 32. 29      | 267. 19. 12             | 23. 26. 50                       |
| 20             | Sat.               | 1. 57, 0   | 30, 1            | 8. 28. 33. 40      | 268. 25. 52             | 23. 27. 44                       |
| 21             | Dom                | 1. 26, 9   | 30, 2            | 8. 29. 34. 50      | 269. 32. 34             | 23. 28. 10                       |
| 22             | Lun.               | 0. 56, 7   | 30, 2            | 9. 0. 36. 2        | 270. 39. 17             | 23. 28. 8                        |
| 23             | Mar.               | 0. 26, 5   | 30, 2            | 9. 1. 37. 14       | 271. 46. 0              | 23. 28. 37                       |
| 24             | Mer.               | 0. 3, 7  | 30, 2            | 9. 2. 38. 26       | 272. 52. 42             | 23. 27. 37                       |
| 25             | Jov.               | 0. 33, 9   | 30, 1            | 9. 3. 39. 38       | 273. 59. 23             | 23. 26. 9                        |
| 26             | Ven.               | 1. 4, 0  | 29, 9            | 9. 4. 40. 51       | 275. 6. 3               | 23. 23. 13                       |
| 27             | Sat.               | 1. 33, 9   | 29, 6            | 9. 5. 42. 3        | 276. 12. 41             | 23. 20. 49                       |
| 28             | Dom                | 2. 3, 5  | 29, 4            | 9. 6. 43. 15       | 277. 19. 16             | 23. 17. 57                       |
| 29             | 'un.               | 2. 32, 9   | 29, 1            | 9. 7. 44. 27       | 278. 25. 47             | 23. 14. 37                       |
| 30             | Mar.               | 2. 2, 0  | 28, 7            | 9. 8. 45. 39       | 279. 32. 14             | 23. 10. 49                       |
| 31             | Mer..              | 2. 30, 7   | 28, 7            | 9. 9. 46. 51       | 280. 38. 36             | 23. 6. 23                        |

# DECEMBER 1783.

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| Dier<br>monisi<br>ep | Distantia<br>sectionis Y<br>a Sole | Diffen-<br>tentia | Ini-<br>tium<br>Crepus-<br>culi | Ortu<br>Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepus-<br>culi | Hora<br>Italica<br>Meri-<br>dies |
|----------------------|------------------------------------|-------------------|---------------------------------|-------------------------|---------------------------------|--------------------------|----------------------------------|
|                      |                                    |                   |                                 |                         |                                 |                          |                                  |
|                      |                                    | H. M. S.          | M. S.                           | H. M.                   | H. M.                           | H. M.                    | H. M.                            |
| 1 Lun.               | 7. 29. 51,1                        |                   |                                 | 5. 45                   | 7. 33                           | 4. 27                    | 6. 15 19. 3                      |
| 2 Mar.               | 7. 25. 31,3                        | 4. 19, 8          |                                 | 5. 45                   | 7. 33                           | 4. 27                    | 6. 15 19. 3                      |
| 3 Mer.               | 7. 21. 30,9                        | 4. 20, 4          |                                 | 5. 46                   | 7. 34                           | 4. 26                    | 6. 14 19. 4                      |
| 4 Jov.               | 7. 16. 49,9                        | 4. 21, 0          |                                 | 5. 46                   | 7. 35                           | 4. 25                    | 6. 14 19. 5                      |
| 5 Ven.               | 7. 12. 28,4                        | 4. 21, 5          |                                 | 5. 47                   | 7. 36                           | 4. 24                    | 6. 13 19. 6                      |
| 6 Sat.               | 7. 6. 6,4                          | 4. 22, 5          |                                 | 5. 47                   | 7. 36                           | 4. 24                    | 6. 13 19. 6                      |
| 7 Dom.               | 7. 3. 43,9                         | 4. 23, 0          |                                 | 5. 48                   | 7. 37                           | 4. 23                    | 6. 12 19. 7                      |
| 8 Lun.               | 6. 59. 20,9                        | 4. 23, 4          |                                 | 5. 49                   | 7. 37                           | 4. 23                    | 6. 11 19. 7                      |
| 9 Mar.               | 6. 54. 57,5                        | 4. 23, 9          |                                 | 5. 49                   | 7. 38                           | 4. 22                    | 6. 11 19. 8                      |
| 10 Mer.              | 6. 50. 33,6                        | 4. 24, 3          |                                 | 5. 50                   | 7. 39                           | 4. 21                    | 6. 10 19. 9                      |
| 11 Jov.              | 6. 46. 9,3                         | 4. 24, 7          |                                 | 5. 50                   | 7. 39                           | 4. 21                    | 6. 10 19. 9                      |
| 12 Ven.              | 6. 41. 44,6                        | 4. 25, 1          |                                 | 5. 50                   | 7. 39                           | 4. 21                    | 6. 10 19. 9                      |
| 13 Sat.              | 6. 37. 19,5                        | 4. 25, 4          |                                 | 5. 50                   | 7. 40                           | 4. 20                    | 6. 10 19. 10                     |
| 14 Dom.              | 6. 32. 54,1                        | 4. 25, 7          |                                 | 5. 51                   | 7. 40                           | 4. 20                    | 6. 9 19. 10                      |
| 15 Lun.              | 6. 28. 28,4                        | 4. 26, 0          |                                 | 5. 51                   | 7. 40                           | 4. 20                    | 6. 9 19. 10                      |
| 16 Mar.              | 6. 24. 2,4                         | 4. 26, 2          |                                 | 5. 51                   | 7. 41                           | 4. 19                    | 6. 9 19. 11                      |
| 17 Mer.              | 6. 19. 36,2                        | 4. 26, 4          |                                 | 5. 52                   | 7. 41                           | 4. 19                    | 6. 8 19. 11                      |
| 18 Jov.              | 6. 15. 9,8                         | 4. 26, 6          |                                 | 5. 52                   | 7. 41                           | 4. 19                    | 6. 8 19. 11                      |
| 19 Ven.              | 6. 10. 43,2                        | 4. 26, 7          |                                 | 5. 52                   | 7. 42                           | 4. 18                    | 6. 8 19. 12                      |
| 20 Sat.              | 6. 6. 16,5                         | 4. 26, 8          |                                 | 5. 52                   | 7. 42                           | 4. 18                    | 6. 8 19. 12                      |
| 21 Dom.              | 6. 1. 49,7                         | 4. 26, 8          |                                 | 5. 52                   | 7. 42                           | 4. 18                    | 6. 8 19. 12                      |
| 22 Lun.              | 5. 57. 22,9                        | 4. 26, 8          |                                 | 5. 52                   | 7. 42                           | 4. 18                    | 6. 8 19. 12                      |
| 23 Mar.              | 5. 52. 56,1                        | 4. 26, 8          |                                 | 5. 52                   | 7. 42                           | 4. 18                    | 6. 8 19. 12                      |
| 24 Mer.              | 5. 48. 29,3                        | 4. 26, 8          |                                 | 5. 52                   | 7. 42                           | 4. 18                    | 6. 8 19. 12                      |
| 25 Jov.              | 5. 44. 2,5                         | 4. 26, 8          |                                 | 5. 51                   | 7. 41                           | 4. 19                    | 6. 9 19. 11                      |
| 26 Ven.              | 5. 39. 35,8                        | 4. 26, 5          |                                 | 5. 51                   | 7. 41                           | 4. 19                    | 6. 9 19. 11                      |
| 27 Sat.              | 5. 35. 9,3                         | 4. 26, 3          |                                 | 5. 51                   | 7. 41                           | 4. 19                    | 6. 9 19. 11                      |
| 28 Dom.              | 5. 30. 43,0                        | 4. 26, 1          |                                 | 5. 50                   | 7. 40                           | 4. 20                    | 6. 10 19. 10                     |
| 29 Lun.              | 5. 26. 16,9                        | 4. 25, 8          |                                 | 5. 50                   | 7. 40                           | 4. 20                    | 6. 10 19. 10                     |
| 30 Mar.              | 5. 21. 51,1                        | 4. 25, 5          |                                 | 5. 50                   | 7. 39                           | 4. 21                    | 6. 10 19. 9                      |
| 31 Mer.              | 5. 17. 25,6                        | 4. 25, 5          |                                 | 5. 50                   | 7. 39                           | 4. 21                    | 6. 10 19. 9                      |

| Dies<br>mense<br>bebbomanda | Longitude<br>Luna<br>Meridie |     |     | Latitude<br>Luna<br>Meridie |    |     | Dia-<br>meter<br>bori-<br>zonta-<br>lis<br>Luna<br>Merid. | Paral-<br>laxis<br>bori-<br>zonta-<br>lis<br>Luna<br>Merid. | Declina-<br>rio Luna | Trans-<br>itus Luna<br>per Me-<br>ridianum |         |         |
|-----------------------------|------------------------------|-----|-----|-----------------------------|----|-----|---|---|----------------------|--|---------|---------|
|                             | S.                           | G.  | M.  | S.                          | G. | M.  |   |   |                      |  |         |         |
| 1 Lun.                      | 11.                          | 12. | 4.  | 26                          | 0. | 8.  | 33 A  | 31.   | 50                   | 58. 17                                     | 6. 49 A | 6. 40 V |
| 2 Mar.                      | 11.                          | 26. | 33. | 4                           | 1. | 2.  | 19 B  | 31.   | 29                   | 57. 37                                     | 0. 27   | 7. 25   |
| 3 Mer.                      | 0.                           | 9.  | 45. | 21                          | 2. | 8.  | 15  | 31.   | 8                    | 57. 0                                      | 5. 48 B | 8. 9    |
| 4 Jov.                      | 0.                           | 22. | 43. | 29                          | 3. | 6.  | 17  | 30.   | 49                   | 56. 25                                     | 11. 43  | 8. 53   |
| 5 Ven.                      | 1.                           | 5.  | 29. | 33                          | 3. | 53. | 51  | 30.   | 32                   | 55. 54                                     | 17. 3   | 9. 39   |
| 6 Sat.                      | 1.                           | 18. | 4.  | 42                          | 4. | 29. | 11  | 30.   | 16                   | 55. 26                                     | 21. 33  | 10. 27  |
| 7 Dom                       | 2.                           | 0.  | 30. | 29                          | 4. | 51. | 14  | 30.   | 3                    | 55. 1                                      | 25. 3   | 11. 15  |
| 8 Lun.                      | 2.                           | 12. | 47. | 17                          | 4. | 59. | 32  | 29.   | 31                   | 54. 4C                                     | 27. 24  | * *     |
| 9 Mar.                      | 2.                           | 24. | 55. | 49                          | 4. | 53. | 43  | 29.   | 42                   | 54. 23                                     | 28. 16  | 0. 6 M  |
| 10 Mer.                     | 3.                           | 6.  | 56. | 47                          | 4. | 34. | 59  | 29.   | 35                   | 54. 10                                     | 27. 51  | 0. 59   |
| 11 Jov.                     | 3.                           | 18. | 51. | 24                          | 4. | 4.  | 16  | 29.   | 31                   | 54. 3                                      | 26. 9   | 1. 50   |
| 12 Ven.                     | 4.                           | 0.  | 41. | 31                          | 3. | 23. | 4   | 29.   | 30                   | 54. 2                                      | 23. 20  | 2. 40   |
| 13 Sat.                     | 4.                           | 12. | 29. | 58                          | 2. | 23. | 8   | 29.   | 34                   | 54. 8                                      | 19. 31  | 3. 25   |
| 14 Dom                      | 4.                           | 24. | 20. | 26                          | 1. | 36. | 16  | 29.   | 42                   | 54. 22                                     | 14. 55  | 4. 9    |
| 15 Lun.                     | 5.                           | 6.  | 17. | 15                          | 0. | 34. | 34  | 29.   | 55                   | 54. 46                                     | 9. 44   | 4. 51   |
| 16 Mar.                     | 5.                           | 18. | 25. | 36                          | 0. | 29. | 44 A  | 30.   | 13                   | 55. 20                                     | 4. 6    | 5. 31   |
| 17 Mer.                     | 6.                           | 0.  | 50. | 46                          | 1. | 34. | 6   | 30.   | 37                   | 56. 3                                      | 1. 49 A | 6. 11   |
| 18 Jov.                     | 6.                           | 13. | 37. | 57                          | 2. | 35. | 44  | 31.   | 4                    | 56. 54                                     | 7. 47   | 6. 53   |
| 19 Ven.                     | 6.                           | 26. | 51. | 42                          | 3. | 31. | 7   | 31.   | 35                   | 57. 51                                     | 13. 40  | 7. 39   |
| 20 Sat.                     | 7.                           | 10. | 35. | 14                          | 4. | 16. | 33  | 32.   | 7                    | 58. 49                                     | 19. 3   | 8. 27   |
| 21 Dom                      | 7.                           | 24. | 48. | 47                          | 4. | 47. | 54  | 32.   | 38                   | 59. 44                                     | 23. 37  | 9. 22   |
| 22 Lun.                     | 8.                           | 9.  | 30. | 16                          | 5. | 1.  | 35  | 33.   | 3                    | 60. 30                                     | 26. 52  | 10. 21  |
| 23 Mar.                     | 8.                           | 24. | 32. | 52                          | 4. | 55. | 1   | 33.   | 20                   | 61. 2                                      | 28. 16  | 11. 27  |
| 24 Mer.                     | 9.                           | 9.  | 46. | 41                          | 4. | 27. | 35  | 33.   | 28                   | 61. 36                                     | 27. 31  | 0. 34 V |
| 25 Jov.                     | 9.                           | 25. | 1.  | 14                          | 3. | 41. | 5   | 33.   | 25                   | 61. 11                                     | 24. 47  | 1. 39   |
| 26 Ven.                     | 10.                          | 10. | 5.  | 18                          | 2. | 39. | 31  | 33.   | 12                   | 60. 48                                     | 20. 20  | 2. 39   |
| 27 Sat.                     | 10.                          | 24. | 50. | 40                          | 1. | 28. | 10  | 32.   | 52                   | 60. 10                                     | 14. 61  | 3. 32   |
| 28 Dom                      | 11.                          | 9.  | 12. | 21                          | 0. | 12. | 56  | 32.   | 26                   | 59. 23                                     | 8. 22   | 4. 23   |
| 29 Lun.                     | 11.                          | 23. | 8.  | 40                          | 1. | 1.  | 4 B   | 31.   | 58                   | 58. 31                                     | 1. 50   | 5. 8    |
| 30 Mar.                     | 0.                           | 6.  | 40. | 26                          | 2. | 9.  | 29  | 31.   | 29                   | 57. 40                                     | 4. 35 B | 5. 53   |
| 31 Mer.                     | 0.                           | 19. | 50. | 4                           | 3. | 9.  | 7   | 31.   | 3                    | 56. 51                                     | 1. 38   | 6. 37   |

| Dies<br>mens. | D.<br>et<br>temp. | Longitudo<br>Luna media<br>nocte. |     | Latitudo<br>Luna media<br>nocte. |    | Dia-<br>meter<br>boriz. | Paral-<br>laxis<br>boriz. | Ortus<br>Luna | Occidens<br>Luna |     |     |     |    |     |    |   |     |      |
|---------------|-------------------|-----------------------------------|-----|----------------------------------|----|-------------------------|---------------------------|---------------|------------------|-----|-----|-----|----|-----|----|---|-----|------|
|               |                   | S.                                | G.  | M.                               | S. | M.                      | S.                        | H.            | M.               | H.  |     |     |    |     |    |   |     |      |
| 1             | Lun.              | II.                               | 19. | 50.                              | 57 | 0.                      | 27.                       | 18            | B                | 31. | 39. | 57. | 57 | 0.  | 57 | V | *   | *    |
| 2             | Mar.              | 0.                                | 3.  | 11.                              | 6  | 1.                      | 36.                       | 7             |                  | 31. | 18. | 57. | 18 | 1.  | 16 |   | 0.  | 35 M |
| 3             | Mer.              | 0.                                | 16. | 16.                              | 3  | 2.                      | 38.                       | 27            |                  | 30. | 58. | 56. | 42 | 1.  | 33 |   | 1.  | 47   |
| 4             | Jov.              | 0.                                | 29. | 7.                               | 51 | 3.                      | 31.                       | 32            |                  | 30. | 40. | 56. | 9  | 1.  | 50 |   | 2.  | 59   |
| 5             | Ven.              | 1.                                | 11. | 48.                              | 16 | 4.                      | 13.                       | 8             |                  | 30. | 24. | 55. | 40 | 2.  | 12 |   | 4.  | 11   |
| 6             | Sat.              | 1.                                | 24. | 18.                              | 45 | 4.                      | 41.                       | 56            |                  | 30. | 9.  | 55. | 15 | 2.  | 38 |   | 5.  | 20   |
| 7             | Dom.              | 2.                                | 6.  | 39.                              | 57 | 4.                      | 57.                       | 3             |                  | 29. | 57. | 54. | 51 | 3.  | 6  |   | 6.  | 28   |
| 8             | Lun.              | 2.                                | 18. | 52.                              | 33 | 4.                      | 58.                       | 15            |                  | 29. | 46. | 54. | 31 | 3.  | 45 |   | 7.  | 33   |
| 9             | Mer.              | 3.                                | 0.  | 57.                              | 11 | 4.                      | 45.                       | 57            |                  | 29. | 38. | 54. | 16 | 4.  | 31 |   | 8.  | 31   |
| 10            | Mer.              | 3.                                | 12. | 54.                              | 48 | 4.                      | 21.                       | 4             |                  | 29. | 33. | 54. | 6  | 5.  | 27 |   | 9.  | 24   |
| 11            | Jov.              | 3.                                | 24. | 46.                              | 52 | 3.                      | 44.                       | 52            |                  | 29. | 30. | 54. | 1  | 6.  | 31 |   | 10. | 5    |
| 12            | Ven.              | 4.                                | 6.  | 35.                              | 43 | 2.                      | 59.                       | 6             |                  | 29. | 31. | 54. | 3  | 7.  | 35 |   | 10. | 39   |
| 13            | Sat.              | 4.                                | 18. | 24.                              | 42 | 1.                      | 55.                       | 27            |                  | 29. | 37. | 54. | 14 | 8.  | 40 |   | 11. | 3    |
| 14            | Dom.              | 5.                                | 0.  | 17.                              | 43 | 1.                      | 5.                        | 54            |                  | 29. | 48. | 54. | 33 | 9.  | 45 |   | 11. | 24   |
| 15            | Lun.              | 5.                                | 12. | 19.                              | 40 | 0.                      | 2.                        | 36            |                  | 30. | 3.  | 55. | 2  | 10. | 51 |   | 11. | 42   |
| 16            | Mer.              | 5.                                | 24. | 35.                              | 46 | 1.                      | 2.                        | 3             | A                | 30. | 25. | 55. | 41 | 11. | 57 |   | 11. | 57   |
| 17            | Mer.              | 6.                                | 7.  | 11.                              | 21 | 2.                      | 5.                        | 28            |                  | 30. | 50. | 56. | 27 | *   | *  |   | 0.  | 13 V |
| 18            | Jov.              | 6.                                | 20. | 11.                              | 13 | 3.                      | 4.                        | 25            |                  | 31. | 19. | 57. | 21 | 1.  | 4M |   | 0.  | 31   |
| 19            | Ven.              | 7.                                | 3.  | 39.                              | 42 | 3.                      | 55.                       | 23            |                  | 31. | 51. | 58. | 19 | 2.  | 16 |   | 0.  | 51   |
| 20            | Sat.              | 7.                                | 17. | 38.                              | 12 | 4.                      | 34.                       | 15            |                  | 32. | 23. | 59. | 17 | 3.  | 30 |   | 1.  | 14   |
| 21            | Dom.              | 8.                                | 2.  | 6.                               | 18 | 4.                      | 57.                       | 14            |                  | 32. | 52. | 60. | 9  | 4.  | 50 |   | 1.  | 45   |
| 22            | Lun.              | 8.                                | 16. | 59.                              | 32 | 5.                      | 1.                        | 2             |                  | 33. | 13. | 60. | 49 | 6.  | 11 |   | 2.  | 25   |
| 23            | Mer.              | 9.                                | 2.  | 8.                               | 53 | 4.                      | 43.                       | 56            |                  | 33. | 25. | 61. | 12 | 7.  | 27 |   | 3.  | 25   |
| 24            | Mer.              | 9.                                | 17. | 24.                              | 52 | 4.                      | 6.                        | 33            |                  | 33. | 28. | 61. | 16 | 8.  | 33 |   | 4.  | 38   |
| 25            | Jov.              | 10.                               | 2.  | 35.                              | 10 | 3.                      | 11.                       | 54            |                  | 33. | 19. | 61. | 1  | 9.  | 22 |   | 6.  | 2    |
| 26            | Ven.              | 10.                               | 17. | 30.                              | 45 | 2.                      | 4.                        | 38            |                  | 33. | 3.  | 60. | 31 | 10. | 0  |   | 7.  | 28   |
| 27            | Sat.              | 11.                               | 2.  | 4.                               | 39 | 0.                      | 50.                       | 40            |                  | 32. | 40. | 59. | 48 | 10. | 26 |   | 8.  | 48   |
| 28            | Dom.              | 11.                               | 16. | 13.                              | 43 | 0.                      | 24.                       | 34            |                  | 32. | 12. | 58. | 57 | 10. | 50 |   | 10. | 8    |
| 29            | Lun.              | 11.                               | 29. | 57.                              | 29 | 1.                      | 36.                       | 14            |                  | 31. | 43. | 58. | 4  | 11. | 9  |   | 11. | 23   |
| 30            | Mer.              | 0.                                | 13. | 17.                              | 57 | 2.                      | 40.                       | 36            |                  | 31. | 16. | 57. | 15 | 11. | 26 |   | *   | *    |
| 31            | Mer.              | 0.                                | 26. | 17.                              | 18 | 3.                      | 34.                       | 54            |                  | 30. | 50. | 56. | 26 | 11. | 43 |   | 0.  | 34 M |

| Dies<br>mensis | Longitudo<br>Planetarum | Latitudo<br>Planetarum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Transi-<br>tus Pla-<br>netarum<br>per Me-<br>ridianum | Occulus<br>Plane-<br>tarum |
|----------------|-------------------------|------------------------|---------------------------------|--------------------------|---|----------------------------|
|                | S. G. M.                | G. M.                  | G. M.                           | H. M.                    | H. M.   | H. M.                      |

## S A T U R N U S .

|    |              |            |          |         |         |         |
|----|--------------|------------|----------|---------|---------|---------|
| 1  | 9. 10. 53, 8 | 0. 20, 0 B | 22. 41 A | 9. 55 M | 2. 17 V | 6. 39 V |
| 7  | 9. 11. 35, 1 | 0. 19, 3   | 22. 38   | 9. 32   | 1. 54   | 6. 16   |
| 13 | 9. 12. 9, 4  | 0. 18, 5   | 22. 26   | 9. 7    | 1. 30   | 5. 53   |
| 19 | 9. 12. 56, 2 | 0. 17, 6   | 22. 33   | 8. 43   | 1. 7    | 5. 31   |
| 25 | 9. 13. 39, 0 | 0. 16, 5   | 22. 30   | 8. 19   | 0. 43 M | 5. 7    |

## J U P I T E R .

|    |              |            |          |         |         |         |
|----|--------------|------------|----------|---------|---------|---------|
| 1  | 10. 0. 18, 2 | 0. 37, 5 A | 20. 44 A | 11. 9 M | 3. 41 V | 8. 13 V |
| 7  | 10. 1. 29, 0 | 0. 37, 4   | 20. 28   | 10. 46  | 3. 20   | 7. 54   |
| 13 | 10. 2. 40, 5 | 0. 37, 4   | 20. 12   | 10. 23  | 2. 58   | 7. 33   |
| 19 | 10. 3. 56, 6 | 0. 37, 5   | 19. 15   | 10. 1   | 2. 37   | 7. 13   |
| 25 | 10. 5. 13, 2 | 0. 37, 6   | 19. 36   | 9. 37   | 2. 15   | 6. 53   |

## M A R S .

|    |              |            |        |         |        |         |
|----|--------------|------------|--------|---------|--------|---------|
| 1  | 0. 8. 16, 1  | 0. 16, 2 A | 3. 2 B | 1. 48 V | 8. 0 V | 2. 12 M |
| 7  | 0. 10. 17, 3 | 0. 9, 5    | 4. 3   | 1. 26   | 7. 42  | 1. 58   |
| 13 | C. 12. 40, 6 | 0. 8, 6 B  | 5. 9   | 1. 4    | 7. 24  | 1. 44   |
| 19 | O. 15. 10, 0 | 0. 18, 7   | 6. 18  | 0. 43   | 7. 7   | 1. 31   |
| 25 | O. 17. 52, 2 | 0. 27, 2   | 7. 26  | 0. 21   | 6. 50  | 1. 19   |

## V E N U S .

|    |              |            |         |         |         |         |
|----|--------------|------------|---------|---------|---------|---------|
| 1  | 6. 27. 35, 9 | 1. 45, 3 B | 8. 59 A | 3. 51 M | 9. 15 M | 2. 39 V |
| 7  | 7. 1. 38, 1  | 2. 22, 7   | 9. 50   | 2. 46   | 9. 5    | 2. 24   |
| 13 | 7. 6. 10, 4  | 2. 53, 0   | 10. 58  | 3. 40   | 8. 56   | 2. 12   |
| 19 | 7. 11. 33, 8 | 3. 8, 5    | 12. 19  | 3. 41   | 8. 51   | 2. 1    |
| 25 | 7. 17. 12, 0 | 3. 18, 6   | 13. 49  | 2. 44   | 8. 47   | 1. 50   |

## M E R C U R I U S .

|    |              |            |          |         |         |         |
|----|--------------|------------|----------|---------|---------|---------|
| 1  | 7. 27. 11, 5 | 0. 39, 9 B | 18. 54 A | 6. 29 M | 11. 9 M | 3. 49 V |
| 7  | 8. 6. 20, 0  | 0. 2, 4    | 21. 26   | 6. 53   | 11. 22  | 3. 51   |
| 13 | 8. 15. 50, 9 | 0. 42, 7   | 23. 26   | 7. 16   | 11. 35  | 3. 54   |
| 19 | 8. 25. 18, 2 | 1. 15, 3   | 24. 38   | 7. 37   | 11. 50  | 4. 3    |
| 25 | 9. 4. 47, 7  | 1. 43, 5   | 26. 6    | 8. 0    | C. 5 V  | 4. 10   |

## ECLIPSES SATELLITUM JOVIS.

| Dies<br>mensis | I. Satelles. |     |    | II. Satelles. |     |     | III. Satelles. |                                |              |
|----------------|--------------|-----|----|---------------|-----|-----|----------------|--------------------------------|--------------|
|                | Emerfiones   |     |    | Emerfiones    |     |     | Imers. Emerf.  |                                |              |
|                | H.           | M.  | S. | H.            | M.  | S.  | H.             | M.                             | S.           |
| 3              | 13.          | 17. | 15 | 3             | 15. | 38. | 51             | 3                              | 22. 50. 37 I |
| 4              | 7.           | 45. | 25 | 7             | 4.  | 54. | 3              | 4                              | 2. 24. 11 E  |
| 6              | 2.           | 13. | 34 | 10            | 18. | 11. | 29             | 11                             | 6. 22. 4 E   |
| 7              | 20.          | 41. | 41 | 14            | 7.  | 27. | 49             | 18                             | 10. 20. 5 E  |
| 9              | 15.          | 9.  | 45 | 17            | 20. | 43. | 56             | 25                             | 14. 17. 46 E |
| 11             | 9.           | 37. | 48 | 21            | 9.  | 59. | 55             |                                |              |
| 13             | 4.           | 5.  | 45 | 24            | 29. | 16. | 5              |                                |              |
| 14             | 22.          | 33. | 51 | 23            | 12. | 32. | 12             |                                |              |
| 16             | 17.          | 1.  | 50 |               |     |     |                |                                |              |
| 18             | 11.          | 29. | 48 |               |     |     |                |                                |              |
| 20             | 5.*          | 57. | 42 |               |     |     |                |                                |              |
| 21             | 0.           | 25. | 43 |               |     |     |                |                                |              |
| 23             | 18.          | 53. | 40 |               |     |     |                |                                |              |
| 25             | 13.          | 21. | 36 |               |     |     |                |                                |              |
| 27             | 7.           | 49. | 32 |               |     |     |                |                                |              |
| 29             | 2.           | 17. | 27 |               |     |     |                |                                |              |
| 30             | 20.          | 44. | 21 |               |     |     |                |                                |              |
|                |              |     |    |               |     |     | Dies           | IV. Satelles.<br>Imers. Emerf. |              |
|                |              |     |    |               |     |     | 12             | 9. 48. 7 I                     |              |
|                |              |     |    |               |     |     | 12             | 14. 29. 41 E                   |              |
|                |              |     |    |               |     |     | 29             | 3. 50. 48 I                    |              |
|                |              |     |    |               |     |     | 29             | 8. 33. 48 E                    |              |

| Dies | Diameter<br>Solis |       | Mora<br>transitus<br>Solis per<br>Meridian. |       | Motus<br>horarius<br>Solis |       | Logaritmus<br>distantia<br>Solis a terra<br>posita media<br>100000 |        | Longitudo<br>Nodi Luna |     |    |
|------|-------------------|-------|---|-------|----------------------------|-------|--|--------|------------------------|-----|----|
|      | M. S.             |       | M. S.                                       |       | M. S.                      |       |  |        | S. G. M.               |     |    |
|      |                   |       |   |       |                            |       |  |        |                        |     |    |
| 1    | 32.               | 31, 4 | 2.  | 20, 2 | 2.                         | 32, 2 | 4.   | 993570 | 11.                    | 14. | 19 |
| 4    | 32.               | 32, 3 | 2.  | 20, 7 | 2.                         | 32, 4 | 4.   | 993391 | 11.                    | 14. | 9  |
| 7    | 32.               | 33, 0 | 2.  | 21, 2 | 2.                         | 32, 5 | 4.   | 992330 | 11.                    | 14. | 0  |
| 10   | 32.               | 33, 7 | 2.  | 21, 5 | 2.                         | 32, 6 | 4.   | 993087 | 11.                    | 13. | 50 |
| 13   | 32.               | 34, 3 | 2.  | 21, 8 | 2.                         | 32, 7 | 4.   | 992964 | 11.                    | 13. | 40 |
| 16   | 32.               | 34, 8 | 2.  | 21, 9 | 2.                         | 32, 7 | 4.   | 992860 | 11.                    | 13. | 31 |
| 19   | 32.               | 35, 2 | 2.  | 22, 0 | 2.                         | 32, 8 | 4.   | 992776 | 11.                    | 13. | 21 |
| 22   | 32.               | 35, 5 | 2.  | 22, 0 | 2.                         | 32, 8 | 4.   | 992712 | 11.                    | 13. | 12 |
| 25   | 32.               | 35, 6 | 2.  | 22, 0 | 2.                         | 32, 9 | 4.   | 992668 | 11.                    | 13. | 2  |
| 28   | 32.               | 35, 7 | 2.  | 22, 0 | 2.                         | 32, 9 | 4.   | 992645 | 11.                    | 12. | 53 |

DECEMBER 1783.

## POSITIONES SATELLITUM JOVIS

*Oriens**5<sup>h</sup> Vespere**Occidens*

|    |     |       |       |    |
|----|-----|-------|-------|----|
| 1  | .4  | 2° 5' | ○     | .3 |
| 2  | .4  | ○     | .2    | .3 |
| 3  | .4  | ○     | .2    | .3 |
| 4  | .8  | 2.    | ○     | .4 |
| 5  | 2.0 | 3.    | ○     | .4 |
| 6  | .3  | 2.    | ○     | .2 |
| 8  | .1  | 2° 2' | ○     | .3 |
| 9  | .1  | 2° 3' | ○     | .3 |
| 10 | .1  | ○     | .2    | .4 |
| 12 | 2.0 | 3.    | ○     | .4 |
| 13 | .4  | 2° 4. | ○     | .2 |
| 15 | .4  | 2° 2. | ○     | .3 |
| 16 | .4  | ○     | 2° 2. | .3 |
| 17 | .4  | .2    | ○     | .2 |
| 18 | .4  | 2.    | ○     | .2 |
| 19 | .1  | 2° 4. | ○     | .2 |
| 21 | 2.0 | .3    | ○     | .4 |
| 22 | .3  | 2.    | ○     | .2 |
| 23 | .3  | ○     | .2    | .4 |
| 24 | .1  | ○     | .2    | .4 |
| 25 | .2  | ○     | .2    | .4 |
| 26 | .3  | 2° 2. | ○     | .4 |
| 27 | 2.0 | .3    | ○     | .2 |
| 28 | .3  | ○     | .2    | .4 |
| 29 | 2.0 | 2.    | ○     | .3 |
| 30 | .4  | 4.    | ○     | .3 |
| 31 | .4  | .1    | ○     | .2 |

Positiones Satellitum tempore eclipsium.

|    |    |    |    |    |
|----|----|----|----|----|
| 7  | .3 | 2. | ○  | .1 |
| 11 | .2 | 2. | ○  | .1 |
| 14 | .4 | .3 | 2. | .1 |
| 20 | .3 | .4 | 2. | .2 |

Positiones mediae 300 principalium stellarum fixarum pro i. Jan. 1783, ex Catalogo D. *de la Caille* computatae secundum earum ascensionem rectam, declinationem, longitudinem, latitudinem & angulum positionis, quibus adjiciuntur variationes annuae, aberrationes maxima lucis, & argumenta aberrationis in ascensionem rectam, & declinationem.

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SYDERIS                     | Ascensio recta |     |    | Va-                       | Aber. | Argum.                        |
|-----------------------------------|----------------|-----|----|---------------------------|-------|-------------------------------|
|                                   | H.             | M.  | S. | ri-<br>tio<br>annua<br>S. | S.    | aberra-<br>tionis<br>S. G. M. |
| γ Pegasi <i>Algenib.</i> 2        | 0.             | 2.  | 7  | 0. 31. 16,0               | 46,2  | 18,7                          |
| α Phoenicis . . . . . 2. 3        | 0.             | 15. | 31 | 3. 52. 45,2               | 44,9  | 25,3                          |
| δ Andromedae . . . . . 3          | 0.             | 27. | 45 | 6. 56. 19,1               | 47,5  | 21,1                          |
| ε Cassiopeiae . . . . . 3         | 0.             | 28. | 17 | 7. 4. 19,8                | 49,6  | 32,3                          |
| ε Ceti . . . . . 2                | 0.             | 32. | 41 | 8. 10. 21,4               | 45,2  | 19,4                          |
| γ Cassiopeae . . . . . 3          | 0.             | 43. | 44 | 10. 56. 7,1               | 52,5  | 36,3                          |
| ε Ursae min. <i>Polaris</i> 2     | 0.             | 48. | 16 | 12. 4. 1,9                | 175,3 | 566,3                         |
| ε Andromedae . . . . . 2          | 0.             | 57. | 37 | 14. 24. 14,3              | 49,5  | 22,3                          |
| ε Ceti . . . . . 3. 4             | 0.             | 57. | 40 | 14. 25. 4,6               | 45,1  | 18,8                          |
| γ Cassiopeae . . . . . 3          | 1.             | 11. | 45 | 17. 56. 10,0              | 56,3  | 36,0                          |
| ε Ceti . . . . . 3. 4             | 1.             | 13. | 18 | 18. 18. 0,7               | 45,1  | 18,7                          |
| ε Cassiopeae . . . . . 3          | 1.             | 28. | 58 | 24. 44. 32,6              | 62,7  | 40,5                          |
| ε Trianguli bor. . . . . 3. 4     | 1.             | 40. | 45 | 25. 11. 19,6              | 50,7  | 21,3                          |
| γ Arietis . . . . . 3             | 1.             | 41. | 39 | 25. 24. 38,8              | 49,0  | 19,6                          |
| ε Arietis . . . . . 3. 4          | 1.             | 42. | 40 | 25. 40. 6,8               | 49,2  | 19,8                          |
| γ Andromedae . . . . . 2          | 1.             | 50. | 39 | 27. 39. 42,4              | 54,2  | 24,9                          |
| ε Pisceum . . . . . 3             | 1.             | 50. | 51 | 47. 42. 37,6              | 46,4  | 18,7                          |
| ε Arietis . . . . . 3             | 1.             | 54. | 58 | 28. 44. 36,8              | 50,1  | 20,2                          |
| ε Trianguli bor. . . . . 4        | 1.             | 56. | 41 | 29. 10. 10,9              | 52,7  | 22,6                          |
| γ . . . . . 4                     | 2.             | 4.  | 58 | 31. 6. 59,8               | 52,8  | 22,4                          |
| ε Ceti . . . . . var.             | 2.             | 8.  | 19 | 32. 4. 50,8               | 45,4  | 18,9                          |
| δ . . . . . 3                     | 2.             | 28. | 19 | 37. 4. 51,7               | 46,0  | 19,0                          |
| ε . . . . . 3                     | 2.             | 29. | 5  | 37. 16. 17,0              | 43,4  | 19,4                          |
| γ Lili Borea . . . . . 3          | 2.             | 32. | 5  | 38. 1. 14,4               | 46,6  | 19,0                          |
| Lili Austria . . . . . 4          | 2.             | 34. | 59 | 38. 44. 44,3              | 52,9  | 21,1                          |
| Lili Austria . . . . . 4          | 2.             | 37. | 14 | 39. 18. 34,3              | 52,4  | 23,0                          |
| γ Persei . . . . . 3              | 2.             | 49. | 12 | 42. 17. 53,8              | 63,7  | 31,5                          |
| ε Eridani . . . . . 3             | 2.             | 50. | 3  | 42. 30. 46,1              | 34,3  | 25,4                          |
| ε Ceti . . . . . 2                | 2.             | 50. | 57 | 42. 44. 22,1              | 46,9  | 19,2                          |
| ε Persei <i>Algol</i> . . . . . 2 | 2.             | 54. | 7  | 43. 31. 44,4              | 57,8  | 25,0                          |
| ε Fornacis . . . . . 3. 4         | 3.             | 2.  | 51 | 45. 42. 51,8              | 37,9  | 22,1                          |
| ζ Eridani . . . . . 3             | 3.             | 5.  | 19 | 46. 19. 43,7              | 43,6  | 19,5                          |
| ε Persei . . . . . 3              | 3.             | 8.  | 56 | 47. 13. 54,5              | 63,0  | 29,2                          |
| ε Eridani . . . . . 3             | 3.             | 23. | 46 | 50. 41. 24,4              | 43,3  | 19,7                          |
| δ Persei . . . . . 3              | 3.             | 27. | 31 | 51. 53. 11,0              | 63,0  | 28,5                          |

pro 1. Jan. 1783. ex Catalogo D. de la Caille computata &amp;c.

| Declinatio-    | Varia- | S.    | Argum.    | Longitudo            | Latitudo     | Angularis  |
|----------------|--------|-------|-----------|----------------------|--------------|------------|
| G. M. S.       | tio    | S.    | aberra-   |                      |              | positionis |
|                | annus  | S.    | tionis    | S. G. M. S. B. M. S. | G. M. S.     | G. M. S.   |
| 13. 58. 39,6 B | + 20,0 | 9, 1  | 4. 8. 6.  | 0. 6. 8. 6           | 12. 26. 28 B | 24. 5. 9   |
| 43. 28. 52,2 A | - 20,0 | 15, 2 | 6. 25. 46 | 11. 12. 26. 34       | 40. 35. 48 A | 31. 33. 29 |
| 59. 42. 20,0 B | + 19,9 | 11, 4 | 4. 29. 19 | 0. 18. 47. 24        | 24. 20. 50 B | 25. 43. 14 |
| 55. 20. 40,1 B | + 19,9 | 16, 6 | 5. 20. 41 | 1. 4. 46. 23         | 46. 36. 18 B | 36. 7. 24  |
| 19. 10. 52,0 A | - 19,8 | 10, 8 | 7. 22. 10 | 11. 29. 31. 39       | 20. 47. 2 A  | 24. 56. 30 |
| 59. 32. 14,1 B | + 19,7 | 17, 0 | 5. 26. 27 | 1. 10. 55. 22        | 48. 47. 23 B | 36. 24. 50 |
| 88. 8. 53,6 B  | + 19,6 | 19, 9 | 6. 10. 28 | 2. 25. 31. 53        | 66. 4. 21 B  | 78. 48. 41 |
| 34. 27. 59,7 B | + 19,4 | 11, 4 | 5. 10. 0  | 0. 27. 22. 39        | 25. 56. 19 B | 24. 24. 12 |
| 41. 30. 53,4 A | - 19,4 | 9, 9  | 6. 4. 21  | 0. 8. 43. 12         | 16. 6. 44 A  | 23. 40. 95 |
| 59. 6. 30 B    | + 19,2 | 16, 3 | 6. 2. 36  | 1. 24. 53. 51        | 46. 23. 23 B | 33. 19. 39 |
| 9. 18. 29,0 A  | - 19,0 | 9, 3  | 8. 10. 44 | 0. 13. 12. 13        | 15. 46. 3 A  | 23. 8. 15  |
| 61. 35. 28,5 B | + 18,2 | 16, 4 | 6. 11. 1  | 1. 21. 44. 57        | 47. 31. 23 B | 32. 23. 23 |
| 28. 30. 1,5 B  | + 18,2 | 9, 2  | 5. 9. 14  | 1. 3. 50. 39         | 16. 47. 46 B | 32. 6. 59  |
| 48. 13. 36,2 B | + 18,1 | 7, 6  | 4. 17. 58 | 1. 0. 9. 17          | 7. 9. 19 B   | 21. 15. 34 |
| 29. 44. 31,8 B | + 18,1 | 7, 3  | 4. 21. 39 | 1. 0. 96. 21         | 8. 28. 44 B  | 24. 16. 96 |
| 41. 16. 49,3 B | + 17,8 | 11, 7 | 5. 28. 10 | 1. 11. 12. 19        | 27. 47. 15 B | 23. 30. 3  |
| 1. 42. 35,9 B  | + 17,8 | 7, 7  | 3. 3. 53  | 0. 36. 20. 42        | 9. 4. 36 A   | 20. 55. 18 |
| 22. 25. 48,9 B | + 17,6 | 7, 8  | 4. 29. 8  | 1. 4. 27. 45         | 9. 57. 21 B  | 20. 45. 41 |
| 23. 57. 10,4 B | + 17,5 | 9, 9  | 5. 26. 30 | 1. 9. 19. 18         | 20. 23. 53 B | 21. 47. 96 |
| 32. 50. 7,1 B  | + 17,2 | 9, 4  | 5. 20. 28 | 1. 10. 39. 40        | 18. 55. 48 B | 21. 7. 49  |
| 3. 58. 5,5 A   | - 17,0 | 8, 7  | 8. 22. 15 | 0. 28. 29. 23        | 15. 56. 20 A | 20. 31. 35 |
| 0. 36. 56,1 A  | - 16,0 | 9, 3  | 8. 28. 47 | 1. 4. 32. 21         | 14. 28. 57 A | 19. 9. 31  |
| 11. 43. 1,8 A  | - 16,0 | 10, 9 | 8. 10. 57 | 1. 0. 47. 53         | 26. 0. 16 A  | 20. 29. 0  |
| 2. 13. 51,0 B  | + 16,0 | 7, 5  | 3. 4. 49  | 1. 6. 24. 44         | 12. 0. 38 A  | 18. 42. 40 |
| 22. 30. 21,2 B | + 15,7 | 7, 6  | 5. 18. 2  | 1. 15. 19. 34        | 12. 28. 17 B | 18. 23. 9  |
| 26. 21. 21,4 B | + 15,5 | 7, 2  | 5. 13. 54 | 1. 15. 10. 23        | 10. 26. 5 B  | 18. 45. 43 |
| 52. 38. 30,7 B | + 14,9 | 12, 9 | 6. 22. 54 | 1. 27. 0. 7          | 34. 30. 7 B  | 20. 56. 45 |
| 41. 10. 55,3 A | - 14,8 | 17, 2 | 7. 25. 38 | 0. 20. 12. 39        | 53. 45. 34 A | 39. 46. 39 |
| 3. 13. 34,5 B  | + 14,8 | 7, 3  | 5. 6. 30  | 1. 11. 17. 20        | 12. 26. 16 A | 17. 26. 34 |
| 40. 6. 22,4 B  | + 14,5 | 9, 6  | 6. 12. 18 | 1. 23. 8. 40         | 22. 24. 3 B  | 18. 15. 3  |
| 59. 51. 27,0 A | - 14,0 | 15, 1 | 8. 2. 39  | 1. 1. 30. 24         | 44. 44. 37 A | 23. 3. 5   |
| 2. 38. 11,3 A  | - 13,8 | 10, 3 | 8. 17. 4  | 1. 10. 47. 25        | 25. 56. 57 A | 17. 48. 38 |
| 49. 4. 24,3 B  | + 13,6 | 11, 4 | 6. 25. 45 | 1. 29. 3. 39         | 30. 5. 51 B  | 18. 12. 39 |
| 50. 12. 9,0 A  | - 12,7 | 10, 6 | 8. 17. 45 | 1. 15. 12. 21        | 27. 45. 34 A | 26. 34. 4  |
| 47. 4. 35,4 B  | + 13,4 | 10, 4 | 6. 29. 37 | 2. 8. 46. 33         | 27. 16. 31 B | 16. 8. 25  |

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SYDERIS                | Ascensio recta |     |     | Va-<br>riatio<br>annua | Aber.<br>max. | Argum.<br>Aberra-<br>tionis |           |           |
|------------------------------|----------------|-----|-----|------------------------|---------------|-----------------------------|-----------|-----------|
|                              | H.             | M.  | S.  |                        |               |                             |           |           |
| b Plejadum <i>Eleætra</i>    | 5              | 3.  | 32. | 1                      | 53. 0. 17,8   | 53,0                        | 21,1      | 4. 25. 19 |
| δ Eridani . . . . .          | 3              | 3.  | 32. | 53                     | 53. 13. 16,4  | 43,2                        | 19,7      | 4. 25. 32 |
| γ Plejadum <i>Alcyone</i>    | 3              | 3.  | 34. | 37                     | 53. 39. 13,0  | 53,1                        | 21,1      | 4. 25. 57 |
| f . . . <i>Atlas</i> . . . . | 5              | 3.  | 36. | 17                     | 54. 4. 21,4   | 53,1                        | 21,1      | 4. 26. 22 |
| ζ Persei . . . . .           | 3              | 3.  | 40. | 31                     | 55. 7. 52,4   | 56,1                        | 22,7      | 4. 27. 23 |
| f Eridani . . . . .          | 4              | 3.  | 40. | 36                     | 55. 9. 1,5    | 33,2                        | 24,8      | 4. 27. 25 |
| ε Persei . . . . .           | 3              | 3.  | 43. | 31                     | 55. 50. 11,2  | 59,7                        | 25,2      | 4. 28. 4  |
| ι Eridani . . . . . 4        | 5              | 3.  | 44. | 29                     | 56. 7. 16,1   | 38,3                        | 21,5      | 4. 28. 20 |
| γ . . . . . . . . .          | 3              | 3.  | 47. | 56                     | 56. 58. 54,3  | 41,9                        | 20,1      | 4. 29. 11 |
| ο . . . . . . . . .          | 4              | 4.  | 1.  | 18                     | 60. 19. 32,2  | 43,9                        | 19,7      | 5. 2. 23  |
| γ Tauri . . . . .            | 3              | 4.  | 8.  | 28                     | 60. 51. 53,6  | 50,9                        | 20,3      | 5. 3. 51  |
| ε Eridani . . . . . 3        | 4              | 4.  | 9.  | 42                     | 62. 25. 34,6  | 34,0                        | 23,8      | 5. 4. 23  |
| δ Tauri praeced.             | 4              | 4.  | 10. | 26                     | 62. 36. 35,8  | 51,6                        | 20,6      | 5. 4. 33  |
| δ . . . sequens . .          | 4              | 4.  | 11. | 37                     | 62. 54. 13,3  | 51,1                        | 20,5      | 5. 4. 50  |
| ε Tauri . . . . .            | 4              | 4.  | 15. | 58                     | 63. 59. 23,5  | 52,2                        | 20,8      | 5. 5. 52  |
| α . . . <i>Aldebaran</i>     | 1              | 4.  | 23. | 29                     | 65. 52. 18,9  | 51,4                        | 20,5      | 5. 7. 39  |
| ν Eridani . . . . . 3        | 4              | 4.  | 27. | 8                      | 66. 47. 1,9   | 35,1                        | 23,0      | 5. 8. 30  |
| 53a Eridani . . . . . 3      | 4              | 4.  | 28. | 16                     | 67. 4. 3,4    | 41,3                        | 20,4      | 5. 8. 45  |
| 54a Eridani . . . . . 3      | 4              | 4.  | 30. | 59                     | 67. 44. 49,1  | 39,4                        | 11,0      | 5. 9. 25  |
| ε Tauri . . . . . 4          | 4              | 4.  | 50. | 9                      | 72. 32. 12,1  | 53,6                        | 21,3      | 5. 13. 53 |
| ε Eridani . . . . .          | 3              | 4.  | 57. | 13                     | 74. 18. 8,8   | 44,3                        | 20,0      | 5. 15. 32 |
| α Aurigae <i>Capella</i>     | 1              | 5.  | 0.  | 41                     | 75. 10. 11,2  | 66,0                        | 28,5      | 5. 16. 19 |
| ε Orionis <i>Rigel</i> . .   | 1              | 5.  | 4.  | 8                      | 76. 1. 57,9   | 43,3                        | 20,1      | 5. 17. 7  |
| ε Tauri . . . . . 2          | 5.             | 12. | 35  | 78. 8. 39,2            | 56,7          | 22,7                        | 5. 19. 4  |           |
| γ Orionis . . . . . 2        | 5.             | 13. | 30  | 78. 28. 33,9           | 48,3          | 20,0                        | 5. 19. 17 |           |
| γ Orionis . . . . . 3        | 5.             | 13. | 35  | 78. 23. 39,7           | 45,2          | 19,9                        | 5. 19. 18 |           |
| ε Leporis . . . . . 2        | 5.             | 18. | 57  | 79. 44. 14,4           | 38,6          | 21,3                        | 5. 20. 33 |           |
| δ Orionis . . . . . 2        | 5.             | 20. | 57  | 80. 14. 9,2            | 46,0          | 20,0                        | 5. 21. 1  |           |
| ε Leporis . . . . . 3        | 5.             | 23. | 11  | 80. 47. 42,1           | 39,7          | 21,0                        | 5. 21. 32 |           |
| ζ Tauri . . . . . 3          | 5.             | 24. | 41  | 81. 10. 14,3           | 53,7          | 21,3                        | 5. 21. 52 |           |
| β Orionis . . . . . 3        | 5.             | 24. | 50  | 81. 12. 30,2           | 44,0          | 20,0                        | 5. 21. 55 |           |
| ε . . . . . . . . . 2        | 5.             | 25. | 13  | 81. 18. 18,3           | 45,7          | 19,8                        | 5. 22. 0  |           |
| ζ . . . . . . . . . 2        | 5.             | 29. | 50  | 82. 27. 31,9           | 45,4          | 20,0                        | 5. 23. 4  |           |
| α Columbae . . . .           | 5.             | 31. | 49  | 82. 57. 10,0           | 32,6          | 24,2                        | 5. 23. 31 |           |
| γ Leporis . . . . . 3        | 5.             | 35. | 26  | 83. 51. 35,8           | 37,9          | 21,6                        | 5. 24. 20 |           |

Pro 1. Jan. 1783. ex Catalogo D. de la Caille computatae &c.

| Declinatio<br>G. M. S. | Varia-<br>tio<br>annua<br>S. | g.<br>m.<br>s. | Argum.<br>aberra-<br>tionis<br>S. G. M. | Longitudo<br>S. G. M. S. | Latitudo<br>G. M. S. | Angulus<br>positionis<br>G. M. S. |
|------------------------|------------------------------|----------------|---|--------------------------|----------------------|-----------------------------------|
| 23. 35. 36.9B          | + 12.1                       | 5. 0           | 5. 12. 44                               | 1. 26. 23. 6             | 4. 10. 26B           | 13. 54. 18                        |
| 10. 30. 51.7A          | - 12.0                       | 10. 7          | 8. 18. 15                               | 1. 17. 49. 9             | 28. 45. 13A          | 15. 47. 2                         |
| 23. 35. 14.6B          | + 11.9                       | 4. 9           | 5. 13. 0                                | 1. 26. 57. 43            | 4. 1. 34B            | 13. 41. 19                        |
| 23. 22. 33.7B          | + 11.8                       | 4. 8           | 5. 13. 2                                | 1. 27. 19. 37            | 3. 53. 31B           | 13. 32. 51                        |
| 31. 13. 26.8B          | + 11.5                       | 6. 0           | 6. 9. 26                                | 2. 0. 5. 42              | 11. 18. 19B          | 13. 25. 39                        |
| 38. 17. 34.3A          | - 11.5                       | 17. 1          | 8. 5. 34                                | 1. 7. 29. 15             | 55. 25. 0A           | 23. 44. 45                        |
| 39. 22. 0.4B           | + 11.3                       | 7. 9           | 6. 5. 54                                | 2. 2. 39. 5              | 19. 5. 13B           | 13. 41. 27                        |
| 25. 15. 56.9A          | - 11.2                       | 14. 5          | 8. 10. 50                               | 1. 45. 48. 55            | 43. 40. 24A          | 17. 52. 36                        |
| 14. 8. 16.0A           | - 10.9                       | 11. 7          | 8. 16. 57                               | 1. 20. 49. 41            | 33. 13. 23A          | 15. 2. 13                         |
| 7. 24. 4.5A            | - 9.9                        | 10. 0          | 8. 22. 40                               | 1. 26. 23. 57            | 27. 29. 13A          | 12. 50. 32                        |
| 15. 5. 23.2B           | + 9.5                        | 4. 3           | 4. 5. 12                                | 2. 2. 46. 3              | 5. 45. 31A           | 10. 52. 53                        |
| 34. 20. 16.1A          | - 9.3                        | 16. 6          | 8. 11. 38                               | 1. 19. 26. 53            | 53. 59. 31A          | 18. 16. 36                        |
| 17. 1. 11.9B           | + 9.2                        | 3. 9           | 4. 13. 22                               | 2. 3. 50. 3              | 3. 59. 44A           | 10. 35. 3                         |
| 16. 55. 39.9B          | + 9.1                        | 3. 9           | 4. 12. 46                               | 2. 4. 5. 31              | 4. 8. 15A            | 10. 28. 90                        |
| 18. 41. 6.6B           | + 8.9                        | 3. 6           | 4. 21. 8                                | 2. 5. 25. 39             | 2. 35. 34A           | 10. 4. 11                         |
| 16. 3. 37.3B           | + 8.2                        | 3. 9           | 4. 6. 47                                | 2. 6. 45. 25             | 5. 29. 0A            | 9. 24. 54                         |
| 31. 1. 0.1A            | - 7.9                        | 16. 0          | 8. 15. 17                               | 1. 26. 50. 52            | 51. 50. 48A          | 14. 43. 25                        |
| 14. 44. 20.4A          | - 7.8                        | 12. 1          | 8. 20. 36                               | 2. 2. 13. 47             | 36. 1. 24A           | 11. 3. 47                         |
| 20. 5. 52.4A           | - 7.6                        | 11. 0          | 8. 23. 2                                | 2. 1. 41. 41             | 41. 24. 28A          | 11. 36. 7                         |
| 21. 15. 50.3B          | + 6.0                        | 2. 4           | 5. 3. 39                                | 2. 13. 45. 21            | 1. 13. 39A           | 6. 51. 23                         |
| 5. 23. 45.8A           | - 5.4                        | 9. 6           | 8. 26. 59                               | 2. 12. 15. 21            | 27. 53. 18A          | 7. 0. 11                          |
| 45. 45. 34.7B          | + 5.1                        | 8. 0           | 8. 2. 46                                | 2. 18. 49. 32            | 22. 51. 43B          | 6. 21. 36                         |
| 8. 27. 52.8A           | - 4.9                        | 10. 6          | 8. 26. 8                                | 2. 13. 48. 4             | 31. 9. 13A           | 6. 27. 1                          |
| 28. 24. 19.4B          | + 4.1                        | 2. 5           | 7. 8. 2                                 | 2. 19. 32. 33            | 5. 21. 56B           | 4. 42. 51                         |
| 6. 8. 13.7B            | + 4.1                        | 6. 0           | 3. 4. 6                                 | 2. 17. 55. 3             | 16. 50. 53A          | 4. 48. 36                         |
| 2. 36. 40.0A           | - 4.0                        | 8. 8           | 8. 28. 47                               | 2. 17. 7. 39             | 25. 23. 58A          | 5. 5. 46                          |
| 20. 56. 39.6A          | - 3.6                        | 13. 9          | 8. 24. 45                               | 2. 16. 38. 33            | 43. 56. 29A          | 5. 38. 49                         |
| 0. 48. 23.3A           | - 3.4                        | 8. 1           | 8. 29. 48                               | 2. 19. 20. 10            | 23. 35. 2A           | 4. 13. 37                         |
| 17. 59. 28.1A          | - 3.2                        | 13. 1          | 8. 25. 43                               | 2. 18. 21. 12            | 41. 5. 29A           | 4. 50. 58                         |
| 20. 59. 38.8B          | + 3.1                        | 1. 5           | 4. 19. 21                               | 2. 21. 45. 17            | 2. 13. 31A           | 3. 30. 18                         |
| 6. 3. 57.8A            | - 3.1                        | 9. 8           | 8. 28. 8                                | 2. 19. 58. 11            | 29. 13. 25A          | 4. 0. 2                           |
| 1. 21. 17.6A           | - 3.0                        | 8. 4           | 8. 29. 31                               | 2. 20. 26. 12            | 24. 32. 18A          | 3. 47. 42                         |
| 2. 4. 18.0A            | - 2.6                        | 8. 6           | 8. 29. 22                               | 2. 21. 39. 28            | 25. 19. 32A          | 3. 18. 54                         |
| 34. 11. 57.9A          | - 2.5                        | 16. 9          | 8. 25. 18                               | 2. 19. 8. 31             | 57. 24. 21A          | 5. 11. 45                         |
| 22. 31. 42.3A          | - 2.2                        | 14. 3          | 8. 26. 43                               | 2. 21. 50. 55            | 45. 49. 26A          | 3. 20. 18                         |

## Positiones mediae 300 principalium stellarum ex ariam

| NOMEN SYDKRIS                        | Ascenso rectus |     |    | Varia-<br>tio<br>nibus | Aber-<br>ratio<br>ne | Argum.<br>aberra-<br>tionis |    |          |
|--------------------------------------|----------------|-----|----|------------------------|----------------------|-----------------------------|----|----------|
|                                      | H.             | M.  | S. |                        |                      |                             | S. | S. G. M. |
| $\alpha$ Orionis . . . . . 2. 3      | 5.             | 37. | 29 | 84. 22. 20,2           | 43,7                 | 20,2                        | 5. | 24. 49   |
| $\delta$ Leporis . . . . . 3. 4      | 5.             | 42. | 0  | 85. 29. 58,5           | 38,5                 | 21,4                        | 5. | 25. 51   |
| $\epsilon$ Columbae . . . . . 3      | 5.             | 43. | 00 | 85. 19. 58,1           | 31,7                 | 24,8                        | 5. | 26. 19   |
| $\alpha$ Orionis . . . . . 1         | 5.             | 43. | 06 | 85. 51. 29,9           | 48,7                 | 20,0                        | 5. | 26. 10   |
| $\epsilon$ Aurigae . . . . . 2. 3    | 5.             | 43. | 33 | 85. 53. 16,1           | 66,0                 | 28,1                        | 5. | 26. 12   |
| $\theta$ . . . . . 3                 | 5.             | 44. | 55 | 86. 19. 49,9           | 61,3                 | 25,0                        | 5. | 26. 31   |
| $\gamma$ Castoris . . . . . 3. 4     | 6.             | 1.  | 47 | 90. 26. 38,2           | 54,5                 | 20,0                        | 6. | 0. 23    |
| $\mu$ Pollucis . . . . . 3. 4        | 6.             | 9.  | 53 | 92. 27. 20,7           | 54,5                 | 20,0                        | 6. | 2. 13    |
| $\zeta$ Canis maj. . . . . 2. 3      | 6.             | 12. | 0  | 93. 0. 1,8             | 34,6                 | 23,0                        | 6. | 2. 44    |
| $\epsilon$ . . . . . 2. 3            | 6.             | 13. | 9  | 93. 17. 16,9           | 39,7                 | 21,0                        | 6. | 2. 52    |
| $\delta$ Columbae . . . . . 4        | 6.             | 14. | 12 | 93. 33. 5,8            | 33,0                 | 23,9                        | 6. | 9. 14    |
| $\gamma$ Pollucis . . . . . 2. 3     | 6.             | 25. | 6  | 96. 16. 29,9           | 52,1                 | 20,8                        | 6. | 5. 45    |
| $\epsilon$ Castoris . . . . . 3      | 6.             | 30. | 25 | 97. 38. 39,2           | 55,5                 | 22,1                        | 6. | 7. 0     |
| $\gamma$ Navis . . . . . 3           | 6.             | 31. | 8  | 97. 46. 56,7           | 27,6                 | 27,3                        | 6. | 7. 8     |
| $\alpha$ Canis maj. <i>Sirius</i> 1  | 6.             | 35. | 37 | 98. 54. 13,1           | 40,3                 | 20,8                        | 6. | 8. 9     |
| $\epsilon$ . . . . . 3               | 6.             | 50. | 7  | 102. 31. 28,4          | 35,4                 | 22,7                        | 6. | 11. 31   |
| $\zeta$ Pollucis . . . . . 3         | 6.             | 51. | 13 | 102. 48. 16,2          | 53,6                 | 21,3                        | 6. | 11. 45   |
| $b$ Canis maj. . . . . 4             | 6.             | 53. | 5  | 103. 16. 13,3          | 35,9                 | 22,4                        | 6. | 12. 11   |
| $\gamma$ . . . . . 4                 | 6.             | 53. | 57 | 103. 29. 7,7           | 40,8                 | 20,6                        | 6. | 12. 23   |
| $\delta$ . . . . . 2                 | 6.             | 59. | 35 | 104. 53. 38,1          | 36,7                 | 22,1                        | 6. | 13. 42   |
| $\delta$ Pollucis . . . . . 3        | 7.             | 7.  | 9  | 106. 47. 8,0           | 54,0                 | 21,5                        | 6. | 15. 28   |
| $\gamma$ Navis . . . . . 3           | 7.             | 9.  | 29 | 107. 28. 18,5          | 31,9                 | 24,8                        | 6. | 16. 0    |
| $\epsilon$ Canis min. . . . . 3      | 7.             | 15. | 23 | 108. 50. 44,2          | 49,1                 | 20,1                        | 6. | 17. 22   |
| $\gamma$ Canis maj. . . . . 3        | 7.             | 15. | 31 | 108. 58. 42,5          | 35,7                 | 18,0                        | 6. | 17. 23   |
| $\epsilon$ Castoris . . . . . 1. 2   | 7.             | 20. | 44 | 110. 10. 58,8          | 58,1                 | 23,5                        | 6. | 18. 37   |
| $\epsilon$ Navis . . . . . 3         | 7.             | 22. | 22 | 110. 35. 30,7          | 28,7                 | 27,0                        | 6. | 19. 0    |
| $\alpha$ Canis min. <i>Procyon</i> I | 7.             | 27. | 58 | 111. 59. 29,3          | 48,0                 | 19,9                        | 6. | 20. 18   |
| In ventre Monoc. 4                   | 7.             | 30. | 53 | 112. 43. 17,9          | 43,2                 | 20,1                        | 6. | 20. 59   |
| $\epsilon$ Pollucis . . . . . 2. 3   | 7.             | 32. | 2  | 113. 0. 32,9           | 56,1                 | 22,5                        | 6. | 21. 15   |
| $\epsilon$ Navis . . . . . 3. 4      | 7.             | 40. | 11 | 115. 8. 40,0           | 37,9                 | 21,3                        | 6. | 23. 11   |
| $\alpha$ . . . . . 4                 | 7.             | 44. | 46 | 116. 11. 38,9          | 31,1                 | 25,7                        | 6. | 24. 19   |
| $\zeta$ . . . . . 2                  | 7.             | 55. | 58 | 118. 59. 33,0          | 31,8                 | 25,4                        | 6. | 26. 56   |
| $\rho$ . . . . . 3. 2                | 7.             | 58. | 19 | 119. 34. 37,7          | 38,5                 | 21,4                        | 6. | 27. 19   |
| $\epsilon$ Canceris . . . . . 3. 4   | 8.             | 4.  | 44 | 121. 11. 6,5           | 49,1                 | 19,9                        | 6. | 29. 0    |
| $\gamma$ . . . . . 4                 | 8.             | 30. | 43 | 127. 40. 38,0          | 58,6                 | 21,0                        | 7. | 6. 7     |

pro 1. Jan. 1783. ex Catalogo D. de la Caille computatae &c.

| <i>Declinatio-</i> | <i>Varia-</i> | <i>Argum.</i> | <i>Longitudo</i> | <i>Latitudo</i>    | <i>Angulus</i>  |             |            |
|--------------------|---------------|---------------|------------------|--------------------|-----------------|-------------|------------|
| <i>G. M. S.</i>    | <i>annua</i>  | <i>aberr.</i> | <i>aberra-</i>   | <i>positionis</i>  | <i>G. M. S.</i> |             |            |
|                    |               |               | <i>S. G. M.</i>  | <i>S. G. M. S.</i> |                 |             |            |
| 9. 45. 31. 7A      | —             | 2.0           | 10. 9            | 8. 28. 15          | 2. 23. 22. 29   | 33. 6. 5A   | 2. 40. 21  |
| 20. 54. 18. 3A     | —             | 1.6           | 14. 0            | 8. 27. 42          | 2. 24. 7. 21    | 44. 17. 7A  | 2. 30. 8   |
| 35. 51. 49. 0A     | —             | 1.5           | 17. 9            | 8. 27. 8           | 2. 23. 23. 14   | 59. 14. 23A | 3. 14. 29  |
| 7. 21. 6. 2B       | +             | 1.5           | 5. 6             | 3. 1. 55           | 2. 25. 43. 31   | 16. 5. 32A  | 1. 42. 56  |
| 44. 54. 10. 6B     | +             | 1.5           | 7. 3             | 8. 22. 11          | 2. 26. 53. 1    | 21. 28. 21B | 1. 45. 6   |
| 37. 10. 40. 8B     | +             | 1.3           | 4. 8             | 8. 20. 21          | 2. 26. 54. 30   | 13. 44. 46B | 1. 32. 41  |
| 52. 33. 19. 7B     | —             | 0.1           | 0. 3             | 2. 20. 12          | 3. 0. 24. 36    | 0. 55. 5A   | 0. 10. 37  |
| 22. 36. 33. 1B     | —             | 0.8           | 0. 4             | 1. 3. 22           | 3. 2. 16. 1     | 0. 50. 37A  | 0. 58. 41  |
| 29. 58. 41. 1A     | +             | 1.0           | 16. 0            | 9. 1. 55           | 3. 4. 21. 42    | 53. 24. 17A | 2. 0. 15   |
| 17. 51. 43. 9A     | +             | 1.1           | 13. 2            | 9. 1. 30           | 3. 4. 9. 58     | 41. 17. 12A | 1. 44. 36  |
| 13. 20. 13. 3A     | +             | 1.2           | 16. 7            | 9. 2. 19           | 3. 5. 24. 59    | 56. 44. 32A | 2. 34. 43  |
| 16. 34. 10. 5B     | —             | 2.2           | 2. 5             | 2. 15. 43          | 3. 6. 4. 18     | 6. 46. 13A  | 2. 30. 46  |
| 25. 19. 38. 4B     | —             | 2.6           | 1. 3             | 11. 2. 57          | 3. 6. 54. 37    | 2. 2. 19B   | 3. 2. 21   |
| 42. 0. 52. 9B      | +             | 2.7           | 18. 2            | 9. 5. 47           | 3. 14. 8. 52    | 66. 6. 16A  | 7. 39. 5   |
| 16. 25. 14. 7A     | +             | 3.1           | 12. 8            | 9. 3. 54           | 3. 11. 6. 2     | 39. 32. 58A | 4. 35. 8   |
| 28. 41. 17. 6A     | +             | 4.3           | 15. 7            | 9. 7. 36           | 3. 17. 45. 12   | 51. 23. 24A | 7. 57. 29  |
| 20. 52. 23. 4B     | —             | 4.4           | 1. 9             | 1. 4. 0            | 3. 11. 57. 33   | 2. 4. 6A    | 5. 4. 3    |
| 27. 38. 11. 6A     | +             | 4.6           | 15. 4            | 9. 7. 53           | 3. 18. 32. 45   | 50. 15. 24A | 8. 13. 18  |
| 15. 19. 26. 9A     | +             | 4.6           | 12. 4            | 9. 5. 40           | 3. 16. 35. 18   | 38. 1. 18A  | 6. 46. 16  |
| 26. 3. 40. 1A      | +             | 5.1           | 15. 1            | 9. 8. 36           | 3. 20. 23. 10   | 48. 29. 0A  | 8. 53. 5   |
| 22. 32. 0. 2B      | —             | 5.8           | 2. 3             | 0. 17. 12          | 3. 15. 29. 22   | 0. 12. 22A  | 6. 36. 19  |
| 36. 42. 59. 2A     | +             | 6.0           | 17. 2            | 9. 11. 57          | 3. 27. 18. 16   | 58. 33. 3A  | 13. 10. 31 |
| 8. 42. 53. 1B      | —             | 6.5           | 5. 3             | 2. 19. 26          | 3. 19. 10. 13   | 13. 30. 37A | 7. 36. 13  |
| 23. 53. 28. 3A     | +             | 6.5           | 15. 7            | 9. 11. 29          | 3. 26. 31. 47   | 50. 38. 11A | 11. 43. 26 |
| 32. 20. 51. 5B     | —             | 6.9           | 4. 4             | 10. 26. 1          | 3. 17. 13. 18   | 10. 4. 33B  | 8. 1. 23   |
| 42. 52. 16. 3A     | +             | 7.0           | 18. 2            | 9. 15. 16          | 3. 5. 43. 50    | 63. 48. 26A | 18. 30. 14 |
| 5. 46. 37. 6B      | —             | 7.5           | 6. 3             | 2. 23. 4           | 3. 22. 47. 54   | 15. 58. .9A | 8. 55. 27  |
| 9. 3. 20. 0A       | +             | 7.7           | 10. 6            | 9. 6. 35           | 3. 26. 16. 8    | 30. 28. 34A | 10. 16. 57 |
| 28. 32. 7. 7B      | —             | 7.8           | 3. 9             | 11. 13. 58         | 3. 20. 13. 36   | 6. 40. 0B   | 9. 1. 5    |
| 24. 19. 38. 0A     | +             | 8.5           | 14. 5            | 9. 13. 52          | 4. 3. 2. 12     | 44. 57. 53A | 13. 47. 21 |
| 40. 1. 24. 9A      | +             | 8.8           | 17. 6            | 9. 18. 46          | 4. 12. 5. 41    | 59. 43. 16A | 20. 24. 22 |
| 39. 23. 57. 9A     | +             | 9.7           | 17. 5            | 9. 20. 38          | 4. 15. 34. 12   | 58. 31. 57A | 21. 35. 49 |
| 13. 41. 27. 8A     | +             | 9.9           | 14. 6            | 9. 16. 7           | 4. 8. 22. 27    | 43. 17. 46A | 15. 40. 17 |
| 9. 50. 29. 4B      | —             | 10.4          | 5. 5             | 2. 11. 7           | 4. 1. 14. 7     | 10. 18. 32A | 12. 6. 3   |
| 23. 14. 17. 6B     | —             | 10.8          | 5. 0             | 0. 22. 4           | 4. 4. 30. 52    | 3. 10. 31B  | 14. 6. 43  |

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SYDERIS             | Ascensio recta |            |               | Varia-<br>tiō<br>anūua | Aber.<br>max. | Argum.<br>Aberra-<br>tionis |
|---------------------------|----------------|------------|---------------|------------------------|---------------|-----------------------------|
|                           | H.             | M.         | S.            |                        |               |                             |
| ♂ Cancri . . . . .        | 4              | 8. 32. 20  | 128. 5. 3,6   | 51,6                   | 20,5          | 7. 5. 41                    |
| ζ Hydræ . . . . .         | 4.5            | 8. 43. 55  | 130. 58. 38,7 | 47,9                   | 19,4          | 7. 8. 32                    |
| ι Ursæ maj. . . . .       | 3              | 8. 44. 16  | 131. 4. 4,8   | 63,5                   | 29,4          | 7. 8. 36                    |
| ε Cancri . . . . .        | 5              | 8. 46. 36  | 131. 39. 6,1  | 49,5                   | 19,8          | 7. 9. 11                    |
| κ Ursæ maj. . . . .       | 3.4            | 8. 48. 43  | 132. 10. 38,3 | 62,7                   | 28,8          | 7. 9. 11                    |
| λ Navis . . . . .         | 2.3            | 9. 0. 2    | 135. 0. 31,1  | 33,1                   | 26,1          | 7. 12. 31                   |
| ε Hydræ . . . . .         | 2              | 9. 16. 56  | 139. 14. 5,1  | 44,4                   | 19,2          | 7. 16. 45                   |
| η Ursæ maj. . . . .       | 3              | 9. 18. 18  | 139. 34. 28,6 | 63,3                   | 31,4          | 7. 17. 3                    |
| ο Leonis . . . . .        | 4              | 9. 29. 34  | 142. 23. 25,3 | 48,5                   | 19,3          | 7. 19. 47                   |
| σ . . . . .               | 3              | 9. 33. 30  | 143. 22. 30,9 | 51,7                   | 20,9          | 7. 20. 57                   |
| μ . . . . .               | 3              | 9. 40. 24  | 145. 5. 56,5  | 52,0                   | 21,2          | 7. 22. 52                   |
| η . . . . .               | 3              | 9. 55. 28  | 148. 52. 5,0  | 49,4                   | 19,8          | 7. 26. 27                   |
| ε Leonis <i>Regulus</i> . | 1              | 9. 56. 48  | 149. 12. 5,9  | 48,5                   | 19,3          | 7. 26. 57                   |
| ξ . . . . .               | 3              | 10. 4. 35  | 151. 8. 43,5  | 50,6                   | 20,6          | 7. 28. 59                   |
| γ . . . . .               | 3              | 10. 7. 59  | 151. 59. 40,2 | 49,8                   | 20,0          | 7. 29. 52                   |
| ρ Leonis . . . . .        | 4              | 10. 21. 22 | 155. 20. 32,5 | 47,7                   | 19,0          | 8. 3. 23                    |
| ε Ursæ maj. . . . .       | 2              | 10. 48. 33 | 162. 8. 12,8  | 55,8                   | 34,5          | 8. 10. 38                   |
| ε Crateris . . . . .      | 4              | 10. 49. 14 | 162. 18. 35,6 | 44,3                   | 19,4          | 8. 10. 48                   |
| ε Ursæ maj. . . . .       | 2              | 10. 50. 11 | 162. 32. 44,2 | 57,9                   | 41,0          | 8. 11. 2                    |
| δ Leonis . . . . .        | 2.3            | 11. 2. 44  | 165. 40. 54,4 | 48,1                   | 19,9          | 8. 14. 22                   |
| θ . . . . .               | 3              | 11. 2. 50  | 165. 42. 27,6 | 47,6                   | 19,3          | 8. 14. 27                   |
| α Hydræ . . . . .         | 4.5            | 11. 21. 33 | 170. 23. 20,8 | 44,3                   | 20,8          | 8. 19. 31                   |
| ξ . . . . .               | 3.4            | 11. 22. 23 | 170. 35. 43,5 | 44,2                   | 21,4          | 8. 19. 44                   |
| ε Leonis . . . . .        | 2              | 11. 38. 0  | 174. 29. 58,5 | 46,7                   | 19,2          | 8. 23. 59                   |
| ε Virginis . . . . .      | 3              | 11. 39. 23 | 174. 50. 45,1 | 46,3                   | 18,4          | 8. 24. 21                   |
| γ Ursæ maj. . . . .       | 2              | 11. 42. 19 | 175. 34. 46,3 | 48,4                   | 31,9          | 8. 25. 9                    |
| ε Corvi . . . . .         | 4              | 11. 57. 16 | 179. 18. 52,6 | 46,0                   | 20,0          | 8. 29. 14                   |
| ε . . . . .               | 3.4            | 11. 59. 1  | 179. 45. 8,6  | 46,1                   | 19,7          | 8. 29. 42                   |
| δ Ursæ maj. . . . .       | 3              | 12. 4. 36  | 181. 8. 53,4  | 45,8                   | 34,9          | 9. 3. 14                    |
| γ Corvi . . . . .         | 3              | 12. 4. 41  | 181. 10. 12,7 | 46,3                   | 19,1          | 9. 3. 15                    |
| γ Virginis . . . . .      | 3.4            | 12. 8. 49  | 182. 12. 10,5 | 46,1                   | 18,4          | 9. 2. 23                    |
| δ Corvi . . . . .         | 3.4            | 12. 18. 41 | 184. 40. 9,3  | 46,6                   | 19,0          | 9. 5. 4                     |
| ε . . . . .               | 3              | 12. 23. 21 | 185. 45. 23,5 | 47,0                   | 19,8          | 9. 6. 15                    |
| γ Virginis . . . . .      | 3              | 12. 30. 42 | 187. 40. 44,6 | 46,2                   | 18,4          | 9. 8. 20                    |
| γ . . . . .               | 2.3            | 12. 34. 21 | 189. 5. 56,6  | 46,2                   | 18,2          | 9. 9. 10                    |

pro 1. Jan. 1783. ex Catalogo D. de la Caille computatae &c.

| Declinatio-   | Varia- | S.    | Argum.     | Longitudo     | Latitudo       | Angulus    |
|---------------|--------|-------|------------|---------------|----------------|------------|
| G. M. S.      | tio    | S.    | aberra-    | G. M. S.      | G. M. S.       | positionis |
|               | annua  | S.    | tionis     | S. G. M.      | G. M. S.       | G. M. S.   |
| 18. 56. 37,6B | — 12,3 | 4, 9  | 1. 5. 23   | 4. 5. 41. 27  | 0. 4. 18B      | 14. 13. 19 |
| 6. 46. 2,8B   | — 13,1 | 6, 4  | 2. 16. 10  | 4. 11. 33. 18 | 10. 58. 59A    | 15. 25. 48 |
| 48. 53. 51,2B | — 13,2 | 11, 2 | 11. 2. 19  | 3. 29. 47.    | 5. 29. 34. 21B | 17. 30. 33 |
| 12. 41. 19,9B | — 13,3 | 5, 6  | 1. 28. 28  | 4. 10. 26. 47 | 5. 5. 53A      | 15. 24. 44 |
| 48. 0. 15,9B  | — 13,4 | 11, 1 | 11. 4. 23  | 4. 0. 53. 53  | 28. 57. 33B    | 17. 47. 56 |
| 42. 33. 49,3A | + 14,2 | 17, 5 | 10. 2. 9   | 5. 8. 12. 40  | 55. 52. 42A    | 30. 8. 38  |
| 7. 43. 31,1A  | + 15,2 | 9, 7  | 9. 12. 5   | 4. 24. 16. 1  | 22. 23. 48A    | 19. 2. 35  |
| 52. 39. 34,2B | — 15,2 | 13, 0 | 11. 9. 3   | 4. 4. 16. 39  | 34. 55. 53B    | 21. 42. 31 |
| 10. 52. 21,7B | — 15,8 | 6, 4  | 2. 2. 21   | 4. 21. 13. 42 | 3. 46. 0A      | 18. 26. 16 |
| 24. 46. 50,8B | — 16,1 | 7, 3  | 0. 21. 28  | 4. 17. 40. 24 | 9. 41. 53B     | 18. 55. 22 |
| 27. 1. 14,6B  | — 16,4 | 7, 8  | 11. 17. 29 | 4. 18. 24. 31 | 12. 20. 32B    | 19. 32. 7  |
| 17. 48. 57,2B | — 17,1 | 7, 0  | 1. 11. 4   | 4. 24. 52. 17 | 4. 51. 9B      | 20. 0. 32  |
| 13. 1. 25,3B  | — 17,2 | 6, 8  | 1. 25. 33  | 4. 26. 48. 53 | 9. 27. 33B     | 20. 0. 26  |
| 24. 39. 30,8B | — 17,5 | 8, 1  | 0. 26. 13  | 4. 24. 31. 37 | 11. 50. 58B    | 20. 52. 55 |
| 20. 56. 8,2B  | — 17,7 | 7, 7  | 1. 4. 28   | 4. 26. 33. 32 | 8. 48. 19B     | 20. 50. 45 |
| 10. 35. 13,9B | — 18,2 | 7, 2  | 2. 2. 58   | 5. 3. 21. 31  | 0. 8. 30B      | 21. 13. 19 |
| 57. 32. 28,5B | — 19,1 | 16, 1 | 11. 28. 18 | 4. 16. 28. 24 | 45. 6. 34B     | 32. 29. 23 |
| 17. 8. 55,5A  | + 19,1 | 10, 8 | 10. 1. 14  | 5. 20. 42. 40 | 22. 43. 45A    | 24. 17. 27 |
| 62. 55. 11,9B | — 19,1 | 17, 0 | 11. 25. 41 | 4. 12. 8. 38  | 49. 40. 4B     | 35. 56. 57 |
| 21. 42. 44,6B | — 19,4 | 9, 3  | 1. 8. 33   | 5. 8. 15. 47  | 14. 19. 48B    | 23. 28. 4  |
| 16. 36. 36,0B | — 19,4 | 8, 4  | 1. 18. 48  | 5. 10. 23. 15 | 9. 40. 30B     | 23. 3. 1   |
| 28. 4. 34,2A  | + 19,8 | 12, 6 | 10. 17. 36 | 6. 3. 26. 34  | 29. 21. 55A    | 26. 46. 58 |
| 30. 39. 26,2A | + 19,8 | 13, 1 | 10. 20. 11 | 6. 4. 59. 37  | 31. 34. 49A    | 27. 58. 6  |
| 15. 47. 11,9B | — 19,9 | 9, 0  | 1. 23. 98  | 5. 18. 36. 35 | 12. 17. 13B    | 23. 56. 20 |
| 2. 59. 27,2B  | — 19,9 | 7, 9  | 2. 22. 27  | 5. 24. 5. 0   | 0. 41. 41B     | 23. 21. 45 |
| 54. 54. 7,4B  | — 20,0 | 16, 7 | 0. 11. 48  | 4. 27. 24. 82 | 47. 7. 23B     | 35. 42. 28 |
| 13. 31. 3,9A  | + 20,0 | 10, 9 | 10. 17. 11 | 6. 9. 13. 17  | 21. 44. 31A    | 25. 23. 21 |
| 21. 24. 42,9A | + 20,0 | 10, 4 | 10. 14. 25 | 6. 8. 39. 19  | 19. 39. 43A    | 25. 1. 17  |
| 58. 14. 33,7B | — 20,0 | 17, 6 | 0. 14. 50  | 4. 27. 59. 18 | 51. 38. 14B    | 39. 54. 49 |
| 16. 20. 11,5A | + 20,0 | 9, 4  | 10. 6. 42  | 6. 7. 43. 6   | 14. 29. 21A    | 24. 17. 11 |
| 0. 32. 35,6B  | — 20,0 | 8, 0  | 2. 28. 37  | 6. 1. 48. 17  | 1. 22. 31B     | 23. 27. 39 |
| 15. 18. 15,3A | + 20,0 | 9, 0  | 10. 5. 48  | 6. 10. 26. 27 | 12. 10. 16A    | 23. 57. 38 |
| 22. 11. 34,1A | + 19,9 | 10, 1 | 10. 18. 20 | 6. 14. 20. 50 | 18. 1. 42A     | 24. 37. 48 |
| 0. 15. 15,7A  | + 19,8 | 8, 0  | 9. 0. 36   | 6. 7. 8. 50   | 2. 48. 56B     | 23. 16. 45 |
| 57. 8. 31,2B  | — 19,7 | 18, 0 | 0. 23. 50  | 5. 5. 51. 12  | 54. 18. 16B    | 42. 3. 24  |

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SYDKRIS           | Ascensio recta |     |     | Varia-<br>tio<br>anna<br>S. | Aber.<br>max.<br>S. | Argum.<br>aberra-<br>tionis<br>S. G. M. |      |            |           |
|-------------------------|----------------|-----|-----|-----------------------------|---------------------|---|------|------------|-----------|
|                         | H.             | M.  | S.  |                             |                     |   |      |            |           |
| δ Virginis . . . . .    | 3              | 12. | 44. | 42                          | 191. 10. 32,7       | 45,8                                    | 18,4 | 9. 12. 8   |           |
| Cor Caroli II. . . . .  | 3              | 12. | 45. | 12                          | 191. 17. 54,6       | 42,9                                    | 23,9 | 9. 12. 27  |           |
| ε Virginis . . . . .    | 3              | 12. | 51. | 22                          | 192. 50. 33,9       | 45,2                                    | 18,9 | 9. 13. 56  |           |
| ζ . . . . .             | 3.             | 4.  | 12. | 58.                         | 194. 41. 4,6        | 46,5                                    | 18,5 | 9. 15. 55  |           |
| γ Hydræ . . . . .       | 3              | 13. | 7.  | 10                          | 196. 47. 28,2       | 48,5                                    | 19,8 | 9. 18. 11  |           |
| ι Centauri . . . . .    | 3              | 13. | 8.  | 39                          | 197. 7. 9,8         | 50,4                                    | 23,3 | 9. 18. 32  |           |
| ε Virg. Spica . . . . . | 1.             | 2.  | 13. | 48                          | 198. 26. 54,1       | 47,3                                    | 18,8 | 9. 19. 57  |           |
| ξ Ursæ maj. . . . .     | 2              | 13. | 15. | 8                           | 198. 46. 59,0       | 36,6                                    | 33,2 | 9. 20. 19  |           |
| ξ Virginis . . . . .    | 3              | 13. | 23. | 40                          | 200. 54. 54,2       | 46,1                                    | 18,4 | 9. 22. 36  |           |
| η Centauri . . . . .    | 3.             | 4.  | 13. | 36.                         | 204. 8. 40,6        | 53,2                                    | 24,5 | 9. 26. 1   |           |
| μ Centauri . . . . .    | 3.             | 4.  | 13. | 36.                         | 204. 9. 28,3        | 53,4                                    | 24,8 | 9. 26. 2   |           |
| σ . . . . .             | 4              | 13. | 36. | 57                          | 204. 14. 14,5       | 53,6                                    | 21,8 | 9. 26. 7   |           |
| η Ursæ maj. . . . .     | 2              | 13. | 38. | 59                          | 204. 44. 51,0       | 36,0                                    | 29,3 | 9. 26. 40  |           |
| κ Centauri . . . . .    | 4.             | 5.  | 13. | 39.                         | 204. 50. 40,8       | 51,4                                    | 21,5 | 9. 26. 45  |           |
| η Bootis . . . . .      | 3              | 13. | 44. | 21                          | 206. 5. 13,1        | 43,0                                    | 19,8 | 9. 28. 3   |           |
| ε Centauri . . . . .    | 3              | 13. | 54. | 1                           | 208. 30. 8,3        | 52,9                                    | 22,9 | 10. 0. 36  |           |
| ε Draconis . . . . .    | 3              | 13. | 58. | 31                          | 209. 37. 50,5       | 24,5                                    | 45,1 | 10. 1. 47  |           |
| ξ Virginis . . . . .    | 4.             | 1.  | 21  |                             | 210. 20. 17,1       | 47,8                                    | 19,0 | 10. 2. 30  |           |
| ε Bootis Arcturus       | 1.             | 4.  | 5.  | 49                          | 211. 27. 15,1       | 42,3                                    | 20,0 | 10. 3. 39  |           |
| λ Virginis . . . . .    | 4              | 14. | 7.  | 24                          | 211. 51. 0,1        | 48,5                                    | 19,3 | 10. 4. 5   |           |
| η Centauri . . . . .    | 2.             | 3   | 14. | 21.                         | 215. 47. 7,4        | 56,3                                    | 25,1 | 10. 7. 47  |           |
| γ Bootis . . . . .      | 3              | 14. | 23. | 20                          | 215. 50. 0,7        | 36,6                                    | 24,4 | 10. 8. 11  |           |
| ζ . . . . .             | 3              | 14. | 30. | 47                          | 217. 41. 49,8       | 42,9                                    | 19,6 | 10. 10. 6  |           |
| ζ . . . . .             | 3              | 14. | 35. | 31                          | 218. 52. 45,6       | 39,5                                    | 21,5 | 10. 11. 18 |           |
| ε Librae . . . . .      | 2.             | 3   | 14. | 38.                         | 55                  | 219. 43. 39,6                           | 49,6 | 19,7       | 10. 12. 9 |
| ε Lupi . . . . .        | 3              | 14. | 44. | 24                          | 221. 6. 6,9         | 58,1                                    | 25,8 | 10. 13. 32 |           |
| ζ Centauri . . . . .    | 3              | 14. | 45. | 8                           | 221. 16. 54,5       | 57,7                                    | 25,4 | 10. 13. 43 |           |
| γ Scorpionis . . . . .  | 3.             | 4.  | 14. | 51.                         | 222. 51. 16,8       | 52,3                                    | 21,0 | 10. 15. 18 |           |
| ε Ursæ min. . . . .     | 3              | 14. | 51. | 32                          | 222. 53. 1,9        | —5,0                                    | 74,2 | 10. 15. 21 |           |
| ζ Bootis . . . . .      | 3              | 14. | 53. | 47                          | 223. 26. 40,7       | 34,1                                    | 25,5 | 10. 15. 53 |           |
| ε Librae . . . . .      | 2.             | 3   | 15. | 5.                          | 226. 20. 20,5       | 48,3                                    | 19,4 | 10. 18. 47 |           |
| δ Bootis . . . . .      | 3.             | 4   | 15. | 6.                          | 226. 41. 20,4       | 36,3                                    | 23,2 | 10. 19. 7  |           |
| ζ Lupi . . . . .        | 3.             | 4   | 15. | 7.                          | 226. 48. 4,4        | 58,3                                    | 25,1 | 10. 19. 13 |           |
| ζ . . . . .             | 3.             | 4   | 15. | 8.                          | 227. 0. 30,6        | 60,2                                    | 26,7 | 10. 19. 25 |           |
| η Ursæ min. pr.         | 4              | 15. | 17. | 24                          | 229. 20. 56,9       | —2,4                                    | 64,7 | 10. 21. 47 |           |

pro 1. Jan. 1783. ex Catalogo D. de la Caille computatae &c.

| Declinatio<br>G. M. S. | Varia-<br>tio<br>mutua<br>S. | Max.<br>Aberr.<br>S. | Argum.<br>aberra-<br>tionis<br>S. G. M. | Longitudo<br>S. G. M. S. | Latitudo<br>G. M. S. | Angulus<br>positionis<br>G. M. S. |
|------------------------|------------------------------|----------------------|---|--------------------------|----------------------|-----------------------------------|
| 4. 34. 59.9B           | - 19.7                       | 8. 4                 | 2. 19. 11                               | 6. 8. 27. 22             | 8. 38. 29B           | 23. 16. 50                        |
| 39. 29. 41.3B          | - 19.6                       | 15. 1                | 1. 4. 10                                | 5. 21. 31. 47            | 40. 7. 33B           | 10. 42. 23                        |
| 12. 7. 51.6B           | - 19.5                       | 9. 6                 | 2. 4. 37                                | 6. 6. 55. 8              | 16. 13. 13B          | 23. 51. 21                        |
| 4. 22. 25.7A           | + 19.4                       | 7. 7                 | 9. 10. 59                               | 6. 15. 12. 33            | 1. 45. 38B           | 22. 40. 23                        |
| 22. 1. 14.7A           | + 19.3                       | 9. 0                 | 10. 23. 2                               | 6. 23. 59. 28            | 13. 43. 26A          | 23. 6. 42                         |
| 35. 33. 37.5A          | + 19.3                       | 9. 6                 | 10. 27. 40                              | 7. 0. 8. 1               | 25. 58. 48A          | 25. 3. 7                          |
| 10. 1. 18.9A           | + 19.0                       | 7. 6                 | 9. 25. 45                               | 6. 20. 48. 58            | 2. 3 5A              | 22. 12. 51                        |
| 56. 3. 50.6B           | - 19.0                       | 18. 3                | 1. 0. 44                                | 5. 12. 35. 53            | 56. 22. 4A           | 43. 54. 33                        |
| 6. 31. 10.6B           | - 18.7                       | 8. 0                 | 2. 28. 46                               | 6. 19. 7. 12             | 8. 39. 21B           | 22. 6. 27                         |
| 40. 25. 53.1A          | + 18.3                       | 11. 9                | 11. 24. 22                              | 7. 8. 8. 28              | 28. 14. 51A          | 24. 21. 59                        |
| 41. 23. 2.1A           | + 18.3                       | 12. 1                | 11. 25. 20                              | 7. 8. 31. 19             | 28. 57. 13A          | 24. 32. 24                        |
| 33. 20. 30.6A          | + 18.3                       | 10. 3                | 11. 15. 54                              | 7. 5. 0. 37              | 21. 54. 50A          | 22. 59. 24                        |
| 50. 24. 9.3B           | - 18.2                       | 17. 8                | 1. 8. 8                                 | 5. 23. 52. 14            | 54. 23. 45B          | 38. 24. 45                        |
| 31. 54. 33.3A          | + 18.2                       | 10. 0                | 1. 14. 19                               | 7. 4. 54. 54             | 20. 2. 46A           | 22. 37. 41                        |
| 19. 29. 51.2B          | - 18.0                       | 11. 8                | 1. 29. 29                               | 6. 16. 16. 53            | 28. 6. 57B           | 23. 56. 39                        |
| 35. 17. 16.3A          | + 17.6                       | 10. 6                | 11. 21. 51                              | 7. 9. 18. 44             | 22. 0. 30A           | 22. 10. 52                        |
| 65. 25. 3.8B           | - 17.4                       | 19. 6                | 1. 6. 10                                | 5. 4. 21. 41             | 66. 21. 14B          | 59. 40. 36                        |
| 9. 15. 14.1A           | + 17.3                       | 6. 9                 | 9. 23. 30                               | 7. 1. 28. 7              | 2. 56. 37B           | 20. 8. 0                          |
| 32. 20. 13.7B          | - 17.1                       | 12. 3                | 2. 1. 15                                | 6. 21. 12. 26            | 30. 54. 31B          | 23. 19. 45                        |
| 12. 21. 47.0A          | + 17.0                       | 6. 8                 | 10. 2. 28                               | 7. 3. 55. 30             | 0. 30. 40B           | 19. 46. 23                        |
| 41. 11. 30.1A          | + 16.3                       | 10. 8                | 0. 5. 22                                | 7. 17. 13. 47            | 25. 28. 57A          | 21. 3. 53                         |
| 39. 15. 52.8B          | - 16.2                       | 16. 3                | 1. 21. 37                               | 6. 14. 36. 52            | 19. 33. 30B          | 29. 51. 17                        |
| 14. 40. 13.0B          | - 15.9                       | 11. 3                | 2. 9. 11                                | 6. 29. 59. 19            | 27. 53. 57B          | 20. 53. 30                        |
| 27. 59. 55.1B          | - 15.6                       | 14. 4                | 1. 29. 33                               | 6. 25. 3. 30             | 40. 38. 38B          | 24. 7. 10                         |
| 15. 7. 39.2A           | + 15.4                       | 6. 1                 | 10. 10. 54                              | 7. 18. 3. 32             | 0. 21. 55B           | 17. 50. 19                        |
| 42. 14. 34.3A          | + 15.1                       | 10. 4                | 0. 12. 17                               | 7. 22. 0. 22             | 25. 0. 43A           | 14. 20. 22                        |
| 41. 13. 4.9A           | + 15.1                       | 6. 1                 | 0. 11. 17                               | 7. 21. 46. 28            | 23. 59. 69A          | 19. 7. 31                         |
| 24. 24. 57.4A          | + 14.7                       | 6. 4                 | 0. 10. 54                               | 7. 17. 39. 55            | 7. 36. 46A           | 17. 7. 53                         |
| 75. 2. 45.6B           | - 14.7                       | 20. 0                | 1. 14. 54                               | 4. 10. 11. 58            | 72. 58. 0B           | 94. 58. 33                        |
| 41. 15. 16.9B          | - 14.5                       | 17. 2                | 1. 26. 11                               | 6. 21. 11. 6             | 54. 10. 11B          | 29. 36. 14                        |
| 8. 34. 7.7A            | + 13.8                       | 6. 3                 | 9. 19. 11                               | 7. 16. 20. 48            | 8. 31. 36B           | 16. 8. 37                         |
| 34. 8. 8.0B            | - 13.8                       | 16. 1                | 2. 1. 19                                | 7. 0. 5. 6               | 48. 59. 29B          | 24. 36. 23                        |
| 39. 50. 44.8A          | + 13.7                       | 9. 1                 | 0. 15. 25                               | 7. 25. 38. 7             | 21. 23. 38A          | 17. 1. 37                         |
| 43. 53. 29.5A          | + 13.7                       | 10. 1                | 0. 20. 5                                | 7. 27. 6. 6              | 25. 12. 43A          | 17. 28. 24                        |
| 72. 36. 46.0B          | - 13.1                       | 20. 0                | 2. 21. 33                               | 4. 18. 20. 52            | 74. 56. 17B          | 93. 12. 17                        |

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SYDERIS             | Ascensio recta |     |    | Va-<br>riatio<br>annua | Aber.<br>max. | Argum.<br>Aberra-<br>tionis |
|---------------------------|----------------|-----|----|------------------------|---------------|-----------------------------|
|                           | H.             | M.  | S. |                        |               |                             |
| z Draconis . . . . 3. 4   | 15.            | 20. | 7  | 230. 1. 51,3           | 19,8          | 38,4                        |
| y Lupi . . . . . 3        | 15.            | 20. | 45 | 230. 11. 15,0          | 59,3          | 25,4                        |
| z Ursae min. sequ. 3      | 15.            | 21. | 22 | 230. 18. 5,8           | -3,1          | 64,7                        |
| y Librae . . . . . 4      | 15.            | 23. | 25 | 230. 51. 15,9          | 50,0          | 20,0                        |
| z Serpentis . . . . 3     | 15.            | 24  | 27 | 231. 6. 49,0           | 43,0          | 19,7                        |
| a Coronae . . . . 2. 3    | 15.            | 25. | 30 | 231. 22. 32,3          | 38,0          | 21,8                        |
| x Librae . . . . * 4      | 15.            | 29. | 29 | 232. 22. 20,8          | 51,6          | 20,5                        |
| x Serpentis . . . . 2. 3  | 15.            | 33. | 36 | 233. 23. 53,0          | 44,1          | 19,6                        |
| c . . . . . . . . . 3     | 15.            | 36. | 11 | 234. 2. 39,5           | 41,5          | 20,3                        |
| x . . . . . . . . . 4     | 15.            | 38. | 35 | 234. 34. 47,6          | 46,9          | 19,5                        |
| a . . . . . . . . . 3. 4  | 15.            | 40. | 0  | 235. 0. 4,9            | 44,7          | 19,6                        |
| x Librae . . . . * 4      | 15.            | 40. | 46 | 235. 11. 34,4          | 51,9          | 20,6                        |
| o . . . . . . . . . 4     | 15.            | 41. | 30 | 235. 22. 31,1          | 51,0          | 20,3                        |
| p Scorpionis . . . 4      | 15.            | 43. | 32 | 235. 53. 2,1           | 55,2          | 22,2                        |
| r . . . . . . . . . 3. 4  | 15.            | 45. | 46 | 236. 26. 29,9          | 54,1          | 21,6                        |
| ↓ Librae . . . . * 4      | 15.            | 46. | 4  | 236. 31. 7,2           | 50,2          | 20,1                        |
| y Serpentis . . . . 3     | 15.            | 46. | 26 | 236. 36. 34,2          | 41,2          | 20,3                        |
| z Scorpionis . . . 2      | 15.            | 47. | 32 | 236. 53. 4,4           | 52,9          | 21,1                        |
| c . . . . . . . . . 2     | 15.            | 52. | 51 | 238. 12. 49,3          | 52,1          | 20,7                        |
| a Draconis . . . . 3. 4   | 15.            | 57. | 52 | 239. 28. 0,3           | 17,3          | 38,2                        |
| z Scorpionis . . . 4      | 15.            | 59. | 25 | 239. 51. 12,2          | 52,1          | 20,7                        |
| z Ophiuci . . . . 3       | 16.            | 3.  | 0  | 240. 44. 54,8          | 47,1          | 19,6                        |
| z . . . . . . . . . 3     | 16.            | 6.  | 52 | 241. 42. 55,6          | 47,4          | 19,7                        |
| o Scorpionis . . . 3. 4   | 16.            | 8.  | 2  | 242. 0. 34,3           | 54,4          | 21,7                        |
| y Herculis . . . . 3      | 16.            | 12. | 21 | 243. 5. 19,8           | 39,8          | 20,9                        |
| a Scorp. Antares . 1      | 16.            | 16. | 8  | 244. 2. 6,3            | 54,9          | 21,9                        |
| o Ophiuci . . . . * 4     | 16.            | 18. | 44 | 244. 41. 6,1           | 51,4          | 20,5                        |
| c Herculis . . . . 3      | 16.            | 20. | 55 | 245. 13. 46,4          | 38,8          | 21,3                        |
| z Draconis . . . . 3. 4   | 16.            | 21. | 5  | 245. 16. 13,8          | 11,9          | 42,0                        |
| z Scorpionis . . . . 3. 4 | 16.            | 22. | 25 | 245. 36. 10,4          | 55,8          | 22,3                        |
| z Ophiuci . . . . . 3     | 16.            | 25. | 14 | 246. 18. 29,5          | 49,4          | 20,1                        |
| z Herculis . . . . 3      | 16.            | 33. | 8  | 248. 17. 2,9           | 34,5          | 23,3                        |
| z . . . . . . . . . 3. 4  | 16.            | 35. | 28 | 248. 51. 54,4          | 30,8          | 25,6                        |
| z Scorpionis . . . . 3    | 16.            | 36. | 10 | 249. 2. 36,1           | 58,7          | 23,8                        |
| z . . . . . . . . . 3     | 16.            | 37. | 53 | 249. 18. 15,7          | 60,6          | 25,0                        |

pro 1. Jan. 1783. ex Catalogo D. de la Caille computatae &c.

| <i>Declinatio-</i> | <i>Varia-</i> | <i>S.</i> | <i>Argum.</i> | <i>Longitude</i> | <i>Latitudo</i>    | <i>Angulus</i>    |
|--------------------|---------------|-----------|---------------|------------------|--------------------|-------------------|
| <i>G. M. S.</i>    | <i>tio-</i>   | <i>s.</i> | <i>aberr-</i> | <i>S. G. M.</i>  | <i>S. G. M. S.</i> | <i>positionis</i> |
|                    | <i>annua</i>  |           | <i>x.</i>     | <i>S. G. M.</i>  | <i>G. M. S.</i>    | <i>G. M. S.</i>   |
| 59. 43. 54.7B      | - 12.9        | 19. 6     | 1. 25. 31     | 6. 1. 49. 38     | 71. 5. 52B         | 52. 9. 59         |
| 40. 25. 9.6A       | + 12.8        | 8. 9      | 0. 20. 16     | 7. 28. 28. 28    | 21. 19. 40A        | 15. 52. 38        |
| 72. 36. 24.5B      | - 12.8        | 20. 0     | 1. 22. 26     | 4. 18. 28. 0     | 75. 13. 21B        | 94. 9. 35         |
| 14. 3. 7.1A        | + 12.6        | 5. 3      | 10. 5. 38     | 7. 22. 6. 16     | 4. 24. 47B         | 14. 36. 26        |
| 11. 16. 34.7B      | - 12.6        | 10. 9     | 2. 16. 57     | 7. 15. 18. 29    | 28. 54. 30B        | 16. 35. 48        |
| 87. 27. 26.6B      | - 12.5        | 14. 8     | 2. 7. 9       | 7. 9. 12. 47     | 44. 21. 4B         | 20. 20. 48        |
| 18. 57. 33.8A      | + 12.2        | 4. 9      | 10. 24. 38    | 7. 24. 42. 59    | 0. 0. 52B          | 14. 4. 25         |
| 7. 7. 17.5B        | - 12.0        | 9. 8      | 2. 21. 21     | 7. 19. 1. 49     | 25. 31. 54B        | 15. 15. 43        |
| 16. 6. 49.2B       | - 11.8        | 12. 2     | 2. 14. 31     | 7. 16. 52. 57    | 34. 21. 20B        | 16. 27. 18        |
| 2. 45. 5.1A        | + 11.6        | 7. 3      | 9. 4. 23      | 7. 22. 54. 40    | 16. 16. 15B        | 13. 54. 52        |
| 5. 8. 38.8B        | - 11.5        | 9. 3      | 2. 23. 40     | 7. 21. 17. 5     | 24. 1. 45B         | 14. 39. 5         |
| 19. 21. 2.0A       | + 11.5        | 4. 6      | 10. 26. 55    | 7. 27. 24. 48    | 0. 15. 54B         | 13. 8. 29         |
| 16. 4. 42.3A       | + 11.4        | 4. 7      | 10. 12. 12    | 7. 26. 50. 21    | 3. 29. 28B         | 13. 5. 18         |
| 28. 33. 46.9A      | + 11.3        | 5. 4      | 0. 2. 48      | 8. 0. 7. 16      | 8. 33. 56A         | 13. 3. 24         |
| 25. 28. 22.6A      | + 11.1        | 4. 8      | 11. 22. 36    | 7. 29. 54. 47    | 5. 26. 33A         | 12. 46. 40        |
| 13. 38. 17.9A      | + 11.1        | 4. 9      | 10. 2. 15     | 7. 27. 22. 15    | 6. 7. 4B           | 12. 46. 3         |
| 16. 23. 37.3B      | - 11.0        | 12. 4     | 2. 15. 26     | 7. 19. 41. 18    | 35. 18. 15B        | 15. 34. 51        |
| 21. 59. 18.7A      | + 11.0        | 4. 4      | 11. 8. 11     | 7. 29. 38. 37    | 1. 57. 15A         | 12. 34. 33        |
| 19. 11. 44.5A      | + 10.6        | 4. 2      | 10. 25. 20    | 8. 0. 9. 43      | 1. 2. 24B          | 12. 6. 52         |
| 59. 8. 46.7B       | - 10.2        | 19. 7     | 2. 3. 41      | 6. 13. 38. 42    | 74. 26. 53B        | 49. 0. 4          |
| 18. 52. 53.6A      | + 10.1        | 4. 0      | 10. 23. 20    | 8. 1. 36. 56     | 1. 39. 54B         | 11. 32. 37        |
| 2. 7. 10.6A        | + 9.8         | 7. 1      | 9. 4. 17      | 7. 29. 16. 17    | 17. 16. 56B        | 11. 45. 37        |
| 4. 4. 53.0A        | + 9.5         | 6. 8      | 9. 5. 48      | 8. 0. 28. 24     | 16. 28. 5B         | 11. 21. 0         |
| 25. 3. 12.8A       | + 9.4         | 4. 0      | 11. 25. 34    | 8. 4. 46. 22     | 4. 0. 10A          | 10. 48. 16        |
| 19. 40. 30.4B      | - 9.1         | 13. 4     | 2. 16. 49     | 7. 26. 10. 35    | 40. 3. 7B          | 13. 37. 8         |
| 25. 56. 59.5A      | + 8.8         | 3. 8      | 0. 0. 40      | 8. 6. 44. 9      | 4. 32. 12A         | 10. 4. 29         |
| 16. 7. 21.8A       | + 8.7         | 3. 9      | 10. 7. 54     | 8. 5. 38. 16     | 5. 11. 48B         | 9. 50. 50         |
| 21. 58. 30.6B      | - 8.4         | 14. 0     | 2. 17. 2      | 7. 28. 3. 43     | 42. 44. 9B         | 13. 7. 58         |
| 62. 0. 29.0B       | - 8.4         | 19. 8     | 2. 8. 10      | 6. 11. 19. 37    | 78. 26. 56B        | 56. 18. 97        |
| 27. 44. 47.8A      | + 8.3         | 3. 9      | 0. 10. 39     | 8. 8. 25. 48     | 6. 5. 7A           | 9. 31. 35         |
| 10. 6. 43.0A       | + 8.1         | 5. 1      | 9. 16. 4      | 8. 6. 11. 55     | 21. 85. 17B        | 9. 23. 90         |
| 31. 0. 13.3B       | - 7.4         | 16. 3     | 2. 16. 3      | 7. 28. 28. 24    | 53. 7. 19B         | 14. 12. 57        |
| 39. 20. 48.6B      | - 7.2         | 17. 6     | 2. 14. 57     | 7. 25. 43. 18    | 60. 19. 30B        | 16. 51. 46        |
| 33. 52. 39.5A      | + 7.2         | 4. 7      | 1. 6. 16      | 8. 12. 20. 54    | 11. 40. 56A        | 8. 21. 5          |
| 37. 39. 25.5A      | + 7.1         | 6. 0      | 1. 24. 0      | 8. 13. 7. 48     | 15. 23. 17B        | 8. 23. 42         |

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SYDERIS          | Ascensio recta |     |     | Varia<br>riatio<br>annua | Aber-<br>max. | Argum.<br>aberra-<br>tionis |       |            |
|------------------------|----------------|-----|-----|--------------------------|---------------|-----------------------------|-------|------------|
|                        | H.             | M.  | S.  |                          |               |                             | S.    | S. G. M.   |
| ξ Scorpionis . . . . . | 3              | 16. | 39. | 22                       | 249. 50. 29,2 | 63, 1                       | 26, 6 | 11. 11. 21 |
| η Herculis . . . . .   | 3              | 16. | 51. | 59                       | 252. 59. 48,9 | 34, 5                       | 23, 2 | 11. 14. 20 |
| γ Scorpionis . . . . . | 3. 4           | 16. | 56. | 39                       | 254. 9. 46,4  | 64, 1                       | 27, 2 | 11. 15. 23 |
| δ Ophiuci . . . . .    | 2. 3           | 16. | 57. | 57                       | 254. 29. 14,9 | 51, 5                       | 20, 6 | 11. 15. 42 |
| ε Herculis . . . . .   | 2. 3           | 17. | 4.  | 45                       | 256. 11. 22,5 | 41, 1                       | 20, 6 | 11. 17. 16 |
| β . . . . .            | 3              | 17. | 7.  | 8                        | 256. 46. 54,1 | 37, 0                       | 22, 0 | 11. 17. 50 |
| θ Ophiuci . . . . .    | 3              | 17. | 8.  | 42                       | 257. 10. 34,2 | 55, 2                       | 21, 9 | 11. 18. 10 |
| υ Scorpionis . . . . . | 3. 4           | 17. | 16. | 2                        | 259. 0. 35,7  | 61, 0                       | 25, 0 | 11. 19. 52 |
| λ . . . . .            | 2. 3           | 17. | 18. | 54                       | 259. 43. 31,2 | 61, 0                       | 25, 0 | 11. 20. 32 |
| θ . . . . .            | 2. 3           | 17. | 21. | 45                       | 260. 26. 18,9 | 64, 5                       | 27, 2 | 11. 21. 11 |
| α Ophiuci . . . . .    | 2. 3           | 17. | 24. | 52                       | 261. 12. 57,9 | 41, 7                       | 20, 4 | 11. 21. 56 |
| ε Draconis . . . . .   | 3              | 17. | 25. | 33                       | 261. 23. 14,0 | 20, 3                       | 32, 9 | 11. 22. 4  |
| κ Scorpionis . . . . . | 2. 3           | 17. | 27. | 30                       | 261. 52. 29,2 | 62, 2                       | 25, 7 | 11. 22. 31 |
| ι . . . . .            | 3              | 17. | 32. | 26                       | 263. 6. 31,6  | 62, 9                       | 26, 1 | 11. 23. 39 |
| € Ophiuci . . . . .    | 3              | 17. | 32. | 46                       | 263. 11. 24,6 | 44, 5                       | 20, 0 | 11. 23. 44 |
| γ . . . . .            | 3              | 17. | 37. | 2                        | 264. 15. 28,8 | 45, 2                       | 20, 0 | 11. 24. 42 |
| μ Herculis . . . . .   | 3. 4           | 17. | 37. | 59                       | 264. 29. 42,2 | 35, 6                       | 22, 6 | 11. 24. 56 |
| θ . . . . .            | 3              | 17. | 48. | 49                       | 267. 12. 13,2 | 30, 9                       | 25, 1 | 11. 27. 25 |
| ζ Serpentis . . . . .  | 4              | 17. | 49. | 2                        | 267. 15. 27,7 | 47, 4                       | 20, 0 | 11. 27. 28 |
| γ Sagittar. praec.     | 4              | 17. | 51. | 10                       | 267. 47. 34,0 | 57, 5                       | 23, 1 | 11. 27. 56 |
| γ . . . . sequens      | 3. 4           | 17. | 51. | 53                       | 267. 58. 13,5 | 57, 9                       | 23, 2 | 11. 28. 7  |
| γ Draconis . . . . .   | 3              | 17. | 51. | 34                       | 267. 53. 32,1 | 20, 9                       | 32, 1 | 11. 28. 3  |
| μ Sagittarii . . . . . | 4              | 18. | 0.  | 48                       | 270. 11. 57,1 | 53, 9                       | 21, 4 | 0. 0. 9    |
| θ . . . . .            | 4              | 18. | 2.  | 58                       | 270. 44. 24,7 | 61, 2                       | 25, 0 | 0. 0. 38   |
| δ . . . . .            | 3              | 18. | 7.  | 5                        | 271. 46. 19,5 | 57, 7                       | 23, 1 | 0. 1. 37   |
| θ . . . . .            | 3              | 18. | 9.  | 47                       | 272. 26. 43,9 | 59, 9                       | 24, 3 | 0. 2. 13   |
| γ Serpentis . . . . .  | 3. 4           | 18. | 10. | 7                        | 272. 31. 45,8 | 47, 2                       | 20, 0 | 0. 2. 18   |
| λ Sagittarii . . . . . | 3              | 18. | 14. | 35                       | 273. 38. 50,5 | 55, 7                       | 22, 2 | 0. 3. 19   |
| ε Lirae Lucida..       | 1              | 18. | 29. | 35                       | 277. 23. 44,4 | 30, 3                       | 25, 6 | 0. 6. 47   |
| φ Sagittarii . . . . . | 3. 4           | 18. | 32. | 6                        | 278. 1. 33,9  | 56, 4                       | 22, 5 | 0. 7. 20   |
| ε Sagittarii . . . . . | 2. 3           | 18. | 41. | 49                       | 280. 27. 8,2  | 56, 0                       | 23, 3 | 0. 9. 35   |
| ε Lyrae . . . . .      | 2. 3           | 18. | 42. | 4                        | 280. 31. 4,0  | 33, 3                       | 23, 8 | 0. 9. 40   |
| θ Serpentis . . . . .  | 4              | 18. | 45. | 26                       | 281. 21. 32,0 | 44, 8                       | 20, 0 | 0. 10. 25  |
| δ Lirae . . . . .      | 3              | 18. | 46. | 56                       | 281. 43. 56,0 | 31, 6                       | 24, 8 | 0. 10. 46  |
| ζ Sagittarii . . . . . | 3              | 18. | 48. | 48                       | 282. 11. 55,7 | 57, 6                       | 23, 1 | 0. 11. 11  |

Pro i. Jan. 1783. ex Catalogo D. de la Caille computatae &amp;c.

| <i>Declinatio-</i> | <i>Varia-</i> | <i>S.</i> | <i>Argum.</i>  | <i>Longitudo</i> | <i>Latitudo</i> | <i>Angulus</i>    |
|--------------------|---------------|-----------|----------------|------------------|-----------------|-------------------|
| <i>G. M. S.</i>    | <i>tio</i>    | <i>S.</i> | <i>aberra-</i> | <i>S. G. M.</i>  | <i>G. M. S.</i> | <i>positionis</i> |
|                    | <i>annua</i>  |           | <i>tionis</i>  |                  |                 |                   |
| 41. 57. 52.7A      | +             | 6.9       | 7. 2           | 1. 20. 26        | 8. 14. 13. 1    | 19. 35. 32A       |
| 31. 15. 29.7B      | -             | 5.9       | 16. 2          | 2. 19. 12        | 8. 5. 17. 22    | 53. 16. 45B       |
| 42. 55. 43.7A      | +             | 5.5       | 7. 2           | 1. 28. 56        | 8. 17. 42. 43   | 10. 7. 50A        |
| 15. 26. 24.2A      | +             | 5.4       | 3. 3           | 9. 25. 42        | 8. 14. 56. 18   | 7. 13. 23B        |
| 14. 39. 5.7B       | -             | 4.8       | 12. 3          | 2. 24. 21        | 8. 13. 7. 6     | 37. 19. 0B        |
| 25. 6. 34.4B       | -             | 4.6       | 14. 9          | 2. 23. 31        | 8. 12. 3. 38    | 47. 45. 39B       |
| 24. 45. 47.7A      | +             | 4.5       | 1. 9           | 0. 7. 47         | 8. 18. 22. 0    | 1. 48. 29A        |
| 37. 6. 5.6A        | +             | 3.8       | 4. 9           | 2. 2. 53         | 8. 20. 59. 7    | 13. 58. 23A       |
| 36. 55. 36.1A      | +             | 3.6       | 5. 0           | 2. 4. 22         | 8. 21. 33. 29   | 13. 45. 14A       |
| 42. 50. 17.3A      | +             | 3.3       | 6. 8           | 2. 10. 38        | 8. 22. 34. 14   | 19. 36. 14A       |
| 12. 44. 5.5B       | -             | 3.1       | 11. 8          | 2. 26. 45        | 8. 19. 24. 22   | 35. 53. 1B        |
| 52. 28. 9.3B       | -             | 3.0       | 19. 4          | 2. 22. 56        | 8. 8. 54. 42    | 75. 18. 43B       |
| 38. 53. 52.0A      | +             | 2.8       | 5. 5           | 2. 11. 5         | 8. 23. 26. 29   | 15. 36. 38A       |
| 40. 1. 12.4A       | +             | 2.4       | 5. 8           | 2. 14. 34        | 8. 24. 29. 43   | 16. 40. 47A       |
| 4. 40. 20.8B       | -             | 2.4       | 9. 4           | 2. 28. 50        | 8. 22. 18. 37   | 27. 57. 55B       |
| 2. 48. 21.0B       | -             | 2.0       | 11. 2          | 2. 29. 21        | 8. 23. 36. 28   | 26. 9. 2B         |
| 27. 52. 1.5B       | -             | 1.9       | 15. 0          | 2. 26. 41        | 8. 22. 13. 24   | 51. 11. 28B       |
| 37. 17. 22.9B      | -             | 1.0       | 17. 5          | 3. 16. 2         | 8. 25. 26. 55   | 60. 43. 3B        |
| 3. 39. 28.7A       | +             | 1.0       | 6. 8           | 9. 0. 31         | 8. 27. 5. 28    | 19. 47. 11B       |
| 39. 33. 18.1A      | +             | 0.8       | 2. 1           | 2. 19. 39        | 8. 28. 4. 9     | 6. 6. 45A         |
| 30. 24. 18.1A      | +             | 0.7       | 2. 4           | 2. 21. 22        | 8. 28. 14. 12   | 6. 56. 43A        |
| 51. 31. 17.5B      | -             | 0.7       | 19. 3          | 2. 28. 17        | 8. 24. 56. 30   | 74. 57. 23B       |
| 21. 5. 55.2A       | -             | 0.1       | 0. 8           | 8. 28. 31        | 9. 0. 11. 9     | 2. 22. 24B        |
| 36. 48. 17.5A      | -             | 0.2       | 4. 7           | 3. 1. 49         | 9. 0. 36. 31    | 13. 20. 3A        |
| 29. 53. 58.9A      | -             | 0.6       | 2. 2           | 3. 7. 42         | 9. 1. 32. 45    | 6. 26. 23A        |
| 34. 27. 51.9A      | -             | 0.8       | 3. 8           | 3. 7. 10         | 9. 2. 3. 13     | 11. 0. 26A        |
| 2. 56. 2.7A        | -             | 0.9       | 7. 0           | 8. 29. 38        | 9. 2. 41. 49    | 20. 30. 51B       |
| 25. 31. 16.5A      | -             | 1.3       | 0. 9           | 4. 7. 48         | 9. 3. 17. 35    | 2. 5. 27A         |
| 38. 35. 19.2B      | +             | 2.6       | 17. 7          | 3. 5. 13         | 9. 12. 16. 17   | 61. 44. 50B       |
| 27. 11. 54.2A      | -             | 2.8       | 1. 8           | 4. 16. 16        | 9. 7. 9. 2      | 3. 55. 19A        |
| 26. 32. 52.1A      | -             | 3.6       | 1. 9           | 4. 29. 49        | 9. 9. 21. 23    | 3. 24. 54A        |
| 33. 7. 25.0B       | +             | 3.6       | 16. 6          | 3. 6. 53         | 9. 15. 52. 23   | 56. 1. 1B         |
| 3. 56. 13.5B       | +             | 3.9       | 9. 2           | 3. 1. 40         | 9. 12. 43. 45   | 26. 54. 29B       |
| 36. 38. 4.1B       | +             | 4.1       | 17. 3          | 3. 8. 3          | 9. 18. 39. 56   | 59. 20. 51B       |
| 30. 10. 17.3A      | -             | 4.2       | 3. 0           | 4. 14. 52        | 9. 10. 36. 32   | 4. 8. 53A         |

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SYDERIS            | Ascensio recta |     |    | Varia-<br>ratio<br>annua | Aber.<br>max. | Argum.<br>Aberra-<br>tionis |
|--------------------------|----------------|-----|----|--------------------------|---------------|-----------------------------|
|                          | H.             | M.  | S. |                          |               |                             |
| α Aquilae . . . . . 3-4  | 18.            | 49. | 43 | 282. 25. 48,3            | 41,0          | 20,6                        |
| γ Lirae . . . . . 3      | 18.            | 50. | 50 | 282. 42. 25,4            | 33,7          | 23,6                        |
| ε Sagittarii . . . . . 4 | 18.            | 51. | 40 | 282. 55. 6,9             | 54,1          | 21,4                        |
| τ . . . . . 4            | 18.            | 53. | 23 | 283. 20. 45,0            | 56,5          | 22,6                        |
| λ Antinoi . . . . . 3-4  | 18.            | 54. | 44 | 283. 41. 2,2             | 47,9          | 20,0                        |
| ζ Aquilae . . . . . 3-4  | 18.            | 55. | 26 | 283. 51. 37,1            | 41,5          | 21,0                        |
| π Sagittarii . . . . . 3 | 18.            | 56. | 51 | 284. 12. 50,8            | 53,8          | 21,4                        |
| α . . . . . 4            | 19.            | 8.  | 49 | 287. 12. 18,3            | 62,8          | 26,3                        |
| δ Draconis . . . . . 3   | 19.            | 12. | 27 | 288. 6. 44,0             | 0,7           | 51,2                        |
| δ Aquilae . . . . . 3    | 19.            | 14. | 33 | 289. 38. 19,3            | 45,3          | 19,9                        |
| ε Cygni . . . . . 3      | 19.            | 21. | 58 | 290. 29. 33,7            | 35,4          | 22,3                        |
| ι Antinoi . . . . . 3-4  | 19.            | 25. | 30 | 291. 22. 27,8            | 46,7          | 20,0                        |
| ε Sagittae . . . . . 4   | 19.            | 30. | 25 | 292. 36. 9,0             | 40,3          | 20,7                        |
| γ Aquilae . . . . . 3    | 19.            | 35. | 56 | 293. 59. 3,9             | 42,9          | 20,0                        |
| δ Cygni . . . . . 3      | 19.            | 38. | 12 | 294. 32. 56,6            | 28,2          | 27,7                        |
| α Aquilae . . . . . I. 2 | 19.            | 40. | 11 | 295. 2. 43,3             | 43,5          | 19,9                        |
| γ Antinoi . . . . . 3    | 19.            | 41. | 25 | 295. 21. 18,1            | 46,0          | 19,7                        |
| ε Aquilae . . . . . 3    | 19.            | 44. | 39 | 296. 9. 53,1             | 44,3          | 19,8                        |
| ο Antinoi . . . . . 3-4  | 20.            | 0.  | 6  | 300. 1. 36,2             | 46,6          | 19,6                        |
| ε Capricorni sequ.       | 20.            | 6.  | 0  | 301. 30. 1,3             | 50,2          | 20,1                        |
| ε . . . . . 3            | 20.            | 8.  | 48 | 302. 12. 2,6             | 50,9          | 20,3                        |
| γ Cygni . . . . . 3      | 20.            | 14. | 26 | 303. 36. 35,7            | 32,4          | 25,3                        |
| ε Delphini . . . . . 3-4 | 20.            | 22. | 50 | 305. 42. 37,5            | 43,1          | 19,8                        |
| ζ . . . . . 4            | 20.            | 25. | 10 | 306. 17. 26,6            | 42,2          | 20,0                        |
| ε . . . . . 3            | 20.            | 27. | 23 | 306. 50. 44,5            | 42,2          | 20,0                        |
| ε Delphini . . . . . 3   | 20.            | 29. | 33 | 307. 23. 21,7            | 41,9          | 20,1                        |
| γ . . . . . 3-4          | 20.            | 33. | 20 | 308. 19. 53,5            | 42,1          | 20,0                        |
| ε Cygni . . . . . 2      | 20.            | 34. | 2  | 308. 30. 30,6            | 30,7          | 27,2                        |
| γ Delphini . . . . . 3-4 | 20.            | 36. | 36 | 309. 9. 5,0              | 41,9          | 20,1                        |
| ε Cygni . . . . . 3      | 20.            | 37. | 24 | 309. 21. 6,9             | 36,0          | 23,1                        |
| ζ . . . . . 3-4          | 21.            | 8.  | 42 | 315. 55. 28,5            | 38,8          | 22,0                        |
| ε Eulei . . . . . 4      | 21.            | 4.  | 57 | 316. 14. 21,5            | 45,1          | 19,2                        |
| ε Pegasi . . . . . 4     | 21.            | 12. | 1  | 318. 0. 18,9             | 41,6          | 19,3                        |
| ε Cephei . . . . . 3     | 21.            | 13. | 22 | 318. 20. 27,3            | 21,4          | 40,2                        |
| ε Aquarii . . . . . 3    | 21.            | 20. | 8  | 320. 2. 3,1              | 47,6          | 19,2                        |

to 1. Jan. 1783. ex Catalogo D. de la Caille computatae &amp;c.

| <i>Dec linatio</i> | <i>Varia-</i><br><i>tio</i><br><i>annua</i> | <i>Aberr.</i> | <i>Argum.</i><br><i>aberra-</i><br><i>tionis</i> | <i>Longitudo</i>   | <i>Latitudo</i> | <i>Angulus</i><br><i>positionis</i> |
|--------------------|---|---------------|--|--------------------|-----------------|-------------------------------------|
| <i>G. M. S.</i>    | <i>S.</i>                                   | <i>S.</i>     | <i>S. G. M.</i>                                  | <i>S. G. M. S.</i> | <i>G. M. S.</i> | <i>G. M. S.</i>                     |
| 14. 47. 17,8 B     | + 4,3                                       | 12, 3         | 3. 5. 7  | 9. 15. 15. 1       | 37. 36. 11 B    | 6. 12. 44                           |
| 32. 24. 15,7 B     | + 4,4                                       | 16, 5         | 3. 8. 12   | 9. 18. 54. 48      | 55. 2. 38 B     | 8. 47. 42                           |
| 23. 2. 33,3 A      | - 4,5                                       | 1, 8          | 6. 21. 55  | 9. 11. 57. 40      | 0. 53. 38 B     | 5. 6. 32                            |
| 27. 58. 2,6 A      | - 4,6                                       | 2, 6          | 4. 28. 17  | 9. 11. 48. 35      | 5. 2. 29 A      | 5. 17. 43                           |
| 5. 11. 30,5 A      | - 4,7                                       | 6, 3          | 8. 26. 55  | 9. 14. 18. 36      | 17. 36. 7 B     | 5. 25. 3                            |
| 13. 33. 21,5 B     | + 4,8                                       | 11, 9         | 3. 5. 22   | 9. 16. 46. 42      | 36. 13. 23 B    | 6. 47. 33                           |
| 21. 21. 6,8 A      | - 4,9                                       | 2, 0          | 6. 27. 50  | 9. 13. 13. 28      | 1. 28. 7 B      | 5. 36. 52                           |
| 41. 0. 10,0 A      | - 5,9                                       | 6, 7          | 4. 5. 13   | 9. 13. 36. 6       | 18. 20. 26 A    | 7. 7. 48                            |
| 67. 16. 47,3 B     | + 6,2                                       | 20, 0         | 3. 16. 41  | 0. 14. 19. 51      | 87. 52. 52 B    | 87. 37. 58                          |
| 2. 41. 48,7 B      | + 6,4                                       | 8, 8          | 3. 1. 58   | 9. 20. 35. 51      | 24. 50. 39 B    | 8. 3. 50                            |
| 27. 30. 56,1 B     | + 7,0                                       | 15, 4         | 3. 12. 10  | 9. 28. 14. 36      | 48. 59. 43 B    | 12. 16. 11                          |
| 1. 45. 10,6 A      | - 7,3                                       | 6, 8          | 8. 28. 15  | 9. 22. 48. 55      | 20. 2. 24 B     | 8. 53. 20                           |
| 17. 31. 41,5 B     | + 7,7                                       | 12, 9         | 3. 10. 42  | 9. 28. 3. 26       | 38. 49. 16 B    | 11. 4. 13                           |
| 10. 5. 49,9 B      | + 8,1                                       | 10, 9         | 3. 7. 30   | 9. 27. 55. 6       | 31. 16. 16 B    | 10. 55. 10                          |
| 44. 36. 34,5 B     | + 8,3                                       | 18, 3         | 3. 18. 32  | 9. 13. 16. 5       | 64. 26. 7 B     | 22. 32. 59                          |
| 8. 18. 22,5 B      | + 8,5                                       | 10, 6         | 3. 6. 47   | 9. 28. 48. 42      | 29. 18. 46 B    | 11. 8. 59                           |
| 0. 27. 48,7 B      | + 8,6                                       | 8, 1          | 3. 0. 29   | 9. 27. 24. 47      | 21. 33. 11 B    | 10. 33. 52                          |
| 5. 52. 59,2 B      | + 8,8                                       | 9, 6          | 3. 5. 21   | 9. 29. 24. 37      | 26. 43. 10 B    | 11. 20. 20                          |
| 1. 27. 5,5 A       | - 10,0                                      | 7, 6          | 8. 28. 5   | 10. 1. 53. 24      | 18. 45. 13 B    | 12. 8. 53                           |
| 13. 12. 40,0 A     | - 10,4                                      | 4, 8          | 8. 0. 15   | 10. 0. 49. 39      | 6. 57. 18 B     | 12. 6. 8                            |
| 15. 28. 10,5 A     | - 10,7                                      | 4, 5          | 7. 21. 16  | 10. 1. 1. 1        | 4. 36. 53 B     | 12. 17. 40                          |
| 39. 34. 20,2 B     | + 11,1                                      | 17, 4         | 3. 23. 58  | 10. 21. 51. 18     | 57. 8. 36 B     | 23. 57. 58                          |
| 10. 34. 44,5 B     | + 11,7                                      | 10, 8         | 3. 11. 28  | 10. 11. 2. 40      | 29. 5. 55 B     | 15. 25. 49                          |
| 13. 56. 21,5 B     | + 11,8                                      | 11, 6         | 3. 14. 9   | 10. 12. 44. 31     | 32. 10. 40 B    | 16. 10. 20                          |
| 13. 51. 7,5 B      | + 12,0                                      | 11, 6         | 3. 14. 19  | 10. 13. 19. 25     | 31. 56. 35 B    | 16. 20. 44                          |
| 15. 9. 32,8 B      | + 12,2                                      | 11, 9         | 3. 15. 25  | 10. 14. 21. 47     | 33. 2. 43 B     | 16. 46. 12                          |
| 14. 18. 25,4 B     | + 12,4                                      | 11, 7         | 3. 15. 12  | 10. 15. 6. 16      | 31. 58. 0 B     | 16. 55. 43                          |
| 44. 30. 45,4 B     | + 12,5                                      | 18, 0         | 3. 28. 59  | 11. 2. 21. 2       | 59. 55. 6 B     | 29. 39. 16                          |
| 15. 21. 18,7 B     | + 12,6                                      | 11, 9         | 3. 16. 16  | 10. 16. 21. 59     | 32. 44. 3 B     | 17. 23. 41                          |
| 33. 9. 51,1 B      | + 12,7                                      | 16, 0         | 3. 25. 40  | 10. 24. 41. 52     | 49. 25. 43 B    | 22. 50. 58                          |
| 29. 20. 46,9 B     | + 14,4                                      | 15, 0         | 3. 28. 4   | 11. 0. 2. 25       | 43. 42. 46 B    | 23. 19. 14                          |
| 4. 21. 44,9 B      | + 14,5                                      | 9, 0          | 3. 7. 1  | 10. 20. 5. 34      | 10. 8. 55 B     | 17. 50. 37                          |
| 18. 53. 4,8 B      | + 14,9                                      | 12, 5         | 3. 22. 40  | 10. 27. 16. 56     | 33. 18. 1 B     | 20. 44. 33                          |
| 61. 40. 14,8 B     | + 15,0                                      | 19, 6         | 4. 12. 11  | 10. 9. 48. 22      | 68. 54. 46 B    | 55. 48. 1                           |
| 6. 30. 57,9 A      | - 15,4                                      | 6, 8          | 8. 15. 10  | 10. 20. 22. 19     | 8. 37. 58 B     | 17. 59. 6                           |

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SYDERIS        | Ascensio recta |            |               | Variatio<br>annua | Aber. | Argum.<br>aberra-<br>tionis |           |
|----------------------|----------------|------------|---------------|-------------------|-------|-----------------------------|-----------|
|                      | H.             | M.         | S.            |                   |       |                             |           |
| ε Cephei . . . . .   | 3              | 4          | 21. 25. 46    | 321. 26. 27,7     | 12,6  | 54,6                        | 1. 19. 1  |
| γ Capricorni . . . . | 3              | 41. 28. 2  | 322. 0. 32,6  | 50,1              | 19,9  | 1. 19. 33                   |           |
| ε Pegasi . . . . .   | 3              | 21. 33. 31 | 323. 28. 39,4 | 44,3              | 19,2  | 1. 20. 57                   |           |
| μ Cygni . . . . .    | 3              | 4          | 21. 34. 26    | 323. 36. 34,6     | 39,9  | 21,4                        | 1. 21. 12 |
| δ Capricorni . . . . | 3              | 21. 35. 2  | 323. 45. 33,5 | 49,8              | 19,8  | 1. 21. 20                   |           |
| γ Gruis . . . . .    | 3              | 21. 40. 44 | 325. 11. 0,0  | 55,2              | 24,1  | 1. 22. 38                   |           |
| α Aquarii . . . . .  | 3              | 21. 54. 38 | 328. 39. 34,2 | 46,4              | 18,8  | 1. 26. 23                   |           |
| γ . . . . .          | 3              | 22. 10. 27 | 332. 36. 42,5 | 46,6              | 18,7  | 2. 0. 26                    |           |
| ζ Pegasi . . . . .   | 3              | 22. 30. 37 | 337. 39. 18,0 | 44,9              | 18,9  | 2. 5. 50                    |           |
| η . . . . .          | 3              | 22. 32. 51 | 338. 12. 39,2 | 42,0              | 21,8  | 2. 6. 26                    |           |
| λ Aquarii . . . . .  | 4              | 22. 41. 26 | 340. 18. 27,7 | 47,2              | 18,9  | 2. 8. 40                    |           |
| δ . . . . .          | 3              | 22. 43. 7  | 340. 46. 46,9 | 48,2              | 19,4  | 2. 9. 10                    |           |
| Fomahant . . . . .   | 1              | 22. 45. 36 | 341. 24. 3,7  | 50,0              | 21,5  | 2. 9. 50                    |           |
| ο Andromedae . .     | 4              | 22. 51. 57 | 342. 59. 22,2 | 41,0              | 24,6  | 2. 11. 32                   |           |
| ε Pegasi . . . . .   | 2              | 22. 53. 16 | 343. 18. 57,8 | 43,2              | 20,7  | 2. 11. 53                   |           |
| α . . . . .          | 2              | 22. 53. 58 | 343. 29. 23,6 | 44,7              | 19,1  | 2. 12. 4                    |           |
| φ Aquarii . . . . .  | 4              | 23. 3. 5   | 345. 46. 14,9 | 46,8              | 18,6  | 2. 14. 31                   |           |
| α Cephei . . . . .   | 3              | 23. 30. 35 | 352. 38. 46,5 | 35,5              | 78,2  | 2. 21. 59                   |           |
| γ Andromedae . .     | 2              | 23. 57. 12 | 359. 17. 58,4 | 46,0              | 20,7  | 2. 29. 13                   |           |
| α Cassiopeae . . .   | 3              | 23. 57. 39 | 359. 24. 45,3 | 45,8              | 34,6  | 2. 29. 20                   |           |



pro i. Jan. 1783. ex Catalogo D. de la Caille computatae &amp;c.

| Declinatio<br>G. M. S. | Varia-<br>tio<br>annua<br>S. | z<br>Max.<br>Aberr.<br>S. | Argum.<br>aberra-<br>tionis<br>S. G. M. | Longitudo<br>S. G. M. S. | Latitudo<br>G. M. S. | Angulus<br>positionis<br>G. M. S. |
|------------------------|------------------------------|---------------------------|---|--------------------------|----------------------|-----------------------------------|
| 69. 36. 36.5B          | + 15.7                       | 19.9                      | 4. 17. 23                               | 1. 2. 35. 35             | 71. 8. 0B            | 74. 24. 6                         |
| 17. 38. 0.8A           | - 15.8                       | 6.3                       | 7. 11. 7                                | 10. 18. 44. 51           | 2. 32. 2A            | 18. 18. 48                        |
| 8. 53. 20.5B           | + 16.1                       | 9.9                       | 3. 44. 34                               | 10. 28. 51. 41           | 22. 6. 58B           | 20. 11. 4                         |
| 27. 46. 18.9B          | + 16.1                       | 14.3                      | 4. 1. 45                                | 11. 7. 26. 20            | 39. 31. 49B          | 24. 33. 50                        |
| 17. 6. 2.1A            | - 16.2                       | 6.5                       | 7. 12. 58                               | 10. 20. 30. 9            | 2. 33. 34A           | 18. 45. 27                        |
| 38. 22. 27.5A          | - 16.4                       | 10.2                      | 5. 28. 20                               | 10. 14. 18. 26           | 23. 1. 32A           | 20. 48. 44                        |
| 1. 22. 59.8A           | - 17.1                       | 7.7                       | 8. 26. 57                               | 11. 0. 19. 45            | 10. 10. 29B          | 20. 15. 13                        |
| 2. 28. 25.2A           | - 17.8                       | 7.6                       | 8. 24. 13                               | 11. 3. 40. 58            | 8. 14. 54B           | 20. 56. 15                        |
| 9. 42. 19.0B           | + 18.6                       | 9.6                       | 3. 19. 2                                | 11. 13. 7. 22            | 17. 41. 31B          | 22. 44. 53                        |
| 29. 5. 30.7B           | + 18.6                       | 13.7                      | 4. 41. 49                               | 11. 22. 42. 19           | 35. 6. 43B           | 26. 52. 50                        |
| 8. 43. 44.5A           | - 18.9                       | 7.5                       | 8. 7. 35                                | 11. 8. 32. 54            | 0. 22. 52A           | 22. 1. 40                         |
| 16. 58. 11.8A          | - 18.9                       | 8.0                       | 7. 16. 42                               | 11. 5. 50. 36            | 8. 10. 52A           | 22. 19. 54                        |
| 30. 45. 55.8A          | - 19.0                       | 10.4                      | 6. 21. 38                               | 11. 0. 48. 13            | 21. 6. 13A           | 23. 52. 17                        |
| 41. 9. 47.5B           | + 19.2                       | 15.8                      | 4. 22. 51                               | 0. 4. 46. 34             | 43. 44. 46B          | 31. 49. 6                         |
| 26. 54. 38.5B          | + 19.2                       | 12.8                      | 4. 12. 24                               | 11. 26. 20. 39           | 31. 8. 11B           | 26. 27. 51                        |
| 14. 2. 32.4B           | + 19.2                       | 10.1                      | 3. 27. 20                               | 11. 20. 27. 53           | 19. 24. 46B          | 23. 53. 6                         |
| 7. 12. 49.2A           | - 19.4                       | 7.7                       | 8. 11. 57                               | 11. 18. 6. 46            | 1. 2. 3A             | 22. 42. 53                        |
| 76. 25. 6.8B           | + 19.9                       | 19.7                      | 5. 17. 50                               | 1. 27. 4. 13             | 64. 37. 57B          | 67. 13. 36                        |
| 27. 43. 56.7B          | + 20.0                       | 11.8                      | 4. 22. 36                               | 0. 11. 27. 24            | 25. 41. 6B           | 26. 13. 41                        |
| 57. 57. 43.7B          | + 20.0                       | 17.5                      | 5. 25. 28                               | 1. 2. 5. 35              | 1. 13. 42B           | 39. 29. 41                        |



## DIFFERENTIAE MERIDIANORUM

*Inter Observatorium Mediolanense, Et praecipua loca terrae  
cum eorumdem longitudine Et latitudine.*

| NOMINA<br>LOCORUM.   | Differentia<br>Meridianorum. |     |         | Longitudo. | Latitudo.  |
|----------------------|------------------------------|-----|---------|------------|------------|
|                      | H.                           | M.  | S.      |            |            |
| Aboa Finnia          | 0.                           | 52. | 9. or.  | 39. 52     | 0. 27. 0 B |
| Agra Mogolis         | 3.                           | 30. | 11. or. | 94. 24     | 26. 43. 0  |
| Agria Erlan          | 0.                           | 44. | 5. or.  | 37. 52     | 47. 42. 0  |
| Aleppum Syria        | 1.                           | 52. | 35. or. | 55. 0      | 35. 45. 23 |
| Alexandria Egypti    | 1.                           | 24. | 21. or. | 47. 57     | 31. 11. 20 |
| Alexandria Liguriz   | 0.                           | 2.  | 52. or. | 27. 34     | 53. 35. 0  |
| Amstelodamum         | 0.                           | 17. | 13. oc. | 22. 39     | 52. 22. 45 |
| Ancona               | 0.                           | 17. | 17. or. | 31. 11     | 43. 37. 54 |
| Antissidorum Auxerre | 0.                           | 22. | 28. oc. | 21. 14     | 47. 47. 54 |
| Antuerpia            | 0.                           | 19. | 12. oc. | 22. 4      | 51. 13. 35 |
| Aquae Sextiae Aix    | 0.                           | 15. | 0. oc.  | 23. 7      | 43. 31. 35 |
| Archangelus          | 1.                           | 58. | 55. or. | 56. 35     | 64. 34. 0  |
| Ariminum             | 0.                           | 13. | 56. or. | 30. 20     | 44. 3. 43  |
| Athenae Gracie       | 1.                           | 5.  | 20. or. | 43. 11     | 37. 40. 0  |
| Avenio Avignon       | 0.                           | 19. | 31. oc. | 22. 29     | 43. 57. 25 |
| Augusta Vindel       | 0.                           | 7.  | 0. or.  | 28. 36     | 48. 24. 0  |
| Aurelianum Orleans   | 0.                           | 29. | 8. oc.  | 19. 34     | 47. 54. 4  |
| Bafilea              | 0.                           | 6.  | 25. oc. | 25. 15     | 47. 55. 0  |
| Bajoce Bajeux        | 0.                           | 39. | 36. oc. | 16. 57     | 49. 16. 30 |
| Bajonna              | 0.                           | 42. | 45. oc. | 16. 10     | 43. 29. 21 |
| Belgradum            | 0.                           | 49. | 5. or.  | 39. 7      | 45. 3. 0   |
| Bergomum             | 0.                           | 0.  | 48. or. | 27. 3      | 45. 41. 0  |
| Berolinum            | 0.                           | 17. | 0. or.  | 31. 6      | 58. 31. 30 |
| Bitera Beziers       | 0.                           | 23. | 55. oc. | 20. 53     | 43. 20. 20 |
| Bononia Italiae      | 0.                           | 8.  | 40. or. | 29. I      | 44. 29. 36 |
| Brandenburgum        | 0.                           | 13. | 52. or. | 30. 19     | 52. 27. 0  |
| Brixia               | 0.                           | 3.  | 0. or.  | 27. 36     | 45. 51. 0  |
| Burdigala Bourdeaux  | 0.                           | 39. | 4. oc.  | 17. 5      | 44. 50. 18 |
| Burgum in Brechia    | 0.                           | 39. | 1. oc.  | 22. 54     | 46. 12. 30 |
| Brestia Brest        | 0.                           | 54. | 48. oc. | 13. 9      | 48. 23. 0  |

NOMINA  
LOCORUM.

|                           | Differentia<br>Meridianorum. |     |         | Longitudo. | Latitudo. |              |
|---------------------------|------------------------------|-----|---------|------------|-----------|--------------|
|                           | H.                           | M.  | S.      | G.         | M.        | S.           |
| Buenos-aires              | 4.                           | 30. | 50. oc. | 319.       | 9         | 34. 35. 26 A |
| Cadomum Caen              | 0.                           | 38. | 12. oc. | 17.        | 18        | 49. 11. 10 B |
| Cajaneburgum              | I.                           | 14. | 17. or. | 45.        | 25        | 64. 13. 30   |
| Cajrus Egypti             | I.                           | 29. | 15. or. | 29.        | 10        | 30. 3. 12    |
| Caletum Calais            | O.                           | 39. | 21. oc. | 19.        | 31        | 50. 57. 31   |
| Canton                    | 6.                           | 55. | 28. oc. | 130.       | 43        | 23. 8. 0     |
| Capua                     | O.                           | 19. | 0. or.  | 31.        | 36        | 41. 7. 0     |
| Caput bonæ Spei           | O.                           | 36. | 50. or. | 36.        | 4         | 33. 35. 15 A |
| Caput Gallicum            | S.                           | 26. | 5. oc.  | 305.       | I         | 19. 46. 40 B |
| Caput Viridie             | I.                           | 45. | 25. oc. | 0.         | 30        | 14. 43. 0    |
| Carthago Americæ          | S.                           | 38. | 30. oc. | 302.       | 14        | 10. 26. 35   |
| Casale Majus              | O.                           | 3.  | 36. or. | 27.        | 45        | 45. 1. 0     |
| Cayenna                   | 4.                           | 5.  | 5. oc.  | 325.       | 25        | 4. 56. 0     |
| Colonia                   | O.                           | 8.  | 25. oc. | 24.        | 45        | 50. 55. 0    |
| Conceptio Cibili          | S.                           | 27. | 25. oc. | 305.       | 0         | 36. 42. 53 A |
| Constantinopolis          | I.                           | 19. | 0. or.  | 46.        | 36        | 41. 1. 0 B   |
| Cracovia                  | O.                           | 42. | 35. or. | 37.        | 30        | 50. 10. 0    |
| Cremifanium Cremfinunster | O.                           | 19. | 45. or. | 31.        | 48        | 48. 3. 36    |
| Cremona                   | O.                           | 5.  | 38. or. | 27.        | 45        | 45. 7. 49    |
| Curia Coira               | O.                           | 1.  | 0. or.  | 27.        | 6         | 46. 30. 0    |
| Dresda                    | O.                           | 17. | 0. or.  | 31.        | 6         | 51. 6. 0     |
| Duquerque                 | O.                           | 27. | 15. oc. | 20.        | 2         | 51. 2. 4     |
| Edenburgum                | O.                           | 49. | 6. oc.  | 14.        | 35        | 55. 58. 0    |
| Ferraria                  | O.                           | 9.  | 32. or. | 29.        | 14        | 44. 54. 0    |
| Florentia                 | O.                           | 7.  | 23. or. | 28.        | 42        | 43. 46. 30   |
| Francofurtum              | O.                           | 2.  | 25. oc. | 26.        | 15        | 50. 6. 0     |
| Gades Cadice              | I.                           | 1.  | 41. oc. | 11.        | 26        | 36. 31. 7    |
| Gedannum Danzica          | O.                           | 37. | 19. or. | 35.        | 11        | 54. 22. 23   |
| Geneva                    | O.                           | 12. | 35. oc. | 23.        | 49        | 46. 12. 0    |
| Genua                     | O.                           | 2.  | 22. oc. | 26.        | 16        | 44. 25. 0    |
| Goa                       | 4.                           | 18. | 16. or. | 91.        | 25        | 15. 31. 0 A  |
| Goritia                   | O.                           | 17. | 34. or. | 31.        | 15        | 45. 57. 30 B |
| Gothenburgum              | O.                           | 9.  | 50. or. | 20.        | 19        | 57. 42. 0    |
| Gottinga                  | O.                           | 2.  | 51. or. | 27.        | 34        | 51. 32. 0    |
| Gracium Gratz             | O.                           | 24. | 50. or. | 33.        | 4         | 47. 4. 18    |

**NOMINA  
LOCORUM.**

|                                | <i>Differentia<br/>Meridianorum.</i> | <i>Longitudo.</i> | <i>Latitudo.</i> |
|--------------------------------|--------------------------------------|-------------------|------------------|
|                                |                                      | <i>H. M. S.</i>   | <i>G. M.</i>     |
| Greenovicum                    | 0. 36. 41. oc.                       | 17. 41            | 5. 28. 40 B      |
| Gripwald                       | 0. 17. 43. or.                       | 31. 17            | 5. 16. 0         |
| Haphnia Copenague              | 0. 14. 16. or.                       | 30. 25            | 55. 40. 45       |
| Havana                         | 6. 3. 56. oc.                        | 295. 52           | 23. 14. 50       |
| Herbipolis Wurtzburg           | 0. 4. 10. oc.                        | 27. 54            | 49. 46. 6        |
| Hierosolima                    | 1. 44. 35. or.                       | 53. 0             | 31. 50. 0        |
| Imola                          | 0. 10. 31. or.                       | 29. 29            | 44. 21. 32       |
| Ingolstadium                   | 0. 8. 45. or.                        | 29. 2             | 48. 46. 0        |
| Insula Borbonica ad S. Diodif. | 3. 5. 15. or.                        | 73. 10            | 20. 51. 43 A     |
| Insula Ferri, ad Opp.          | 1. 47. 0. oc.                        | 0. 6              | 27. 47. 20 B     |
| Insula Galliz ad port. Ludov.  | 3. 13. 7. or.                        | 75. 8             | 20. 9. 45 A      |
| S. Joseph in California        | 7. 55. 24. oc.                       | 268. 0            | 23. 3. 36 B      |
| Ispahan                        | 2. 54. 35. or.                       | 79. 30            | 32. 25. 0        |
| Julia Cæsarea Algeri           | 0. 27. 54. oc.                       | 19. 53            | 36. 49. 30       |
| Kebecum                        | 5. 16. 17. oc.                       | 307. 47           | 46. 55. 0        |
| Leodium Liegi                  | 0. 14. 28. oc.                       | 23. 14            | 50. 38. 0        |
| Leyda                          | 0. 19. 0. oc.                        | 22. 6             | 52. 8. 40        |
| Ligurnus                       | 0. 4. 0. or                          | 27. 51            | 43. 32. 0        |
| Lima Peruvia                   | 5. 44. 3. oc.                        | 300. 50           | 12. 1. 15 A      |
| Lipsia                         | 0. 12. 35. or.                       | 30. 0             | 51. 19. 14 B     |
| Londinum                       | 0. 37. 6. oc.                        | 17. 35            | 51. 51. 0        |
| Luca                           | 0. 4. 24. or.                        | 27. 57            | 43. 49. 3        |
| Lugdunum                       | 0. 17. 6. oc.                        | 22. 20            | 45. 45. 51       |
| Lunden                         | 0. 16. 40. or.                       | 31. 1             | 55. 41. 36       |
| Lutetiae Parisiorum            | 0. 27. 25. oc.                       | 20. 0             | 48. 50. 12       |
| Macaum                         | 6. 58. 20. or.                       | 131. 26           | 22. 12. 44       |
| Madras                         | 4. 43. 30. or.                       | 97. 43            | 13. 8. 0         |
| Macerata                       | 0. 17. 29. or.                       | 31. 13            | 43. 18. 36       |
| Malaca                         | 6. 11. 35. or.                       | 19. 45            | 2. 12. 0         |
| Manilla                        | 7. 24. 35. or.                       | 138. 0            | 14. 30. 0        |
| Mantua                         | 0. 3. 56. or.                        | 27. 50            | 45. 2. 0         |
| Martinica                      | 4. 40. 40. oc.                       | 316. 41           | 14. 43. 9        |
| Maffiliae                      | 0. 15. 16. oc.                       | 23. 2             | 43. 17. 45       |
| Matritum                       | 0. 50. 28. oc.                       | 14. 14            | 40. 25. 0        |
| Mediolanum                     | 0. 0. 0.                             | 26. 51            | 45. 27. 57       |

| NOMINA<br>LOCORUM.                | Differentia<br>Meridianorum. |     | Longitudo. | Latitudo. |      |    |     |     |    |   |
|-----------------------------------|------------------------------|-----|------------|-----------|------|----|-----|-----|----|---|
|                                   | H.                           | M.  | G.         | M.        | S.   |    |     |     |    |   |
| Melita                            | 0.                           | 21. | 9.         | or.       | 32.  | 9  | 35. | 54. | 0  | B |
| Messana                           | 0.                           | 24. | 29.        | or.       | 32.  | 58 | 38. | 21. | 0  |   |
| Mexicum                           | 7.                           | 31. | 25.        | oc.       | 274. | 0  | 20. | 0.  | 0  |   |
| Mognatia                          | 0.                           | 3.  | 25.        | oc.       | 25.  | 59 | 49. | 54. | 0  |   |
| Monachium Bav.                    | 0.                           | 9.  | 15.        | or.       | 29.  | 15 | 48. | 9.  | 55 |   |
| Monspeffulanum <i>Montpellier</i> | 0.                           | 21. | 14.        | oc.       | 21.  | 33 | 43. | 36. | 33 |   |
| Moscua                            | 1.                           | 54. | 20.        | or.       | 55.  | 26 | 55. | 45. | 20 |   |
| Mutina                            | 0.                           | 8.  | 4.         | or.       | 28.  | 52 | 44. | 34. | 0  |   |
| Neapolis                          | 0.                           | 20. | 5.         | or.       | 31.  | 52 | 40. | 50. | 15 |   |
| Nicea <i>Prov.</i>                | 0.                           | 7.  | 36.        | oc.       | 24.  | 57 | 42. | 41. | 54 |   |
| Norimberga                        | 0.                           | 7.  | 31.        | or.       | 28.  | 44 | 49. | 27. | 0  |   |
| Oxonium <i>Oxford</i>             | 0.                           | 41. | 45.        | oc.       | 16.  | 29 | 51. | 44. | 57 |   |
| Padua                             | 0.                           | 10. | 57.        | or.       | 29.  | 36 | 45. | 22. | 26 |   |
| Panormum                          | 0.                           | 16. | 16.        | or.       | 30.  | 55 | 38. | 9.  | 0  |   |
| Parma                             | 0.                           | 2.  | 58.        | or.       | 27.  | 35 | 44. | 44. | 50 |   |
| Pekinum                           | 7.                           | 9.  | 10.        | or.       | 134. | 9  | 39. | 54. | 13 |   |
| Perium                            | 0.                           | 14. | 57.        | or.       | 30.  | 35 | 43. | 33. | 54 |   |
| Petropolis                        | 1.                           | 24. | 33.        | or.       | 48.  | 0  | 59. | 56. | 0  |   |
| Philadelphia                      | 5.                           | 37. | 28.        | oc.       | 302. | 29 | 39. | 56. | 55 |   |
| Pifae                             | 0.                           | 5.  | 4.         | or.       | 28.  | 7  | 43. | 43. | 7  |   |
| Pistorium                         | 0.                           | 6.  | 8.         | or.       | 28.  | 23 | 43. | 36. | 0  |   |
| Placentia                         | 0.                           | 0.  | 52.        | or.       | 27.  | 4  | 45. | 3.  | 0  |   |
| Pondichery                        | 4.                           | 43. | 5.         | or.       | 97.  | 37 | 11. | 56. | 30 |   |
| Portobelo                         | 5.                           | 56. | 5.         | oc.       | 297. | 50 | 9.  | 33. | 5  |   |
| Praga                             | 0.                           | 22. | 15.        | or.       | 32.  | 25 | 50. | 4.  | 30 |   |
| Quanton                           | 6.                           | 55. | 28.        | or.       | 130. | 43 | 23. | 8.  | 0  |   |
| Quito                             | 5.                           | 48. | 25.        | oc.       | 299. | 45 | 0.  | 13. | 17 | A |
| Ravenna                           | 0.                           | 11. | 8.         | or.       | 29.  | 38 | 44. | 25. | 5  | B |
| Regium Lepidi                     | 0.                           | 6.  | 20.        | or.       | 28.  | 25 | 44. | 39. | 0  |   |
| Rio-Janeirc                       | 3.                           | 27. | 45.        | oc.       | 334. | 55 | 23. | 54. | 10 | A |
| Roma                              | 0                            | 13. | 12.        | or.       | 30.  | 9  | 41. | 53. | 54 | B |
| Rothomagus Roán                   | 0.                           | 52. | 24.        | oc.       | 18.  | 45 | 49. | 26. | 43 |   |
| Sevona                            | 0.                           | 3.  | 40.        | oc.       | 25.  | 56 | 44. | 18. | 0  |   |
| Schwezingen                       | 0.                           | 2.  | 10.        | oc.       | 26.  | 19 | 49. | 23. | 4  |   |
| Senac                             | 0.                           | 7.  | 44.        | or.       | 28.  | 47 | 43. | 20. | 0  |   |

| NOMINA<br>LOCORUM.  | Differentia<br>Meridianorum. |             | Longitudo. | Latitudo.    |
|---------------------|------------------------------|-------------|------------|--------------|
|                     | H.                           | M.          |            |              |
| Senoges <i>Sens</i> | 0.                           | 23. 37. oc. | 20. 57     | 48. 11. 56 B |
| Siam                | 6.                           | 6. 35. or.  | 118. 30    | 14. 18. 0    |
| Smirna              | I.                           | 12. 32. or. | 44. 59     | 38. 28. 7    |
| Stokolmia           | 0.                           | 35. 25. or. | 35. 43     | 59. 20. 30   |
| Taurinum            | 0.                           | 6. 5. oc.   | 25. 20     | 45. 4. 14    |
| Telo-Martius Tolon  | 0.                           | 12. 59. oc. | 23. 37     | 43. 7. 24    |
| Tergeste            | 0.                           | 18. 40. or. | 31. 31     | 45. 33. 0    |
| Ticinum             | 0.                           | 0. 1. oc.   | 26. 51     | 45. 10. 59   |
| Tobolk              | 3.                           | 56. 55. or. | 186. 5     | 58. 12. 22   |
| Tolosa              | 0.                           | 30. 40. oc  | 19. 6      | 43. 35. 54   |
| Tornea              | I.                           | 0. 3. or.   | 41. 53     | 65. 50. 50   |
| Trajectum superius  | 0.                           | 13. 48. oc. | 23. 23     | 50. 49. 0    |
| Tridentum           | 0.                           | 6. 24. or.  | 28. 27     | 46. 1. 0     |
| Tyrnavia            | 0.                           | 33. 30. or. | 35. 14     | 48. 23. 30   |
| Varfavia            | 0.                           | 47. 35. or. | 38. 45     | 52. 14. 0    |
| Venetiae            | 0.                           | 11. 33. or. | 29. 45     | 45. 25. 0    |
| Vercelliae          | 0.                           | 3. 48. oc.  | 25. 54     | 45. 13. 0    |
| Verona              | 0.                           | 8. 29. or.  | 28. 58     | 45. 26. 26   |
| Versailles          | 0.                           | 28. 16. oc. | 19. 47     | 48. 48. 18   |
| Vicentia            | 0.                           | 8. 16. or.  | 28. 55     | 45. 30. 0    |
| Vienna Austriae     | 0.                           | 28. 45. or. | 34. 2      | 48. 12. 32   |
| Viterbum            | 0.                           | 12. 7. or.  | 29. 53     | 42. 24. 54   |
| Ultrajectum         | 0.                           | 16. 16. oc. | 22. 47     | 52. 6. 0     |
| Ulyssippo           | I.                           | 13. 20. oc. | 8. 31      | 38. 42. 20   |
| Urbinum             | 0.                           | 14. 4. or.  | 30. 22     | 43. 43. 36   |
| Upsala              | 0.                           | 33. 45. or. | 36. 25     | 59. 51. 50   |
| Uraniburgum         | 0.                           | 14. 45. or. | 30. 33     | 55. 54. 15   |
| Wardus              | I.                           | 27. 39. or. | 48. 46     | 70. 22. 35   |
| Wilna               | I.                           | 5. 5. or.   | 43. 7      | 54. 41. 0    |
| Wirtemberga         | 0.                           | 13. 29. or. | 30. 14     | 51. 43. 10   |

EXPLICATIO  
ATQUE USUS  
TARANTULARVM  
PRAECEDENTIUM.

---

DE OBLIQUITATE ECLIPTICAE.

**S**ol, uti omnibus perspectum est, ex hyemali solsticio, quo dies trahit brevissimos, in ampliores deinceps orbis circumfertur, & spirali quodam gyro ad aestivum usque solstitium assurgit; mox viam remetitur eamdem, variasque anni tempestates dicit & reducit. Stellae interim videntur quotidie citius oriri & occidere; & quae lumine Solis opprimuntur appetente vere, eadem plena nocte coruscant ineunte autumno. Duplex hinc motus Solis colligitur: alter quo in diurnis orbibus progreditur ab ortu in occasum; alter quo in orientalem coeli plagam regreditur, & *magnus Sol circumvolvitur annum*. Orbis ejusmodi diurnos Astronomi dixerunt *Parallelos*; inter hos medium *Aequatorem*; hinc & hinc extremos *Tropicos*; orbem annuum *Eclipticam* atque *Eclipticae Obligkeitatem* angulum qui fit ex intersectione planorum eclipticae & aequatoris.

Quorum quidem motuum causas cognoscere tum frustra conati sunt veteres cum Tycone; tum post Copernicanos eae rerum atque oppositionum species debentur rotationi

telluris circa suum axem , ejusque motui , quo per anni gyrum versatur . Qui motus terrae diurnus & annuus quia in plano sunt nec eodem nec parallelo : hinc est aequatoris ad eclipticam inclinatio sine , ut ajunt , obliquitas .

Facti evidenter ex observationibus , facti necessitas ex gravitatis legibus inclinationem ejusmodi imminutam evincent . Nam , quotquot habitae sunt , collatis observationibus , eae prodeunt eclipticae obliquitates , ut maxima Pytheam , Eratostenem , Ptolemeum astronomorum antiquissimos , mediae & minimae superiorem nostramque aetatem spectent . Alia ex parte cum se mutuo petunt graves planetae , tum a plano sui motus retrahunt singuli singulos ; hinc motus nodorum , hinc imminutio , de qua agitur . Cum enim eclipticae nodi & orbitalium Jovis & Veneris , quorum maxima est vis in terram , sint in signis borealis ascendentibus , non regredientur in earum orbitalium plano quin aequatori accedant , hujusque ad eclipticam inclinatio minuatur .

Est autem circiter  $45''$  quantitas accuratis observationibus La Caille , Bradley , aliorumque Clariss . Astronomorum comprobata , atque ex gravitatis legibus a celeberrimi Geometris jam deducta & novissime a Cl . La Grange Berolini confirmata , quam in his tabulis sequor . Neque vero ab eadem recedere cogor aut auctoritate de Loville , qui secularem imminutionem non minorem esse putavit  $60''$  , sed qui recentioribus & accuratiorebus observationibus caruit ad comparationes rite instituendas : aut observationibus Monnierii ad gnomonem S. Sulpitii , quae pro nullo vel perexi-

guo decremento stare videntur, sed quibus jam satisfecit La Lande inducta novi aedificii subsidentia: aut sententia ipsius La Lande, ex qua imminutio ejusmodi ad 88" excrescit, sed qui Veneris massam plus aequo forte supputavit: aut demum observationibus ad gnomonem Florentinum a Cl. Ximenes institutis ann. 1756. & 1775. *Dissertazione intorno alle osservazioni solstiziali del 1775. allo gnomone della Metropolitana Fiorentina, ec. Livorno 1776.* ex quibus idem decrementum 35" solum attingere ostenditur, sed quae nec comparationum numero, nec instrumenti natura sic coeteris praestare videntur, ut rem prorsus definire censeantur.

Quamvis vero tot ab hinc saeculis decrementum perget haberi, haud licet tamen inferre eclipticam, aut olim fuisse aequatori perpendicularem, aut fore aliquando parallelam. Qui enim summi viri secularem obliquitat̄ immunitatem 45" circiter supputaverunt, positis, quae nunc habentur, planetarum massis, orbitarum ad eclipticam inclinationibus, nodorum locis, demonstrarunt iidem fore ut nodis in signa alia progressis, immunitatem excipiat obliquitatis incrementum, maximi sive incrementi, sive decrementi limite praefinito 1° 7'.

Haec de inclinationis variatione ex planetarum gravitate in terram totam. Alia est variatio ex eorumdem, lunaeque potissimum actione varia in terrae parte aequatori superiensidentem. Ex quo enim Bradleyana axis nutatio habetur, necessario sequitur fore ut eclipticae accedat aequator aut ab eadem recedat, prout nutationis motus positivus sit vel negativus. Variationis ejusmodi periodus & quantitas

periodo respondet & cosinui longitudinis nodi lunaris, factio  
radio 9''. Ex hac fit, ut quandoque apparetis eclipticae  
obliquitas crescat, cum revera jugiter decrescere perget  
obliquitas media.

### DE PHAENOMENIS ET OBSERVATIONIBUS SOLIS, LUNAE, PLANETARUM.

**S**olis orbita ad aequatorem inclinata parallelos omnes  
qui inter aequatorem & tropicos interjacent ita secat,  
ut eundem parallelum bis in anno Sol contingat aequali  
hinc & hinc a solsticiis intervallo. Observata differentia ascen-  
sionum rectarum fixae & Solis in eodem parallelo versantis  
accuratam methodum exhibet ascensionibus rectis tum fixae  
tum Solis omnino definiendis.

Sit  $x$  ascensio recta Solis ad propositum parallelum  
ante solsticium aestivum appellentis, erit post solsticium  
redeuntis  $180^\circ - x$ . Sit  $a$  differentia ascensionum recta-  
rum Solis & stellae observata in primo appulso, erit  
ascensio recta stellae  $= x \pm a$ . Sit  $b$  eundem ascensioni  
differentia in secundo appulso, erit ascensio recta  
stellae  $= 180^\circ - x \pm b$ . Sit constans ascensio recta stellae,  
erit  $x \pm a = 180^\circ - x \pm b$ ; atque  $x = \frac{180^\circ \mp a \pm b}{2}$ .

Quod si solsticium fuerit hyemale, facta in primo ap-  
pulso ascensione recta Solis  $= 180^\circ + x$ ; erit in secundo  
 $= 360^\circ - x$ , & ascensio recta Solis tempore primi ap-  
pulsus  $= \frac{360^\circ \mp a \pm b}{2}$ . Et quamvis ob aequinoctiorum

praecessionem rationesque alias constans supponi nequeat ascensio recta stellae , attamen variationibus ejusmodi , quibus subest ; satis cognitis , exakte corrigitur quantitas  $b$  , & quantitas  $x$  non minus accurata obtinetur , quam in hypothesi immutabilis ascensionis rectae stellae .

Ob methodi praestantiam fructusque uberes qui inde colligi possunt , notantur singulis mensibus fixae in quarum parallelo Sol invenitur : Quamvis enim fixam quamlibet methodus exposita admittat , facilius tamen res obtinebitur , si cum fixa in parallelo eodem jacente Sol comparetur . Observentur itaque ante & post significatam diem differentiae tum ascensionis rectae tum declinationis Solis & stellae , ut inveniatur & instans , quo Sol propositum parallelum attingit , & differentia ascensionis rectae huic tempori respondens : eadem fiant Sole ad eundem parallelum regrediente , & correctio adhibetur ob praecessionem aequinoctiorum , ut habeatur Solis atque stellae ascensio recta quaesita .

Eadem haec pagina monet quando Sol in planetarum nodis versatur . Latitudo geocentrica planetae tunc observati vel aequalis est inclinationi orbitae ejusdem , vel ipsa inclinatio ex his observationibus faciliter supputatione deducitur . Manifestum autem est quanti intersit elementum ejusmodi exakte determinare , quantique proinde facienda sint istae observationes .

Indicantur secundo & tertio loco phaenomena & observationes planetarum & Lunae . Horum oppositiones , conjunctiones invicem & cum fixis , transitus per lineam ap-

dum & nodorum , distantiae mediae , aliaque ejusmodi astronomis proponuntur , ut ex observationibus in his circumstantiis institutis , planetarum tabulae corrigantur , nonvisque inventis astronomia decoretur . Lunae vero conjunctiones cum fixis , earumque praeferit , quibus fixae occultatio accedit in primis attendendae sunt , cum maximi emolumenti sint tum geographicis longitudinibus definendis ; tum Lunae ipsius theoriae perficienda : quae cum planeta sit coeteris terrae propior , totque tantisque phænomenis distincta , adhuc tamen exlege quadam contumacia astronomis ita se subrahit , ut nonnisi post diurnas fastidiosasque supputationes ejus positiones & phænomena assignare queant .

Ad faciliores demum reddendas planetarum observations prostant fixae prope quarum parallelos iidem inveniuntur indicatis diebus , & quarum comparatione planetarum loca obtinebuntur .

#### DE AEQUATIONE TEMPORIS.

**T**empus suapte natura aequabile dies horaeque plerumque inaequales distinguunt . Horum vitio emendando temporis aequationem adhibuit excultior astronomia . Verum non prius de correctione sit sermo , quam de ipsis temporum mensuris nonnulla praemittantur .

Tempora metimur Solis siderumque motibus . Qui motus cum ad speciem magis , quam ad rei veritatem pertinent ; tum jure dies definitur ex telluris circa suum

axem rotatione ; annus vero ex ejusdem majore gyro, quo volvitur circa Solem . Temporum tamen appellatiōnem retinemus , prout sensus ususque ferunt . Telluris itaque rotatio seorsum inspecta tempus sidereum , rotatio & diurna gyri pars simul comparata tempus solare verum , rotatio simul & respondens gyrus , motu aequabili , alteroque alteri parallelo supposito , tempus solare medium determinat .

Telluris rotatio circa axem aequabilis assumi potest , negari aut demonstrari non potest : neque enim modi suppunt aut rationes , quibus immutationem , si qua est , experiamur . Dies ergo tempusque sidereum aequabile censetur .

Telluris gyrus in ellipsi est ; vera ergo motus inaequabilis causa inest : ellipsis planum plano inclinatur , cui ipse motus referunt ; nova ergo se motus inaequabilitas prodit ; dies ergo tempusque solare verum inaequabile apparere debet .

Si fiat telluris gyrus in circulo , fiatque directione rotationis motui parallela , aequabilis erit motus , & aequali rotationis tempore , aequalis percurri videbitur orbis portio . Dies ergo tempusque solare medium aequabile apparebit .

Ex his jam satis patet unde correctio desumenda sit inaequibili tempori vero in medium aequabile convertendo . Inaequabilitatis enim vitium elliptico ex motu ortum , aequatio centri ; inaequabilitatis speciem ex motus relatione productam , reductio eclipticae ad aequatorem , corrigunt . Hinc quia aequatio centri differentia est longitudinum Solis mediae & verae ; atque reductio ad aequatorem differentia

est longitudinis verae Solis ejusdemque ascensionis rectae verae, aequationis temporis formula est *differentia longitudinis Solis mediae & ascensionis rectae verae in tempus solare medium redacta in ratione 15° ad 1°.*

Quater in anno ascensioni rectae Solis verae longitudine ejusdem media fit aequalis alterna vice excessus & defectus. Hinc sequitur quatuor tantum dies veros esse mediis aequales, reliquis deficientibus modo; modo excedentibus, aequationemque temporis modo esse positivam, modo negativam.

Tempori solari medio plerumque aptantur horologia, quae tamen cum eidem accuratissime respondere minime soleant, observatori tempus quoddam exhibent, quod nec medium est nec verum, atque apparet horologii tempus rite nuncupatur. Hinc si observati phaenomeni tempus medium requiratur, tempus horologii apparet ad tempus verum primo, mox verum ad medium redigi debet.

Observato ex. c. appulsu Martis ad meridianum die 12. Julii anni 1781. 12<sup>h</sup> 13' 0'' tempore horologii, queritur ejusdem tempus verum & medium. Horologio, quo meridiei momento indicari debuerant 0<sup>h</sup> 0' 0'' tempore vero, indicabantur die 12. Julii 0<sup>h</sup> 10' 1''; die vero 13, 0<sup>h</sup> 10' 2''; tempore ergo observationis + 0<sup>h</sup> 10' 1'',5 supra tempus verum. Tempus itaque verum observationis erit 12<sup>h</sup> 13' 0'' — 10' 1'',5 = 12<sup>h</sup> 2' 58'',5. Praeterea aquatio temporis meridie diei 12. Julii = + 5' 7'',9; diei 13. = + 5' 15'',1; tempore ergo observationis + 5' 11'',5; atque tempus medium observationis 12<sup>h</sup> 2' 58'',5 + 5' 11'',5 = 12<sup>h</sup> 8' 10''.

### DE LONGITUDINE SOLIS.

Sideris longitudinem metitur in ecliptica , ejusdem ab arietis sectione distantia orientem versus ; eclipticam signa duodecim , signum gradus triginta distinguunt . Signo cuilibet ejusdem nominis constellationem apposuere olim veteres , sed ex aequinoctiorum praecessione factum compemus , ut primum signum sere occupet modo constellatio duodecima , secundum prima &c. Signorum denominatio atque ordo notissimis hisce versibus exhibentur .

*Sunt Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libraque, Scorpius, Arcitenens, Caper, Amphora, Pisces.*

Longitudo alia *media* dicitur , alia *vera* est . Illa sideris motum aequabilem supponit ; haec vero metitur inaequabilem , qui re ipsa existit . Obtinentur ex observationibus longitudines *verae* , ex his tum longitudines *mediae* , tum aequationes longitudinibus veris ad quodlibet tempus supputandis eruuntur . Sit exemplo Sol .

Collatis inter se Solis per annuam revolutionem longitudinibus , habetur tum tempus aequaliter quo ipsa revolutione absolvitur , tum differentia celeritatum , quibus modo praeceps agitur , modo lentus tardat planeta . Post dies enim 365. 5<sup>h</sup> 48' 46'' ad eamdem redit longitudinem ; ejusque diurnus motus qui ineunte Julio est = 0° 57' 12'' , exente Decembre invenitur = 1° 2' 12'' . Itaque ex noto tempore periodico longitudinis mediae quantitas cuivis dato tempori respondens infertur ; est enim tempus periodicum ad 360° sive integrum revolutionem , ut tempus

datum ad quantitatem quaesitam. Ex celeritatum differentia ellipsis excentricitas, lineae apsidum positio, per lineam apsidum planetae transitus, distantiarum rationes &c., atque ex his omnibus differentia motus medii & veri cuilibet ab apside distantiae respondens, supputantur. Sic fit ut cognita quovis tempore longitudo media planetae, ejusdem longitudo vera innotescat. Verum hujus calculi simplicitatem haud parum imminuunt correctiones aliae, quas adhibere necesse est, ut quaesita positio determinetur. Quia enim a mutuis planetarum actionibus Sol loco deturbatur; ideo singulorum aequationes praeter aequationem centri jam supra memoratam, supputantur. Quarum quidem aequationum quatuor tantum locum habent in calculis Solis; neglectis reliquis, quae in sensibilem quantitatem non coalescunt.

Quantum utiliter immo necessario solares longitudines adhibentur in omnibus fere astronomicis calculis, tantum studii datum est, ut accuratissime supputarentur. Supputationes ejusmodi, quae ad meridiem verum eujusque diei peractae sunt, ad horam quamlibet aliam redigentur faciendo:  $24^{\text{h}}$  ad motum longitudinis diurnum, ut data hora ad quantitatem longitudini meridianae addendam, ut habeatur longitudo quaesita. Ope tabulae differentiae meridianorum hora cuiuslibet regionis alterius ad horam Mediolanensem reducta, eodem modo habebitur Solis longitudine ad quamlibet datae regionis horam.



## DE ASCENSIONE RECTA, ET DECLINATIONE SOLIS.

**O**bseruationes, quibus omnis Astronomia uititur, in eo sitae sunt, ut non tantum coelestium corporum formas, magnitudines, distantias perscrutemur; sed eorumdem praesertim positiones cum immutatis quibusdam punctis & planis conferamus atque determinemus. Siderum supra horizontem altitudines, in arcibus circulorum per verticem transeuntium, & tempora appulsum vel ad eosdem arcus, vel ad planum eisdem normale, plerumque observando inquirimus. Sed quia observatori cuique in diversis sphaerae punctis suus impendet vertex, suusque terminatur horizon; ideo astrorum positiones ad commune punctum referimus, in quo cardo est seu polus diurni motus. Ducas itaque per sidera quaeque & per polos circulis maximis, angulos, qui ex eorumdem intersectione obveniunt, metimur in aequatore juxta signorum ordinem, & *Ascensiones Rectas* dicimus: harum vero initium idem facimus atque longitudinum, in sectione verna aequatoris & eclipticae. Siderum praeterea distantias ab aequatore, in suis circulis concludimus & *Declinationes* nominamus five Boreales, five Australes, prout sidus supra vel infra aequatorem versatur.

Coelestium corporum ascensiones rectae ab ascensione recta Solis sic pendent, ut eadem tanquam omnium fundamentum considerari debeant. Illae enim nonnisi ex datis observationum temporibus habentur: tempora vero, Solis motu juxta ascensionem ejus rectam distinguuntur. Plu-

rima excogitarunt astronomi, ut eamdem exactè determinarent. Multiplices inter methodos accuratior illa generatim adhibetur, qua cum eadem fixa Sol comparatur quum ante & post solstitium eundem parallelum attingit. *Vide supra art. de Phaenomenis Solis &c.*

Quod declinationes spectat: si meridiani Solis altitudines singulis anni diebus observatae fuerint, habebitur altitudinum minimae & maxima semisumma aequalis elevationi aequatoris, semidifferentia eclipticae obliquitati. Ab altitudinibus singulis aequatoris elevationem subtrahendo binae formabuntur quantitatum series altera positiva declinationes boreales exhibens, altera negativa exhibens declinationes australes. Declinationes declinationibus conferendo minima reperitur diurna earumdem variatio in solsticiis, maxima in aequinoctiis. Hinc sive interpolando, sive theorematum alia adhibendo, accuratius solstitiorum & aequinoctiorum tempora, accuratius aequatoris elevatio, eclipticae obliquitas, &c., supputantur. Quod si praeterea observationibus fixae alicujus observationes solares socientur, ut paulo ante de ascensione recta dictum est, accuratior adhuc supradictorum elementorum determinatio, atque tabularum super iisdem constructarum comprobatio obtinentur.

Ecclipticae obliquitas, Solis ascensio recta, declinatio, longitudo ita invicem necuntur, ut reliquae dentur, earumdem datis duabus. Cognita sit ecclipticae obliquitas, quaeritur ad longitudinem determinandam praestetne declinationi ascensio recta, an illa huic.

Declinatio ab una tantum observatione & ab aequatoris elevatione, ab observationibus duabus & a sectionis Arietis loco ascensio recta pendent. Observatio ad declinationem definiendam absolvitur meridiana Solis altitudine: observatio ad ascensionem rectam, Solis fixaeque, cui comparatur, ad eundem horarum appulsus exigit. Compensentur errores, qui forte in aequatoris elevatione atque sectionis loco computando irrepserint; & altitudo Solis observata ab altitudine vera distet  $2''$ , error  $2''$  in deducenda declinatione admittetur, qui in ascensione recta supputanda erit  $7\frac{1}{2}''$ , si appulsus observati ab appulsibus veris differant  $\frac{1}{2}''$  temporis.

Septem ascensionis rectae secundis totidem sere longitudinis,  $2''$  declinationis modo  $5''$ , modo  $8''$ , modo  $16''$ , modo plures plura respondent. Hinc limite satis ample assumpto, mensibus praecedente & subsequente aequinoctia declinationem, mensibus praecedente & subsequente solititia ascensionem rectam longitudini accuratius determinandae adhibere proderit.

#### DE DISTANTIA SECTIONIS AEQUINOCTIALIS A SOLE.

**C**irculi in sphaera descripti in aequales 360 partes fractionesque sexagesimales sive gradus, minuta, secunda, tertia, &c. dividuntur. Partibus ejusmodi substituto tempore, quo in aequatore coeterisque parallelis eadem percurruntur, nova habetur circulorum divisio, nempe in aequales 24 partes fractionesque sexagesimales sive horas,

minuta , secunda , tertia , &c. Ratio illarum partium ad istas est  $15^\circ$  ad  $1^h$ , vel  $15^\circ$ , ad  $0^h\ 59' \ 50''$ , prout tempus substituatur sidereum aut solare medium.

Maxima in plerisque astrorum supputationibus noscendi tempora necessitas , & maxima temporum ipsorum cum Solis ascensione recta connexio astronomos mouit simplius atque utilius futurum ascensionis rectae loco ejusdem complementum ad  $360^\circ$  in ratione  $15^\circ$  ad  $1^h$  conversum inducere. Atque hoc est quod in ephemeridibus distantia aequinoctii a Sole, distantia aequinoctii a meridiano, hora transitus aequinoctii per meridianum, inscribitur.

Ascensio recta sideris cujuscumque in tempus eodem modo conversa distantiae aequinoctii a Sole addita sideris ipsius distantiam, ideoque horam transitus ejusdem per meridianum indicat. Idem enim est ad habendam sideris a Sole distantiam, sive ascensiones eorum rectae altera ab altera subtrahatur, sive altera complemento alterius addatur. Verum quidem ex dictis est tempus ejusmodi sidereum esse atque redigendum ad tempus solare, quod plerumque indicant Astronomorum horologia. Fiat itaque  $24^h$  ad excessum temporis solaris supra sidereum, ut hora data ad correctionem quae sitam. Quantitas correctionis inventa a data siderei temporis quantitate semper subtrahenda est, cum horis sidereis productiores semper sint horae solares.

Exemplo res illustratur. Quaeratur hora vera transitus Syrii per meridianum 1. Januar. 1782. Ascensio recta Syrii invenitur  $6^h\ 35' \ 34''$ : distantia sectionis a Sole  $5^h\ 10' \ 51'',7$ ; harum summa  $11^h\ 46' \ 25'',7$ : excessus temporis solaris veri

supra fidereum  $4' 24'', 7'$ . Fiat  $24^h : 4' 24'', 7 :: 11^h 46' 25'', 7 :$   
 $2' 10'', 2$  : erit ergo hora quae sita  $11^h 46' 25'', 7 - 2' 10'', 4$   
 $= 11^h 44' 15'', 3$ . Quod si sideris, cuius culminatio quaeritur, ascensionis rectae diurna variatio sit sensibilis, tempus juxta dicta inventum, corrigendum erit aequatione ascensionis variationi, ipsique temporis respondente.

DE CREPUSCULIS, HORA ITALICA MERIDIEI,  
 ORTU ET OCCASU SOLIS.

C Repusculum lumen est, quo terrestria corpora sublument, Sole adhuc vel jam sub horizonte delitescente non ultra gradus circiter duodeviginti. Eadem in regione diversis anni temporibus, eodemque anni tempore diversis in regionibus crepuscularis luminis duratio diversa observatur. Omnium minima in aequinoctiis habetur sub aequatore, maxima sub polis. Duratio minima horam & horae quintam partem non superat, duratio maxima ultra septem hebdomadas extenditur. Ab aequatore ad polos progrediviendo vespertinum crepusculum & matutinum obscuro noctis intervallo disjungitur ad quadragesimum octavum usque latitudinis gradum cum dimidio; ultra quem aestivo in solstitio nox penitus intempesta habetur nulla, crepusculo utroque fere attingente vel commiscente.

Ab atmospherae terrestris refringente & reflectente vi crepusculi causa repetitur. Unane refractione & reflexione an multiplici & quota phaenomenon habeatur, inquirunt physici. Inquirit astronomus quae sit data in latitudine

quovis anni tempore crepusculorum duratio ; quae sit , quo anni tempore data in latitudine crepusculorum duratio maxima & minima ; quae sit , quo anni tempore , qua in latitudine crepusculorum duratio omnium maxima & minima .

Supputatione angulorum horariorum cuilibet declinationis gradui respondentium , Sole in horizonte & duodeviginti ab horizonte gradibus posito , resolvitur problema primum . Inventa declinatione qua sine data sine quavis in latitudine Sol horizonti maxime rectus aut obliquus descendit aut ascendit , adeo ut minimum inter se differant arcus parallelorum quos horizon & limes crepuscularis intercipit , problematis secundi & tertii solutio habetur . Nostra hac in latitudine minimo crepusculo respondet declinatio australis  $6^{\circ} 29'$  , quam Sol obtinet ineuntibus Martio & Octobre .

Ex crepusculi duratione & quantitate colligunt astronomi num coeleste aliquod phaenomenon queat observari . Oculo inermi ex. c. non antea stellae infimae magnitudinis apparrebunt quam crepusculum desierit ; decimoquarto ab horizonte gradu Sole posito tertiae magnitudinis stellae , undecimo primae magnitudinis cum Saturno & Marte , decimo Jupiter & Mercurius , quinto demum Venus , suspici poterunt . Quamvis non raro accidit ut Venus alto adhuc meridie ab omnibus observetur , circumstantiis quibusdam positis , quas superioribus annis locum habuisse vidimus .

Ex eadem crepusculorum duratione determinatur his in regionibus tempus , quo ab horologiis pulsentur viginti quatuor horae . Lex est Italici horologii , ut crepusculis detur semihora : atque haec supposita tabulae omnes ortus Solis ,

meridiei , &c. supputatae sunt . Verum legem abrogant nostrorum horologiorum moderatores , qui pro libito diem serius producunt ; unde horologia & cum tabulis non consentiunt & inter se dissona sunt . Utrumque incommodum declinatur certam regulam in crepusculis assignandis servando , juxtaque eamdem tabulas construendo .

Hora Italica meridiei singulis mensis diebus apposita ita supputata est , ut tantum quovis anni tempore datum sit crepusculi , quantum hominum usibus plerumque sufficit . Itaque semihora assignatur mensibus Januario , Februario , Octobri , Novembri , Decembri , qui intra limites sunt minimae crepusculorum durationis : ab his limitibus ad maximum aestivi solstitii crepusculum quantitas assignata usque ad horam augetur , hinc fit ut horologia accelerare caliginosis mensibus hyemalibus ; retardare vero aestivis videri debeant . Habebitur autem hora mediae noctis eodem ritu computata , si datae horae meridiei duodecim horae addantur ; habebitur hora ortus & occasus Solis , si a data hora meridiei subtrahatur vel eidem addatur hora in altera ex proximis tabulis posita , quae inscribitur *Occasus Centri Solis* .

#### DE LUNAE LONGITUDINE , ET LATITUDINE .

**L**una phases , motus , eclipses tam sensibilia in coelo spectacula , tamque insignes effectus in maris aestu , aliisque in terra phaenomenis observandos offerunt , ut illum inculti etiam rusticique viri curiose perscrutentur , & consulant . At eadem haec phaenomena cum tam facile

obseruentur, tam accuratè supputationum proposito respondeant, tam utiliter geographicis praesertim longitudinibus determinandis adhibeantur, astronomis praecipuum exhibent observationis studiique argumentum. Quamvis vero in lunaris motus perturbationibus detegendis, construendisque tabulis summi viri elaboraverint, non ea tamen adhuc est tabularum earumdem accuratio, ut major non desideretur. Hinc de astronomia benemerebitur plurimum quicumque novas observationes instituendo novas cognitis aequationibus correctiones suppeditabit.

Operae temporisque parcus non fui ut longitudines, latitudines, parallaxes &c. ad singulos dies, omnibus aequationibus adhibitis, diligenter supputarem. Interpolatione, sed quartis etiam inductis differentiis, eadem positiones ad medianam noctem erutae sunt. Qui easdem accurate computare velit ad horam quamlibet meridiem inter & medium noctem, consulat tabellam, cuius est titulus: *Ad interpolandas Lunae Longitudines, Latitudines, pag. 124.* in Ephem. ad an. 1778. consulat etiam tabulae fundamenta atque explicationem in appendice. Consulat item tabellam, atque explicationem in volumine superioris anni pro motu Lunae horario.

#### De LUNAE PARALLAXI ET DIAMETRO.

**D**ifferentia locorum ad quae refertur sidus, quod eodem tempore in telluris superficie & centro observari intelligatur, parallaxis dicitur. A planis aut punctis

ad quae sit sideris relatio, parallaxis denominatur. Itaque parallaxis vocatur latitudinis & longitudinis, si ad eclipticam ejusdemque cum aequatore sectionem; parallaxis declinationis & ascensionis rectae, si ad aequatorem ejusdemque cum ecliptica sectionem; parallaxis altitudinis, si ad horizontem fidus referatur.

Ad parallaxim planetae definiendam sunt qui utantur latitudinibus planetae maximis hinc & inde ab ecliptica; tantum enim latitudes australes augebuntur ratione parallaxis, quantum imminuentur boreales, aut viceversa: verum methodus ista iis minime inservit, quibus planeta modo ad austrum, modo ad boream observatur. Sunt qui cum fixa planetam comparent in horizonte & in meridiano positum, ut habeatur parallaxis ascensionis rectae: fixae enim parallaxis cum nulla sit sive in horizonte sive in meridiano, nulla item sit parallaxis ascensionis planetae in meridiano, ope differentiae ascensionum rectarum ad tempus ortus & culminationis planetae supputatae, habebitur quaesita parallaxis. Sunt qui parallaxim inquirant correspondentes planetae observationes instituendo iisdem tempore & longitudine geographica, at diversa admodum latitudine. Sic fit ut altissimus uni, prope horizontem alteri appareat planeta, & parallaxium differentia, ipsaeque deinceps parallaxes manifesto se prodant.

Quod parallaxim altitudinis spectat, quam pro Luna supputatam ephemerides offerunt, duo haec habentur theorematum, quae sibi quisque facili demonstratione suadebit. Sinus parallaxis altitudinis ad semidiametrum terrae, ut

cosinus apparentis altitudinis astri ad ejusdem a terra distantiam: atque ideo sinus parallaxis altitudinis ad sinum parallaxis horizontalis, ut cosinus altitudinis apparentis ad radium. Hinc sequitur 1.<sup>o</sup> sideris parallaxim, ad quamlibet altitudinem dari, si detur ad altitudinem aliquam: 2.<sup>o</sup> aequationem aliquam ob terrae ellipticitatem adhibendam esse si parallaxis in data latitudine, & altitudine determinata ad latitudinem aliam transferri contingat.

Parallaxis Lunae ad diametrum ejus horizontalem constantem habet rationem; atque diameter horizontalis est ad diametrum in data altitudine apparentem, ut cosinus altitudinis verae ad cosinum altitudinis apparentis. Et quia effectu parallaxis altitudo apparet ab altitudine vera superatur, diametrum horizontalem, coeteris paribus, excedit diameter in quavis altitudine apparet; neque aliud est, nisi optica illusio praegrandis illa Lunae horizontalis figura.

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### DE LUNAE DECLINATIONE, TRANSITU PER MERIDIANUM, ORTU, OCCASU.

**S**equentes tabulae eo studio computatae sunt, ut astronomis normae essent observationibus tantum praeparandis, non vero comparandis; quemadmodum cum superioribus tabulis conferri possunt longitudines & latitudes observatae: idcirco neglecta sunt minuta secunda, quod in plerisque Ephemeridibus fieri solet. Declinationi, horaeque transitus per meridianum supputandis usus sum

tabulis, quae Parisiensibus Ephemeridibus adjunctae sunt. Horas ortus & occasus obtinui, easdem horas proximè veras supponendo, inquirendoque declinationes iis competentes; tum ope inventarum déclinationum investigando arcus semidiurnos, quos ob diurnam Lunae retardationem, & differentiam refractionis & parallaxis corre&os ab hora transitus per meridianum subtraxi, atque eidem addidi, ut ortus & occasus tempora haberem.

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### DE PLANETARUM POSITIONIBUS.

**S**olis Lunaeque longitudinem &c., excipiunt planetarum positiones. Ex tempore ortus eorum atque occasus & facilius agnoscuntur, & innotescit num, quae in ipsis contingunt, phaenomena possint observari. Hora transitus per meridianum & declinatio proprius astronomos afficit, quibus tamen majori adhuc usui sunt longitudines & latitudes sive tabulas cum observationibus conferant, sive supputationes alias instituant. Ad obtainendam planetae longitudinem aut positionem aliam computatis intermedium, fiat, servata proportione, ut supra dictum est art. *de Longitudine Solis.*

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### DE ECLIPSIBUS ET POSITIONIBUS SATELLITUM JOVIS.

**C**um astronomia, Galileo observante, Jovis satellites, satellitumque eclipses nuntiavit; novo geographiam commodo, nova physicam veritate ditavit. Inter methodos

enim detegendis longitudinibus adhibitas, nulla est simplicior, nulla facilior observatione eclipsium ejusmodi; atque successiva lucis propagatio non aliunde primum demonstrata est, quam ex earundem anticipatione Jove perigeo, retardatione Jove apogeo.

In eclipsibus satellitum immersionses in umbra & emersionses considerantur: utrumque phaenomenon in eadem eclipsiis nunquam in primo satellite, aliquando in secundo, tertio & quarto visibile est. Satellitum immersionses iis, quibus Jupiter fulget ad austrum, ab ejus cum Sole coniunctione usque ad oppositionem, ab oppositione usque ad coniunctionem emersionses observantur; hac respectu Jovis ad orientis partem, illac ad occasum.

Praestantiores satellitum tabulas Cl. Wargentinus dedit. Immersionum tempora observata si referantur ad supputata ex tabulis, videntur retardare, emersionses contra. At non magis tabularum, quam observationis vitio id forte tribuendum est, cum praesertim differentia aliqua plerumque appareat inter ejusdem immersionis aut emersionis tempora a diversis astronomis, diversis telescopiis observata.

Ultimam mensis tabulam occupant satellitum respectu Jovis positiones. Jupiter circello, satellites punctis & numeris adjacentibus exprimuntur ea lege, ut ad Jovem accedere indicentur, numeris circulum inter & punctum positis, contra recedere. Zero satellites super Jovis disco, puncto crassiore iidem vel post discum vel in umbra invisibles significantur.

## DE SOLIS DIAMETRO, MORA TRANSITUS &amp;c.

**E**X optice elementis constat apparentes objectorum parvis sub angulis cospectorum magnitudines esse reciproce ut eorumdem ab oculo distantias. Hinc lex datur, qua, observatis planetae cuiusvis diametro & distantia, distantiis reliquis respondentes diametri supputentur.

Apparens Solis diameter post adjuncta praesertim telescopiis catoptricis micrometra objectiva satis accurate definita censetur: item accurate definita habetur solaris orbitae excentricitas, ex qua distantiarum ratio, iisdemque respondentes diametri eruuntur. In apposita tabula fit diameter Solis apogei =  $31' 31'',_0$ ; distantia media 100000.

Vera Solis itemque planetae cuiusvis diameter diametro apparente est major in ea ratione, ut sit diameter vera ad apparentem, ut radius ad cosinum semidiametri apparentis; quod ex principiis opticis sibi quisque facile demonstrare potest. Minorem adhuc nonnulli putant diametrum Solis apparentem, eo quod telescopia, quibus definita olim fuit, quamdam gignerent radiorum aberrationem, ex qua  $2''$  vel etiam  $3''$  observata diameter augeatur.

Sunt qui velint solarem superficiem ellipticam esse non circularem. Bouguerius solarem diametrum juxta declinationis directionem suspicatus est majorem diametro juxta ascensionis rectae directionem assumpta. Accedit sententia Cl. La Lande, qui Solis diametrum ab occasu ad ortum diametro ab austro ad boream saltem  $2''$  superari non semel observavit. Verum haec, ut ipse testatur La Lande, haud

ita sunt definita, ut confirmatione non indigeant. Coeterum evidens est apparentem quamdam Solis ellipticitatem oriri debere ex refractione, qua, plus inferiore quam superiore limbo affecto, diameter verticalis contrahitur; quod non modo micrometrorum ope, sed inermi etiam oculo observatur in Sole & Luna prope horizontem positis.

Assumpta distantia media Solis a Terra partium 100000 distantiae reliquae supputatae sunt, quarum logarithmi majori commodo exhibentur. Indefinitae ejusmodi distantiae, ope solaris parallaxis ad definitam redigi possunt mensuram, cujus unitas sit semidiameter teluris. Est enim sinus parallaxis ad semidiametrum telluris, ut radius, ad distantiam telluris a Sole. Si distantiae mediae respondeant parallaxis 8'',7 erit ipsa media distantia semidiametrorum 23742.

Solis diamerer per cosinum solaris declinationis & per 15 divisa temporis quantitatem exhibit, quam metitur angulus a binis circulis horariis Solem tangentibus interceptus, quaeque inscribitur: *Mora transitus Solis per meridianum.* Hac quantitate saepissime utuntur astronomi, ut ex notato in solaribus observationibus appulsi limbi, centri appulsum deducant, sive immediate si observatum sit ad circulum horarium, sive medio calculo si ad circulum quemvis horizonti parallelum aut perpendicularem. Motu item Solis horario utuntur, ut motum relativum habeant in planetarum conjunctionibus, oppositionibus, aliisque ejusmodi determinandis. Supradictae quantitates omnes (quemadmodum & longitudo nodi Lunaris, investigandae praesertim nutationi, & eclipsibus inserviens) cum & parum & fere

aequabiliter sive crescant sive decrescant quarto quoque die solum indicantur.

### DE AEQUATIONE ALTITUDINUM CORRESPONDENTIUM.

**A**ccuratissimam methodum determinandi tempus, quo sidus meridianum attingit exhibent altitudines, quas vocant correspondentes. Cum enim, coeteris paribus, in eadem sideris supra horizontem altitudine idem sit angulus horarius, si momenta notentur, quibus ad eamdem hinc inde a meridiano altitudinem sidus appellit, habebitur culminationis instans summam temporum bifariam dividendo. At in planetis coetera non sunt paria. Horum orbitae ad aequatorem inclinantur, eorumque proinde declinatio jugiter mutatur, atque temporis spatio inaequali aequales arcus hinc inde a meridiano describuntur. Formulam norunt astronomi, qua, inducta temporis differentia declinationis differentiae respondent, culminationem ex altitudinibus erutam corrigent. Hanc utuntur praesertim pro Sole, cuius transitus per meridianum praecipuum astronomiae elementum est, hanc latitudini quisque suae accommodant atque in tabella explicant, nostram in duas partes divisam dedimus in Eph. an. 1779. Monendum est  $1^{\circ}$ , quoad tabulae constructionem, longitudinem Apogei Solis factam esse  $3^{\circ} 10'$ : obliquitatem vero eclipticae  $23^{\circ} 27' 57''$ , quae veluti quantitates mediae de sumptae sunt, ut ad diuturnissimum tempus protendatur tabulae usus: quin error obrepat aliquot minutorum ter-

tiorum : 2.<sup>o</sup> quoad tabulae usum , non ante cum suis signis jungendam esse primam & secundam partem , quam secundam in tangentem propriae latitudinis ducatur .

### DE CATALOGO FIXARUM.

**A** Scensiones rectae in tempore & in gradibus expressae , tum declinationes cum suis annuis variationibus pro 300 insignioribus fixis in hoc catalogo describuntur , hisce utuntur Astronomi ad determinandas aliorum astrorum ascensiones rectas & declinationes hanc cognitas . Longitudines vero & latitudines fixarum praecipuum habent usum in determinandis Lunae & planetarum congressibus cum iisdem fixis . Accedit quoque pro qualibet fixa angulus positionis , qui ad computandas exiguae variationes ascensionis rectae & declinationis , vel longitudinis & latitudinis eximiam praefstat utilitatem . Ut ascensio recta vera , scilicet affecta jam mutatione , reducatur ad apparentem in usum vocari possunt columnae quinta & sexta , quarum illa continet aberrationem maximam in ascensionem rectam , atque haec argumentum annum aberrationis , seu longitudinem Solis , ubi aberratio in ascensionem rectam est = 0 & crescere incipit ; ad reducendam vero declinationem veram ad apparentem columnae nona & decima , seu tertia & quarta paginae adjacentis inserviunt . Computatio utriusque aberrationis sequenti modo institui potest : a longitudine Solis pro dato tempore subtrahitur argumentum aberrationis , sinus arcus residui ducitur in aberrationem maximam , atque

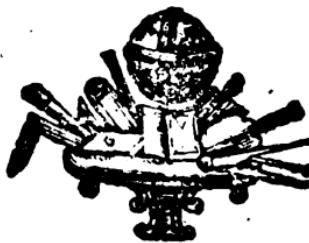
productum dabit actualem aberrationem, quae ascensioni rectae vel declinationi addi debet, si arcus illi non superat  $180^{\circ}$ ; secus subtrahenda est.

Invenire horam transitus fixae per meridianum, &c.  
Vid. art. *Distantia aequinoctii a Sole.*

### DE DIFFERENTIIS MERIDIANORUM.

**X** curva terrae figura fit, ut regionibus singulis sua sit longitudo & latitudo. Meridiani circuli ad aequatorem normales, seque in polo intersecantes utramque determinant. Latitudines enim habentur ex mensura arcuum interceptorum inter verticem datarum regionum & aequatorem, quae proinde aequales & cognomines sunt respondentibus poli borealis vel australis altitudinibus. Longitudines vero ex mensura angulorum, qui in communi meridianorum intersectione fiunt in polo; qui que etiam in horas, minuta, & secunda expressi, anguli horarii dici possunt. Longitudines geographicas orientem versus computamus ab vigesimo gradu, qui jacet ad occasum meridiani Parisiensis, & perraro adhibemus in astronomicis. Contra saepissime in usum veniunt anguli horarii, quos directis observationibus investigatos cum suo quisque meridiano confert, ut meridianorum omnium differentiam atque tempus obtineat. Hora itaque cuiusvis regionis ad Mediolanensem reducitur, eidem addendo vel ab eadem subtrahendo differentiam in tabula descriptam, prout data regio ad Mediolani occidentem aut orientem jacet.

Ex tabulis Viennae editis a Cl. Hell, Parisiis a Cl. La Lande, Berolini a Regia Scientiarum Academia, tabula haec nostra exscripta est. Aliquot etiam urbium positiones, ex nostris aliorumque observationibus, additae sunt; aliquot emendatae. Qua quidem ex emendatione, cum nova quaedam errorum species oriri debeat, correctas positiones cum incorrectis conferendo, iisque praesertim quae ex analysi geographica D. de Anville deductae sunt in tabulis Berolinensibus; tum ridiculum esset, si tabulas illas calumniari, aut errata temere emendare auderemus. Nos ab utroque abstinemus, dum per nova observationum subsidia res manifestari, sicutque in sedem aberrantia loca restitui possint: quemadmodum & hoc anno Mediolanensem nostram latitudinem imminuimus, de eaque rationem reddimus.



APPENDIX  
AD EPHÆMERIDES  
1783.

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*De Latitudine Speculae Astronomicae Mediolanensis*

C O M M E N T A R I U S

FRANCISCI REGGIO.

M<sup>r</sup>orunt viri in praxi astronomica exercitatissimi quam sedulae indaginis esse debeat determinatio latitudinis loci, ubi praesertim observationes instituendae sunt ad astronomiae incrementum. Haec Cl. *La Grange*, & nos item sentientes animo jamdudum proposuimus, ita nos gerere in re tanti momenti, ut comparata prius nostrarum observationum copia haud exigua, iis sedulè discussis, rejectis, quae aliquam incertitudinis notam praeferebant,

& elementis omnibus exploratis, definienda latitudini hujus Speculae sensibilis erroris periculum adiungeremus.

Nobis haud latebat diuturna incertitudine interdum laborare altitudinem poli vel apparentem vel veram illustrum etiam Specularum, licet Astronomi celeberrimi ad eam definiendam operam contulerint omnem & accuratam in observando experientiam. Ut unum vel alterum exemplum proferam: altitudo poli apparet regiae Speculae Parisiensis statuebatur a Clar.<sup>mis</sup>

|                              |              |     |
|------------------------------|--------------|-----|
| <i>Picardo</i> .. an. 1767.  | 48° 51' 10'' | (a) |
| <i>de la Hire</i> .. . . .   | 48. 51. 2    |     |
| <i>de Louville</i> .. 1721.  | 48. 50. 58   |     |
| <i>Maraldo</i> .. . 1732.    | 48. 51. 5    |     |
| <i>le Monnier</i> .. 1740.   | 48. 51. 0    |     |
| <i>Cassini</i> .. . 1742.    | 48. 51. 2,5  |     |
| <i>de la Caille</i> .. 1755. | 48. 51. 12,2 |     |

Latitudinem veram Speculae Grenovicensis, quam Flamstedius definierat  $51^{\circ} 28' 30''$ , D. *de la Caille*, observationibus Bradley ibidem factis cum Parisiensibus collatis, reperit deinceps  $51^{\circ} 28' 53'',2$ ; in praesentiarum statuitur  $51^{\circ} 28' 40''$  (b).

Latitudinem veram Speculae Gottingensis idem D. *de la Caille* collatis observationibus Tobiae Mayeri Gottingae factis cum Parisiensibus statuebat  $51^{\circ} 32' 4'',4$ . Hanc laudatus *Mayerus* ex observationibus stellae polaris contendebat  $19''$  minorem.

(a) Vide D. *de la Lande* Astr. Lib. XII. pag. 704. edit. an. 1770.

(b) Vide Acta Acad. regiae Parisiensis ad an. 1755.

Latitudinem Speculae Berolinensis, cui Clar. *de la Lande* anno 1752. ex suis observationibus ibidem peractis adscripsit  $52^{\circ} 31' 30''$ , nunc temporis Astronomi Berolinenses statuunt  $52^{\circ} 32' 30''$ .

Haec nobis, & astronomis omnibus naturam observationum, & delicatioris indaginis penitus agnoscentes nullam pariunt admirationem: atque his praecognitis nemo sane mirabitur, nos nonnisi post exactum quindennium publici juris facere observationes ad scopum definienda latitudinis susceptas, quibus inter arctissimos incertitudinis limites constituatur latitudo nostra, cui adscriptis  $45^{\circ} 28' 10''$  paulo ampliores haec tenus statuebantur. Huic quantitat i parum nos adquiescentes, atque etiam eam animo abnuentes, quid sentiremus satis ostendimus adhibitis, ubi interdum de latitudine nostra mentio habebatur, locutionibus, quae non omnem certitudinem circa eam saperent.

Tres praecipue methodi definienda latitudini locorum adnumerantur penes Astronomos, altera, qua distantiae a vertice siderum culminantium, quae zenithalia sunt, observantur; altera siderum, quae circumpolaria dicuntur; tertia, quae distantias praedictas quorumcumque siderum, vel Solis complectitur. Prima solas supponit cognitas declinationes siderum; altera solam accuratam tabulam refractionum; tertia tandem & declinationes, & tabulam refractionum. Nos licet triplex hoc observationum genus persecuti simus ad scopum definienda latitudinis nostrae; primum tamen reliquis anteferimus: ratio patebit ex dicendis.

Inter tabulas refractionum nullam reperies cum altera prorsus consentientem in assignanda ad datam supra horizontem altitudinem quantitate refractionis mediae. Inter tabulas refractionum probatissimas apud Astronomos tabulae *Cassini*, *Bradley*, *de la Caille*, *Mayeri* recensentur: verum, si ex. g. in tabula *D. de la Caille*, quae fuit diurni, & improbi laboris opus innixum observationibus pene innumeris ad Caput Bonae-spei, & Parisiis institutis (\*), & in altera *Tobiae Mayeri* constructa ex observationibus Gottingensibus quaeratur refractionis media ad altitudinem  $45^{\circ}$ , hanc juxta tabulam Caillii invenies  $1'.6''$ , juxta tabulam *Mayeri*  $0'.57'',5$ , cui potius adquiescendum sit haeret animo meticulosus Astronomus in re, a qua incertitudo omnis avertenda est. Concludendum ipsis superest, vel aequales non esse ubique terrarum refractiones medias, & in zonis temperatis, vel nullas hactenus refractionum mediarium tabulas constructas, quae omnem praferant certitudinem.

Nos hoc vel maximè cum reliquo Astronomis sentientes jamdiu nobis animo proposuimus, curam & diligentiam omnem eo conferre, ut nostris observationibus definiremus, quaenam ex tabulis refractionum indoli nostrae atmosphaerae magis responderet, vel novam ipsis accommodatam construeremus. Observationum hujuscē generis juxta probatissimas methodos institutarum, & instituendarum a nobis copia olim in lucem prodibit.

(\*) Vide Acta regiae Scient. Acad. ad an. 1755.

Quod ad praesens institutum spectat definienda latitudinis Speculae Mediolanensis; majorem determinationi hujusmodi accurationem comparatur solas observationes distantiarum a vertice siderum zenithalium attendimus.

Differentia inter declinationem apparentem sideris, & distantiam a vertice observatam, vel utriusque summa prout ad boream vel ad austrum vergit distantia observata, ut constat, latitudinem loci aequat. Res igitur in eo posita, ut omni diligentia in siderum declinationem apparentem, quae observata sunt, inquiratur.

Tres zenithales stellas ad intentum nostrum idoneas invenimus & Capellae, & Aurigae, & & Cygni, harum distantias a vertice ad sextantem nostrum pedum sex instrumentum sane idoneum & eximum observavimus. Praestat innuere breviter, qua indagine in declinationem horum siderum inquisiverim.

Declinationem & Capellae ad epochas varias determinatam reperio observationibus peculiaribus Astronomorum magnae notae, instrumentis eximiis.

|     |                                     |                         |
|-----|-------------------------------------|-------------------------|
| (a) | Juxta le Monnier ad init. an. 1742. | $45^{\circ} 42' 5''$ ,0 |
| (b) | de la Caille . . . . .              | 1750. $45. 42. 41. 2$   |
| (c) | Mayer . . . . .                     | 1756. $45. 43. 11. 8$   |
| (d) | Maskeline . . . . .                 | 1770. $45. 44. 16. 4$   |

Ope variationis annuae declinationis & Capellae ex praec-

(a) Institutiones Astron. pag. 397.

b) Astronomiae fundamenta.

(c) Opera postuma Vol. I. Gottingae 1775.

(d) Tables for computing the apprens places of the fixt stars &c.

cessione aequinoctiorum  $+ 5'',273$ , quae media est inter successivè usurpandas ab an. 1742. ad 1770. redigatur declinatio stellae ab exhibitis epochis ad initium an. 1770. erunt.

An. 1770. juxta le Monnier . . . . .  $45^{\circ} 44' 32'',60$   
de la Caille . . . . .  $45^{\circ} 44' 26'',64$

Mayer . . . . .  $45^{\circ} 44' 24'',81$ , quae si conferantur cum allata Clar. Maskeline prodit peculiaris motus Capellae annis 28 =  $- 16'',60$  . . . annus  $- 0'',59$

$20 = - 10',24$  . . . . .  $- 0',51$

$14 = - 8',41$  . . . . .  $- 0',60$

Medius motus annuus . . . . .  $- 0',56$

Motus hic peculiaris Capellae, quo ejus declinatio annuatim decrescit, variationem annuam ex praecessione aequinoctiorum minuit. Hinc variatio annua ex utraque causa statui potest  $+ 4,77$  ab an. 1750. ad an. 1760. dein  $+ 4,713$  usque ad annum 1770., &  $+ 4,65$  ab an. 1770. ad 1780.

Clar. le Monnier motum hunc annum ex praecessione aequinoctiorum, & peculiari motu Capellae statuit ad initium an. 1750.  $+ 4,8$  (\*) foret itaque juxta le Monnier motus annuus peculiaris declinationis stellae  $- 0,53$ , qui vix a superiori invento differt.

In volumine I. operum posthumorum Tobiae Mayeri, quae Clar. Christophorus Lichtenberg in lucem edidit an. 1775. extat Catalogus continens ascensionem rectam, & declinationem quorundam siderum partim ad initium

(\*) Acta regiae Scient. Acad. ad an. 1773.

anni 1756: definitas a *Mayero* suis observationibus; partim ex catalogo *D. de la Caille* ad initium an. 1756. depromptas. Eas ascensiones rectas & declinationes confert *Mayerus* cum iis a celeb.<sup>o</sup> *Roemerio* eo celeb.<sup>o</sup> triduo anni 1706. observatis ad alias epochas redactis, idque animo investigandi eorundem siderum peculiarem motum. Quod ad stellam  $\alpha$  Capellae spectat hujus motum proprium declinationis ex ea collatione invenit — 11" spatio annorum 50, atque adeo annus motus — 0,22.

Motum peculiarem annum ascensionis rectas, & declinationis eorundem siderum, qui prodit ex dicta *Mayeri* collatione cum observatis a *Roemerio*, translati in peculiarem tabellam *D. Otiani* in vol. mostrando Ephemeridum ad an. 1781.

Postea haecenus habita indagine. me tuò. actuationem omnem & certitudinem comparaturum arbitror. Latitudini hujus Speculae ex observationibus  $\alpha$  Capellae, si ejus declinationem a Catalogo *D. de la Caille* ad an. 1750. depromptam redigam ad singularum observationum epochas adhibito motu anno declinationis superioris deducto pro diversis annorum intervallis ex praecessione aequinoctiorum, & peculiari motu stellae.

Ex eodem probatissimo Catalogo *D. de la Caille* orum declinationem  $\beta$  Aurigae, & declinationem  $\delta$  Cygni; hanc postremam etiam in Catalogis *Clars le Monnier*, & *Mascleline* inveni, & sola attenta variatione ex praecessione aequinoctiorum, si omnes ad eandem epocham redigantur valde conformati reperies.

Observationes, quas ordine recenseo, in peculiaribus diariis vel alias habent consentientes, vel mediae sunt inter pene consentientes, vel ex circumstantiis ut accertatores adnotantur: reliquas inutile censui referre. Ad latus singularum nomen Observatoris adjicitur.

*Observationes a Capellae.*

|  |                                      |                |
|--|--------------------------------------|----------------|
| 1767.                                    | 8. Apr. limbo ad oc. dist. a vertice | 0° 12' 19",8   |
|  | 24. .... limbo ad or. ....           | 0. 20. 12 ,76  |
|  | Summa .....                          | 0. 32. 32 ,56  |
| (la Grange)                              | Distantia a vertice                  | 0. 16. 16 ,28  |
| Decl.° a Capell. an. 1760. 45° 42' 41",2 |                                      |                |
| Reduct. ad epocham 1767. +               | 8. 20 ,6                             |                |
| ad 20. April. .... +                     | 8 ,3                                 | 45. 44. 14 ,6  |
| Nutatio .... +                           | 6 ,8                                 |                |
| Aberratio .... +                         | 4 ,9                                 |                |
|  | Latitudo ....                        | 45. 27. 58 ,32 |
| 1767. 26. Aug. limbo ad oc. ....         | 0° 12' 6",7                          |                |
| 28. .... limbo ad or. ....               | 0. 19. 59 ,0                         |                |
|  | Summa .....                          | 0. 32. 5 ,7    |
| (la Grange)                              | Distantia a vertice                  | 0. 16. 2 ,85   |
| Decl.° a Capel. an. 1767. 45° 44' 1",8   |                                      |                |
| ad 27. Aug. .... +                       | 3                                    | 45. 44. 2 ,8   |
| Nutatio .... +                           | 6                                    |                |
| Aberratio .... +                         | 8                                    |                |
|  | Latitudo ....                        | 45. 27. 59 ,95 |

|                                 |                          |                         |
|---------------------------------|--------------------------|-------------------------|
| 1769. 17. Mart.                 | limbo ad or.             | $0^{\circ} 20' 25'',4$  |
| 18. . . . .                     | limbo ad oc.             | $0. 12. 24 ,1$          |
|                                 | Summa . . . . .          | $0. 32. 49 ,5$          |
| (la Grange)                     | Distantia a vertice      | $0. 16. 24 ,75$         |
| Decl. $\alpha$ Capel. an. 1769. | $45^{\circ} 44' 11'',3$  |                         |
| ad 17. Mart. . . . +            | I                        | $45^{\circ} 44. 20 ,1$  |
| Nutatio . . . . . +             | I                        |                         |
| Aberratio . . . . . +           | 6.8                      |                         |
|                                 | Latitudo . . . . .       | $45^{\circ} 27. 55 ,35$ |
| 1770. 4. Aprilis.               | limbo ad oc.             | $0^{\circ} 12' 28'',6$  |
| 5. . . . .                      | limbo ad or.             | $0. 20. 25 ,4$          |
|                                 | Summa . . . . .          | $0. 32. 54 ,0$          |
| (la Grange)                     | Distantia a vertice      | $0. 16. 27 ,0$          |
| Decl. $\alpha$ Capel. an. 1770. | $45^{\circ} 44' 16'',03$ |                         |
| ad 4. Apr. . . . . +            | I. 2                     | $45^{\circ} 44. 24 ,53$ |
| Nutatio . . . . . +             | I. 5                     |                         |
| Aberratio . . . . . +           | 5.8                      |                         |
|                                 | Latitudo . . . . .       | $45^{\circ} 27. 57 ,53$ |
| 1771. 4. Aprilis.               | limbo ad or.             | $0^{\circ} 20' 37'',5$  |
| 5. . . . .                      | limbo ad oc.             | $0. 12. 17 ,6$          |
|                                 | Summa . . . . .          | $0. 32. 55 ,1$          |
| (la Grange)                     | Distantia a vertice      | $0. 16. 27 ,5$          |
| Decl. $\alpha$ Capel. an. 1771. | $45^{\circ} 44' 20'',73$ |                         |
| ad 4. Apr. . . . . +            | I. 10                    |                         |
| Nutatio . . . . . —             | 2.10                     | $45^{\circ} 44. 25 ,43$ |
| Aberratio . . . . . +           | 5.60                     |                         |
|                                 | Latitudo . . . . .       | $45^{\circ} 27. 57 ,93$ |

|  |                         |
|--|-------------------------|
| 1773. 7. Mart. limbo ad or. . . . .                | $0^{\circ} 20' 47'',2$  |
| limbo ad occ. . . . .                              | $0. 12. 25 ,6$          |
| Summa . . . . .                                    | $0. 33. 12 ,8$          |
| (la Grange) Distantia a vertice                    | $0. 16. 36 ,4$          |
| Decl.° a Capel. an. 1773. $45^{\circ} 44' 31'',11$ |                         |
| ad 7. Mart. . . . + . . . . .                      | $0 ,85$                 |
| Nutatio . . . . — . . . . .                        | $8 ,10$                 |
| Aberratio . . . . + . . . . .                      | $7 ,40$                 |
| Latitudo . . . . .                                 | $45. 27. 53 ,86$        |
| 1773. 26. Jul. limbo ad os. . . . .                | $0^{\circ} 12' 11'',67$ |
| 3. Aug. limbo ad or. . . . .                       | $0. 20. 27 ,87$         |
| Summa . . . . .                                    | $0. 32. 39 ,54$         |
| (de Cofaria) Distantia a vertice                   | $0. 16. 39 ,77$         |
| Decl.° a Capel. an. 1773. $45^{\circ} 44' 59'',99$ |                         |
| ad 1. Aug. . . . + . . . . .                       | $2 ,72$                 |
| Nutatio . . . . — . . . . .                        | $8 ,59$                 |
| Aberratio . . . . — . . . . .                      | $7 ,40$                 |
| Latitudo . . . . .                                 | $45. 27. 57 ,03$        |
| 1774. 22. Mart. limbo ad or. . . . .               | $0^{\circ} 20' 45'',65$ |
| 23. . . . . limbo ad occ. . . . .                  | $0. 12. 35 ,03$         |
| Summa . . . . .                                    | $0. 33. 20 ,68$         |
| (la Grange) Distantia a vertice                    | $0. 16. 49 ,34$         |
| Decl.° a Capel. an. 1774. $45^{\circ} 44' 34'',66$ |                         |
| ad 24. Mart. . . . + . . . . .                     | $1 ,81$                 |
| Nutatio . . . . — . . . . .                        | $8 ,37$                 |
| Aberratio . . . . + . . . . .                      | $6 ,6$                  |
| Latitudo . . . . .                                 | $45. 27. 53 ,32$        |

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| 1774. 26. Jul. limbo ad or. . . . .                | $6^{\circ} 20' 30'',85$ |
| limbo ad oc. . . . .                               | $0. 12. 17 ,70$         |
| Summa . . . . .                                    | $0. 32. 48 ,55$         |
| (de Cesaris) Distantia a vertice                   | $0. 16. 24 ,27$         |
| Decl.° a Capel. an. 1774. $45^{\circ} 44' 34'',66$ |                         |
| ad 30. Jul. . . . +                                | $2 ,70$                 |
| Nutatio . . . . —                                  | $8 ,80$                 |
| Aberratio . . . . —                                | $7 ,40$                 |
| Latitudo . . . .                                   | $45. 27. 56 ,89$        |
| 1776. 22. Mart. limbo ad or. . . . .               | $0^{\circ} 21' 0'',2$   |
| 23. . . . . limbo ad oc. . . . .                   | $0. 12. 35 ,8$          |
| Summa . . . . .                                    | $0. 33. 35 ,8$          |
| (la Grange) Distantia a vertice                    | $0. 16. 47 ,9$          |
| Decl.° a Capel. an. 1776. $45^{\circ} 44' 44'',00$ |                         |
| ad 22. Mart. . . . +                               | $3 ,10$                 |
| Nutatio . . . . —                                  | $7 ,00$                 |
| Aberratio . . . . +                                | $6 ,80$                 |
| Latitudo . . . .                                   | $45. 27. 57 ,00$        |
| 1777. 22. Mart. limbo ad or. . . . .               | $0^{\circ} 21' 5'',95$  |
| 29. . . . . limbo ad oc. . . . .                   | $0. 12. 47 ,00$         |
| Summa . . . . .                                    | $0. 33. 52 ,95$         |
| (de Cesaris) Distantia a vertice                   | $0. 16. 36 ,47$         |
| Decl.° a Capel. an. 1777. $45^{\circ} 44' 48'',7$  |                         |
| ad 25. Mart. . . . +                               | $1 ,51$                 |
| Nutatio . . . . —                                  | $5 ,4$                  |
| Aberratio . . . . +                                | $6 ,3$                  |
| Latitudo . . . .                                   | $45. 27. 54 ,43$        |

|  |                         |
|--|-------------------------|
| 1777. 13. Jul. limbo ad oc. . . . .                            | $0^{\circ} 12' 32'',00$ |
| 14. . . . . limbo ad or. . . . .                               | $0. 20. 51. ,25$        |
| Summa . . . . .  | $0. 33. 23. ,25$        |
| (Reggio) . . . . . Distantia a vertice                         | $0. 16. 41. ,62$        |
| Decl. <sup>o</sup> & Capel. an. 1777. $45^{\circ} 44' 48'',7$  |                         |
| ad 13. Jul. . . . . + . . . . .                                | $2. ,5$                 |
| Nutatio . . . . . — . . . . .                                  | $4. ,3$                 |
| Aberratio . . . . . — . . . . .                                | $6. ,0$                 |
| Latitudo . . . . .   | $45. 27. 59. ,28$       |
| 1778. 28. Mart. limbo ad. oc. . . . .                          | $0^{\circ} 12' 31'',32$ |
| 1. Apr. limbo ad or. . . . .                                   | $0. 21. 9. ,55$         |
| Summa . . . . .  | $0. 34. 0. ,87$         |
| (Reggio) . . . . . Distantia a vertice                         | $0. 17. 0. ,43$         |
| Decl. <sup>o</sup> & Capel. an. 1778. $45^{\circ} 44' 53'',35$ |                         |
| ad 1. Apr. . . . . + . . . . .                                 | $1. ,15$                |
| Nutatio . . . . . — . . . . .                                  | $2. ,40$                |
| Aberratio . . . . . + . . . . .                                | $6. ,00$                |
| Latitudo . . . . .   | $45. 27. 57. ,67$       |
| 1778. 24. Jul. limbo ad oc. . . . .                            | $0^{\circ} 12' 39'',7$  |
| 29. . . . . limbo ad or. . . . .                               | $0. 20. 59. ,85$        |
| Summa . . . . .  | $0. 33. 39. ,55$        |
| (Reggio) . . . . . Distantia a vertice                         | $0. 16. 49. ,77$        |
| Decl. <sup>o</sup> & Capel. an. 1778. $45^{\circ} 44' 53'',35$ |                         |
| ad 26. Jul. . . . . + . . . . .                                | $2. ,60$                |
| Nutatio . . . . . — . . . . .                                  | $1. ,5$                 |
| Aberratio . . . . . — . . . . .                                | $6. ,9$                 |
| Latitudo . . . . .   | $45. 27. 57. ,78$       |

|  |                           |
|--|---------------------------|
| 1779. 22. Mart. limbo ad oc. . . . .               | $0^{\circ} 12' 38'' , 26$ |
| 23. . . . . limbo ad or. . . . .                   | $0. 21. 18 , 35$          |
| Summa . . . . .                                    | $0. 34. 16 , 55$          |
| (Reggio) Distantia a vertice o. 17. 8 , 27         |                           |
| Decl. a Capel. an. 1779. $45^{\circ} 44' 58'' , 0$ |                           |
| ad 22. Mart. . . . +                               | $2 , 8$                   |
| Nutatio . . . . +                                  | $0 , 7$                   |
| Aberratio . . . . +                                | $6 , 8$                   |
| Latitudo . . . .                                   | $45. 27. 58 , 33$         |
| 1779. 4. Aug. limbo ad oc. . . . .                 | $0^{\circ} 12' 49'' , 77$ |
| 5. . . . . limbo ad or. . . . .                    | $0. 21. 3 , 55$           |
| Summa . . . . .                                    | $0. 33. 53 , 32$          |
| (Reggio) Distantia a vertice o. 16. 56 , 66        |                           |
| Decl. a Capel. an. 1779. $45^{\circ} 44' 58'' , 0$ |                           |
| ad 4. Aug. . . . +                                 | $2 , 8$                   |
| Nutatio . . . . +                                  | $1 , 7$                   |
| Aberratio . . . . —                                | $7 , 4$                   |
| Latitudo . . . .                                   | $45. 27. 58 , 44$         |
| 1780. 10. Mart. limbo ad oc. . . . .               | $0^{\circ} 13' 5'' , 81$  |
| 12. . . . . limbo ad or. . . . .                   | $0. 21. 30 , 27$          |
| Summa . . . . .                                    | $0. 34. 30 , 08$          |
| (Oriani) Distantia a vertice o. 17. 18 , 04        |                           |
| Decl. a Capel. an. 1780. $45^{\circ} 45' 2'' , 65$ |                           |
| ad 10. Mart. . . . +                               | $0 , 80$                  |
| Nutatio . . . . +                                  | $2 , 60$                  |
| Aberratio . . . . +                                | $7 , 40$                  |
| Latitudo . . . .                                   | $45. 27. 55 , 41$         |

|  |                         |
|--|-------------------------|
| 1781. 6. Mart. limbo ad or. dist. a vertice                  | $0^{\circ} 21' 29'',75$ |
| 9. .... limbo ad oc. ....                                    | $0. 13. 22 ,12$         |
| Summa .....  | $0. 34. 51 ,87$         |
| (Reggio) Distantia a vertice                                 | $0. 17. 25 ,93$         |
| Decl. <sup>o</sup> & Capel. an. 1781. $45^{\circ} 45' 7'',2$ |                         |
| ad 7. Mart. ... +  | $0 ,8$                  |
| Nutatio ... +  | $5 ,3$                  |
| Aberratio ... +  | $7 ,7$                  |
| Latitudo ....  | $45. 27. 55 ,07$        |

*Observationes & Aurigae.*

|   |                        |
|---|------------------------|
| 1769. 17. Mart. limbo ad or. ....                               | $0^{\circ} 29' 58'',5$ |
| 19. .... limbo ad oc. ....                                      | $0. 37. 57 ,5$         |
| Summa .....   | $1. 7. 56 ,0$          |
| (la Grange) Distantia a vertice                                 | $0. 33. 58 ,0$         |
| Decl. <sup>o</sup> & Aurigae an. 1750. $44^{\circ} 53' 18'',80$ |                        |
| ad epoch. an. 1769. +   | $31 ,16$               |
| ad 18. Mart. ... +  | $0 ,40$                |
| Nutatio ... +   | $0 ,50$                |
| Aberratio ... +   | $7 ,30$                |
| Latitudo ....   | $45. 27. 56 ,16$       |

1771. 20. Mart. limbo ad or. . . . .  $0^{\circ} 29' 51'',33$   
 21. . . . . limbo ad oc. . . . .  $0. 38. 7 ,80$

Summa . . . . .  $1. 7. 59 ,13$

(la Grange) Distantia a vertice  $0. 33. 59 ,36$

Decl. $^{\circ}\beta$  Aurigae an. 1771.  $44^{\circ} 53' 53'',24$   
 ad 20. Mart. . . . . +  $0 ,40$   
 Nutatio . . . . . —  $5 ,60$   
 Aberratio . . . . . +  $7 ,30$

Latitudo . . . . .  $45. 27. 54 ,90$

1773. 16. Mart. limbo ad oc. . . . .  $0^{\circ} 38' 10'',85$   
 17. . . . . limbo ad or. . . . .  $0. 29. 50 ,83$

Summa . . . . .  $1. 8. 1 ,68$

(la Grange) Distantia a vertice  $0. 34. 0 ,84$   
 Decl. $^{\circ}\beta$  Aurigae an. 1773.  $44^{\circ} 53' 56'',52$   
 ad 16. Mart. . . . . +  $0 ,40$   
 Nutatio . . . . . —  $8 ,70$   
 Aberratio . . . . . +  $7 ,30$

Latitudo . . . . .  $45. 27. 56 ,36$

1776. 21. Mart. limbo ad oc. . . . .  $0^{\circ} 38' 10'',56$   
 23. . . . . limbo ad or. . . . .  $0. 29. 42 ,41$

Summa . . . . .  $1. 7. 52 ,97$

(la Grange) Distantia a vertice  $0. 33. 56 ,48$   
 Decl. $^{\circ}\beta$  Aurigae an. 1776.  $44^{\circ} 54' 1'',44$   
 ad 22. Mart. . . . . +  $0 ,40$   
 Nutatio . . . . . —  $6 ,00$   
 Aberratio . . . . . +  $7 ,30$

Latitudo . . . . .  $45. 27. 59 ,62$

|   |                                     |
|---|-------------------------------------|
| 1783. 9. Mart. limbo ad or. . . . .                     | $0^{\circ} 29' 30'',66$             |
| 11. . . . . limbo ad oc. . . . .                        | $0. 37. 38 ,28$                     |
| Summa . . . . .   | $1. 7. 8 ,94$                       |
| (Reggio)  | Distantia a vertice $0. 33. 34 ,47$ |
| Decl. $\beta$ Aurigae an. 1781. $44^{\circ} 54' 9'',64$ |                                     |
| ad 9. Mart. . . . +                                     | $0 ,35$                             |
| Nutatio . . . . +                                       | $6 ,10$                             |
| Aberratio . . . . +                                     | $7 ,20$                             |
| Latitudo . . . .  | $45. 27. 57 ,76$                    |



*Observationes a Cygni.*

|   |                                     |
|---|-------------------------------------|
| 1768. 12. Decemb. limbo ad or. dist. a vert.            | $0^{\circ} 59' 45'',00$             |
| Ref. $^{\circ}$ . . . . .                               | $+ . . . . 1 ,00$                   |
| (la Grange)   | Distantia a vertice $0. 59. 46 ,00$ |
| Decl. $\alpha$ Cygni an. 1750. $44^{\circ} 23' 55'',30$ |                                     |
| ad an. 1768. . . . +                                    | $3. 43 ,44$                         |
| ad 12. Decemb. . . . +                                  | $81 ,70$                            |
| Nutatio . . . . +                                       | $3 ,70$                             |
| Aberratio . . . . +                                     | $13 ,20$                            |
| Latitudo . . . .  | $45. 27. 53 ,34$                    |
| 1769. 2. Decemb. limbo ad or. . . . .                   | $0^{\circ} 55' 35'',44$             |
| 3. . . . . limbo ad oc. . . . .                         | $1. 3. 36 ,8$                       |
| Summa . . . . .   | $1. 59. 12 ,2$                      |
| (la Grange)   | Distantia a vertice $0. 59. 36 ,8$  |
| Ref. $^{\circ}$ . . . . .                               | $+ . . . . 1 ,0$                    |
|   | $0. 59. 37 ,8$                      |

Decl.<sup>o</sup> e Cygni an. 1759.  $44^{\circ} 27' 50'',90$

|                       |        |                |
|-----------------------|--------|----------------|
| ad 2. Decemb. . . +   | 11 ,31 | 44. 28. 22 ,31 |
| Nutatio . . . . . +   | 6 ,10  |                |
| Aberratio . . . . . + | 14 ,00 |                |

Latitudo . . . . .  $45. 27. 59 ,41$

1771. 24. Novemb. limbo ad or. . . . .  $0^{\circ} 54' 53'',8$

28. . . . . limbo ad oc. . . . . 1. 3. 23 ,7

Summa . . . . . 1. 58. 17 ,5

(de Cesaris) Distantia a vertice 0. 59. 8 ,75

Ref.<sup>o</sup> . . . . . + ..... 1 ,00

0. 59. 9 ,75

Decl.<sup>o</sup> e Cygni an. 1771.  $44^{\circ} 28' 15'',70$

|                       |        |                |
|-----------------------|--------|----------------|
| ad 26. Novemb. . +    | 11 ,18 | 44. 28. 49 ,78 |
| Nutatio . . . . . +   | 8 ,80  |                |
| Aberratio . . . . . + | 14 ,10 |                |

Latitudo . . . . .  $45. 27. 59 ,53$

1777. 29. Septemb. limbo ad or. . . . .  $0^{\circ} 53' 57'',6$

30. . . . . limbo ad oc. . . . . 1. 2. 13 ,5

Summa . . . . . 1. 56. 11 ,1

(de Cesaris) Distantia a vertice 0. 58. 5 ,55

Ref.<sup>o</sup> . . . . . + ..... 1 ,00

0. 58. 6. 55

Decl.<sup>o</sup> e Cygni an. 1777.  $44^{\circ} 29' 30'',00$

|                       |        |                |
|-----------------------|--------|----------------|
| ad 29. Novemb. . +    | 9 ,32  | 44. 29. 53 ,62 |
| Nutatio . . . . . +   | 2 ,00  |                |
| Aberratio . . . . . + | 17 ,10 |                |

Latitudo . . . . .  $45. 28. 0 ,17$

Pro latitudine hujus Speculae suppeditant superiores conclusiones sequentes valores.

| Ex observ. a Capellae. | a Antigae.     | a Cygni.       |
|------------------------|----------------|----------------|
| 45° 27' 58",32         | 45° 27' 56",16 | 45° 27' 53",34 |
| 27. 59 ,93             | 27. 54 ,90     | 27. 59 ,42     |
| 27. 55 ,35             | 27. 56 ,36     | 27. 59 ,53     |
| 27. 57 ,53             | 27. 59 ,62     | 28. 0 ,17      |
| 27. 57 ,93             | 27. 57 ,76     | • • • • •      |
| 27. 53 ,86             | • • • • •      | • • • • •      |
| 27. 57 ,03             | • • • • •      | • • • • •      |
| - 27. 53 ,32           | • • • • •      | • • • • •      |
| 27. 56 ,89             | • • • • •      | • • • • •      |
| 27. 57 ,00             | • • • • •      | • • • • •      |
| 27. 54 ,43             | • • • • •      | • • • • •      |
| 27. 59 ,28             | • • • • •      | • • • • •      |
| 27. 57 ,67             | • • • • •      | • • • • •      |
| 27. 57 ,78             | • • • • •      | • • • • •      |
| 27. 58 ,33             | • • • • •      | • • • • •      |
| 27. 58 ,44             | • • • • •      | • • • • •      |
| - 27. 55 ,48           | • • • • •      | • • • • •      |
| 27. 55 ,07             | • • • • •      | • • • • •      |

Medium 45. 27. 56 ,97 .... 27. 56 ,96 .... 27. 57 ,84

Quare latitudo Speculae Mediol. statuitur 45° 27' 57".

Observationes a Capellae an. 1767., & a Cygni an. 1768. a Clar. *la Grange* peractae, quas supra recensuimus, in lucem etiam prodiere an. 1769. in opusculo, quod inscribitur: *Esercitazione matematica ec. auctore anonimo.* Ex iis supputata

est in eo opusculo altitudo poli hujus Speculae paulo major deducta a nobis ex iisdem observationibus. Differentia ex eo oritur 1.<sup>o</sup> quod in supputanda declinatione apparenti a Capellae, quae in eo opusculo ad 10. Aprilis an. 1767. notatur  $45^{\circ} 44' 25'',43$ , & ad 27. Augusti ejusdem anni  $45^{\circ} 44' 13'',5$ , non attentus sit motus peculiaris stellae in declinationem, satis pene dixerim demonstratus ex superius dictis, & quem cum reliquis Astronomis attendendum censui. 2.<sup>o</sup> in eodem opusculo declinatio apparet a Cygni ad 12. Decemb. an. 1768. exhibetur  $44^{\circ} 28' 24'',8$ , id certid ex aliquo errore in ipsam declinationis supputationem irrepto; ea enim Clar.<sup>o</sup> la Grange & mihi ex iterata exploratione prodiit  $44^{\circ} 28' 7'',34$  ut cuique exhibitis elementis calculum instauraturo constabit.

Haec dicta velim ex solo veritatis amore, & ne quis unquam ex capite allatae differentiae inter declinationes eorum siderum a Clariss. Auctore, & a nobis ex eodem Caillii Catalogo depromptas, & ad dictas epochas redactas, suspicetur errorum aliquem a nobis admissum in conclusionibus deductis pro justa quantitate latitudinis hujus Speculae. Absit quod dixerim animo notam vel minimam inurendi estimationi, & ingenio laudati Auctoris. Continua experientia satis docemur interdum irreptum errorum in accuratissimas supputationes inopinatō calculatores sagacissimos, & exercitatissimos fallere.



## DE MEDIA PRAECESSIONE AEQUINOCTIORUM

*ex veterum Astronomorum observationibus  
collecta*

EX BARNABA ORIANI.

**F**ampridem manifestum fuit inclinationem eclipticam ad aequatorem continue imminui, quanvis haec etenus datum non fuerit imminutionis quantitatem ex observationibus immediate derivare. Ex omnibus veterum Astronomorum observationibus eruitur tantum obliquitas eclipticae major, quam nunc est, &c., ut nihil dicam de observatione Pitheae Massiliensis, de qua adhuc sub judice lis est, inter Hipparchum & tempora nostra Arabum & Persarum observationes reperiuntur, quae ipsam prohibent sere medium inter illam a cel. Graeco Astronomo determinatam & illam, quae modo observatur. Plures iisque illustres Astronomi Copernicus, Lansbergius, Tycho, Keplerus ex comparatione veterum observationum non solum obliquitatem imminui arbitrati sunt, sed ulterius periodum fixerunt imminutionis ita, ut, postquam obliquitas certa quantitate, quam minimam vocarent, decreverit, denuo cresceret & perveiret ad maximam. Sed illorum hacce in re opiniones & hypotheses observationibus non ita fulciebantur, ut a plerisque non inferioris notae astronomis coaevis rejicerentur tamquam nimis vagae & a veritate aberrantes. Aliqui vero, ut variationem obliquitatis, quam negare non audebant, aliquo modo expli-

carent, trepidationem quamdam in punctis aequinoctialibus fingeant, cuius gratia obliquitas modo major modo minor appareret; *Copernicus* vero hunc motum axi telluris tribuit ita, ut iuxta ipsum polus aequatoris circulum describat, cuius diameter maxima deviationi sit aequalis. Hanc postremam explicationem non multum ab ludere a nutatione nostro aeo inventa quisque vider, sed eius quantitas instrumentis rudioribus antiquorum pesitus insensibilis esse debebat, & propterea sorti adscribendum est, si veteres Astronomi, ut sibi apparentem in obliquitate eclipticae anomaliam explicarent, in hypothesis incidunt, quae nutationi valde similis est.

Prior sententia de continua vel periodica immutacione obliquitatis praeterea confirmabatur ex collatione latitudinis stellarum fixarum a veteribus observatae cum eius determinatione posterioribus observationibus facta. Comparationem istiusmodi primus, quem sciam, instituit perillustris Astronomus *Tycho Brahe* (Tom. I. Progymnasma-tum pag. 236., & epistolarum 2<sup>da</sup> pag. 69.) ex undecim enim selectarum fixarum latitudine, quae innitebatur observationibus Timocharidis, Hipparchi, & Ptolemaei ab hoc postremo (cap. 3. lib. 7. *Almagesti*) relatis, & latitudine ab ipso *Tychone* observata collegit latitudinem ipsarum variationem subiisse, & in aliquibus fixis fere tot minutorum, quot importabat immutatio obliquitatis a temporibus Hipparchi ad sua, scilicet usque ad finem saeculi XVI. Hanc eandem comparationem, ut alios silentio praetererat, instituit deinde *D. Eulerus* (V. *Mémoires de l' Acad. R.*

*de Berlin an. 1754.* ), & elegantem suam theoriam de saeculari decremento obliquitatis eclipticae luculenter veterum & recentiorum observationibus confirmavit , licet ex ipsis eruere non potuerit quantitatem illius decrementi , quam ex theoria collegerat ob imperfectionem observationum a veteribus traditarum , & fortasse etiam ob motum proprium aliquarum fixarum adhuc non satis cognitum . Quinimmo variatio latitudinis per intervallum plurium saeculorum fere inepta est ad investigandam mutationem obliquitatis , cum eadem non sit tempori proportionalis , sed varietur continue , prout postulant elementa , quae coefficientes formulae illam mutationem exprimentis ingrediuntur ; quod facile constabit , si vel leviter considerentur formulae ipsae a praelaudato D. Euler traditae ( loco citato ) vel illae , quas dedit D. de la Grange , ( Mémoires de l' Acad. R. des Sciences de Paris , An. 1774. ) idque etiam inferius , adducto exemplo stellae *a Leonis* , evidenter patebit .

Ex variata obliquitate eclipticae longitudines quoque immutantur dupli modo , videlicet primo ex progressu vel regressu punctorum aequinoctialium , deinde ex majori vel minori inclinatione eclipticae ad aequatorem . Haec postrema pars variationis longitudinis pro diversis fixis diversa est , prima vero omnibus fixis est communis , & in praxi astronomica tanquam pars praecessionis aequinoctiorum considerari potest . Quapropter si quantitas praecessionis annuae elicienda sit ex comparatione longitudinis fixarum a veteribus statutae cum illa recentiorum , oportet , ut a lon-

gitudine hodierna dematur vel illi addatur quantitas a variatione praedicta obliquitatis oriunda , deinde , subtracta veteri longitudine a recenti , prodibit residuum , quod per annorum interea elapsorum numerum divisum praebebit quantitatem illam praecessionis , quae tantum ab actione Lunae & Solis in tellurem pender . D. d'Alembert & autores omnes , qui post ipsum (\*) problema praecessionis aequinoctiorum pertractarunt , quantitatem  $50''$  annuae praecessionis immediate ex theoria eruere non potuerunt ob incertitudinem quorundam elementorum , quae ad illam determinandam requiruntur , veluti sunt homogeneitas fixatorum telluris , sphaeroiditas ipsius , & quantitas virium Solis & Lunae in terram , sive saltem earundem relatio . Quare ipsis satis fuit monstrare determinatam  $50''$  ab observationibus quantitatem a recepta attractionis theoria non declinare .

Si longitudines stellarum non liberentur ab indicata variatione punctorum aequinoctialium , antequam inter se conferantur , prodibit quantitas annuae praecessionis mediae aequa minor , & quidem , si duae longitudines datae sint pro praesenti saeculo , defectus erit circiter  $= 0'',2$  ; si una

(\*) In nostris Ephemeridibus ad an. 1781. pag. 181. afferui D. d'Alembert problema praecessionis aequinoctiorum primum resoluisse & nihil in hoc negotio posteris faciendum reliquise . Haec postrema verba intelligenda utique sunt de completa & absoluta resolutione problematis , sed ita , ut nulla dematur laus , nullum meritum auctoriibus aliis , qui post D. d'Alembert sua quisque methodo ejusdem problematis solutionem tradiderunt .

ex longitudinibus detur tempore Hipparchi , altera vero sit ad tempus praesens , defectus erit =  $0'',67$  . Hinc fortasse factum est , ut plures astronomi superiorum saeculorum invenerint praecessionem annuam aliquantis per minutum illa , quae modo communiter adhiberi solet , cum illos variationem punctorum aequinoctialium a motu eclipticae prodeuntem omnino ignorasse manifestum sit . Copernicus vero & pauci alii inaequalitatem in praecessione concludere volebant ex diversis veterum sententiis In aeternanda illius quantitate annua ; etenim cum Hipparchus , & Ptolemaeus statuerint illam  $36''$  , Albategnius  $54'',5$  , & ipse invenerit  $50'',2$  , anomaliam in motu fixarum recognoscere maluerunt , ne in dubium auctoritas & peritia tantorum virorum revocarentur . Sed deinde penes omnes ferme astronomos Ptolemaei & Albategnii hadlucinatio recognita & evidenter monstrata est ex comparatione , & rectificatione illarum earundem observationum , quibus Ptolemaeus sententiam suam stabilire conatus est . Ceteri vero astronomi , & plerique etiam illorum , qui variationem latitudinis locum habere existimabant , trepidationem illam punctorum aequinoctialium rejiciebant , & horum singuli , juxta propriam opinionem veterum observations castigando , erroresque corrugendo , praecessionem annuam colligebant aequabilem fuisse semper & priscis temporibus & recentioribus , ejusque limites intra  $52''$  &  $49''$  communiter statuebant .

Multi quoque astronomi , qui ex proposito investigarunt annuam praecessionem aequinoctiorum , sibi licitum cre-

diderant observationibus antiquis applicare correctiones a refractione pendentes & veteribus ignotas , atque illas , quae prodiebant a tabulis *Ptolemaei* Solaribus & Lunaribus , quoniam pleraque fixarum loca a *Prothomaeo* (cap. 2. & 3. lib. 7. *Alm.*) determinata sunt per appulsus Lunae ad fixas ; locus Lunae ex tabulis erutus tamquam notus assumebatur , atque ex ipso positus fixae colligebatur , videlicet methodus adamastorius inversa illius nostris temporibus adscitae in usu erat . Igitur quisque videt fixae locum affici debuisse non solum errore ex observatione , sed etiam illo tabularum ; cum itaque astronomi tabulas illas *Lugares Ptolemaei* deficientes & erroribus refertas cognovissent , alias atque alias instruxerunt observationibus recentioribus magis conformes , & per ipsas determinationes antiquas corrigebant , seu veterum erroribus proprios substituebant . Verum sane est juxta testimonium *Hipparchi a Ptolemaeo* (cap. 2. L 7. *Alm.*) relatum , observationes *Timocharidis* ruidores fuisse & parum explanatas , sed constat etiam , neque *Hipparchum* neque *Ptolemaeum* sibi licitum existimasse illas per aliquas correctiones immutare , quamvis in investigatione praecessionis aequinoctiorum , quam ipsi suscepserant , duas observationes stellae a *Virginis* intervallo 12. annorum inter se distantes a *Timocharide* institutas retulerint , quae quantitatem ipsam annum proxime = 50<sup>m</sup> perhibebant , videlicet valde diversam a 36<sup>m</sup> ; ut *Hipparchus* & *Ptolemaeus* statuerent .

Observationes antiquae , quas *Ptolemaeus* (lib. 7. cap. 2. & 3. *Alm.*) recenset , ad eruendam annuam praecessionem

prae ceteris idoneae , sunt fixarum tertiae vel mediae succedentis virgiliarum partis , quam modo dicimus a Plejadum , Spicae seu a Virginis , Reguli seu a Leonis , & borealissimae earum , quae sunt in fronte Scorpii , seu  $\beta$  Scorpii ; harum stellarum Ptolemaeus memorat tum longitudinem , tum declinationem utpote a Timocharide vel Hipparcho observatas . Spica vero & Reguli celebriores sunt fixae apud astronomos in determinanda praecessione ; quare exempli loco Reguli observationes , quas potui , & veteres & recentiores inter se contuli , ut , si non emendatio quantitatis praecessionis in praesens adscitae prodiret , saltem confirmatio opinionis communius receptae obtineretur . Nam etiamnum , de hac quantitate non ita conventum est , ut aliqua licet per exigua non adsit dissensio ; Regulum vero prae Spicam Virginis selegi primo , quia ex datis a Ptolemaeo ejus declinatione  $20^{\circ} 40'$  , & longitudine  $3^{\circ} 29^{\circ} 50'$  ab Hipparcho observatis , tum ex latitudine  $0^{\circ} 10'$  Bor. , quam in suo catalogo fixarum illi tribuit Ptolemaeus , quamque pariter ex Hipparchi determinatione presumptam esse omnes norunt astronomi , collegi obliquitatem eclipticae  $23^{\circ} 49'$  , quae sane ab altera Hipparchi determinatione aliunde petita non multum ab ludit ; hanc autem quantitatem nimis magnam ex observationibus Timocharidis super Spicam Virginis ibidem a Ptolemaeo relativis inveni , & propterea credibile videtur vel longitudinem ejus vel latitudinem vel declinationem non omni accurate a Timocharide determinatam fuisse ; deinde Reguli observatio immediata & fundamentalis invenitur

instituta ab aliquibus Astronomis posterioribus & celebri-  
bus , inter quos sane eminet Arabus *Albategnius*.

*Ptolemaei* determinationem circa locum *Reguli* consulto  
omitto , cum constet ab ipso tantum illius declinationem  
observatam fuisse , longitudines vero & latitudines omnium  
fixarum catalogi ab ipso traditi derivasse a *Hipparchi* de-  
terminationibus , addita scilicet longitudinibus praecessione  
aequinoctiorum , quam aequo minorem statuerat , unius  
nempe gradus intervallo 100. annorum . Similiter alios  
plures Astronomos praecipue Arabes & Persas silentio  
praetermittant , cum plerique non ex observatione , sed  
ex suis anticipatis hypothesibus loca fixarum perhibeant ,  
videlicet *Ptolemaei* positiones ad sua tempora reducant ,  
addita longitudinibus praecessione , quam quisque veriorem  
putat . Loca insigniorum fixarum ab hisce Auctoriibus  
& pluribus aliis constituta videri possunt in *Astron. Phi-*  
*losolica Bullialdi* versus finem , in *Philosophical Transactions*  
num. 158. , in Ricciolii *Almagesto novo & Astronomia re-*  
*formata* , in Flamstedii *Prolegomenis ad Historiam Coele-*  
*stem* , &c.



| OBSERVATORES.   | Anni<br>ante Cbr. | Longitude<br>Reguli |     |     | Latitudo<br>Borealis |
|---|-------------------|---------------------|-----|-----|----------------------|
|   |                   | S.                  | G.  | M.  |                      |
| Hipparchus . . . . .  | 128               | 3.                  | 29. | 50. | 0                    |
|   | <i>Post Cbr.</i>  |                     |     |     |                      |
| Albategnius . . . . .   | 880               | 4.                  | 14. | 0.  | 0                    |
| Idem ex lectione Tychonis<br>& Bullialdi . . . . .                | 936               | 4.                  | 14. | 5.  | 0                    |
| Ebeneen Sophi . . . . .   | 938               | 4.                  | 19. | 13. | 0                    |
| Aly Abolcalimus . . . . .   | 1233              | 4.                  | 14. | 40. | 0                    |
| Chosga Nasirodinus . . . . .                                      | 1261              | 4.                  | 19. | 14. | 0                    |
| Iabdulgalibus Segazius . . . . .                                  | 1264              | 4.                  | 19. | 42. | 0                    |
| Ex Codice Arnaldino apud<br>Gassendum . . . . .                   | 1437              | 4.                  | 20. | 40. | 0                    |
| Ulugh Beigh . . . . .   | 1587              | 4.                  | 22. | 13. | 0                    |
| Tycho . . . . .   | 1593              | 4.                  | 24. | 6.  | 0                    |
| Princeps Hassiae . . . . .  | 1599              | 4.                  | 24. | 10. | 20                   |
| Lansbergius . . . . .   | 1601              | 4.                  | 24. | 14. | 0                    |
| Tycho ex lectione Kepleri in<br><i>tab. Rudolphinis</i> . . . . . | 1661              | 4.                  | 25. | 4.  | 45                   |
| Ricciolius . . . . .  | 1661              | 4.                  | 25. | 6.  | 0                    |
| Hevelius . . . . .  | 1687              | 4.                  | 25. | 28. | 52                   |
| De la Hire apud D. Monnier<br>in <i>Hist. Coelesti</i> . . . . .  | 1690              | 4.                  | 25. | 31. | 20                   |
| Flamsteed . . . . .   | 1742              | 4.                  | 26. | 14. | 10                   |
| Monnier <i>Inst. Afr.</i> . . . . .                               | 1750              | 4.                  | 26. | 21. | 44                   |
| Zacutti . . . . .   | 1750              | 4.                  | 26. | 21. | 52,3                 |
| De la Caille . . . . .  | 1750              | 4.                  | 26. | 20. | 45                   |
| Monnier . . . . .   | 1756              | 4.                  | 26. | 26. | 17                   |
| T. Mayer . . . . .  | 1760              | 4.                  | 26. | 29. | 39                   |
| Bradley . . . . .   | 1770              | 4.                  | 26. | 37. | 57,3                 |
| Maskelyne . . . . .   |                   |                     |     |     |                      |

Hinc institutis comparationibus prodiret annuus fixarum motus in longitudinem, sed non ille, qui quaeritur. Nam antea inquirendum est, quaenam quantitas ob motum eclipticae addi vel subtrahi debeat, ut obtineatur exacta aequinoctiorum praecessio ex solo motu aequatoris oriunda. Itaque inhaerendo pereleganti theoriae Illust. D. de la Grange

pro singulis epochis computati monetae sequinoctiorum, & variationem longitudinis Reguli, & in sequenti tabula dispositi, adiecta quoque variatione latitudinis, & ascensionis rectae.

|                        | <i>Var.<br/>punct.<br/>aequin.<br/>in longit.</i> | <i>Var.<br/>longit.<br/>Reguli</i> | <i>Var.<br/>latitudinis</i> | <i>Var. punct.<br/>aequin.<br/>in ascens.<br/>recte.</i> |
|------------------------|---|------------------------------------|-----------------------------|--|
| Ab an. Ch. 1750.<br>ad |   |                                    |                             |  |
| Hipparchus . . .       | 1678  | 20. " 53                           | + 8,6                       | - 1. 54,1  |
| Ptolemaicum . . .      | 1613  | 16. 18                             | + 7,4                       | - 1. 43,5  |
| Albategnium . . .      | 870   | 6. 11,5                            | + 4,0                       | - 2. 6,8   |
| Aly Abolcasimam        | 812   | 5. 35,1                            | + 4,0                       | - 2. 9,0   |
| Choagam . . .          | 517   | 2. 55,0                            | + 2,2                       | - 1. 34,8  |
| Tychonem . . .         | 149   | 0. 36,8                            | + 0,6                       | - 0. 33,0  |
| Hevelium . . .         | 89  | 0. 20,7                            | + 0,4                       | - 0. 20,1  |
| De la Hire . . .       | 63  | 0. 14,0                            | + 0,2                       | - 0. 13,5  |
| Flamsteed . . .        | 60  | 0. 12,3                            | + 0,2                       | - 0. 13,6  |
| De la Caille . . .     | 0   | 0. 0                               | 0,0                         | 0. 0,0   |
| T. Mayer . . .         | 6   | - 0. 1,3                           | 0,0                         | + 0. 2,3   |
| Bradley . . .          | 10  | - 0. 2,2                           | 0,0                         | + 0. 2,4   |
| Mackeyne . . .         | 20  | - 0. 4,2                           | - 0,1                       | + 0. 4,8   |

Si a Hipparcho, a Tychone, a Flamstedio, & a de la Caille constituta longitudo Reguli singillatim a ceteris sequentibus subtrahatur, & residuum dividatur per numerum annorum inter utramque collatam longitudinem intercessorum, prodibunt annuae praecessiones aequinoctiorum, quarum omnium media est = 50", 279; & si singulae corrigantur a variazione punctorum aequinoctialium juxta praecedentem tabulam, fiet illa = 50,606.

Quantitates, ex quibus hanc medianam pro annua praecessione elicimus, non omnia inter se congruunt, cum Hipparchi observationes minutis primis 10, 15, 20, & amplius a veritate aberrare possint; nam, referente Pto-

*lemaeo*, astrolabia, quibus veteres Astronomi utebantur, nonnisi ad quina vel dena minuta prima divisa fuerint; quod quidem vel ex ipso catalogo fixarum Ptolemaico patet, cum ibi longitudines & latitudines numeris fere semper rotundis, seu per decadas tantum minutorum notentur. Idem sane dici debet de Arabum determinationibus, uti cum recentioribus Astronomis afferit *Flamsteadi* in Prolegomenis ad Hist. Coel. *Tychonis* observationes magnis organis astronomicis & incredibili solertia institutae illas anteriorum Astronomorum valde praecellunt, sed non distant tali temporis intervallo a recentioribus, ut in disquisitione praecessionis nihil faciendus sit error 3 vel 4 minutorum in locis fixarum, quo, ob nimiam ab ipso assumptam Solis parallaxim, & praecipue ob incertitudinem collimationis objecti per oudas dioptras visi, determinationes suas inquinari postulant (\*).

*Flamsteadi* vero, qui in suis observationibus & tubis opticis, & instrumentis egregie elaboratis, & methodis novis atque accuratiorebus usus est, primus inter recentio-

(\*) Motum proprium Reguli in superioribus comparationibus neglexi, licet a plerisque magni nominis Astronomis ille non contennendum judicetur; sed, cum de ejus quantitate discrepantes adhuc sint opiniones, juvabit tantum illas indicare, ut, qui motum hunc in computum ducere optat, felicitat quem maluerit: D. *Monnier* ponit motum annum proprium Reguli in longitudine  $\equiv -0'',6$  in latitudinem  $\equiv +0'',01$ , T. *Mayer* in ascens. rectam  $\equiv -0'',32$ , in declinationem  $\equiv +0'',1$ , & D. *Maskeleyne* in ascens. rectam  $\equiv -0'',41$ .

res confidentiam Astronomorum meruit. Ex ejus amplissimo catalogo loca 58. fixarum excerpti comparanda cum illis, quae post annos 60. D. de la Caille constituerat. In sequenti tabula, praeterea differentiam longitudinis, & latitudinis praedictarum 58. fixarum, retuli variationem latitudinis & illam longitudinis ex variata obliquitate eclipticae, quae pro singulis selectis fixis locum habuit ab an. 1690. ad an. 1750., atque in hac postrema non comprehendendi variationem punctorum aequinoctialium, quae cunctis fixis illo annorum intervallo convenit, atque est — 12'',; 1.

Variationem obliquitatis eclipticae ex ipsis quoque observationibus Flamstedii & de la Caille determinavi, quam quidem apposite theoriae consentaneam reperi. Etenim si latitudo Grenovicensis Observatorii, quam Flamstedius statuerat  $51^{\circ} 28' 30''$ , ponatur  $51^{\circ} 28' 40''$ , sicut illam inventit D. Maskelyne, atque inde corrigantur determinationes Flamstedii in suis Prolegomenis ad Historiam Coelestem, pag. 115. & seq. relatae, prodibit eclipticae obliquitas, quae deinde correcta a nutatione  $= 9'',55.$  col. & Dicit  $23^{\circ} 28' 55''$ , videlicet vix  $2''$  major illa, quae colligitur a sublimi theoria D. de la Grange, accepta nempe pro initio anni 1750. obliquitate  $23^{\circ} 28' 19''$ , qualiter reperierat D. de la Caille. Haec autem saecularis  $56''$  imminutio obliquitatis magis magisque confirmatur a determinatione D. Maskelyne, qui ad an. 1770. illam statuit  $23^{\circ} 28' 9'',2$  (\*). Sed ne a proposito recedamus juvat modo indicatam tabulam referre.

(\*) Consul. quoque *Philosophical Transactions*, vol. 63. par. 1. pag. 93.

| NOMINA<br>STELLARUM | Differentia<br>Longitudinis<br>Annis 60 |      | Differentia<br>Latitudinis |    | Variatio<br>Longitu-<br>dinis |        | Variatio<br>Latitu-<br>dinis |    |
|---------------------|---|------|----------------------------|----|-------------------------------|--------|------------------------------|----|
|                     | i                                       | ii   | ii                         | ii | ii                            | ii     | ii                           | ii |
| γ Pegasi            | + 50.                                   | 35,5 | + 26,5                     | —  | 7,3                           | + 8,2  |                              |    |
| δ Andromedae        | 51.                                     | 29,4 | + 15,5                     | —  | 13,6                          | + 15,0 |                              |    |
| ε Cassiopeiae       | 48.                                     | 29,5 | + 25,0                     | —  | 26,0                          | + 22,7 |                              |    |
| ε Ceti              | 50.                                     | 96,2 | + 10,4                     | +  | 12,8                          | + 4,7  |                              |    |
| γ Cassiopeiae       | 48.                                     | 36,2 | — 23,5                     | —  | 25,4                          | + 25,0 |                              |    |
| ε Ursae minoris     | 49.                                     | 29,0 | + 11,0                     | +  | 2,8                           | + 31,0 |                              |    |
| ε Andromedae        | 52.                                     | 14,5 | 0,0                        | —  | 13,3                          | + 19,5 |                              |    |
| ε Cassiopeiae       | 48.                                     | 55,9 | + 6,6                      | —  | 22,4                          | + 26,5 |                              |    |
| ε Cassiopeiae       | 50.                                     | 38,5 | — 27,0                     | —  | 18,9                          | + 29,0 |                              |    |
| γ Arietis           | 50.                                     | 36,8 | + 21,2                     | —  | 3,2                           | + 21,0 |                              |    |
| ε Arietis           | 50.                                     | 41,3 | + 28,5                     | —  | 4,0                           | + 21,2 |                              |    |
| γ Andromedae        | 48.                                     | 53,3 | + 67,6                     | —  | 11,5                          | + 25,4 |                              |    |
| ε Piscium           | 50.                                     | 39,0 | — 33,7                     | +  | 4,5                           | + 19,0 |                              |    |
| ε Arietis           | 50.                                     | 46,3 | + 19,2                     | —  | 4,2                           | + 22,7 |                              |    |
| γ Persei            | 50.                                     | 19,8 | + 1,7                      | —  | 10,3                          | + 30,5 |                              |    |
| ε Ceti              | 50.                                     | 24,8 | — 43,0                     | +  | 4,9                           | — 26,4 |                              |    |
| ε Persei            | 50.                                     | 18,0 | + 16,5                     | —  | 6,4                           | + 29,5 |                              |    |
| ε Persei            | 49.                                     | 55,0 | + 31,5                     | —  | 7,5                           | + 31,0 |                              |    |
| δ Persei            | 49.                                     | 66,5 | + 68,6                     | —  | 6,2                           | + 81,6 |                              |    |
| b Plejadum          | 50.                                     | 4,7  | + 70,9                     | —  | 1,0                           | + 30,4 |                              |    |
| n Plejadum          | 49.                                     | 54,8 | + 56,6                     | —  | 0,9                           | + 26,6 |                              |    |
| f Plejadum          | 50.                                     | 4,1  | + 54,1                     | —  | 0,9                           | + 30,6 |                              |    |
| 1 δ Tauri           | 50.                                     | 55,4 | + 50,8                     | +  | 9,7                           | — 32,0 |                              |    |
| 2 δ Tauri           | 50.                                     | 37,5 | — 49,2                     | +  | 0,7                           | — 33,6 |                              |    |
| ε Tauri             | 50.                                     | 42,5 | — 24,2                     | +  | 0,4                           | — 32,5 |                              |    |
| Aldebaran           | 50.                                     | 44,8 | — 48,6                     | +  | 0,8                           | — 32,5 |                              |    |
| Capella             | 50.                                     | 19,9 | — 5,8                      | +  | 9,9                           | + 33,7 |                              |    |
| ε Orionis           | 50.                                     | 23,4 | — 57,8                     | +  | 2,1                           | — 33,4 |                              |    |
| f Tauri             | 50.                                     | 56,6 | + 21,6                     | —  | 0,2                           | + 33,7 |                              |    |
| γ Orionis           | 49.                                     | 49,8 | — 36,7                     | +  | 1,9                           | — 33,7 |                              |    |
| ε Orionis           | 52.                                     | 47,6 | — 64,5                     | +  | 0,5                           | — 33,7 |                              |    |
| ζ Orionis           | 52.                                     | 2,1  | — 45,2                     | +  | 0,3                           | — 33,8 |                              |    |
| η Orionis           | 50.                                     | 50,2 | — 63,7                     | —  | 0,5                           | — 33,9 |                              |    |
| γ Castoris          | 50.                                     | 22,6 | — 55,2                     | —  | 0,0                           | — 33,7 |                              |    |

| NOMINA<br>STELLARUM | Differentia<br>Longitudinis<br>Annis 60 |      | Differentia<br>Latitu-<br>dinis |    | Variatio<br>Longitu-<br>dinis |    | Variatio<br>Latitu-<br>dinis |    |
|---------------------|---|------|---------------------------------|----|-------------------------------|----|------------------------------|----|
|                     | II                                      | II   | II                              | II | II                            | II | II                           | II |
| α Cætoris           | + 50.                                   | 10,7 | — 44,8                          | —  | 0,0                           | —  | 32,6                         |    |
| β Sérus             | 49.                                     | 21,0 | + 28,5                          | —  | 9,0                           | —  | 34,0                         |    |
| α Cætoris           | 50.                                     | 11,6 | + 45,8                          | +  | 2,4                           | +  | 31,0                         |    |
| Procyon             | 49.                                     | 43,0 | + 14,3                          | —  | 4,7                           | —  | 29,0                         |    |
| ε Pollucis          | 49.                                     | 46,0 | + 33,4                          | +  | 1,8                           | +  | 30,0                         |    |
| α Hydræ             | 50.                                     | 81,7 | — 45,2                          | —  | 12,1                          | —  | 15,3                         |    |
| Regulus             | 49.                                     | 52,3 | + 54,9                          | +  | 0,2                           | +  | 13,6                         |    |
| ε Ursæ maj.         | 50.                                     | 30,2 | + 16,3                          | +  | 87,2                          | +  | 19,8                         |    |
| α Ursæ maj.         | 50.                                     | 58,0 | 0,0                             | +  | 30,0                          | +  | 32,0                         |    |
| Spica Virginis      | 49.                                     | 57,0 | + 6,2                           | —  | 1,2                           | +  | 16,3                         |    |
| Arcturus            | 50.                                     | 54,0 | — 149,3                         | +  | 17,2                          | —  | 16,4                         |    |
| α Librae            | 49.                                     | 12,0 | — 56,2                          | +  | 0,1                           | —  | 25,4                         |    |
| ε Librae            | 49.                                     | 27,5 | — 67,0                          | +  | 3,0                           | —  | 27,8                         |    |
| α Coronæ            | 50.                                     | 11,0 | — 12,6                          | +  | 22,3                          | —  | 25,0                         |    |
| ε Scorpii           | 49.                                     | 6,5  | — 44,6                          | +  | 0,8                           | —  | 34,3                         |    |
| Antares             | 50.                                     | 24,5 | + 45,8                          | —  | 0,7                           | +  | 32,5                         |    |
| α Herculis          | 49.                                     | 22,4 | — 14,7                          | +  | 4,1                           | —  | 33,4                         |    |
| α Lyrae             | 51.                                     | 18,7 | — 41,2                          | —  | 20,0                          | —  | 31,8                         |    |
| α Aquilæ            | 51.                                     | 97,7 | — 25,0                          | —  | 11,                           | —  | 27,2                         |    |
| α Cygni             | 51.                                     | 49,6 | — 90,6                          | —  | 54,1                          | —  | 12,0                         |    |
| ε Aquarii           | 50.                                     | 16,6 | — 44,7                          | —  | 4,1                           | —  | 37,6                         |    |
| Fomalhaut           | 51.                                     | 33,7 | + 79,4                          | +  | 12,0                          | +  | 12,2                         |    |
| α Pégasi            | 50.                                     | 59,2 | + 9,0                           | —  | 11,8                          | —  | 2,7                          |    |
| α Andromedæ         | 50.                                     | 50,3 | + 4,7                           | —  | 14,9                          | +  | 11,0                         |    |

Si quantitatum secundae columnæ, seu, differentiarum longitudinis media accipiatur, habebitur  $50'.33''$ ,8, cui quantitati si addatur media ex illis columnæ quartæ seu variationis longitudinis, id est  $-3'',0$ , tumque corrigatur a variatione punctorum aequinoctialium, quam supra diximus esse  $= -12'',3$ , obtinebitur praecessio aequinoctiorum pro 60. annis  $= 50'.33''$ ,1 seu fieri praecessio aequa-

$= 50'',552$ . Sed in hisce comparationibus duo notari conveniet, primum errores probabiles saltem 15. minutorum secundorum in locis stellarum a *Flamstedio* depromptis locum habere posse, cum in determinandis illarum rectis ascensionibus de fractionibus secundorum temporis ipsum sollicitum non fuisse constet, sed tantum integra secunda computaverit; secundo loca a *Flamstedio* tradita non possunt media appellari, cum a nutatione, quae tuac temporis ignorabatur, non sint correcta; praeterea in factis collationibus nulla a nobis ratio habita est motus proprii fixarum, cum revera plures fixas motum proprium, & anomalum habere pateat vel ex differentiis non exiguis, quas in illarum latitudinibus invenimus, & quae sane non sine injuria defectui Observatorum vel instrumentorum, quibus illi usi sunt, tribui possunt, atque ex recentiorum observationibus ulterius innotuit, licet adhuc non constet de certa quantitate motus, quo singulæ fixae centur.

Itaque duas obtinuimus quantitates pro praecessione aequinoctiorum scilicet  $50'',606$ , &  $50'',552$ , quae sane parum inter se discrepant, media ipsarum est  $50'',579$  (\*).

(\*) Nemo inter recentiores, praeter Eust. Zanotti in Ephemeridibus Bononiensibus ad annos 1751.—1762. pag. ultima praecessionem annuam posuit  $= 51'',4$ , quae major evaderet, si corrigeretur a variatione annua punctorum aequinoctialium. Sed plures, iisque celebriores Astronomi superiorum saeculorum Tycho, Keplerus, Gassendus &c., & plerique Arabum etiadem fere sententiam tuebantur. Vid. Philosophical Transactions, num. 158., & Riccioli's Astron. Reform. lib. 4. cap. 19.

Praecessio inventa computatur in ascensionem rectam per notam formulam  $50'',579$  (cos. obl. ecl. + sin. obl. ecl. sin. asc. r. tang. decl.) Variatio autem annua punctorum aequinoctialium in longitudinem pro praesenti saeculo est  $= -0'',083$  cot.  $23^\circ.28'$ ; haec vero ad aequatorem relata, seu variatio ascensionis rectae omnium fixarum est  $= -0'',083$  cosec.  $23^\circ.28' = -0'',208$ .

In omnibus fere Astronomiae libris recentioribus nullam reperi mentionem de hujusmodi variatione punctorum aequinoctialium in ascensionem rectam, licet D. Eulerus anno 1754. jam tradidisset elegantem theoriam de immunitione obliquitatis eclipticae, & ex proposito differuerit de progressione punctorum aequinoctialium in longitudinem. (V. *Mémoires de l' Acad. R. de Berlin anno 1754.* pag. 323.) D. de la Lande eamdem quaestionem denuo ptractavit (Mémoires de l' Acad. R. des Sciences de Paris an. 1758., & 1761. *Astronomie* §. 2728. & sequ.) & variationem illam in longitudinem cum Eulero recognovit, sed in ascensionem rectam nullam indicavit, vel fortasse ipsam cum praecessione annua ex motu aequatoris orta confundi posse judicavit. D. Maskelyne vero apertis verbis hujuscce quantitatis rationem habendam esse indicat, (V. *Explanation and use of the tables for computing the apparent places of the fixt stars*) & cum ponat ipse saecularem imminutionem obliquitatis eclipticae  $= 50''$ , atque inde ortam variationem punctorum aequinoctialium in longitudinem  $= 15'',4$ , praecessio ascensionis rectae omnium fixarum, quae, postea praecessione annua in longitudinem

$= 50'',35$ , juxta ipsum effet  $= 46'',18 + 20'',05$  fin.  
 $\text{ascens. r. tang. declin.}$ , illam facit  $= 46'',02 + 20'',05$   
 fin.  $\text{asc. rectae tang. declin.}$ , scilicet terminum costarum  
 $46'',18$  imminuit quantitate  $0'',16$ , uti cirtiter postulat  
 eius hypothesis de imminutione obliquitatis eclipticae.

Huc redit quæstio, quam indicavi in nostris Ephemeridibus ad annum 1781. pag. 176., videlicet si tota præcessio annua sequinoctiorum, seu quæ immediate colligitur ex comparatione longitudinum fixarum, ponatur cum D. de la Lande  $= 50'',336$ , erit præcessio orta ex motu æquatoris  $= 50'',527$ , & variatio producta a motu ecliptice erit  $= -0'',083$  cor.  $23^\circ. 28' = -0'',191$ , quæ summa additæ dant summam  $50'',336$ . Quare variatio omnium in ascensionem rectam erit  $= 50'',527$  (cor.  $23^\circ. 28'$   
 $+ \text{fin. } 23^\circ. 28' \text{ fin. ascens. r. tang. declin.}) - 0'',083$   
 ceter.  $23^\circ. 28' = 46'',14 + 20'',12$  fin.  $\text{asc. r. tang. declin.}$   
 non autem  $50'',336$  (cor.  $23^\circ. 28' + \text{etc.}) = 46'',17$   
 $+ 20'',15$  fin.  $\text{ascens. r. tang. declin.}$  Differentia harum  
 quantitatum unius per exigua est, & nonnulli post diuturnum tempus sensibilis fieri potest, nihilominus illam locum habere & indicare non inutile videbatur. Hanc ipsam quæstionem nuperime indicatam vidi a D. Bernoulli, (*Novissimæ Mémoires de l'Acad. R. de Berlin*, ad. 1773. pag. 191.) cum & ipse, variationem ascensionis rectae ex motu ecliptice putentem in locis fixarum computari debere, satis dilucide ostendat.

Itaque ex dictis, posita præcessione annua in longitudinem  $= 50'',579$ , & variatione quadratorum sequinoctialiæ

in longit. pro praesenti saeculo = —  $8'',083$  cot.  $23^\circ . 28'$   
 = —  $0'',191$ , erit variatio omnis ascensionis rectae  
 $50'',579$  (col.  $23^\circ . 28' + \sin. 23^\circ . 28' \sin. ascens. r. \tan.$   
 $decl.$ ) —  $0'',083$  cosec.  $23^\circ . 28'$  variatio declinationis  
 $50'',579$   $\sin. 23^\circ . 28' \cos. ascens. r.$  & anguli positionis =  
 —  $50'',579$   $\sin. 23^\circ . 28' \sin. ascens. r. sec. declin.$

## OBSERVATIONES MERCURII

*Annis 1778. & 1779. institutae*

A BARNABA ORIANI.

Planitarum observationes , quando ipsi in apsidis ,  
 vel in distantia media a Sole , vel in nodis repe-  
 riuntur , quando inter se congregantur , vel tellus in il-  
 lorum nodis versatur , instituere consuevi , ut ex illarum  
 repetita collatione cum tabulis usu receptis inferatur earum-  
 dem cum coelo consensus vel ab eo dissensus , & elementa ,  
 super quae illae instructae sunt , vel magis magisque con-  
 firmentur , vel illorum a veris aberratio colligatur . Mer-  
 curium vero toties observo , quoties opportunitas se se of-  
 fert illum invisendi . Et sane in plerisque digressionibus  
 orientalibus quarta vel quinta die post ejus conjunctionem  
 inferiorem cum Sole conspicere potui , serius autem illum  
 vidi in digressionibus occidentalibus , licet nonnullas hoc  
 quoque casu institueram observationes hyberno tempore , &  
 quando Mercurius maximam declinationem australis ob-  
 tinebat . Ob celeritatem vero hujus planetae fit ut saepe

saepius in insignioribus punctis suae orbitae reperiatur dum visibilis est, & propterea elementa quoque suarum tabularum frequenter explorari possunt. Cum autem ob difficultatem perspiciendi Mercurium observationes ipsius rariores perhibeantur, & quae magnis, accuratisque organis astronomicis peraguntur, nonnihili aestimari soleant, ex observationibus planetarum, quas superioribus annis in diario descripsi sequentes seligo exponendas, & quarundam etiam cum tabulis comparationem exhibeo.

Nonnullas sequentium observationum sectore aequatoreali feci, ceteras vero quadrante murali; qui habet radium sex pedum, & tubo optico communi ejusdem longitudinis instruitur. In hisce postremis comparavi Mercurium vel cum Sole & cum aliqua stella fixa, vel cum duabus fixis. Duplicem comparationem ideo institui, ut, si quis esset error in una divisione instrumenti, vel aliqua deviatio limbi ipsius a plano meridiani in diversis tubi optici positionibus vel detegeretur, vel saltē imminueretur ejus effectus in loco Mercurii ex observatione elicito, medium duarum determinationum assumendo. In calculo tamen ascensionis rectae Mercurii sola comparatione cum binis fixis usus sum, ut inaequalitates vitarem, quae ex prominentiis, & sinuositatibus limbi in diversis ipsius punctis prō diversis Solis altitudinibus meridianis oriri poterant. In observationibus vero, quas sectore aequatoreali (\*) institui Mer-

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(\*) Descriptio sectoris aequatorialis, quam tradidit D. Reggio, videri potest in Ephemeridibus ad annum 1778.

curium cum duabus vel tribus fixis comparavi ob eamdem supradictam rationem , & praeterea ut ex intervallo ipsarum sive in ascensione recta sive in declinatione positio axis instrumenti mihi ianotesceret , & errorem ab ejus qualcumque deviatione ortum in loco Mercurii corrigerem . Cum autem invenerim intervallum illud omnino congruens cum locis fixarum a catalogis melioris notae assignatis , axem ipsius vel nihil , vel in melius positionem quam in Ephemeridibus ad annum 1780. pag. 160. indicavi , varavisse , & locum Mercurii ab hoc errore instrumenti immunem esse intuli .

Observationes quadrante murali institutae nulla indigent explicatione cum ex titulo tabularum , in quibus exponuntur , satis explanatae videantur . In observationibus vero instrumento aequatoreali institutis duo notari conveniet , primum scilicet ad reducendum tempus apparet horologii ad tempus verum in usum adhiberi debere columnam , quae inscribitur *Meridies verus tempore horologii* , secundo si effectus refractionis & parallaxis pro loco Mercurii in computum duci velit , consulendam esse columnam , quae continet pro qualibet observatione *angulum horarium* , seu arcum aequatoris inter meridianum fixum observatorii Mediolanensis interceptum & meridianum , in quo observatio Mercurii & stellarum fixarum peracta est , cum non omnibus diebus in longa serie observationum , vel ob alias causas instrumentum immobile in eodem meridiano servari potuerit . Ceterum si declinatio Mercurii est borealis , si differentia declinationis inter ipsum & fixam non supe-

rat 4. gradus, & si angulus horarius non excedit 30. gradus, supputatio parallaxis & differentiae refractionis in ascensionem rectam penitus omitti potest, cum error probabilis in ipsa observatione admissus valde superet quantitatem peregrinam, quae ex illa supputatione reperiatur.

*Observationes Mercurii Sectore Aequatoreali.*

| Dies          | Meridies<br>verus<br>temporis<br>penduli |    | Transitus<br>Mercurii<br>tempore<br>penduli |    | Transitus<br>unius fixae |      | Transitus<br>alterius<br>fixae |     |      |
|---------------|--|----|---|----|--------------------------|------|--------------------------------|-----|------|
|               | H.                                       | M. | S.  | H. | M.                       | S.   | H.                             | M.  |      |
| 1778. Aug. 19 | 0.                                       | 1. | 8   | 2. | 33.                      | 27,8 | 6.                             | 48. | 44,4 |
| 20            | 0.                                       | 1. | 9   | 2. | 34.                      | 10,0 | 6.                             | 44. | 12,6 |
| 21            | 0.                                       | 1. | 10  | 2. | 31.                      | 56,2 | 6.                             | 36. | 50,8 |
| 22            | 0.                                       | 1. | 10  | 2. | 32.                      | 56,8 | 20.                            | 40. | 29,2 |
| 24            | 0.                                       | 1. | 5   | 2. | 56.                      | 59,7 | 6.                             | 47. | 0,3  |

| Differ. de-<br>clin. inter-<br>Merc. &<br>primam<br>fixam | Differ. de-<br>clin. inter-<br>Merc. &<br>secundam<br>fixam | Angu-<br>lus<br>Horn-<br>rius-<br>ad Oc. | Tempore<br>Mer-<br>curii | Tempore<br>Observat.<br>fixarum |        |        |        |
|---|---|--|--------------------------|---------------------------------|--------|--------|--------|
| Dies  | G. M. S.  | G. M. S.                                 | G. M.                    | Barom.                          | Therm. | Barom. | Tber.  |
| 1778. Aug. 19   | 2. 31. 3,0  | 0. 32. 26,4                              | 17. 31                   | + 12,0                          | + 19,5 | + 12,0 | + 19,0 |
| 20  | 3. 13. 19,2   | 1. 14. 43,5                              | 17. 34                   | + 11,3                          | + 20,0 | 12,2   | + 19,3 |
| 21  | 3. 55. 18,5   | 1. 56. 44,8                              | 16. 39                   | + 11,0                          | + 20,0 | 11,4   | + 19,5 |
| 22  | 4. 49. 45,7   | • • •                                    | 16. 34                   | + 10,2                          | + 21,0 | 10,7   | + 19,0 |
| 24  | 6. 0. 1,0   | 1. 27,5. 22, 2                           | 11,0                     | + 22,0                          | 11,0   | + 21,5 |        |

*Observationes Mercurii Quadrante Murali.*

|               | Meridies<br>versus temp.<br>penduli | Transitus   |          |             | Transitus<br>unius fixae<br>δ Aquilae | Transitus<br>alter. fixae<br>ε Antinori |          |          |
|---------------|-------------------------------------|-------------|----------|-------------|---------------------------------------|---|----------|----------|
|               |                                     | Merc. temp. | penduli  | H. M. S.    |                                       | H. M. S.                                | H. M. S. | H. M. S. |
| Dies          | H. M. S.                            | H. M. S.    | H. M. S. | H. M. S.    | H. M. S.                              | H. M. S.                                | H. M. S. | H. M. S. |
| 1778. Aug. 23 | II. 49. 11                          | I. 16.      | 58,0     | 8. 52. 23,8 | 9. 37. 49,3                           |   |          |          |
| 24            | II. 48. 46                          | I. 17.      | 41,1     | 8. 48. 15,3 | ...                                   | ...                                     | ...      | ...      |
| 25            | II. 48. 20                          | I. 18.      | 21,5     | 8. 44. 11,5 | ...                                   | ...                                     | ...      | ...      |
| 26            | II. 47. 55                          | I. 18.      | 55,0     | 8. 40. 9,4  | ...                                   | ...                                     | ...      | ...      |
| 27            | II. 47. 31                          | I. 19.      | 23,2     | 8. 36. 4,2  | ...                                   | ...                                     | ...      | ...      |
|               |                                     |             |          |             |                                       |   |          |          |
| 28            | II. 47. 5                           | I. 19.      | 43,7     | ...         | ...                                   | ...                                     | ...      | ...      |
| 29            | II. 46. 43                          | I. 20.      | 3,7      | ...         | ...                                   | ...                                     | ...      | ...      |
| 30            | II. 46. 22                          | I. 20.      | 17,3     | ...         | ...                                   | 9. 9. 27,7                              |          |          |
| Septemb.      | II. 45. 38                          | I. 20.      | 23,3     | 8. 16. 2,9  | 9. 1. 28,4                            |   |          |          |
| 1             | II. 45. 16                          | I. 20.      | 15,4     | 8. 12. 4,0  | ...                                   | ...                                     | ...      | ...      |
|               |                                     |             |          |             |                                       |   |          |          |
| 3             | II. 44. 54                          | I. 20.      | 0,0      | 8. 8. 4,0   | ...                                   | ...                                     | ...      | ...      |
| 4             | II. 44. 31                          | I. 19.      | 37,3     | 8. 4. 4,5   | ...                                   | ...                                     | ...      | ...      |
| 5             | II. 44. 8                           | I. 19.      | 5,0      | ...         | ...                                   | ...                                     | ...      | ...      |
| 8             | II. 43. 0                           | I. 16.      | 34,7     | 7. 48. 11,8 | ...                                   | ...                                     | ...      | ...      |
| 9             | II. 42. 37                          | I. 15.      | 23,3     | 7. 44. 13,5 | ...                                   | ...                                     | ...      | ...      |

|               | Differ. de-<br>clin. inter-<br>Merc. &<br>primam<br>fixum | Differ. de-<br>clin. inter-<br>Merc. &<br>alteram<br>fixam | Tempore Obseru.<br>Mercurii - |          | Tempore Obseru.<br>fixarum |        |
|---------------|---|--|-------------------------------|----------|----------------------------|--------|
|               | Merc. ad<br>Aufbrum                                       | Merc. ad<br>Boream   | G. M. S.                      | G. M. S. | Barom.                     | Therm. |
| Dies          | G. M. S.  | G. M. S.   | Barom.                        | Therm.   | Barom.                     | Therm. |
| 1778. Aug. 23 | 0. 49. 41   | 3. 19. 30  | + 11,3                        | + 21,0   | + 12,3                     | + 20,0 |
| 24            | 1. 30. 29   | • • •  | 11,0                          | 22,0     | 12,0                       | 20,5   |
| 25            | 2. 10. 57   | • • •  | 12,0                          | 23,0     | 11,0                       | 22,0   |
| 26            | 2. 50. 52   | • • •  | 10,0                          | 23,0     | 9,0                        | 21,0   |
| 27            | 3. 30. 25   | • • •  | 7,0                           | 22,0     | 7,5                        | 20,0   |
|               |   |  |                               |          |                            |        |
| 28            | 4. 8. 43  | 0. 0. 28   | 10,0                          | 16,0     | 11,5                       | 15,5   |

|            | Differ. de-<br>clin. inter | Differ. de-<br>clin. inter | Tempore Obserw.<br>Mercurii | Tempore Obserw.<br>fixarum |
|------------|----------------------------|----------------------------|-----------------------------|----------------------------|
|            | Merc. &<br>primam          | Merc. &<br>alteram         |                             |                            |
|            | fixam                      | fixam                      |                             |                            |
|            | Merc. ad<br>Austrum        | Merc. ad<br>Austrum        |                             |                            |
|            | Dies G. M. S.              | G. M. S.                   | Barom.                      | Therm.                     |
|            |                            |                            | 27 p. l.                    |                            |
| 1778. Aug. | 29 4. 46. 47               | 30 37. 37                  | + 12,0                      | + 16,0                     |
|            | 30 5. 24. 2                | 1. 14. 52                  | 11,5                        | 17,0                       |
| Septemb.   | 16. 36. 5                  | .. . . .                   | 8,0                         | 16,0                       |
|            | 27. 10. 54                 | .. . . .                   | 8,5                         | 15,0                       |
|            | 37. 44. 47                 | .. . . .                   | 7,5                         | 17,5                       |
|            | 4 8. 17. 23                | .. . . .                   | 7,0                         | 16,5                       |
|            | 5 8. 48. 53                | .. . . .                   | 8,5                         | 16,7                       |
|            | 8 10. 15. 56               | .. . . .                   | 9,0                         | 16,0                       |
|            | 9 10. 42. 14               | .. . . .                   | 8,0                         | 17,7                       |

Quando observationes hasce postremas instituebam, Solem quoque quadrante murali observabam; quare si Mercurium etiam cum Sole comparari veller, ex differentia temporis inter meridiem verum & transitum Mercurii ejus ascensio recta colligi posset.

Horologium, quod inservit observationibus quadrante murali institutis, omnino diversum est ab eo, quo utimur in observationibus Sectore aequatoreali factis; quapropter nihil mirandum est, si eadem die, exempli causa, 24 Augusti in uno notetur tempus meridiei o<sup>h</sup>. 1'. 5'', in altero vero 11<sup>h</sup>. 48''. 46''.

Denique animadvertisendum est, altitudinem hydrargiri in barometro exprimi per 27 pollices pedis parisiensis, & pro qualibet observatione additum fuisse numerum linearum, quibus hydrargirum supra 27 pollices sustinetur, ita ut,

exempli causa, pro die 23. Augusti in penultima columna intelligi debeat altitudo barometri 27<sup>p</sup>. 12<sup>l</sup>, 3, sive 28<sup>p</sup>. 0<sup>l</sup>, 3. Haec eadem columnā, & postrema, in qua gradus caloris in thermometro vulgo dicto Reaumuriano indicantur, accuratè valent pro tempore observationis primae fixae, atque sine erroris periculo pro altera fixa usurpari possunt.

Fixarum observatarum positiones ex Bradleyano catalogo desumpsi, eaeque nutatione & aberratione lucis affectae ita se habent.

|                    |   |             | Ascens. recta<br>apparens |     |      | Declinatio<br>apparens |     |        |
|--------------------|---|-------------|---------------------------|-----|------|------------------------|-----|--------|
|                    |   |             | G.                        | M.  | S.   | G.                     | M.  | S.     |
| <i>Pro die</i>     |   |             |                           |     |      |                        |     |        |
| 20 Augus <i>ti</i> | . | α Serpentis | 233.                      | 20. | 32,2 | 7.                     | 8.  | 18,2 B |
| .                  | . | α Serpentis | 234.                      | 56. | 35,2 | 5.                     | 9.  | 36,7 B |
| 23 Augus <i>ti</i> | . | α Orionis   | 85.                       | 47. | 31,3 | 7.                     | 20. | 59,1 B |
| 1 Septembris       | . | ♂ Aquilae   | 288.                      | 34. | 58,5 | 2.                     | 41. | 20,8 B |
| .                  | . | ♂ Antinoi   | 289.                      | 58. | 15,8 | 1.                     | 27. | 45,2 A |

Hinc sequentes determinationes pro loco Mercurii deducuntur.

| 1778. | Temp.<br>ver.     |    |     | Temp.<br>med. |    |     | Ascens. recta<br>Mercurii cor-<br>recta a refr.<br>& parallaxi |      |     | Declin. Mer-<br>curii correpta<br>a refr.<br>& parallaxi |    |     |     |
|-------|-------------------|----|-----|---------------|----|-----|--|------|-----|--|----|-----|-----|
|       | D <sup>i</sup> as | H. | M.  | S.            | H. | M.  | S.   | G.   | M.  | S.   | G. | M.  | S.  |
| Aug.  | 19                | 2. | 32. | 23            | 2. | 35. | 36   | 169. | 21. | 25   | 4. | 27. | 8 B |
|       | 20                | 2. | 33. | 4             | 2. | 36. | 3  | 170. | 40. | 12   | 3. | 54. | 49  |
|       | 21                | 2. | 30. | 50            | 2. | 33. | 34   | 171. | 57. | 22   | 3. | 12. | 46  |
|       | 22                | 2. | 31. | 51            | 2. | 34. | 20   | 173. | 13. | 1  | 2. | 31. | 46  |
|       | 23                | 1. | 27. | 48            | 1. | 30. | 4  | 174. | 24. | 0  | 1. | 51. | 38  |

| 1778. |    |    | Temp.<br>ver. |    |    | Temp.<br>med. |    |      | Ascens. recta<br>Mercurii cor-<br>recta a refr.<br>& parallaxi |    |    | Declin. Mer-<br>curii correc-<br>ta a refr.<br>& parallaxi |    |    |    |
|-------|----|----|---------------|----|----|---------------|----|------|--|----|----|--|----|----|----|
| Dies  | H. | M. | S.            | H. | M. | S.            | G. | M.   | S.   | G. | M. | S.   | G. | M. | S. |
| Aug.  | 24 | 2. | 55.           | 54 | 2. | 57.           | 53 | 175. | 41.  | 33 | 1. | 8.   | 44 |    |    |
|       | 25 | 1. | 30.           | 3  | 1. | 31.           | 47 | 176. | 48.  | 11 | 0. | 30.  | 19 | B  |    |
|       | 26 | 1. | 31.           | 1  | 1. | 32.           | 29 | 177. | 57.  | 53 | 0. | 9.   | 36 | A  |    |
|       | 27 | 1. | 31.           | 53 | 1. | 33.           | 4  | 179. | 5.   | 47 | 0. | 49.  | 10 |    |    |
|       | 28 | 1. | 32.           | 40 | 1. | 33.           | 34 | 180. | 12.  | 28 | 1. | 27.  | 28 |    |    |
|       | 29 | 1. | 33.           | 20 | 1. | 33.           | 56 | 181. | 17.  | 25 | 2. | 5.   | 34 |    |    |
| Sept. | 30 | 1. | 34.           | 2  | 1. | 34.           | 20 | 182. | 22.  | 36 | 2. | 42.  | 50 |    |    |
|       | 1  | 1. | 34.           | 46 | 1. | 34.           | 30 | 184. | 23.  | 40 | 3. | 54.  | 55 |    |    |
|       | 2  | 1. | 35.           | 1  | 1. | 34.           | 25 | 185. | 21.  | 16 | 4. | 59.  | 46 |    |    |
|       | 3  | 1. | 35.           | 8  | 1. | 34.           | 14 | 186. | 16.  | 24 | 5. | 3.   | 40 |    |    |
|       | 4  | 1. | 35.           | 8  | 1. | 33.           | 54 | 187. | 10.  | 37 | 5. | 36.  | 17 |    |    |
|       | 5  | 1. | 34.           | 59 | 1. | 33.           | 25 | 188. | 3.   | 24 | 6. | 7.   | 49 |    |    |
|       | 8  | 1. | 33.           | 36 | 1. | 31.           | 2  | 190. | 25.  | 0  | 7. | 34.  | 55 |    |    |
|       | 9  | 1. | 31.           | 47 | 1. | 28.           | 53 | 190. | 51.  | 48 | 8. | 1.   | 14 |    |    |

Ex quibus determinationibus sequentes comparationes institui pro temporibus supra indicatis.

| 1778. | Longitudo<br>geocen. vera<br>Mercurii ex<br>tabul. Hally |     |     | Longitudo<br>vera Observ. |    |     | Diff. | Latitudo<br>geocentrica<br>vera ex tab<br>Hally |     |    | Latitudo<br>vera<br>Observ. |    |    | Diff.<br>Latit. |     |    |   |     |
|-------|--|-----|-----|---------------------------|----|-----|-------|---|-----|----|-----------------------------|----|----|-----------------|-----|----|---|-----|
|       | S.   | G.  | M.  | S.                        | G. | M.  |       | S.  | G.  | M. | S.                          | G. | M. |                 |     |    |   |     |
| Aug.  | S.   | G.  | M.  | S.                        | G. | M.  | S.    | S.  | G.  | M. | S.                          | G. | M. | S.              |     |    |   |     |
| 19    | 5.   | 18. | 24. | 34                        | 5. | 18. | 25.   | 33  | -59 | 0. | 3.                          | 5  | B  | 0.              | 1.  | 54 | B | +71 |
| 20    | 5.   | 19. | 53. | 32                        | 5. | 19. | 54.   | 11  | -39 | 0. | 5.                          | 8  | A  | 0.              | 6.  | 16 | A | -68 |
| 21    | 5.   | 21. | 20. | 49                        | 5. | 21. | 21.   | 34  | -45 | 0. | 13.                         | 28 |    | 0.              | 14. | 36 |   | -68 |
| 22    | 5.   | 22. | 46. | 11                        | 5. | 22. | 47.   | 10  | -59 | 0. | 21.                         | 59 |    | 0.              | 22. | 26 |   | -27 |
| 23    | 5.   | 24. | 7.  | 29                        | 5. | 24. | 8.    | 11  | -42 | 0. | 30.                         | 7  |    | 0.              | 31. | 10 |   | -63 |
| 24    | 5.   | 25. | 35. | 23                        | 5. | 25. | 36.   | 22  | -54 | 0. | 39.                         | 30 |    | 0.              | 39. | 49 |   | -19 |
| 25    | 5.   | 26. | 51. | 55                        | 5. | 26. | 52.   | 39  | -44 | 0. | 47.                         | 35 |    | 0.              | 48. | 35 |   | -60 |
| 26    | 5.   | 28. | 11. | 49                        | 5. | 28. | 12.   | 31  | -46 | 0. | 56.                         | 25 |    | 0.              | 57. | 30 |   | -65 |
| 27    | 5.   | 29. | 29. | 53                        | 5. | 29. | 30.   | 40  | -56 | 1. | 5.                          | 19 |    | 1.              | 6.  | 30 |   | -71 |
| 28    | 6.   | 0.  | 46. | 23                        | 6. | 0.  | 47.   | 8   | -45 | 1. | 14.                         | 16 |    | 1.              | 15. | 19 |   | -63 |
| 29    | 6.   | 2.  | 1.  | 10                        | 6. | 2.  | 1.    | 48  | -38 | 1. | 23.                         | 14 |    | 1.              | 24. | 23 |   | -69 |

modo, si eruatur medius ex erroribus inventis tabularum, fiet ille in longitudine = — 48'', & in latitudine = — 59''. Pro latitudine vero, relictis duobus diebus 22 & 24 nimis ab aliis discrepantibus, fiet medius error = — 1'. 4''. Itaque dia 26 Augulti error tabularum est rite ex observatione elicitus, videlicet in longitudine = — 46'', & in latitudine = — 1'. 5''. Pro eadem die inveni ex tabulis Mercurii a D. *De la Lande* editis differentiam in observata longitudine = + 46'', & in latitudine = + 3''.

Differentia aliqua errorum ceteris diebus necessario ortum ducet a diversis fixis, ex quibus loca Mercurii derivata sunt, cum illarum positiones non absolutissima exactitudine ad ultimum usque scrupulum secundum accuratae esse possint. Praeterea ad determinandam longitudinem Mercurii, quae circa sex signa versabatur, in usum veniebant arcus proxime = 90°, in quibus sinus tam parum inter se differunt, ut levis error 4 decies millesimarum in eorum logarithmis, errorem 10 secundorum producat in longitudine; quem quidem, ut potui, vitavi per methodos satis cognitas, quae pro hisce casibus communi triangulorum resolutioni substitui solent.

Mercurius fuit in elongatione maxima a Sole die 6. Septembris 5<sup>h</sup>. 31'' temp. ver., quo tempore elongatio erat ex Observationibus = 27°. 3'. 44''.

Praecedentes observationes aliquantum fusius exposui, ut ordo, quem in iis suppurandis secutus sum, facile constaret, quae adhuc remanent exponendae, brevius persequar.

## *Observationes Mercurii Sectore aequatoreali.*

|               | <i>Meridies<br/>versus temp.<br/>penduli</i> | <i>Transitus<br/>Merc. temp.<br/>penduli</i> | <i>Transitus<br/>unius fixae<br/>1 b Aquar.</i> | <i>Transitus<br/>alter. fixae<br/>4 b Aquar.</i> |
|---------------|--|--|---|--|
| <i>Dies</i>   | <i>H. M. S.</i>                              | <i>H. M. S.</i>                              | <i>H. M. S.</i>                                 | <i>H. M. S.</i>                                  |
| 1778. Dec. 25 | 0. 14. 36                                    | 2. 37. 6.8                                   | .....   | .....  |
| 26            | 0. 15. 14                                    | 2. 39. 3.4                                   | 6. 5. 56.2                                      | 6. 16. 16.1                                      |
| 27            | 0. 15. 53                                    | 2. 40. 36.4                                  | 6. 2. 8.4                                       | 6. 12. 28.4                                      |
| 28            | 0. 16. 29                                    | 2. 41. 50.3                                  | 5. 58. 19.2                                     | 6. 8. 39.0                                       |
|               |  |  |   |  |
| 30            | 0. 17. 46                                    | 2. 44. 19.1                                  | .....   | .....  |
| 31            | 0. 18. 19                                    | 2. 43. 19.7                                  | 5. 46. 53.6                                     | 5. 57. 13.3                                      |
| 1779. Jan. 1  | 0. 18. 52                                    | 2. 42. 26.4                                  | 5. 42. 46.9                                     | 5. 53. 6.6                                       |
| 4             | 0. 20. 28                                    | 2. 37. 50.8                                  | 5. 31. 14.0                                     | 5. 31. 33.8                                      |

|               | Differ.<br>clin. inter-<br>Merc. &<br>primam<br>fixam | Differ.<br>clin. inter-<br>Merc. &<br>secundam<br>fixam | Angu-<br>lus | Tempore<br>Observ. Mer-<br>curii | Tempore<br>Observat.<br>fixarum |        |        |       |
|---------------|---|---|--------------|----------------------------------|---------------------------------|--------|--------|-------|
| Dies          | G. M. S.  | G. M. S.  | G. M.        | Barom.                           | Ther.                           | Barom. | Ther.  |       |
| 1778. Dec. 25 | 2. 4. 19,0  | 1. 14. 35,5   | 15. 26       | 27 p.l.                          | + 13,0                          | + 3    | + 14,0 | + 2,5 |
| 26            | 1. 44. 14,0   | 0 54. 30,5  | 15. 26       | 15,5                             | + 3                             |        | 16,0   | + 2,5 |
| 27            | 1. 23. 19,0   | 0. 33. 35,5   | 15. 26       | 14,0                             | + 2                             |        | 14,0   | + 2,0 |
| 28            | 1. I. 8,0   | 0 11. 35 0  | 15. 26       | 11,0                             | + 2                             |        | 10,0   | + 1,5 |
|               | <i>Merc. ad<br/>Bor.</i>                              |   |              |                                  |                                 |        |        |       |
| 30            | 0 15. 26,0  | 0. 34. 17,0   | 15. 26       | 5,2                              | + 3                             | 5,5    | + 2,5  |       |
|               | <i>Merc. ad<br/>Bor.</i>                              |   |              |                                  |                                 |        |        |       |
| 31            | 0 7. 50,0   | 0. 57. 33,0   | 15. 26       | 6,0                              | + 2                             | 6,0    | + 2,0  |       |
| 1779. Jan.    | 10. 31. 1,0   | 1. 20. 56,0   | 15. 2        | 1,5                              | + 1,5                           | 2,0    | + 2,0  |       |
|               | 41. 38. 3,0   | 2. 27. 56   | 15. 24       | 13,0                             | + 0,5                           | 13,0   | + 0,0  |       |

Die 25. Decembris transitum fixarum observare non potui ob nubilum coelum, sed, cum instrumentum im-

mobile remanserit a die 25. ad 31. Decembris, ex transitu illarum die 26 ascensio recta Mercurii erui potest. Praeterea eadem die 25 Decembris observavi Quadrante murali transitum Mercurii  $1^h 35' 31'',4$  temp. penduli transitum  $\alpha$  Aquarii  $4^h 38.4,4$   
 transitum  $\delta$  Aquarii  $4^h 39.54,0$   
& differentiam declinationis apparentem inter Mercurium &  $\alpha$  Aquarii  $= 14^\circ 37' 9''$ , & eamdem differentiam inter Mercurium &  $\delta$  Aquarii  $= 6^\circ 23' 19''$  Mercurio existente ad Austrum; tempore observationis Mercurii barom.  $28^\circ 2^1,0$ , thermometrum  $+ 3,0$ , tempore observationis fixarum barom.  $28^\circ 2^1,5$ , therm.  $+ 3,0$ .

Positiones fixarum  $1^h b$  &  $4^h b$  Aquarii inveniuntur in catalogo Flamsteediano, & nullatenus in aliquo ex recentioribus, illas vero determinatas ex meis observationibus quadrante murali institutis inferius tradam. Sin autem quis optat Mercurium cum Sole quoque comparare, observationes Solis sequentes iisdem diebus ac praecedentes, eodemque instrumento immobili permanente institutas consulere poterit.



*Observationes Solis Sectore aequatoreali.*

|               | Transitus<br>centri Solis<br>temp. penduli |    |     | Differ. decl.<br>apparens inter<br>Mercur. & Solis<br>limb. superior.<br>Mercur. ad Bor. | Temp. Observ.<br>Solis |     |      |        |       |
|---------------|--|----|-----|--|------------------------|-----|------|--------|-------|
|               | Dies                                       | H. | M.  | S.   | G.                     | M.  | S.   | Barom. | Tberm |
| 1778. Decemb. | 27   | 1. | 17. | 34,6   | 0.                     | 32. | 11,0 | + 14,5 | + 2,0 |
|               | 28   | 1. | 18. | 10,5   | 0.                     | 41. | 11,5 | 11,5   | 2,0   |
|               | 29   | 1. | 18. | 48,7   | .                      | .   | .    | 5,0    | 1,5   |
|               | 31   | 1. | 19. | 59,3   | 1.                     | 38. | 27,7 | 5,5    | 2,0   |
| 1779. Januar. | 1  | 1. | 20. | 16,5   | 1.                     | 57. | 10,0 | 1,5    | 1,5   |
|               | 4  | 1. | 21. | 54,7   | 2.                     | 46. | 52,0 | 13,0   | 0,0   |

Pro elongatione occidentali Mercurii mense Februarii  
an. 1779. tantum tres sequentes institui observationes Se-  
ctore aequatoreali.

|             | Meridies<br>versus temp.<br>penduli |    |     | Transitus<br>Mercurii<br>temp. pend. | Transitus<br>centri Solis |     |      |     |     |      |
|-------------|-------------------------------------|----|-----|--------------------------------------|---------------------------|-----|------|-----|-----|------|
|             | Dies                                | H. | M.  | S.                                   | H.                        | M.  | S.   | H.  | M.  |      |
| 1779. Febr. | 6                                   | 0. | 32. | 59                                   | 21.                       | 33. | 21,4 | 23. | 19. | 59,6 |
|             | 7                                   | 0. | 33. | 10                                   | 21.                       | 33. | 40,2 | 23. | 19. | 43,3 |
|             | 8                                   | 0. | 33. | 21                                   | 21.                       | 34. | 35,5 | 17. | 42. | 6,8  |

|             | Diff. appar.<br>decl. inter<br>Mercur. &<br>limb. super<br>Mer. ad Austr. | Temp. Observ.<br>Mercurii |     | Temp. Observ.<br>Solis |          | Angulus<br>Horarius<br>ad<br>Orien-<br>tem |          |        |
|-------------|---|---------------------------|-----|------------------------|----------|--|----------|--------|
|             |   | G.                        | M.  | S.                     | Barom.   | Tberm.                                     | G.       | M.     |
| 1779. Febr. | 6   | 5.                        | 50. | 20                     | 27 p. l. | —  | 27 p. l. | —      |
|             | 7   | 6.                        | 9.  | 29                     | + 11,0   | + 0,5                                      | + 11,5   | + 0,5  |
|             |   | € Scorpis                 |     | 10,0                   | 1,5      | 10,0                                       | 8,0      | 18. 25 |
|             | 8   | 1.                        | 39. | 47                     | 13,0     | 4,0  | 12,3     | 3,0    |

*Observationes Mercurii circa ejus maximam digressionem  
orientalem a Sole mens. Aug. & Septemb. an. 1779.*

Sectore Aequatoreali.

|            | Meridies<br>versus temp.<br>penduli |   |  | Transitus<br>Merc. temp.<br>penduli     |                                     |        | Transitus<br>unius fixae |        |     | Transitus<br>alter. fixae |                                 |      |                  |
|------------|-------------------------------------|---|--|---|-------------------------------------|--------|--------------------------|--------|-----|---------------------------|---------------------------------|------|------------------|
|            | Dies                                | H.  | M.   | S.                                      | H.                                  | M.     | S.                       | H.     | M.  | S.                        | H.                              | M.   | S.               |
| 1779. Aug. | 12                                  | 0.  | 55.  | 49                                      | 3.                                  | 47.    | 48,7                     | 8.     | 13. | 25,0                      | 8.                              | 19.  | 48,4             |
|            | 13                                  | 0.  | 55.  | 48                                      | 3.                                  | 48.    | 12,3                     | ..     | ..  | ..                        | ..                              | ..   | ..               |
|            | 14                                  | 0.  | 55.  | 47                                      | ..                                  | ..     | ..                       | 8.     | 6.  | 49,5                      | 8.                              | 13.  | 13 $\frac{1}{2}$ |
|            | 16                                  | 0.  | 55.  | 43                                      | 4.                                  | 24.    | 29,9                     | 9.     | 2.  | 22,7                      | 9.                              | 6.   | 13,9             |
|            | 27                                  | 0.  | 54.  | 52                                      | 1.                                  | 30.    | 4,8                      | 7.     | 46. | 11,6                      | ..                              | ..   | ..               |
|            | 30                                  | 0.  | 54.  | 23                                      | 1.                                  | 41.    | 25,8                     | 7.     | 54. | 53,1                      | ..                              | ..   | ..               |
| Septemb.   | 1                                   | 0.  | 54.  | 2                                       | 1.                                  | 7.     | 11,2                     | 7.     | 19. | 22,0                      | 9.                              | 9.   | 5,4              |
|            |                                     | Differ. de-<br>clin. app.<br>inter Mer.<br>Et primam<br>fixam<br>Merc. ad<br>Austr. | Differ. de-<br>clin. app.<br>inter Mer.<br>Et alteram<br>fixam<br>Merc. ad<br>Austr. | Angu-<br>lus<br>Hora-<br>rius<br>ad Oc. | Tempore<br>Obseru.<br>Mer-<br>curii |        |                          |        |     |                           | Tempore<br>Obseruat.<br>fixarum |      |                  |
|            | Dies                                | G. M. S.  | G. M. S.   | G. M.                                   | Barom.                              | Therm. | Barom.                   | Tber.  |     |                           |                                 |      |                  |
|            |                                     |   |  |   | 27p.l.                              |        |                          | 27p.l. |     |                           |                                 |      |                  |
| 1779. Aug. | 12                                  | 2. 27. 33,7   | 0. 28. 54,0  | 18 18                                   | + 8,0                               | + 21,0 | + 8,0                    | + 19,0 |     |                           |                                 |      |                  |
|            | 13                                  | 3. 4. 49,0  | 1. 6. 10,7   | 18. 31                                  | 8,5                                 | + 19,0 | ..                       | ..     |     |                           |                                 |      |                  |
|            | 14                                  | ..  | ..   | 18. 31                                  | ..                                  | ..     | ..                       | ..     |     |                           | 8,0                             | + 18 |                  |
|            |                                     | Merc. ad<br>Bor.  | Merc. ad<br>Bor.   |   |                                     |        |                          |        |     |                           |                                 |      |                  |
|            | 16                                  | 5. 21. 32,2   | 6. 23. 8,3   | 27. 4<br>ad O-<br>rien.                 | 9,0                                 | + 20,0 | 11,0                     | + 20,5 |     |                           |                                 |      |                  |
|            | 27                                  | 0. 4. 25,0  | ..   | 12. 31                                  | 10,0                                | + 18,0 | 10,5                     | + 18,0 |     |                           |                                 |      |                  |
|            |                                     | Merc. ad<br>Austr.  |  |   |                                     |        |                          |        |     |                           |                                 |      |                  |
|            | 30                                  | 0. 43. 50,4   | ..   | 8. 32                                   | 10,5                                | + 17,5 | 10,0                     | + 17,0 |     |                           |                                 |      |                  |
|            |                                     | Merc. ad<br>Austr.  |  |   |                                     |        |                          |        |     |                           |                                 |      |                  |
| Septemb.   | 1                                   | 1. 2. 43,6  | 2. 31. 23,4  | 15. 33                                  | 10,5                                | + 17,5 | 10,3                     | + 17,7 |     |                           |                                 |      |                  |

*Quadrante Murali.*

|               | <i>Meridies<br/>verus<br/>temp.<br/>penduli</i> | <i>Transitus<br/>Mercurii<br/>temp.<br/>penduli</i> | <i>Transitus<br/>unius fixae<br/>ε Opbiuci</i> | <i>Transitus<br/>alterius<br/>fixae<br/>γ Ophiuci</i> |
|---------------|---|---|--|---|
| <i>Dies</i>   | <i>H. M. S.</i>                                 | <i>H. M. S.</i>                                     | <i>H. M. S.</i>                                | <i>H. M. S.</i>                                       |
| 1779. Aug. 14 | II. 45. 47                                      | I. 25. 28,5   | 7. 41. 49,7                                    | 7. 46. 4,2  |
| 15            | II. 45. 31                                      | I. 25. 21,8   | 7. 37. 48,2                                    | 7. 42. 2,7  |
| 16            | II. 45. 14                                      | I. 25. 41,3   | 7. 33. 44,8                                    | 7. 37. 59,4   |
| 17            | II. 44. 47                                      | I. 24. 29,3   | 19. 8 15,7                                     | 19. 24. 30,5  |
|               |   |   | ζ Serpentis                                    | η Serpentis   |
| 27            | II. 40. 27                                      | I. 9. 29,3  | 7. 4. 38,7                                     | 7. 25. 39,0   |
|               |   |   | δ Orionis                                      | ξ Orionis   |
| 28            | II. 40. 4                                       | I. 6. 51,9  | 18. 50. 35,6                                   | 18. 39. 27,4  |
|               |   |   | ζ Serpentis                                    | η Serpentis   |
| 29            | II. 39. 42                                      | I. 3. 57,6  | 6. 56. 26,8                                    | 7. 17. 37,5   |
| 30            | II. 39. 19                                      | I. 0. 46,0  | 6. 52. 36,3                                    | ..... .   |
| 31            | II. 38. 56                                      | O. 57. 15,8   | ..... .  | 7. 9. 35,4  |
| Septemb.      | II. 38. 32                                      | O. 53. 26,0   | 6. 44. 33,5                                    | 7. 5. 34,3  |
| 1             | II. 38. 32                                      | O. 49. 0,7  | 6. 40. 31,8                                    | ζ Orionis   |
| 2             | II. 38. 8                                       | O. 49. 0,7  | 6. 40. 31,8                                    | 18. 19. 21,2  |

|               | <i>Differ. ap-<br/>par. decl.</i>      | <i>Differ. ap-<br/>par. decl.</i>       | <i>Tempore Observ.<br/>Mercurii</i> | <i>Tempore Observ.<br/>fixarum</i> |
|---------------|--|---|-------------------------------------|------------------------------------|
|               | <i>Mer inter<br/>Sprimam<br/>fixam</i> | <i>Mer inter<br/>Secundam<br/>fixam</i> |                                     |                                    |
|               | <i>Merc. ad<br/>Austrum</i>            | <i>Merc. ad<br/>Bor.</i>                |                                     |                                    |
| <i>Dies</i>   | <i>G. M. S.</i>                        | <i>G. M. S.</i>                         | <i>Barom.</i>                       | <i>Therm.</i>                      |
| 1779. Aug. 14 | I. 11. 43                              | O. 40. 25                               | + 27 p. l.                          | + 9,0 + 17,0                       |
| 15            | I. 47. 36                              | O. 4. 32                                | 9,5                                 | 19,0                               |
|               |  | <i>Merc. ad<br/>Austr.</i>              |                                     |                                    |
| 16            | 2. 22. 44                              | O. 30. 36                               | 10,0                                | 20,0                               |
|               |  | <i>Merc. ad<br/>Bor.</i>                |                                     |                                    |
| 17            | 4. 24. 38                              | 3. 47. 57                               | 10,3                                | 20,5                               |
|               |  |   | 10,5                                | 20,0                               |

|            | Differ. up-<br>par. decl. | Differ ap-<br>par. decl.             | Tempore Observ.<br>Mercurii | Tempore Observ.<br>fixarum |
|------------|---------------------------|--------------------------------------|-----------------------------|----------------------------|
|            | Merc. inter<br>§ primam   | Merc. inter<br>§ secun-<br>dum fixum |                             |                            |
|            | Merc. ad<br>Boream        | Merc. ad<br>Boream                   |                             |                            |
|            | Dies G. M. S.             | G. M. S.                             | Barom.                      | Therm.                     |
|            |                           |                                      | 27 p. l.                    |                            |
| 1779. Aug. | 27. 0. 47. 0. 3. 50       | + 11,0                               | + 17,5                      | 27 p. l.                   |
|            | Merc. ad Austr.           | Merc. ad Austr.                      |                             | + 18,0                     |
|            | 28. 2. 41. 59. 1. 6. 24   | 12,3                                 | 18,0                        | 12,0                       |
|            | Merc. ad Bor.             |                                      |                             | 16,0                       |
|            | 29. 0. 12. 45. 0. 30. 25  | 12,0                                 | 17,5                        | 11,5                       |
|            | Merc. ad Austr.           |                                      |                             | 17,5                       |
|            | 30. 0. 0. 45. . . . .     | 11,0                                 | 17,5                        | 10,3                       |
| Septemb.   | 31. . . . 0. 54. 54       | 11,0                                 | 17,0                        | 11,0                       |
|            | 10. 19. 44. 1. 2. 51      | 11,3                                 | 17,3                        | 11,5                       |
|            | 20. 24. 37. 1. 59. 44     | 11,5                                 | 17,0                        | 10,0                       |
|            |                           |                                      |                             | 17,0                       |

*Observationes Mercurii mense Decembris  
an. 1779.*

Sectore Aequatoreali.

|            | Meridies<br>verus temp.<br>penduli | Transitus<br>Merc. temp.<br>penduli | Transitus<br>unius fixae<br>ξ Capricorni | Transitus<br>alter. fixae<br>ε Capricorni |
|------------|------------------------------------|-------------------------------------|--|---|
| Dies       | H. M. S.                           | H. M. S.                            | H. M. S.                                 | H. M. S.                                  |
| 1779. Dec. |                                    |                                     |  |   |
| 1          | 0. 57. 19                          | 1. 58. 5,3                          | 5. 29. 52,5                              | 5. 40. 26,0                               |
| 6          | 1. 0. 1                            | 2. 19. 29,1                         | . . . . .                                | 5. 35. 29,5                               |
| 9          | 1. 1. 36                           | 3. 5. 4,8                           | 5. 47. 51,7                              | 5. 57. 29,0                               |
| 10         | 1. 2. 12                           | 3. 6. 43,8                          | 5. 43. 4,7                               | 5. 53. 40,7                               |
| 14         | 1. 4. 40                           | 3. 5. 58,4                          | 6 Corvi                                  |   |
|            |                                    |                                     | 20. 29. 39,3                             | • • • • •                                 |

|              | Differ. de clin. appa- | Differ. de clin. appa- | Augu-    | Temp. Observ. | Temp. Observ. |
|--------------|------------------------|------------------------|----------|---------------|---------------|
|              | rens inter             | rens inter             | lus Hora | Mercurii      | fixarum       |
|              | Merc.                  | Merc.                  | rius     |               |               |
|              | primam                 | secundam               | ad O     |               |               |
|              | fixam                  | fixam                  | rien.    |               |               |
|              | Merc. ad               | Merc. ad               |          |               |               |
|              | Austr.                 | Austr.                 |          |               |               |
| Dies         | G. M. S.               | G. M. S.               | G. M.    | Barom.        | Ther.         |
| 1779. Dec. 1 | 2. 23. 4.              | 18. 22. 3.             | 10.      | 27p l         | —             |
| 6.           | .. .                   | 5. 17. 54.             | 50.      | + 7.0         | + 4.5         |
|              |                        |                        | ad Oc-   | 100           | 5.0           |
|              |                        |                        | cid.     |               |               |
| 9            | 2. 5. 4.               | 5. 0. 18.              | 9. 5     | 7.0           | 3.0           |
| 10           | 1. 57. 1.              | 4. 51. 44.             | 6        | 8.0           | 3.0           |
| 11           | 2. 21. 5.              | .. . . .               | 9. 5     | 6.5           | 4.0           |
|              |                        |                        |          |               |               |
|              |                        |                        |          | Barom. 10.0   | Ther. 5.0     |
|              |                        |                        |          |               |               |

Ad faciliorem supputationem observationum praecedentium sequentes fixarum apparentes positiones inservire possunt.

| Pro die                 | Nomina fixarum                          | Ascens. recta apparen                           | Declinatio apparen                                 |                 |
|-------------------------|---|---|--|-----------------|
| 24 Decemb.<br>An. 1778. | 1 b Aquarii<br>4 b Aquarii<br>3 Aquarii | 347°49'44",6<br>350 24. 58 5<br>340. 43. 15.5   | 210 18'14",0 A                                     |                 |
| 8 Febr. 1779            | 6 Scorpii                               | 238. 8. 17.0                                    | 19. 1C. 50.4 A                                     | Ex Bradley      |
| 12 Augusti              | 7 Serpentis<br>6 Serpentis              | 233. 21. 11.4<br>234. 57. 20.7                  | 7. 7. 57.3 B<br>5. 9. 26.3 B                       | Ex de la Caille |
| 15 Augusti              | 5 Ophiuchi                              | 263. 8. 49.5                                    | 4 40. 38.0 B                                       |                 |
| 16 Augusti              | 7 Ophiuei<br>3 Ophiuchi<br>4 Ophiuchi   | 264. 12. 52.0<br>240. 42. 4.0<br>241. 40. 4.4   | 2. 43. 37.8 B<br>3. 6. 32.8 A<br>4. 8. 15.7 A      |                 |
| 28 Augusti              | 2 Orionis                               | 78. 19. 26.8                                    | 6. 7. 53.5 B                                       |                 |
| 29 Augusti              | 3 Orionis                               | 82. 24. 35.6                                    | 2. 4. 17.0 A                                       |                 |
|                         | 5 Serpentis                             | 80. 11. 3.8                                     | 0. 28. 32.0 A                                      |                 |
|                         |   | 267. 12. 42.1                                   | 3. 39. 22.6 A                                      |                 |
| 1 Septemb.              | 7 Serpentis                             | 272. 29. 2.3                                    | 2. 56. 2.6 A                                       |                 |
| 9 Decemb.               | 6 Antinoi                               | 299. 59. 0.8                                    | 1. 27. 38.2 A                                      | Ex Bradley      |
| 14 Decemb.              | 2 Capricorni<br>3 Capricorni<br>6 Corvi | 318. 30. 33.3<br>321. 10. 41.7<br>185. 42. 43.5 | 23. 20. 57.6 A<br>20. 26. 16.7 A<br>22. 10. 33.8 A | Ex de la Caille |

Positio media duarum priorum fixarum pro 1. Januarii an. 1780. ex meis observationibus derivata ita se habet.

|             | Longitudo |     |     |      |     |     | Latitudo |    |    |    |    |    |
|-------------|-----------|-----|-----|------|-----|-----|----------|----|----|----|----|----|
|             | S.        | G.  | M.  | S.   | G.  | M.  | S.       | G. | M. | S. | G. | M. |
| 1 b Aquarii | 11.       | 10. | 23. | 25.0 | 14. | 46. | 28.3     | A  |    |    |    |    |
| 4 b Aquarii | 11.       | 12. | 19. | 11.6 | 16. | 30. | 29.8     | A  |    |    |    |    |

Ex praecedentibus observationibus sequentes determinations pro loco Mercurii obtinui.

|               | Temp.<br>ver. | Temp.<br>med. | Ascensio<br>recta Merc.<br>vera ex<br>Objerv. | Declinatio<br>vera Merc.<br>ex Observ. |          |    |
|---------------|---------------|---------------|---|--|----------|----|
|               |               |               |   | G.                                     | M.       | S. |
| Dies          | H. M. S.      | H. M. S.      |   | G. M. S.                               | G. M. S. |    |
| 1778. Dec.    |               |               |   |  |          |    |
| 25            | 1. 20. 53     | 1. 21. 38     | 294. 30. 23                                   | 23. 23. 32                             | A        |    |
| 26            | 2. 23. 45     | 2. 23. 0      | 295. 53. 17                                   | 23. 2. 32                              |          |    |
| 27            | 2. 24. 39     | 2. 26. 54     | 297. 18. 32                                   | 22. 41. 32                             |          |    |
| 28            | 2. 25. 17     | 2. 27. 32     | 298. 34. 34                                   | 22. 19. 21                             |          |    |
| 30            | 2. 26. 29     | 2. 29. 42     | 301. 10. 20                                   | 21. 33. 29                             |          |    |
| 31            | 2. 24. 57     | 2. 28. 39     | 301. 53. 1                                    | 21. 10. 12                             |          |    |
| 1779. Januar. |               |               |   |  |          |    |
| 1             | 2. 23. 30     | 2. 27. 40     | 302. 37. 16                                   | 20. 46. 45                             |          |    |
| 4             | 2. 17. 19     | 2. 22. 42     | 304. 22. 3                                    | 19. 39. 47                             |          |    |
| Februa.       | 20. 59. 20    | 21. 13. 55    | 294. 17. 49                                   | 20. 50. 50                             |          |    |
| 6             | 20. 59. 27    | 21. 14. 5     | 295. 26. 22                                   | 20. 51. 10                             |          |    |
| 7             | 20. 0. 14     | 20. 14. 43    | 296. 25. 25                                   | 20. 50. 41                             |          |    |
| August.       |               |               |   |  |          |    |
| 12            | 2. 52. 0      | 2. 56. 39     | 166. 46. 37                                   | 4. 40. 37                              | B        |    |
| 13            | 2. 52. 25     | 2. 56. 54     | 167. 49. 25                                   | 4. 3. 20                               |          |    |
| 14            | 1. 39. 37     | 1. 43. 56     | 168. 47. 56                                   | 3. 29. 10                              |          |    |
| 15            | 1. 39. 47     | 1. 43. 55     | 169. 46. 40                                   | 2. 52. 16                              |          |    |
| 16            | 1. 39. 46     | 1. 43. 42     | 170. 42. 49                                   | 2. 18. 7                               |          |    |
|               |               |               |   |  |          |    |
| 27            | 1. 29. 5      | 1. 30. 19     | 178. 10. 29                                   | 2. 53. 4                               | A        |    |
| 28            | 1. 26. 50     | 1. 27. 47     | 178. 31. 36                                   | 3. 10. 37                              |          |    |
| 29            | 1. 24. 18     | 1. 24. 57     | 178. 47. 48                                   | 3. 26. 25                              |          |    |
| 30            | 1. 21. 29     | 1. 21. 51     | 178. 59. 47                                   | 3. 39. 59                              |          |    |
| 31            | 1. 18. 22     | 1. 18. 25     | 179. 7. 51                                    | 3. 50. 50                              |          |    |

|             |    | Temp.<br>vera | Temp.<br>med. | Ascensio<br>recta Merc.<br>vera ex<br>Obseru. | Declinatio<br>vera Merc.<br>ex Obseru. |
|-------------|----|---------------|---------------|---|--|
| Dies        |    | H. M. S.      | H. M. S.      | G. M. S.                                      | G. M. S.                               |
| 1779. Sept. | 1  | 1. 14. 56     | 1. 14. 41     | 179. 11. 15                                   | 3. 58. 47 A                            |
|             | 2  | 1. 10. 56     | 1. 10. 22     | 179. 5. 9                                     | 4. 5. 1                                |
| Decem.      | 1  | 1. 0. 45      | 0. 50. 18     | 265. 25. 16                                   | 25. 45. 0                              |
|             | 9  | 2. 3. 26      | 1. 56. 8      | 277. 57. 24                                   | 25. 27. 19                             |
|             | 10 | 2. 4. 29      | 1. 57. 40     | 279. 19. 2                                    | 25. 18. 46                             |
|             | 14 | 2. 1. 15      | 1. 56. 19     | 284. 5. 56                                    | 24. 31. 48                             |

Rectae ascensiones, & declinationes istae non omnes aequo jure accuratae dici possunt, cum aliquas fortasse nimia aberratione laborare expertus sim ex comparatione loci Mercurii inde deducti tum illo per tabulas computato. Verumtamen non inficior, me neque extrema attentione comparationem hanc instituisse, neque otium habuisse sufficiens investigandi per repetitam supputationem, num error hujusmodi in reductione observationum lateret, vel in calculo longitudinis & latitudinis tabularum; hanc vero negligentiam eo libentius confiteor, ut mihi culpae non tribuatur, si, ex observationibus non rudioribus organis astronomicis institutis, determinationes erroneas eliciui. Quisque enim ex praecedentibus exaratis observationibus habet quodquod necessarium est ad illas emendandas, vel rejiciendas, si omnino a veritate aberrant. Itaque sequentes tantum comparationes cum tabuis exhibeo pro temporibus supra indicatis.

|              | <i>Longit. geo-<br/>cen. Mer.<br/>ex tab.<br/>Halley</i> | <i>Longit. geo-<br/>cen. vera<br/>ex observ.</i> | <i>Difer.<br/>Longit.</i> | <i>Latitudo<br/>geocentr.<br/>ex tab.<br/>Halley</i> | <i>Latitudo<br/>geocentr.<br/>vera ex<br/>observ.</i> | <i>Dif.<br/>Latit.</i> |
|--------------|--|--|---------------------------|--|---|------------------------|
| <i>Dies</i>  | <i>S. G. M. S.</i>                                       | <i>S. G. M. S.</i>                               | <i>M. S.</i>              | <i>G. M. S.</i>                                      | <i>G. M. S.</i>                                       | <i>S.</i>              |
| <b>1778.</b> |  |  |                           |  |   |                        |
| Dec. 25      | 9. 22. 22. 14  | 9. 22. 24. 6                                     | - 1. 52                   | 1. 49. 33 A  | 1. 48. 35 A   | + 58                   |
| 26           | 9. 23. 43. 40  | 9. 23. 47. 19                                    | - 3. 39                   | 1. 41. 52  | 1. 41. 38   | + 14                   |
| 27           | 9. 25. 0. 21   | 9. 25. 3. 49                                     | - 3. 38                   | 1. 34. 24  | 1. 34. 10   | + 14                   |
| 28           | 9. 26. 13. 4   | 9. 26. 16. 57                                    | - 3. 53                   | 1. 25. 58  | 1. 25. 28   | + 30                   |
| <b>1779.</b> |  |  |                           |  |   |                        |
| Jan. 1       | 10. 0. 15. 51  | 10. 0. 16. 42                                    | - 0. 51                   | 0. 41. 50  | 0. 40. 33   | + 77                   |
| Febr. 6      | 9. 22. 34. 40  | 9. 22. 37. 35                                    | - 2. 55                   | 0. 45. 6 B   | 0. 43. 51 B   | + 75                   |
| 8            | 9. 24. 31. 21  | 9. 24. 35. 5                                     | - 3. 44                   | 0. 25. 0   | 0. 23. 41   | + 79                   |
| <b>Aug.</b>  |  |  |                           |  |   |                        |
| 14           | 5. 18. 20. 29  | 5. 18. 21. 0                                     | - 0. 31                   | 1. 13. 3 A   | 1. 13. 37 A   | - 34                   |
| 15           | 5. 19. 28. 38  | 5. 19. 29. 35                                    | - 0. 47                   | 1. 23. 3   | 1. 24. 46   | - 103                  |
| 16           | 5. 20. 34. 27  | 5. 20. 34. 22                                    | + 0. 5                    | 1. 33. 7   | 1. 34. 9  | - 62                   |
| 27           | 5. 29. 30. 13  | 5. 29. 29. 0                                     | + 1. 13                   | 3. 20. 27  | 3. 22. 24   | - 117                  |
| 28           | 5. 29. 55. 36  | 5. 29. 55. 17                                    | + 0. 19                   | 3. 28. 33  | 3. 30. 6  | - 93                   |
| <b>Sept.</b> |  |  |                           |  |   |                        |
| 29           | 6. 0. 17. 24   | 6. 0. 16. 25                                     | + 0. 59                   | 3. 37. 3   | 3. 38. 6  | - 63                   |
| 31           | 6. 0. 45. 48   | 6. 0. 44. 32                                     | + 1. 16                   | 3. 51. 33  | 3. 52. 31   | - 58                   |
| Sept. 1      | 6. 0. 51. 48   | 6. 0. 50. 48                                     | + 1.                      | 3. 57. 47  | 3. 58. 25   | - 38                   |
| Dec. 9       | 9. 7. 9. 59  | 9. 7. 11. 51                                     | - 1. 52                   | 2. 10. 57  | 2. 11. 3  | - 6                    |
| 10           | 9. 8. 24. 25   | 9. 8. 26. 5                                      | - 1. 40                   | 2. 6. 44   | 2. 6. 55  | - 11                   |

Si observationes, quae diversis anni tempestatibus institutae fuerunt, seorsim considerentur, evidenter constabit errores tabularum certum ordinem inter se servare, & propterea ex hisce comparationibus & aliis pluribus, quas ex observationibus an. 1780. & 1781. institutis eruam, & in sequentibus ephemeridibus exponam, non difficulter colligetur, quibusnam correctionibus elementa tabularum Mercurii indigeant, ut accuratius cum coelo consentiant.

## OBSERVATIO OPPOSITIONIS JOVIS CUM SOLE

Anni 1780.

PERACTA A FRANCISCO REGGIO.

**V**Ix duas observationes Jovis circa ejus oppositionem cum Sole instituere datum est ob nubilum coelum, quae instans ipsum oppositionis comprehendunt. Eae de more ad quadrantem muralem peractae, ad quem differentiae ascensionis rectae & declinationis inter planetam, & stellam a Hydræ.

Ascensio recta apparet stellæ  $4^{\circ} 19' 11'' 59'',8$

Declinatio australis apparet ..  $7^{\circ} 42' 51'' ,7$

Ascensio recta, & declinatio vera deprompta sunt ex catalogo Caillii, & ad epocham observationum reductæ. Tempus observationum est tempus verum; revolutio siderea & differentiae ascensionis rectæ exhibentur in tempore horologii.

10. Aprilis.

|                             |                            | 11. Aprilis.                |
|-----------------------------|----------------------------|-----------------------------|
| $12^{\text{h}} 4' 49''$     | Tempus ver. observ.        | $12^{\text{h}} 0' 40''$     |
| 23. 56. 5                   | Revol.° sidera .....       | 23. 56. 5                   |
| + 4. 7. 24                  | Diff.° asc. rect. 24 & a   | + 4. 6. 55                  |
| $62^{\circ} 1' 6'' ,9$      | Eadem in part. aequat.     | $61^{\circ} 53' 52''$       |
| — 28. 3. 5                  | Diff.° declinationis ..... | — 31. 1.                    |
| 6 <sup>h</sup> 21. 13. 6. 7 | Asc. recta apparet 24      | 6 <sup>h</sup> 21. 5. 51. 8 |
| 7. 14. 48. 2                | Decl.° appar. australis .. | 7. 11. 50. 7                |
| 6. 22. 18. 57.              | Longitudo apparet....      | 6. 22. 11. 12. 5            |
| 1. 35. 48. 2                | Latit. borealis apparet    | 1. 35. 46. 2                |
| 0. 21. 39. 32.              | Longitudo apparet *        | 0. 22. 38. 4. 8             |

Aequatio ex aberratione pro longitudine Jovis — 11''  
ex nutatione axis + 13'',6 : pro longitudine Solis ex aber-  
ratione + 20'', ex nutatione + 13'',6 : his aequationibus  
correcta longitudine Solis , & Planetae diei 11. Aprilis  
prodit.

Longitudo vera ~~est~~  $0^{\circ} 22' 38.38'',4$

24. 6. 22. 11. 15,1

Elongatio ad occid. .... 5. 29. 32. 36,7.

Distabat Jupiter ab oppositione , quam jam attigerat  
arcu eclipticae 27' 23'',3 emenso motu relativo Solis , &  
Planetae .

Motus Solis ab instanti observationis diei 10. Aprilis ad  
instans observationis diei 11. = 58' 32'',8 , motus Planetae  
ex tabulis supputatus = 7' 37'',4 ; quare motus relativus  
= 1° 6' 10'',2.

Arcui eclipticae motu relativo emenso respondent  $9^{\text{h}} 54' 12''$   
subducenda ab hora observationis diei 11.

Instans itaque oppositionis 11. Aprilis  $2^{\text{h}} 6' 28''$  r. u.

Longitudo Solis tempore oppositionis ..  $0^{\circ} 22' 14' 24''$ ,5

Longitudo Jovis elioc. ex observ. . . 6. 22. 14. 24,5

Longitudo supputata ex tab. Halleji . 6. 22. 22. 13,

|                                      |             |         |
|--------------------------------------|-------------|---------|
| Diff. tabularum . . . . .            | +           | 7. 48,5 |
| Latitudo geocentrica Jovis ex obser, | 1. 35. 47,0 |         |

|                                    |            |
|------------------------------------|------------|
| Latitudo ex tab. Halleji . . . . . | 1. 34. 17. |
|------------------------------------|------------|

|                           |          |
|---------------------------|----------|
| Diff. tabularum . . . . . | — 1. 30. |
|---------------------------|----------|



## OBSERVATIO OPPOSITIONIS SATURNI CUM SOLE

Anni 1780.

PERACTA A FRANCISCO REGGIO.

 Observationes ad quadrantem muralem institutae, quibus differentias ascensionis rectae, & declinationis assequebar inter centrum planetae, & stellam  $\beta$   $\text{M}_\alpha$ .

Ascensio recta stellae vera, & declinatio excerptae ex catalogo Caillii an. 1750., & ad epocham observationum reductae, dein in apparentes mutatae sunt.

Ascensio recta apparent  $\beta$   $\text{M}_\alpha$  . . .  $7^\circ 28' 11'' 31'',8$

Declinatio australis apparent . . . .  $19. 13. 22. ,6$

24. Maij.

|                             |   |                          |
|-----------------------------|---|--------------------------|
| 22 <sup>h</sup> 5' 50'',5   | Tempus ver. obseru.   | 12 <sup>h</sup> 1' 30''  |
| 23. 56. 0 ,5                | Revol. <sup>o</sup> siderea ad pend.                                | 23. 55. 59 ,7            |
| + 22. 8 ,7                  | Diff. <sup>a</sup> asc.rect. $\beta$ $\text{M}_\alpha$ & $\text{h}$ | + 21. 50 ,5              |
| $5^\circ 33' 5''$           | Eadem in part. aequat.  | $5^\circ 28' 31'',2$     |
| + 1. 50                     | Diff. <sup>a</sup> declinationis . . . .                            | + 1. 9                   |
| 8 <sup>h</sup> 3. 43. 44 ,7 | Asc. recta apparent . $\text{h}$                                    | 8 <sup>h</sup> 3. 39. 11 |
| 19. 13. 12                  | Decl. <sup>o</sup> appar. australis . .                             | 19. 12. 38               |
| 8. 5. 16. 44                | Longitudo apparent . . . .  | 8. 5. 12. 22             |
| 2. 1. 13                    | Latit. borealis apparent  | 2. 1. 6 ,3               |
| 2. 4. 15. 7                 | Longitudo <del>apparent</del> apparent                              | 2. 5. 12. 28 ,5          |



27. Maji.

|                        |  |                        |
|------------------------|--|------------------------|
| $11^h 52' 46'',5$      | Tempus ver. obseru.                      | $11^h 48' 26''$        |
| 23. 55. 59 ,2          | Revol.° siderea . . . . .                | 23. 55. 58 ,6          |
| + 21. 13 ,7            | Diff.° asc. rect. $\beta M_1$ & $\Sigma$ | + 20. 55 ,0            |
| $5^{\circ} 19' 17'',7$ | Eadem in part. aequat.                   | $5^{\circ} 14' 36'',6$ |
| + 14                   | Diff.° declinationis . . . . .           | — 51 ,0                |
| 8° 3. 29. 57 ,4        | Asc. recta apparents $\Sigma$            | 8° 3. 25. 16 ;3        |
| 19. 11. 8              | Decl.° appar. australis                  | 19. 10. 31             |
| 8. 5. 3. 32            | Longit. apparents geoc.                  | 8. 4. 59. 3 ,8         |
| 2. 0. 55 ,7            | Latit. appar. boreal. geoc.              | 2. 0. 47 ,9            |

Loco apparenti Solis, & Saturni pro instanti observationis 25. Maji in verum redacto adhibitis aequationibus pro utriusque loco ex nutatione + 13'',2, & ex aberratione pro loco Solis + 20'' pro loco Saturni — 13'' prodit longitudo vera . . . . . ☽ 2° 5° 13' 1'',7

$\Sigma$  8. 5. 12. 22 ,2

Elongatio Saturni . . . 5. 29. 59. 20 ,5

Differentia a sex signis 39'',5 ad occidentem docet planetam praeterisse punctum verae oppositionis cum Sole ante instans observationis diei 25. Maji.

Erat tum motus ☽ intra diem solarem verum 37' 32''; Planetae vero retrogradi 4' 24'', quare motus relatus 1° 1' 56''.

Quibus elementis instituto calculo, arcui 39'',5 motu relativo Solis, & Planetae ab oppositione emenso respondent 15' 16'' subducenda a tempore observationis diei 25. Maji, ut prodeat verum oppositionis instans Planetae cum Sole. Tempus itaque verum oppositionis 25. Maji 11<sup>h</sup> 46' 14''.

|                                      |         |               |
|--------------------------------------|---------|---------------|
| Pro quo instanti longitudo vera      | $\odot$ | 2° 5' 12" 25" |
| Longitudo eliocentrica               | ...     | 8. 5. 12. 25  |
| Longitudo vera ex tab. Halleij       | ...     | 8. 5. 10. 19  |
| Diff. tabularum                      | ...     | 2. 6          |
| Latitudo vera geocentrica ex observ. | 2.      | 1. 6 ,2       |
| ex tabulis Hallejanis                | ...     | 2. C. 37 ,4   |
| Diff. tabularum                      | ...     | 28 ,8         |



OBSERVATIONES VENERIS  
PROPE MAXIMAM EJUS DIGRESSIONEM A SOLE

*Anni 1780.*

PERACTAE A FRANCISCO REGGIO.

**D**ifferentiae ascensionis rectae & declinationis inter Venerem & stellam Arcturum definivi ad quadranten muralem, eaeque correctae exhibentur a differentia refractionis, quod semper praestiti. In supputandis ascensione recta & declinatione apparentibus Arcturi ad epocham observationum usus sum etiam motu peculiari ejusdem stellae tum in ascensionem rectam, tum in declinationem, quem eruerat Mayerus ex comparatione suarum observationum cum observationibus Roemeri.

Ascensio recta apparens Arcturi  $211^{\circ} 24' 48'',5$

Declinatio borealis apparens .. 20. 19. 57

Ascensio recta vera, & declinatio excerptae ex catalogo D. de la Caille. Differentiae priores glascens. rectae sunt limbi praecedentis ♀, quae dein ad centrum reducuntur.

## 26. Maij.

|                    |                             |                    |
|--------------------|-----------------------------|--------------------|
| $3^h 17' 4''$ ,7   | <i>Tempus ver. obſerv.</i>  | $3^h 17' 30''$ ,0  |
| 23. 55. 58         | Revol.° ſiderea .....       | 23. 55. 58         |
| — 6. 31. 50 ,3     | Diff.° asc. rect. L. praec. | — 6. 23. 18 ,5     |
| $98^\circ 14' 5''$ | Eadem in part. aequat.      | $96^\circ 5' 47''$ |
| 98. 13. 53         | Eadem ad centr. reducta     | 96. 5. 34          |
| + 4. 9. 44         | Diff.° declinationis ....   | + 3. 47. 43        |
| 113. 19. 56        | Ascens. recta apparens ♀    | 115. 19. 14        |
| 24. 29. 41         | Decl.° borealis apparens    | 24. 7. 40          |
| 3° 21. 0. 56       | Longit. apparens geoc.      | 3° 23. 0. 1        |
| 4. 42. 20          | Latit. bor. appar. geoc.    | 2. 39. 41          |
| 2. 5. 49. 3        | Longit. Solis apparens      | 2. 7. 44. 5        |
| 1. 15. 11. 46      | Elong.° vera ad orient.     | 1. 15. 15. 50      |



## 30. Maij.

|                   |                             |                    |
|-------------------|-----------------------------|--------------------|
| $3^h 17' 43''$ ,0 | <i>Tempus ver. obſerv.</i>  | $3^h 17' 46''$ ,0  |
| 23. 55. 58        | Revol.° ſiderea .....       | 23. 55. 58 ,3      |
| — 6. 14. 37       | Diff.° asc. rect. L. praec. | — 6. 10. 50        |
| $94^\circ 0' 3''$ | Eadem in part. aequat.      | $92^\circ 58' 7''$ |
| 93. 59. 50        | Eadem ad centr. reducta     | 92. 57. 55         |
| + 3. 23. 35       | Diff.° declinationis ....   | + 3. 11. 2         |
| 117. 24. 58       | Ascens. recta apparens ♀    | 118. 26. 34        |
| 23. 43. 32        | Decl.° borealis apparens    | 23. 30. 59         |
| 3° 24. 17. 32     | Longit. apparens geoc.      | 3° 25. 55. 41      |
| 2. 36. 16         | Latit. bor. appar. geoc.    | 2. 34. 27          |
| 2. 9. 39. 4       | Longit. Solis apparens      | 2. 10. 36. 36      |
| 1. 15. 18. 22     | Elong.° vera ad orient.     | 1. 15. 19. 2       |

| 1. Junii.                |   | 2. Junii.                |  |
|--------------------------|---|--------------------------|--|
| 3 <sup>h</sup> 17' 46",0 | <i>Tempus ver. observ.</i>              | 3 <sup>h</sup> 17' 41",0 |  |
| 23. 55. 58 ,3            | Revol. <sup>o</sup> siderea .....       | 23. 55. 58 ,3            |  |
| — 5. 6. 46               | Diff. <sup>a</sup> asc. rect. L. praec. | — 6. 2. 45               |  |
| 91° 56' 57"              | Eadem in part. aequat.                  | 90° 56' 32"              |  |
| 91. 56. 44               | Eadem ad centr. reducta                 | 90. 16. 20               |  |
| + 2. 57. 56              | Diff. <sup>a</sup> declinationis ....   | + 2. 44. 23              |  |
| 119. 28. 4               | Ascens. recta apparent $\varphi$        | 120. 28. 29              |  |
| 23. 17. 53               | Decl. <sup>o</sup> borealis apparent    | 23. 4. 20                |  |
| 3° 26. 53. 23            | Longit. apparent geoc.                  | 3° 27. 50. 33            |  |
| — 2. 32. 22              | Latit. bor. appar. geoc.                | 2. 30. 7                 |  |
| 2. 11. 34. 0             | Longit. Solis apparent                  | 3. 12. 31. 25            |  |
| 1. 15. 19. 17            | Elong. <sup>o</sup> vera ad orient.     | 1. 15. 19 ,2             |  |



| 3. Junii.                |   | 4. Junii.                |  |
|--------------------------|---|--------------------------|--|
| 3 <sup>h</sup> 17' 34",0 | <i>Tempus ver. observ.</i>              | 3 <sup>h</sup> 17' 21",0 |  |
| 23. 55. 58 ,3            | Revol. <sup>o</sup> siderea .....       | 23. 55. 58 ,3            |  |
| — 5. 58. 47              | Diff. <sup>a</sup> asc. rect. L. praec. | — 5. 54. 53              |  |
| 89° 57' 3"               | Eadem in part. aequat.                  | 88° 58' 1"               |  |
| 89. 56. 50               | Eadem ad centr. reducta                 | 88. 57. 59               |  |
| + 2. 30. 22              | Diff. <sup>a</sup> declinationis ....   | + 2. 15. 48              |  |
| 121. 27. 59              | Ascens. recta apparent $\varphi$        | 122. 26. 50              |  |
| 22. 50. 19               | Decl. <sup>o</sup> borealis apparent    | 22. 35. 45               |  |
| 3° 28. 47. 7             | Longit. apparent geoc.                  | 3° 29. 43. 15            |  |
| — 2. 27. 41              | Latit. bor. appar. geoc.                | — 2. 25. 2               |  |
| 2. 13. 28. 50            | Longit. Solis apparent                  | 2. 14. 26. 15            |  |
| 1. 15. 18. 11            | Elong. <sup>o</sup> vera ad orient.     | 1. 15. 16. 36            |  |

Correctis ex aberratione luminis + 20'', & ex nutatione axis telluris + 10'',5 loco apparenti Solis, & ex aberratione + 14'', ex nutatione + 10'',5 loco apparenti Veneris prodierunt elongationes Veneris, quas superius retuli. His deinceps interpolatis, inveni pro casu maximi elongationem maximam Veneris incidisse in diem 1. Jun. 3<sup>h</sup> 12', pro quo instanti fuit vera maxima elongatio 45° 19' 18'' vix major observata eadem die.

Elongationes & latitudines aliquot ex expositis contulic cum supputatis pro iisdem instantibus ex tabulis Clariss. de la Lande, quae positiones inferiorum planetarum solent accuratius exhibere, quam Hallejanae tabulae.

|          | Elongat.<br>obserw. |     | Elongat.<br>Supput. |     | Diff.<br>tab. | Latit.<br>obserw. | Latit.<br>Supput. | Diff.<br>tab. |           |      |
|----------|---------------------|-----|---------------------|-----|---------------|-------------------|-------------------|---------------|-----------|------|
|          | G.                  | M.  | S.                  | G.  | M.            | S.                | G.                | M.            |           |      |
| 30. Maj  | 45.                 | 18. | 22                  | 45. | 18.           | 8                 | - 14              | 2. 36. 16     | 2. 36. 33 | + 17 |
| 31. .... | 45.                 | 19. | 2                   | 45. | 18.           | 44                | - 18              | 2. 34. 27     | 2. 34. 40 | + 13 |
| 1. Jun.  | 45.                 | 19. | 17                  | 45. | 19.           | 0                 | - 17              | 2. 32. 22     | 2. 32. 34 | + 12 |
| 2. ....  | 45.                 | 19. | 2                   | 45. | 18.           | 48                | - 14              | 2. 30. 7      | 2. 30. 17 | + 10 |
| 3. ....  | 45.                 | 18. | 18                  | 45. | 17.           | 59                | - 19              | 2. 27. 41     | 2. 27. 52 | + 11 |



### OBSERVATIO OPPPOSITIONIS SATURNI CUM SOLE

Anni 1781.

PERACTA A FRANCISCO REGGIO.

A D quadrantem muralem observavi differentias ascensionis rectae, & declinationis inter centrum Saturni, & stellam δ Scorpii, cuius ascensio recta apparet ex catalogo

Caillii ad epocham observationum supputata 7° 26' 51" 50",6  
 Declinatio apparet australis . . . . . 21. 39. 10 ,4  
 Observations, earumque conclusiones exponam.



3. Junii.

|                           |   |                           |
|---------------------------|---|---------------------------|
| 12 <sup>h</sup> 14' 35",8 | <i>Tempus ver. obseru.</i>                                    | 12 <sup>h</sup> 10' 11",7 |
| 23. 56. 1                 | Revolutio siderea . . . . .                                   | 23. 56. 0                 |
| + 1. 15. 47 ,2            | Diff. <sup>a</sup> asc. rect. $\bar{h}$ & $\delta \text{m}_L$ | + 1. 15. 28 ,5            |
| 18° 59' 57",7             | Eadem in part. aequat.  | 18° 55. 17                |
| — 0. 45. 59 ,8            | Diff. <sup>a</sup> declinationis . . . . .                    | — 46. 22 ,2               |
| 8° 15. 51. 48 ,3          | Asc. recta apparet $\bar{h}$                                  | 8° 15. 47. 7 ,6           |
| 21. 13. 10 ,6             | Decl. <sup>o</sup> appar. australis ..                        | 21. 12. 48 ,2             |
| . . . . .                 | Longit. apparet geoc.   | 8. 16. 45. 41 ,5          |
| . . . . .                 | Latit. appar. bor. geoc.                                      | 1. 36. 18 ,7              |

4. Junii.

5. Junii.

|                          |   |                          |
|--------------------------|---|--------------------------|
| 12 <sup>h</sup> 5' 46",0 | <i>Tempus ver. obseru.</i>                                    | 12 <sup>h</sup> 1' 21",0 |
| 23. 56. 0                | Revol. <sup>o</sup> siderea . . . . .                         | 23. 56. 0 ,5             |
| + 1. 15. 10 ,0           | Diff. <sup>a</sup> asc. rect. $\bar{h}$ & $\delta \text{m}_L$ | + 1. 14. 51 ,1           |
| 18° 50' 38",5            | Eadem in part. aequat.  | 18° 45' 54",0            |
| — 46. 42                 | Diff. <sup>a</sup> declinationis . . . . .                    | — 47. 4                  |
| 8° 15. 42. 29            | Asc. recta apparet $\bar{h}$                                  | 8° 15. 37. 44 ,6         |
| 21. 12. 28 ,4            | Decl. <sup>o</sup> appar. australis ..                        | 21. 12. 6 ,4             |
| 8. 16. 41. 20 ,9         | Longit. apparet geoc.   | 8. 16. 36. 55            |
| 1. 36. 12 ,5             | Latit. appar. bor. geoc.                                      | 1. 36. 7 ,8              |
| . . . . .                | Longitudo $\odot$ apparet                                     | 2. 16. 27. 57 ,7         |

6. Junii.

| <i>7. Junii.</i>          |   | <i>9. Junii.</i>         |  |
|---------------------------|---|--------------------------|--|
| 11 <sup>h</sup> 36' 55",0 | <i>Tempus ver. obseru.</i>                    | 11 <sup>h</sup> 48' 3",0 |  |
| 23. 36. 1,0               | <i>Revol.° siderea.....</i>                   | 23. 56. 1",5             |  |
| + 1. 14. 22 ,6            | <i>Diff.<sup>2</sup> asc. rect. ♂ &amp; ♂</i> | + 1. 13. 55 ,1           |  |
| 18° 41' 22",4             | <i>Eadem in part. aequat.</i>                 | 18° 31' 50",8            |  |
| — 47. 22 ,0               | <i>Diff.<sup>2</sup> declinationis .....</i>  | — 48. 5 ,8               |  |
| 8° 15. 33. 13 ,0          | <i>Asc. recta apparens ♂</i>                  | 8° 15. 23. 41 ,4         |  |
| 21. 11. 48 ,4             | <i>Decl.° appar. australis..</i>              | 21. 15. 4 ,6             |  |
| 8. 16. 32. 41 ,0          | <i>Longit. apparens geoc.</i>                 | .....                    |  |
| 1. 36. 1 ,3               | <i>Latit. appar. hor. geoc.</i>               | .....                    |  |
| 2. 17. 25. 4 ,2           | <i>Longitudo ☽ apparens</i>                   | .....                    |  |



Adhibitis correctionibus ex nutatione axeos telluris + 8",9 & ex aberratione luminis + 20" longitudini Solis pro instanti observationis diei 6. Junii, & longitudini Saturni + 8",9 ex nutatione, — 13" ex aberratione prodit longitudo vera Solis 2° 26° 28' 26",6

Saturni 8. 16. 36. 50 ,9

Elongatio ad orientem 6. o. 8. 24 ,3, quare planeta nondum oppositionem cum Sole attigerat, distabat nempe arcu 8' 24",3 motu relativo emetiendo. Erat tum motus Solis intra diem solarem verum 57' 19", & planetae retrogradi 4' 24", atque inde motus relatus 1° 1' 43", quo in emetiendo arcu 8' 24",3 impendenda erant 3° 16' 6",6, quibus additis horae observationis diei 6. Junii, prodit verum instantis oppositionis Saturni cum Sole 6. Jun. 15<sup>h</sup> 17' 27",6

|   |                                     |
|---|-------------------------------------|
| pro quo instanti longitudo vera Solis .     | $2^{\circ} 16' 36''$ ,94            |
| Longitudo elioc. Saturni ex observ. . . . . | $8. 16. 36. 14$ ,94                 |
| Ex tabulis Halleij . . . . .                | <u><math>8. 16. 31. 47</math>,0</u> |
| Diff. <sup>a</sup> tabularum . . . . .      | — 4. 27 ,94                         |
| Latitudo geocent. bor. ex obser. . . . .    | $1. 36. 7$ ,8                       |
| Ex tabulis Halleij . . . . .                | <u><math>1. 35. 43</math>,0</u>     |
| Diff. <sup>a</sup> tabularum . . . . .      | — 24 ,8                             |

OBSERVATIO OPPPOSITIONIS JOVIS MENSE MAI 1781.  
FACTA ET SUPPUTATA A CAJETANO ALLODIO.

**A**D quadrantem muralem observationibus rite insti-  
tutis determinavi differentias ascensionis rectae & de-  
clinationes inter centrum  $\Delta$  & stellae  $\gamma$  Corvi , quae  
a parallelo planetae uno circiter gradu distabat . Ascensio  
recta & declinatio stellae ad tempus observationis ex tabulis  
D. de la Caille supputatae sunt & in apparentes reductae .

|   |                          |
|---|--------------------------|
| Ascensio recta apparens $\gamma$ Corvi        | $181^{\circ} 8' 58''$ ,1 |
| Declinatio australis apparens . . .           | $16. 19. 44$ ,1          |
| <i>11. Maii 12<sup>h</sup> 6' 1'',2 t. v.</i> |                          |

|   |                            |
|---|----------------------------|
| Revol. <sup>o</sup> siderea ad pend. 23. 56. 4 ,7                 |                            |
| Dif. <sup>a</sup> asc.r. $\Delta$ & $\gamma$ Corvi + 3. 17. 24 ,2 | = $49^{\circ} 26' 37''$ ,7 |
| Differentia declinationis . . . . .                               | + 1. 1. 7 ,6               |
| Ascensio recta apparens $\Delta$ . . . . .                        | $7^{\circ} 20. 35. 36$ ,1  |
| Declinatio australis apparens . . . . .                           | $7. 17. 20. 51$ ,8         |
| Longitudo geocentrica apparens . . . .                            | $7. 22. 41. 39$ ,4         |
| Latitudo geocentr. borealis apparens . .                          | 1. 9. 32 ,9                |
| Locus ☽ apparens . . . . .  | <u>1. 21. 31. 28</u> ,6    |

12. *Maji.*

|                           |  |                           |
|---------------------------|--|---------------------------|
| 12 <sup>h</sup> 1' 35'',6 | <i>Tempus ver. observ.</i>             | 11 <sup>h</sup> 57' 9'',9 |
| 23. 56. 3 ,8              | Revol. <sup>o</sup> siderea ad pend.   | 23. 56. 3 ,1              |
| + 3. 16. 43 ,2            | Diff. <sup>a</sup> asc.r. 24 & γ Corvi | + 3. 16. 12 ,5            |
| 0° 49° 18' 52'',6         | Eadem in part. aequat.                 | 0° 49° 11' 13'',0         |
| + 0. 59. 18 ,6            | Diff. <sup>a</sup> declinationis . . . | + 0. 57. 24 ,3            |
| 7. 20. 27. 50 ,9          | Asc. recta apparenſ 24                 | 7. 20. 20. 11 ,3          |
| 17. 19. 2 ,7              | Decl. <sup>o</sup> australis appar...  | 17. 17. 8 ,5              |
| 7. 22. 34. 2 ,0           | Longit. geocentr. appar.               | 7. 22. 26. 28 ,4          |
| 1. 9. 31 ,2               | Latit. geoc. bor. appar.               | 1. 9. 25 ,0               |
| 1. 22. 29. 5 ,4           | Locus ⚡ apparenſ . . .                 | 1. 23. 26. 40 ,9          |

14. *Maji.*

|                            |  |                            |
|----------------------------|--|----------------------------|
| 11 <sup>h</sup> 52' 42'',9 | <i>Tempus ver. observ.</i>             | 11 <sup>h</sup> 48' 16'',8 |
| 23. 56. 2 ,8               | Revol. <sup>o</sup> siderea ad pend.   | 23. 56. 2 ,7               |
| + 3. 15. 42 ,0             | Diff. <sup>a</sup> asc.r. 24 & γ Corvi | + 3. 15. 11 ,2             |
| 0° 49° 3' 34'',8           | Eadem in part. aequat.                 | 0° 48° 55' 51'',8          |
| + 0. 55. 31 ,7             | Diff. <sup>a</sup> déclinationis . . . | + 0. 53. 41 ,5             |
| 7. 20. 12. 32 ,9           | Asc. recta apparenſ 24                 | 7. 20. 4. 49 ,8            |
| 17. 15. 15 ,8              | Decl. <sup>o</sup> australis appar...  | 17. 13. 25 ,7              |
| 7. 22. 18. 56 ,5           | Longit. geocentr. appar.               | 7. 22. 11. 20 ,6           |
| 1. 9. 22 ,6                | Latit. geoc. bor. appar.               | 1. 9. 16 ,2                |
| 1. 24. 24. 13 ,0           | Locus ⚡ apparenſ . . .                 | 1. 25. 21. 48 ,9           |

16. Maji 11<sup>h</sup> 43' 48",3

Revol.° siderea ad pend. 23. 56. 2 ,7

Dif.° asc.r. 24 & γ Corvi + 3. 14. 40 ,0 = 48° 48' 4",1

Differentia declinationis . . . . . + 0. 31. 52 ,3

Ascensio recta apparentis 24 . . . . . 7° 19. 57. 1 ,9

Declinatio australis apparentis . . . . . 17. 11. 36 ,5

Longitudo geocentrica apparentis . . . . . 7. 22. 3. 39 ,7

Latitudo geocentr. borealis apparentis . . . . . 1. 9. 7 ,3

Locus ☽ apparentis . . . . . 1. 26. 19. 21 ,3

Ex longitudinibus Planetae & Solis inter se collatis patet oppositionem obvenisse inter observationes 12. & 13. Maji. Adhibitis correctionibus ex effectu aberrationis & nutationis locis Solis & Planetae, & supputato ex tabulis, pro eo temporis intervallo motus Solis & Planetae, habebitur ut infra.

Locus app. Jovis . . . . . 7° 22° 34' 2",0

Aberrat. . . . . — 11 ,0

Nutat. . . . . + 9 ,3

Locus verus Jovis . . . . . 7. 22. 34. 0 ,3

Locus app. Solis . . . . . 1° 22° 29' 5",4

Aberrat. . . . . + 20 ,0

Nutat. . . . . + 9 ,3

Locus verus Solis . . . . . 1. 22. 29. 34 ,7

Locus verus Planetæ . . . . . 7. 22. 34. 0 ,3

Arcus distantiae a vera oppositione . . . . . 4. 25 ,6

Intervalum inter observationes dierum

12. & 13. . . . . 23<sup>h</sup> 55' 34",3

|  |                   |
|--|-------------------|
| Motus geocen. & retrogradus Jovis intra        |                   |
| dictum tempus . . . . .                        | 0° 0' 7" ,3       |
| Motus Solis . . . . .                          | 0. 57. 35 ,5      |
| Motus relativus . . . . .                      | 1. 5. 13 ,8       |
| Arcus distantiae ope hujus motus relativi      |                   |
| in tempus reductus . . . . .                   | 1h 37' 25" ,3     |
| Tempus verae oppositionis . . . . .            | 13. 39. 0 ,9      |
| Locus verus Solis pro eodem tempore .          | 1° 22' 33" 29" ,2 |
| Locus verus geocent. 2/4 ex observatione       | 7. 22. 33. 29 ,2  |
| Latitudo borealis . . . . .                    | 1. 9. 30 ,8       |
| Longitudo 2/4 ex Tabulis <i>la Lande</i> . . . | 7. 22. 37. 12 ,5  |
| Latitudo borealis ex iisdem Tabulis . . .      | 1. 10. 20 ,3      |
| Differentia tabularum in longitudine . . . +   | 3. 43 ,3          |
| Differentia tabularum in latitudine . . . +    | 0. 49 ,5          |

## OPPOSITIO MARTIS

Anni 1781.

*Observationibus determinata, & cum Tabulis collata*

AB ANGELO DE CESARJS.

Observationes praemitto, quot qualesque procellosi coeli intemperies varie turbavit, atque vix penitus non intercepit. Martis & stellarum τ Scorpī & σ Sagittarii distantias a vertice, ac tempora appulsuum ad quadratam muralem in meridiano observavi. Earumdem stellarum positiones ex catalogo *la Caille* supputatae, atque nutationis & aberrationis effectu implicitae, appa-

rere tunc debebant : + Scorpii Asc. recta  $245^{\circ} 35' 0''$  ;  
 Decl. austr.  $27^{\circ} 44' 34''$  : + Sagittarii Asc. recta  $278^{\circ} 0' 24''$  ;  
 Decl. austr.  $27^{\circ} 11' 46''$ .

Observationes autem sunt quae sequuntur.

| 8. Julii     | + Scorpii                 | + Sagittarii               | Mars                       |
|--------------|---------------------------|----------------------------|----------------------------|
| Tempora      | 1 . . . . .               | 1 11 <sup>h</sup> 27. 14   | 1 . . . . .                |
| appulsum     | 2 . . . . .               | 2. 28. 19,3                | 2 . . . . .                |
|              | 3 . . . . .               | 3 29. 24,5                 | 3 . . . . .                |
| Dist.a vert. | * . . . . .               | * . . . . .                | * 12 <sup>h</sup> 35' 40,5 |
|              |                           |                            | 72° 36' 0''                |
| 9. Julii     | 1 . . . . .               | 1 11 <sup>h</sup> 23. 12,3 | 1 12 <sup>h</sup> 27' 35,3 |
| Tempora      | 2 . . . . .               | 2 24. 17,5                 | 2 28. 40,5                 |
| appulsum     | 3 . . . . .               | 3 25. 22,5                 | 3 29. 45,3                 |
|              | * . . . . .               | * 26. 6,5                  | * 30. 29                   |
| Dist.a vert. | * . . . . .               | 72° 36' 0''                | 72° 50' 26''               |
| 11. Julii    | 1 9 <sup>h</sup> 5' 50''  | 1 . . . . .                | 1 12 <sup>h</sup> 17' 9''  |
| Tempora      | 2 6. 55                   | 2 . . . . .                | 2 18. 14                   |
| appulsum     | 3 8. 0,63                 | 3 11 <sup>h</sup> 17' 20'' | 3 19. 19,3                 |
|              | 8. 44,3*                  | 18. 3,5*                   | 20. 3                      |
| Dist.a vert. | 73° 8' 53'',4             | 72° 36' 0                  | 73° 1' 3''                 |
| 12. Julii    | 1 . . . . .               | 1 12. 13,5                 | 1 12 <sup>h</sup> 11' 54,6 |
| Tempora      | 2 . . . . .               | 2 11 <sup>h</sup> 13. 18,7 | 2 13. 0                    |
| appulsum     | 3 9 <sup>h</sup> 3' 59''  | 3 14. 2,3                  | 3 . . . . .                |
|              | 4. 42,5*                  | 36. 6,5*                   | 14. 49                     |
| Dist.a vert. | 73° 8. 53,4               | 72° 36' 0''                | 73° 6' 9''                 |
| 13. Julii    | 1 8 <sup>h</sup> 57' 46'' | 1 11 <sup>h</sup> 7. 6,5   | 1 12 <sup>h</sup> 6' 39,6  |
| Tempora      | 2 58. 51,6                | 2 8. 11,4                  | 2 7. 45                    |
| appulsum     | 3 59. 37                  | 3 9. 16,4                  | 3 . . . . .                |
|              | 9. 48. 53,4*              | 9. 59,7*                   | 9. 33,5                    |
| Dist.a vert. | 73° 8. 53,4               | 72° 36' 0''                | 73° 11' 3''                |

Dies 11, 12, 13 ad planetae oppositionem propius attingunt. Ex iis itaque assumpto inter varios observationum terrinos medio, prout magis verum existimavi, habitaque ratione differentiae refractionis, quam sequare necesse fuit, conferta prodeunt calculi elementa & planetae positiones.

|   |                         |
|---|-------------------------|
| 11. Julii. Tempus verum obseruat. Martis                                    | 22 <sup>h</sup> 8' 14"  |
| Revolutio siderea ad pendulum . . . . .                                     | 23 <sup>h</sup> 55' 58" |
| Differ. ase. rect. int. ♂ & τ + 3 <sup>h</sup> 11' 18", 8 = + 47° 57' 48"   |                         |
| Differ. declin. + differ. refractionis . . . . —                            | 7' 52"                  |
| Differ. ascens. rect. int. ♂ & τ + 1 <sup>h</sup> 1' 39", 4 = + 15° 32' 27" |                         |
| Differ. declin. + differ. refractionis . . . . +                            | 25' 8"                  |
| Ascensio recta ♂ ex τ . . . . .   | 293° 32' 46"            |
| ex ♀ . . . . .  | 293° 32' 38"            |
| Declinatio Australis ♂ ex τ . . . . .                                       | 27° 36' 43"             |
| ex ♀ . . . . .  | 27° 36' 34"             |

|   |                           |
|---|---------------------------|
| 12. Julii. Tempus verum obseruat. Martis                                    | 12 <sup>h</sup> 2' 98", 5 |
| Revolutio siderea ad pendulum . . . . .                                     | 23 <sup>h</sup> 55' 58"   |
| Differ. ascens. rect. int. ♂ & τ + 3 <sup>h</sup> 10' 6", 3 = + 47° 39' 38" |                           |
| Differentia declinationis . . . . . —                                       | 2' 44", 4                 |
| Differ. ase. rect. int. ♂ & τ + 1 <sup>h</sup> 0' 46", 5 = + 85° 14' 15"    |                           |
| Differ. declin. + differ. refract. . . . . +                                | 30' 15"                   |
| Ascensio recta ♂ ex τ . . . . .   | 293° 34' 38"              |
| ex ♀ . . . . .  | 293° 34' 39"              |
| Declinatio Australis ♂ ex τ . . . . .                                       | 27° 41' 50"               |
| ex ♀ . . . . .  | 27° 41' 51"               |

|   |                         |
|---|-------------------------|
| 13. Julii. Tempus verum observat. Martis                                  | 11 <sup>h</sup> 57' 40" |
| Revolutio siderea ad pendulum . . . . .                                   | 23 <sup>h</sup> 55' 58" |
| Differ. asc. rect. int. σ & τ + 3 <sup>h</sup> 8' 53", 3 = + 47° 21' 17"  |                         |
| Differentia declinationis . . . . . +                                     | 2' 10"                  |
| Differ. asc. rect. int. σ & φ + 0 <sup>h</sup> 59' 33", 7 = + 14° 55' 56" |                         |
| Differ. declin. + differ. refract. . . . .                                | 35' 10"                 |
| ex τ . . . . .  | 292° 56' 17"            |
| Ascensio recta σ  | ex φ . . . . .          |
|   | 292° 56' 20",           |
|   | ex τ . . . . .          |
| De clinatio Australis σ ex φ . . . . .                                    | 27° 46' 44", 5          |
|   | 27° 46' 56", 4          |

Descriptae Martis positiones cum satis inter se differunt, tum in suspicionem adducunt, ne quis error alicubi obrepserit. Ascensionum rectarum differentiam non equidem plurimi facio; insensibilis enim error decimae particulæ minuti secundi temporis in qualibet trium observationum ex crescere potest in aberrationem 5" gradus, quæ ex prima comparatione apparet. Verum quantitas 12", qua altera ex deductis declinationibus alteram constanter excedit, observationum errori temere adscribi posse non videtur: itaque, ut res postulat, ejusdem origo investiganda. Animadvero igitur ascensiones rectas stellarum τ & φ ex tabulis supputatas differre inter se 32° 25' 24"; easdem vero observatas differre inter se . . 32° 25' 21". Item differentiam declinationum ex tabulis esse 32' 48"; atque ex observationibus esse 32' 53", 4 sive 33' 0" ob additum inaequalis refractionis excessum. Omissa ascensionum rectarum examine, quantitas 12", quæ differentiae decli-

nationum  $\sigma$  &  $\tau$  invicem distant satis ostendere videtur errorem duodecim pariter secundorum in determinanda Martis declinatione ortum, ejusdem Martis observationi minime esse tribuendum. Primis ergo stellarum positionibus inesse debet pars virii, quae in earumdem observationibus supponi minime potest.

Consulendo itaque Bradleyanum stellarum catalogum habetur ascensio recta  $\tau$  Scorpis minor  $1''$ ,  $\sigma$  Sagittarii minor  $8''$ ; declinatio  $\tau$  major  $7''$ ,  $\sigma$  minor  $3''$  ascensionibus & declinationibus Caillianis. In qua Bradley hypothesi & collatae superius declinationum differentiae observantur  $33' 58''$  &  $33' 0''$  proxime aequales; & planetae positiones in sequentes abeunt.

|    |                      |                                       |                        |
|----|----------------------|---------------------------------------|------------------------|
|    | Ascensio recta       | $\sigma^{\alpha}$ ex $\tau$ . . . . . | $293^{\circ} 32' 45''$ |
| 11 |                      | ex $\phi$ . . . . .                   | $293^{\circ} 32' 43''$ |
|    | Declinatio Australis | $\sigma^{\alpha}$ ex $\tau$ . . . . . | $27^{\circ} 36' 49''$  |
|    |                      | ex $\phi$ . . . . .                   | $27^{\circ} 36' 51''$  |
|    | Ascensio recta       | $\sigma^{\alpha}$ ex $\tau$ . . . . . | $293^{\circ} 14' 37''$ |
| 12 |                      | ex $\phi$ . . . . .                   | $293^{\circ} 14' 31''$ |
|    | Declinatio Australis | $\sigma^{\alpha}$ ex $\tau$ . . . . . | $27^{\circ} 41' 57''$  |
|    |                      | ex $\phi$ . . . . .                   | $27^{\circ} 41' 58''$  |
|    | Ascensio recta       | $\sigma^{\alpha}$ ex $\tau$ . . . . . | $292^{\circ} 56' 16''$ |
| 13 |                      | ex $\phi$ . . . . .                   | $292^{\circ} 56' 12''$ |
|    | Declinatio Australis | $\sigma^{\alpha}$ ex $\tau$ . . . . . | $27^{\circ} 46' 51''$  |
|    |                      | ex $\phi$ . . . . .                   | $27^{\circ} 46' 53''$  |

Disquisitio hactenus necessaria, ulterius promota inuti-

lie ficer. Neque enim tres quatuorve observationes incertas coelestis institutas autoritatem alteri catalogo prae altero conciliare valent: & positiones, quae sumptibus, inter omnes, mediis, deducuntur, vixio nonnulli perexiguo labore condescendunt; nisi video est in sequentibus.

| <i>11. Iulii a.</i> | <i>Media exposit.</i> | <i>Media exposit.</i> | <i>Media ex-</i> |
|---------------------|-----------------------|-----------------------|------------------|
|                     | <i>la Caille</i>      | <i>Bradley</i>        | <i>urisque</i>   |
| Ascens. recta       | 293° 32' 48",5        | 293° 32' 44"          | 293° 32' 46"     |
| Decl. Austr.        | 27. 36. 48            | 27. 36. 30            | 27. 36. 49       |
| 12 Ascens. recta    | 293. 14. 38 ,5        | 293. 14. 34           | 293. 14. 36.     |
| Decl. Austr.        | 27. 41. 53 ,5         | 27. 41. 57 ,5         | 27. 41. 56 ,5    |
| 13 Ascens. recta    | 292. 56. 18 ,5        | 292. 56. 14           | 292. 56. 16      |
| Decl. Austr.        | 271. 46. 50 ,5        | 27. 46. 52            | 27. 46. 51       |

Unde 11. Julii. Longitudo geocentrica  $\sigma^{\circ} 9^{\circ} 20' 50'' 38",5$   
 Aequatio ab effectu parallaxis . . . . . + 3",1  
 Longitudo geocentrica apparetis correcta .  $9^{\circ} 20' 50' 41'',6$   
 Latitude geocentrica Australis  $\sigma^{\circ} . . . . . 5^{\circ} 30' 0''$   
 Aequatio ab effectu parallaxis . . . . . 19",9  
 Latitude geocent: Australis ap. correcta  $\sigma^{\circ} 5^{\circ} 49' 40'',1$

12. Jul. Longitudo geocentrica . . . . .  $9^{\circ} 20' 33' 41'',3$   
 Aequatio ab effectu parallaxis . . . . . + 3",1  
 Longitudo geocentrica apparetis corr. . . . .  $9^{\circ} 20' 33' 54'',3$   
 Latitude geocentrica Australis  $\sigma^{\circ} . . . . . 5^{\circ} 52' 30'',1$   
 Aequatio ab effectu parallaxis . . . . . — 19",9  
 Latitude geocent: Austr. ap. corr. . . . .  $5^{\circ} 52' 10'',1$

|  |                      |        |    |
|--|----------------------|--------|----|
| 13 Longitudo geocentrica ♂ . . . . .       | $9^{\circ} 20' 16''$ | $58''$ | ,1 |
| Aequatio ab effectu parallaxis . . . . .   | + 3''                | ,1     |    |
| Longitudo geocentrica appar. correcta . .  | $9^{\circ} 20' 17'$  | 1'',2  |    |
| Latitudo geocentrica Austr. ♂ . . . . .    | $3^{\circ} 54' 48''$ | ,2     |    |
| Aequatio ab effectu parallaxis . . . . .   | - 19''               | ,9     |    |
| Latitudo geocentrica app. correcta . . . . | $5^{\circ} 54' 28''$ | ,3     |    |

Quae planetae longitudines cum Solis longitudinibus comparatae ostendunt apparentem oppositionem contigisse die 12. Ut autem verus oppositionis locus & tempus habeatur, correctio ex aberratione & nutatione perenda. Est itaque die 12 tempore observationis  $12^{\text{h}} 2' 58''$ ;5.

|  |                                    |       |
|--|------------------------------------|-------|
| Locus Solis ap. $3^{\circ} 20' 48' 18''$ .               | Locus ♂ $9^{\circ} 20' 33' 34''$   | ,5    |
| Aequatio aberrationis + 20''                             | —                                  | 4''   |
| Aequatio nutationis + 8'',4                              | — 4                                | 8'',4 |
| Locus <del>verus</del> $3^{\circ} 20' 48' 46'',4$ .      | Locus ♂ $9^{\circ} 20' 33' 58'',7$ |       |
| Distantia ab oppositione + 44' 47'',7.                   | Est autem motus                    |       |
| Solis diurnus + 57' 14'';                                | motus Martis — 26' 34'';           |       |
| hinc erit ergo motus relatives 94' 5'';                  | atque erit 74' 5'':                |       |
| $24^{\text{h}} : : 14' 47'',7 : 4^{\text{h}} 47' 34''$ . | Hic                                |       |

|  |                          |     |
|--|--------------------------|-----|
| Tempus verum oppositionis . . . . .    | $12^{\text{h}} 15' 24''$ | ,25 |
| Longitudo vera ♂ observ. . . . .       | $9^{\circ} 20' 37' 20''$ | ,6  |
| Longitudo supputata ex tab. Halley . . | $9^{\circ} 20' 36' 46''$ | ,39 |
| Differentia . . . . .                  | — 10' 43''               | ,7  |
| Latitudo geocentr. observ. . . . .     | $5^{\circ} 52' 2''$      |     |
| Latitudo geocentr. supput. . . . .     | $5^{\circ} 50' 8''$      | ,3  |
| Differentia . . . . .                  | — 1' 43''                | ,7  |

## OPPOSITIO SATURNI

Anni 1781.

*Determinata ex observationibus habitis*

A BARNABA ORIANI.

**N** ACTIS Academiae Regiae Scientiarum Parisiensis  
**M**emini aliquando legisse Cel. Astronomum D. de la  
**Caille** oppositiones Planetarum per observatas hinc inde  
a meridiano altitudines correspondentes tum planetae,  
tum alicujus fixae determinare consueuisse; idque fortasse  
ab ipso factum est, ut accuratius ascensio recta planetae  
obtineretur, vel quia carebat instrumentis idoneis, scilicet  
*quadrante murali* vel *Instrumento Transitu* ad illam fa-  
cilius determinandam, Ob copiam vero instrumentorum  
exquisitorum, quibus Regia munificentia Observatorium  
nostrum ditatur Oppositionem Saturni ad huic an. 1781.  
duplici modo observare potui, scilicet & methodo com-  
muni, & altera, qua D. de la Caille usus est. Quare  
altitudines correspondentes & meridianas Saturni, dua-  
rumque vel trium fixarum sextante sex pedum radii ob-  
servavi, transitum vero earundem & Saturni ex ipsis  
altitudinibus correspondentibus atque ex observatione im-  
mediata instrumento transituum habita obtinui. Observa-  
tiones ita se habent.



|  | Die 3. Junii<br>Temp. penduli | 4. Junii<br>Temp. penduli  | 5. Junii<br>Temp. penduli  |
|--|-------------------------------|----------------------------|----------------------------|
| $\gamma\delta$ Scorpii                           | 10 <sup>h</sup> 50' 40'',7    | 10 <sup>h</sup> 46' 44'',0 | 10 <sup>h</sup> 42' 46'',8 |
| $\beta$ Scorpii                                  | 10. 55. 59 ,0                 | 10. 52. 2 ,4               | .. .. .. ..                |
| Saturni  | 12. 6. 28 ,6                  | 12. 2. 13 ,7               | 11. 57. 57 ,2              |
| $\mu$ Sagittarii                                 | ..... .                       | 12. 59. 38 ,3              | .. .. .. ..                |
| <i>Altitudo meridiana correcta a refractione</i> |                               |                            |                            |
| $\delta$ Scorpii                                 | 22° 37' 4'',1                 | 22° 37' 3'',1              | 22° 37' 4'',3              |
| $\beta$ Scorpii                                  | .. .. .. ..                   | 25. 24. 39 ,6              | .. .. .. ..                |
| Saturni  | 23. 22. 56 ,2                 | 23. 23. 25 ,9              | 23. 23. 46 ,4              |
| $\mu$ Sagittarii                                 | .. .. .. ..                   | 23. 30. 23 ,2              | .. .. .. ..                |
|  | 6. Junii                      | 7. Junii                   | 9. Junii                   |
| $\gamma\delta$ Scorpii                           | 10 <sup>h</sup> 38. 49'',5    | 10 <sup>h</sup> 34' 52'',7 | 10 <sup>h</sup> 26' 58'',4 |
| $\beta$ Scorpii                                  | 10. 44. 7 ,7                  | 10. 40. 11 ,0              | 10. 32. 16 ,5              |
| Saturni  | 11. 53. 40 ,7                 | 11. 49. 25 ,0              | 11. 40. 53 ,6              |
| $\mu$ Sagittarii                                 | 12. 51. 43 ,0                 | 12. 47. 46 ,3              | .. .. .. ..                |
| <i>Altitudo meridiana correcta a refractione</i> |                               |                            |                            |
| $\delta$ Scorpii                                 | 22° 37' 3'',0                 | 22° 37' 5'',0              | 22° 37' 5'',3              |
| $\beta$ Scorpii                                  | 25. 24. 41 ,2                 | 25. 24. 47 ,0              | 25. 24. 48 ,4              |
| Saturni  | 23. 24. 12 ,8                 | 23. 24. 25 ,3              | 23. 25. 3 ,2               |
| $\mu$ Sagittarii                                 | 23. 30. 18 ,0                 | 23. 30. 16 ,1              | .. .. .. ..                |

Loca fixarum ex determinationibus DD. Bradley, de la Caille, & Mayeri ita se habent.

|                  | Ascens. recta<br>apparens | Declin. Austr.<br>apparens |
|------------------|---------------------------|----------------------------|
| $\delta$ Scorpii | 236° 51' 49'',7           | 21° 58' 56'',0             |
| $\beta$ Scorpii  | 238. 11. 33 ,3            | 19. 11. 23 ,7              |
| $\mu$ Sagittarii | 270. 10. 39 ,2            | 21. 5. 41 ,2               |

## Ex hisce loca Saturni obtinentur sequentia.

| Dies    | Tempus<br>verum         | Tempus<br>medium        | Ascens. recta<br>appar. Satur. | Decl. Austr.<br>appar. Sat. |
|---------|-------------------------|-------------------------|--------------------------------|-----------------------------|
| Junii 3 | 12 <sup>h</sup> 14' 36" | 12 <sup>h</sup> 12' 25" | 255° 51' 53"                   | 21° 13' 4"                  |
| 4       | 12. 10. 12              | 12. 8. 11               | 255. 47. 13                    | 21. 12. 36                  |
| 5       | 12. 5. 46               | 12. 3. 55               | 255. 42. 32                    | 21. 12. 14                  |
| 6       | 12. 1. 12               | 11. 59. 32              | 255. 37. 39                    | 21. 11. 58                  |
| 7       | 11. 56. 45              | 11. 55. 16              | 255. 32. 56                    | 21. 11. 38                  |
| 9       | 11. 48. 3               | 11. 46. 57              | 255. 23. 23                    | 21. 10. 52                  |

Atque hinc comparationes sequentes cum tabulis eruuntur pro temporibus supra notatis.

| Dies    | Longit. apparenſ<br>Saturni ex tab.<br>Halley .. | Longit. apparenſ<br>ex observ. | Differ.<br>longit. |
|---------|--|--------------------------------|--------------------|
| Junii 3 | 8 <sup>h</sup> 16° 46' 5"                        | 8 <sup>h</sup> 16° 50' 8"      | — 4' 3"            |
| 4       | 8. 16. 41. 41                                    | 8. 16. 45. 46                  | — 4. 5             |
| 5       | 8. 16. 37. 17                                    | 8. 16. 41. 22                  | — 4. 5             |
| 6       | 8. 16. 32. 53                                    | 8. 16. 36. 49                  | — 3. 56            |
| 7       | 8. 16. 28. 28                                    | 8. 16. 32. 24                  | — 3. 56            |
| 9       | 8. 16. 19. 40                                    | 8. 16. 23. 37                  | — 3. 57            |

Medius ergo error tabularum est — 4' 0".

Oppositio Saturni juxta methodum consuetam fieri debuit ex observationibus die 6. Junii 15<sup>h</sup> 31' 12" temp. ver., seu 15<sup>h</sup> 29' 33" temp. med., quo tempore

Longitudo appar. Saturni & Solis = 8<sup>h</sup> 16° 36' 14"

Longitudo vera geocentrica . . . . . 8. 16. 36. 10

Latitudo geocentrica . . . . . 1. 36. 16B

Latitudo heliocentrica . . . . . 1. 26. 33B

OBSERVATIONES MERCURII CIRCA EJUS MAXIMAM  
DIGRESSIONEM A SOLE

An. 1781.

PERACTAE A FRANCISCO REGGIO.

**O**bseruationes institutae ad sectorem aequatorialem.  
Differentiae ascensionis rectae & declinationis determinatae inter planetam & stellas Arcturum a die 29. Jun. usque ad diem 11. Julii, Aldebaran a die 12. Julii ad diem 17. , & & Serpentis a die 20. ad diem 21. in supputanda ascensione recta, & declinatione Arcturi rationem habui motus peculiaris ejusdem.

Ascensio recta, & declinatio praedictorum siderum ex catalogo D. de la Caille supputatae sunt.

Ascensio recta apparenſ Arcturi  $211^{\circ} 25' 28'',$ ,

Declinatio borealis apparenſ...  $20. 19. 38. ,3$



29. Junii.

|                         |                          |                           |
|-------------------------|--------------------------|---------------------------|
| 0 <sup>h</sup> 8' 4'',0 | Tempus ver. obſerv.      | 0 <sup>h</sup> 10' 18'',0 |
| 23. 56. 1,0             | Revolutio siderea....    | 23. 55. 59 ,3             |
| — 5. 54. 15 ,3          | Diff. asc. r. ♀ & Arct.  | — 5. 47. 53 ,4            |
| 88° 48' 33'',8          | Eadem in part. aequat.   | 87° 12' 55'',8            |
| + 1. 19. 22 ,1          | Diff. declinationis ...  | + 53. 20 ,6               |
| . 4° 2. 36. 54 ,6       | Ascensio recta apparenſ  | 4° 4. 12. 32 ,6           |
| 21. 38. 50 ,4           | Declinatio bor. apparenſ | 21. 12. 59 ,0             |

30. Junii.

| <i>1. Julii.</i>         | <i>Tempus ver. obseru.</i>  | <i>2. Julii.</i>         |
|--------------------------|-----------------------------|--------------------------|
| 0 <sup>h</sup> 12' 47",0 | Revolutio siderea . . . .   | 0 <sup>h</sup> 14' 35",0 |
| 23. 55. 59 ,9            | Diff. alc. r. ♀ & Arct.     | 23. 55. 59 ,9            |
| — 5. 41. 44 ,7           | Eadem in part. aequat.      | — 5. 35. 48 ,0           |
| 85° 40' 27",8            | Diff. declinationis . . . . | 84° 11. 2 ,4             |
| + 26. 34 ,0              | Ascensio recta apparenſ     | — 57 ,0                  |
| 4° 5. 45. 0 ,3           | Declinatio bor. apparenſ    | 4° 7. 14. 25 ,7          |
| 20. 46. 12 ,3            |                             | 20. 18. 41 ,3            |



| <i>3. Julii.</i>        | <i>Tempus ver. obseru.</i>  | <i>4. Julii.</i>        |
|-------------------------|-----------------------------|-------------------------|
| 0 <sup>h</sup> 16' 8",4 | Revolutio siderea . . . .   | 0 <sup>h</sup> 17' 8",5 |
| 23. 55. 59 ,3           | Diff. alc. r. ♀ & Arct.     | 23. 55. 59 ,6           |
| — 5. 30. 3 ,7           | Eadem in part. aequat.      | — 5. 24. 31 ,5          |
| 82° 44' 42",4           | Diff. declinationis . . . . | 81° 21' 27",3           |
| — 29. 16 ,3             | Ascensio recta apparenſ     | — 58. 1 ,2              |
| 4° 8. 40. 45 ,7         | Declinatio bor. apparenſ    | 4° 10. 14. 0 ,8         |
| 19. 30. 22 ,0           |                             | 19. 21. 37 ,1           |



| <i>5. Julii.</i>         | <i>Tempus vér. obseru.</i>  | <i>6. Julii.</i>         |
|--------------------------|-----------------------------|--------------------------|
| 0 <sup>h</sup> 18' 43",6 | Revolutio fidereſ . . . .   | 0 <sup>h</sup> 19' 48",0 |
| 23. 55. 59 ,1            | Diff. alc. r. ♀ & Arct.     | 23. 55. 59 ,6            |
| — 5. 19. 10 ,3           | Eadem in part. aequat.      | — 5. 14. 1 ,7            |
| 80° 6' 57",9             | Diff. declinationis . . . . | 78° 43' 33",9            |
| — 1. 27. 17 ,7           | Ascensio recta apparenſ     | — 1. 56. 42 ,6           |
| 4° 11. 24. 30 ,2         | Declinatio bor. apparenſ    | 4° 12. 41. 44 ,2         |
| 18. 52. 20 ,6            |                             | 18. 22. 55 ,7            |

7. Julii.

|                 |                                |                  |
|-----------------|--------------------------------|------------------|
| ob 20' 37'',0   | <i>Tempus ver. observ.</i>     | 10. Julii.       |
| 23. 55. 59 ,6   | Revol.° siderea . . . . .      | 23. 56. 0 ,0     |
| - 5. 9. 6 ,0    | Diff.° asc. r. ♡ & Arct.       | - 4. 55. 31 ,5   |
| 77° 29' 26'',2  | Eadem in part. aequat.         | 74° 5' 13'',6    |
| - 2. 26. 39 ,0  | Diff.° declinationis . . . . . | - 3. 56. 2 ,4    |
| 4° 13. 56. 1 ,9 | Ascensio recta apparents       | 4° 17. 26. 14 ,5 |
| 17. 53. 9 ,3    | Declinatio bor. apparents      | 16. 23. 35 ,9    |

11. Julii. 1<sup>h</sup> 45' 33'',0

|  |                  |            |
|--|------------------|------------|
| Revolutio siderea . . . . .                | 23. 56. 0 ,4     | 12. Julii. |
| Diff.° asc. rect. ♡ & Arct. — 4. 51. 21 ,0 | = 72° 59' 54'',0 |            |
| Differentia declinationis . . . . .        | — 4. 27. 39 ,6   |            |
| Ascensio recta apparents . . . . .         | 4° 18. 25. 32 ,2 |            |
| Declinatio borealis apparents . . . . .    | 15. 51. 58 ,7    |            |

13. Julii.

Asc.° recta appar. Aldeb. 65° 50' 38'',8

Declinatio borealis appar. 16. 3. 18 ,4

|                           |                                |                          |
|---------------------------|--------------------------------|--------------------------|
| 1 <sup>h</sup> 45' 23'',3 | <i>Tempus ver. observ.</i>     | 1 <sup>h</sup> 45' 0'',0 |
| 23. 56. 0 ,0              | Revol.° siderea . . . . .      | 23. 56. 0 ,0             |
| + 4. 53. 24 ,1            | Diff.° asc. rect. ♡ & Ald.     | + 4. 57. 4 ,0            |
| 73° 33' 20'',2            | Eadem in part. aequat.         | 74° 28' 20'',2           |
| + 6. 40. 28 ,0            | Diff.° declinationis . . . . . | + 1. 9. 46 ,6            |
| 4° 19. 23. 59 ,0          | Ascens. recta apparents ♡      | 4° 20. 18. 59 ,0         |
| 15. 22. 51 ,7             | Decl.° borealis apparents      | 14. 53. 32 ,1            |
| 4° 17. 3. 43 ,0           | Longit. apparents geoc.        | 4. 18. 3. 12 ,9          |
| 22. 44 ,6                 | Latit. bor. appar. geoc.       | 34. 29 ,8                |
| 3. 20. 23. 44 ,8          | Longit. Solis apparents        | 3. 21. 20. 58 ,7         |
| 26. 39. 55 ,3             | Elong.° vera ad orient.        | 26. 42. 11 ,3            |

| 15. Julii.               | 16. Julii.                |
|--------------------------|---------------------------|
| 1 <sup>h</sup> 43' 54",4 | Tempus ver. observ.       |
| 23. 55. 59 ,4            | Revol.° siderea .....     |
| + 5. 3. 45 ,0            | Diff.° asc.rect. ♀ & Ald. |
| 76° 8' 51",0             | Eadem in part. aequat.    |
| + 2. 5. 56 ,9            | Diff.° declinationis .... |
| 4° 21. 59. 30 ,6         | Ascens.recta apparents ♀  |
| 13. 56. 21 ,8            | Decl.° borealis apparents |
| 4. 19. 53. 27 ,0         | Longit. apparents geoc.   |
| 58. 36 ,8                | Latit. bor. appar. geoc.  |
| 3. 23. 15. 27 ,6         | Longit. Solis apparents   |
| 26. 37. 56 ,4            | Elong.° vera ad orient.   |



| 17. Julii. 1 <sup>h</sup> 41' 36",5                      |
|--|
| Revolutio siderea . . . . . 23. 56. 0 ,9                 |
| Diff.° asc.rect. ♀ & Ald. + 5. 9. 31 ,0 = 77° 35' 38",0  |
| Differentia declinationis . . . . . — 3. 1. 15 ,5        |
| Ascensio recta apparents ♀ . . . . . 4° 23. 26. 16 ,8    |
| Declinatio borealis apparents . . . . . 13. 2. 3 ,2      |
| Longitudo geoc. apparents . . . . . 4. 21. 30. 46 ,5     |
| Latitudo borealis geoc. apparents . . . . . 1. 23. 24 ,9 |
| Longitudo apparents Solis . . . . . 3. 25. 9. 53 ,7      |
| Elongatio vera ad orientem . . . . . ; 26. 20. 52 ,8     |

20. Julii.

21. Julii.

Asc. recta appar. &amp; Serpen. 231° 5' 49",0

Decl.° borealis apparenſ . . . 11. 16. 56 ,6

|                         |                                |                          |
|-------------------------|--------------------------------|--------------------------|
| 1 <sup>h</sup> 36' 6",0 | Tempus ver. obſerv.            | 1 <sup>h</sup> 34' 19",0 |
| 23. 56. 3 ,5            | Revol.° ſiderea . . . . .      | 23. 56. 4 ,4             |
| — 5. 42. 50 ,3          | Diff.° asc. r. ♀ & ♂ Serp.     | — 5. 41. 4 ,4            |
| 85° 30' 5",4            | Eadem in part. aequat.         | 85° 30' 5 ,4             |
| + 0. 29. 29 ,6          | Diff.° declinationis . . . .   | + 5. 21 ,9               |
| 4° 25. 6. 7 ,7          | Ascens. recta apparenſ . . . . | 4° 25. 35. 43 ,6         |
| 11. 46. 26 ,1           | Decl.° borealis . . . . .      | 11. 22. 18 ,4            |

Æquationes adhibitae locis apparentibus Solis, & Planetae pro eruendis elongationibus veris fuere pro loco Solis ex aberratione + 20", ex nutatione axis + 6",1 pro loco Mercurii ex aberratione + 17, ex nutatione + 6,1.

Pro latitudine vero correctio ex aberratione + 4,3.

Interpolatis elongationibus dierum 12. 13. 15. 16. invenitur tempus, in quo inciderat maxima elongatio, 13. Jun. 7<sup>h</sup> 57' 9", pro quo instanti quantitas elongationis 26° 43' 1".

Aliquot elongationes veras, & latitudines observatas contuli, ut infra, cum supputatis ex tabulis D. de la Lande.

|          | Elongat.<br>obſerv. | Elongat.<br>ſupput. | Diff.<br>tab. | Latit.<br>obſerv. | Latit.<br>ſupput. | Diff.<br>tab. |
|----------|---------------------|---------------------|---------------|-------------------|-------------------|---------------|
|          | G. M. S.            | G. M. S.            | S.            | G. M. S.          | G. M. S.          | S.            |
| 12. Jul. | 26. 39. 55          | 26. 40. 6           | + 11          | 0. 22. 49         | 0. 22. 53         | + 4           |
| 13. .... | 26. 42. 11          | 26. 43. 29          | + 18          | 0. 34. 34         | 0. 34. 30         | - 4           |
| 15. .... | 26. 37. 56          | 26. 38. 24          | + 28          | 0. 58. 41         | 0. 58. 36         | - 5           |
| 16. .... | 26. 30. 57          | 26. 31. 12          | + 15          | 0. 11. 0          | 1. 11. 3          | + 3           |

OBSERVATIONES VENERIS ANTEA ET. POST,  
EJUS CONJUNCTIONEM SUPERIOREM CUM SOLE

*Ann. 1781.*

INSTITUTAE A CAJETANO ALLODIO.

**S**ingulis diebus infra expositis ad quadrantem muralem observabam tempus transitus per meridianum & distantiam a vertice centri Solis & Veneris. Observationes prope conjunctionem partim ex nubilo coelo, partim ex immersione Veneris in radiis solaribus mihi concessae non sunt. Intervallum temporis inter transitus per meridianum centri Solis & Veneris in partes circuli reductum suppeditat differentiam ascensionis rectae inter Solem & Planetam: haec differentia addatur ascensioni rectae Solis meridianae, erit summa ascensio recta Veneris tempore observationis. Differentia declinationis ex effectu differentiae refractionis & parallaxis correctae addita vel subducta prout signa docent a declinatione Solis suppeditat declinationem planetae. Differentia declinationis \*notata summa est declinationum borealis Solis & australis Veneris; subducta ab ea quantitate declinatione Solis habetur declinatio australis Veneris.



## 5. Martii.

|                           |                            |                           |
|---------------------------|----------------------------|---------------------------|
| 22 <sup>h</sup> 35' 38",2 | <i>Tempus ver. observ.</i> | 22 <sup>h</sup> 36' 46",6 |
| 346° 29. 26 ,0            | Asc.º recta Solis merid.   | 347° 24. 36 ,0            |
| 5. 47. 30 ,0              | Decl.º Solis austr.merid.  | 5. 24. 14 ,0              |
| 339. 46. 46 ,5            | Diff.º asc. rectae ☀ & ♁   | 340. 3. 52 ,0             |
| +8. 47. 36 ,3             | Differentia declinat....   | +8. 48. 8 ,9              |
| 326. 16. 12 ,5            | Ascensio recta Veneris     | 327. 28. 48 ,0            |
| 14. 35. 6 ,3              | Decl.º Veneris australis   | 14. 12. 22 ,9             |

XVI

## 7. Martii.

|                           |                            |                           |
|---------------------------|----------------------------|---------------------------|
| 22 <sup>h</sup> 37' 56",9 | <i>Tempus ver. observ.</i> | 22 <sup>h</sup> 40' 14",3 |
| 348° 20. 20 ,0            | Asc.º recta Solis merid.   | 350° 10. 50               |
| 5. 0. 54 ,0               | Decl.º Solis austr.merid.  | 4. 14. 5 ,0               |
| 340. 21. 20 ,9            | Diff.º asc. rectae ☀ & ♁   | 340. 55. 38 ,2            |
| +8. 48. 4 ,8              | Differentia declinationis  | +8. 46. 52 ,6             |
| 328. 41. 40 ,9            | Ascensio recta Veneris     | 331. 6. 28 ,2             |
| 13. 48. 58 ,8             | Decl.º Veneris australis   | 13. 0. 57 ,6              |

## 11. Martii.

|                           |                            |                           |
|---------------------------|----------------------------|---------------------------|
| 22 <sup>h</sup> 42. 28 ,8 | <i>Tempus ver. observ.</i> | 22 <sup>h</sup> 45' 44",6 |
| 352° 0. 59 ,0             | Asc.º recta Solis merid.   | 354° 45. 39 ,0            |
| 3. 27. 4 ,0               | Decl.º Solis austr.merid.  | 2. 16. 14 ,0              |
| 341. 29. 13 ,1            | Diff.º asc. rectae ☀ & ♁   | 342. 18. 13 ,7            |
| +8. 44. 42 ,5             | Differentia declinat....   | +8. 39. 22 ,6             |
| 333. 30. 12 ,1            | Ascensio recta Veneris     | 337. 3. 40 ,7             |
| 12. 11. 46 ,5             | Decl.º Veneris australis   | 10. 55. 36 ,6             |

## 16. Martii.

|                            |  |                           |
|----------------------------|--|---------------------------|
| 22 <sup>h</sup> 47' 52'',0 | <i>Tempus ver. obseru.</i>             | 22 <sup>h</sup> 49' 5'',9 |
| 356° 35. 7 ,0              | Asc. <sup>o</sup> recta Solis merid.   | 358° 24. 24 ,0            |
| 1. 28. 53 ,0               | Decl. <sup>o</sup> Solis austr. merid. | 0. 41. 30 ,0              |
| 342. 49. 54 ,8             | Diff. <sup>o</sup> asc. rectae ☀ & ♁   | 343. 20. 52 ,6            |
| + 8. 34. 14 ,1             | Differentia declinat....               | + 8. 28. 11 ,7            |
| 339. 25. 1 ,8              | Ascensio recta Veneris                 | 341. 45. 16 ,6            |
| 10. 3. 7 ,1                | Decl. <sup>o</sup> Veneris australis   | 9. 9. 41 ,7               |

## 20. Martii.

|                            |                                      |                            |
|----------------------------|--------------------------------------|----------------------------|
| 22 <sup>h</sup> 51' 58'',2 | <i>Tempus ver. obseru.</i>           | 22 <sup>h</sup> 54' 57'',6 |
| 0° 13. 33 ,0               | Asc. <sup>o</sup> recta Solis merid. | 2° 57. 6 ,0                |
| 0. 5. 53 ,0                | Decl. <sup>o</sup> Solis bor. merid. | 1. 16. 51 ,0               |
| 343. 51. 31 ,2             | Diff. <sup>o</sup> asc. rectae ☀ & ♁ | 344. 36. 20 ,2             |
| * 8. 21. 14 ,9             | Differentia declinat....             | * 8. 8. 51 ,4              |
| 344. 5. 4 ,2               | Ascensio recta Veneris               | 347. 33. 26 ,2             |
| 8. 15. 21 ,9               | Decl. <sup>o</sup> Veneris australis | 6. 52. 0 ,4                |

## 26. Martii.

|                            |                                      |                           |
|----------------------------|--------------------------------------|---------------------------|
| 22 <sup>h</sup> 57' 50'',8 | <i>Tempus ver. obseru.</i>           | 23 <sup>h</sup> 9' 30'',1 |
| 5° 40. 33 ,0               | Asc. <sup>o</sup> recta Solis merid. | 17° 30. 18 ,0             |
| 2. 27. 32 ,0               | Decl. <sup>o</sup> Solis bor. merid. | 7. 26. 27 ,0              |
| 345. 19. 30 ,3             | Diff. <sup>o</sup> asc. rectae ☀ & ♁ | 348. 16. 21 ,4            |
| * 7. 54. 38 ,3             | Differentia declinat....             | - 6. 33. 38 ,8            |
| 351. 0. 23 ,3              | Ascensio recta Veneris               | 5. 46. 39 ,4              |
| - 5. 27. 6 ,3A             | Decl. <sup>o</sup> Veneris . . . . . | 0. 52. 48 ,2B             |

## 18. Martii.

|                           |  |
|---------------------------|--|
| 22 <sup>h</sup> 49' 5'',9 |  |
| 358° 24. 24 ,0            |  |
| 0. 41. 30 ,0              |  |
| 343. 20. 52 ,6            |  |
| + 8. 28. 11 ,7            |  |
| 341. 45. 16 ,6            |  |
| 9. 9. 41 ,7               |  |

## 23. Martii.

|                            |  |
|----------------------------|--|
| 22 <sup>h</sup> 54' 57'',6 |  |
| 2° 57. 6 ,0                |  |
| 1. 16. 51 ,0               |  |
| 344. 36. 20 ,2             |  |
| * 8. 8. 51 ,4              |  |
| 347. 33. 26 ,2             |  |
| 6. 52. 0 ,4                |  |

## 8. Aprilis.

|                           |  |
|---------------------------|--|
| 23 <sup>h</sup> 9' 30'',1 |  |
| 17° 30. 18 ,0             |  |
| 7. 26. 27 ,0              |  |
| 348. 16. 21 ,4            |  |
| - 6. 33. 38 ,8            |  |
| 5. 46. 39 ,4              |  |
| 0. 52. 48 ,2B             |  |

## 9. Aprilis.

|                           |                                      |
|---------------------------|--------------------------------------|
| 23 <sup>h</sup> 10' 24",6 | <i>Tempus ver. obseru.</i>           |
| 18° 25. 11 ,0             | Asc. <sup>o</sup> recta Solis merid. |
| 7. 48. 43 ,0              | Decl. <sup>o</sup> Solis bor. merid. |
| 348. 29. 12 ,6            | Diff. <sup>o</sup> asc. rectae ☀ & ♁ |
| — 6. 26. 25 ,5            | Differentia declinat....             |
| 6. 54. 23 ,6              | Ascensio recta Veneris               |
| 1. 22. 17 ,5              | Decl. <sup>o</sup> Veneris borealis  |

## 15. Aprilis.

|                           |  |
|---------------------------|--|
| 23 <sup>h</sup> 15. 31 ,0 |  |
| 23° 55. 58 ,0             |  |
| 9. 59. 22 ,0              |  |
| 349. 46. 29 ,8            |  |
| — 5. 40. 30 ,4            |  |
| 13. 42. 27 ,8             |  |
| 4. 18. 51 ,6              |  |

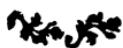


## 17. Aprilis.

|                           |                                      |
|---------------------------|--------------------------------------|
| 23 <sup>h</sup> 17' 12",5 | <i>Tempus ver. obseru.</i>           |
| 25° 46. 56 ,0             | Asc. <sup>o</sup> recta Solis merid. |
| 10. 41. 40 ,0             | Decl. <sup>o</sup> Solis bor. merid. |
| 350. 12. 8 ,1             | Diff. <sup>o</sup> asc. rectae ☀ & ♁ |
| — 5. 24. 38 ,5            | Differentia declinat....             |
| 15. 59. 4 ,5              | Ascensio recta Veneris               |
| 5. 17. 1 ,5               | Decl. <sup>o</sup> Veneris borealis  |

## 18. Aprilis.

|                          |  |
|--------------------------|--|
| 23 <sup>h</sup> 18' 1",7 |  |
| 26° 42. 34 ,0            |  |
| 11. 2. 34 ,0             |  |
| 350. 24. 34 ,6           |  |
| — 5. 16. 35 ,6           |  |
| 17. 7. 8 ,6              |  |
| 5. 45. 58 ,4             |  |



## 19. Aprilis.

|                           |                                      |
|---------------------------|--------------------------------------|
| 23 <sup>h</sup> 18' 52",1 | <i>Tempus ver. obseru.</i>           |
| 27° 38. 19 ,0             | Asc. <sup>o</sup> recta Solis merid. |
| 11. 23. 17 ,0             | Decl. <sup>o</sup> Solis bor. merid. |
| 350. 37. 27 ,2            | Diff. <sup>o</sup> asc. rectae ☀ & ♁ |
| — 5. 8. 20 ,5             | Differentia declinat....             |
| 18. 15. 46 ,2             | Ascensio recta Veneris               |
| 6. 14. 56 ,5              | Decl. <sup>o</sup> Veneris borealis  |

## 22. Aprilis.

|                           |  |
|---------------------------|--|
| 23 <sup>h</sup> 21' 23 ,6 |  |
| 30° 26. 16 ,6             |  |
| 12. 24. 19 ,0             |  |
| 351. 30. 40 ,9            |  |
| — 4. 43. 34 ,9            |  |
| 21. 56. 56 ,9             |  |
| 7. 40. 44 ,8              |  |

## 5. Maii.

|                           |                                      |                          |
|---------------------------|--------------------------------------|--------------------------|
| 23 <sup>h</sup> 32' 36",2 | <i>Tempus ver. obseru.</i>           | 12. Junii.               |
| 42° 46. 42 ,0             | Asc. <sup>o</sup> recta Solis merid. | 0 <sup>h</sup> 10' 46",2 |
| 36. 25. 49 ,0             | Decl. <sup>o</sup> Solis bor. merid. | 80° 58. 55 ,0            |
| 354. 5. 50 ,6             | Diff. <sup>2</sup> asc. rectae ☀ & ♀ | 2. 57. 3 ,7              |
| - 2. 54. 43 ,3            | Differentia declinat....             | + 0. 28. 18 ,5           |
| 36. 52. 32 ,6             | Ascensio recta Veneris               | 83. 55. 58 ,7            |
| 13. 31. 5 ,7              | Decl. <sup>o</sup> Veneris borealis  | 23. 40. 57 ,5            |

## 14. Junii.

|                          |                                      |                          |
|--------------------------|--------------------------------------|--------------------------|
| 0 <sup>h</sup> 14' 12",1 | <i>Tempus ver. obseru.</i>           | 17. Junii.               |
| 83. 3. 24 ,0             | Asc. <sup>o</sup> recta Solis merid. | 0 <sup>h</sup> 17' 51",5 |
| 23. 18. 59 ,0            | Decl. <sup>o</sup> Solis bor. merid. | 86° 10. 24 ,0            |
| 3. 8. 34 ,2              | Diff. <sup>2</sup> asc. rectae ☀ & ♀ | 23. 25. 25 ,0            |
| + 0. 31. 35 ,3           | Differentia declinat....             | 4. 28. 1 ,3              |
| 86. 11. 58 ,2            | Ascensio recta Veneris               | + 0. 33. 51 ,0           |
| 23. 50. 34 ,3            | Decl. <sup>o</sup> Veneris borealis  | 90. 38. 15 ,3            |

## 18. Junii.

|                          |                                      |                |
|--------------------------|--------------------------------------|----------------|
| 0 <sup>h</sup> 18' 54",4 | <i>Tempus ver. obseru.</i>           | 19. Junii.     |
| 87° 12. 47 ,0            | Asc. <sup>o</sup> recta Solis merid. | 88° 15. 11 ,0  |
| 23. 26. 44 ,0            | Decl. <sup>o</sup> Solis bor. merid. | 23. 27. 28 ,0  |
| 4. 46. 55 ,0             | Diff. <sup>2</sup> asc. rectae ☀ & ♀ | 5. 5. 29 ,7    |
| + 0. 34. 3 ,1            | Differentia declinat....             | + 0. 33. 53 ,2 |
| 91. 59. 42 ,0            | Ascensio recta Veneris               | 93. 20. 40 ,7  |
| 24. 0. 47 ,1             | Decl. <sup>o</sup> Veneris borealis  | 24. 1. 31 ,2   |

29. Junii.

|                           |                            |                          |
|---------------------------|----------------------------|--------------------------|
| 0 <sup>h</sup> 32' 28'',4 | <i>Tempus ver. obseru.</i> | 30. Iunii.               |
| 98° 38. 29 ,0             | Asc.º recta Solis merid.   | 0 <sup>h</sup> 33. 40 ,3 |
| 23. 13. 56 ,0             | Decl.º Solis bor. merid.   | 99° 40. 35 ,0            |
| 8. 8. 28 ,5               | Diff.º asc. rectae ♂ & ♀   | 23. 10. 19 ,0            |
| + 0. 16. 56 ,5            | Differentia declinat....   | + 0. 13. 30 ,5           |
| 106. 46. 57 ,5            | Ascensio recta Veneris     | 108. 7. 3 ,9             |
| 23. 30. 52 ,5             | Decl.º Veneris borealis    | 23. 23. 49 ,5            |

1. Julii.

|                          |                            |                          |
|--------------------------|----------------------------|--------------------------|
| 0 <sup>h</sup> 34. 51 ,6 | <i>Tempus ver. obseru.</i> | 2. Julii.                |
| 100. 42. 37 ,0           | Asc.º recta Solis merid.   | 0 <sup>h</sup> 36' 3'',1 |
| 23. 6. 17 ,0             | Decl.º Solis bor. merid.   | 101. 44. 34 ,0           |
| 8. 43. 30 ,9             | Diff.º asc. rectae ♂ & ♀   | 23. 1. 51 ,0             |
| + 0. 10. 6 ,9            | Differentia declinat....   | + 0. 6. 5 ,2             |
| 109. 26. 7 ,9            | Ascensio recta Veneris     | 110. 46. 52 ,4           |
| 23. 16. 23 ,9            | Decl.º Veneris borealis    | 23. 7. 56 ,2             |

4. Julii.

|                           |                            |                           |
|---------------------------|----------------------------|---------------------------|
| 0 <sup>h</sup> 38' 23'',6 | <i>Tempus ver. obseru.</i> | 5. Julii.                 |
| 103. 48. 15 ,0            | Asc.º recta Solis merid.   | 0 <sup>h</sup> 39' 33'',5 |
| 22. 51. 47 ,0             | Decl.º Solis bor. merid.   | 104° 49. 58 ,0            |
| 9. 37. 32 ,3              | Diff.º asc. rectae ♂ & ♀   | 22. 46. 9 ,0              |
| - 0. 2. 44 ,4             | Differentia declinat....   | - 0. 7. 32 ,8             |
| 113. 25. 47 ,3            | Ascensio recta Veneris     | 114. 45. 1 ,9             |
| 22. 49. 2 ,6              | Decl.º Veneris borealis    | 22. 38. 36 ,2             |

## 6. Julii.

|                        |                                      |                       |
|------------------------|--------------------------------------|-----------------------|
| $0^h\ 40' 42''$ ,2     | <i>Tempus ver. observ.</i>           | $0^h\ 41' 50''$ ,9    |
| $105^\circ\ 51. 36$ ,0 | Asc. <sup>o</sup> recta Solis merid. | $106^\circ\ 53. 9$ ,0 |
| 22. 40. 7,0            | Decl. <sup>o</sup> Solis bor. merid. | 22. 33. 42,0          |
| 10. 12. 17,2           | Diff. <sup>a</sup> asc. rectae ♂ & ♀ | 10. 28. 3,6           |
| — 0. 12. 24,8          | Differentia declinat....             | — 0. 17. 36,5         |
| 116. 3. 53,2           | Ascensio recta Veneris               | 117. 21. 12,6         |
| 22. 27. 42,2           | Decl. <sup>o</sup> Veneris borealis  | 22. 16. 5,5           |

## 8. Julii.

|                        |                                      |                        |
|------------------------|--------------------------------------|------------------------|
| $0^h\ 42' 58''$ ,5     | <i>Tempus ver. observ.</i>           | $0^h\ 44' 7''$ ,4      |
| $107^\circ\ 54. 37$ ,0 | Asc. <sup>o</sup> recta Solis merid. | $108^\circ\ 55. 59$ ,0 |
| 22. 26. 54,0           | Decl. <sup>o</sup> Solis bor. merid. | 22. 19. 42,0           |
| 10. 46. 26,2           | Diff. <sup>a</sup> asc. rectae ♂ & ♀ | 11. 3. 42,5            |
| — 0. 23. 27,3          | Differentia declinat....             | — 0. 29. 0,5           |
| 118. 41. 3,2           | Ascensio recta Veneris               | 119. 59. 41,9          |
| 22. 3. 26,7            | Decl. <sup>o</sup> Veneris borealis  | 21. 50. 41,5           |

## 10. Julii.

|                        |                                      |                        |
|------------------------|--------------------------------------|------------------------|
| $0^h\ 45' 14''$ ,5     | <i>Tempus ver. observ.</i>           | $0^h\ 46' 20''$ ,4     |
| $109^\circ\ 57. 14$ ,0 | Asc. <sup>o</sup> recta Solis merid. | $110^\circ\ 58. 23$ ,0 |
| 22. 12. 7,0            | Decl. <sup>o</sup> Solis bor. merid. | 22. 4. 9,0             |
| 11. 20. 31,5           | Diff. <sup>a</sup> asc. rectae ♂ & ♀ | 11. 37. 2,8            |
| — 0. 35. 0,3           | Differentia declinat....             | — 0. 41. 13,0          |
| 121. 17. 43,5          | Ascensio recta Veneris               | 122. 35. 47,3          |
| 21. 37. 6,7            | Decl. <sup>o</sup> Veneris borealis  | 21. 22. 54,3           |

## 11. Julii.

| 12. Julii.                            |                                      | 13. Julii.                            |
|---------------------------------------|--------------------------------------|---------------------------------------|
| 0 <sup>h</sup> 47' 27'', <sup>0</sup> | Tempus ver. observ.                  | 0 <sup>h</sup> 48' 31'', <sup>6</sup> |
| 111° 59. 26 , <sup>0</sup>            | Aſc. <sup>o</sup> recta Solis merid. | 113° 0. 23 , <sup>0</sup>             |
| 21. 55. 48 , <sup>0</sup>             | Decl. <sup>o</sup> Solis bor. merid. | 21. 47. 4 , <sup>0</sup>              |
| 11. 53. 21 , <sup>3</sup>             | Diff. <sup>a</sup> aſc. rectae ♂ & ♀ | 12. 9. 57 , <sup>3</sup>              |
| - 0. 47. 51 , <sup>4</sup>            | Differentia declinat....             | - 0. 54. 36 , <sup>1</sup>            |
| 123. 52. 47 , <sup>3</sup>            | Aſcenſio recta Veneris               | 125. 10. 20 , <sup>3</sup>            |
| 21. 7. 56 , <sup>6</sup>              | Decl. <sup>o</sup> Veneris borealis  | 20. 52. 27 , <sup>9</sup>             |

## OBSERVATIONES COMETAE

mense Martii An. 1781. detecti & adhuc apparentis habita*e*

A BARNABA ORIANI.

Singularis Cometa, qui primum in Anglia a D. Hertchſel Astronomiae amatore conspectus est mense Martii hujusce anni 1781., & qui etiamnum apparet, apparbitque fortasse diutius, quam aliis quivis hactenus cognitus, in hoc Observatorio observari coepit die 12. Maii, & posthac illum fere quotidie observationibus secuti sumus. Ob ejus motum lentissimum difficulter ejus orbita ex habitis observationibus determinari potest, cum nonnisi 6. gradus circiter in longitudinem promotus sit intervallo quinque mensium; atque id tantum inferri posse videtur, siquidem ejus orbita proxime parabolica supponatur, valde a Sole distare, adeo ut semidiameter orbitae telluris peregrinam teneat rationem ad radium vectorem Cometæ. Ex continua quoque observatione adhuc constare non potuit, num

cometa ad Solem accedat , vel ab eo recedat , cum eius magnitudo apparet 6" vel 7" sensibiliter eadem modo observetur , sicuti initio mensis Maji visa est . Lucem eius vividiorem factam esse certius constat , atque nunc in dies majorem aquirere fulgorem videtur , & facile pro stella fixa quintae vel sextae magnitudinis accipi potest ab iis , qui illum aliunde non recognoscunt .

Observationes sequentes tamquam accuratas exhibeo , cum singulae ex quatuor vel pluribus observationibus particularibus , quae raro inter se duobus vel tribus minutis secundis arcus aequatoris discrepabant , erutae sint . Eae institutae sunt *Sectore aequatoreali* , & saepe tempore crepusculi , ut appulsus ad fila interioris micrometri exactius obtineretur ; quando obscuro coelo observari debuit , fila per lucem reflexam , more Astronomorum consueto , illuminabantur . Declinatio Cometae , seu differentia declinationis inter ipsum & stellas fixas , cum quibus conferebatur , per solas partes micrometri accuratissime elaborati determinabatur , & forte contigit , ut post conjunctionem Cometa diu versatus sit , & adhuc versetur quamproxime in parallelo stellulae cuiusdam septimae vel octavae magnitudinis , adeo ut refractio nullam variationem ingerat neque in ejus ascensionem rectam , neque in ejus declinationem . Stellulae hujusce positionem per 40. & amplius observationes determinavi , atque illam cum positionibus aliarum fixarum , quae versantur in vicinia semitae , quam Cometa a prima apparitione usque ad hanc diem peragrat , hic subjungo . Praedicta stellula est ordine 10.<sup>a</sup>

*Positiones mediae aliquarum fixarum in constellatione  
Geminorum ad diem 20. Augusti An. 1781.*

| Ordo | Magn. | Ascensio recta | Declinatio borealis |     |    |
|------|-------|----------------|---------------------|-----|----|
|      |       |                | G.                  | M.  | S. |
| 1    | 8     | 86. 57. 11     | 23.                 | 42. | 28 |
| 2    | 8     | 86. 57. 41     | 23.                 | 40. | 10 |
| 3    | 8     | 87. 2. 45      | 23.                 | 18. | 38 |
| 4    | 8     | 87. 3. 15      | 23.                 | 16. | 48 |
| 5    | 7. 8  | 87. 23. 15     | 23.                 | 18. | 43 |
| 6    | 7. 8  | 87. 42. 44     | 23.                 | 15. | 28 |
| 7    | 4.    | 88. 11. 19     | 23.                 | 7.  | 37 |
| 8    | 7. 8  | 88. 53. 10     | 22.                 | 30. | 25 |
| 9    | 5. 6  | 90. 54. 58     | 23.                 | 47. | 53 |
| 10   | 5.    | 91. 24. 4      | 23.                 | 40. | 10 |
| 11   | 6. 7  | 92. 59. 52     | 23.                 | 48. | 30 |
| 12   | 6. 7  | 93. 3. 37      | 23.                 | 32. | 41 |
| 13.  | 7.    | 93. 4. 0       | 23.                 | 25. | 53 |

H. Geminorum.

Cum jam Cometa die 9. Octobris ex directa retrogradus factus sit , & modo pedetentim motus retrogradus major fiat , manifestum est , ipsum per easdem fixas hic adnotatas pertransire posse ; quare ejus loca in proximis observationibus facile inde determinari poterunt ; praeterea facilius recognosci , & ab exiguis fixis discriminari poterit ab iis Astronomis , qui adhuc ipsum non invenerunt .

Ex uniformitate motus , quo Cometa ante & post conjunctionem cum Sole ciebatur , tempus ipsius conjunctionis

satis accurate ex observationibus concludi posset. Ex sequentibus observatis locis colligitur conjunctionem accidisse die 19. Junii 12<sup>h</sup> 0' tempore vero, atque eo instanti longitudo Cometae & Solis eruitur  $= 2^\circ 28' 52'' 30''$ , latitudo cometae borealis  $= 0^\circ 11' 51''$ . Hinc ex hac prima longitudine heliocentrica Cometae, & ex altera, quam mense Decembribus proximo, quando erit in oppositione cum Sole, observare speramus, jam aliquid certius de ejus vera orbita elicetur. Interim elementa orbitae circularis, quam ad ejus motum observatum repraesentandum mihi effinxii, hic adnotare non abs re erit.

Motus Cometae in longitudinem a tellure observatus intervallo 40. dietum post ejus conjunctionem cum Sole est  $= 2^\circ 3' 21''$ . Quapropter motus ejus verus heliocentricus in orbita circulari esset eodem dierum intervallo  $= 0^\circ 24' 49''$ ; ex quibus, per theorematum satis cognita mechanicae, eruitur radius circuli a Cometa descripti, seu ejus a Sole distantia  $= 20,8734$ , posita media distantia terrae a Sole  $= 1$ . Hinc per notissimum *Kepleri* theorema fiet tempus periodicum Cometae  $= (20,8734)^{\frac{2}{3}} = 95$ . annorum, &  $133 \frac{1}{2}$  dierum.

Praeterea ex observata  $103^\circ 1' 0''$  elongatione Cometae a Sole die 8. Octobris 10<sup>h</sup> 0', quando stationarius visus est, in eadem hypothesi orbitae circularis inveni distantiam cometae a Sole  $= 20,03$  semidiametrov orbitae telluris. Quare, etiam si facta hypothesis veritati fortasse conferante non sit, saltem inde concludi posse videtur Cotteram ad Systema accessibile quantitate proxime  $= 20,87 - 20,03 = 0,84$ , scilicet uno circiter semidiametro orbitae telluris, atque

impostorum nos illum & magnitudine ampliorem & motu celeriorem visuros esse speramus. Sed ne inutiliter extra oleam vagemus, praestabit observationes Cometæ describere. Notetur in supputatione longitudinis & latitudinis Cometæ ex observata ejus ascensione recta & declinatione me usum fuisse obliquitate Eclipticae media  $= 23^{\circ} 28' 3''$ .

| 1781.     | Tempus<br>ver. |    |     | Tempus<br>med. |    |    | Longitudo<br>observ.<br>Cometae |     |    | Latitudo<br>borealis<br>observata |     |    |
|-----------|----------------|----|-----|----------------|----|----|---------------------------------|-----|----|-----------------------------------|-----|----|
|           | Dies.          | H. | M.  | S.             | H. | M. | S.                              | S.  | G. | M.                                | S.  | G. |
| Maji. 12. | 9. 35.         | Ω  | 9.  | 31.            | 0  | 2. | 26.                             | 28. | 25 | 0.                                | 11. | 33 |
| 13.       | 9. 38.         | 49 | 9.  | 34.            | 48 | 2. | 26.                             | 31. | 14 | 0.                                | 11. | 33 |
| 14.       | 8. 39.         | 55 | 9.  | 35.            | 54 | 2. | 26.                             | 34. | 16 | 0.                                | 11. | 33 |
| 15.       | 8. 53.         | 39 | 8.  | 49.            | 38 | 2. | 26.                             | 37. | 14 | 0.                                | 11. | 34 |
| 16.       | 8. 0.          | 35 | 7.  | 56.            | 35 | 2. | 26.                             | 40. | 11 | 0.                                | 11. | 34 |
| Julii. 29 | 15. 57.        | 33 | 16. | 30.            | 31 | 3. | 0.                              | 56. | 21 | 0.                                | 12. | 25 |
| 30        | 15. 33.        | 49 | 15. | 39.            | 44 | 3. | 0.                              | 59. | 14 | 0.                                | 12. | 29 |
| Aug. 8    | 16. 30.        | 20 | 16. | 35.            | 24 | 3. | 1.                              | 25. | 9  | 0.                                | 12. | 43 |
| 11        | 16. 21.        | 45 | 16. | 26.            | 22 | 3. | 1.                              | 33. | 5  | 0.                                | 12. | 43 |
| 12        | 16. 39.        | 24 | 16. | 43.            | 49 | 3. | 1.                              | 35. | 56 | 0.                                | 12. | 43 |
|           |                |    |     |                |    |    |                                 |     |    |                                   |     |    |
| 19        | 15. 4.         | 9  | 15. | 7.             | 10 | 3. | 1.                              | 53. | 32 | 0.                                | 12. | 43 |
| 19        | 15. 30.        | 0  | 15. | 33.            | 1  | 3. | 1.                              | 53. | 36 | 0.                                | 12. | 43 |
| 22        | 16. 36.        | 0  | 16. | 38.            | 16 | 3. | 2.                              | 0.  | 43 | 0.                                | 12. | 46 |
| 23        | 16. 48.        | 34 | 16. | 50.            | 35 | 3. | 2.                              | 2.  | 54 | 0.                                | 12. | 51 |
| 24        | 16. 27.        | 3  | 16. | 28.            | 48 | 3. | 2.                              | 5.  | 8  | 0.                                | 12. | 51 |
|           |                |    |     |                |    |    |                                 |     |    |                                   |     |    |
| 25        | 16. 9.         | 10 | 16. | 10.            | 39 | 3. | 2.                              | 7.  | 11 | 0.                                | 12. | 52 |
| 26        | 16. 38.        | 6  | 16. | 39.            | 17 | 3. | 2.                              | 9.  | 19 | 0.                                | 12. | 53 |
| 30        | 16. 21.        | 3  | 16. | 21.            | 4  | 3. | 2.                              | 17. | 18 | 0.                                | 12. | 57 |
| 31        | 16. 42.        | 14 | 16. | 41.            | 56 | 3. | 2.                              | 19. | 15 | 0.                                | 12. | 58 |

| 1781.  | Tempus<br>ver. |     |     | Tempus<br>med. |     |     | Longitudo<br>observ.<br>Cometae. |    |    | Latitudo<br>borealis<br>observata |    |    |     |    |
|--------|----------------|-----|-----|----------------|-----|-----|----------------------------------|----|----|-----------------------------------|----|----|-----|----|
|        | Dies.          | H.  | M.  | S.             | H.  | M.  | S.                               | S. | G. | M.                                | S. | G. | M.  |    |
| Sept.  | 1              | 16. | 38. | 4              | 16. | 37. | 27                               | 3. | 2. | 21.                               | 12 | 0. | 12. | 59 |
|        | 2              | 16. | 38. | 58             | 16. | 38. | 2                                | 3. | 2. | 22.                               | 53 | 0. | 13. | 0  |
|        | 3              | 16. | 48. | 14             | 16. | 46. | 58                               | 3. | 2. | 24.                               | 37 | 0. | 13. | 2  |
|        | 4              | 17. | 0.  | 32             | 16. | 58. | 56                               | 3. | 2. | 26.                               | 24 | 0. | 13. | 4  |
|        | 12             | 16. | 47. | 50             | 16. | 43. | 32                               | 3. | 2. | 38.                               | 18 | 0. | 13. | 21 |
|        | 12             | 17. | 21. | 15             | 17. | 16. | 56                               | 3. | 2. | 38.                               | 20 | 0. | 13. | 21 |
|        | 13             | 17. | 20. | 0              | 17. | 15. | 21                               | 3. | 2. | 39.                               | 42 | 0. | 13. | 23 |
|        | 14             | 17. | 18. | 42             | 17. | 13. | 42                               | 3. | 2. | 40.                               | 53 | 0. | 13. | 25 |
|        | 18             | 17. | 7.  | 2              | 17. | 0.  | 38                               | 3. | 2. | 45.                               | 28 | 0. | 13. | 27 |
|        | 24             | 17. | 27. | 20             | 17. | 18. | 51                               | 3. | 2. | 50.                               | 21 | 0. | 13. | 33 |
|        | 25             | 17. | 35. | 21             | 17. | 26. | 32                               | 3. | 2. | 51.                               | 8  | 0. | 13. | 34 |
|        | 28             | 17. | 29. | 25             | 17. | 19. | 30                               | 3. | 2. | 52.                               | 44 | 0. | 13. | 38 |
| Octob. | 4              | 12. | 4.  | 46             | 11. | 53. | 10                               | 3. | 2. | 54.                               | 39 | 0. | 13. | 48 |
|        | 5              | 11. | 30. | 3              | 11. | 18. | 5                                | 3. | 2. | 54.                               | 47 | 0. | 13. | 50 |
|        | 6              | 11. | 6.  | 21             | 10. | 54. | 11                               | 3. | 2. | 54.                               | 53 | 0. | 13. | 53 |
|        | 7              | 11. | 36. | 17             | 11. | 23. | 50                               | 3. | 2. | 54.                               | 57 | 0. | 13. | 54 |
|        | 8              | 11. | 50. | 47             | 11. | 38. | 4                                | 3. | 2. | 54.                               | 55 | 0. | 13. | 56 |
|        | 9              | 11. | 38. | 32             | 11. | 25. | 33                               | 3. | 2. | 54.                               | 49 | 0. | 13. | 57 |
|        | 10             | 10. | 54. | 49             | 10. | 41. | 36                               | 3. | 2. | 54.                               | 39 | 0. | 13. | 58 |
|        | 14             | 11. | 9.  | 26             | 10. | 55. | 22                               | 3. | 2. | 53.                               | 41 | 0. | 14. | 2  |
|        | 17             | 10. | 48. | 40             | 10. | 33. | 55                               | 3. | 2. | 52.                               | 21 | 0. | 14. | 5  |
|        | 20             | 18. | 13. | 56             | 17. | 58. | 39                               | 3. | 2. | 50.                               | 28 | 0. | 14. | 9  |
|        | 22             | 18. | 18. | 55             | 18. | 3.  | 23.                              | 3. | 2. | 49.                               | 0  | 0. | 14. | 16 |

## OBSERVATIO ECLIPSIS SOLIS

dies 16. Octobris An. 1781. habita

a BARNABA ORIANI.

**Q**uando Eclipsis incipere debebat frequentes nubes Solem operiebant, & vix incoepsum conspicere potui  $19^{\text{h}} 25' 0''$  temp. vero. Finem, Sole splendidissimo fulgente, accuratissime observavi  $21^{\text{h}} 4' 57''$  tempore vero. Observationem institui tubo achromatico Dollondiano, cuius focalis distantia octo pedum est. D. Chronthal, qui telescopio catadioptrico gregoriano duorum pedum usus est, eodem omnino instanti & ipse finem vidit.

Ad determinandam saltem ex observato fine Eclipsis conjunctionem Solis & Lunae, atque ad eliciendum erorem tabularum lunarium T. Mayeri & D. Euleri pro hac observatione utor eadem accuratissimè & pereleganti methodo D. de la Grange, quae fuse explanata reperitur in Ephemeridibus Berolinensibus ad annum 1782., & quam in praecedenti volumine jam indicavimus. Itaque iidem characteres in hoc casu idem significant, siquidem, quod ibi de stella fixa diximus, hic de Sole intelligatur, scilicet A ponatur longitudo centri Solis, & a differentia inter motum horarum Solis & Lunae; praeterea dicatur D semidiameter Solis, &  $\Psi$  parallaxis horizontalis Solis  $= 8'',3$ . Invenientur primo ex formulis ibidem indicatis valores ipsorum  $\lambda\psi$ ,  $\mu\psi$ , &  $\nu\psi$  pro parallaxi  $\psi$  Lunae; & valores, ex illis facile eliciendi, ipsorum  $\mu\Psi$ , &  $\nu\Psi$

pro parallaxi  $\gamma$  Solis, habebiturque pro fine eclipsis aequatio

$$\left( \frac{\sin. d}{\cos. D} + (\cos. b \cos. t - \sin. \lambda \dot{\psi}) \tan. D \right)^2 = \\ (\cos. b \sin. t - \sin. (\mu \dot{\psi} - \nu \dot{\psi}))^2 + (\sin. b - \sin. (\nu \dot{\psi} - \mu \dot{\psi}))^2, \text{ ex qua valor ipsius } t, \text{ seu differentiae longitudinis inter Solem \& Lunam colligetur.}$$

*Elementa calculi ex tabulis derivata ita se habent*

Pro fine Eclipsi.

Tempus verum . . . . . 21<sup>h</sup> 4. 57<sup>''</sup>

Tempus medium . . . . . 20. 50. 20

Longitude Lunae . . . . . 6° 23' 54" 25",4

Latitude bor. = b = 0. 8. 39 ,4

Parallaxis Lunae aequatorea = 61. 34 ,8

Semidiameter Lunae . . d = 36. 46 ,6

Semidiameter Solis = D = 36. 7 ,6

a = 35. 34 ,3

b = — 3. 32 ,3

Longitude Solis = A = 6. 24. 19. 50 ,4

θ = 5. 8. 31. 12 ,0

φ = 1. 15. 13. 8 ,0

logar. p = 9,9990446

Atque erant, pro  $\dot{\psi} = 1^\circ$ ,  $\lambda \dot{\psi} = + 23' 0'',0$ ,  $\mu \dot{\psi} = - 45' 35'',8$ ,  $\nu \dot{\psi} = + 32' 54'',4$ , ex quibus colliguntur, pro  $\dot{\psi} = p$ ,  $\sin. 61' 34'',1 = 61' 26'',0$ , valores  $\lambda \dot{\psi} = + 23' 33'',0$ ,  $\mu \dot{\psi} = - 46' 41'',3$ ,  $\nu \dot{\psi} = 33' 41'',3$ ,

atque, pro  $\varphi = 8'',5$ , fiet  $\mu \Psi = - 6'',5$ , &  $\nu \Psi = + 4'',7$ , quare habebitur sequentia

$$(0,00484828 + 0,00469108 \cos t)^3 =$$

$(0,01354868 + 0,9999970 \sin t)^2 + (-0,00725799)^2$   
 ex qua eruetur  $t = - 25^\circ 17'',7$ . Hinc prodibit instantia  
 conjunctionis Solis & Lunae pro die 16. Octobris 1781.  
 $21^h 47' 37'$  temp. ver. seu  $21^h 33' 0''$  temp. med., quo  
 tempore longitudo Solis & Lunae erat  $6^\circ 24' 21' 36'',6$ ;  
 latitudo Lunae borealis  $= 0^\circ 6' 8'',4$ , atque error tabu-  
 larum Lunarium Tob. Mayeri in longitudine Lunae  $=$   
 $- 0' 7'',3$ , & D. Euleri  $= - 0' 36'',5$ .

### OBSERVATIONES SATELLITUM JOVIS

habitus tubo Gregoriano duorum pedum

a F. REGGIO ET A. DE CESARIS COMPARATAE  
 cum praecipuis correspondentibus & cum Tabulis  
 a Clar. WARGENTIN.

### OBSERVATIONES I. SATELL.

| Dies.      | Observatio. |     |            | Err. Calc.         |
|------------|-------------|-----|------------|--------------------|
|            | H.          | M.  | S.         |                    |
| 1777. Maj. | 9.          | 57. | 54.        | 0. 2. + Paris. Cl. |
|            | 10.         | 25. | 48.        | 0. 32. — Mediolani |
|            | 10.         | 30. | 23. Em.    | 0. 23. — Pisii     |
| Dec.       | 7.          | 17. | 3. 25. Im. | 0. 46. + Massiliae |
|            | 17.         | 42. | 45.        | 0. 40. + Perinaldi |
|            | 17.         | 18. | 46.        | 0. 40. + Mediolani |

## OBSERVATIONES I. SATELL.

|       |         | Observatio.   | Er. Calc.  |  |
|-------|---------|---|--|--|
|       | Dies.   | H. M. S.  | M. S.  |  |
| 1777. | Dec. 16 | 13. 36. 18.<br>13. 41. 51. Im.  | o. 50. + Mediolanī<br>o. 1. + Pisīs  |  |
| 1778. | Apr. 5  | 8. 46. 38. Em.<br>9. 8. 24.<br>9. 14. 9.<br>9. 18. 39.<br>9. 30. 37. Em.                      | o. 37. + Paris. Cluguy<br>o. 14. + Perinaldi<br>o. 30. + Mediolanī<br>o. 44. + Pisīs<br>o. 46. + Berolini                        |  |
|       | 12      | 10. 43. 13. Em.<br>10. 44. 1.<br>10. 48. 43.<br>11. 10. 49.<br>11. 15. 11.<br>12. 35. 20. Em. | o. 37. + Paris. Obs.<br>o. 9. — Paris. Cl. dub.<br>o. 11. + Genevæ<br>o. 27. + Mediolanī<br>o. 49. + Pisīs<br>o. 28. + Petropoli |  |
| 1779. | Jan. 4  | 14. 11. 10. Im.<br>14. 38. 13.<br>18. 17. 52. 49.<br>17. 53. 4.<br>18. 19. 59.                | o. 19. + Paris. Cl.<br>o. 42. + Mediolanī<br>o. 24. + Paris. Cl.<br>o. 7. + Paris. Obs.<br>o. 12. — Mediolanī                    |  |
|       | Febr. 3 | 16. 17. 36.<br>16. 32. 21.  | o. 14. + Massiliae<br>o. 44. + Mediolanī   |  |
|       | 10      | 18. 11. 6.<br>18. 25. 34.   | o. 20. + Massiliae<br>1. 1. + Mediolanī <i>susp.</i>   |  |
|       | 19      | 13. 33. 40.<br>14. 48. 43.<br>15. 5. 20.  | o. 30. + Massiliae<br>o. 42. + Mediolanī<br>o. 49. + Berolini  |  |
|       | 21      | 9. 17. 35.  | o. 29. + Mediolanī   |  |
|       | 26      | 16. 43. 33.   | o. 53. + Mediolanī   |  |
|       | 28      | 10. 57. 38.<br>11. 12. 46.<br>11. 17. 57.   | o. 19. + Massiliae<br>o. 26. + Mediolanī<br>o. 4. — Pisīs  |  |

## OBSERVATIONES I. SATELL.

| Dies.          | Observatio. |     |     | Err. Calc. |        |                      |
|----------------|-------------|-----|-----|------------|--------|----------------------|
|                | H.          | M.  | S.  | M.         | S.     |                      |
| 1779. Febr. 28 | 11.         | 29. | 56. | Im.        | o. o.  | Berolini             |
| Apr. 8         | 12.         | 5.  | 22. | Em.        | o. 19. | — Mediolani          |
|                | 12.         | 9.  | 35. |            | o. 12. | + Pisis              |
| Maj. 3         | 12.         | 22. | 22. |            | o. 4.  | — Mediolani          |
|                | 13.         | 46. | 38. |            | o. 12. | + Petropoli          |
| 17             | 10.         | 28. | 46. |            | o. 8.  | — Genevae            |
|                | 10.         | 40. | 35. |            | o. 25. | + Mediolani          |
| 24             | 12.         | 7.  | 31. |            | o. 14. | + Paris. Cl.         |
|                | 12.         | 35. | 23. |            | o. 14. | — Mediolani          |
|                | 13.         | 8.  | 41. | Em.        | o. 1.  | + Upsaliae           |
| 1780. Febr. 24 | 12.         | 8.  | 12. | Im.        | o. 11. | + Mediolani          |
| Mart. 11       | 10.         | 0.  | 4.  |            | o. 29. | + Paris. Obs.        |
|                | 10.         | 27. | 37. |            | o. 22. | + Mediolani          |
|                | 11.         | 3.  | 1.  | Im.        | o. 27. | + Stokh.             |
| Maj. 5         | 9.          | 20. | 48. | Em.        | o. 9.  | — Massiliae          |
|                | 9.          | 35. | 38. | Em.        | o. 16. | + Mediolani          |
| 28             | 9.          | 32. | 51. | Em.        | o. 10. | — Massiliae          |
|                | 9.          | 48. | 0.  |            | o. 16. | + Mediolani          |
|                | 11.         | 12. | 23. |            | o. 25. | + Petropoli          |
| Jun. 20        | 9.          | 41. | 48. |            | o. 12. | — Massiliae          |
|                | 9.          | 56. | 58. | Em.        | o. 17. | + Mediolani          |
| 1781. Febr. 26 | 14.         | 33. | 6.  | Im.        | o. 7.  | + Paris. Obs.        |
|                | 14.         | 59. | 9.  |            | 1.     | 30. + Mediolani dub. |
| Mart. 5        | 16.         | 28. | 50. |            | o. 1.  | + Paris. Obs.        |
|                | 16.         | 55. | 3.  |            | o. 29. | + Mediolani          |
|                | 17.         | 31. | 0.  |            | o. 1.  | + Stokh.             |
| 14             | 12.         | 51. | 28. |            | o. 52. | + Paris. Obs. dub.   |
|                | 13.         | 19. | 26. |            | o. 20. | + Mediolani          |
| 21             | 15.         | 15. | 47. |            | o. 20. | — Mediolani          |
| Apr. 6         | 14.         | 11. | 9.  |            | o. 19. | + Stokh.             |

## OBSERVATIONES I. SATELL.

| Dies.      | Observatio. |     |     | Err. Calc. |                         |
|------------|-------------|-----|-----|------------|-------------------------|
|            | H.          | M.  | S.  |            |                         |
| 1781. Apr. | 15          | 9.  | 59. | 41.        | o. 58. + Mediolani dub. |
|            | 22          | 11. | 55. | 32.        | o. 43. + Mediolani      |
|            | 29          | 14. | 26. | 37. Im.    | o. 27. + Stokh.         |
| Maj.       | 17          | 9.  | 22. | 5. Em.     | o. 19. — ibidem         |
|            | 34          | 13. | 10. | 0.         | o. 8. — ibidem          |
| Jun.       | 16          | 11. | 25. | 9. Em.     | o. 13. + ibidem         |

## OBSERVATIONES II. SATELL.

| Dies.       | Observatio. |     |     | Err. Calc. |                         |
|-------------|-------------|-----|-----|------------|-------------------------|
|             | H.          | M.  | S.  |            |                         |
| 1778. Apr.  | 12          | 8.  | 2.  | 10. Em.    | o. 15. + Paris. Obs.    |
|             |             | 8.  | 2.  | 32.        | o. 5. — Paris. Cl.      |
|             |             | 8.  | 17. | 57.        | o. 28. — Genevae        |
|             |             | 8.  | 30. | 5.         | o. 14. — Mediolani      |
|             |             | 8.  | 34. | 12.        | o. 23. + Pisis          |
|             |             | 9.  | 5.  | 23.        | o. 3. — Stokh.          |
| 1779. Maj.  | 15          | 9.  | 54. | 34. Em.    | o. 9. — Petropoli       |
|             |             | 9.  | 6.  | 1. Em.     | o. 17. + Mediolani      |
|             |             | 9.  | 41. | 9.         | o. 38. + Stokh.         |
|             | 22          | 11. | 15. | 8.         | o. 6. + Paris. Obs.     |
|             |             | 11. | 15. | 10.        | o. 6. + Paris. Cl.      |
|             |             | 11. | 30. | 6.         | o. 12. — Genevae        |
| 1780. Mart. | 19          | 11. | 42. | 13.        | o. 27. + Mediolani      |
|             |             | 11. | 57. | 33.        | 1. 31. + Berolini susp. |
|             |             | 10. | 38. | 47. Im.    | o. 27. + Mediolani      |
|             |             | 12. | 22. | 38.        | 1. 18. + Petropoli dub. |

## OBSERVATIONES II. SATELL.

| <i>Dies.</i>   | <i>Observatio.</i> | <i>Err. Calc.</i>     |
|----------------|--------------------|-----------------------|
|                | <i>H. M. S.</i>    | <i>M. S.</i>          |
| 1780. Mart. 26 | 13. 5. 51.         | 1. 26. + Paris. Obs.  |
|                | 13. 18. 40.        | 0. 48. + Massiliae    |
|                | 13. 33. 45. Im.    | 0. 58. + Mediolani    |
| Apr. 20        | 13. 31. 37. Em.    | 1. 33. + Stokh. bona. |
| Jun. 16        | 9. 33. 14. Em.     | 1. 1. + Mediolani     |
| 1781. Mart. 20 | 12. 24. 54. Im.    | 0. 22. + Mediolani    |
|                | 27 15. 36. 9.      | 0. 3. + Stokh.        |
|                | 12. 33. 48.        | 0. 5. — Mediolani     |
| Apr. 21        | 12. 3. 46.         | 0. 22. + Stokh.       |

## OBSERVATIONES III. SATELL.

| <i>Dies.</i>  | <i>Observatio.</i> | <i>Err. Calc.</i>    |
|---------------|--------------------|----------------------|
|               | <i>H. M. S.</i>    | <i>H. M. S.</i>      |
| 1781. Jan. 21 | 17. 45. 15. Im.    | 0. 20. + Stokh.      |
|               | 19. 19. 18. Em.    | 0. 1. — ibidem dub.  |
| Febr. 26      | 14. 2. 57. Em.     | 1. 40. + Paris. Obs. |
|               | 16. 27. 37. Im.    | 0. 2. + ibidem       |
| Mart. 5       | 16. 34. 13. Im.    | 0. 52. + Mediolani   |
|               | 17. 29. 31. Im.    | 1. 3. + Stokh.       |
|               | 13. 27. 51. Im.    | 1. 35. + ibidem      |
| Apr. 10       | 15. 7. 53. Em.     | 0. 9. + ibidem dub.  |

In Calculis assumptae Differ. Meridianorum Observatorii  
Parisiensis & Mediolan. . . . . o<sup>h</sup> 27' 26"

Parisiensis & Pisani . . . . . o. 32. 10

Parisiensis & Genevensis . . . . o. 15. 4

Reliquas ut in Ephemeridibus Mediol. anni 1778.

## OBSERVATIONES SATELLITUM JOVIS

*habitate tubo acromatico Dollondiano octo pedum*

A BARNABA ORIANI.

## OBSERVATIONES I. SATELL.

Temp. vero.

An. 1780. 24. Febr. Imm. 12<sup>h</sup> 8' 12"

11. Mart. Imm. 10. 27. 37.

5. Maj. Em. 9. 35. 28.

28. Maj. Em. 9. 47. 43.

20. Jun. Em. 9. 56. 49.

6. Jul. Em. 8. 12. 3.

29. Jul. Em. 8. 23. 33.

An. 1781. 21. Mart. Imm. 15. 9. 58.

22. Apr. Imm. 11. 55. 58. dubia

15. Maj. Em. 14. 18. 1.

17. Maj. Em. 8. 46. 20.

2. Jul. Em. 9. 4. 47.

9. Jul. Em. 10. 59. 23. telescop. 2. ped.

25. Jul. Em. 9. 17. 46.

10. Aug. Em. 7. 37. 30.

## OBSERVATIONES II. SATELL.

Temp. vero.

An. 1780. 19. Mart. Imm. 10<sup>h</sup> 58' 54"

26. Mart. Imm. 13. 34. 26.

16. Jun. Em. 9. 32. 43.

An. 1781. 20. Mart. Em. 12. 20. 2.

21. Apr. Imm. 12. 4. 8.

28. Apr. Imm. 14. 38. 24.

16. Maj. Em. 11. 21. 36.

27. Jun. Em. 10. 50. 19.

## OBSERVATIONES III. SATELL.

Temp. vero.

|                     |                              |
|---------------------|------------------------------|
| An. 1780. 12. Mart. | Imm. 10 <sup>h</sup> 11' 22" |
| 19. Jul.            | Em. 11. 58. 55. —            |
| An. 1781. 16. Maj.  | Imm. 9. 57. 24. ±            |
| 28. Jun.            | Em. 10. 30. 15.              |
|                     | Em. 10. 18. 22.              |

## OBSERVATIONES METEOROLOGICAE

Anno 1780.

*Habitas in Specula Astronomica Mediolanensi*

▲ FRANCISCO REGGIO.

Observationes meteorologicae anni 1780. hic exhibentur, circa quas praefat adnotare, quod observacionibus praecedentium annorum praemisimus. Altitudines Mercurii in barometro, & in thermometro bis singulis diebus observantur, barometrum scilicet mane, & vespere intervallo circiter horarum 12; thermometrum per id tempus quo elationes liquoris minimae & maximae esse solent oriente scilicet Sole, & circa horam 3.<sup>am</sup> post meridiem, quibus temporibus directio etiam venti & status coeli adnotantur, ita vero ut quaelibet sensibilis atmosphaerae variatio si quae contingat intra diem in idem diarium referatur, hujusmodi sunt pluvia, nix, grando, procellae, repentinae furentis venti impetus, aurorae boreales, & his similia.

Diameter tubi barometri rite aeris expurgati trium circiter linearum, superficies stagnantis satis ampla. Thermometrum juxta methodum Reaumurii divisum a gradu congelationis ad gradum ebullientis aquae pollices 7 & lineas proxime 11 Parisenses excipit. Laminae illae versatiles, & ad omnem auram mobiles in summis turribus Mediolani satis frequentes loco anemometri ventorum directionem nos docent, quam etiam plerumque juvat inferre ex via summi prodeuntis ex aedium caminis, quaqua liberis ab omni circumstanti obice, qui vel directionem immutare vel actionem impedire valeat spirantis aeris. Methodus haec postrema, si Observator aperto gaudeat horizonte, ejusque praecipua puncta rite cognoscat, quovis anemometro accuratior censenda est Mediolani praesertim, ubi plerumque venti spirant admodum lenes.

Pro mensura aquae pluviae, vas plumbeum, cuius area linearum Parisiensium 74653,3 exponitur libero ac aperto coelo in summo speculae fastigio. Aqua pluvia intra ejusdem vasis aream defluit per plumbeum canalem in vas alterum satis capax, in inferiori cubiculo situm: dein tempore idoneo aquam in hujusmodi vas collectam licet metiri mensura quadam parallepipeda, quam rite novimus ab explorata ejus capacitatem: etenim aqua ad altitudinem lineae Parisiensis 1,23 intra superioris vasis aream exactè compleat hujusmodi mensuram.

Experimentum etiam evaporantis aquae singulis anni mensibus, si duo vel tres excipias hyemales, instituimus. Immissa quantitate aquae haud modica intra vos plum-

beum pedis cibici item in summo Speculae fastigio libero aeri expositum, aquae altitudinem initio & fine cujusque mensis exploramus. Ex collatis dein inter se altitudinibus, & cognita ope alterius experimenti, de quo supra, quantitate aquae pluviae licet quantitatem evaporatae aquae inferre, ut patet. Apparatus quidam exterius vasis latera ita vestit, ut omnem lateralem actionem radiorum solarium, quantum fieri potest, avertat.

In columnis sequentium tabularum, quae docent statum coeli, nomini ventorum, qui vehementer flaverint adjicitur asteriscus \*; coelum serenum, nubilum, nebulosum denotant initiales sillabae ser., nub., nebul.; coelum partim serenum partim nubilum, eadem initiales lineola junctae ser-nub., vel nub-ser. Initiales item pluv., pluviam, procell. procellam significant.

Ad calcem tabularum pro singulis mensibus adduntur altitudines maxime, minime, mediae barometri & thermometri, item quantitas aquae pluviae, & evaporationis, & numerus dierum serenorum, quem conflant nedit diēs perfectè sereni, sed etiam summa intervaliorum temporis, quibus coelum satis serenum, ut coalescere potuerit notatus numerus, quod, ut patet, nisi quadam aestimatione potuit definiri.

| 1780<br>JULY | Mane.          |                 |                 | Vespere.       |                 |                   |
|--------------|----------------|-----------------|-----------------|----------------|-----------------|-------------------|
|              | Altit.<br>Bar. | Altit.<br>Tber. | Status Coeli.   | Altit.<br>Bar. | Altit.<br>Tber. | Status Coeli.     |
| 1            | 28. 0,5        | +               | O. ser.         | 28. 0,0        | +               | O. ser.           |
| 2            | 27. 11,9       | —               | O. ser.         | 27. 9,0        | —               | O. ser.           |
| 3            | 7,6            | +               | S. ser-nub.     | 6,6            | 3,0             | S. O. ser.        |
| 4            | 5,8            | 0,0             | N. O. ser.      | 8,5            | 3,0             | S. nebula         |
| 5            | 9,5            | 0,0             | E. ser.         | 8,5            | 1,0             | N. O. ser.        |
| 6            | 9,2            | —               | E. ser.         | 8,6            | 0,0             | E. ser.           |
| 7            | 8,5            | 1,3             | O. ser.         | 11,0           | 0,6             | E. ser.           |
| 8            | 28. 0,0        | 0,0             | E. nub-ser.     | 28. 0,0        | 1,5             | E. ser.           |
| 9            | 27. 11,2       | 3,0             | E. ser.         | 27. 10,3       | 0,0             | E. ser.           |
| 10           | 9,3            | —               | O. ser.         | 8,6            | 0,0             | E. ser.           |
| 11           | 7,7            | 1,6             | N. O. nub.      | 6,7            | 0,0             | N. O. nub.        |
| 12           | 5,5            | 1,6             | O. ser.         | 5,0            | 1,5             | O. ser.           |
| 13           | 5,0            | 2,5             | E. ser.         | 7,8            | 1,5             | E. ser-nub.       |
| 14           | 8,5            | 0,5             | E. nub.         | 9,0            | 0,2             | N. E. n. s. pluv. |
| 15           | 8,5            | 0,7             | O. nub.         | 6,5            | 1,0             | S. O. nub.        |
| 16           | 6,6            | 0,0             | N. O. nix       | 3,5            | 1,0             | N. O. nix         |
| 17           | 2,3            | 0,0             | N. O. nub.      | 1,3            | 0,8             | E. nix            |
| 18           | 1,0            | +               | O. nub.         | 2,5            | 2,6             | O. ser.           |
| 19           | 3,9            | 0,0             | N. E. nub-ser.  | 5,0            | 2,0             | nub.              |
| 20           | 5,3            | 1,3             | S. E. nub.      | 5,3            | 4,0             | O. ser-nub.       |
| 21           | 5,0            | 1,0             | nebula          | 4,5            | 2,3             | N. O. ser.        |
| 22           | 5,0            | 0,3             | nebula          | 5,3            | 3,0             | E. nub-ser.       |
| 23           | 5,3            | 0,6             | N. E. nix       | 5,5            | 1,3             | N. E. nix         |
| 24           | 5,3            | 0,0             | E. nub.         | 5,5            | 1,5             | N. E. nix         |
| 25           | 5,5            | —               | N. E. nix       | 5,5            | 1,0             | N. E. nix         |
| 26           | 5,5            | 0,6             | N. E. nub.      | 5,5            | 0,6             | O. nub.           |
| 27           | 6,0            | 1,6             | N. O. nub-ser.  | 6,5            | 1,0             | N. O. nub-ser.    |
| 28           | 7,0            | 1,6             | O. nub-ser. nix | 7,0            | 0,6             | O. ser.           |
| 29           | 7,0            | 5,6             | O. ser.         | 6,5            | —               | O. nub.           |
| 30           | 6,3            | 2,0             | N. E. nix       | 5,5            | 0,5             | N. O. nix         |
| 31           | 4,6            | 1,5             | N. O. nub.      | 2,6            | +               | N. O. nix         |

Altitud. max. Bar. poll. 28. lin. 0,5 | Altitudo maxima Therm. + 4,0  
 minima . . . poll. 27. lin. 1,0 | minima . . . . . — 5,6  
 media . . . poll. 27. lin. 6,8 | media . . . . . — 0,1  
 Quant. aquae plav. poll. 2. lin. 4,8  
 Dies sercni . . . . . 14.

## Mane.

## Vespere.

| 1780<br>Mense | Altit.<br>Bar. | Altit.<br>Therm. | Status<br>Cœli.  | Altit.<br>Bar. | Altit.<br>Therm. | Status<br>Cœli. |
|---------------|----------------|------------------|------------------|----------------|------------------|-----------------|
| 1             | 27. 2,6        | +                | 0,0              | 27. 3,0        | +                | 2,5             |
| 2             | 3,5            |                  | E. nub.          | 2,6            |                  | E. pluvia.      |
| 3             | 2,5            | 0,8              | E. nub.          | 2,6            | 2,5              | E. pluvia.      |
| 4             | 2,5            | 1,0              | O. nub.          | 3,5            | 3,0              | O. nub.         |
| 5             | 5,6            | —                | O. nub-ser.      | 7,5            | 3,0              | E. ser.         |
| 6             | 7,6            | 0,0              | E. nub.          | 7,3            | 2,5              | E. pluv.        |
| 7             | 7,3            | 1,6              | Tertæm. neb      | 7,0            | 0,2              | N. O. nebula    |
| 8             | 7,0            | +                | N. E. nub.       | 7,3            | 3,6              | O. ser.         |
| 9             | 8,8            | —                | 1,0              | 10,3           | 3,0              | O. ser.         |
| 10            | 28. 0,0        |                  | O. ser.          | 28. 0,6        | 3,6              | E. ser.         |
| 11            | 1,0            | 0,3              | E. ter.          | 1,0            | 3,6              | E. ser.         |
| 12            | 0,6            | +                | E. hub.          | 7,10,0         | 3,0              | O. ser.         |
| 13            | 27. 10,0       |                  | E. fer.          | 10,0           | 3,9              | E. ser.         |
| 14            | 10,6           | 0,0              | E. fer.          | 10,5           | 3,0              | S. E. fer.      |
| 15            | 19,5           | 0,0              | E. fer.          | 9,0            | 3,9              | E. fer.         |
| 16            | 8,5            | 0,0              | E. fer.          | 8,5            | 0,0              | S. E. fer.      |
| 17            | 7,0            | 0,0              | S. O. neb. ser.  | 8,5            | 5,5              | O. * fer.       |
| 18            | 4,5            | 2,0              | N. E. * fer.     | 8,5            | 3,0              | N. E. * sub.nix |
| 19            | 8,5            | —                | N. E. fer.       | 8,5            | 0,6              | N. fer.         |
| 20            | 8,0            | 4,7              | O. fer.          | 7,3            | 0,0              | E. fer-nub.     |
| 21            | 6,5            | 1,0              | E. hub.nix.      | 4,5            | 0,0              | E. nub; nix     |
| 22            | 3,8            | 0,5              | E. hub.          | 1,3            | 2,0              | N. O. sub fer.  |
| 23            | 1,5            | 0,6              | N. hub.          | 3,5            | 2,0              | N. E. hub;      |
| 24            | 15,5           | 0,0              | N. O. hub-ser.   | 9,0            | 3,0              | N. * fer.       |
| 25            | 19,5           | 2,3              | O. fer.          | 28. 9,0        | 2,3              | E. fer.         |
| 26            | 28. 0,3        | 2,3              | E. fer.          | 27. 10,3       | 2,5              | O. fer.         |
| 27            | 27. 7,0        | 0,0              | S. E. nub.       | 9,2            | 2,0              | N. E. * nix     |
| 28            | 7,0            | 0,6              | N. E. * nub-ser. | 9,0            | 4,0              | N. E. * fer.    |
| 29            | 8,5            | 1,5              | O. fer.          | 9,5            | 4,0              | O. fer.         |
| 30            | 10,0           | 0,0              | E. fer.          | 9,5            | 4,5              | E. nub-ter.     |

Altit. max. Bar. poll. 28. lin. 1,0 Altitudo maxima Therm. + 4,9  
 minima ... poll. 27. lin. 1,3 minima ... ... ... 5,0  
 media ... poll. 28. lin. 2,7 media ... ... ... + 0,9

Quant. aquæ pluv. poll. o. lin. 8,8.

Dies sereni . . . . 17.

| Menses. | Mane.   |                |                 | Vespere.      |                |                 |
|---------|---------|----------------|-----------------|---------------|----------------|-----------------|
|         | 1780    | Altit.<br>Bar. | Altit.<br>Tber. | Status Coeli. | Altit.<br>Bar. | Altit.<br>Tber. |
| 1       | 27. 9,3 | + 0,6          | O. fer.         | 27. 9,6       | + 10,0         | O. * fer.       |
| 2       | 10,3    | 1,7            | E. fer.         | 10,2          | 8,0            | S. nub-fer.     |
| 3       | 10,2    | 4,0            | E. nub.         | 9,5           | 6,5            | E. nub. pl.     |
| 4       | 9,0     | 5,0            | E. nub.         | 11,0          | 6,0            | E. nub.         |
| 5       | 28. 0,6 | 3,8            | N. O. fer.      | 28. 2,0       | 9,0            | S. fer-nub.     |
| 6       | 2,8     | 3,6            | N. E. nub.      | 1,6           | 8,5            | E. nub-fer.     |
| 7       | 1,0     | 3,3            | N. E. fer.      | 27.11,5       | 11,5           | O. fer.         |
| 8       | 27.11,5 | 5,0            | E. fer.         | 28. 0,5       | 12,0           | S. E. fer.      |
| 9       | 28. 4,5 | 6,5            | E. fer.         | 1,0           | 11,C           | S. E. fer.      |
| 10      | 1,6     | 5,6            | E. fer.         | 1,3           | 12,0           | E. fer.         |
| 11      | 1,3     | 8,0            | E. nub-fer.     | 1,0           | 11,5           | E. fer.         |
| 12      | 0,6     | 6,3            | E. nub-fer.     | 0,0           | 11,0           | O. fer.         |
| 13      | 0,0     | 7,0            | E. nub-fer.     | 0,3           | 11,0           | S. E. nub.      |
| 14      | 0,3     | 7,0            | E. fer-nub.     | 27.11,5       | 12,0           | E. nub-fer.     |
| 15      | 27.10,0 | 7,5            | E. nub-fer. pl. | 8,5           | 12,0           | S. E. nub-fer.  |
| 16      | 7,8     | 8,0            | E. fer-nub      | 8,0           | 11,0           | S. E. fer.      |
| 17      | 8,0     | 5,5            | O. fer.         | 11,0          | 12,C           | S. E. fer.      |
| 18      | 28. 0,0 | 6,5            | E. fer.         | 10,0          | 12,C           | S. E. nub.      |
| 19      | 27. 9,0 | 7,0            | O. fer.         | 9,0           | 13,3           | N. * fer.       |
| 20      | 9,0     | 7,0            | E. fer.         | 11,0          | 13,5           | O. fer.         |
| 21      | 28. 0,0 | 7,3            | E. fer.         | 28. 0,0       | 13,0           | O. fer.         |
| 22      | 27.11,5 | 7,3            | S. E. nub.      | 27. 9,0       | 11,0           | S. E. nub.      |
| 23      | 8,6     | 9,5            | N. O. nub-fer.  | 9,5           | 13,0           | N. O. fer-nub.  |
| 24      | 10,3    | 6,0            | E. fer.         | 10,3          | 11,0           | S. E. fer.      |
| 25      | 11,0    | 6,0            | S. E. fer-nub.  | 11,5          | 11,C           | E. nub.         |
| 26      | 11,8    | 7,0            | E. fer.         | 28. 0,0       | 12,5           | E. fer.         |
| 27      | 28. 0,0 | 7,3            | E. fer.         | 27.11,C       | 14,0           | O. fer.         |
| 28      | 27.11,0 | 8,2            | O. fer.         | 10,6          | 14,0           | O. fer-nub.     |
| 29      | 11,5    | 8,6            | O. fer-nub.     | 11,5          | 15,5           | O. fer.         |
| 30      | 11,0    | 10,5           | E. nub.         | 10,5          | 15,0           | O. sub-fer.     |
| 31      | 9,5     | 11,2           | E. nub-fer.     | 6,5           | 13,0           | E. pluvia       |

Altitud. max. Bar. poll. 28. lin. 2; 8 Altitud. maxima Therm. + 15,5  
 minima . . . poll. 27. lin. 6; 5 minima . . . . . + 0,6  
 media . . . poll. 27. lin. 17,2 media . . . . . + 9,1  
 Quant. aquae pluv. poll. o. lin. 3,9.  
 Dies fereni . . . . . 20.

## Mane.

## Vespere.

| April. | Altit.<br>Bar. | Altit.<br>Tber. | Status Coeli. | Altit.<br>Bar. | Altit.<br>Tber. | Status Coeli.    |
|--------|----------------|-----------------|---------------|----------------|-----------------|------------------|
| 1      | 27. 5,8        | 8,3             | E. sub-ser.   | 27. 6,5        | 14,0            | O. ser-nub.      |
| 2      | 7,0            | 7,3             | S.O. fer-nub. | 5,7            | 14,0            | O. fer-nub.      |
| 3      | 5,3            | 8,3             | E. nub.       | 26.11,5        | 12,3            | N.E. *nu. O.*pl. |
| 4      | 0,0            | 6,6             | N.E. nub.     | 27. 2,5        | 10,0            | N.E. nub.        |
| 5      | 4,0            | 6,0             | N.O. fer.     | 4,6            | 10,0            | N. fer.          |
| 6      | 5,5            | 5,0             | E. fer. sub   | 5,5            | 7,9             | O. fer.          |
| 7      | 5,5            | 4,0             | N.O. fer.     | 6,5            | 11,0            | O.*fer.          |
| 8      | 5,6            | 5,2             | E. nub.       | 5,5            | 10,3            | E.*nub.          |
| 9      | 5,5            | 6,2             | N.E. pluvia   | 6,0            | 8,2             | N.O.*pluvia      |
| 10     | 6,5            | 5,0             | N.O. nub.     | 7,0            | 10,0            | S.O. fer.        |
| 11     | 7,8            | 5,0             | E. fer.       | 6,0            | 11,0            | S.E. nub-ser.    |
| 12     | 5,8            | 6,6             | E. nub.       | 5,0            | 8,9             | E.*pluvia        |
| 13     | 3,6            | 5,6             | N.E. pluvia   | 3,5            | 7,6             | S.E. pluvia      |
| 14     | 4,0            | 6,3             | E. nub.       | 6,0            | 11,0            | S.O. nub-ser.    |
| 15     | 6,6            | 6,0             | O. fer.       | 7,5            | 10,0            | S.O. pluv. pros. |
| 16     | 7,5            | 6,0             | N. nub.       | 7,5            | 11,0            | O. fer.          |
| 17     | 7,6            | 6,6             | E. fer.       | 7,5            | 13,5            | O. fer-nub.      |
| 18     | 7,5            | 8,0             | E. fer-nub.   | 6,5            | 14,0            | S.E. fer-nub.    |
| 19     | 6,3            | 8,5             | nub.          | 6,3            | 10,0            | N.O. proc.plu.   |
| 20     | 7,8            | 5,0             | E. fer.       | 8,0            | 12,0            | S.O. fer.        |
| 21     | 8,7            | 6,0             | N. fer.       | 9,3            | 11,0            | S.E. fer-nub.    |
| 22     | 9,6            | 5,2             | E. fer.       | 9,5            | 12,0            | O. fer-nub.      |
| 23     | 9,0            | 6,5             | E. fer.       | 6,5            | 13,0            | S.O. nub. plu.   |
| 24     | 6,3            | 7,5             | O. nub-ser.   | 5,6            | 13,0            | E. nub.          |
| 25     | 6,3            | 10,0            | E. nub.       | 6,3            | 14,0            | E. nub.n.s.plu.  |
| 26     | 6,3            | 11,0            | E. nub.       | 6,5            | 14,0            | N.O. nub-se.pl.  |
| 27     | 8,0            | 9,0             | E. fer-nub.   | 7,5            | 15,0            | O. fer.          |
| 28     | 7,6            | 10,0            | N.O. fer.     | 8,5            | 18,0            | O.*fer.          |
| 29     | 9,5            | 12,0            | E.*fer.       | 10,5           | 17,0            | S.E.*fer.        |
| 30     | 10,5           | 13,0            | E. fer-nub.   | 9,0            | 19,0            | S.E.             |

Altit. max. Bar. poll. 27.lin. 10,5 Altitudo maxima Therm. + 19,0  
 minima . . . poll 26.lin. 11,5 minima . . . . . + 4,9  
 media . . . poll. 27.lin. 6,5 media . . . . . + 9,6

Quant. aquae pluv. poll. 1. lin. 4,7  
 Dies sereni . . . . 13.

## Mane.

## Vespere.

| N.<br>E. | Status Coeli.  |                 |                 | Status Coeli.  |                 |                 |
|----------|----------------|-----------------|-----------------|----------------|-----------------|-----------------|
|          | Altit.<br>Bar. | Altit.<br>Ther. |                 | Altit.<br>Bar. | Altit.<br>Ther. |                 |
| 1        | 27. 9,2        | + 13,0          | O: fer-nub.     | 27. 9,2        | + 18,5          | O: fer.         |
| 2        | 9,3            | 14,5            | E: fer-nub.     | 9,5            | 18,5            | O: fer.         |
| 3        | 10,0           | 13,5            | O: fer.         | 10,5           | 20,3            | S.O: fer.       |
| 4        | 10,5           | 15,0            | S E: fer.       | 10,0           | 20,0            | E: fer.         |
| 5        | 10,0           | 14,0            | E: fer.         | 9,5            | 19,0            | E: fer.         |
| 6        | 9,0            | 14,6            | E: nub.plu.     | 8,5            | 17,5            | E: fer.         |
| 7        | 9,0            | 12,0            | N: fer.         | 9,5            | 18,0            | S.E: fer.       |
| 8        | 9,0            | 13,5            | E: fer.         | 9,0            | 19,0            | E: nub.         |
| 9        | 10,0           | 15,0            | O: nub.         | 9,0            | 19,0            | S.O: fer-nub.   |
| 10       | 9,0            | 18,6            | O: fer-nub.     | 9,0            | 19,0            | S.E: fer.       |
| 11       | 9,0            | 14,5            | E: nub.         | 9,5            | 17,0            | O:nub n.s.plu.  |
| 12       | 10,3           | 14,0            | E: nub.plu.     | 9,5            | 14,0            | S.E: pluvia     |
| 13       | 9,5            | 11,3            | S O: nub.       | 9,3            | 16,0            | S: pluvia.      |
| 14       | 9,0            | 12,5            | N.E: nub.       | 7,5            | 13,5            | N.E: pluvia.    |
| 15       | 6,6            | 11,5            | E: pluvia       | 6,5            | 11,5            | S O: "prod.plu. |
| 16       | 7,3            | 10,5            | prec.plu sc:nu. | 7,6            | 14,5            | E: nub.         |
| 17       | 8,5            | 10,5            | E: nub.         | 9,0            | -16,0           | O: fer.         |
| 18       | 9,5            | 12,0            | E: fer.         | 9,5            | 16,5            | O: fer.         |
| 19       | 9,9            | 14,0            | E: nub.         | 9,5            | 18,0            | S.O: fer.       |
| 20       | 9,5            | 12,5            | E: nub-fer.     | 9,0            | 19,0            | O: fer.         |
| 21       | 9,1            | 13,5            | E: "nub.        | 8,6            | 17,5            | O: nub-fer.     |
| 22       | 9,2            | 14,0            | E: nub.         | 9,0            | 19,0            | E: nub-fer.     |
| 23       | 9,0            | 15,0            | E: nub:         | 8,5            | 18,0            | E: nub.         |
| 24       | 8,5            | 15,0            | E: nub.         | 10,5           | 19,0            | N: fer.         |
| 25       | 11,0           | 11,5            | N.O: fer-nub.   | 11,5           | 17,3            | O: fer.         |
| 26       | 28. 0,0        | 12,5            | E: fer.         | 11,5           | 18,0            | O: fer.         |
| 27       | 27. 11,0       | 13,0            | E: fer.         | 10,0           | 21,0            | S.E: nub.       |
| 28       | 10,6           | 15,0            | S.E: nub-fer.   | 11,0           | 20,3            | S.E: "fer.      |
| 29       | 11,5           | 15,3            | S.E: sub.       | 11,5           | 20,5            | S.E: fer.       |
| 30       | 11,6           | 16,3            | E: nub.         | 10,5           | 20,3            | E: fer.         |
| 31       | 10,6           | 16,3            | E: fer.         | 10,6           | 22,2            | S.E: fer.       |

Altit. max. Bar. pol. 28. lin. 0,0

minima . . . pol. 27. lin. 6,5

media . . . pol. 27. lin. 9,4

Quant. aquae pluv. pol. 1. lin. 6.

Evaporationes . . . pol. 4. lin. 8,3

Dies sereni . . . . 16.

Altitude maxima Therm. + 22,2

minima . . . . . + 10,5

media . . . . . + 15,8

## Manc.

## Vespere.

|    | Altit.<br>Bar. | Altit.<br>Ther. | Status Coli.   |         | Altit.<br>Bar. | Altit.<br>Ther.  | Status Coli. |
|----|----------------|-----------------|----------------|---------|----------------|------------------|--------------|
| 1  | 27.10,5        | + 17,3          | E. fer.        | 27.11,0 | + 23,0         | S. E. fer.       |              |
| 2  | 11,0           | 18,0            | S. E. fer.     | 10,5    | 23,2           | E. fer.          |              |
| 3  | 10,5           | 18,5            | E. fer.        | 9,0     | 23,2           | S. O. fer.       |              |
| 4  | 9,0            | 17,5            | S. O. fer.     | 9,0     | 23,0           | S. O. fer.       |              |
| 5  | 9,5            | 17,0            | O. fer.        | 8,5     | 22,0           | S. O. nub. plu.  |              |
| 6  | 8,2            | 18,5            | E. nub.        | 7,5     | 21,0           | S. E. "nub. plu. |              |
| 7  | 7,5            | 16,0            | N. E. nub-ser. | 6,0     | 21,0           | S. E. nub. plu.  |              |
| 8  | 6,6            | 15,0            | E. nub.        | 5,5     | 17,0           | E. nub. proc.    |              |
| 9  | 6,5            | 14,6            | E. nub. plu.   | 8,5     | 17,0           | S. E. "sub. plu. |              |
| 10 | 9,0            | 14,0            | E. plu. nub.   | 8,5     | 17,0           | S. E. nub. proc. |              |
| 11 | 7,6            | 14,0            | S. E. nub.     | 7,5     | 18,0           | N. O. nub-ser.   |              |
| 12 | 8,0            | 15,0            | O. nub-ser.    | 8,5     | 19,0           | S. E. pl. sub-f. |              |
| 13 | 9,6            | 14,8            | E. nub-ser.    | 9,5     | 19,0           | E. nub-proc.     |              |
| 14 | 9,3            | 16,0            | E. nub.        | 8,5     | 19,6           | E. nub-ser.      |              |
| 15 | 8,0            | 16,0            | E. nub-ser.    | 7,5     | 19,0           | E. nub proc.     |              |
| 16 | 7,6            | 13,0            | S. E. fer.     | 9,0     | 18,0           | N. S. fer.       |              |
| 17 | 9,5            | 15,0            | E. fer-nub.    | 9,6     | 18,8           | E. fer-nub.      |              |
| 18 | 10,2           | 15,5            | E. nub.        | 10,5    | 20,0           | O. fer.          |              |
| 19 | 11,0           | 16,2            | E. fer.        | 10,6    | 21,2           | S. O. nub-ser.   |              |
| 20 | 11,0           | 18,0            | E. nub.        | 11,0    | 23,0           | S. O. fer.       |              |
| 21 | 11,0           | 18,6            | E. nub.        | 10,0    | 22,0           | Nub.             |              |
| 22 | 10,0           | 17,2            | E. nub-ser.    | 10,5    | 21,2           | E. fer-nub.      |              |
| 23 | 10,5           | 17,0            | E. nub-ser.    | 10,5    | 21,0           | N.O. fer-nub.    |              |
| 24 | 10,6           | 18,0            | E. fer.        | 10,6    | 22,5           | O. fer.          |              |
| 25 | 11,0           | 18,0            | N. E. fer.     | 9,5     | 23,5           | O. fer.          |              |
| 26 | 9,0            | 18,0            | O. fer.        | 9,0     | 24,7           | N. E. fer.       |              |
| 27 | 9,0            | 18,8            | N. E. fer.     | 10,3    | 21,0           | N. E. fer.       |              |
| 28 | 11,0           | 16,5            | E. fer.        | 11,5    | 20,5           | N. E. fer.       |              |
| 29 | 11,8           | 16,5            | E. fer.        | 11,3    | 22,3           | O. fer.          |              |
| 30 | 11,2           | 17,0            | O. fer.        | 11,3    | 23,0           | S. O. fer.       |              |

Altitud. max. Bar. poll. 27. lin. 12,8 | Altitud. maxima Ther. + 24,7  
 minima .. poll. 27. lin. 5,5 | minima ..... + 13,0  
 media ... poll. 27. lin. 9,6 | media ..... + 18,6

Quant. aquae pluv. poll. 1. lin. 9.

Evaporationis . . . poll. 7. lin. 1.

Dies sereni . . . 17.

| Mense. |                |                 |               | Vespere.       |                 |                   |  |
|--------|----------------|-----------------|---------------|----------------|-----------------|-------------------|--|
| 1780   | Altit.<br>Bar. | Altit.<br>Tber. | Status Coeli. | Altit.<br>Bar. | Altit.<br>Tber. | Status Coeli.     |  |
| 1      | 27.11,0        | +18,5           | O. ser.       | 27.10,6        | +23,0           | S.E. ser.         |  |
| 2      | 10,5           | 19,6            | O. ser.       | 10,5           | 24,0            | S.O. nub.         |  |
| 3      | 10,3           | 17,0            | O. ser-nub.   | 9,5            | 23,5            | E.N.E. proc.pl.   |  |
| 4      | 10,5           | 15,5            | S.O. nub-ser. | 10,5           | 21,0            | S.O. ser-nub.     |  |
| 5      | 11,0           | 18,0            | E. sub-ser.   | 10,5           | 23,0            | O. ser-nub.       |  |
| 6      | 10,3           | 19,7            | E. ser-nub.   | 9,0            | 24,0            | O. ser.           |  |
| 7      | 8,5            | 20,0            | E. ser.       | 7,0            | 24,0            | S.O. ser.         |  |
| 8      | 9,0            | 18,5            | E. nub-ser.   | 9,0            | 24,0            | E. nub-ser.       |  |
| 9      | 9,5            | 17,6            | S.O. neb-ser. | 8,6            | 23,0            | E. proc.piav.     |  |
| 10     | 9,2            | 17,5            | E. ser-nub.   | 8,5            | 22,0            | E. piav.          |  |
| 11     | 8,0            | 16,5            | E. nub-ser.   | 7,5            | 17,5            | O. ser.           |  |
| 12     | 8,0            | 16,5            | N.E. nub-ser. | 9,0            | 19,5            | E. ser.           |  |
| 13     | 9,0            | 16,5            | E. ser.       | 9,0            | 20,0            | E. seg.           |  |
| 14     | 9,2            | 16,6            | N. nub.       | 9,2            | 20,0            | E. nub. piav.     |  |
| 15     | 9,3            | 16,5            | E. ser-nub.   | 8,0            | 21,0            | S.E. proc.piav.   |  |
| 16     | 7,5            | 17,3            | E. ser-nub.   | 8,6            | 20,6            | E. seg-nub.       |  |
| 17     | 8,6            | 17,3            | N.E. nub.     | 9,0            | 21,0            | E. seg.           |  |
| 18     | 9,0            | 17,5            | E. ser.       | 8,5            | 23,0            | O. seg.           |  |
| 19     | 8,8            | 19,0            | O. ser-nub.   | 9,0            | 18,3            | O. proc. piav.    |  |
| 20     | 9,5            | 17,0            | E. ser.       | 9,5            | 21,0            | E. ser.           |  |
| 21     | 9,5            | 17,3            | E. ser.       | 8,6            | 21,5            | E. ser.           |  |
| 22     | 7,6            | 17,6            | E. nub-ser.   | 7,5            | 22,0            | E. nub-ser-proc.  |  |
| 23     | 7,5            | 15,5            | E. nub.       | 8,6            | 18,5            | S.E. nub.         |  |
| 24     | 9,0            | 17,0            | S.E. nub.     | 8,5            | 20,0            | S. nub.           |  |
| 25     | 8,7            | 16,5            | S.O. ser.     | 8,7            | 21,0            | S.O. ser-nub.     |  |
| 26     | 9,5            | 18,0            | E. ser.       | 10,0           | 23,5            | O. ser.           |  |
| 27     | 10,3           | 19,0            | E. ser.       | 9,0            | 23,0            | O. ser.           |  |
| 28     | 9,0            | 18,0            | N.O. ser.     | 9,5            | 25,5            | O. ser. Aur. Bor. |  |
| 29     | 10,5           | 19,0            | E. ser.       | 10,5           | 23,5            | E. ser.           |  |
| 30     | 11,2           | 18,5            | E. nub.       | 10,5           | 22,0            | E. ser.           |  |
| 31     | 11,0           | 18,3            | E. nub.       | 10,5           | 23,0            | O. ser.           |  |

Altitud. max. Bar. poll. 27. lin. 11,2 Altitude maxima Theor. + 25,5  
 minima . . . poll. 27. lin. 7,0 minima . . . . . + 15,5  
 media . . . poll. 27. lin. 9,3 | media . . . . . + 19,7

Quant. aquae pluv. poll. 4. lin. 5,3.

Quant. evaporationis poll. 5. lin. 10.

Dies sereni . . . . . 18.

## Mense.

## Vespere.

|    | Altit.<br>Bar. | Altit.<br>Tber. | Status Cœli.  |          | Altit.<br>Bar. | Altit.<br>Tber. | Status Cœli.      |
|----|----------------|-----------------|---------------|----------|----------------|-----------------|-------------------|
| 1  | 27.10,5        | + 18,0          | E. ser.       |          | 27. 9,3        | + 24,0          | E. ser. proc. pl. |
| 2  | 9,6            | 17,5            | E. ser.       |          | 10,0           | 22,0            | E. ser.           |
| 3  | 10,2           | 18,0            | E. ser.       |          | 9,5            | 22,5            | S.E. ser.         |
| 4  | 10,0           | 18,3            | E. nub., plu. |          | 9,0            | 22,0            | E. nub.           |
| 5  | 8,6            | 18,3            | E. nub.       |          | 9,0            | 21,5            | E. nub.           |
| 6  | 9,2            | 17,3            | E. nub.       |          | 8,9            | 21,0            | E. ser-nub.       |
| 7  | 8,6            | 17,0            | E. plu. proc  |          | 8,3            | 20,0            | E. nub-ser.       |
| 8  | 8,3            | 17,0            | O. ser.       |          | 8,0            | 21,5            | O. ser.           |
| 9  | 8,5            | 17,0            | E. ser.       |          | 8,5            | 21,5            | E. proc. plu.     |
| 10 | 8,5            | 17,0            | E. nub. pluv. |          | 9,5            | 19,5            | E. nub.           |
| 11 | 9,5            | 16,5            | E. nub.       |          | 8,6            | 21,1            | E. nub.           |
| 12 | 8,6            | 17,0            | E. nub. pluv. |          | 8,6            | 21,0            | E. nub-ser.       |
| 13 | 8,3            | 17,0            | N.O. ser.     |          | 8,6            | 21,0            | O. ser.           |
| 14 | 9,0            | 17,5            | O. ler.       |          | 9,0            | 22,0            | S.E. nub. pluv.   |
| 15 | 9,0            | 18,0            | E. ser.       |          | 9,3            | 22,0            | plu. N.O. turb.   |
| 16 | 9,5            | 15,3            | O. ser-nub.   |          | 9,6            | 20,5            | O. ser.           |
| 17 | 9,0            | 16,3            | E. ser.       |          | 9,0            | 21,5            | S. ser-nub.       |
| 18 | 9,3            | 17,6            | E. nub.       |          | 8,5            | 21,6            | E. nub. pluv.     |
| 19 | 7,5            | 16,6            | E. nub. pluv. |          | 6,5            | 18,5            | E. nub.           |
| 20 | 6,5            | 16,5            | E. nub.       |          | 6,3            | 22,6            | N.O. ser.         |
| 21 | 8,3            | 16,0            | N.O. ser.     |          | 9,5            | 21,5            | N.E. ser.         |
| 22 | 10,3           | 15,0            | E. ser.       |          | 9,6            | 20,5            | E. nub-ser.       |
| 23 | 8,5            | 16,0            | E. nub. proc. |          | 8,5            | 15,2            | E. pluv.          |
| 24 | 8,5            | 13,6            | N.E. pluvia   |          | 9,0            | 15,5            | E. pluvia         |
| 25 | 9,2            | 15,2            | S.E. pluvia   |          | 9,5            | 18,0            | O. proc. pluv.    |
| 26 | 10,5           | 14,0            | N.O. ser.     |          | 10,5           | 19,0            | N. ser.           |
| 27 | 9,8            | 16,0            | N.E. nub.     |          | 7,5            | 19,5            | S.O. nub-ser.     |
| 28 | 7,5            | 16,0            | E. nub. proc. |          | 8,7            | 21,0            | S.E. nub. pluv.   |
| 29 | 8,7            | 16,0            | N.O. nub.     |          | 10,2           | 20,0            | K. ser-nub.       |
| 30 | 11,2           | 16,6            | E. ser.       | 28. 0,0  | 19,0           | E. ser.         |                   |
| 31 | 128. 0,2       | 15,0            | E. nub.       | 27. 11,3 | 18,5           | E. ser.         |                   |

Altitud. max. Bar. poll. 28. lin. 0,0 | Altitude maxima Therm. + 24,0  
 minima . . . poll. 27. lin. 6,3 | minima . . . . . + 15,0  
 media . . . poll. 27. lin. 9,0 | media . . . . . + 18,5

Quant. aquæ pluv. poll. 9. lin. 4,8

Evaporationis . . . poll. 2. lin. 9.

Dies sereni . . . . 12.

| Mane. |                |                 |                 | Vespere.       |                 |                |  |
|-------|----------------|-----------------|-----------------|----------------|-----------------|----------------|--|
| 1780  | Altit.<br>Bar. | Altit.<br>Tber. | Status Coeli.   | Altit.<br>Bar. | Altit.<br>Tber. | Status Coeli.  |  |
| 1     | 27. 11,0       | + 14,0          | E. ser.         | 27. 9,3        | + 19,0          | S. ser.        |  |
| 2     | 9,0            | 16,0            | S. O. ser-nub.  | 8,3            | 20,0            | S. O. ser.     |  |
| 3     | 8,0            | 16,2            | S. O. nub-ser.  | 7,5            | 21,0            | S. O. ser.     |  |
| 4     | 7,5            | 17,0            | S. E. nub.proc. | 8,5            | 17,0            | E. pluv.       |  |
| 5     | 9,5            | 15,0            | E. nub.         | 10,5           | 17,0            | N. E. ser-nub. |  |
| 6     | 10,5           | 12,0            | E. ser.         | 9,3            | 17,0            | O. ser.        |  |
| 7     | 9,2            | 12,0            | E. ser.         | 8,6            | 17,0            | O. ser.        |  |
| 8     | 8,0            | 14,0            | E. nub.         | 8,0            | 14,0            | E. pluvia      |  |
| 9     | 7,5            | 13,0            | O. pluv.        | 7,0            | 15,0            | S. O. nub.     |  |
| 10    | 7,0            | 13,0            | N. E. ser.      | 8,2            | 17,0            | E. ser-nub.    |  |
| 11    | 9,             | 13,0            | E. nub.         | 9,             | 16,0            | E. sub-ser.    |  |
| 12    | 9,             | 13,0            | E. nub.         | 9,7            | 16,0            | E. nub.        |  |
| 13    | 10,2           | 12,7            | E. nub.         | 10,0           | 15,6            | E. nub-ser.    |  |
| 14    | 10,0           | 13,0            | E. nub.         | 9,5            | 15,0            | E. nub-ser.    |  |
| 15    | 10,0           | 12,0            | S. E. ser-nub   | 10,0           | 16,5            | S. O. ser.     |  |
| 16    | 11,0           | 13,0            | E. ser-nub.     | 10,0           | 16,6            | E. ser.        |  |
| 17    | 10,0           | 12,0            | E. nub.         | 10,0           | 15,0            | S. O. nub.     |  |
| 18    | 10,5           | 13,5            | E. nub ser      | 7,0            | 14,0            | E. nub.pl.N.E. |  |
| 19    | 7,0            | 12,5            | N. E. nub-ser.  | 7,0            | 15,0            | S. O. nub-ser. |  |
| 20    | 8,0            | 11,0            | E. ser-nub.     | 9,0            | 15,3            | O. ser.        |  |
| 21    | 10,            | 12,0            | E. nub-ser.     | 10,0           | 16,0            | E. nub. pl.    |  |
| 22    | 9,0            | 14,0            | E. pluv.        | 8,2            | 14,5            | N. O. pluv.    |  |
| 23    | 9,0            | 11,             | E. ser.         | 9,0            | 15,3            | E. ser.        |  |
| 24    | 9,5            | 11,0            | N. O. ser-nub.  | 10,0           | 16,3            | E. ser.        |  |
| 25    | 10,0           | 12,0            | E. ser.         | 10,0           | 17,0            | S. E. ser-nub. |  |
| 26    | 10,0           | 13,0            | E. ser-nub      | 10,0           | 17,6            | E. ser.        |  |
| 27    | 10,0           | 12,7            | E. ser.         | 9,0            | 16,5            | O. ser.        |  |
| 28    | 9,3            | 13,0            | E. ser.         | 9,0            | 17,0            | O. ser.        |  |
| 29    | 9,0            | 15,0            | S. O. nub-ser.  | 9,0            | 16,0            | S. E. nub.     |  |
| 30    | 7,5            | 14,0            | E. nub. pl.     | 6,3            | 15,0            | E. nub. proc.  |  |

Altit. max. Bar. polt. 27 lin. 11,0 Altitudo maxima Therm. + 21,0  
 minima .. polt. 27 lin. 6,3 minima.....+ 11,0  
 media ... polt. 27 lin. 9,1 media.....+ 14,8  
 Quant. aquae pluv. polt. 3. lin. 10,3  
 Quant. evaporationis . . 3. . . 45  
 Dies sereni . . . 14.

| Mane.          |                 |              |                  | Vespere.       |                 |                    |  |
|----------------|-----------------|--------------|------------------|----------------|-----------------|--------------------|--|
| Altit.<br>Bar. | Altit.<br>Thér. | Status Cœli. |                  | Altit.<br>Bar. | Altit.<br>Thér. | Status Cœli.       |  |
| 1              | 27. 4,0         | + 13,6       | S.E. fer-neb.    | 27. 4,5        | + 17,0          | S.O. fer-nub.      |  |
| 2              | 5,0             | 14,0         | S.E. fer-nub.    | 5,3            | 18,0            | S.O. nub.          |  |
| 3              | 6,6             | 14,5         | E. fer-nub.      | 6,9            | 18,5            | S.E. fer-nub.      |  |
| 4              | 7,0             | 15,0         | S.E. sub-ser.    | 8,0            | 18,0            | S.O. nub-ser.      |  |
| 5              | 8,6             | 13,0         | N.E. nub. pluv.  | 8,0            | 14,0            | S.O. nub. pro. pl. |  |
| 6              | 10,2            | 9,3          | E. fer.          | 10,6           | 14,0            | E. fer.            |  |
| 7              | 10,5            | 9,0          | E. fer-nebul.    | 9,3            | 15,5            | E. nub-ser.        |  |
| 8              | 8,0             | 11,0         | E. sub-ser.      | 6,5            | 13,5            | O. fer.            |  |
| 9              | 5,0             | 10,5         | O. pluv.         | 5,8            | 13,0            | S.O. nub.          |  |
| 10             | 5,7             | 12,0         | N.E. pluv.       | 5,0            | 13,0            | S.O. nub.          |  |
| 11             | 5,0             | 12,0         | O. fer.          | 8,0            | 15,0            | O. fer-nub.        |  |
| 12             | 9,0             | 10,6         | E. nub. pluv.    | 10,6           | 13,6            | E. fer.            |  |
| 13             | 28. 0,0         | 9,0          | N.E. fer.        | 28. 0,0        | 14,0            | S.O. fer.          |  |
| 14             | 0,3             | 10,0         | N.E. nub-ser.    | 0,0            | 13,6            | S.O. fer-nub.      |  |
| 15             | 27. 11,3        | 9,5          | N.O. fer-nebul.  | 27. 11,3       | 14,0            | S.O. fer-nebul.    |  |
| 16             | 28. 0,0         | 10,3         | O. neb-ser., pl. | 11,3           | 14,6            | S.O. fer.          |  |
| 17             | 0,0             | 10,5         | S.O. fer.        | 11,5           | 15,0            | S.O. fer.          |  |
| 18             | 27. 11,0        | 10,0         | O. fer.          | 10,0           | 16,0            | S.O. fer.          |  |
| 19             | 10,2            | 8,7          | E. fer.          | 10,            | 16,0            | E. fer-nub.        |  |
| 20             | 8,7             | 13,7         | E. nub.          | 4,0            | 15,0            | E. nub. pluv.      |  |
| 21             | 1,3             | 11,0         | N.O. fer-nub.    | 4,0            | 13,0            | E. fer-nub.        |  |
| 22             | 6,3             | 8,5          | E. nub.          | 9,0            | 11,0            | O. nub.            |  |
| 23             | 9,5             | 6,8          | O. fer.          | 9,5            | 11,5            | E. fer.            |  |
| 24             | 9,0             | 9,7          | O. nub.          | 8,5            | 13,0            | O. nub-ser.        |  |
| 25             | 7,7             | 11,5         | E. fer., nub.    | 6,5            | 14,5            | E. nub.            |  |
| 26             | 6,0             | 12,0         | E. nub.          | 6,6            | 13,5            | E. pluv., nub.     |  |
| 27             | 7,7             | 11,0         | N.E. pluv., nub. | 8,0            | 13,0            | O. nub.            |  |
| 28             | 7,8             | 11,2         | S.O. pluv., nub. | 7,0            | 13,0            | S.O. nub., pluv.   |  |
| 29.            | 7,9             | 11,5         | E. nub. pluv.    | 7,0            | 13,0            | S.O. nub., pluv.   |  |
| 30             | 6,6             | 8,0          | O. fer-nebul.    | 7,5            | 12,6            | E. fer.            |  |
| 31             | 8,0             | 10,5         | E. pluv. nub.    | 8,0            | 12,5            | E. nub., pluv.     |  |

Altit. max. Bar. poll. 28 lin. 0,0 Altitudo maxima Thér. + 18,5  
 minima . . . poll. 27 lin. 1,3 minima . . . . . + 6,8  
 media . . . poll. 27 lin. 8,1 media . . . . . + 12,6  
 Quant. aquae pluv. poll. 2 lin. 2,3  
 Evaporationis . . . poll. 2 lin. 10,5  
 Dies sereni . . . . 13.

| 1780<br>Numb. | Mare.          |                  |                 | Vespere.       |                  |                  |
|---------------|----------------|------------------|-----------------|----------------|------------------|------------------|
|               | Altit.<br>Bar. | Altit.<br>Therm. | Status Coeli    | Altit.<br>Bar. | Altit.<br>Therm. | Status Coeli     |
| 1             | 27. 8,0        | + 10,6           | E. nub.         | 27. 8,0        | + 12,2           | E. nub.          |
| 2             | 8,3            | 9,5              | E. nub-ser.     | 9,0            | 13,0             | E. ser-nub.      |
| 3             | 9,0            | 8,0              | E. nub.         | 8,0            | 11,5             | E. nub-ser.      |
| 4             | 7,0            | 8,5              | O. ser-nub.     | 6,0            | 12,0             | O. ser.          |
| 5             | 7,5            | 7,5              | N.E. ser.       | 7,0            | 11,0             | S.O. ser.        |
| 6             | 5,0            | 8,0              | N.E. nebul.     | 3,0            | 9,4              | S. ser.          |
| 7             | 1,8            | 6,0              | N.O. ser.       | 1,7            | 8,0              | E. pl. N.E. "aix |
| 8             | 2,0            | 2,0              | N.E. nub.       | 5,6            | 3,0              | N.E. nub.        |
| 9             | 8,5            | 2,0              | N.E. nix        | 10,7           | 4,0              | E. ser-nub.      |
| 10            | 11,6           | - 3,0            | N. ser.         | 10,0           | 9,3              | O. ser.          |
| 11            | 8,3            | 2,0              | E. ser-nub.     | 8,5            | 3,0              | O.ser-nebul.     |
| 12            | 11,0           | 0,0              | N.E. fer-nub.   | 10,5           | 4,5              | E. fer.          |
| 13            | 10,6           | + 4,0            | N.O. fer-nub.   | 10,0           | 8,0              | N.O. fer.        |
| 14            | 9,0            | 5,5              | S.O. pub; pluv. | 6,5            | 6,5              | S.O. nub.        |
| 15            | 6,0            | 5,3              | E. nub.         | 6,5            | 6,5              | E. nub.          |
| 16            | 5,0            | 4,5              | N.O. nub.       | 6,5            | 6,5              | N. fer.          |
| 17            | 8,6            | 1,5              | N. fer.         | 9,0            | E. fer-nub.      | E. nub.          |
| 18            | 9,0            | 2,5              | E. fer-nub      | 8,0            | 4,5              | O. nub.          |
| 19            | 7,5            | 2,3              | O. nub.         | 6,6            | 4,5              | O. pluvia        |
| 20            | 6,6            | 4,3              | S. nub.pluv.    | 6,5            | 5,0              | O.nub.n.spluv.   |
| 21            | 5,5            | 5,0              | E. nub; pluv.   | 4,5            | 6,0              | E. nub.spluv.    |
| 22            | 4,3            | 5,5              | O. nub.         | 4,0            | 6,5              | S.E. nub-ser.    |
| 23            | 2,7            | 4,2              | O. nub.         | 1,5            | 6,0              | E. sub-pluv.     |
| 24            | 0,6            | 5,0              | N.O. nub.       | 4,0            | 6,5              | N.E. nub.        |
| 25            | 6,6            | 4,5              | N.E. nub-ser.   | 9,0            | 6,2              | N.E. nub-ser.    |
| 26            | 10,6           | 4,2              | N. fer-nub.     | 11,0           | 5,3              | N. fer.          |
| 27            | 10,3           | 2,0              | E. fer.         | 10,0           | 5,3              | E. fer.          |
| 28            | 8,7            | 2,5              | O. nub.pluv.    | 10,0           | 3,3              | O.nub.pluv.      |
| 29            | 11,0           | 4,3              | O. nub.         | 11,2           | 7,5              | N.O. nub.        |
| 30            | 11,2           | 5,5              | E. nub.         | 10,5           | 7,5              | E. fer.          |

Altitud. max. Bar. poll. 27 lin. 11,6 | Altitudo maxima Therm. + 13,0  
 minima . . . poll. 27. lin. 0,6 | minima . . . . . - 3,0  
 media . . . poll. 27. lin. 7,4 | media . . . . . + 5,6

Quant. aquae pluv. poll. 2. lin. 5, 3

Quant. evaporationis . . 1. . . 0, 2

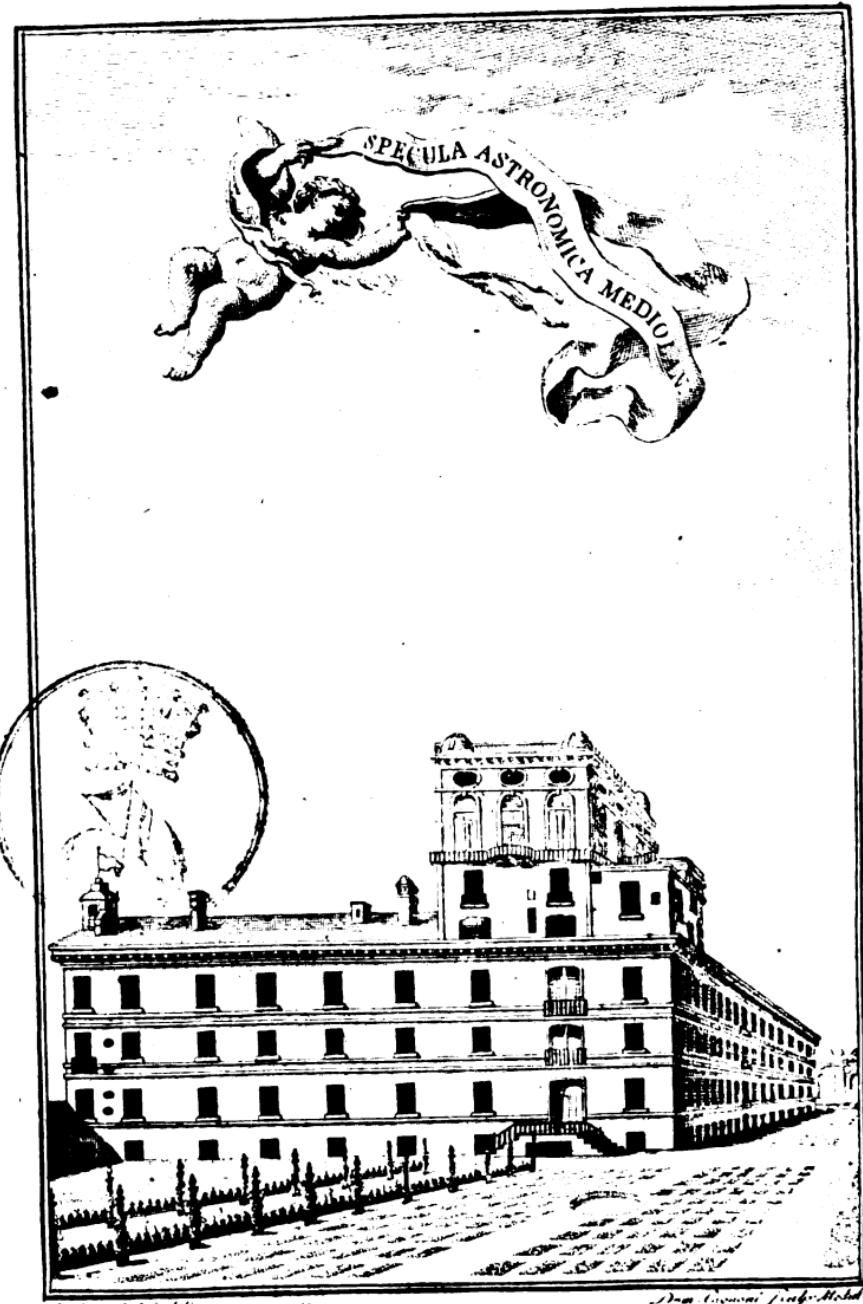
Dies sereni . . . . 10.

| Mane. |                |                 |               | Vespere.       |                 |               |                |
|-------|----------------|-----------------|---------------|----------------|-----------------|---------------|----------------|
| 1780  | Altit.<br>Bar. | Altit.<br>Tber. | Status Coeli. | Altit.<br>Bar. | Altit.<br>Tber. | Status Coeli. |                |
| 1     | 27.10,2        | +               | E. unb.       | 27.10,2        | +               | 5,3           | O. nub-ser.    |
| 2     | 11,3           | 5,0             | N.O. ser-nub. | 28. 0,0        |                 | 7,0           | N. ser.        |
| 3     | 28. 1,2        | 5,0             | E. nub.       | 2,0            |                 | 6,0           | N. ser.        |
| 4     | 2,0            | 2,0             | O. ser.       | 1,2            |                 | 5,0           | O. ser.        |
| 5     | 0,2            | 0,6             | S.O. ser.     | 0,5            |                 | 4,0           | O. ser.        |
| 6     | 0,5            | 5,0             | O. ser.       | 0,3            |                 | 4,0           | O. ser.        |
| 7     | 27.11,6        | 0,0             | O. ser.       | 27.11,3        |                 | 3,3           | O. ser.        |
| 8     | 9,6            | 0,0             | O. ser.nebu.  | 9,6            |                 | 1,0           | O. ser.        |
| 9     | 9,5            | 0,5             | N. ser.       | 0,5            |                 | 3,0           | E. ser.        |
| 10    | 11,3           | 0,0             | O. ser.       | 10,0           |                 | 2,0           | E. nub-ser.    |
| 11    | 9,2            | 0,0             | E. nub-ser.   | 11,0           |                 | 2,0           | O. ser.        |
| 12    | 10,6           | 0,0             | O. ser.       | 10,3           |                 | 2,0           | O. ser.        |
| 13    | 10,3           | -               | E. ser.       | 9,7            |                 | 2,7           | E. ser.        |
| 14    | 9,5            | 0,3             | E. ser.nebu   | 10,0           |                 | 0,6           | nebula         |
| 15    | 10,0           | 0,0             | nebula        | 11,6           |                 | 0,6           | nebula         |
| 16    | 28. 1,0        | 1,6             | nebula        | 28. 0,0        |                 | 1,3           | O. nebula      |
| 17    | 0,0            | 0,0             | E. nub.       | 27.11,8        |                 | 2,0           | E. ser.        |
| 18    | 27.11,3        | 0,0             | E. nub.       | 11,0           |                 | 0,3           | E. nub.n.s.E.* |
| 19    | 11,5           | 2,5             | E. nub.       | 28. 0,0        |                 | 1,5           | E. nub.        |
| 20    | 18. 0,3        | 0,0             | N.E. nix      | 0,5            |                 | 0,0           | N.E. nix       |
| 21    | 0,0            | 0,0             | O. nix        | 0,0            |                 | 0,5           | O. nix         |
| 22    | 27.11,3        | +               | O,3           | N.O. nix       | 27.10,5         | 1,3           | O. nix         |
| 23    | 10,0           | 0,6             | O. nub.       | 10,0           |                 | 1,6           | O. nub.        |
| 24    | 9,0            | 1,5             | O. nub.       | 8,5            |                 | 2,0           | O. nub.        |
| 25    | 9,3            | 2,0             | N.E. nub.     | 11,5           |                 | 3,3           | O. nub.        |
| 26    | 11,6           | 0,3             | E. ser-nub.   | 28. 0,0        |                 | 2,0           | E. ser.        |
| 27    | 11,5           | 0,5             | E. nub.       | 27.11,3        |                 | 0,6           | E. nub.        |
| 28    | 11,0           | 0,0             | N.E. nub.     | 10,5           |                 | 1,0           | E. nub.        |
| 29    | 10,5           | 0,0             | E. nub.       | 9,0            |                 | 0,6           | N.O. nub.      |
| 30    | 9,5            | -               | 3,5           | N.E. nub.      | 8,5             | -             | O.ser.n.s.O.*  |
| 31    | 8,6            | 2,0             | O. ser.       | 10,5           | 0,0             | 0,0           | O. ser.        |

Altit. max. Bar. poll. 28 lin. 2,0 | Altitudo maxima Therm. + 70  
 minima . . . poll. 27.lin. 8,5 | minima . . . - 3,5  
 media . . . poll. 27.lin. 10,8 | media . . . + 1,0  
 Quant. aquae pluv. poll. 1. lin. 11, 6  
 Dies sereni . . . 13.







M. G. C. 1750

D. G. C. 1750

**E P H E M E R I D E S**

**A S T R O N O M I C A E**

Anni intercalaris 1784.

AD MERIDIANUM MEDOLANENSEM

S U P P U T A T E

AB ANGELO DE CESARIS



ACCEDE APPENDIX

Cum Observationibus & Opusculis  
&c. &c. &c.



MEDOLANI. MDCCLXXXIII.

APUD JOSEPH GALEATIUM REGIUM TYPOGRAPHUM.  
*Superiorum permisso.*



## ECLIPSES ANNI INTERCALARIS 1784.

20 Februarii. Eclipsis Solis Mediolani invisibilis.

7 Martii. Eclipsis Lunae Mediolani visibilis.

Initium 2<sup>h</sup> 52<sup>m</sup>

Medium 4. 4.) mane.

Finis 5. 16.)

Quantitas Eclipsis 4. digit. 36' in regione  
Lunae Boreali.

15 Augusti. Eclipsis Solis Mediolani invisibilis.

30 Augusti. Eclipsis Lunae Mediolani invisibilis.



*In Appendice ad Ephemerides habentur,  
quae sequuntur.*

Observationes Solis habitae Mediolani ab anno 1773. ad finem 1782. ab ANGELO DE CESARIS & FRANCISCO REGGIO.

Observationes Mercurii annis 1780. & 1781. a BARNABA ORIANI.

Oppositio Jovis an. 1782. observationibus & calculo definita a CAJETANO ALLODIO.

Observationes novi planetae habitae a FRANCISCO REGGIO.

Oppositio Saturni an. 1782. ex observ. determinata a BARNABA ORIANI.

Observationes macularum ~~Solis~~ &c. a BARNABA ORIANI.

Occultatio Veneris observata &c. ab ANGELO DE CESARIS.

Occultationes Fixarum &c. a BARNABA ORIANI.

Observationes meteorologicae anni 1781. a FRANCISCO REGGIO.

#### ERRATA.

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|----------|------------------|
| pag. 200 | 194 <sup>3</sup> |
| pag. 228 | ex nostris       |

#### CORRIGE.

|                  |
|------------------|
| 964 <sup>4</sup> |
| ex notis         |



## FESTA MOBILIA.

|                             |                  |              |           |
|-----------------------------|------------------|--------------|-----------|
| Septuagesima                | - - - - -        | 8.)          | Februarii |
| Dies Cinerum                | - - - - -        | 25.)         | Aprilis   |
| Pascha Resurrectionis       | - - - - -        | 11.          |           |
| Rogationes Ritu Romano      | - - - - -        | 17. 18. 19.) |           |
| Ascensio Domini             | - - - - -        | 20.)         | Majii     |
| Rogationes Ritu Ambrosiano  | - - 24. 25. 26.) |              |           |
| Pentecostes                 | - - - - -        | 30.)         |           |
| Dominica SS. Trinitatis     | - - - - -        | 6.(          | Junii     |
| Solemnitas Corporis Christi | - - - - -        | 10.(         |           |
| Adventus Ritu Ambrosiano    | - - - - -        | 14.)         | Novembris |
| Adventus Ritu Romano        | - - - - -        | 28.)         |           |

## CYCLORUM NUMERI.

|                |           |                                    |           |   |
|----------------|-----------|------------------------------------|-----------|---|
| Numerus aureus | - - - - - | 18   Indictio Romana               | - - - - - | 2 |
| Cyclus Solaris | - - - - - | 1   Littera Dominicalis            | - - DC    |   |
| Epacta         | - - - - - | VII   Littera Martyrologii g parv. |           |   |

## QUATUOR ANNI TEMPORA.

|         |           |                         |
|---------|-----------|-------------------------|
| Vere    | - - - - - | 3. 5. 6. Martii         |
| Aestate | - - - - - | 2. 4. 5. Junii          |
| Autumno | - - - - - | 15. 17. 18. Septembbris |
| Hyeme   | - - - - - | 15. 17. 18. Decembris   |

## OBLIQUITAS ECLIPTICAE.

|             |               |
|-------------|---------------|
| 1. Januarii | 23° 28' 12" 6 |
| 1. Aprilis  | 12 ,2         |
| 1. Julii    | 11 ,8         |
| 1. Octobris | 11 ,3         |



# JANUARIUS 1784.

## *Phænomena & Observationes Solis*

| Sol                              |         |
|----------------------------------|---------|
| 5 in parallelo γ Leporis culmin. | 10h 29' |
| 9 in parall. ε Corvi culm.       | 16h 57' |
| 10 in parall. γ Hydr. culm.      | 17h 38' |
| 11 in nodo descendente Saturni   |         |
| 13 in parall. ε Corvi culm.      | 16h 16' |
| 16 in parall. ε Leporis culm.    | 9h 24'  |
| 17 in parall. δ Leporis culm.    | 9h 43'  |
| 19 in signo Aquarii              | 20h 16' |
| 24 in parall. β Ceti culm.       | 4h 14'  |
| in parall. β Scorp. culm.        | 19h 23' |
| 29 in parall. α Leporis culm.    | 8h 34'  |
| in parall. β Canis culm.         | 9h 23'  |

## *Phænomena & Observationes Planetarum*

|    |  |
|----|--|
| 1  | Venus ad + Librae diff. lat. 40'           |
| 2  | Venus in elongatione maxima matutina       |
| 9  | Saturnus in coniunctione cum Sole          |
| 6  | Mars ad + Piscium diff. lat. 10 12'        |
| 9  | Venus ad + Scorpil diff. lat. 43'          |
| 12 | Mercurius ad + Capri diff. lat. 20° 6'     |
| 15 | Mercurius ad Jovis diff. lat. 59'          |
| 22 | Venus ad A Ophiuci diff. lat. 36'          |
| 23 | Venus ad + Ophiuci diff. lat. 59'          |
| 24 | Mercurius ad + Capri diff. lat. 26'        |
| 25 | Mercurius in elongatione maxima vespertina |

## *Phænomena & Observationes Lunæ*

| Luna                                  |               |
|---------------------------------------|---------------|
| 2 ad + Arietis & + Tauri ob           | 30' & 22h 20' |
| 3 ad + Tauri                          | 14h 40'       |
| 4 ad + Tauri                          | 17h 0'        |
| 6 ad + Geminorum                      | 6h 0'         |
| 7 Plenilunium 2h 27' Apogea           |               |
| 10 ad + Leonis 11h 8' diff. lat. 46'  |               |
| 11 ad + Leonis                        | 6h 40'        |
| 15 Ultimus Quadrans                   | 5h 10'        |
| 17 ad + Scorpii                       | 18h 17'       |
| 18 ad + Scorpii                       | 6h 0'         |
| 19 ad Veneris                         | 15h 48'       |
| 20 ad Saturni                         | 22h 27'       |
| 21 Novilunium 22h 24' Perigea         |               |
| 23 ad + Capri 3h 26' diff. lat. 58'   |               |
| ad Mercurii                           | 3h 50'        |
| 28 Primus Quadrans                    | 18h 26'       |
| 29 ad + Arietis 6h 48' diff. lat. 36' |               |

## *Planetae in parallelis fixarum*

|           |   |
|-----------|---|
| Saturnus  | γ Leporis, & Corvi,<br>+ Sagitarii, δ Scorpil   |
| Jupiter   | β Ceti & β Scorpil, + Li-<br>brae, + Leporis, & Canis   |
| Mars      | β Canis & + Pegasi, 5 γ<br>Aquilæ 13 δ Serpentis, 19 +<br>Ophiuci, 22 + Leonis 25 δ Del-<br>phini               |
| Venus     | ζ & θ Librae, 7 + Crateris<br>11 δ Canis 18 δ Scorpil, δ Ceti<br>& + Librac, 25 54 Eridani                      |
| Mercurius | 1 γ Scorpil, 6 + Corvi,<br>10 δ Scorpil, 13 δ Canis, 18<br>δ Canis, 21 + Syrii, 24 γ Erida-<br>ni, 21 δ Eridani |

## JANUARIUS 1784.

| Dies<br>menses | Dies<br>brevi-<br>dominicae | <i>Equatio<br/>a denda<br/>tempori<br/>vero<br/>ut habeatur<br/>medium</i> | Diff-<br>erentia | Longitu-<br>do<br><i>Solis</i> | Ascensio recta<br><i>Solis</i> |           | Declinatio<br><i>Solis</i><br><i>Australis</i> |           |           |           |
|----------------|-----------------------------|--|------------------|--------------------------------|--------------------------------|-----------|--|-----------|-----------|-----------|
|                |                             |  |                  |                                | <i>M.</i>                      | <i>S.</i> | <i>S.</i>                                      | <i>G.</i> | <i>M.</i> | <i>S.</i> |
| 1 Jov.         | 3. 59, 3                    | 28, 6  |                  | 9. 10. 48. 2                   | 281.                           | 44. 55    | 23.  | 1. 50     |           |           |
| 2 Ven.         | 4. 27, 6                    | 28, 5  |                  | 9. 11. 49. 13                  | 282.                           | 51. 8     | 22.  | 56. 38    |           |           |
| 3 Sat.         | 4. 55, 5                    | 27, 9  |                  | 9. 12. 50. 24                  | 283.                           | 57. 16    | 22.  | 50. 59    |           |           |
| 4 Dom          | 5. 23, 0                    | 27, 5  |                  | 9. 13. 51. 34                  | 285.                           | 3. 18     | 22.  | 44. 53    |           |           |
| 5 Lun.         | 5. 50, 0                    | 27, 0  |                  | 9. 14. 52. 44                  | 286.                           | 9. 13     | 22.  | 38. 20    |           |           |
|                |                             | 26, 6  |                  |                                |                                |           |  |           |           |           |
| 6 Mar.         | 6. 16, 6                    |  |                  | 9. 15. 53. 53                  | 287.                           | 15. 1     | 22.  | 31. 20    |           |           |
| 7 Mer.         | 6. 42, 7                    | 26, 1  |                  | 9. 16. 55. 2                   | 288.                           | 20. 41    | 22.  | 23. 53    |           |           |
| 8 Jov.         | 7. 8, 2                     | 25, 5  |                  | 9. 17. 56. 11                  | 289.                           | 26. 14    | 22.  | 16. 0     |           |           |
| 9 Ven.         | 7. 33, 2                    | 25, 0  |                  | 9. 18. 57. 19                  | 290.                           | 31. 39    | 22.  | 7. 41     |           |           |
| 10 Sat.        | 7. 57, 8                    | 24, 6  |                  | 9. 19. 58. 27                  | 291.                           | 36. 55    | 21.  | 58. 56    |           |           |
|                |                             | 24, 0  |                  |                                |                                |           |  |           |           |           |
| 11 Dom         | 8. 21, 8                    |  |                  | 9. 20. 59. 35                  | 292.                           | 42. 3     | 21.  | 46. 45    |           |           |
| 12 Lun.        | 8. 45, 1                    | 23, 3  |                  | 9. 22. 0. 42                   | 293.                           | 47. 3     | 21.  | 40. 8     |           |           |
| 13 Mar.        | 9. 7, 8                     | 22, 7  |                  | 9. 23. 1. 50                   | 294.                           | 51. 54    | 21.  | 30. 6     |           |           |
| 14 Mer.        | 9. 29, 9                    | 22, 1  |                  | 9. 24. 2. 57                   | 295.                           | 56. 36    | 21.  | 19. 39    |           |           |
| 15 Jov.        | 9. 51, 4                    | 21, 5  |                  | 9. 25. 4. 4                    | 297.                           | 1. 7      | 21.  | 8. 48     |           |           |
|                |                             | 20, 8  |                  |                                |                                |           |  |           |           |           |
| 16 Ven.        | 10. 12, 2                   |  |                  | 9. 26. 5. 10                   | 298.                           | 5. 28     | 20.  | 57. 33    |           |           |
| 17 Sat.        | 10. 32, 4                   | 20, 2  |                  | 9. 27. 6. 16                   | 299.                           | 9. 39     | 20.  | 45. 54    |           |           |
| 18 Dom         | 10. 51, 9                   | 19, 5  |                  | 9. 28. 7. 21                   | 300.                           | 13. 40    | 20.  | 33. 51    |           |           |
| 19 Lun.        | 11. 10, 6                   | 18, 7  |                  | 9. 29. 8. 26                   | 301.                           | 17. 30    | 20.  | 21. 54    |           |           |
| 20 Mar.        | 11. 28, 5                   | 17, 9  |                  | 10. 0. 9. 31                   | 302.                           | 21. 9     | 20.  | 9. 34     |           |           |
|                |                             | 17, 2  |                  |                                |                                |           |  |           |           |           |
| 21 Mer.        | 11. 45, 7                   |  |                  | 10. 1. 10. 36                  | 303.                           | 54. 37    | 19.  | 55. 82    |           |           |
| 22 Jov.        | 12. 2, 1                    | 16, 4  |                  | 10. 2. 11. 40                  | 304.                           | 27. 54    | 19.  | 41. 47    |           |           |
| 23 Ven.        | 12. 17, 8                   | 15, 7  |                  | 10. 3. 12. 43                  | 305.                           | 30. 59    | 19.  | 27. 50    |           |           |
| 24 Sat.        | 12. 32, 8                   | 15, 0  |                  | 10. 4. 13. 45                  | 306.                           | 33. 52    | 19.  | 13. 32    |           |           |
| 25 Dom         | 12. 47, 0                   | 14, 2  |                  | 10. 5. 14. 46                  | 307.                           | 36. 33    | 18.  | 58. 53    |           |           |
|                |                             | 13, 4  |                  |                                |                                |           |  |           |           |           |
| 26 Lun.        | 13. 0, 4                    | 13, 5  |                  | 10. 6. 15. 45                  | 308.                           | 29. 1     | 18.  | 43. 53    |           |           |
| 27 Mar.        | 13. 12, 9                   |  |                  | 10. 7. 16. 43                  | 309.                           | 41. 17    | 18.  | 28. 33    |           |           |
| 28 Mer.        | 13. 24, 5                   | 11, 6  |                  | 10. 8. 17. 40                  | 310.                           | 43. 20    | 18.  | 18. 53    |           |           |
| 29 Jov.        | 13. 35, 2                   | 10, 7  |                  | 10. 9. 18. 36                  | 311.                           | 45. 10    | 17.  | 56. 53    |           |           |
| 30 Ven.        | 13. 45, 1                   | 9, 9   |                  | 10. 10. 19. 30                 | 312.                           | 46. 48    | 17.  | 40. 34    |           |           |
| 31 Sat.        | 13. 54, 2                   | 9, 1   |                  | 10. 11. 20. 23                 | 313.                           | 48. 13    | 17.  | 23. 56    |           |           |
|                |                             | 8, 2   |                  |                                |                                |           |  |           |           |           |

| Dies<br>mensis<br>Dies<br>hebdomadis | Distantia<br>sectionis<br>a Sole | Diffe-<br>rentia | Ini-<br>tium<br>Crepus-<br>culi | Ortu-<br>s<br>Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepus-<br>culi | Hora<br>Italica<br>Meridi-<br>diei |
|--------------------------------------|----------------------------------|------------------|---------------------------------|-------------------------------|---------------------------------|--------------------------|------------------------------------|
|                                      | H. M. S.                         | M. S.            | H. M.                           | H. M.                         | H. M.                           | H. M.                    | H. M.                              |
| 1 Juv.                               | 5. 13. 0,3                       | 4. 24, 9         | 5. 50                           | 7. 39                         | 4. 21                           | 6. 10                    | 19. 9                              |
| 2 Ven.                               | 5. 8. 35,4                       | 4. 24, 5         | 5. 49                           | 7. 38                         | 4. 22                           | 6. 11                    | 19. 8                              |
| 3 Sat.                               | 5. 4. 10,9                       | 4. 24, 1         | 5. 49                           | 7. 38                         | 4. 22                           | 6. 11                    | 19. 8                              |
| 4 Dom                                | 4. 59. 46,8                      | 4. 23, 6         | 5. 48                           | 7. 37                         | 4. 23                           | 6. 12                    | 19. 7                              |
| 5 Lun.                               | 4. 55. 23,2                      | 4. 23, 2         | 5. 48                           | 7. 37                         | 4. 23                           | 6. 12                    | 19. 7                              |
| 6 Mar.                               | 4. 51. 0,1                       | 4. 22, 7         | 5. 47                           | 7. 36                         | 4. 24                           | 6. 13                    | 19. 6                              |
| 7 Mer.                               | 4. 46. 37,3                      | 4. 22, 2         | 5. 47                           | 7. 35                         | 4. 25                           | 6. 13                    | 19. 5                              |
| 8 Jov.                               | 4. 42. 15,1                      | 4. 21, 7         | 5. 46                           | 7. 34                         | 4. 26                           | 6. 14                    | 19. 4                              |
| 9 Ven.                               | 4. 37. 53,4                      | 4. 21, 1         | 5. 45                           | 7. 34                         | 4. 26                           | 6. 15                    | 19. 4                              |
| 10 Sat.                              | 4. 33. 32,3                      | 4. 20, 5         | 5. 45                           | 7. 33                         | 4. 27                           | 6. 15                    | 19. 3                              |
| 11 Dom                               | 4. 29. 11,8                      | 4. 20, 0         | 5. 44                           | 7. 32                         | 4. 28                           | 6. 16                    | 19. 2                              |
| 12 Lun.                              | 4. 24. 51,8                      | 4. 19, 4         | 5. 43                           | 7. 32                         | 4. 29                           | 6. 17                    | 19. 2                              |
| 13 Mar.                              | 4. 20. 32,4                      | 4. 18, 8         | 5. 42                           | 7. 31                         | 4. 29                           | 6. 17                    | 19. 1                              |
| 14 Mer.                              | 4. 16. 13,6                      | 4. 18, 1         | 5. 42                           | 7. 30                         | 4. 30                           | 6. 18                    | 19. 0                              |
| 15 Jov.                              | 4. 11. 55,5                      | 4. 17, 4         | 5. 41                           | 7. 29                         | 4. 31                           | 6. 19                    | 18. 59                             |
| 16 Ven.                              | 4. 7. 38,1                       | 4. 16, 7         | 5. 41                           | 7. 28                         | 4. 32                           | 6. 19                    | 18. 58                             |
| 17 Sat.                              | 4. 3. 21,4                       | 4. 16, 0         | 5. 40                           | 7. 26                         | 4. 34                           | 6. 20                    | 18. 56                             |
| 18 Dom                               | 3. 59. 5,4                       | 4. 15, 3         | 5. 39                           | 7. 25                         | 4. 35                           | 6. 21                    | 18. 55                             |
| 19 Lun.                              | 3. 54. 50,1                      | 4. 14, 6         | 5. 39                           | 7. 24                         | 4. 36                           | 6. 21                    | 18. 54                             |
| 20 Mar.                              | 3. 50. 35,5                      | 4. 13, 9         | 5. 38                           | 7. 23                         | 4. 37                           | 6. 22                    | 18. 53                             |
| 21 Mer.                              | 3. 46. 21,6                      | 4. 13, 1         | 5. 37                           | 7. 21                         | 4. 39                           | 6. 23                    | 18. 51                             |
| 22 Jov.                              | 3. 42. 8,5                       | 4. 12, 4         | 5. 36                           | 7. 20                         | 4. 40                           | 6. 24                    | 18. 50                             |
| 23 Ven.                              | 3. 37. 56,1                      | 4. 11, 6         | 5. 35                           | 7. 19                         | 4. 41                           | 6. 25                    | 18. 49                             |
| 24 Sat.                              | 3. 33. 44,5                      | 4. 10, 7         | 5. 34                           | 7. 18                         | 4. 42                           | 6. 26                    | 18. 48                             |
| 25 Dom                               | 3. 29. 33,8                      | 4. 9, 9          | 5. 33                           | 7. 17                         | 4. 43                           | 6. 27                    | 18. 47                             |
| 26 Lun.                              | 3. 25. 23,9                      | 4. 9, 0          | 5. 32                           | 7. 16                         | 4. 44                           | 6. 28                    | 18. 46                             |
| 27 Mar.                              | 3. 21. 14,9                      | 4. 8, 2          | 5. 31                           | 7. 15                         | 4. 45                           | 6. 29                    | 18. 45                             |
| 28 Mer.                              | 3. 17. 6,7                       | 4. 7, 4          | 5. 30                           | 7. 14                         | 4. 46                           | 6. 30                    | 18. 44                             |
| 29 Jov.                              | 3. 12. 59,3                      | 4. 6, 5          | 5. 29                           | 7. 13                         | 4. 47                           | 6. 31                    | 18. 43                             |
| 30 Ven.                              | 3. 8. 52,8                       | 4. 5, 7          | 5. 28                           | 7. 12                         | 4. 48                           | 6. 32                    | 18. 42                             |
| 31 Sat.                              | 3. 4. 47,1                       | 4. 4, 8          | 5. 27                           | 7. 11                         | 4. 49                           | 6. 33                    | 18. 41                             |

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| Dies<br>mensis<br>bibdominis | Longitudo<br>Lunae<br>Meridie | Longitudo<br>Lunae<br>media nocte | Latitudo<br>Lunae<br>Meridie | Latitudo<br>Lunae<br>med. noct. | Paral-<br>laxis<br>Lunae<br>Meridie | Paral-<br>laxis<br>Lunae<br>media<br>nocte |
|------------------------------|-------------------------------|-----------------------------------|------------------------------|---------------------------------|-------------------------------------|--|
|                              | S. G. M. S.                   | S. G. M. S.                       | G. M. S.                     | G. M. S.                        | M. S.                               | M. S.                                      |
| 1 Jov.                       | 1. 2. 40. 37                  | 1. 8. 59. 47                      | 3. 57. 37 B                  | 4. 17. 13 B                     | 56. 8                               | 55. 48                                     |
| 2 Ven.                       | 1. 15. 15. 28                 | 1. 21. 28. 24                     | 33. 30                       | 4. 46. 24                       | 55. 31                              | 55. 15                                     |
| 3 Sat.                       | 1. 27. 37. 47                 | 2. 3. 45. 44                      | 55. 53                       | 5. 1. 53                        | 55. 1                               | 54. 48                                     |
| 4 Dom                        | 2. 9. 50. 10                  | 2. 15. 53. 22                     | 5. 4. 23                     | 5. 3. 26                        | 54. 37                              | 54. 27                                     |
| 5 Lun.                       | 2. 21. 54. 56                 | 2. 27. 55. 24                     | 59. 5                        | 4. 51. 27                       | 54. 19                              | 54. 12                                     |
| 6 Mar.                       | 3. 3. 53. 47                  | 2. 9. 51. 24                      | 4. 40. 38                    | 4. 26. 46                       | 54. 7                               | 54. 3                                      |
| 7 Mer.                       | 3. 15. 48. 7                  | 3. 21. 44. 0                      | 4. 9. 59                     | 3. 50. 29                       | 54. 0                               | 53. 58                                     |
| 8 Jov.                       | 3. 27. 39. 20                 | 4. 3. 34. 17                      | 3. 28. 31                    | 3. 4. 18                        | 53. 57                              | 53. 58                                     |
| 9 Ven.                       | 4. 9. 29. 4                   | 4. 15. 23. 57                     | 2. 38. 2                     | 2. 10. 1                        | 54. 0                               | 54. 4                                      |
| 10 Sat.                      | 4. 21. 19. 11                 | 4. 27. 15. 10                     | 1. 40. 31                    | 1. 9. 48                        | 54. 9                               | 54. 16                                     |
| 11 Dom                       | 5. 3. 12. 18                  | 5. 9. 11. 5                       | 38. 11                       | 0. 5. 58 B                      | 54. 24                              | 54. 34                                     |
| 12 Lun.                      | 5. 15. 11. 50                 | 5. 21. 15. 7                      | 0. 26. 31 A                  | 0. 58. 57 A                     | 54. 47                              | 55. 2                                      |
| 13 Mar.                      | 5. 27. 21. 29                 | 6. 3. 31. 32                      | 1. 31. 2                     | 2. 2. 25                        | 55. 18                              | 55. 36                                     |
| 14 Mer.                      | 6. 9. 45. 47                  | 6. 16. 4. 48                      | 2. 32. 41                    | 3. 1. 29                        | 55. 56                              | 56. 18                                     |
| 15 Jov.                      | 6. 22. 29. 19                 | 6. 28. 59. 41                     | 3. 28. 28                    | 3. 53. 11                       | 56. 42                              | 57. 7                                      |
| 16 Ven.                      | 7. 6. 36. 20                  | 7. 12. 19. 47                     | 4. 15. 9                     | 4. 34. 2                        | 57. 34                              | 58. 2                                      |
| 17 Sat.                      | 7. 19. 10. 13                 | 7. 26. 17. 53                     | 4. 49. 21                    | 5. 0. 40                        | 58. 30                              | 58. 58                                     |
| 18 Dom                       | 8. 3. 12. 51                  | 8. 10. 24. 57                     | 5. 7. 40                     | 5. 9. 58                        | 59. 26                              | 59. 58                                     |
| 19 Lun.                      | 8. 17. 43. 37                 | 8. 25. 8. 20                      | 5. 7. 18                     | 4. 59. 27                       | 60. 17                              | 60. 39                                     |
| 20 Mar.                      | 9. 2. 38. 22                  | 9. 10. 12. 40                     | 4. 46. 26                    | 4. 28. 15                       | 60. 58                              | 61. 12                                     |
| 21 Mer.                      | 9. 17. 49. 54                 | 9. 25. 28. 48                     | 4. 5. 13                     | 3. 37. 42                       | 61. 22                              | 61. 57                                     |
| 22 Jov.                      | 10. 3. 8. 5                   | 10. 10. 46. 13                    | 3. 6. 11                     | 2. 31. 25                       | 61. 27                              | 61. 53                                     |
| 23 Ven.                      | 10. 18. 21. 55                | 10. 25. 53. 58                    | 1. 54. 1                     | 1. 14. 55                       | 61. 12                              | 60. 57                                     |
| 24 Sat.                      | 11. 3. 21. 14                 | 11. 10. 42. 56                    | 0. 34. 53 A                  | 0. 5. 15 B                      | 60. 39                              | 60. 17                                     |
| 25 Dom                       | 11. 7. 58. 25                 | 11. 25. 7. 20                     | 0. 44. 48 B                  | 1. 23. 4                        | 59. 52                              | 59. 53                                     |
| 26 Lun.                      | 0. 8. 9. 16                   | 0. 9. 4. 18                       | 1. 59. 28                    | 2. 33. 32                       | 58. 57                              | 58. 57                                     |
| 27 Mar.                      | 0. 15. 52. 28                 | 0. 22. 34. 3                      | 3. 4. 50                     | 3. 33. 6                        | 57. 58                              | 57. 59                                     |
| 28 Mer.                      | 0. 29. 9. 22                  | 0. 35. 38. 47                     | 4. 58. 3                     | 4. 19. 33                       | 57. 9                               | 56. 36                                     |
| 29 Jov.                      | 1. 12. 2. 48                  | 1. 18. 21. 48                     | 4. 37. 31                    | 4. 51. 51                       | 56. 12                              | 55. 49                                     |
| 30 Ven.                      | 1. 24. 36. 21                 | 2. 0. 46. 55                      | 5. 2. 32                     | 5. 9. 35                        | 55. 28                              | 55. 10                                     |
| 31 Sat.                      | 2. 6. 54. 6                   | 2. 12. 58. 17                     | 5. 13. 1                     | 5. 12. 55                       | 54. 54                              | 54. 40                                     |

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3

| Dies<br>mensis | Diamet.<br>horiz.<br>Lunae<br>Meridie | Diameter | Diameter                | Declinatio                 | Ortes  | Transitus                    | Occasus |
|----------------|---------------------------------------|----------|-------------------------|----------------------------|--------|------------------------------|---------|
|                |                                       | horiz.   | Lunae<br>media<br>nocte | Lunae<br>in Meri-<br>diano | Lunae  | Lunae<br>per Méri-<br>dianum | Lunae   |
|                |                                       | M. S.    | M. S.                   | G. M.                      | H. M.  | H. M.                        | H. M.   |
| 1              | Jov.                                  | 30. 39   | 30. 29                  | 17. 40 B                   | 0. 2 V | 7. 22 V                      | 2. 34 M |
| 2              | Ven.                                  | 30. 19   | 30. 10                  | 22. 8                      | 0. 34  | 8. 9                         | 2. 56   |
| 3              | Sat.                                  | 30. 2    | 29. 55                  | 25. 26                     | 0. 54  | 8. 58                        | 4. 6    |
| 4              | Dom.                                  | 29. 49   | 29. 44                  | 27. 38                     | 1. 30  | 9. 49                        | 5. 14   |
| 5              | Lun.                                  | 29. 39   | 29. 35                  | 28. 17                     | 2. 13  | 10. 41                       | 6. 16   |
| 6              | Mar.                                  | 29. 33   | 29. 31                  | 27. 32                     | 3. 9   | 11. 33                       | 7. 9    |
| 7              | Mer.                                  | 29. 29   | 29. 28                  | * *                        | 4. 6   | Mane.                        | 7. 51   |
| 8              | Jov.                                  | 29. 27   | 29. 28                  | 25. 28                     | 5. 11  | 0. 21 M                      | 8. 28   |
| 9              | Ven.                                  | 29. 29   | 29. 31                  | 22. 13                     | 6. 16  | 1. 8                         | 8. 55   |
| 10             | Sat.                                  | 29. 34   | 29. 38                  | 17. 56                     | 7. 21  | 1. 52                        | 9. 14   |
| 11             | Dom.                                  | 29. 42   | 29. 48                  | 13. 0                      | 8. 28  | 2. 34                        | 9. 34   |
| 12             | Lun.                                  | 29. 55   | 30. 3                   | 7. 31                      | 9. 34  | 3. 14                        | 9. 48   |
| 13             | Mar.                                  | 30. 12   | 30. 21                  | 1. 35 B                    | 10. 40 | 8. 55                        | 10. 4   |
| 14             | Mer.                                  | 30. 32   | 30. 44                  | 4. 23 A                    | 11. 49 | 4. 35                        | 10. 20  |
| 15             | Jov.                                  | 30. 57   | 31. 11                  | 10. 27                     | * *    | 5. 18                        | 10. 37  |
| 16             | Ven.                                  | 31. 26   | 31. 41                  | 16. 8                      | 1. 1 M | 6. 4                         | 10. 57  |
| 17             | Sat.                                  | 31. 57   | 32. 12                  | 21. 14                     | 2. 14  | 6. 53                        | 11. 24  |
| 18             | Dom.                                  | 32. 27   | 32. 41                  | 25. 30                     | 3. 31  | 7. 48                        | 11. 57  |
| 19             | Lun.                                  | 32. 55   | 33. 7                   | 27. 48                     | 4. 50  | 8. 51                        | 0. 46 V |
| 20             | Mar.                                  | 33. 17   | 33. 25                  | 28. 14                     | 6. 1   | 9. 57                        | 1. 54   |
| 21             | Mer.                                  | 33. 31   | 33. 34                  | 26. 24                     | 6. 59  | 11. 3                        | 3. 18   |
| 22             | Jov.                                  | 33. 34   | 33. 31                  | 22. 30                     | 7. 42  | 0. 7 V                       | 4. 28   |
| 23             | Ven.                                  | 33. 25   | 33. 17                  | 16. 53                     | 8. 14  | 1. 5                         | 6. 7    |
| 24             | Sat.                                  | 33. 7    | 32. 55                  | 10. 17                     | 8. 41  | 2. 1                         | 7. 33   |
| 25             | Dom.                                  | 32. 41   | 32. 27                  | 3. 16 A                    | 8. 59  | 2. 49                        | 3. 51   |
| 26             | Lun.                                  | 32. 11   | 31. 55                  | 3. 37 B                    | 9. 18  | 3. 36                        | 10. 6   |
| 27             | Mar.                                  | 31. 39   | 31. 23                  | 10. 9                      | 9. 37  | 4. 22                        | 11. 21  |
| 28             | Mer.                                  | 31. 8    | 30. 94                  | 16. 0                      | 9. 57  | 5. 9                         | * *     |
| 29             | Jov.                                  | 30. 41   | 30. 29                  | 20. 57                     | 10. 20 | 5. 57                        | 0. 25 M |
| 30             | Ven.                                  | 30. 17   | 30. 7                   | 24. 43                     | 10. 48 | 6. 46                        | 1. 49   |
| 31             | Sat.                                  | 29. 58   | 29. 51                  | 27. 15                     | 11. 21 | 7. 27                        | 2. 59   |

| Dies<br>menses      | Longitudo<br>Planeta-<br>rum | Latitudo<br>Plane-<br>tarum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Trans-<br>itus Pla-<br>netarum<br>per Me-<br>ridianum | Ocasus<br>Plane-<br>tarum |
|---------------------|------------------------------|-----------------------------|---------------------------------|--------------------------|---|---------------------------|
|                     | S. G. M.                     | G. M.                       | G. M.                           | H. M.                    | H. M.   | H. M.                     |
| S A T U R N U S .   |                              |                             |                                 |                          |   |                           |
| 1                   | 9. 14. 36                    | 0. 16 B                     | 22. 25 A                        | 7. 51 M                  | 0. 15 V   | 4. 39 V                   |
| 7                   | 9. 15. 18                    | 0. 16                       | 22. 10                          | 7. 27                    | 11. 53 M  | 4. 17                     |
| 13                  | 9. 16. 0                     | 0. 16                       | 22. 15                          | 7. 4                     | 11. 29  | 3. 54                     |
| 19                  | 9. 16. 41                    | 0. 16                       | 22. 10                          | 6. 40                    | 11. 6   | 3. 32                     |
| 25                  | 9. 17. 23                    | 0. 15                       | 22. 5                           | 6. 17                    | 10. 44  | 3. 11                     |
| J U P I T E R .     |                              |                             |                                 |                          |   |                           |
| 1                   | 10. 6. 56                    | 0. 38 A                     | 19. 9 A                         | 9. 11 M                  | 1. 52 V   | 6. 33 V                   |
| 7                   | 10. 8. 18                    | 0. 38                       | 18. 48                          | 8. 48                    | 1. 31   | 6. 14                     |
| 13                  | 10. 9. 41                    | 0. 38                       | 18. 27                          | 8. 26                    | 1. 10   | 5. 54                     |
| 19                  | 10. 11. 5                    | 0. 39                       | 18. 5                           | 8. 4                     | 0. 50   | 5. 36                     |
| 25                  | 10. 12. 23                   | 0. 39                       | 17. 41                          | 7. 41                    | 2. 21   | 5. 18                     |
| M A R S .           |                              |                             |                                 |                          |   |                           |
| 1                   | 0. 21. 8                     | 0. 38 B                     | 8. 51 B                         | 11. 51 M                 | 6. 30 V   | 8. 9 M                    |
| 7                   | 0. 24. 10                    | 0. 44                       | 10. 4                           | 11. 30                   | 6. 14   | 0. 59                     |
| 13                  | 0. 27. 17                    | 0. 50                       | 11. 19                          | 11. 10                   | 6. 0  | 0. 50                     |
| 19                  | 1. 0. 29                     | 0. 56                       | 12. 32                          | 10. 51                   | 5. 47   | 0. 42                     |
| 25                  | 1. 3. 47                     | 1. 1                        | 13. 46                          | 10. 33                   | 5. 34   | 0. 35                     |
| V E N U S .         |                              |                             |                                 |                          |   |                           |
| -4                  | 7. 23. 58                    | 3. 22 A                     | 15. 52 A                        | 3. 46 M                  | 8. 43 M   | 1. 40 V                   |
| 7                   | 8. 0. 12                     | 3. 19                       | 16. 59                          | 3. 51                    | 8. 42   | 1. 33                     |
| 13                  | 8. 6. 36                     | 3. 11                       | 18. 19                          | 3. 57                    | 8. 42   | 1. 27                     |
| 19                  | 8. 13. 10                    | 2. 58                       | 19. 29                          | 4. 5                     | 8. 44   | 1. 23                     |
| 25                  | 8. 19. 53                    | 2. 43                       | 20. 24                          | 4. 11                    | 8. 47   | 1. 20                     |
| M E R C U R I U S . |                              |                             |                                 |                          |   |                           |
| 1                   | 9. 16. 4                     | 2. 4 A                      | 24. 33 A                        | 8. 11 M                  | 0. 24 V   | 4. 37 V                   |
| 7                   | 9. 25. 58                    | 2. 6                        | 23. 3                           | 8. 19                    | 0. 40   | 5. 1                      |
| 13                  | 10. 5. 58                    | 1. 51                       | 20. 36                          | 8. 21                    | 0. 56   | 5. 29                     |
| 19                  | 10. 15. 35                   | 1. 12                       | 17. 20                          | 8. 20                    | 1. 8  | 5. 56                     |
| 25                  | 10. 23. 39                   | 0. 3                        | 13. 42                          | 8. 8                     | 1. 13   | 6. 18                     |

SATELLITES JOVIS  
nequeunt hoc mense observari.

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>horarius<br>Solis | Logaritmus<br>distuntiae<br>Solis a terra<br>posita media<br>100000 | Longitudo<br>Nodi Lunae |
|------|-------------------|---|----------------------------|---|-------------------------|
|      | M. S.             | M. S.                                       | M. S.                      |   | S. G. M.                |
| 1    | 32. 35, 8         | 2. 21, 6                                    | 2. 32, 9                   | 4. 992646   | II. 12. 40              |
| 4    | 32. 35, 7         | 2. 21, 3                                    | 2. 32, 9                   | 4. 992673   | II. 12. 31              |
| 7    | 32. 35, 5         | 2. 21, 0                                    | 2. 32, 9                   | 4. 992713   | II. 12. 21              |
| 10   | 32. 35, 3         | 2. 20, 6                                    | 2. 32, 8                   | 4. 992784   | II. 12. 12              |
| 13   | 32. 34, 7         | 2. 20, 0                                    | 2. 32, 8                   | 4. 992868   | II. 12. 1               |
| 16   | 32. 34, 2         | 2. 19, 4                                    | 2. 32, 7                   | 4. 991975   | II. 11. 50              |
| 19   | 32. 33, 7         | 2. 18, 8                                    | 2. 32, 7                   | 4. 993182   | II. 11. 40              |
| 22   | 32. 33, 1         | 2. 18, 2                                    | 2. 32, 6                   | 4. 993247   | II. 11. 31              |
| 25   | 32. 32, 4         | 2. 17, 6                                    | 2. 32, 5                   | 4. 993410   | II. 11. 21              |
| 28   | 32. 31, 5         | 2. 16, 9                                    | 2. 32, 3                   | 4. 993590   | II. 11. 11              |

SATELLITES Jovis  
nequeunt hoc mense observari.

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## Dier. Pbaenomena & Observations Solis

| Sol                                   |
|---------------------------------------|
| 2 in parallelo Sirii culm. 9h 28'     |
| 3 in parall. γ Corvi culm. 14h 52'    |
| 5 in paral. ο Ophiuci culm. 19h 36'   |
| 6 in parall. ρ Canis culm. 9h 30'     |
| item δ Corvi culm. 14h 54'            |
| 7 in parall. α Librae culm. 17h 9'    |
| 8 in parall. 53 Erid. culm. 6h 57'    |
| 10 in parall. γ Eridani culm. 6h 9'   |
| item γ Librae culm. 17h 42'           |
| 14 in parallelo ε Ceti culm. 4h 35'   |
| 15 in parall. α Virginis culm. 16h 5' |
| 17 in parallelo γ Ceti culm. 2h 47'   |
| 18 in signo Piscium 10h 26'           |
| 20 Eclipseis Solis. Vide supra.       |
| in parall. δ Eridani culm. 5h 14'     |
| 22 in parall. α Virgin. culm. 14h 45' |
| item κ Orionis culm. 7h 11'           |
| 23 in parall. ζ Eridani culm. 4h 36'  |
| 24 in parall. ε Virg. culm. 15h 26'   |
| 26 in parall. δ Librae culm. 16h 22'  |
| item Rigel culm. 6h 23'               |
| 28 in parall. α Hydræ culm. 10h 27'   |

## Dier. Pbaenomena & Observations Lunae

| Luna                                    |
|---|
| 1 ad informem aurigæ 6h 54'             |
| 2 ad σ Geminorum 12h 0'                 |
| 3 ad τ Geminorum 15h 54'                |
| 4 Apogeia ad γ Canceris 20h d. l. 11'   |
| 5 Plenilunium 21h 55'                   |
| 6 ad π & α Leonis ) Imm. 17h 6'         |
| 7 ad ε & α Leonis ) Emerf. 18h 6'       |
| 8 ad τ Leonis 12h 17'                   |
| 11 ad α Virginis 2h 52'                 |
| 13 Ultimus Quadrans 17h 55'             |
| 14 ad τ & ε Scorpiorum 2h 24' & 14h 15' |
| ad τ Scorpiorum } Immers. 15h 18'       |
| 18 Perigea } Emerf. 16h 24'             |
| 20 Novilunium 9h 1'                     |
| 23 ad δ & ε Piscium 1h 30' & 8h 20'     |
| 26 ad Martis                            |
| 27 Primus Quadrans 11h 20'              |
| 28 ad β Tauri 8h 4' diff. lat. 9'       |

## Planetae in parallelis fixarum

|                                  |
|----------------------------------|
| Saturnus β Corvi, ο Sagittarii,  |
| γ Hydræ, δ Scorpiorum, ε Corvi   |
| Jupiter 25 ο Ophiuci, γ Canis,   |
| δ Corvi, α Librae                |
| Mars 1 γ Tauri, α & γ Delph.,    |
| β Leonis, 6 α Tauri, β & γ       |
| Serpentis, γ Gemin., 12 δ        |
| Tauri, α Sagittæ, τ Leonis,      |
| 25 ε Tauri & γ Canceris          |
| Venus 1 μ Sagittarii, 5 γ Sagit- |
| tarii, ε Corvi, 19 β & δ Le-     |
| poris, 28. 54 Eridani            |
| Mercurius 1 δ & ε Eridani,       |
| ζ Ophiuci & α Virginis, γ        |
| Librae, γ & 53 Eridani           |
| ο Ophiuci                        |

## Dier. Pbaenomena & Observations Planetarum

|  |
|--|
| 2 Jupiter in coniunct. cum Sole          |
| 3 Venus ad ο Sagittarii diff. lat. 10'   |
| 5 Mars ad ο Arietis diff. lat. 3'        |
| 8 Mars ad ε Arietis diff. lat. 39'       |
| 10 Mercurius in coniunctione in-         |
| feriore cum Sole                         |
| 12 Venus ad 1. 2 Ζ Sagittarii diff. lat. |
| 29' & 5'                                 |
| 13 Venus ad ο Sagittarii diff. lat. 42'  |
| 20 Venus ad Saturni diff. lat. 54'       |
| 25 Jupiter ad 1. 2. 3 δ Capri diff.      |
| 33', 5', & 19'                           |
| 28 Venus ad ε Capri diff. lat. 10'       |

| Dies<br>mensis | Dies<br>bris. m. dñe | Equatio<br>addenda<br>tempori<br>vero<br>ut habeatur<br>medium | Differe-<br>ntia | Longitude<br>Solis | Ascensio recta<br>Solis |            | Declinatio<br>Solis<br>Australis |
|----------------|----------------------|--|------------------|--------------------|-------------------------|------------|----------------------------------|
|                |                      |  |                  |                    | M. S.                   | S.         |                                  |
|                |                      |  |                  |                    | M. S.                   | S.         |                                  |
| 1              | Dom                  | 14. 2. 4   | 8. 2             | 10. 12. 21. 15     | 314. 49. 26             | 17. 7. 0   |                                  |
| 2              | Lun                  | 14. 9. 5   | 7. 1             | 10. 13. 22. 5      | 315. 50. 26             | 16. 49. 46 |                                  |
| 3              | Mar                  | 14. 16. 5  | 7. 0             | 10. 14. 22. 53     | 316. 51. 14             | 16. 32. 15 |                                  |
| 4              | Mer                  | 14. 22. 4  | 5. 9             | 10. 15. 23. 40     | 317. 51. 49             | 16. 14. 27 |                                  |
| 5              | Jov.                 | 14. 27. 2  | 4. 8             | 10. 16. 24. 26     | 318. 52. 11             | 15. 26. 22 |                                  |
| 6              | Ven                  | 14. 31. 2  | 4. 0             | 10. 17. 25. 10     | 319. 52. 21             | 15. 38. 0  |                                  |
| 7              | Sat                  | 14. 34. 5  | 3. 3             | 10. 18. 25. 52     | 320. 52. 18             | 15. 19. 23 |                                  |
| 8              | Dom                  | 13. 37. 0  | 2. 5             | 10. 19. 26. 33     | 321. 52. 3              | 15. 0. 29  |                                  |
| 9              | Lun                  | 14. 38. 6  | 1. 6             | 10. 20. 27. 13     | 322. 51. 37             | 14. 41. 21 |                                  |
| 10             | Mar                  | 14. 39. 4  | 0. 9             | 10. 21. 27. 52     | 323. 50. 59             | 14. 21. 59 |                                  |
| 11             | Mer                  | 14. 39. 6  | 0. 1             | 10. 22. 28. 29     | 324. 50. 9              | 14. 2. 22  |                                  |
| 12             | Jov.                 | 14. 39. 0  | 0. 6             | 10. 23. 29. 5      | 325. 49. 7              | 13. 42. 31 |                                  |
| 13             | Ven.                 | 14. 37. 6  | 1. 4             | 10. 24. 29. 40     | 326. 47. 54             | 13. 22. 27 |                                  |
| 14             | Sat.                 | 14. 35. 5  | 2. 1             | 10. 25. 30. 13     | 327. 46. 30             | 13. 2. 10  |                                  |
| 15             | Dom                  | 14. 32. 7  | 2. 8             | 10. 26. 30. 45     | 328. 44. 56             | 12. 41. 40 |                                  |
| 16             | Lun                  | 14. 29. 1  | 3. 6             | 10. 27. 31. 16     | 329. 43. 11             | 12. 20. 57 |                                  |
| 17             | Mar.                 | 14. 24. 8  | 4. 3             | 10. 28. 31. 46     | 330. 41. 16             | 12. 0. 2   |                                  |
| 18             | Mer.                 | 14. 19. 9  | 4. 9             | 10. 29. 32. 15     | 331. 39. 11             | 11. 38. 56 |                                  |
| 19             | Jov.                 | 14. 14. 3  | 5. 6             | 11. 0. 32. 42      | 332. 36. 55             | 11. 17. 39 |                                  |
| 20             | Ven                  | 14. 8. 0   | 6. 3             | 11. 1. 33. 8       | 333. 34. 29             | 10. 56. 12 |                                  |
| 21             | Sat.                 | 14. 1. 1   | 6. 9             | 11. 2. 33. 32      | 334. 31. 53             | 10. 34. 34 |                                  |
| 22             | Dom                  | 13. 53. 6  | 7. 5             | 11. 3. 33. 54      | 335. 29. 7              | 10. 12. 46 |                                  |
| 23             | Lun                  | 13. 45. 4  | 8. 2             | 11. 4. 34. 15      | 336. 26. 12             | 9. 50. 49  |                                  |
| 24             | Mar.                 | 13. 36. 6  | 8. 8             | 11. 5. 34. 34      | 337. 23. 8              | 9. 28. 43  |                                  |
| 25             | Mer.                 | 13. 27. 1  | 9. 5             | 11. 6. 34. 51      | 338. 19. 55             | 9. 6. 29   |                                  |
| 26             | Jov.                 | 13. 17. 1  | 10. 0            | 11. 7. 35. 6       | 339. 16. 33             | 8. 44. 7   |                                  |
| 27             | Ven.                 | 13. 6. 5   | 10. 6            | 11. 8. 35. 19      | 340. 13. 2              | 8. 21. 38  |                                  |
| 28             | Sat.                 | 12. 55. 4  | 11. 1            | 11. 9. 35. 30      | 341. 9. 22              | 7. 59. 1   |                                  |
| 29             | Dom                  | 12. 43. 7  | 11. 7            | 11. 10. 35. 38     | 342. 6. 33              | 7. 36. 17  |                                  |
|                |                      |  | 12. 2            |                    |                         |            |                                  |

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| Dies<br>mensis | Distan-<br>tia<br>sectionis<br>a Sole | Diffe-<br>rentia | Ini-<br>tium<br>Crepus-<br>culi | Ortu-<br>s Centri<br>Solis | Ocea-<br>sus Centri<br>Solis | Finis<br>Crepus-<br>culi | Horu-<br>s Italica<br>Meridi-<br>diei |
|----------------|---------------------------------------|------------------|---------------------------------|----------------------------|------------------------------|--------------------------|---------------------------------------|
|                | H. M. S.                              | M. S.            | H. M.                           | H. M.                      | H. M.                        | H. M.                    | H. M.                                 |
| 1 Dom          | 3. 0. 42,3                            | 4. 4. 0          | 5. 26                           | 7. 9                       | 4. 51                        | 6. 34                    | 18. 39                                |
| 2 Lun.         | 2. 56. 38,3                           | 4. 5. 2          | 5. 25                           | 7. 8                       | 4. 52                        | 6. 35                    | 18. 38                                |
| 3 Mar.         | 2. 52. 35,1                           | 4. 2. 3          | 5. 24                           | 7. 6                       | 4. 54                        | 6. 36                    | 18. 36                                |
| 4 Mer.         | 2. 48. 32,8                           | 4. 1. 5          | 5. 23                           | 7. 5                       | 4. 55                        | 6. 37                    | 18. 35                                |
| 5 Jov.         | 2. 44. 31,3                           | 4. 0. 7          | 5. 21                           | 7. 3                       | 4. 57                        | 6. 39                    | 18. 33                                |
| 6 Ven.         | 2. 40. 30,6                           | 3. 59. 8         | 5. 20                           | 7. 2                       | 4. 58                        | 6. 40                    | 18. 31                                |
| 7 Sat.         | 2. 36. 30,8                           | 3. 59. 0         | 5. 19                           | 7. 1                       | 4. 59                        | 6. 41                    | 18. 31                                |
| 8 Dom          | 2. 32. 31,8                           | 3. 58. 2         | 5. 17                           | 7. 0                       | 5. 0                         | 6. 43                    | 18. 30                                |
| 9 Lun.         | 2. 28. 33,6                           | 3. 57. 5         | 5. 16                           | 6. 58                      | 5. 2                         | 6. 44                    | 18. 28                                |
| 10 Mar.        | 2. 24. 36,1                           | 3. 56. 7         | 5. 15                           | 6. 57                      | 5. 3                         | 6. 45                    | 18. 27                                |
| 11 Mer.        | 2. 20. 39,4                           | 3. 55. 9         | 5. 13                           | 6. 55                      | 5. 5                         | 6. 47                    | 18. 24                                |
| 12 Jov.        | 2. 16. 43,5                           | 3. 55. 1         | 5. 12                           | 6. 54                      | 5. 6                         | 6. 48                    | 18. 24                                |
| 13 Ven.        | 2. 12. 48,4                           | 3. 54. 4         | 5. 11                           | 6. 52                      | 5. 8                         | 6. 49                    | 18. 22                                |
| 14 Sat.        | 2. 8. 54,0                            | 3. 53. 7         | 5. 10                           | 6. 51                      | 5. 9                         | 6. 50                    | 18. 21                                |
| 15 Dom         | 2. 5. 0,3                             | 3. 53. 0         | 5. 8                            | 6. 49                      | 5. 11                        | 6. 52                    | 18. 19                                |
| 16 Lun.        | 2. 1. 7,3                             | 3. 52. 3         | 5. 7                            | 6. 48                      | 5. 12                        | 6. 53                    | 18. 18                                |
| 17 Mar.        | 1. 57. 15,0                           | 3. 51. 7         | 5. 5                            | 6. 46                      | 5. 14                        | 6. 55                    | 18. 16                                |
| 18 Mer.        | 1. 53. 23,3                           | 3. 51. 0         | 5. 4                            | 6. 45                      | 5. 15                        | 6. 56                    | 18. 15                                |
| 19 Jov.        | 1. 49. 32,3                           | 3. 50. 3         | 5. 2                            | 6. 43                      | 5. 17                        | 6. 58                    | 18. 13                                |
| 20 Ven.        | 1. 45. 42,0                           | 3. 49. 6         | 5. 1                            | 6. 42                      | 5. 18                        | 6. 59                    | 18. 12                                |
| 21 Sat.        | 1. 41. 52,4                           | 3. 48. 9         | 4. 59                           | 6. 40                      | 5. 20                        | 7. 1                     | 18. 10                                |
| 22 Dom         | 1. 38. 3,5                            | 3. 48. 3         | 4. 58                           | 6. 38                      | 5. 22                        | 7. 2                     | 18. 8                                 |
| 23 Lun.        | 1. 34. 15,2                           | 3. 47. 7         | 4. 56                           | 6. 37                      | 5. 22                        | 7. 4                     | 18. 7                                 |
| 24 Mar.        | 1. 30. 27,5                           | 3. 47. 1         | 4. 55                           | 6. 35                      | 5. 25                        | 7. 5                     | 18. 5                                 |
| 25 Mer.        | 1. 26. 40,4                           | 3. 46. 5         | 4. 53                           | 6. 34                      | 5. 26                        | 7. 7                     | 18. 4                                 |
| 26 Jov.        | 1. 22. 53,9                           | 3. 45. 9         | 4. 52                           | 6. 32                      | 5. 28                        | 7. 8                     | 18. 2                                 |
| 27 Ven.        | 1. 19. 8,0                            | 3. 44. 3         | 4. 50                           | 6. 31                      | 5. 27                        | 7. 10                    | 18. 1                                 |
| 28 Sat.        | 1. 15. 22,6                           | 3. 44. 8         | 4. 49                           | 6. 29                      | 5. 21                        | 7. 11                    | 17. 59                                |
| 29 Dom         | 1. 11. 37,8                           | 3. 44. 3         | 4. 48                           | 6. 28                      | 5. 20                        | 7. 12                    | 17. 58                                |

| Dies<br>septimanae<br>meyſer | Longitude<br>Lunae<br>Meridie |     | Longitude<br>Lunae<br>media nocte |    | Latitudo<br>Lunae<br>Meridie |     | Latitudo<br>Lunae<br>med. noct. |    | Parab.<br>laxis<br>Lunae<br>Meridie |     | Paral.<br>laxis<br>Lunae<br>media<br>nocte |    |     |     |    |
|------------------------------|-------------------------------|-----|-----------------------------------|----|------------------------------|-----|---------------------------------|----|-------------------------------------|-----|--|----|-----|-----|----|
|                              | S.                            | G.  | M.                                | S. | G.                           | M.  | S.                              | G. | M.                                  | S.  | M.   | S. |     |     |    |
| 1 Dom.                       | 2.                            | 18. | 59.                               | 57 | 2.                           | 24. | 59.                             | 25 | 5.                                  | 9.  | 20   | B  |     |     |    |
| 2 Lun.                       | 3.                            | 0.  | 57.                               | 23 | 3.                           | 6.  | 54.                             | 54 | 4.                                  | 52. | 11   | 4. | 38. | 51  |    |
| 3 Mar.                       | 3.                            | 12. | 49.                               | 53 | 3.                           | 18. | 45.                             | 44 | 4.                                  | 22. | 32   | 4. | 3.  | 24  |    |
| 4 Mer.                       | 3.                            | 24. | 39.                               | 59 | 4.                           | 0.  | 34.                             | 51 | 3.                                  | 41. | 40   | 3. | 17. | 33  |    |
| 5 Jov.                       | 4.                            | 6.  | 29.                               | 58 | 4.                           | 12. | 25.                             | 51 | 2.                                  | 51. | 16   | 2. | 23. | 4   |    |
| 6 Ven.                       | 4.                            | 18. | 21.                               | 48 | 4.                           | 24. | 19                              | 1  | 1.                                  | 53. | 15   | 1. | 22. | 4   |    |
| 7 Sat.                       | 5.                            | 0.  | 17.                               | 22 | 5.                           | 6.  | 17.                             | 6  | 0.                                  | 49. | 52   | 0. | 16. | 57  |    |
| 8 Dom.                       | 5.                            | 12. | 18.                               | 29 | 5.                           | 18. | 21.                             | 47 | 0.                                  | 16. | 19   | A  | 0.  | 49. | 37 |
| 9 Lun.                       | 5.                            | 24. | 27.                               | 21 | 6.                           | 0.  | 35.                             | 29 | 1.                                  | 22. | 33   | 1. | 54. | 46  |    |
| 10 Mar.                      | 6.                            | 6.  | 46.                               | 27 | 6.                           | 13. | 0.                              | 38 | 2.                                  | 25. | 55   | 2. | 55. | 38  |    |
| 11 Mer.                      | 6.                            | 19. | 18.                               | 26 | 6.                           | 25. | 40.                             | 13 | 1.                                  | 23. | 31   | 3. | 49. | 10  |    |
| 12 Jov.                      | 7.                            | 2.  | 6.                                | 21 | 7.                           | 8.  | 37.                             | 12 | 4.                                  | 12. | 15   | 4. | 32. | 24  |    |
| 13 Ven.                      | 7.                            | 15. | 13.                               | 2  | 7.                           | 21. | 54.                             | 12 | 4.                                  | 49. | 11   | 5. | 2.  | 20  |    |
| 14 Sat.                      | 7.                            | 28. | 40.                               | 59 | 8.                           | 5.  | 33.                             | 32 | 5.                                  | 11. | 26   | 5. | 16. | 14  |    |
| 15 Dom.                      | 8.                            | 12. | 31.                               | 51 | 8.                           | 19. | 35.                             | 54 | 5.                                  | 16. | 30   | 5. | 12. | 0   |    |
| 16 Lun.                      | 8.                            | 26. | 45.                               | 36 | 9.                           | 4.  | 0.                              | 40 | 5.                                  | 8.  | 39   | 4. | 48. | 21  |    |
| 17 Mar.                      | 9.                            | 11. | 20.                               | 35 | 9.                           | 18. | 44.                             | 42 | 4.                                  | 29. | 15   | 4. | 5.  | 29  |    |
| 18 Mer.                      | 9                             | 26. | 12.                               | 20 | 10                           | 3.  | 42.                             | 32 | 3.                                  | 37. | 18   | 3. | 5.  | 12  |    |
| 19 Jov.                      | 10.                           | 11. | 14.                               | 14 | 10.                          | 18. | 46.                             | 26 | 2.                                  | 29. | 33   | 1. | 51. | 52  |    |
| 20 Ven.                      | 10.                           | 26. | 17.                               | 50 | 11.                          | 3.  | 47.                             | 26 | 1.                                  | 11. | 54   | 0. | 30. | 52  |    |
| 21 Sat.                      | 11.                           | 11. | 14.                               | 0  | 11.                          | 18. | 36.                             | 36 | 0.                                  | 10. | 28   | B  | 0.  | 51. | 12 |
| 22 Dom.                      | 11.                           | 25. | 54.                               | 27 | 0.                           | 3.  | 6.                              | 49 | 1.                                  | 30. | 44   | 2. | 8.  | 19  |    |
| 23 Lun.                      | 0.                            | 10. | 13.                               | 2  | 0.                           | 17. | 12.                             | 49 | 2.                                  | 43. | 19   | 2. | 15. | 19  |    |
| 24 Mar.                      | 0.                            | 24. | 5.                                | 58 | 1.                           | 0.  | 52.                             | 28 | 3.                                  | 44. | 1  | 4. | 9.  | 9   |    |
| 25 Mer.                      | 1.                            | 7.  | 32.                               | 23 | 1.                           | 14. | 5.                              | 54 | 4.                                  | 30. | 18   | 4. | 47. | 29  |    |
| 26 Jov.                      | 1.                            | 20. | 33.                               | 24 | 1.                           | 26. | 55.                             | 16 | 6.                                  | 0.  | 50   | 5. | 10. | 22  |    |
| 27 Ven.                      | 2.                            | 3.  | 11.                               | 53 | 2.                           | 9.  | 23.                             | 49 | 5.                                  | 16. | 3  | 5. | 17. | 52  |    |
| 28 Sat.                      | 2.                            | 15. | 31.                               | 35 | 2.                           | 21. | 35.                             | 48 | 5.                                  | 16. | 3  | 5. | 10. | 41  |    |
| 29 Dom.                      | 2.                            | 27. | 36.                               | 59 | 3.                           | 3.  | 35.                             | 44 | 5.                                  | 1.  | 58   | 4. | 50. | 1   |    |

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| Dies<br>menses | Dia-<br>meter<br>boriz.<br>Lunae<br>Meridie | Dia-<br>meter<br>boriz.<br>Lunae<br>media<br>nocte | Declinatio-<br>nem<br>Lunae<br>in Meri-<br>diano | Ortus<br>Lunae | Transitus<br>Lunae<br>per Meri-<br>dianum | Occasus<br>Lunae |
|----------------|---|--|--|----------------|---|------------------|
|                | M. S.                                       | M. S.  | G. M.  | H. M.          | H. M.                                     | H. M.            |
| 1 Dom          | 29. 44                                      | 29. 39   | 29. 21 B   | 0. 0 V         | 8. 28 V                                   | 4. 2 M           |
| 2 Lun.         | 29. 35                                      | 29. 32   | 28. 2  | 0. 55          | 9. 20                                     | 4. 56            |
| 3 Mar.         | 29. 30                                      | 29. 29   | 26. 22   | 1. 52          | 10. 10                                    | 5. 42            |
| 4 Mer.         | 29. 28                                      | 29. 29   | 23. 22   | 2. 59          | 10. 58                                    | 6. 20            |
| 5 Jov.         | 29. 30                                      | 29. 32   | 19. 27   | 4. 5           | 11. 44                                    | 6. 49            |
| 6 Ven.         | 29. 35                                      | 29. 38   | *  | 5. 10          | Mane.                                     | 7. 13            |
| 7 Sat.         | 29. 42                                      | 29. 46   | 14. 40   | 6. 16          | 0. 27                                     | 7. 30            |
| 8 Dom          | 29. 51                                      | 29. 56   | 9. 17  | 7. 22          | 1. 8                                      | 7. 46            |
| 9 Lun.         | 30. 2                                       | 30. 10   | 3. 27 B  | 8. 27          | 1. 49                                     | 8. 4             |
| 10 Mar.        | 30. 18                                      | 30. 27   | 2. 31 A  | 9. 35          | 2. 30                                     | 8. 21            |
| 11 Mer.        | 30. 36                                      | 30. 46   | 8. 37  | 10. 46         | 3. 12                                     | 8. 38            |
| 12 Jov.        | 30. 57                                      | 31. 8  | 14. 25   | 11. 58         | 3. 56                                     | 8. 56            |
| 13 Ven.        | 31. 20                                      | 31. 33   | 19. 39   | *              | 4. 44                                     | 9. 20            |
| 14 Sat.        | 31. 46                                      | 31. 59   | 23. 59   | 1. 13 M        | 5. 36                                     | 9. 51            |
| 15 Dom         | 32. 12                                      | 32. 24   | 27. 4  | 2. 26          | 6. 32                                     | 10. 32           |
| 16 Lun.        | 32. 36                                      | 32. 47   | 28. 25   | 3. 38          | 7. 33                                     | 11. 27           |
| 17 Mar.        | 32. 58                                      | 33. 7  | 27. 44   | 4. 39          | 8. 38                                     | 0. 40 V          |
| 18 Mer.        | 33. 14                                      | 33. 19   | 24. 50   | 5. 29          | 9. 42                                     | 8. 1             |
| 19 Jov.        | 33. 21                                      | 33. 21   | 20. 5  | 6. 6           | 10. 44                                    | 3. 30            |
| 20 Ven.        | 33. 18                                      | 33. 13   | 13. 53   | 6. 38          | 11. 42                                    | 4. 56            |
| 21 Sat.        | 33. 6                                       | 32. 57   | 7. 2 A   | 7. 1           | 0. 35 V                                   | 6. 21            |
| 22 Dom         | 32. 45                                      | 32. 32   | 0. 9 B   | 7. 21          | 1. 24                                     | 7. 39            |
| 23 Lun.        | 32. 18                                      | 32. 3  | 7. 7   | 7. 40          | 2. 11                                     | 8. 56            |
| 24 Mar.        | 31. 47                                      | 31. 32   | 13. 34   | 7. 57          | 2. 59                                     | 10. 15           |
| 25 Mer.        | 31. 17                                      | 31. 2  | 19. 3  | 8. 20          | 3. 48                                     | 11. 30           |
| 26 Jov.        | 30. 47                                      | 30. 34   | 23. 26   | 8. 48          | 4. 38                                     | *                |
| 27 Ven.        | 30. 22                                      | 30. 11   | 26. 32   | 9. 21          | 5. 50                                     | 0. 44 M          |
| 28 Sat.        | 30. 2                                       | 29. 54   | 28. 10   | 10. 1          | 6. 23                                     | 1. 50            |
| 29 Dom         | 29. 47                                      | 29. 41   | 28. 21   | 10. 51         | 7. 16                                     | 2. 48            |

| Dies<br>mensis      | Longitudo<br>Planeta-<br>rum | Latitudo<br>Plan-<br>tarum | Declina-<br>tio Pla-<br>netarum | Ortas<br>Plane-<br>tarum | Trans-<br>itus Pla-<br>netarum<br>per Me-<br>ridianum | Oceasus<br>Plane-<br>tarum |
|---------------------|------------------------------|----------------------------|---------------------------------|--------------------------|---|----------------------------|
|                     | S. G. M.                     | G. M.                      | G. M.                           | H. M.                    | H. M.   | H. M.                      |
| S A T U R N U S .   |                              |                            |                                 |                          |   |                            |
| 1                   | 9. 18. 11                    | 0. 15 B                    | 22. 0 A                         | 5. 52 M                  | 10. 19 M  | 2. 46 V                    |
| 7                   | 9. 18. 50                    | 0. 15                      | 21. 54                          | 5. 30                    | 9. 58   | 2. 25                      |
| 13                  | 9. 19. 28                    | 0. 15                      | 21. 49                          | 5. 9                     | 9. 36   | 2. 4                       |
| 19                  | 9. 20. 4                     | 0. 15                      | 21. 44                          | 4. 48                    | 9. 16   | 1. 44                      |
| 25                  | 9. 20. 38                    | 0. 14                      | 21. 39                          | 4. 28                    | 8. 56   | 1. 24                      |
| J U P I T E R .     |                              |                            |                                 |                          |   |                            |
| 1                   | 10. 14. 11                   | 0. 39 A                    | 17. 13 A                        | 7. 19 M                  | 0. 9 V  | 4. 59 V                    |
| 7                   | 10. 15. 36                   | 0. 40                      | 16. 48                          | 6. 55                    | 11. 47  | 4. 39                      |
| 13                  | 10. 17. 2                    | 0. 40                      | 16. 23                          | 6. 35                    | 11. 29  | 4. 23                      |
| 19                  | 10. 18. 27                   | 0. 41                      | 15. 57                          | 6. 16                    | 11. 12  | 4. 8                       |
| 25                  | 10. 19. 52                   | 0. 42                      | 15. 33                          | 5. 56                    | 10. 54  | 3. 52                      |
| M A R S .           |                              |                            |                                 |                          |   |                            |
| 1                   | 1. 7. 41                     | 1. 5 B                     | 15. 7 B                         | 10. 14 M                 | 5. 20 V   | 0. 26 M                    |
| 7                   | 1. 11. 7                     | 1. 8                       | 16. 17                          | 9. 58                    | 5. 10   | 0. 22                      |
| 13                  | 1. 14. 39                    | 1. 11                      | 17. 21                          | 9. 42                    | 4. 59   | 0. 16                      |
| 19                  | 1. 18. 6                     | 1. 14                      | 18. 26                          | 9. 28                    | 4. 50   | 0. 12                      |
| 25                  | 1. 21. 38                    | 1. 16                      | 18. 57                          | 9. 17                    | 4. 42   | 0. 7                       |
| V E N U S .         |                              |                            |                                 |                          |   |                            |
| 1                   | 8. 27. 50                    | 2. 20 B                    | 21. 8 A                         | 4. 20 M                  | 8. 54 M   | 6. 22 V                    |
| 7                   | 9. 4. 44                     | 2. 0                       | 21. 24                          | 4. 26                    | 8. 56   | 1. 26                      |
| 13                  | 9. 11. 44                    | 1. 36                      | 21. 22                          | 4. 32                    | 9. 2  | 1. 32                      |
| 19                  | 9. 18. 46                    | 1. 35                      | 20. 56                          | 4. 37                    | 9. 9  | 1. 41                      |
| 25                  | 9. 25. 51                    | 0. 51                      | 20. 11                          | 4. 40                    | 9. 16   | 1. 52                      |
| M E R C U R I U S . |                              |                            |                                 |                          |   |                            |
| 1                   | 10. 28. 4                    | 1. 50 B                    | 10. 27 A                        | 7. 39 M                  | 0. 59 V   | 6. 19 V                    |
| 7                   | 10. 25. 15                   | 3. 18                      | 10. 0                           | 7. 0                     | 0. 22   | 5. 43                      |
| 13                  | 10. 18. 33                   | 3. 41                      | 11. 46                          | 6. 16                    | 11. 30 M  | 4. 44                      |
| 19                  | 10. 13. 44                   | 2. 52                      | 13. 57                          | 5. 47                    | 10. 52  | 3. 57                      |
| 25                  | 10. 6. 3                     | 1. 35                      | 15. 24                          | 4. 32                    | 10. 30  | 3. 28                      |

SATELLITES JOVIS  
nequeunt hoc mense observari.

| Dies | Diameter<br><i>Solis</i> | Mora<br>transitus<br><i>Solis per</i><br><i>Meridian.</i> | Motus<br>horarius<br><i>Solis</i> | Logaritmus<br>distantiae<br><i>Solis a terra</i><br><i>posita media</i><br>100000 | Longitudo<br>Nodi Lunae |
|------|--------------------------|---|-----------------------------------|---|-------------------------|
|      | <i>M. S.</i>             | <i>M. S.</i>  | <i>M. S.</i>                      |   | <i>S. G. M</i>          |
| 1    | 32. 30, 0                | 2. 16, 0  | 2. 32, 0                          | 4 993860  | II. II. 2               |
| 4    | 32. 28, 8                | 2. 15, 3  | 2. 31, 9                          | 4. 994082   | II. 10. 52              |
| 7    | 32. 27, 8                | 2. 14, 6  | 2. 31, 7                          | 4. 994321   | II. 10. 43              |
| 10   | 32. 26, 6                | 2. 13, 9  | 2. 31, 6                          | 4. 994572   | II. 10. 34              |
| 13   | 32. 25, 4                | 2. 13, 2  | 2. 31, 4                          | 4. 994840   | II. 10. 24              |
| 16   | 32. 24, 2                | 2. 12, 6  | 2. 31, 2                          | 4. 995121   | II. 10. 14              |
| 19   | 32. 23, 0                | 2. 12, 0  | 2. 31, 0                          | 4. 995414   | II. 10. 4               |
| 22   | 32. 21, 7                | 2. 11, 5  | 2. 30, 8                          | 4. 995722   | II. 9. 55               |
| 25   | 32. 20, 3                | 2. 11, 0  | 2. 30, 6                          | 4. 996038   | II. 9. 45               |
| 28   | 32. 18, 8                | 2. 10, 6  | 2. 30, 4                          | 4. 996367   | II. 9. 35               |

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SATELLITES JOVIS  
nequeunt hoc mense observari.

| Phænomena & Observations<br>Solis                    |                                 |
|--|---------------------------------|
| Sol  |                                 |
| 3 Aquarii  | culm. 22h 17'                   |
| 4 Orionis  | culm. 6h 19'                    |
| 6 Eridani  | culm. 5h 46'                    |
| item & Antinoi                                       | culm. 19h 40'                   |
| 9 Ophiuci  | culm. 16h 42'                   |
| 10 Serpentis   | culm. 18h 21'                   |
| 11 Ophiuci   | culm. 16h 31'                   |
| 12 & $\mu$ Serpentis                                 | culm. 18h 34'                   |
| & 16h 2'   |                                 |
| 13 Orionis & $\gamma$ Aquarii                        | culm. 5h 36' & 22h 30'          |
| 14 Orionis   | culm. 5h 48'                    |
| 15 Antinoi   | culm. 19h 38'                   |
| 16 Antin., & Aquar., & Orion.                        | culm. 20h 10', 22h 4', & 5h 37' |
| 18 Ceti & $\delta$ Orionis                           | culm. 2h 33', & 5h 44'          |
| 19 in ligno Arietis                                  | 11h 23'                         |
| 21 Antinoi, $\zeta$ & $\gamma$ Virg. culm.           | 19h 32', 13h 16', & 12h 1'      |
| 25 Ceti  | culm. 2h 12'                    |
| 26 $\delta$ Aquilæ & $\gamma$ Ophiuci                | culm. 18h 47', & 17h 10'        |
| 27 $\beta$ Virg. & $\alpha$ Ceti                     | culm. 11h 10' & 2h 24'          |
| 30 in media distantia a terra                        |                                 |
| 31 $\beta$ Virg. & $\delta$ Oph.                     | 12h 0', & 16h 47'               |
| Phænomena & Observ. Planetar.                        |                                 |
| 1 Venus ad $\sigma$ Capri diff. lat. 6'              |                                 |
| 4 Mercur. in elongat. max. matut.                    |                                 |
| 7 Mercur. ad 1.2.3 d Capri diff. lat. 26', 2', & 26' |                                 |
| 8 Venns ad $\sigma$ Capri diff. lat. 27'             |                                 |
| Jupiter ad $\mu$ Capri diff. lat. 5'                 |                                 |
| 9 Meteur. ad $\mu$ Capri diff. lat. 8'               |                                 |
| Mercurius ad Jovis diff. lat. 6'                     |                                 |
| 11 Mars ad $\alpha$ Tauri diff. lat. 7'              |                                 |
| 16 Ven. ad 1.2.3 d Cap. d.l. 9° 19' & 44'            |                                 |
| 18 Venus ad $\mu$ Capri diff. lat. 15'               |                                 |
| 19 Mars ad 2.3. $\alpha$ Tauri d.l. 52' & 46'        |                                 |
| Mars ad 1.2. $\sigma$ Tauri d.l. 17' & 9'            |                                 |
| 21 Venus ad Jovis diff. lat. 10'                     |                                 |
| 25 Mars ad $\tau$ Tauri diff. lat. 42'               |                                 |
| 27 Venus ad $\sigma$ Aquarii diff. lat. 20'          |                                 |

| Phænomena & Observations<br>Lunæ                           |         |
|--|---------|
| Luna   |         |
| 2 Apog. ad 1. 2 $\omega$ Canc. 5h 45' & 6h                 |         |
| 3 ad $\delta$ Canceri                                      | 3h 2'   |
| 4 ad $\alpha$ Leonis                                       | 23h 40' |
| 5 ad $\rho$ Leonis ) Immerf.                               | 11h 53' |
| 6 Plenilunium 16h 21' ) Emerf.                             | 12h 50' |
| Lunæ. Vide supra.  |         |
| 8 ad $\pi$ Virginis  | 10h 30' |
| 9 ad $\alpha$ Virginis                                     | 9h 0'   |
| 12 ad $\alpha$ Scorpii                                     | 16h 0'  |
| 14 Ultimus Quadrans  | 3h 46'  |
| 15 ad $\tau$ Sagittarii                                    | 8h 43'  |
| 16 Perigea ad Saturni                                      | 2h 0'   |
| 17 ad $\gamma$ Capri                                       | 21h 54' |
| 20 Novilunium  | 19h 49' |
| 25 ad $\Lambda$ Tauri                                      | 4h 0'   |
| 28 Primus Quadrans   | 5h 59'  |
| 29 ad $\pi$ Geminorum                                      | 6h 10'  |
| 30 Apogea ad $\gamma$ & $\delta$ Canceri 10h 18' & 13h 24' |         |

## Planetae in parallelis fixarum.

|   |
|---|
| Saturnus & Corvi, $\pi$ & $\mu$ Sagittarii  |
| Jupiter $\iota$ $\delta$ Corvi & $\alpha$ Librae,   |
| 7 53 Eridani, 15 $\gamma$ Eridani & $\gamma$ Librae, 30 $\alpha$ Capri  |
| Mars $\iota$ $\Lambda$ Tauri, 6 $\gamma$ Leonis, 13 $\beta$ Herculis, 19 $\delta$ , $\pi$ & $\mu$ Geminorum, 27 $\tau$ Tauri  |
| Venus $\iota$ $\beta$ Scorpri, $\beta$ & $\sigma$ Ceti, 7 $\beta$ Canis & $\alpha$ Lepor., 12 Syrii, 16 $\gamma$ Canis, 19 $\gamma$ Eridani, 26 $\gamma$ Ceti, 31 $\alpha$ Virginis                         |
| Mercurius $\iota$ $\zeta$ & $\alpha$ Librae, 7 $\beta$ Ophiuci & $\gamma$ Canis, 10 53 Eridani, 13 $\gamma$ Eridani, 16 $\alpha$ Ceti, 19 $\gamma$ Ceti, 22 $\alpha$ Virginis, 25 Rigel, 30 $\beta$ Eridani |

| Dies<br>mensis | Dies<br>bebedominae | Equatio<br>addenda<br>tempori<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitude<br>Solis | Ascensio recta<br>Solis |        | Declinatio<br>Solis<br>Australis |
|----------------|---------------------|--|------------------|--------------------|-------------------------|--------|----------------------------------|
|                |                     |  |                  |                    | M. S.                   | S.     |                                  |
| 1              | Lun                 | 12. 31, 5  | 12, 2            | 11. 11. 35. 44     | 343.                    | 1. 37  | 7. 13. 26                        |
| 2              | Mar                 | 12. 18, 7  | 12, 8            | 11. 12. 35. 48     | 343.                    | 57. 33 | 6. 50. 29                        |
| 3              | Mer.                | 12. 5, 4   | 13, 3            | 11. 13. 35. 50     | 344.                    | 53. 22 | 6. 27. 27                        |
| 4              | Jov.                | 11. 51, 7  | 13, 7            | 11. 14. 35. 50     | 345.                    | 49. 4  | 6. 4. 30                         |
| 5              | Ven                 | 11. 37, 5  | 14, 2            | 11. 15. 35. 47     | 346.                    | 44. 39 | 5. 41. 8                         |
| 6              | Sat.                | 11. 22, 9  | 14, 6            | 11. 16. 35. 42     | 347.                    | 40. 7  | 5. 17. 52                        |
| 7              | Dom                 | 11. 7, 9   | 15, 0            | 11. 17. 35. 35     | 348.                    | 35. 29 | 4. 54. 32                        |
| 8              | Lun.                | 10. 52, 4  | 15, 5            | 11. 18. 35. 26     | 349.                    | 30. 45 | 4. 31. 8                         |
| 9              | Mar.                | 10. 36, 6  | 15, 8            | 11. 19. 35. 15     | 350.                    | 25. 56 | 4. 7. 40                         |
| 10             | Mer                 | 10. 20, 5  | 16, 1            | 11. 20. 35. 2      | 351.                    | 21. 2  | 3. 44. 9                         |
| 11             | Jov.                | 10. 4, 1   | 16, 4            | 11. 21. 34. 47     | 352.                    | 16. 3  | 3. 20. 36                        |
| 12             | Ven.                | 9. 47, 5   | 16, 6            | 11. 22. 34. 31     | 353.                    | 11. 0  | 2. 57. 1                         |
| 13             | Sat.                | 9. 30, 6   | 16, 9            | 11. 23. 34. 13     | 354.                    | 5. 54  | 2. 33. 23                        |
| 14             | Dom                 | 9. 13, 4   | 17, 3            | 11. 24. 33. 54     | 355.                    | 0. 44  | 2. 9. 43                         |
| 15             | Lun.                | 8. 55, 9   | 17, 5            | 11. 25. 33. 33     | 355.                    | 55. 31 | 1. 46. 3                         |
| 16             | Mar.                | 8. 38, 3   | 17, 6            | 11. 26. 33. 9      | 356.                    | 50. 14 | 1. 22. 20                        |
| 17             | Mer.                | 8. 20, 5   | 17, 8            | 11. 27. 32. 44     | 357.                    | 44. 54 | 0. 58. 38                        |
| 18             | Jov.                | 8. 2, 5  | 18, 0            | 11. 28. 32. 17     | 358.                    | 39. 32 | 0. 34. 56                        |
| 19             | Ven.                | 7. 44, 4   | 18, 1            | 11. 29. 31. 48     | 359.                    | 34. 8  | 0. 21. 14                        |
| 20             | Sat.                | 7. 26, 2   | 18, 2            | 0. 0. 31. 18       | 0.                      | 28. 43 | 0. 12. 28                        |
| 21             | Dom                 | 7. 7, 8  | 18, 4            | 0. 1. 30. 46       | 1.                      | 23. 16 | 0. 36. 96                        |
| 22             | Lun.                | 6. 49, 4   | 18, 4            | 0. 2. 30. 13       | 2.                      | 17. 48 | 0. 59. 48                        |
| 23             | Mar.                | 6. 31, 0   | 18, 4            | 0. 3. 29. 37       | 3.                      | 12. 19 | 1. 23. 26                        |
| 24             | Mer.                | 6. 12, 5   | 18, 5            | 0. 4. 28. 59       | 4.                      | 6. 49  | 1. 47. 2                         |
| 25             | Jov.                | 5. 53, 9   | 18, 6            | 0. 5. 28. 19       | 5.                      | 1. 18  | 2. 10. 36                        |
| 26             | Ven.                | 5. 35, 3   | 18, 6            | 0. 6. 27. 37       | 5.                      | 55. 47 | 3. 34. 7                         |
| 27             | Sat.                | 5. 16, 7   | 18, 6            | 0. 7. 26. 53       | 6.                      | 50. 16 | 2. 57. 34                        |
| 28             | Dom                 | 4. 58, 2   | 18, 5            | 0. 8. 26. 6        | 7.                      | 44. 46 | 3. 20. 57                        |
| 29             | Lun.                | 4. 39, 8   | 18, 4            | 0. 9. 25. 17       | 8.                      | 39. 16 | 3. 44. 16                        |
| 30             | Mar.                | 4. 21, 4   | 18, 4            | 0. 10. 24. 25      | 9.                      | 23. 46 | 4. 7. 31                         |
| 31             | Mer.                | 4. 3, 0  | 18, 4            | 0. 31. 23. 31      | 10.                     | 28. 17 | 4. 30. 42                        |

| Di-<br>se<br>men-<br>sis | Dis-<br>tanc-<br>ia<br>sec-<br>tionis<br>e Sole | Diffe-<br>rentia |       | Ini-<br>tiu-<br>m<br>Crepu-<br>sculi | Ortu-<br>s<br>Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepu-<br>sculi | Hora<br>Italica<br>Mer-<br>diei |
|--------------------------|---|------------------|-------|--------------------------------------|-------------------------------|---------------------------------|--------------------------|---------------------------------|
|                          |   | H. M. S.         | M. S. |                                      | H. M.                         | H. M.                           |                          |                                 |
| 1 Lun.                   | 1. 7. 53,5                                      | 3. 43, 7         | 4. 47 | 6. 27                                | 5. 33                         | 7. 13                           | 17. 57                   |                                 |
| 2 Mar.                   | 1. 4. 9,8                                       | 3. 43, 2         | 4. 46 | 6. 25                                | 5. 35                         | 7. 14                           | 17. 55                   |                                 |
| 3 Mer.                   | 1. 0. 26,6                                      | 3. 42, 8         | 4. 44 | 6. 24                                | 5. 36                         | 7. 16                           | 17. 54                   |                                 |
| 4 Jov.                   | 0. 56. 43,8                                     | 3. 42, 3         | 4. 43 | 6. 22                                | 5. 38                         | 7. 17                           | 17. 52                   |                                 |
| 5 Ven.                   | 0. 53. 1,5                                      | 3. 41, 9         | 4. 42 | 6. 21                                | 5. 39                         | 7. 18                           | 17. 51                   |                                 |
| 6 Sat.                   | 0. 49. 19,6                                     | 3. 41, 5         | 4. 40 | 6. 19                                | 5. 41                         | 7. 20                           | 17. 49                   |                                 |
| 7 Dom                    | 0. 45. 38,1                                     | 3. 41, 1         | 4. 39 | 6. 18                                | 5. 42                         | 7. 21                           | 17. 48                   |                                 |
| 8 Lun.                   | 0. 41. 57,0                                     | 3. 40, 7         | 4. 37 | 6. 16                                | 5. 44                         | 7. 23                           | 17. 46                   |                                 |
| 9 Mar.                   | 0. 38. 16,3                                     | 3. 40, 4         | 4. 35 | 6. 15                                | 5. 45                         | 7. 25                           | 17. 45                   |                                 |
| 10 Mer.                  | 0. 34. 35,9                                     | 3. 40, 1         | 4. 34 | 6. 13                                | 5. 47                         | 7. 26                           | 17. 43                   |                                 |
| 11 Jov.                  | 0. 30. 55,8                                     | 3. 39, 8         | 4. 32 | 6. 12                                | 5. 48                         | 7. 28                           | 17. 42                   |                                 |
| 12 Ven.                  | 0. 27. 16,0                                     | 3. 39, 6         | 4. 30 | 6. 10                                | 5. 50                         | 7. 30                           | 17. 40                   |                                 |
| 13 Sat.                  | 0. 23. 36,4                                     | 3. 39, 3         | 4. 28 | 6. 9                                 | 5. 51                         | 7. 32                           | 17. 38                   |                                 |
| 14 Dom                   | 0. 19. 57,1                                     | 3. 39, 1         | 4. 26 | 6. 7                                 | 5. 53                         | 7. 34                           | 17. 36                   |                                 |
| 15 Lun.                  | 0. 16. 18,0                                     | 3. 38, 9         | 4. 25 | 6. 5                                 | 5. 55                         | 7. 35                           | 17. 34                   |                                 |
| 16 Mar.                  | 0. 12. 39,1                                     | 3. 38, 7         | 4. 23 | 6. 4                                 | 5. 56                         | 7. 37                           | 17. 32                   |                                 |
| 17 Mer.                  | 0. 9. 0,4                                       | 3. 38, 6         | 4. 21 | 6. 2                                 | 5. 58                         | 7. 39                           | 17. 30                   |                                 |
| 18 Jov.                  | 0. 5. 21,8                                      | 3. 38, 4         | 4. 19 | 6. 1                                 | 5. 59                         | 7. 41                           | 17. 28                   |                                 |
| 19 Ven.                  | 0. 1. 43,4                                      | 3. 38, 3         | 4. 17 | 5. 59                                | 6. 0                          | 7. 43                           | 17. 26                   |                                 |
| 20 Sat.                  | 23. 58. 5,1                                     | 3. 38, 2         | 4. 15 | 5. 58                                | 6. 2                          | 7. 43                           | 17. 24                   |                                 |
| 21 Dom                   | 23. 54. 26,9                                    | 3. 38, 1         | 4. 14 | 5. 56                                | 6. 4                          | 7. 46                           | 17. 22                   |                                 |
| 22 Lun.                  | 23. 50. 48,8                                    | 3. 38, 1         | 4. 12 | 5. 54                                | 6. 6                          | 7. 48                           | 17. 20                   |                                 |
| 23 Mar.                  | 23. 47. 10,7                                    | 3. 38, 0         | 4. 10 | 5. 53                                | 6. 7                          | 7. 50                           | 17. 18                   |                                 |
| 24 Mer.                  | 23. 43. 32,7                                    | 3. 37, 9         | 4. 8  | 5. 51                                | 6. 9                          | 7. 52                           | 17. 16                   |                                 |
| 25 Jov.                  | 23. 39. 54,8                                    | 3. 37, 9         | 4. 7  | 5. 49                                | 6. 11                         | 7. 53                           | 17. 14                   |                                 |
| 26 Ven.                  | 23. 36. 16,9                                    | 3. 38, 0         | 4. 5  | 5. 48                                | 6. 12                         | 7. 55                           | 17. 12                   |                                 |
| 27 Sat.                  | 23. 32. 38,9                                    | 3. 38, 0         | 4. 3  | 5. 46                                | 6. 14                         | 7. 57                           | 17. 10                   |                                 |
| 28 Dom                   | 23. 29. 0,9                                     | 3. 38, 0         | 4. 1  | 5. 45                                | 6. 15                         | 7. 59                           | 17. 8                    |                                 |
| 29 Lun.                  | 23. 25. 22,9                                    | 3. 38, 0         | 3. 59 | 5. 43                                | 6. 17                         | 8. 1                            | 17. 6                    |                                 |
| 30 Mar.                  | 23. 21. 44,9                                    | 3. 38, 0         | 3. 57 | 5. 41                                | 6. 19                         | 8. 3                            | 17. 4                    |                                 |
| 31 Mer.                  | 23. 18. 6,9                                     | 3. 38, 1         | 3. 55 | 5. 40                                | 6. 20                         | 8. 5                            | 17. 2                    |                                 |

| Dies<br>seculi<br>bebbdomadi- | Longitudo<br>Lunae<br>Meridie | Longitudo<br>Lunae<br>media nocte | Latitudo<br>Lunae<br>Meridie | Latitudo<br>Lunae<br>med. nocte | Paral- |        | Paral- |
|-------------------------------|-------------------------------|-----------------------------------|------------------------------|---------------------------------|--------|--------|--------|
|                               |                               |                                   |                              |                                 | G.M.S. | G.M.S. |        |
| 1 Lun.                        | 3. 9. 32. 33                  | 3. 15. 27. 58                     | 4. 35. 1 B                   | 4. 17. 6                        | 54. 14 | 54. 9  |        |
| 2 Mar.                        | 3. 21. 22. 40                 | 3. 27. 7. 1                       | 3. 56. 31                    | 3. 33. 25                       | 54. 6  | 54. 5  |        |
| 3 Mer.                        | 4. 3. 11. 26                  | 4. 9. 6. 23                       | 3. 8. 2                      | 2. 40. 34                       | 54. 6  | 54. 9  |        |
| 4 Jov.                        | 4. 15. 2. 20                  | 4. 20. 59. 37                     | 2. 11. 21                    | 1. 40. 36                       | 54. 14 | 54. 20 |        |
| 5 Ven                         | 4. 26. 58. 30                 | 5. 2. 59. 16                      | 1. 8. 35                     | 0. 35. 39                       | 54. 28 | 54. 37 |        |
| 6 Sat.                        | 5. 9. 2. 10                   | 5. 15. 7. 24                      | 0. 2. 6 B                    | 0. 31. 40 A                     | 54. 46 | 54. 56 |        |
| 7 Dom                         | 5. 21. 15. 13                 | 5. 27. 25. 50                     | 1. 5. 16                     | 1. 38. 20                       | 55. 8  | 55. 21 |        |
| 8 Lun.                        | 6. 3. 39. 23                  | 6. 9. 55. 57                      | 2. 10. 31                    | 2. 41. 23                       | 55. 34 | 55. 48 |        |
| 9 Mar.                        | 6. 16. 15. 39                 | 6. 22. 38. 36                     | 3. 10. 30                    | 3. 37. 27                       | 56. 2  | 56. 16 |        |
| 10 Mer.                       | 6. 29. 4. 55                  | 7. 5. 34. 44                      | 4. 1. 55                     | 4. 23. 30                       | 56. 31 | 56. 47 |        |
| 11 Jov.                       | 7. 12. 8. 9                   | 7. 18. 45. 1C                     | 4. 41. 48                    | 4. 56. 31                       | 57. 3  | 57. 19 |        |
| 12 Ven.                       | 7. 25. 25. 53                 | 8. 2. 10. 24                      | 5. 7. 23                     | 5. 14. 19                       | 57. 36 | 57. 53 |        |
| 13 Sat.                       | 8. 8. 58. 43                  | 8. 15. 50. 49                     | 5. 16. 37                    | 5. 14. 35                       | 58. 10 | 58. 27 |        |
| 14 Dom                        | 8. 22. 46. 40                 | 8. 29. 46. 16                     | 5. 7. 57                     | 4. 56. 41                       | 58. 43 | 58. 59 |        |
| 15 Lun.                       | 9. 6. 49. 27                  | 9. 13. 56. 1                      | 4. 40. 53                    | 4. 20. 40                       | 59. 15 | 59. 30 |        |
| 16 Mar.                       | 9. 21. 5. 48                  | 9. 28. 18. 28                     | 3. 56. 17                    | 3. 28. 2                        | 59. 43 | 59. 59 |        |
| 17 Mer.                       | 10. 5. 33. 36                 | 10. 12. 50. 46                    | 2. 56. 12                    | 2. 21. 22                       | 60. 6  | 60. 11 |        |
| 18 Jov.                       | 10. 20. 9. 22                 | 1C. 27. 28. 4:                    | 1. 44. 8                     | 1. 5. 10                        | 60. 15 | 60. 16 |        |
| 19 Ven.                       | 11. 4. 48. 8                  | 11. 12. 6. 55                     | 2. 25. 7 A                   | 0. 15. 17 B                     | 60. 14 | 60. 9  |        |
| 20 Sat.                       | 11. 19. 24. 1                 | 11. 26. 38. 42                    | 3. 55. 14                    | 1. 34. 1                        | 60. 0  | 59. 47 |        |
| 21 Dom                        | 0. 3. 50. 34                  | 0. 10. 58. 29                     | 2. 11. 3                     | 2. 45. 40                       | 59. 31 | 59. 13 |        |
| 22 Lun.                       | 0. 18. 1. 57                  | 0. 25. 0. 23                      | 3. 17. 21                    | 3. 45. 39                       | 58. 52 | 58. 29 |        |
| 23 Mar.                       | 1. 1. 53. 25                  | 1. 8. 40. 46                      | 4. 10. 17                    | 4. 31. 3                        | 58. 5  | 57. 40 |        |
| 24 Mer.                       | 1. 15. 22. 12                 | 1. 21. 57. 43                     | 4. 47. 43                    | 5. 0. 18                        | 57. 25 | 56. 51 |        |
| 25 Jov.                       | 1. 28. 27. 24                 | 2. 4. 51. 29                      | 5. 8. 47                     | 5. 13. 17                       | 56. 27 | 56. 4  |        |
| 26 Ven.                       | 2. 11. 10. 17                 | 2. 17. 24. 11                     | 5. 13. 55                    | 5. 10. 49                       | 55. 42 | 55. 22 |        |
| 27 Sat.                       | 2. 23. 33. 35                 | 2. 29. 38. 59                     | 5. 4. 8                      | 4. 54. 4                        | 55. 5  | 54. 50 |        |
| 28 Dom                        | 3. 5. 41. 2                   | 3. 11. 40. 20                     | 4. 40. 49                    | 4. 24. 37                       | 54. 38 | 54. 28 |        |
| 29 Lun.                       | 3. 17. 37. 29                 | 3. 23. 33. 6                      | 4. 5. 39                     | 3. 44. 9                        | 54. 20 | 54. 15 |        |
| 30 Mar.                       | 3. 29. 27. 46                 | 4. 5. 22. 8                       | 3. 20. 18                    | 2. 54. 19                       | 54. 13 | 54. 13 |        |
| 31 Mer.                       | 4. 11. 16. 48                 | 4. 17. 12. 32                     | 2. 26. 27                    | 1. 56. 59                       | 54. 8  | 54. 21 |        |

| Dies<br>mensis<br>de nominatae | Diameter<br>horiz.<br>Lunae<br>Meridie | Diameter<br>horiz.<br>Lunae<br>media<br>nocte | Declinatio<br>Lunae<br>in Meridi-<br>diano | Orsus<br>Lunae | Transitus<br>Lunae<br>per Meri-<br>diandum | Oceasus<br>Lunae |
|--------------------------------|--|---|--|----------------|--|------------------|
|                                | M. S.                                  | M. S.   | G. M.                                      | H. M.          | H. M.                                      | H. M.            |
| 1 Lun.                         | 29. 37                                 | 29. 34  | 27. 17 B                                   | 11. 50 M       | 8. 8 V                                     | 3. 40 M          |
| 2 Mar.                         | 29. 32                                 | 29. 31  | 24. 35                                     | 0. 49 V        | 8. 56                                      | 4. 20            |
| 3 Mer.                         | 29. 32                                 | 29. 34  | 20. 56                                     | 1. 55          | 9. 43                                      | 4. 50            |
| 4 Jov.                         | 29. 27                                 | 29. 40  | 16. 23                                     | 3. 2           | 10. 28                                     | 5. 19            |
| 5 Ven.                         | 29. 44                                 | 29. 49  | 11. 8                                      | 4. 8           | 11. 10                                     | 5. 40            |
| 6 Sat.                         | 29. 54                                 | 29. 59  | 5. 25 B                                    | 5. 15          | 11. 52                                     | 5. 59            |
| 7 Dom.                         | 30. 5                                  | 30. 12  | *  | 6. 23          | Mane.                                      | 6. 17            |
| 8 Lun.                         | 30. 20                                 | 30. 28  | 0. 38 A                                    | 7. 29          | 0. 33                                      | 6. 31            |
| 9 Mar.                         | 30. 36                                 | 30. 44  | 6. 40                                      | 8. 40          | 1. 14                                      | 6. 47            |
| 10 Mer.                        | 30. 52                                 | 31. 0   | 12. 38                                     | 9. 52          | 1. 58                                      | 7. 6             |
| 11 Jov.                        | 31. 9                                  | 31. 18  | 17. 59                                     | 11. 8          | 2. 45                                      | 7. 28            |
| 12 Ven.                        | 31. 27                                 | 31. 36  | 22. 47                                     | *              | 3. 36                                      | 7. 56            |
| 13 Sat.                        | 31. 46                                 | 31. 55  | 26. 14                                     | 0. 20 M        | 4. 31                                      | 8. 34            |
| 14 Dom.                        | 32. 4                                  | 32. 18  | 28. 10                                     | 1. 34          | 5. 32                                      | 9. 26            |
| 15 Lun.                        | 32. 21                                 | 32. 29  | 28. 17                                     | 2. 38          | 6. 33                                      | 10. 30           |
| 16 Mar.                        | 32. 36                                 | 32. 43  | 26. 13                                     | 3. 29          | 7. 35                                      | 11. 46           |
| 17 Mer.                        | 32. 48                                 | 32. 52  | 22. 20                                     | 4. 9           | 8. 85                                      | 1. 8 V           |
| 18 Jov.                        | 32. 54                                 | 32. 55  | 17. 1                                      | 4. 42          | 9. 32                                      | 2. 33            |
| 19 Ven.                        | 32. 53                                 | 32. 50  | 10. 35                                     | 5. 6           | 10. 26                                     | 3. 57            |
| 20 Sat.                        | 32. 46                                 | 32. 39  | 3. 34 A                                    | 5. 27          | 11. 16                                     | 5. 17            |
| 21 Dom.                        | 32. 30                                 | 32. 20  | 3. 33 B                                    | 5. 48          | 0. 5 V                                     | 6. 35            |
| 22 Lun.                        | 32. 9                                  | 31. 57  | 10. 24                                     | 6. 8           | 0. 54                                      | 7. 94            |
| 23 Mar.                        | 31. 43                                 | 31. 29  | 16. 26                                     | 6. 30          | 1. 44                                      | 9. 12            |
| 24 Mer.                        | 31. 16                                 | 31. 2   | 21. 31                                     | 6. 55          | 2. 35                                      | 10. 29           |
| 25 Jov.                        | 30. 49                                 | 30. 37  | 25. 17                                     | 7. 24          | 3. 27                                      | 11. 43           |
| 26 Ven.                        | 30. 25                                 | 30. 14  | 27. 36                                     | 7. 59          | 4. 36                                      | *                |
| 27 Sat.                        | 30. 4                                  | 29. 56  | 28. 24                                     | 8. 44          | 5. 14                                      | 0. 45 M          |
| 28 Dom.                        | 29. 50                                 | 29. 44  | 27. 43                                     | 9. 43          | 6. 7                                       | 1. 43            |
| 29 Lun.                        | 29. 40                                 | 29. 37  | 25. 38                                     | 10. 43         | 6. 57                                      | 2. 28            |
| 30 Mar.                        | 29. 36                                 | 29. 36  | 22. 20                                     | 11. 51         | 7. 46                                      | 3. 2             |
| 31 Mer.                        | 29. 38                                 | 29. 40  | 18. 4                                      | 0. 58 V        | 8. 32                                      | 3. 30            |

| Die<br>meridi- | Longitudo<br>Planeta-<br>rum | Latitudo<br>Plane-<br>tarum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Transi-<br>tus Pla-<br>netarum<br>per Me-<br>ridianum | Occlusio<br>Plane-<br>tarum |
|----------------|------------------------------|-----------------------------|---------------------------------|--------------------------|---|-----------------------------|
|                | S. G. M.                     | G. M.                       | G. M.                           | H. M.                    | H. M.   | H. M.                       |

A.

## S A T U R N U S .

|    |           |         |          |         |         |          |
|----|-----------|---------|----------|---------|---------|----------|
| 1  | 9. 21. 8  | 0. 13 B | 21. 26 A | 4. 11 M | 8. 40 M | 1. 9 V   |
| 7  | 9. 21. 38 | 0. 12   | 21. 31   | 3. 51   | 8. 20   | 0. 49    |
| 13 | 9. 22. 6  | 0. 12   | 21. 26   | 3. 31   | 8. 0    | 0. 29    |
| 19 | 9. 22. 31 | 0. 13   | 21. 22   | 3. 10   | 7. 40   | 0. 9     |
| 25 | 9. 22. 52 | 0. 13   | 21. 20   | 2. 49   | 7. 19   | 11. 49 M |

## J U P I T E R .

|    |            |         |          |         |          |         |
|----|------------|---------|----------|---------|----------|---------|
| 1  | 10. 21. 4  | 0. 43 A | 15. 11 A | 5. 44 M | 10. 43 M | 3. 42 V |
| 7  | 10. 22. 27 | 0. 44   | 14. 45   | 5. 25   | 10. 26   | 3. 27   |
| 13 | 10. 23. 46 | 0. 45   | 14. 20   | 5. 6    | 10. 9    | 3. 12   |
| 19 | 10. 25. 4  | 0. 46   | 13. 54   | 4. 48   | 9. 52    | 2. 56   |
| 25 | 10. 26. 22 | 0. 46   | 13. 30   | 4. 29   | 9. 35    | 2. 41   |

## M A R S .

|    |           |         |          |        |         |          |
|----|-----------|---------|----------|--------|---------|----------|
| 1  | 1. 24. 35 | 1. 17 B | 20. 12 B | 9. 4 M | 4. 35 V | 0. 6 M   |
| 7  | 1. 28. 10 | 1. 18   | 21. 4    | 8. 52  | 4. 28   | 0. 4     |
| 13 | 2. 1. 49  | 1. 20   | 21. 52   | 8. 41  | 4. 21   | 0. 1     |
| 19 | 2. 5. 26  | 1. 21   | 22. 36   | 8. 31  | 4. 15   | 11. 59 V |
| 25 | 2. 9. 4   | 1. 22   | 23. 12   | 8. 21  | 4. 8    | 11. 55   |

## V E N U S .

|    |            |         |          |         |         |        |
|----|------------|---------|----------|---------|---------|--------|
| 1  | 1d. 1. 45  | 0. 22 B | 19. 17 A | 4. 44 M | 9. 24 M | 2. 4 V |
| 7  | 10. 8. 55  | 0. 10   | 17. 54   | 4. 45   | 9. 31   | 2. 17  |
| 13 | 10. 16. 5  | 0. 11 A | 16. 13   | 4. 44   | 9. 38   | 2. 33  |
| 19 | 10. 23. 17 | 0. 30   | 14. 15   | 4. 42   | 9. 45   | 2. 48  |
| 25 | 11. 0. 30  | 0. 47   | 11. 42   | 4. 38   | 9. 52   | 3. 6   |

## M E R C U R I U S .

|    |            |         |          |         |          |         |
|----|------------|---------|----------|---------|----------|---------|
| 1  | 10. 15. 15 | 0. 31 B | 15. 48 A | 5. 21 M | 10. 18 M | 3. 15 V |
| 7  | 10. 20. 8  | 0. 35 A | 15. 20   | 5. 18   | 10. 17   | 3. 16   |
| 13 | 10. 26. 44 | 1. 26   | 13. 57   | 5. 18   | 10. 22   | 3. 26   |
| 19 | 11. 4. 33  | 2. 1    | 11. 44   | 5. 17   | 10. 21   | 3. 45   |
| 25 | 11. 13. 20 | 2. 30   | 8. 43    | 5. 17   | 10. 44   | 4. 11   |

## ECLIPSES SATELLITUM JOVIS.

| Dies<br>mensis | I. Satelles. |     |     | II. Satelles. |     |     | III. Satelles. |    |               |     |    |   |
|----------------|--------------|-----|-----|---------------|-----|-----|----------------|----|---------------|-----|----|---|
|                | Immerſiones  |     |     | Immerſiones   |     |     | Immerſiones    |    |               |     |    |   |
|                | H.           | M.  | S.  | H.            | M.  | S.  | H.             | M. | S.            |     |    |   |
| 7              | 0.           | 30. | 45  | 8             | 11. | 34. | 52             | 13 | 6.            | 41. | 50 | I |
| 8              | 18.          | 59. | 45  | 12            | 0.  | 54. | 13             | 20 | 10.           | 44. | 12 | I |
| 10             | 13.          | 28. | 46  | 15            | 14. | 13. | 48             | 27 | 14.           | 46. | 20 | I |
| 12             | 7.           | 57. | 46  | 19            | 3.  | 33. | 20             | 27 | 18.           | 18. | 40 | E |
| 14             | 2.           | 26. | 47  | 22            | 16. | 52. | 54             | —  | —             | —   | —  |   |
| 15             | 20.          | 55. | 47  | 26            | 6.  | 12. | 27             | —  | —             | —   | —  |   |
| 17             | 15.          | 24. | 48  | 29            | 19. | 38. | 6              | —  | —             | —   | —  |   |
| 19             | 9.           | 53. | 48  | —             | —   | —   | —              | —  | IV. Satelles. | —   | —  |   |
| 21             | 4.           | 22. | 49  | —             | —   | —   | —              | —  | Dies          | —   | —  |   |
| 22             | 22.          | 51. | 49  | —             | —   | —   | —              | —  | —             | —   | —  |   |
| 24             | 17.          | 20. | 50  | —             | —   | —   | —              | 21 | 22.           | 41. | 30 | I |
| 26             | 11.          | 49. | 50  | —             | —   | —   | —              | 22 | 3.            | 27. | 27 | E |
| 28             | 6.           | 18. | 51  | —             | —   | —   | —              | —  | —             | —   | —  |   |
| 30             | 0.           | 47. | 53  | —             | —   | —   | —              | —  | —             | —   | —  |   |
| 31             | 1.           | 19. | 16. | 50            | —   | —   | —              | —  | —             | —   | —  |   |

| Dies | Diameter<br>Solis. |     | Mora<br>transitus<br>Solis per<br>Meridian. |         | Motus<br>horarius<br>Solis |         | Logaritmus<br>distantiae<br>Solis a terra<br>posita media<br>100000 |         | Longitudo<br>Nodi Lunae |         |        |     |    |    |
|------|--------------------|-----|---|---------|----------------------------|---------|---|---------|-------------------------|---------|--------|-----|----|----|
|      | M. S.              |     | M. S.                                       |         | M. S.                      |         | S. G. M.  |         | S. G. M.                |         |        |     |    |    |
|      | H.                 | M.  | Hours                                       | Minutes | Hours                      | Minutes | Hours   | Minutes | Hours                   | Minutes |        |     |    |    |
| 1    | 32.                | 18. | 0   | 2.      | 10.                        | 4       | 2.  | 30.     | 1                       | 4.      | 996477 | 11. | 9. | 36 |
| 4    | 32.                | 16. | 9   | 2.      | 30.                        | 0       | 2.  | 29.     | 9                       | 4.      | 996815 | 11. | 9. | 30 |
| 7    | 32.                | 15. | 1   | 2.      | 9.                         | 6       | 2.  | 29.     | 7                       | 4.      | 997168 | 11. | 9. | 30 |
| 10   | 32.                | 14. | 0   | 2.      | 9.                         | 3       | 2.  | 29.     | 4                       | 4.      | 997521 | 11. | 9. | 1  |
| 13   | 32.                | 12. | 4   | 2.      | 9.                         | 0       | 2.  | 29.     | 2                       | 4.      | 997881 | 11. | 8. | 51 |
| 16   | 32.                | 10. | 8   | 2.      | 8.                         | 8       | 2.  | 29.     | 0                       | 4.      | 998244 | 11. | 8. | 42 |
| 19   | 32.                | 9.  | 2   | 2.      | 8.                         | 6       | 2.  | 28.     | 8                       | 4.      | 998619 | 11. | 8. | 32 |
| 22   | 32.                | 7.  | 4   | 2.      | 8.                         | 5       | 2.  | 28.     | 5                       | 4.      | 998993 | 11. | 8. | 23 |
| 25   | 32.                | 5.  | 7   | 2.      | 8.                         | 4       | 2.  | 28.     | 2                       | 4.      | 999368 | 11. | 8. | 13 |
| 28   | 32.                | 4.  | 1   | 2.      | 8.                         | 3       | 2.  | 28.     | 0                       | 4.      | 999743 | 11. | 8. | 4  |

**POSITIONES SATELLITUM JOVIS**  
*Oriens*      *6<sup>h</sup> Mane*      *Occidens*

|    |     |     |   |     |     |
|----|-----|-----|---|-----|-----|
| 1  | 3.  | 1.  | ○ | 2.  | .6. |
| 2  | .3. | 2.  | ○ | .1. | .6. |
| 3  | 10. | .3. | ○ | .1. | 4.  |
| 4  | .1. | .3. | ○ | .3. | 4.  |
| 5  | .1. | .3. | ○ | .3. | 4.  |
| 6  | .1. | .3. | ○ | .1. | .   |
| 7  | .4. | .3. | ○ | .1. | .   |
| 8  | .4. | 3.  | ○ | .3. | .   |
| 9  | 4.  | .3. | ○ | .1. | .   |
| 10 | 4.  | .3. | ○ | .1. | 10. |
| 11 | .4. | .3. | ○ | .3. | .   |
| 12 | .4. | .3. | ○ | .1. | 3.  |
| 13 | .4. | .3. | ○ | .1. | .   |
| 14 | .4. | .3. | ○ | .1. | .   |
| 15 | 3.  | .3. | ○ | .4. | .3. |
| 16 | 3.  | .3. | ○ | .1. | 10. |
| 17 | .3. | .3. | ○ | .3. | .6. |
| 18 | 3.  | .3. | ○ | .3. | .6. |
| 19 | .3. | .3. | ○ | .1. | 4.  |
| 20 | .3. | .3. | ○ | .1. | 4.  |
| 21 | .3. | .3. | ○ | .1. | 4.  |
| 22 | 3.  | .3. | ○ | .4. | .3. |
| 23 | .3. | .3. | ○ | .3. | .   |
| 24 | .4. | .3. | ○ | .1. | .   |
| 25 | 4.  | .3. | ○ | .3. | .   |
| 26 | 4.  | .3. | ○ | .3. | 10. |
| 27 | .4. | .3. | ○ | .3. | .   |
| 28 | .4. | .3. | ○ | .1. | 10. |
| 29 | .4. | 3.  | ○ | .1. | .3. |
| 30 | .3. | 3.  | ○ | .3. | .   |
| 31 | .3. | .3. | ○ | .3. | .   |

| D <i>icit</i> | Phaenomena & Observationes<br>Solis                               | D <i>icit</i> | Phaenomena & Observationes<br>Lunae  |
|---------------|---|---------------|--|
|               | Sol in parallelo  |               | Luna   |
| 2             | Serpentis culm. 14h 49'   | 1             | ad * & α Leonis 5h 40' & 6h 43'  |
| 3             | Procyon, & β Aquilae culm.<br>6h 33' & 18h 48'                    | 2             | ad γ Leonis 12h 42'  |
| 4             | Orionis culm. 4h 16'  | 4             | ad γ Virginis 14h 10'  |
| 7             | Serpentis, & π Orion. culm.<br>14h 25', & 4h 36'                  | 5             | Plenilunum 7h 43' ad 0 & α<br>Virg. 5h 24', 16h 39'  |
| 10            | Aquilae culm. 18h 16'   | 7             | ad δ Librae 5h 15'   |
| 11            | Canis, & δ Pegasi culm. 5h 52'<br>& 20h 8'                        | 8             | ad δ & σ Scropi 13h 18', &<br>22h 30'  |
| 14            | Pegasi & β Cancri culm.<br>20h 54', & 6h 80'                      | 11            | ad τ Sagittarii 14h 18' d. l. 3'   |
| 15            | Aquilae culm. 17h 56'   | 12            | Ultimus Quadrans 10h 8'  |
| 16            | Leonis & τ Delphini culm.<br>8h 39' & 18h 38'                     | 13            | Perigea ad 1. 2. 3. x Aquarii<br>14h 40', 15h 24' & 15h 30'  |
| 18            | Serpentis culm. 13h 54'   | 14            | ad δ Aquarii } Imm. 15h 30'<br>} Emerg. 16h 32'  |
| 19            | in signo Tauri oh 5'  | 19            | Novilunium 6h 51'  |
| 21            | Virginis culm. 10h 50'  | 21            | ad Mercurii 5h 40'   |
| 22            | Ophiuci culm. 15h 15'   | 23            | ad δ Tauri & informem Aurigae<br>1h 2' & 6h 24'  |
| 24            | Leonis culm. 7h 45'   | 25            | ad ν Geminorum 11h 42'   |
| 26            | δ & γ Delphini & γ Pegasi culm.<br>18h 8', 18h 6', & 21h 41'      | 26            | ad 1. 2. ν Cancri 9h 20' & 10h 21'   |
| 28            | Delphini culm. 18h 8'   | 27            | Primus Quadrans 1h 3' Apogea<br>ad ε Cancri 6h 0'  |
| 29            | Herculis, ζ Bootis, ε Aquilae<br>culm. 14h 33', 11h 59' & 16h 18' | 28            | ad δ & α Leonis 11h 44' & 15h 32'  |
| 30            | Tauri & α Delphini culm.<br>1h 34' & 17h 54'                      | 30            | ad τ Leonis 10h 48'<br>Planetae in parallelis fixarum<br>Saturnus & Corvi, τ & μ Sagitt.   |
|               | Phaenomena & Observationes<br>Planetarum                          |               | Jup. 3 ε Ceti, 10 λ Virg., 29 ε Ceti<br>Mars 1 τ & b Tauri, 13 ε Leo-<br>nis, 19 ε Leonis, 30 δ Herc.<br>Venus 1. 20 Monoc. 3 β Libr.<br>& Rigel, 5 α Hydr. & ε Erid.,<br>7 δ Aquar., 8 ε Orion., 9 δ<br>Erid. & α Antin., 12 ε Virg.<br>& ε Ophiuci, 15 δ, τ & μ<br>Serp., 16 ε Orion. γ Aquar.,<br>18 γ Antin., ε Aquar. & ε Orion.<br>21 γ Virg., 23 ζ & ε Virg.,<br>25 ε Pisc., 28 δ Virg. & ε Ceti,<br>30 δ Serpentis<br>Mercur. 1 ε Virg. & ε Ophiuci,<br>4 γ Aquarii & ζ Orionis, 5 δ<br>Ceti & ε Orionis, 7 ε Antinoi<br>& ε Virg., 10 δ Virg. & ε Ceti,<br>14 Procyon |

| Dies<br>septimanae | Aequatio<br>uddenda<br>tempori<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitude<br>Solis | Ascensio recta<br>Solis | Declinatio<br>Solis<br>Borealis |
|--------------------|---|------------------|--------------------|-------------------------|---------------------------------|
| Dies<br>mense      | M. S.   | S.               | S. G. M. S.        | G. M. S.                | G. M. S.                        |
| 1 Jov.             | + 3. 44, 6  | 18. 4            | 0. 12. 22. 34      | 11. 22. 48              | 4. 53. 48                       |
| 2 Ven.             | 3. 36, 3  | 18. 3            | 0. 13. 21. 55      | 12. 17. 22              | 5. 16. 48                       |
| 3 Sat.             | 3. 8, 1   | 18. 8            | 0. 14. 20. 34      | 13. 11. 58              | 5. 39. 48                       |
| 4 Dom.             | 2. 50, 1  | 19. 0            | 0. 15. 19. 30      | 14. 6. 36               | 6. 2. 30                        |
| 5 Lun.             | 2. 32, 3  | 17. 8            | 0. 16. 18. 34      | 15. 1. 16               | 6. 25. 18                       |
|                    |   | 17. 6            |                    |                         |                                 |
| 6 Mar.             | 2. 14, 7  |                  | 0. 17. 17. 16      | 15. 55. 59              | 6. 47. 48                       |
| 7 Mer.             | 1. 57, 3  | 17. 4            | 0. 18. 16. 6       | 16. 50. 46              | 7. 10. 17                       |
| 8 Joy.             | 1. 40, 2  | 17. 1            | 0. 19. 14. 54      | 17. 45. 36              | 7. 32. 39                       |
| 9 Ven.             | 1. 23, 3  | 16. 9            | 0. 20. 13. 40      | 18. 40. 30              | 7. 54. 53                       |
| 10 Sat.            | 1. 6, 6   | 16. 7            | 0. 21. 12. 24      | 19. 35. 28              | 8. 16. 59                       |
|                    |   | 16. 4            |                    |                         |                                 |
| 11 Dom.            | 0. 50, 2  |                  | 0. 22. 11. 7       | 20. 30. 31              | 8. 38. 57                       |
| 12 Lun.            | 0. 34, 2  | 16. 0            | 0. 23. 9. 48       | 21. 25. 59              | 9. 0. 46                        |
| 13 Mar.            | 0. 18, 6  | 15. 6            | 0. 24. 8. 27       | 22. 20. 52              | 9. 22. 26                       |
| 14 Mer.            | 0. 3, 6   | 15. 4            | 0. 25. 7. 4        | 23. 16. 10              | 9. 43. 57                       |
| 15 Jov.            | 0. 11, 9  | 15. 1            | 0. 26. 5. 40       | 24. 11. 33              | 10. 5. 19                       |
|                    |   | 14. 6            |                    |                         |                                 |
| 16 Ven.            | 0. 26, 5  |                  | 0. 27. 4. 15       | 25. 7. 2                | 10. 26. 31                      |
| 17 Sat.            | 0. 40, 5  | 14. 0            | 0. 28. 2. 48       | 26. 2. 37               | 10. 47. 33                      |
| 18 Dom.            | 0. 54, 1  | 13. 6            | 0. 29. 1. 19       | 26. 58. 19              | 11. 8. 24                       |
| 19 Lun.            | 1. 7, 4   | 13. 3            | 0. 29. 59. 48      | 27. 54. 7               | 11. 29. 4                       |
| 20 Mar.            | 1. 20, 5  | 12. 9            | 1. 0. 58. 16       | 28. 50. 2               | 11. 49. 33                      |
|                    |   | 12. 4            |                    |                         |                                 |
| 21 Mer.            | 1. 32, 7  |                  | 1. 1. 56. 43       | 29. 46. 4               | 12. 9. 51                       |
| 22 Jov.            | 1. 34, 7  | 12. 0            | 1. 2. 55. 7        | 30. 42. 12              | 12. 29. 57                      |
| 23 Ven.            | 1. 56, 3  | 11. 6            | 1. 3. 53. 30       | 31. 38. 27              | 12. 49. 51                      |
| 24 Sat.            | 2. 7, 3   | 11. 0            | 1. 4. 51. 51       | 32. 34. 49              | 13. 9. 32                       |
| 25 Dom.            | 2. 17, 7  | 10. 4            | 1. 5. 50. 9        | 33. 31. 18              | 13. 29. 0                       |
|                    |   | 10. 1            |                    |                         |                                 |
| 26 Lun.            | 2. 27, 8  |                  | 1. 6. 48. 25       | 34. 27. 54              | 13. 48. 14                      |
| 27 Mar.            | 2. 37. 5  | 9. 7             | 1. 7. 46. 40       | 35. 24. 38              | 14. 7. 15                       |
| 28 Mer.            | 2. 46, 7  | 9. 2             | 1. 8. 44. 53       | 36. 21. 29              | 14. 26. 2                       |
| 29 Jov.            | 2. 55, 3  | 8. 6             | 1. 9. 43. 3        | 37. 18. 28              | 14. 44. 35                      |
| 30 Ven.            | 2. 3, 4   | 8. 1             | 1. 10. 41. 11      | 38. 15. 34              | 15. 2. 53                       |
|                    |   | 7. 7             |                    |                         |                                 |

| Die<br>mensis | Dis-<br>tanci-<br>onis<br>a Sole | Diffe-<br>rentia | Ius-<br>tium<br>Crepu-<br>sculi | Ortu-<br>s Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepus-<br>culi | Hora<br>Italica<br>Meridi-<br>diei |
|---------------|----------------------------------|------------------|---------------------------------|----------------------------|---------------------------------|--------------------------|------------------------------------|
|               |                                  |                  |                                 |                            |                                 |                          |                                    |
|               |                                  |                  | "                               |                            |                                 |                          |                                    |
| H. M. S.      | M. S.                            | H. M.            | H. M.                           | H. M.                      | H. M.                           | H. M.                    | H. M.                              |
| 1 Jov.        | 23. 14. 28,8                     | 3. 38, 2         | 3. 54                           | 5. 39                      | 6. 21                           | 8. 6                     | 17. 0                              |
| 2 Ven.        | 23. 10. 50,6                     | 3. 38, 4         | 3. 52                           | 5. 37                      | 6. 23                           | 8. 8                     | 16. 58                             |
| 3 Sat.        | 23. 7. 12,2                      | 3. 38, 6         | 3. 50                           | 5. 36                      | 6. 24                           | 8. 10                    | 16. 56                             |
| 4 Dom.        | 23. 3. 33,6                      | 3. 38, 7         | 3. 48                           | 5. 34                      | 6. 26                           | 8. 12                    | 16. 54                             |
| 5 Lun.        | 22. 59. 54,19                    | 3. 38, 9         | 3. 46                           | 5. 33                      | 6. 27                           | 8. 14                    | 16. 55                             |
| 6 Mar.        | 22. 56. 16,0                     | 3. 39, 1         | 3. 44                           | 5. 31                      | 6. 29                           | 8. 16                    | 16. 53                             |
| 7 Mer.        | 22. 52. 36,9                     | 3. 39, 3         | 3. 42                           | 5. 30                      | 6. 30                           | 8. 18                    | 16. 51                             |
| 8 Jov.        | 22. 48. 57,6                     | 3. 39, 6         | 3. 34                           | 5. 28                      | 6. 32                           | 8. 21                    | 16. 49                             |
| 9 Ven.        | 22. 45. 18,0                     | 3. 39, 9         | 3. 37                           | 5. 26                      | 6. 34                           | 8. 23                    | 16. 47                             |
| 10 Sat.       | 22. 41. 38,1                     | 3. 40, 2         | 3. 35                           | 5. 24                      | 6. 36                           | 8. 25                    | 16. 45                             |
| 11 Dom.       | 22. 37. 57,9                     | 3. 40, 5         | 3. 34                           | 5. 23                      | 6. 37                           | 8. 27                    | 16. 43                             |
| 12 Lun.       | 22. 34. 17,4                     | 3. 40, 9         | 3. 32                           | 5. 21                      | 6. 39                           | 8. 28                    | 16. 41                             |
| 13 Mar.       | 22. 30. 36,5                     | 3. 40, 2         | 3. 30                           | 5. 19                      | 6. 41                           | 8. 30                    | 16. 39                             |
| 14 Mer.       | 22. 26. 55,3                     | 3. 41, 5         | 3. 28                           | 5. 18                      | 6. 42                           | 8. 32                    | 16. 38                             |
| 15 Jov.       | 22. 23. 13,8                     | 3. 41, 9         | 3. 26                           | 5. 16                      | 6. 44                           | 8. 34                    | 16. 36                             |
| 16 Vén.       | 22. 19. 31,9                     | 3. 42, 4         | 3. 24                           | 5. 14                      | 6. 46                           | 8. 36                    | 16. 34                             |
| 17 Sat.       | 22. 15. 49,5                     | 3. 42, 8         | 3. 22                           | 5. 13                      | 6. 47                           | 8. 38                    | 16. 32                             |
| 18 Dom.       | 22. 12. 6,7                      | 3. 43, 2         | 3. 20                           | 5. 11                      | 6. 49                           | 8. 40                    | 16. 30                             |
| 19 Lun.       | 22. 8. 23,5                      | 3. 43, 6         | 3. 18                           | 5. 10                      | 6. 50                           | 8. 42                    | 16. 28                             |
| 20 Mar.       | 22. 4. 39,9                      | 3. 44, 1         | 3. 15                           | 5. 8                       | 6. 52                           | 8. 45                    | 16. 26                             |
| 21 Mer.       | 22. 0. 55,8                      | 3. 44, 6         | 3. 13                           | 5. 7                       | 6. 53                           | 8. 47                    | 16. 24                             |
| 22 Jov.       | 21. 57. 11,2                     | 3. 45, 0         | 3. 11                           | 5. 5                       | 6. 55                           | 8. 49                    | 16. 22                             |
| 23 Ven.       | 21. 53. 26,2                     | 3. 45, 5         | 3. 9                            | 5. 3                       | 6. 57                           | 8. 51                    | 16. 20                             |
| 24 Sat.       | 21. 49. 40,7                     | 3. 45, 9         | 3. 7                            | 5. 2                       | 6. 58                           | 8. 53                    | 16. 19                             |
| 25 Dom.       | 21. 45. 54,8                     | 3. 46, 4         | 3. 5                            | 5. 1                       | 6. 59                           | 8. 55                    | 16. 17                             |
| 26 Lun.       | 21. 42. 8,4                      | 3. 46, 9         | 3. 2                            | 5. 0                       | 7. 0                            | 8. 58                    | 16. 15                             |
| 27 Mar.       | 21. 38. 21,5                     | 3. 47, 4         | 3. 0                            | 4. 58                      | 7. 2                            | 9. 0                     | 16. 13                             |
| 28 Mer.       | 21. 34. 34,1                     | 3. 47, 9         | 2. 57                           | 4. 57                      | 7. 3                            | 9. 2                     | 16. 12                             |
| 29 Jov.       | 21. 30. 46,2                     | 3. 48, 4         | 2. 57                           | 4. 56                      | 7. 4                            | 9. 4                     | 16. 10                             |
| 30 Ven.       | 21. 26. 57,8                     | 3. 48, 9         | 2. 54                           | 4. 54                      | 7. 6                            | 9. 6                     | 16. 8                              |

| Dies<br>mensis<br>bebbdomadae | Longitudo<br>Lunae<br>Meridie | Longitudo<br>Lunae<br>media nocte | Latitudo<br>Lunae<br>Meridie | Latitudo<br>Lunae<br>med. noct. | Paral-<br>laxis<br>Lunae<br>Meridie | Paral-<br>laxis<br>Lunae<br>media<br>nocte |
|-------------------------------|-------------------------------|-----------------------------------|------------------------------|---------------------------------|-------------------------------------|--|
|                               | S. G. M. S.                   | S. G. M. S.                       | G. M. S.                     | G. M. S.                        | M. S.                               | M. S.                                      |
| 1 Jov.                        | 4. 23. 9. 33                  | 4. 29. 8. 25                      | 1. 26. 10                    | 0. 54. 16 B                     | 54. 28                              | 54. 37                                     |
| 2 Ven.                        | 5. 6. 9. 52                   | 5. 17. 14. 13                     | 0. 21. 31 A                  | 0. 11. 42                       | 54. 47                              | 54. 59                                     |
| 3 Sat.                        | 5. 17. 21. 42                 | 5. 23. 32. 39                     | 0. 45. 1                     | 1. 18. 4                        | 55. 12                              | 55. 27                                     |
| 4 Dom                         | 5. 29. 47. 16                 | 6. 6. 5. 50                       | 1. 50. 31                    | 2. 21. 54                       | 55. 42                              | 55. 57                                     |
| 5 Lun.                        | 6. 12. 28. 27                 | 6. 18. 55. 52                     | 51. 49                       | 3. 19. 47                       | 56. 13                              | 56. 39                                     |
| 6 Mar.                        | 6. 25. 25. 41                 | 7. 2. 0. 11                       | 3. 45. 27                    | 4. 8. 21                        | 56. 46                              | 57. 2                                      |
| 7 Mer.                        | 7. 8. 38. 28                  | 7. 15. 20. 19                     | 4. 28. 8                     | 4. 44. 25                       | 57. 17                              | 57. 32                                     |
| 8 Jov.                        | 7. 22. 5. 31                  | 7. 28. 53. 50                     | 4. 56. 51                    | 5. 5. 10                        | 57. 46                              | 57. 59                                     |
| 9 Ven                         | 8. 5. 44. 56                  | 8. 12. 38. 36                     | 5. 9. 13                     | 5. 8. 50                        | 58. 13                              | 58. 24                                     |
| 10 Sat.                       | 8. 19. 34. 26                 | 8. 26. 32. 20                     | 5. 3. 56                     | 4. 54. 31                       | 58. 34                              | 58. 44                                     |
| 11 Dom                        | 9. 3. 31. 59                  | 9. 10. 33. 12                     | 4. 40. 40                    | 4. 22. 35                       | 58. 53                              | 59. 1                                      |
| 12 Lun.                       | 9. 17. 35. 43                 | 9. 24. 39. 22                     | 4. 0. 27                     | 3. 34. 37                       | 59. 9                               | 59. 15                                     |
| 13 Mar.                       | 10. 1. 43. 57                 | 10. 8. 49. 19                     | 3. 5. 26                     | 2. 33. 23                       | 59. 20                              | 59. 24                                     |
| 14 Mer.                       | 10. 15. 55. 14                | 10. 23. 1. 33                     | 1. 58. 52                    | 1. 22. 31                       | 59. 26                              | 59. 27                                     |
| 15 Jov.                       | 11. 0. 8. 0                   | 11. 7. 14. 16                     | 0. 44. 54                    | 0. 6. 39 A                      | 59. 26                              | 59. 23                                     |
| 16 Ven.                       | 11. 14. 20. 7                 | 11. 21. 25. 3                     | 2. 31. 41 B                  | 1. 9. 25                        | 59. 19                              | 59. 18                                     |
| 17 Sat.                       | 11. 28. 28. 46                | 0. 5. 30. 47                      | 1. 45. 53                    | 2. 20. 33                       | 59. 4                               | 58. 54                                     |
| 18 Dom                        | 0. 12. 30. 35                 | 0. 19. 27. 47                     | 2. 52. 52                    | 3. 22. 20                       | 58. 41                              | 58. 26                                     |
| 19 Lun.                       | 0. 26. 21. 47                 | 1. 3. 12. 9                       | 3. 48. 36                    | 4. 11. 20                       | 58. 10                              | 57. 58                                     |
| 20 Mar.                       | 1. 9. 58. 30                  | 1. 16. 40. 31                     | 4. 30. 15                    | 4. 45. 11                       | 57. 33                              | 57. 13                                     |
| 21 Mer.                       | 1. 23. 17. 54                 | 1. 29. 50. 27                     | 4. 56. 2                     | 5. 2. 52                        | 56. 53                              | 56. 32                                     |
| 22 Jov.                       | 2. 6. 18. 10                  | 2. 12. 41. 45                     | 5. 5. 44                     | 5. 4. 44                        | 56. 18                              | 55. 52                                     |
| 23 Ven.                       | 2. 18. 59. 14                 | 2. 25. 12. 55                     | 4. 59. 59                    | 3. 51. 44                       | 55. 34                              | 55. 17                                     |
| 24 Sat.                       | 3. 1. 22. 22                  | 3. 7. 28. 0                       | 4. 40. 8                     | 4. 25. 27                       | 55. 2                               | 54. 49                                     |
| 25 Dom                        | 3. 13. 30. 21                 | 3. 18. 29. 55                     | 4. 7. 55                     | 3. 47. 48                       | 54. 37                              | 54. 28                                     |
| 26 Lun.                       | 3. 25. 27. 16                 | 4. 1. 23. 1                       | 3. 25. 18                    | 3. 0. 39                        | 54. 21                              | 54. 17                                     |
| 27 Mar                        | 4. 7. 17. 45                  | 4. 13. 12. 10                     | 2. 34. 8                     | 3. 6. 0                         | 54. 16                              | 54. 17                                     |
| 28 Mer.                       | 4. 19. 7. 0                   | 4. 25. 2. 54                      | 1. 36. 29                    | 1. 5. 50                        | 54. 31                              | 54. 27                                     |
| 29 Jov.                       | 5. 1. 0. 29                   | 5. 7. 0. 24                       | 0. 34. 21                    | 0. 2. 18 B                      | 54. 26                              | 54. 47                                     |
| 30 Ven.                       | 5. 13. 3. 18                  | 0. 19. 9. 46                      | 0. 30. 1 A                   | 1. 2. 16                        | 55. 0                               | 55. 35                                     |

| Dies<br>meridiis<br>et<br>noctibus | Diameter<br>horiz.<br>Lunae<br>Meridie | Diameter<br>horiz.<br>Lunae<br>media<br>nocte | Declinatio<br>Lunae<br>in Meri-<br>diano | Orbus<br>Lunae | Transitus<br>Lunae<br>per Meri-<br>dianum | Occasus<br>Lunae |
|------------------------------------|--|---|--|----------------|---|------------------|
|                                    | M. S.                                  | M. S.   | G. M.                                    | H. M.          | H. M.                                     | H. M.            |
| 1 Jov.                             | 29. 44                                 | 29. 49  | 13. 11 B                                 | 2. 4 V         | 9. 15 V                                   | 3. 52 M          |
| 2 Ven.                             | 29. 55                                 | 30. 1   | 7. 36                                    | 3. 10          | 9. 57                                     | 4. 13            |
| 3 Sat.                             | 30. 8                                  | 30. 16  | 1. 40 B                                  | 4. 17          | 10. 38                                    | 4. 31            |
| 4 Dom                              | 30. 24                                 | 30. 33  | 4. 25 A                                  | 5. 24          | 11. 20                                    | 4. 47            |
| 5 Lun.                             | 30. 42                                 | 30. 51  | * *                                      | 6. 33          | * *                                       | 5. 4             |
| 6 Mar.                             | 31. 0                                  | 31. 8   | 10. 33                                   | 7. 46          | 0. 3 M                                    | 5. 22            |
| 7 Mer.                             | 31. 17                                 | 31. 25  | 16. 17                                   | 9. 1           | 0. 49                                     | 5. 44            |
| 8 Jov.                             | 31. 33                                 | 31. 40  | 21. 19                                   | 10. 19         | 1. 39                                     | 6. 9             |
| 9 Ven.                             | 31. 47                                 | 31. 53  | 25. 27                                   | 11. 35         | 2. 34                                     | 6. 43            |
| 10 Sat.                            | 31. 59                                 | 32. 4   | 27. 39                                   | *              | 3. 34                                     | 7. 32            |
| 11 Dom                             | 32. 9                                  | 32. 14  | 28. 18                                   | 0. 41 M        | 4. 36                                     | 8. 31            |
| 12 Lun.                            | 32. 18                                 | 32. 21  | 26. 53                                   | 1. 35          | 5. 37                                     | 9. 42            |
| 13 Mar.                            | 32. 24                                 | 32. 26  | 23. 40                                   | 2. 19          | 6. 37                                     | 11. 1            |
| 14 Mer.                            | 32. 27                                 | 32. 28  | 18. 54                                   | 2. 53          | 7. 34                                     | 0. 23 V          |
| 15 Jov.                            | 32. 27                                 | 32. 25  | 13. 1                                    | 3. 18          | 8. 26                                     | 1. 44            |
| 16 Ven.                            | 32. 22                                 | 32. 20  | 6. 18 A                                  | 3. 38          | 9. 14                                     | 3. 8             |
| 17 Sat.                            | 32. 16                                 | 32. 10  | 0. 29 B                                  | 3. 59          | 10. 3                                     | 4. 10            |
| 18 Dom                             | 32. 5                                  | 31. 55  | 7. 80                                    | 4. 80          | 10. 51                                    | 5. 36            |
| 19 Lun.                            | 31. 46                                 | 31. 36  | 13. 46                                   | 4. 39          | 11. 40                                    | 6. 55            |
| 20 Mar.                            | 31. 85                                 | 31. 14  | 19. 13                                   | 5. 8           | 0. 30 V                                   | 8. 11            |
| 21 Mer.                            | 31. 3                                  | 30. 52  | 23. 36                                   | 5. 33          | 1. 23                                     | 9. 26            |
| 22 Jov.                            | 30. 41                                 | 30. 30  | 26. 36                                   | 6. 7           | 2. 16                                     | 10. 37           |
| 23 Ven.                            | 30. 20                                 | 30. 11  | 27. 57                                   | 6. 46          | 3. 10                                     | 11. 35           |
| 24 Sat.                            | 30. 3                                  | 29. 56  | 27. 59                                   | 7. 39          | 4. 4                                      | *                |
| 25 Dom                             | 29. 49                                 | 29. 44  | 26. 29                                   | 8. 37          | 4. 56                                     | 0. 28 M          |
| 26 Lun.                            | 29. 40                                 | 29. 38  | 23. 40                                   | 9. 42          | 5. 46                                     | 1. 8             |
| 27 Mar.                            | 29. 38                                 | 29. 38  | 19. 48                                   | 10. 48         | 6. 91                                     | 1. 40            |
| 28 Mer.                            | 29. 40                                 | 29. 44  | 15. 10                                   | 11. 55         | 7. 15                                     | 2. 2             |
| 29 Jov.                            | 29. 49                                 | 29. 55  | 9. 52                                    | 1. 2 V         | 7. 57                                     | 2. 23            |
| 30 Ven.                            | 30. 2                                  | 30. 10  | 4. 6                                     | 2. 8           | 8. 38                                     | 2. 39            |

| Dier<br>mensis | Longitudo<br>Planeta-<br>rum | Latitudo<br>Plane-<br>tarum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Transi-<br>tus Pla-<br>netarum<br>per Me-<br>ridianum | Occasus<br>Plane-<br>tarum |
|----------------|------------------------------|-----------------------------|---------------------------------|--------------------------|---|----------------------------|
|                | S. G. M.                     | G. M.                       | G. M.                           | H. M.                    | H. M.   | H. M.                      |

## S A T U R N U S .

|    |           |         |          |         |         |          |
|----|-----------|---------|----------|---------|---------|----------|
| 1  | 9. 23. 16 | 0. 12 B | 21. 17 A | 2. 24 M | 6. 55 M | 11. 26 M |
| 7  | 9. 23. 35 | 0. 18   | 21. 15   | 2. 2    | 6. 33   | 11. 4    |
| 13 | 9. 23. 47 | 0. 11   | 21. 12   | 1. 41   | 6. 12   | 10. 43   |
| 19 | 9. 23. 57 | 0. 10   | 21. 10   | 1. 20   | 5. 51   | 10. 22   |
| 25 | 9. 24. 3  | 0. 9    | 21. 11   | 0. 58   | 5. 29   | 10. 0    |

## J U P I T E R .

|    |            |         |          |        |         |         |
|----|------------|---------|----------|--------|---------|---------|
| 1  | 10. 27. 54 | 0. 46 A | 12. 56 A | 4. 6 M | 9. 15 M | 2. 24 V |
| 7  | 10. 29. 3  | 0. 47   | 12. 33   | 3. 46  | 8. 57   | 2. 8    |
| 13 | 11. 0. 11  | 0. 49   | 12. 11   | 3. 27  | 8. 29   | 1. 51   |
| 19 | 11. 1. 16  | 0. 50   | 11. 50   | 3. 7   | 8. 21   | 1. 34   |
| 25 | 11. 2. 16  | 0. 52   | 11. 30   | 2. 47  | 8. 2    | 1. 17   |

## M A R S .

|    |           |         |          |         |        |          |
|----|-----------|---------|----------|---------|--------|----------|
| 1  | 2. 13. 19 | 1. 23 B | 23. 48 B | 8. 12 M | 4. 2 V | 11. 52 V |
| 7  | 2. 17. 0  | 1. 23   | 24. 13   | 8. 4    | 3. 56  | 11. 48   |
| 13 | 2. 20. 40 | 1. 23   | 24. 32   | 7. 56   | 3. 50  | 11. 44   |
| 19 | 2. 24. 16 | 1. 23   | 24. 44   | 7. 49   | 3. 44  | 11. 39   |
| 25 | 2. 28. 7  | 1. 23   | 24. 51   | 7. 42   | 3. 38  | 11. 34   |

## V E N U S .

|    |            |        |         |         |         |         |
|----|------------|--------|---------|---------|---------|---------|
| 1  | 11. 8. 55  | 1. 5 A | 9. 15 A | 4. 34 M | 9. 59 M | 3. 24 V |
| 7  | 11. 16. 10 | 1. 16  | 6. 38   | 4. 28   | 10. 4   | 3. 40   |
| 13 | 11. 23. 26 | 1. 26  | 3. 56   | 4. 22   | 10. 9   | 3. 56   |
| 19 | 0. 0. 43   | 1. 33  | 1. 8    | 4. 16   | 10. 14  | 4. 12   |
| 25 | 0. 7. 58   | 1. 38  | 1. 37 B | 4. 9    | 10. 18  | 4. 27   |

## M E R C U R I U S .

|    |            |         |         |         |          |         |
|----|------------|---------|---------|---------|----------|---------|
| 1  | 11. 24. 41 | 2. 21 A | 4. 17 A | 5. 12 M | 10. 58 M | 4. 44 V |
| 7  | 0. 5. 21   | 2. 3    | 0. 15 B | 5. 12   | 11. 15   | 5. 19   |
| 13 | 0. 16. 54  | 1. 26   | 5. 19   | 5. 12   | 11. 36   | 6. 0    |
| 19 | 0. 29. 18  | 0. 33   | 10. 43  | 5. 12   | 11. 59   | 6. 46   |
| 25 | 1. 12. 8   | 0. 30 B | 15. 58  | 5. 12   | 0. 24 V  | 7. 35   |

## ECLIPSES SATELLITUM JOVIS.

| Dies<br>mensis | I. Satelles.     |     |    | II. Satelles. |                  |     | III. Satelles. |                           |                    |
|----------------|------------------|-----|----|---------------|------------------|-----|----------------|---------------------------|--------------------|
|                | Immersiones      |     |    | Immersiones   |                  |     | Immers. Emerſ. |                           |                    |
|                | H.               | M.  | S. | H.            | M.               | S.  | H.             | M.                        | S.                 |
| 2              | 13.              | 45. | 48 | 8             | 8.               | 51. | 42             | 3                         | 18. 48. 30 I       |
| 4              | 8.               | 14. | 46 | 5             | 22.              | 11. | 30             | 6                         | 22. 20. 28 E       |
| 6              | 2.               | 43. | 44 | 9             | 11.              | 30. | 54             | 10                        | 22. 50. 27 I       |
| 7              | 21.              | 12. | 41 | 13            | 0.               | 50. | 20             | 11                        | 2. 22. 10 E        |
| 9              | 15. <sup>*</sup> | 41. | 37 | 16            | 14.              | 9.  | 43             | 18                        | 2. 52. 12 I        |
| 11             | 10.              | 10. | 32 | 20            | 3.               | 29. | 4              | 18                        | 6. 23. 33 E        |
| 13             | 4.               | 39. | 26 | 23            | 16. <sup>*</sup> | 48. | 21             | 25                        | 6. 53. 30 I        |
| 14             | 21.              | 8.  | 19 | 27            | 6.               | 7.  | 33             | 25                        | 10. 24. 30 E       |
| 16             | 17.              | 27. | 11 | 30            | 19.              | 26. | 36             | —                         | —                  |
| 18             | 12.              | 6.  | 0  | —             | —                | —   | —              | —                         | IV. Satelles.      |
| 20             | 6.               | 34. | 47 | —             | —                | —   | —              | —                         | Dies Imers. Emerſ. |
| 22             | 1.               | 13. | 31 | —             | —                | —   | —              | —                         | —                  |
| 23             | 19.              | 32. | 13 | —             | —                | —   | —              | —                         | —                  |
| 25             | 14.              | 0.  | 52 | —             | —                | —   | 7              | 16. 57. 20 I              | —                  |
| 27             | 8.               | 29. | 34 | —             | —                | —   | 7              | 21. 43. 2 E               | —                  |
| 29             | 2.               | 59. | 9  | —             | —                | —   | 24             | 11. 12. 12 I              | —                  |
| 30             | 21.              | 27. | 46 | —             | —                | —   | 24             | 15. <sup>*</sup> 57. 20 E | —                  |

| Dies | Diameter<br>Solis |       | Mora<br>transitus<br>Solis per<br>Meridian. |       | Motus<br>borarius<br>Solis |       | Logaritmus<br>distansiae<br>Solis a terra<br>posita media<br>100000 |        | Longitudo<br>Node Lunae |    |    |
|------|-------------------|-------|---|-------|----------------------------|-------|---|--------|-------------------------|----|----|
|      | M. S.             |       | M. S.                                       |       | M. S.                      |       | —   |        | S.                      | G. | M. |
|      | —                 | —     | —   | —     | —                          | —     | —   | —      | —                       | —  | —  |
| 1    | 32.               | 1, 8  | 2.  | 8, 6  | 2.                         | 27, 6 | 5.  | 000247 | 11.                     | 7. | 51 |
| 4    | 32.               | 0, 1  | 2.  | 8, 7  | 2.                         | 27, 3 | 5.  | 000622 | 11.                     | 7. | 41 |
| 7    | 31.               | 58, 3 | 2.  | 8, 8  | 2.                         | 27, 0 | 5.  | 000994 | 11.                     | 7. | 32 |
| 10   | 31.               | 56, 7 | 2.  | 9, 1  | 2.                         | 26, 8 | 5.  | 001364 | 11.                     | 7. | 22 |
| 13   | 31.               | 55, 1 | 2.  | 9, 4  | 2.                         | 26, 6 | 5.  | 001731 | 11.                     | 7. | 13 |
| 16   | 31.               | 53, 5 | 2.  | 9, 7  | 2.                         | 26, 4 | 5.  | 002090 | 11.                     | 7. | 3  |
| 19   | 31.               | 52, 0 | 2.  | 10, 0 | 2.                         | 26, 2 | 5.  | 002442 | 11.                     | 6. | 54 |
| 22   | 31.               | 50, 4 | 2.  | 10, 4 | 2.                         | 26, 0 | 5.  | 002792 | 11.                     | 6. | 44 |
| 25   | 31.               | 48, 8 | 2.  | 10, 8 | 2.                         | 25, 8 | 5.  | 003130 | 11.                     | 6. | 35 |
| 28   | 31.               | 47, 3 | 2.  | 11, 2 | 2.                         | 25, 5 | 5.  | 003461 | 11.                     | 6. | 25 |

## POSITIONES SATELLITUM JOVIS

Oriens

4<sup>h</sup> Mane

Occidens

|    |     |    |   |             |        |
|----|-----|----|---|-------------|--------|
| 1  |     | 12 | O | 1. 1. 1. 4. |        |
| 2  |     | 13 | O | 2.          | .3. 4. |
| 3  | 10  | 14 | O | 1.          | .4.    |
| 4  |     | 15 | O | 1. σ.       | .4.    |
| 5  |     | 16 | O | .3.         | .4.    |
| 6  |     | 17 | O | .2. σ.      | .4.    |
| 7  |     | 18 | O | .4.         | .4.    |
| 8  | 10  | 19 | O | .3. 4. σ.   | .4.    |
| 9  |     | 20 | O | 4. .1.      | .4.    |
| 10 |     | 21 | O | 2.          | .4.    |
| 11 | 4.  | 22 | O | .1. 2.      | .4.    |
| 12 | 4.  | 23 | O | 3. 1.       | .4.    |
| 13 | .4. | 24 | O | .2. σ.      | .4.    |
| 14 | .4. | 25 | O | .1. 2.      | .4.    |
| 15 |     | 26 | O | .4.         | .4.    |
| 16 |     | 27 | O | .2.         | .4.    |
| 17 | 10  | 28 | O | .4.         | .4.    |
| 18 | 10  | 29 | O | .2. σ.      | .4.    |
| 19 |     | 30 | O | .1.         | .4.    |
| 20 |     |    | O |             |        |
| 21 |     |    | O |             |        |
| 22 |     |    | O |             |        |
| 23 |     |    | O |             |        |
| 24 | 10  |    | O |             |        |
| 25 |     |    | O |             |        |
| 26 |     |    | O |             |        |
| 27 | 4.  |    | O |             |        |
| 28 | 4.  |    | O |             |        |
| 29 | 4.  |    | O |             |        |
| 30 | 4.  |    | O |             |        |

**G** *Phaenomena & Observationes  
Solis*

| Sol in parallelo                  |       |  |
|-----------------------------------|-------|--|
| 1 γ Delphini                      | culm. | 17 <sup>h</sup> 56'  |
| 2 β Leonis                        | culm. | 8 <sup>h</sup> 56'   |
| 3 ε Tauri & 8 Serp. culm.         | culm. | 1 <sup>h</sup> 39' & 12 <sup>h</sup> 50'                     |
| 5 γ Serp., 7 Geminor., & 6 Leonis | culm. | 12 <sup>h</sup> 52', 3 <sup>h</sup> 33', & 8 <sup>h</sup> 9' |
| 6 in nodo ascend. Mercurii        |       |  |
| 8 in nodo ascend. Martis          |       |  |
| 17 γ Bootis, & 7 Herculis culm.   |       | 10 <sup>h</sup> 4', & 12 <sup>h</sup> 32'                    |
| 20 in signo Geminorum             | oh    | 40'  |
| 21 Arcturi                        | culm. | 10 <sup>h</sup> 12'  |
| 24 γ Leonis                       | culm. | 6 <sup>h</sup> 0'  |
| 29 δ Leonis                       | culm. | 6 <sup>h</sup> 34'   |
| 30 β Herculis                     | culm. | 11 <sup>h</sup> 48'  |

**G** *Phaenomena & Observationes  
Planetarum*

|  |    |            |
|--|----|------------|
| 2 Venus ad ξ Piscium                               | d. | 1. 1.0 25' |
| 4 Mercur. ad A Tauri diff. lat. 32'                |    |            |
| 7 Mercurius ad 1. 2. γ Tauri d. l. 1. 1.0 7' & 58' |    |            |
| 9 Venus ad ε Piscium diff. lat. 2'                 |    |            |
| Jupiter ad * Aquarii diff. lat. 23'                |    |            |
| Mars ad ε Geminorum d. l. 39'                      |    |            |
| 12 Mercurius ad κ Tauri d. l. 3'                   |    |            |
| 17 Mars ad 1. ω Geminorum d. l. 9'                 |    |            |
| 19 Mercur. in elong. max. vespert.                 |    |            |
| 20 Mercur. ad 1. informem Aurigae diff. lat. 24'   |    |            |
| 21 Mars ad m & n Geminor. d. l. 20' & 1.0 8'       |    |            |
| 22 Venus ad σ Arietis diff. lat. 49'               |    |            |
| 23 Venus ad σ Arietis diff. lat. 2'                |    |            |
| Mercurius ad 2. informem Au-                       |    |            |
| rigae diff. lat. 26'                               |    |            |

**G** *Phaenomena & Observationes  
Lunae*

| Luna  |                             |                           |
|---|-----------------------------|---------------------------|
| 2 ad ♀ Virginis   | 9 <sup>h</sup> 48'          | d. l. 25'                 |
| 4 Plenilunium   | .                           | 19 <sup>h</sup> 53'       |
| 6 ad ε Scorpiorum   | 8 <sup>h</sup> 36'          |                           |
| ad + Scorpiorum   | Immerf. 10 <sup>h</sup> 30' |                           |
| in regione Lunae Australi                                     |                             | Emers. 11 <sup>h</sup> 8' |
| 8 ad + Sagittarii   | 19 <sup>h</sup> 30'         |                           |
| 9 ad A Sagittarii   | 14 <sup>h</sup> 10'         |                           |
| 10 Perigea ad γ Aquarii                                       | 17 <sup>h</sup> 30'         |                           |
| 11 Ultimus Quadrans   | 13 <sup>h</sup> 39'         |                           |
| ad γ Capri  | 11 <sup>h</sup> 3'          |                           |
| 12 ad Jovis   | 13 <sup>h</sup> 54'         |                           |
| 13 ad φ Aquarii   | 4 <sup>h</sup> 36'          |                           |
| 18 Novilunium   | 18 <sup>h</sup> 24'         |                           |
| 20 ad Mercurii  | 15 <sup>h</sup> 15'         |                           |
| 22 ad Martis  | 11 <sup>h</sup> 0'          |                           |
| 24 Apogea ad γ Cancri   | 2 <sup>h</sup> 20'          |                           |
| 25 ad + & ε Leonis 18 <sup>h</sup> 32' & + 4 <sup>h</sup> 36' |                             |                           |
| 26 Primus Quadrans  | 19 <sup>h</sup> 8'          |                           |
| ad φ & + Leonis 13 <sup>h</sup> & 19 <sup>h</sup>             |                             |                           |
| ad α Virg. 11 <sup>h</sup> 17' quae occultab.                 |                             |                           |
| ad ε Virginis   | 9 <sup>h</sup> 0'           |                           |

**G** *Planetae in parallelis fixarum*

|                                    |
|------------------------------------|
| Saturnus + Corvi, - + & μ Sagitti. |
| Jupiter 1 + Ceti, 13 δ Eridani,    |
| 25 ε Eridani, 27 ξ Ophiuci         |
| & ε Virginis                       |
| Mars δ Herculis, 4 ε Leonis,       |
| 13 ξ Leonis, 28 b & - Tauri        |
| Venus 1 δ Virg. & δ Ophiuci,       |
| 4 Proc., 7 ε Serp. & ε Orion.      |
| 9 α Aquil., 13 γ Aquil., 16        |
| δ Serp., 19 α Cancri & α Oph.      |
| .21 ε Leon., 22 β & ξ Delph.,      |
| 24 γ & α Pegasi, 25 α Herc.        |
| ξ Bootis & α Aquil., 28 ε Tauri    |
| & δ Serp., 30 γ Serp. & ε Leon.    |
| Mercurius 1 Arcturi, 4 δ Leonis    |
| & β Herc., 5 γ Tauri, 10 ξ         |
| & ε Leonis, 13 δ Herc., 4 19       |
| ε Geminor., & iterum δ Herc.,      |
| & ξ Leonis & - Tauri               |

| Dies<br>nominis | Die<br>borealis | Æquatio<br>subtrahenda<br>a tempore<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitude<br>Solis | Ascensio recta<br>Solis |    |             | Declinatio<br>Solis<br>Borealis |
|-----------------|-----------------|--|------------------|--------------------|-------------------------|----|-------------|---------------------------------|
|                 |                 |  |                  |                    | M                       | S. | S. G. M. S. |                                 |
| 1 Sat.          | 3. 11. 1        | 7. 7   | 1. 11. 39. 17    | 39. 12. 47         | 35. 20.                 | 56 |             |                                 |
| 2 Dom           | 3. 18. 3        | 7. 2   | 1. 12. 37. 21    | 40. 10. 8          | 35. 38.                 | 44 |             |                                 |
| 3 Lun.          | 3. 24. 9        | 6. 6   | 1. 13. 35. 24    | 41. 7. 38          | 35. 56.                 | 16 |             |                                 |
| 4 Mar.          | 3. 30. 9        | 6. 0   | 1. 14. 33. 24    | 42. 5. 16          | 36. 13.                 | 32 |             |                                 |
| 5 Mer.          | 3. 36. 3        | 5. 4   | 1. 15. 31. 22    | 43. 3. 2           | 36. 30.                 | 32 |             |                                 |
|                 |                 | 4. 9   |                  |                    |                         |    |             |                                 |
| 6 Jov.          | 3. 41. 2        |  | 1. 16. 29. 19    | 44. 0. 56          | 16. 47.                 | 16 |             |                                 |
| 7 Ven.          | 3. 45. 5        | 4. 3   | 1. 17. 27. 14    | 44. 58. 59         | 17. 3.                  | 43 |             |                                 |
| 8 Sat.          | 3. 49. 3        | 3. 8   | 1. 18. 25. 8     | 45. 57. 11         | 17. 19.                 | 53 |             |                                 |
| 9 Dom           | 3. 52. 5        | 3. 2   | 1. 19. 23. 0     | 46. 55. 31         | 17. 35.                 | 46 |             |                                 |
| 10 Lun.         | 3. 55. 1        | 2. 6   | 1. 20. 20. 51    | 47. 54. 0          | 17. 51.                 | 22 |             |                                 |
|                 |                 | 2. 0   |                  |                    |                         |    |             |                                 |
| 11 Mar.         | 3. 57. 1        |  | 1. 21. 18. 41    | 48. 52. 38         | 18. 6.                  | 39 |             |                                 |
| 12 Mer.         | 3. 58. 4        | 1. 4   | 1. 22. 16. 30    | 49. 51. 25         | 18. 21.                 | 40 |             |                                 |
| 13 Jov.         | 3. 59. 4        | 0. 9   | 1. 23. 14. 18    | 50. 50. 22         | 18. 36.                 | 21 |             |                                 |
| 14 Ven.         | 3. 59. 6        | 0. 2   | 1. 24. 12. 5     | 51. 49. 28         | 18. 50.                 | 43 |             |                                 |
| 15 Sat.         | 3. 59. 2        | 0. 4   | 1. 25. 9. 51     | 52. 48. 43         | 19. 4.                  | 47 |             |                                 |
|                 |                 |  |                  |                    |                         |    |             |                                 |
| 16 Dom          | 3. 58. 2        | 1. 0   | 1. 26. 7. 36     | 53. 48. 7          | 19. 18.                 | 32 |             |                                 |
| 17 Lun.         | 3. 56. 5        | 1. 7   | 1. 27. 5. 20     | 54. 47. 39         | 19. 31.                 | 58 |             |                                 |
| 18 Mar.         | 3. 54. 3        | 2. 2   | 1. 28. 3. 3      | 55. 47. 20         | 19. 45.                 | 4  |             |                                 |
| 19 Mer.         | 3. 51. 5        | 2. 8   | 1. 29. 0. 45     | 56. 47. 9          | 19. 57.                 | 49 |             |                                 |
| 20 Jov.         | 3. 48. 2        | 3. 3   | 1. 29. 58. 25    | 57. 47. 7          | 20. 10.                 | 12 |             |                                 |
|                 |                 |  |                  |                    |                         |    |             |                                 |
| 21 Ven.         | 3. 44. 5        | 3. 7   | 2. 0. 56. 4      | 58. 47. 13         | 20. 22.                 | 17 |             |                                 |
| 22 Sat.         | 3. 40. 2        | 4. 3   | 2. 1. 53. 42     | 59. 47. 27         | 20. 34.                 | 0  |             |                                 |
| 23 Dom          | 3. 35. 2        | 5. 0   | 2. 2. 51. 19     | 60. 47. 49         | 20. 45.                 | 22 |             |                                 |
| 24 Lun.         | 3. 29. 8        | 5. 4   | 2. 3. 48. 54     | 61. 48. 18         | 20. 56.                 | 22 |             |                                 |
| 25 Mar          | 3. 24. 0        | 5. 8   | 2. 4. 46. 28     | 62. 48. 54         | 21. 7.                  | 1  |             |                                 |
|                 |                 |  |                  |                    |                         |    |             |                                 |
| 26 Mer.         | 3. 17. 6        | 6. 4   | 2. 5. 44. 1      | 63. 49. 38         | 21. 17.                 | 20 |             |                                 |
| 27 Jov.         | 3. 10. 7        | 6. 9   | 2. 6. 41. 32     | 64. 50. 29         | 21. 27.                 | 15 |             |                                 |
| 28 Ven.         | 3. 9. 5         | 7. 2   | 2. 7. 39. 2      | 65. 51. 26         | 21. 36.                 | 48 |             |                                 |
| 29 Sat.         | 2. 55. 9        | 7. 6   | 2. 8. 36. 30     | 66. 52. 29         | 21. 45.                 | 59 |             |                                 |
| 30 Dom          | 2. 47. 9        | 8. 0   | 2. 9. 33. 57     | 67. 53. 39         | 21. 54.                 | 47 |             |                                 |
| 31 Lun.         | 2. 39. 5        | 8. 4   | 2. 10. 31. 23    | 68. 54. 55         | 22. 3.                  | 13 |             |                                 |

| Dies<br>be-<br>domi-<br>nicae | Dies<br>mer-<br>itis | Distan-<br>tia<br>sectionis Y<br>a Sole | Diffe-<br>rentia | In-<br>ti-<br>tum<br>Crepu-<br>sculi | Ortu-<br>s<br>Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepu-<br>sculi | Horu-<br>s<br>Italica<br>Meri-<br>diei |
|-------------------------------|----------------------|---|------------------|--------------------------------------|-------------------------------|---------------------------------|--------------------------|--|
|                               |                      | H. M. S.                                | M. S.            | H. M.                                | H. M.                         | H. M.                           | H. M.                    | H. M.                                  |
| 1                             | Sat.                 | 21. 23. 8.9                             | 3. 49. 4         | 2. 52                                | 4. 53                         | 7. 7                            | 9. 8                     | 16. 6                                  |
| 2                             | Dom.                 | 21. 19. 19.5                            | 3. 50. 0         | 2. 50                                | 4. 52                         | 7. 8                            | 9. 10                    | 16. 5                                  |
| 3                             | Lun.                 | 21. 15. 29.5                            | 3. 50. 5         | 2. 48                                | 4. 50                         | 7. 10                           | 9. 12                    | 16. 3                                  |
| 4                             | Mar.                 | 21. 11. 39.0                            | 3. 51. 1         | 2. 46                                | 4. 49                         | 7. 11                           | 9. 14                    | 16. 1                                  |
| 5                             | Mer.                 | 21. 7. 47.9                             | 3. 51. 6         | 2. 44                                | 4. 48                         | 7. 12                           | 9. 16                    | 16. 0                                  |
| 6                             | Jov.                 | 21. 3. 56.3                             | 3. 52. 2         | 2. 41                                | 4. 46                         | 7. 14                           | 9. 19                    | 15. 58                                 |
| 7                             | Ven.                 | 21. 0. 4.1                              | 3. 52. 8         | 2. 39                                | 4. 45                         | 7. 15                           | 9. 21                    | 15. 57                                 |
| 8                             | Sat.                 | 20. 56. 11.3                            | 3. 53. 4         | 2. 37                                | 4. 44                         | 7. 16                           | 9. 23                    | 15. 55                                 |
| 9                             | Dom.                 | 20. 52. 17.9                            | 3. 53. 9         | 2. 34                                | 4. 43                         | 7. 17                           | 9. 26                    | 15. 54                                 |
| 10                            | Lun.                 | 20. 48. 24.0                            | 3. 54. 5         | 2. 32                                | 4. 41                         | 7. 19                           | 9. 28                    | 15. 52                                 |
| 11                            | Mar.                 | 20. 44. 29.5                            | 3. 55. 2         | 2. 30                                | 4. 40                         | 7. 20                           | 9. 30                    | 15. 51                                 |
| 12                            | Mer.                 | 20. 40. 34.3                            | 3. 55. 8         | 2. 28                                | 4. 39                         | 7. 21                           | 9. 32                    | 15. 49                                 |
| 13                            | Jov.                 | 20. 36. 38.5                            | 3. 56. 4         | 2. 26                                | 4. 38                         | 7. 22                           | 9. 34                    | 15. 47                                 |
| 14                            | Ven.                 | 20. 32. 42.1                            | 3. 57. 0         | 2. 24                                | 4. 37                         | 7. 23                           | 9. 36                    | 15. 46                                 |
| 15                            | Sat.                 | 20. 28. 45.1                            | 3. 57. 6         | 2. 22                                | 4. 36                         | 7. 24                           | 9. 38                    | 15. 44                                 |
| 16                            | Dom.                 | 20. 24. 47.5                            | 3. 58. 1         | 2. 20                                | 4. 34                         | 7. 26                           | 9. 40                    | 15. 43                                 |
| 17                            | Lun.                 | 20. 20. 49.4                            | 3. 58. 7         | 2. 18                                | 4. 33                         | 7. 27                           | 9. 42                    | 15. 42                                 |
| 18                            | Mar.                 | 20. 16. 50.7                            | 3. 58. 3         | 2. 16                                | 4. 32                         | 7. 28                           | 9. 44                    | 15. 40                                 |
| 19                            | Mer.                 | 20. 12. 51.4                            | 3. 59. 8         | 2. 14                                | 4. 31                         | 7. 29                           | 9. 46                    | 15. 39                                 |
| 20                            | Jov.                 | 20. 8. 51.6                             | 4. 0. 4          | 2. 12                                | 4. 30                         | 7. 30                           | 9. 48                    | 15. 36                                 |
| 21                            | Ven.                 | 20. 4. 51.2                             | 4. 1. 0          | 2. 10                                | 4. 29                         | 7. 31                           | 9. 50                    | 15. 35                                 |
| 22                            | Sat.                 | 20. 0. 50.2                             | 4. 1. 5          | 2. 8                                 | 4. 28                         | 7. 32                           | 9. 52                    | 15. 34                                 |
| 23                            | Dom.                 | 19. 56. 48.7                            | 4. 1. 9          | 2. 6                                 | 4. 27                         | 7. 33                           | 9. 54                    | 15. 32                                 |
| 24                            | Lun.                 | 19. 52. 46.8                            | 4. 2. 4          | 2. 4                                 | 4. 26                         | 7. 34                           | 9. 56                    | 15. 31                                 |
| 25                            | Mar.                 | 19. 48. 44.4                            | 4. 2. 9          | 2. 2                                 | 4. 25                         | 7. 35                           | 9. 58                    | 15. 30                                 |
| 26                            | Mer.                 | 19. 44. 41.5                            | 4. 3. 4          | 2. 0                                 | 4. 24                         | 7. 36                           | 10. 0                    | 15. 28                                 |
| 27                            | Jov.                 | 19. 40. 38.1                            | 4. 3. 8          | 1. 58                                | 4. 23                         | 7. 37                           | 10. 2                    | 15. 27                                 |
| 28                            | Ven.                 | 19. 36. 34.3                            | 4. 4. 2          | 1. 56                                | 4. 22                         | 7. 38                           | 10. 4                    | 15. 26                                 |
| 29                            | Sat.                 | 19. 32. 30.1                            | 4. 4. 7          | 1. 54                                | 4. 21                         | 7. 39                           | 10. 6                    | 15. 25                                 |
| 30                            | Dom.                 | 19. 28. 25.4                            | 4. 5. 1          | 1. 52                                | 4. 20                         | 7. 40                           | 10. 8                    | 15. 24                                 |
| 31                            | Lun.                 | 19. 24. 20.3                            | 4. 5. 4          | 1. 50                                | 4. 19                         | 7. 41                           | 10. 10                   | 15. 23                                 |

| Dies<br>mensis | Dies<br>hebdomadae | Longitudo        | Longitudo            | Latitudo         | Latitudo            | Paral-                         | Paral-                           |
|----------------|--------------------|------------------|----------------------|------------------|---------------------|--------------------------------|----------------------------------|
|                |                    | Lunae<br>Meridie | Lunae<br>media nocte | Lunae<br>Meridie | Lunae<br>med. noct. | xaxis<br>Lunae<br>Meri-<br>die | xaxis<br>Lunae<br>media<br>nocte |
|                |                    | S. G. M. S.      | S. G. M. S.          | G. M. S.         | G. M. S.            | M. S.                          | M. S.                            |
| 1 Sat.         | 5. 25. 20. 12      | 6. 1. 35. 4      | 1. 34. 8 A           | 2. 5. 12         | 55. 32              | 55. 50                         |                                  |
| 2 Dom          | 6. 7. 54. 55       | 6. 14. 19. 47    | 2. 35. 5             | 3. 3. 21         | 56. 9               | 56. 29                         |                                  |
| 3 Lun.         | 6. 20. 49. 46      | 6. 27. 25. 0     | 3. 29. 37            | 3. 53. 23        | 56. 50              | 57. 10                         |                                  |
| 4 Mar.         | 7. 4. 5. 34        | 7. 10. 51. 19    | 4. 14. 18            | 4. 31. 54        | 57. 30              | 57. 49                         |                                  |
| 5 Mer.         | 7. 17. 41. 47      | 7. 24. 36. 32    | 4. 45. 46            | 4. 55. 34        | 58. 8               | 58. 25                         |                                  |
| 6 Jov.         | 8. 1. 35. 7        | 8. 8. 36. 58     | 5. 1. 6              | 5. 2. 9          | 58. 40              | 58. 53                         |                                  |
| 7 Ven.         | 8. 15. 41. 30      | 8. 22. 48.       | 1. 45. 34            | 4. 50. 22        | 59. 4               | 59. 13                         |                                  |
| 8 Sat.         | 8. 29. 55. 54      | 9. 7. 4. 32      | 4. 37. 36            | 4. 20. 31        | 59. 20              | 59. 25                         |                                  |
| 9 Dom          | 9. 14. 13. 22      | 9. 21. 21. 56    | 3. 59. 14            | 3. 34. 14        | 59. 28              | 59. 29                         |                                  |
| 10 Lun.        | 9. 28. 29. 52      | 10. 5. 36. 48    | 3. 5. 54             | 2. 34. 45        | 59. 28              | 59. 26                         |                                  |
| 11 Mar.        | 10. 12. 42. 30     | 10. 19. 46. 43   | 2. 1. 16             | 1. 26. 4         | 59. 22              | 59. 17                         |                                  |
| 12 Mer.        | 10. 26. 49. 21     | 11. 3. 50. 23    | 0. 49. 35            | 0. 12. 33 A      | 59. 10              | 59. 2                          |                                  |
| 13 Jov.        | 11. 10. 49. 41     | 11. 17. 47. 13   | 0. 24. 31 B          | 1. 1. 2          | 58. 54              | 58. 45                         |                                  |
| 14 Ven.        | 11. 24. 42. 53     | 0. 1. 36. 36     | 1. 36. 28            | 2. 10. 16        | 58. 36              | 58. 25                         |                                  |
| 15 Sat.        | 0. 8. 28. 17       | 0. 15. 17. 47    | 2. 41. 59            | 3. 11. 10        | 58. 13              | 58. 0                          |                                  |
| 16 Dom         | 0. 22. 5. 0        | 0. 28. 49. 45    | 3. 37. 35            | 4. 0. 24         | 57. 46              | 57. 33                         |                                  |
| 17 Lun.        | 1. 5. 31. 44       | 1. 12. 10. 44    | 4. 19. 55            | 4. 35. 46        | 57. 19              | 57. 3                          |                                  |
| 18 Mar.        | 1. 18. 46. 35      | 1. 25. 19. 4     | 4. 47. 42            | 4. 55. 43        | 56. 47              | 56. 30                         |                                  |
| 19 Mer.        | 2. 1. 48. 3        | 2. 8. 13. 21     | 4. 59. 50            | 5. 0. 7          | 56. 14              | 55. 58                         |                                  |
| 20 Jov.        | 2. 14. 34. 54      | 2. 20. 52. 33    | 4. 56. 36            | 4. 49. 29        | 55. 42              | 55. 27                         |                                  |
| 21 Ven.        | 2. 27. 6. 34       | 3. 3. 16. 51     | 4. 39. 0             | 4. 25. 20        | 55. 12              | 54. 59                         |                                  |
| 22 Sat.        | 3. 9. 23. 48       | 3. 15. 27. 35    | 4. 8. 39             | 3. 49. 13        | 54. 47              | 54. 37                         |                                  |
| 23 Dom         | 3. 21. 28. 25      | 3. 27. 26. 47    | 3. 27. 22            | 3. 3. 26         | 54. 28              | 54. 21                         |                                  |
| 24 Lun.        | 4. 3. 23. 18       | 4. 9. 18. 28     | 2. 37. 32            | 2. 9. 59         | 54. 16              | 54. 13                         |                                  |
| 25 Mar.        | 4. 15. 12. 50      | 4. 21. 7. 2      | 1. 41. 4             | 1. 11. 7         | 54. 13              | 54. 16                         |                                  |
| 26 Mer.        | 4. 27. 1. 25       | 5. 2. 56. 44     | 0. 40. 21            | 0. 9. 3 B        | 54. 21              | 54. 38                         |                                  |
| 27 Jov.        | 5. 8. 54. 5        | 5. 14. 53. 56    | 0. 22. 31 A          | 0. 54. 4         | 54. 38              | 54. 50                         |                                  |
| 28 Ven.        | 5. 20. 56. 58      | 5. 27. 3. 55     | 1. 25. 17            | 1. 55. 50        | 55. 4               | 55. 21                         |                                  |
| 29 Sat.        | 6. 3. 15. 11       | 6. 9. 31. 26     | 2. 25. 23            | 2. 53. 34        | 55. 40              | 56. 1                          |                                  |
| 30 Dom         | 6. 15. 53. 17      | 6. 22. 21. 3     | 3. 19. 59            | 3. 44. 18        | 56. 23              | 56. 46                         |                                  |
| 31 Lun.        | 6. 28. 55. 0       | 7. 5. 35. 19     | 4. 5. 58             | 4. 34. 32        | 57. 11              | 57. 37                         |                                  |

| Dies<br>bris<br>moniale<br>Dies<br>mercurii | Diameter<br>boriz.<br>Lunae<br>Meridie | Diameter<br>boriz.<br>Lunae<br>media<br>nocte | Declinatio<br>Lunae<br>in Meri-<br>diano | Orta<br>Lunae | Transitus<br>Lunae<br>per Meri-<br>dianum | Occlusus<br>Lunae |
|---|--|---|--|---------------|---|-------------------|
|   | M. S.                                  | M. S.   | G. M.                                    | H. M.         | H. M.                                     | H. M.             |
| 1 Sat.                                      | 30. 19                                 | 30. 29  | 1. 49 A                                  | 3. 13 V       | 9. 19 V                                   | 2. 56 M           |
| 2 Dom.                                      | 30. 39                                 | 30. 50  | 8. 1                                     | 4. 22         | 10. 2                                     | 3. 13             |
| 3 Lun.                                      | 31. 2                                  | 31. 13  | 13. 54                                   | 5. 35         | 10. 48                                    | 3. 22             |
| 4 Mar.                                      | 31. 24                                 | 31. 34  | 19. 21                                   | 6. 49         | 11. 37                                    | 3. 51             |
| 5 Mer.                                      | 31. 44                                 | 31. 54  | 4. *                                     | 8. 4          | *   | 4. 16             |
| 6 Jov.                                      | 32. 2                                  | 32. 9   | 23. 50                                   | 9. 25         | 0. 30 M                                   | 4. 48             |
| 7 Ven.                                      | 32. 15                                 | 32. 20  | 26. 51                                   | 10. 36        | 1. 29                                     | 5. 27             |
| 8 Sat.                                      | 32. 24                                 | 32. 27  | 28. 6                                    | 11. 33        | 2. 32                                     | 6. 28             |
| 9 Dom.                                      | 32. 28                                 | 32. 29  | 27. 18                                   | *             | 3. 34                                     | 7. 37             |
| 10 Lun.                                     | 32. 28                                 | 32. 27  | 24. 40                                   | 0. 21 M       | 4. 35                                     | 8. 53             |
| 11 Mar.                                     | 32. 25                                 | 32. 22  | 20. 25                                   | 0. 58         | 5. 32                                     | 10. 14            |
| 12 Mer.                                     | 32. 18                                 | 32. 14  | 14. 41                                   | 1. 26         | 6. 26                                     | 11. 36            |
| 13 Jov.                                     | 32. 10                                 | 32. 5   | 8. 22                                    | 1. 47         | 7. 16                                     | 0. 55 V           |
| 14 Ven.                                     | 32. 0                                  | 31. 54  | 1. 46 A                                  | 2. 7          | 8. 3                                      | 2. 11             |
| 15 Sat.                                     | 31. 47                                 | 31. 40  | 5. 2 B                                   | 2. 26         | 8. 50                                     | 3. 26             |
| 16 Dom.                                     | 31. 22                                 | 31. 25  | 11. 23                                   | 2. 47         | 9. 37                                     | 4. 41             |
| 17 Lun.                                     | 31. 18                                 | 31. 9   | 17. 5                                    | 3. 9          | 10. 25                                    | 5. 55             |
| 18 Mar.                                     | 31. 0                                  | 30. 51  | 21. 52                                   | 3. 34         | 11. 15                                    | 7. 18             |
| 19 Mer.                                     | 30. 42                                 | 30. 33  | 25. 27                                   | 4. 3          | 0. 8 V                                    | 8. 24             |
| 20 Jov.                                     | 30. 25                                 | 30. 16  | 27. 31                                   | 4. 42         | 11. 2                                     | 9. 27             |
| 21 Ven.                                     | 30. 8                                  | 30. 1   | 28. 3                                    | 5. 29         | 1. 56                                     | 10. 22            |
| 22 Sat.                                     | 29. 55                                 | 29. 49  | 27. 8                                    | 6. 28         | 2. 48                                     | 11. 4             |
| 23 Dom.                                     | 29. 44                                 | 29. 40  | 24. 42                                   | 7. 30         | 3. 38                                     | 11. 38            |
| 24 Lun.                                     | 29. 38                                 | 29. 36  | 21. 14                                   | 8. 39         | 4. 26                                     | *                 |
| 25 Mar.                                     | 29. 36                                 | 29. 38  | 16. 53                                   | 9. 44         | 5. 11                                     | 0. 2 M            |
| 26 Mer.                                     | 29. 40                                 | 29. 44  | 11. 56                                   | 10. 47        | 6. 52                                     | 0. 26             |
| 27 Jov.                                     | 29. 50                                 | 29. 56  | 6. 22                                    | 11. 52        | 6. 32                                     | 0. 45             |
| 28 Ven.                                     | 30. 4                                  | 30. 13  | 0. 36 B                                  | 0. 57 V       | 7. 12                                     | 1. 0              |
| 29 Sat.                                     | 30. 24                                 | 30. 35  | 5. 24 A                                  | 2. 3          | 7. 43                                     | 1. 15             |
| 30 Dom.                                     | 30. 47                                 | 31. 0   | 11. 18                                   | 3. 11         | 8. 36                                     | 1. 33             |
| 31 Lun.                                     | 31. 14                                 | 31. 28  | 16. 67                                   | 4. 25         | 9. 24                                     | 1. 55             |

| <i>Dies<br/>meridi-</i> | <i>Longitudo<br/>Planeta-<br/>rum</i> | <i>Latitudo<br/>Plane-<br/>tarum</i> | <i>Declina-<br/>tio Pla-<br/>netarum</i> | <i>Ortus<br/>Plane-<br/>tarum</i> | <i>Transi-<br/>tus Pla-<br/>netarum<br/>per Me-<br/>ridianum</i> | <i>Occasus<br/>Plane-<br/>tarum</i> |
|-------------------------|---------------------------------------|--------------------------------------|--|-----------------------------------|--|-------------------------------------|
|                         | <i>S. G. M.</i>                       | <i>G. M.</i>                         | <i>G. M.</i>                             | <i>H. M.</i>                      | <i>H. M.</i>   | <i>H. M.</i>                        |
| S A T U R N U S .       |                                       |                                      |  |                                   |  |                                     |
| 1                       | 9. 24. 6                              | 0. 8 B                               | 21. 12 A                                 | 0. 37 M                           | 5. 8 M   | 9. 39 M                             |
| 7                       | 9. 24. 4                              | 0. 8                                 | 21. 12                                   | 0. 13                             | 4. 44  | 9. 15                               |
| 13                      | 9. 23. 59                             | 0. 8                                 | 21. 13                                   | 11. 50 V                          | 4. 21  | 8. 52                               |
| 19                      | 9. 23. 51                             | 0. 9                                 | 21. 13                                   | 11. 25                            | 3. 56  | 8. 21                               |
| 25                      | 9. 23. 40                             | 0. 9                                 | 21. 14                                   | 10. 59                            | 3. 30  | 8. 1                                |
| J U P I T E R .         |                                       |                                      |  |                                   |  |                                     |
| 1                       | 11. 3. 13                             | 0. 55 A                              | 11. 9 A                                  | 2. 29 M                           | 7. 46 M  | 1. 3 V                              |
| 7                       | 11. 4. 4                              | 0. 54                                | 10. 53                                   | 2. 8                              | 7. 26  | 0. 44                               |
| 13                      | 11. 4. 52                             | 0. 55                                | 10. 36                                   | 1. 46                             | 7. 6   | 0. 26                               |
| 19                      | 11. 5. 33                             | 0. 57                                | 10. 23                                   | 1. 23                             | 6. 44  | 0. 5                                |
| 25                      | 11. 6. 10                             | 0. 59                                | 10. 10                                   | 1. 2                              | 6. 23  | 11. 44 M                            |
| M A R S .               |                                       |                                      |  |                                   |  |                                     |
| 1                       | 3. 1. 41                              | 1. 22 B                              | 24. 51 B                                 | 7. 35 M                           | 3. 31 V  | 11. 27 V                            |
| 7                       | 3. 5. 25                              | 1. 22                                | 24. 44                                   | 7. 29                             | 3. 24  | 11. 19                              |
| 13                      | 3. 9. 6                               | 1. 21                                | 24. 31                                   | 7. 23                             | 3. 17  | 11. 11                              |
| 19                      | 3. 12. 49                             | 1. 21                                | 24. 12                                   | 7. 17                             | 3. 9   | 11. 1                               |
| 25                      | 3. 16. 30                             | 1. 20                                | 23. 47                                   | 7. 11                             | 3. 1   | 10. 51                              |
| V E N U S .             |                                       |                                      |  |                                   |  |                                     |
| 1                       | 0. 15. 16                             | 1. 39 A                              | 4. 30 B                                  | 4. 2 M                            | 10. 22 M   | 4. 42 V                             |
| 7                       | 0. 22. 31                             | 1. 38                                | 7. 16                                    | 3. 54                             | 10. 26   | 4. 58                               |
| 13                      | 0. 29. 50                             | 1. 34                                | 9. 58                                    | 3. 46                             | 10. 30   | 5. 14                               |
| 19                      | 1. 7. 7                               | 1. 28                                | 12. 32                                   | 3. 39                             | 10. 34   | 5. 29                               |
| 25                      | 1. 14. 26                             | 1. 19                                | 14. 56                                   | 3. 33                             | 10. 39   | 5. 45                               |
| M E R C U R I U S .     |                                       |                                      |  |                                   |  |                                     |
| 1                       | 1. 24. 23                             | 1. 30 B                              | 20. 23 B                                 | 5. 18 M                           | 0. 50 V  | 8. 22 V                             |
| 7                       | 2. 5. 34                              | 2. 11                                | 23. 05                                   | 5. 52                             | 1. 13  | 9. 1                                |
| 13                      | 2. 14. 57                             | 2. 25                                | 24. 59                                   | 5. 38                             | 1. 39  | 9. 26                               |
| 19                      | 2. 21. 26                             | 2. 6                                 | 25. 18                                   | 5. 37                             | 1. 35  | 9. 33                               |
| 25                      | 2. 25. 47                             | 1. 15                                | 24. 40                                   | 6. 35                             | 1. 30  | 9. 25                               |

## ECLIPSES SATELLITUM JOVIS.

| Dies<br>menſis | I. Satelles.         | Dies | II. Satelles. | Dies                | III. Satelles. |
|----------------|----------------------|------|---------------|---------------------|----------------|
|                | Immerſiones          |      | Immerſiones   |                     | Immerſ. Emerſ. |
|                | H. M. S.             |      | H. M. S.      |                     | H. M. S.       |
| 2              | 15. <sup>4</sup> 55. | 16   | 4             | 8. 45.              | 30             |
| 4              | 10. 23.              | 48   | 7             | 22. 14.             | 20             |
| 6              | 4. 52.               | 19   | 11            | 11. 23.             | 6              |
| 7              | 23. 20.              | 48   | 15            | 0. 41.              | 40             |
| 9              | 17. 49.              | 15   | 18            | 14. <sup>4</sup> 0. | 6              |
| 11             | 12. 17.              | 42   | 22            | 3. 18.              | 26             |
| 13             | 6. 46.               | 7    | 25            | 16. 36.             | 44             |
| 15             | 1. 14.               | 27   | 29            | 5. 54.              | 54             |
| 16             | 19. 42.              | 46   |               |                     |                |
| 18             | 14. <sup>4</sup> 11. | 4    |               |                     |                |
| 20             | 8. 39.               | 20   |               |                     |                |
| 22             | 3. 7.                | 34   |               |                     |                |
| 23             | 21. 35.              | 47   |               |                     |                |
| 25             | 16. 3.               | 58   |               |                     |                |
| 27             | 16. 32.              | 8    |               |                     |                |
| 29             | 5. 0.                | 17   |               |                     |                |
| 30             | 23. 28.              | 24   |               |                     |                |
|                |                      |      |               | IV. Satelles.       |                |
|                |                      |      |               | Dies                | Immerſ. Emerſ. |
|                |                      |      |               | 11                  | 5. 24. 10 I    |
|                |                      |      |               | 11                  | 18. 8. 16 E    |
|                |                      |      |               | 27                  | 23. 34. 20 I   |
|                |                      |      |               | 28                  | 4. 17. 34 E    |

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>horarius<br>Solis | Logaritmus<br>distantiae<br>Solis a terra<br>pefcta media<br>100000 | Longitudo<br>Nodi Lunae |
|------|-------------------|---|----------------------------|---|-------------------------|
|      | M. S.             | M. S.                                       | M. S.                      |   | S. G. M.                |
| 1    | 31. 45, 9         | 2. 11, 6                                    | 2. 25, 3                   | \$ .003718  | 11. 6. 16               |
| 4    | 31. 44, 8         | 2. 12, 1                                    | 2. 25, 1                   | \$ .004093  | 11. 6. 6                |
| 7    | 31. 43, 7         | 2. 12, 6                                    | 2. 24, 9                   | \$ .004392  | 11. 5. 57               |
| 10   | 31. 42, 5         | 2. 13, 1                                    | 2. 24, 7                   | \$ .004680  | 11. 5. 47               |
| 13   | 31. 41, 1         | 2. 13, 6                                    | 2. 24, 5                   | \$ .004955  | 11. 5. 38               |
| 16   | 31. 40, 0         | 2. 14, 1                                    | 2. 24, 3                   | \$ .005217  | 11. 5. 28               |
| 19   | 31. 38, 9         | 2. 14, 6                                    | 2. 24, 1                   | \$ .005465  | 11. 5. 19               |
| 22   | 31. 37, 8         | 2. 15, 0                                    | 2. 24, 0                   | \$ .005700  | 11. 5. 9                |
| 25   | 31. 36, 8         | 2. 15, 4                                    | 2. 23, 9                   | \$ .005918  | 11. 5. 0                |
| 28   | 31. 35, 9         | 2. 15, 8                                    | 2. 23, 8                   | \$ .006121  | 11. 4. 50               |

**POSITIONES SATELLITUM JOVIS**  
**Oriens                    3<sup>h</sup> Mane                    Occidens**

|    | • 4 |       | ○        | 3 σ 1      | • 1   |
|----|-----|-------|----------|------------|-------|
| 1  |     |       |          |            |       |
| 2  | • 4 | 3.    | • 2      | ○          |       |
| 3  | 10  |       | • 4      | • 2 ○      | 1.    |
| 4  |     | 3.    | • 1      | ○ 1.       | • 2   |
| 5  |     | • 3   | 2 σ 1    | ○          | • 4   |
| 6  |     |       | 2 σ 1    | ○ • 2      |       |
| 7  |     |       | 2 σ 1    | ○          | • 4   |
| 8  |     |       | 2 σ 1    | ○          | • 4   |
| 9  |     | 2.    | • 2      | ○          | 3.    |
| 10 | 10  |       | • 2      | ○          | 4.    |
| 11 |     | 3.    | • 2      | ○          | • 2   |
| 12 |     | 3.    | 2.       | ○ 1.       |       |
| 13 |     | • 14. | • 2      | ○ 1.       |       |
| 14 | 4.  |       | 1.       | ○ 1. 2     |       |
| 15 | 4.  |       | ○        | 1. 2.      | 1.    |
| 16 | 4.  |       | 3. 2.    | ○          | 1.    |
| 17 | • 4 |       | • 2      | ○ 1. 2.    |       |
| 18 | • 4 | 3.    | • 2      | ○          | • 2   |
| 19 |     | 1 σ 4 |          | ○          | 10 20 |
| 20 |     |       | • 1 2. 4 | ○ 1.       |       |
| 21 | 10  |       | 1.       | ○ 1. 2. 4  |       |
| 22 |     |       | ○        | 1. 2. 1. 4 |       |
| 23 |     |       | 3. 2.    | ○          | 3. 2. |
| 24 |     |       | • 2      | ○ 1. 2.    | 4.    |
| 25 |     |       | 3.       | ○          | 4.    |
| 26 |     | 8.    |          | ○ 1. 2.    | 4.    |
| 27 | 10  |       | • 2.     | ○          | 4.    |
| 28 | 10  |       | 1 σ 3    | ○          | 4.    |
| 29 |     |       | 4.       | ○ 1. 1.    | 3 σ 1 |
| 30 |     | 4.    | 2 σ 2    | ○          | 1.    |
| 31 | 10  | 4.    |          | ○          |       |

*Phænomena & Observationes  
Solis*

| Sol in parallelo                  |                  |
|-----------------------------------|------------------|
| 1. v. Canceris                    | culg. 3h 50'     |
| 3. Geminor. & a Arietis culm.     | 2h 29', & 21h 4' |
| 4. & a Geminorum culm.            | 1h 9' & 1h 17'   |
| 5. o. nodo Veneris                |                  |
| 16. Tauri                         | culg. 21h 50'    |
| 20. iugno Canceris                | 9h 23'           |
| 30. o. nodo Jovis, item in Apogeo |                  |

*Phænomena & Observationes  
Planetarum*

|  |                      |
|--|----------------------|
| 1. Mercurius stationarius              |                      |
| 5. Saturnus ad A Sagitt. diff. lat.    | 1.9 47'              |
| 6. Mars ad V Geminor. diff. lat. 4°    |                      |
| 7. Venus ad 1. o Tauri diff. lat. 28'  |                      |
| 9. Mars ad 1. 2. u Geminorum           | diff. lat. 59' & 1.0 |
| Venus ad 2. o Tauri diff. lat. 4°      |                      |
| 11. Venus ad 2. 3. x Tauri diff. lat.  | 1.9 16' & 1.0 22'    |
| 13. Mercurius in coniunctione in-      |                      |
| feriore                                |                      |
| 15. Venus ad Tauri d. I. 1.9 18'       |                      |
| 18. Venus ad t Tauri diff. lat. 43'    |                      |
| 19. Mars ad s Canceris diff. lat. 16'  |                      |
| 21. Venus ad n Tauri diff. lat. 39'    |                      |
| 22. Mars ad e c & e Tauri diff. lat.   | 3', 3' & 9'          |
| Venus ad o Tauri diff. lat. 56'        |                      |
| 27. Jupiter stationarius               |                      |
| 8. Saturnus ad f Sagitt. d. I. 1.0 21' |                      |
| 2. Venus ad H Geminor. diff. lat. 8'   |                      |

*Phænomena & Observationes  
Lunæ*

| Luna                                 |             |
|--------------------------------------|-------------|
| 2. ad τ & α Scorpis                  | 7h 8' & 18h |
| 3. Plenilunium                       | 5h 10'      |
| ad 43 Ophiuci                        | 13h         |
| 4. ad λ Sagittarii                   | 12h 50'     |
| 5. ad Δ Sagitt. & Satur. 10h & 22h   |             |
| 7. Perigea ad φ Aquarii              | 5h 50'      |
| ad γ Capri                           | 16h 48'     |
| 8. ad σ Aquarii                      | 15h 20'     |
| 9. Ult. Quadrans 21h 4' ad Jovis     |             |
| 11. ad ε Piscium                     | 4h 15'      |
| 13. ad μ Arietis                     | 17h 0'      |
| 16. ad Veneris & Mercurii            |             |
| 17. Novilunium                       | 7h 2'       |
| 19. ad φ Geminorum                   | 8h 48'      |
| 20. Apogeia ad Martis                | 6h 0'       |
| ad γ Canceris                        | 9h 30'      |
| 22. ad α Leonis 6h 48' diff. lat. 3' |             |
| 23. ad χ Leonis                      | 12h 42'     |
| 25. Primus Quadrans                  | 11h 9'      |
| 26. ad α Virginis                    | 18h 12'     |
| 29. ad τ Scorpii                     | 16h 20'     |
| 30. ad α & τ Scorpis 4h 12' & 7h 33' |             |

*Planetae in parallelis fixarum*

|                                  |                     |
|----------------------------------|---------------------|
| Saturnus μ & τ Sagitt.           | , Corvi             |
| Jupiter ε Eridani & ζ Ophiuci,   | α Virg. & η Orionis |
| Mars 1.9 Tauri, 7 μ & , Gemin.,  |                     |
| μ Ariet. & δ Gemin., 12.8 Herc.  |                     |
| & δ Leon., 19 ρ Leon., 5 Taur.   |                     |
| ζ Gemin., 23 Arcturi, 28 γ       |                     |
| Herculis & ι Bootis              |                     |
| Cephus ι & Sagittæ, γ Leonis,    |                     |
| 4 γ Arietis, ε Tauri, 8 δ Boot., |                     |
| γ Herc., 11 Arct., 13 ζ Tauri,   |                     |
| γ Leonis, 18 δ Leonis & β        |                     |
| Herc., 52 μ Arietis, η & μ       |                     |
| Geminorum, 30 γ Tauri            |                     |
| Mercurius 1. δ Tauri, 4 μ & γ    |                     |
| Gemin., α Arietis, 5 β Herc.     |                     |
| ζ Leon., 9 Arct., 25 ε Taur.     |                     |
| & γ Arietis, 30 η Bootis         |                     |

| Dies<br>mensis | Dies<br>hebdomadae | Æquatio<br>subtrahenda<br>a tempore<br>vero<br>ut habeatur<br>medium | Diff-<br>rentia | Longitudo<br>Solis | Ascensio recta<br>Solis | Declinatio<br>Solis |          |
|----------------|--------------------|--|-----------------|--------------------|-------------------------|---------------------|----------|
|                |                    |  |                 |                    |                         | G. M. S.            | G. M. S. |
|                |                    | M. S.  | S.              | S. G. M. S.        | G. M. S.                | G. M. S.            | G. M. S. |
| 1              | Mar.               | 2. 30, 6   | 8, 9            | 2. 11. 28. 47      | 69. 56. 17              | 22. 11. 14          |          |
| 2              | Mer.               | 2. 21, 3   | 9, 3            | 2. 12. 26. 10      | 70. 57. 44              | 22. 18. 53          |          |
| 3              | Jov.               | 2. 11, 7   | 9, 6            | 2. 13. 23. 32      | 71. 59. 16              | 22. 16. 9           |          |
| 4              | Ven.               | 2. 1, 8  | 9, 9            | 2. 14. 20. 53      | 73. 0. 53               | 22. 23. 1           |          |
| 5              | Sat.               | 1. 51, 6   | 10, 2           | 2. 15. 18. 13      | 74. 2. 37               | 22. 39. 29          |          |
| 6              | Dom.               | 1. 41, 0   | 10, 6           | 2. 16. 15. 33      | 75. 4. 25               | 22. 45. 34          |          |
| 7              | Lun.               | 1. 30, 1   | 10, 9           | 2. 17. 12. 53      | 76. 6. 18               | 22. 51. 15          |          |
| 8              | Mar.               | 1. 18, 8   | 11, 3           | 2. 18. 10. 12      | 77. 8. 15               | 22. 56. 32          |          |
| 9              | Mer.               | 1. 7, 2  | 11, 6           | 2. 19. 7. 31       | 78. 10. 16              | 23. 1. 25           |          |
| 10             | Jov.               | 0. 55, 4   | 11, 8           | 2. 20. 4. 49       | 79. 12. 21              | 23. 5. 54           |          |
| 11             | Ven.               | 0. 43, 4   | 12, 0           | 2. 21. 2. 7        | 80. 14. 30              | 23. 9. 58           |          |
| 12             | Sat.               | 0. 31, 3   | 12, 1           | 2. 21. 59. 25      | 81. 16. 43              | 23. 13. 38          |          |
| 13             | Dom.               | 0. 18, 9   | 12, 4           | 2. 22. 56. 43      | 82. 18. 59              | 23. 16. 54          |          |
| 14             | Lun.               | 0. 6, 3  | 12, 6           | 2. 23. 54. 0       | 83. 21. 17              | 23. 19. 45          |          |
| 15             | Mar.               | +0. 6, 5 <small>subtrahenda</small>                                  | 12, 8           | 2. 24. 51. 17      | 84. 23. 37              | 23. 22. 11          |          |
| 16             | Mer.               | 0. 19, 5   | 13, 0           | 2. 25. 48. 33      | 85. 25. 58              | 23. 24. 11          |          |
| 17             | Jov.               | 0. 32, 5   | 13, 0           | 2. 26. 45. 49      | 86. 28. 21              | 23. 25. 49          |          |
| 18             | Ven.               | 0. 45, 5   | 13, 0           | 2. 27. 43. 5       | 87. 30. 45              | 23. 27. 1           |          |
| 19             | Sat.               | 0. 58, 5   | 13, 0           | 2. 28. 40. 21      | 88. 33. 10              | 23. 27. 45          |          |
| 20             | Dom.               | 1. 11, 5   | 13, 0           | 2. 29. 37. 36      | 89. 35. 35              | 23. 28. 10          |          |
| 21             | Lun.               | 1. 24, 5   | 13, 0           | 3. 0. 34. 51       | 90. 37. 59              | 23. 28. 7           |          |
| 22             | Mar.               | 1. 37, 4   | 12, 9           | 3. 1. 32. 5        | 91. 40. 23              | 23. 27. 40          |          |
| 23             | Mer.               | 1. 50, 3   | 12, 9           | 3. 2. 29. 19       | 92. 42. 46              | 23. 26. 48          |          |
| 24             | Jov.               | 2. 3, 1  | 12, 8           | 3. 3. 26. 32       | 93. 45. 7               | 23. 25. 31          |          |
| 25             | Ven.               | 2. 15, 9   | 12, 8           | 3. 4. 23. 45       | 94. 47. 26              | 23. 23. 49          |          |
| 26             | Sat.               | 2. 28, 5   | 12, 6           | 3. 5. 20. 57       | 95. 49. 43              | 23. 21. 42          |          |
| 27             | Dom.               | 2. 40, 8   | 12, 3           | 3. 6. 18. 9        | 96. 51. 57              | 23. 19. 11          |          |
| 28             | Lun.               | 2. 52, 9   | 12, 1           | 3. 7. 15. 20       | 97. 54. 8               | 23. 16. 15          |          |
| 29             | Mar.               | 3. 4, 7  | 11, 8           | 3. 8. 12. 31       | 98. 56. 15              | 23. 12. 55          |          |
| 30             | Mer.               | 3. 16, 3   | 11, 6           | 3. 9. 9. 41        | 99. 58. 18              | 23. 9. 10           |          |
|                |                    |  | 11, 4           |                    |                         |                     |          |

| Dies<br>hebdomadis<br>Dies mensis | Distantia<br>sectionis<br>a Sole | Diffe-<br>rentia | Ini-<br>tium<br>Crepus-<br>culi | Ortu-<br>Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepus-<br>culi | Horu-<br>Italica<br>Meridi-<br>dis |
|-----------------------------------|----------------------------------|------------------|---------------------------------|--------------------------|---------------------------------|--------------------------|------------------------------------|
|                                   | H. M. S.                         | M. S.            | H. M.                           | H. M.                    | H. M.                           | H. M.                    | H. M.                              |
| 1 Mar.                            | 19. 20. 14.9                     | 4. 5. 8          | I. 48                           | 4. 19                    | 7. 41                           | 10. 12                   | 15. 22                             |
| 2 Mer.                            | 19. 16. 9.1                      | 4. 6. 2          | I. 46                           | 4. 18                    | 7. 42                           | 10. 14                   | 15. 21                             |
| 3 Jov.                            | 19. 12. 2.9                      | 4. 6. 5          | I. 44                           | 4. 18                    | 7. 42                           | 10. 16                   | 15. 20                             |
| 4 Ven.                            | 19. 7. 56.4                      | 4. 6. 9          | I. 43                           | 4. 17                    | 7. 43                           | 10. 17                   | 15. 19                             |
| 5 Sat.                            | 19. 3. 49.5                      | 4. 7. 2          | I. 42                           | 4. 16                    | 7. 44                           | 10. 18                   | 15. 18                             |
| 6 Dom                             | 18. 59. 42.3                     | 4. 7. 5          | I. 41                           | 4. 16                    | 7. 44                           | 10. 19                   | 15. 17                             |
| 7 Lun.                            | 18. 55. 34.8                     | 4. 7. 8          | I. 40                           | 4. 15                    | 7. 45                           | 10. 20                   | 15. 16                             |
| 8 Mar.                            | 18. 51. 27.0                     | 4. 8. 1          | I. 39                           | 4. 15                    | 7. 45                           | 10. 21                   | 15. 16                             |
| 9 Mer.                            | 18. 47. 18.9                     | 4. 8. 4          | I. 38                           | 4. 14                    | 7. 46                           | 10. 22                   | 15. 15                             |
| 10 Jov.                           | 18. 43. 10.5                     | 4. 8. 6          | I. 37                           | 4. 14                    | 7. 46                           | 10. 23                   | 15. 14                             |
| 11 Ven.                           | 18. 39. 1.9                      | 4. 8. 8          | I. 36                           | 4. 14                    | 7. 46                           | 10. 24                   | 15. 14                             |
| 12 Sat.                           | 18. 34. 53.1                     | 4. 9. 0          | I. 35                           | 4. 13                    | 7. 47                           | 10. 25                   | 15. 13                             |
| 13 Dom                            | 18. 30. 44.1                     | 4. 9. 2          | I. 34                           | 4. 13                    | 7. 47                           | 10. 26                   | 15. 13                             |
| 14 Lun.                           | 18. 26. 34.9                     | 4. 9. 4          | I. 34                           | 4. 13                    | 7. 47                           | 10. 26                   | 15. 13                             |
| 15 Mar.                           | 18. 22. 25.5                     | 4. 9. 5          | I. 33                           | 4. 13                    | 7. 47                           | 10. 27                   | 15. 13                             |
| 16 Mer.                           | 18. 18. 16.0                     | 4. 9. 5          | I. 33                           | 4. 13                    | 7. 47                           | 10. 27                   | 15. 13                             |
| 17 Jov.                           | 18. 14. 6.5                      | 4. 9. 6          | I. 32                           | 4. 12                    | 7. 48                           | 10. 28                   | 15. 12                             |
| 18 Ven.                           | 18. 9. 56.9                      | 4. 9. 6          | I. 32                           | 4. 12                    | 7. 48                           | 10. 28                   | 15. 12                             |
| 19 Sat.                           | 18. 5. 47.3                      | 4. 9. 6          | I. 31                           | 4. 12                    | 7. 48                           | 10. 29                   | 15. 12                             |
| 20 Dom                            | 18. 1. 37.7                      | 4. 9. 6          | I. 31                           | 4. 12                    | 7. 48                           | 10. 29                   | 15. 12                             |
| 21 Lun.                           | 17. 57. 28.1                     | 4. 9. 6          | I. 31                           | 4. 12                    | 7. 48                           | 10. 29                   | 15. 12                             |
| 22 Mar.                           | 17. 53. 18.5                     | 4. 9. 5          | I. 31                           | 4. 12                    | 7. 48                           | 10. 29                   | 15. 12                             |
| 23 Mer.                           | 17. 49. 9.0                      | 4. 9. 4          | I. 32                           | 4. 12                    | 7. 48                           | 10. 28                   | 15. 12                             |
| 24 Jov.                           | 17. 44. 59.6                     | 4. 9. 3          | I. 32                           | 4. 12                    | 7. 48                           | 10. 28                   | 15. 12                             |
| 25 Ven                            | 17. 40. 50.3                     | 4. 9. 2          | I. 32                           | 4. 12                    | 7. 48                           | 10. 28                   | 15. 12                             |
| 26 Sat.                           | 17. 36. 41.1                     | 4. 9. 0          | I. 33                           | 4. 13                    | 7. 47                           | 10. 27                   | 15. 13                             |
| 27 Dom                            | 17. 32. 32.1                     | 4. 8. 7          | I. 33                           | 4. 13                    | 7. 47                           | 10. 27                   | 15. 13                             |
| 28 Lun                            | 17. 28. 23.4                     | 4. 8. 4          | I. 34                           | 4. 13                    | 7. 47                           | 10. 26                   | 15. 12                             |
| 29 Mar.                           | 17. 24. 15.0                     | 4. 8. 2          | I. 34                           | 4. 13                    | 7. 47                           | 10. 26                   | 15. 13                             |
| 30 Mer.                           | 17. 20. 6.8                      | 4. 8. 0          | I. 35                           | 4. 13                    | 7. 47                           | 10. 25                   | 15. 13                             |

| Dies<br>septimanae | Longitude<br>Lunae<br>Meridie |     | Longitude<br>Lunae<br>media nocte |     | Latitudo<br>Lunae<br>Meridie |     | Latitude<br>Lunae<br>med. noct. |    | Paral.<br>laxis<br>Merid.<br>die |     | Paral.<br>laxis<br>Lunae<br>media<br>nocte |   |
|--------------------|-------------------------------|-----|-----------------------------------|-----|------------------------------|-----|---------------------------------|----|----------------------------------|-----|--|---|
|                    | S.                            | G.  | M.                                | S.  | G.                           | M.  | S.                              | G. | M.                               | S.  | A.   |   |
| 1 Mar.             | 7.                            | 12. | 22.                               | 7   | 7.                           | 19. | 16.                             | 14 | 4.                               | 39. | 46   | A |
| 2 Mer.             | 7.                            | 26. | 14.                               | 20. | 8.                           | 3.  | 18.                             | 53 | 4.                               | 59. | 22   |   |
| 3 Jov.             | 8.                            | 10. | 28.                               | 30. | 8.                           | 17. | 42.                             | 16 | 4.                               | 59. | 15   |   |
| 4 Ven.             | 8.                            | 24. | 59.                               | 16  | 9.                           | 2.  | 18.                             | 43 | 4.                               | 41. | 6  |   |
| 5 Sat.             | 9.                            | 9.  | 39.                               | 24  | 9.                           | 17. | 0.                              | 53 | 4.                               | 4.  | 16   |   |
| 6 Dom              | 9.                            | 24. | 21.                               | 35  | 10.                          | 1.  | 41                              | 6  | 3.                               | 11. | 7  |   |
| 7 Lun.             | 10.                           | 8.  | 58.                               | 40  | 10.                          | 16. | 13.                             | 41 | 2.                               | 5.  | 26   |   |
| 8 Mar.             | 10.                           | 23. | 25.                               | 48  | 11.                          | 0.  | 34.                             | 26 | 0.                               | 52. | 38   |   |
| 9 Mer.             | 11.                           | 7.  | 39.                               | 39  | 11.                          | 14. | 41.                             | 18 | 0.                               | 22. | 44   | B |
| 10 Jov.            | 11.                           | 21. | 39.                               | 17  | 11.                          | 28. | 33.                             | 40 | 1.                               | 35. | 29   |   |
| 11 Ven.            | 0.                            | 5.  | 24.                               | 31  | 0.                           | 12. | 11.                             | 54 | 3.                               | 41. | 29   |   |
| 12 Sat.            | 0.                            | 18. | 55.                               | 58  | 0.                           | 25. | 36.                             | 47 | 4.                               | 37. | 6  |   |
| 13 Dom             | 1.                            | 2.  | 14.                               | 23  | 1.                           | 8.  | 48.                             | 49 | 4.                               | 19. | 59   |   |
| 14 Lun.            | 1.                            | 15. | 20.                               | 11  | 1.                           | 21. | 48.                             | 31 | 4.                               | 48. | 23   |   |
| 15 Mar.            | 1.                            | 28. | 13.                               | 51  | 2.                           | 4.  | 36.                             | 11 | 5.                               | 1.  | 34   |   |
| 16 Mer.            | 2.                            | 10. | 55.                               | 31  | 2.                           | 17. | 11.                             | 51 | 4.                               | 59. | 33   |   |
| 17 Jov.            | 2.                            | 23. | 25.                               | 12  | 2.                           | 29. | 35.                             | 38 | 4.                               | 43. | 8  |   |
| 18 Ven.            | 3.                            | 5.  | 43.                               | 20  | 3.                           | 11. | 48.                             | 23 | 4.                               | 13. | 44   |   |
| 19 Sat.            | 3.                            | 17. | 50.                               | 56  | 3.                           | 23. | 51.                             | 14 | 3.                               | 32. | 59   |   |
| 20 Dom             | 3.                            | 29. | 49.                               | 15  | 4.                           | 5.  | 45.                             | 27 | 3.                               | 43. | 10   |   |
| 21 Lun.            | 4.                            | 11. | 40.                               | 21  | 4.                           | 17. | 34.                             | 1. | 1.                               | 46. | 37   |   |
| 22 Mar.            | 4.                            | 23. | 27.                               | 43  | 4.                           | 29. | 21.                             | 17 | 0.                               | 45. | 38   |   |
| 23 Mer.            | 5.                            | 5.  | 15.                               | 20  | 5.                           | 11. | 10.                             | 33 | 0.                               | 17. | 26   | A |
| 24 Jov.            | 5.                            | 12. | 7.                                | 30  | 5.                           | 23. | 6.                              | 54 | 1.                               | 20. | 21   |   |
| 25 Ven.            | 5.                            | 29. | 9.                                | 25  | 6.                           | 5.  | 15.                             | 44 | 2.                               | 20. | 33   |   |
| 26 Sat.            | 6.                            | 11. | 26.                               | 29  | 6.                           | 17. | 42.                             | 19 | 3.                               | 15. | 37   |   |
| 27 Dom             | 6.                            | 24. | 3.                                | 16  | 7.                           | 0.  | 31.                             | 0  | 4.                               | 2.  | 44   |   |
| 28 Lun.            | 7.                            | 7.  | 4.                                | 54  | 7.                           | 13. | 45.                             | 39 | 4.                               | 38. | 57   |   |
| 29 Mar.            | 7.                            | 20. | 33.                               | 39  | 7.                           | 27. | 18.                             | 43 | 5.                               | 1.  | 10   |   |
| 30 Mer.            | 8.                            | 4.  | 30.                               | 45  | 8.                           | 11. | 39.                             | 22 | 5.                               | 6.  | 42   |   |
|                    |                               |     |                                   |     |                              |     |                                 |    | 5.                               | 9.  | 25   |   |
|                    |                               |     |                                   |     |                              |     |                                 |    | 5.                               | 9.  | 41   |   |
|                    |                               |     |                                   |     |                              |     |                                 |    | 5.                               | 9.  | 51   |   |

| Dier<br>mense<br>septem<br>bris | Diameter<br>boriz.<br>Lunae<br>Meridie | Diameter<br>boriz.<br>Lunae<br>media<br>nocte | Declinatio<br>Lunae<br>in Meri-<br>diano | Ortus<br>Lunae | Transitus<br>Lunae<br>per Meri-<br>dianum | Occafus<br>Lunae |
|---------------------------------|--|---|--|----------------|---|------------------|
|                                 | M. S.                                  | M. S.   | G. M.                                    | H. M.          | H. M.                                     | H. M.            |
| 1 Mar.                          | 31. 41                                 | 31. 54  | 21. 51 A                                 | 5. 41 V        | 10. 16 V                                  | 2. 24 M          |
| 2 Mer.                          | 32. 6                                  | 32. 17  | 25. 34                                   | 6. 159         | 11. 13                                    | 2. 43            |
| 3 Jov.                          | 32. 28                                 | 32. 37  | *  | 8. 12          | *   | 3. 22            |
| 4 Ven.                          | 32. 44                                 | 32. 49  | 27. 43                                   | 9. 19          | 0. 14 M                                   | 4. 14            |
| 5 Sat.                          | 32. 52                                 | 32. 54  | 27. 43                                   | 10. 13         | 1. 19                                     | 5. 21            |
| 6 Dom                           | 32. 54                                 | 32. 52  | 25. 40                                   | 10. 54         | 2. 23                                     | 6. 37            |
| 7 Lun.                          | 32. 43                                 | 32. 44  | 21. 43                                   | 11. 27         | 3. 24                                     | 8. 0             |
| 8 Mar.                          | 32. 38                                 | 32. 21  | 16. 21                                   | 11. 51         | 4. 21                                     | 9. 25            |
| 9 Mer.                          | 32. 23                                 | 32. 15  | 10. 5                                    | *              | 5. 13                                     | 10. 44           |
| 10 Jov.                         | 32. 6                                  | 31. 57  | 3. 27 A                                  | 0. 11 M        | 6. 0                                      | 11. 59           |
| 11 Ven.                         | 31. 48                                 | 31. 39  | 3. 18 B                                  | 0. 29          | 6. 45                                     | 1. 14 V          |
| 12 Sat.                         | 31. 29                                 | 31. 20  | 9. 39                                    | 0. 48          | 2. 31                                     | 2. 28            |
| 13 Dom                          | 31. 11                                 | 31. 2   | 15. 31                                   | 1. 9           | 8. 18                                     | 3. 41            |
| 14 Lun.                         | 30. 53                                 | 30. 44  | 20. 30                                   | 1. 32          | 9. 6                                      | 4. 54            |
| 15 Mar.                         | 30. 36                                 | 30. 28  | 24. 25                                   | 2. 0           | 9. 57                                     | 6. 8             |
| 16 Mer.                         | 30. 21                                 | 30. 14  | 26. 57                                   | 2. 23          | 10. 49                                    | 7. 9             |
| 17 Jov.                         | 30. 7                                  | 30. 0   | 28. 0                                    | 3. 18          | 11. 43                                    | 8. 8             |
| 18 Ven.                         | 29. 54                                 | 29. 49  | 27. 33                                   | 4. 15          | 0. 37 V                                   | 8. 56            |
| 19 Sat.                         | 29. 44                                 | 29. 40  | 25. 38                                   | 5. 14          | 1. 28                                     | 9. 33            |
| 20 Dom                          | 29. 37                                 | 29. 34  | 22. 31                                   | 6. 19          | 2. 16                                     | 10. 1            |
| 21 Lun.                         | 29. 33                                 | 29. 32  | 18. 27                                   | 7. 25          | 3. 1                                      | 10. 25           |
| 22 Mar.                         | 29. 33                                 | 29. 35  | 13. 41                                   | 8. 30          | 3. 43                                     | 10. 45           |
| 23 Mer.                         | 29. 38                                 | 29. 42  | 8. 21                                    | 9. 33          | 4. 23                                     | 11. 0            |
| 24 Jov.                         | 29. 47                                 | 29. 54  | 2. 43 B                                  | 10. 38         | 5. 3                                      | 11. 15           |
| 25 Ven.                         | 30. 2                                  | 30. 12  | 3. 10 A                                  | 11. 44         | 5. 43                                     | 11. 30           |
| 26 Sat.                         | 30. 23                                 | 30. 36  | 8. 57                                    | 0. 51 V        | 6. 25                                     | 11. 59           |
| 27 Dom                          | 30. 48                                 | 31. 2   | 14. 42                                   | 1. 59          | 7. 9                                      | 4. *             |
| 28 Lun.                         | 31. 17                                 | 31. 38  | 19. 51                                   | 3. 19          | 7. 57                                     | 0. 0             |
| 29 Mar.                         | 31. 47                                 | 32. 2   | 24. 6                                    | 4. 27          | 8. 50                                     | 0. 34            |
| 30 Mer.                         | 32. 16                                 | 32. 39  | 27. 0                                    | 5. 45          | 9. 49                                     | 1. 9             |

| Dies<br>menses      | Longitudo<br>Planeta-<br>rum | Latitudo<br>Plane-<br>tarum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Transi-<br>tus Plane-<br>netarum<br>per Me-<br>ridianum | Ocasus<br>Plane-<br>tarum |
|---------------------|------------------------------|-----------------------------|---------------------------------|--------------------------|---|---------------------------|
|                     | S. G. M.                     | G. M.                       | G. M.                           | H. M.                    | H. M.   | H. M.                     |
| S A T U R N U S .   |                              |                             |                                 |                          |   |                           |
| 1                   | 9. 23. 24                    | 0. 8 B                      | 21. 19 A                        | 10. 33 V                 | 3. 3 M  | 7. 33 M                   |
| 7                   | 9. 23. 6                     | 0. 7                        | 21. 22                          | 10. 8                    | 2. 38   | 7. 8                      |
| 13                  | 9. 22. 47                    | 0. 6                        | 21. 26                          | 9. 42                    | 2. 12   | 6. 48                     |
| 19                  | 9. 22. 26                    | 0. 6                        | 21. 29                          | 9. 15                    | 1. 45   | 6. 15                     |
| 25                  | 9. 22. 2                     | 0. 6                        | 21. 35                          | 8. 48                    | 1. 18   | 5. 48                     |
| J U P I T E R .     |                              |                             |                                 |                          |   |                           |
| 1                   | 11. 6. 46                    | 1. 0 A                      | 9. 55 A                         | 0. 36 M                  | 5. 58 M   | 11. 20 M                  |
| 7                   | 11. 7. 10                    | 1. 2                        | 9. 49                           | 0. 12                    | 5. 35   | 10. 58                    |
| 13                  | 11. 7. 28                    | 1. 4                        | 9. 44                           | 11. 48 V                 | 5. 11   | 10. 34                    |
| 19                  | 11. 7. 42                    | 1. 6                        | 9. 41                           | 11. 24                   | 4. 47   | 10. 10                    |
| 25                  | 11. 7. 50                    | 1. 8                        | 9. 41                           | 10. 59                   | 4. 22   | 9. 45                     |
| M A R S .           |                              |                             |                                 |                          |   |                           |
| 1                   | 3. 20. 50                    | 1. 19 B                     | 23. 10 B                        | 7. 4 M                   | 2. 51 V   | 10. 38 V                  |
| 7                   | 3. 24. 33                    | 1. 18                       | 22. 32                          | 7. 0                     | 2. 43   | 10. 26                    |
| 13                  | 3. 28. 17                    | 1. 17                       | 21. 48                          | 6. 55                    | 2. 34   | 10. 13                    |
| 19                  | 4. 1. 59                     | 1. 16                       | 20. 59                          | 6. 50                    | 2. 24   | 9. 59                     |
| 25                  | 4. 5. 43                     | 1. 15                       | 20. 5                           | 6. 45                    | 2. 15   | 9. 45                     |
| V E N U S .         |                              |                             |                                 |                          |   |                           |
| 1                   | 1. 22. 56                    | 1. 8 A                      | 17. 27 B                        | 3. 27 M                  | 10. 44 M  | 6. 1 V                    |
| 7                   | 2. 6. 15                     | 0. 55                       | 19. 21                          | 3. 22                    | 10. 49  | 6. 16                     |
| 13                  | 2. 7. 34                     | 0. 43                       | 20. 54                          | 3. 20                    | 10. 55  | 6. 30                     |
| 19                  | 2. 14. 54                    | 0. 29                       | 22. 9                           | 3. 19                    | 11. 1   | 6. 43                     |
| 25                  | 2. 22. 14                    | 0. 15                       | 23. 0                           | 3. 21                    | 11. 7   | 6. 53                     |
| M E R C U R I U S . |                              |                             |                                 |                          |   |                           |
| 1                   | 2. 27. 27                    | 0. 22 A                     | 23. 5 B                         | 5. 23 M                  | 1. 9 V  | 8. 55 V                   |
| 7                   | 2. 26. 1                     | 2. 3                        | 21. 21                          | 5. 1                     | 0. 38   | 8. 15                     |
| 13                  | 2. 22. 54                    | 3. 36                       | 19. 41                          | 4. 32                    | 0. 1  | 7. 30                     |
| 19                  | 2. 19. 53                    | 4. 27                       | 18. 39                          | 4. 0                     | 11. 23  | 6. 46                     |
| 25                  | 2. 18. 45                    | 4. 29                       | 18. 22                          | 3. 33                    | 10. 55  | 6. 17                     |

## ECLIPSES SATELLITUM JOVIS.

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>horarius<br>Solis | Logaritmus<br>distantiae<br>Solis a terra<br>posita media<br>100000 | Longitudo<br>Nodi Lunae |
|------|-------------------|---|----------------------------|---|-------------------------|
|      | M. S.             | M. S.                                       | M. S.                      |   | S. G. M.                |
| I    | 31. 34, 8         | 2. 16, 4                                    | 2. 23, 7                   | 5. 006368   | II. 4. 37               |
| 4    | 31. 34, 2         | 2. 16, 7                                    | 2. 23, 5                   | 5. 00634  | II. 4. 27               |
| 7    | 31. 33, 6         | 2. 16, 9                                    | 2. 23, 4                   | 5. 006684   | II. 4. 18               |
| 10   | 31. 33, 0         | 2. 17, 1                                    | 2. 23, 3                   | 5. 006815   | II. 4. 8                |
| 13   | 31. 32, 4         | 2. 17, 2                                    | 2. 23, 2                   | 5. 006928   | II. 3. 59               |
| 16   | 31. 31, 9         | 2. 17, 3                                    | 2. 23, 1                   | 5. 007026   | II. 3. 49               |
| 19   | 31. 31, 6         | 2. 17, 4                                    | 2. 23, 0                   | 5. 007105   | II. 3. 40               |
| 22   | 31. 31, 3         | 2. 17, 4                                    | 2. 23, 0                   | 5. 007172   | II. 3. 30               |
| 25   | 31. 31, 1         | 2. 17, 4                                    | 2. 23, 0                   | 5. 007207   | II. 3. 21               |
| 28   | 31. 31, 0         | 2. 17, 3                                    | 2. 23, 0                   | 5. 007230   | II. 3. 11               |

**POSITIONES SATELLITUM JOVIS**  
*Oriens* . . . . . **1<sup>st</sup> Mane** . . . . . *Occidens*

|    |    |         |                   |       |
|----|----|---------|-------------------|-------|
| 1  | 4. | • 3. 3. | ○                 | 1. 3. |
| 2  | 4. | • 3. 3. | ○                 | 1. 3. |
| 3  | 4. | • 3. 3. | ○                 | 1. 3. |
| 4  | 4. | • 3. 3. | ○                 | 1. 3. |
| 5  | 4. | • 3. 3. | ○                 | 1. 3. |
| 6  | 4. | • 3. 3. | ○                 | 1. 3. |
| 7  | 4. | • 3. 3. | ○                 | 1. 3. |
| 8  | 4. | • 3. 3. | ○                 | 1. 3. |
| 9  | 4. | • 3. 3. | ○                 | 1. 3. |
| 10 | 4. | • 3. 3. | ○                 | 1. 3. |
| 11 | 4. | • 3. 3. | ○                 | 1. 3. |
| 12 | 4. | • 3. 3. | ○                 | 1. 3. |
| 13 | 4. | • 3. 3. | ○                 | 1. 3. |
| 14 | 4. | • 3. 3. | ○                 | 1. 3. |
| 15 | 4. | • 3. 3. | ○, σ <sub>1</sub> | 1. 3. |
| 16 | 4. | • 3. 3. | ○                 | 1. 3. |
| 17 | 4. | • 3. 3. | ○                 | 1. 3. |
| 18 | 4. | • 3. 3. | ○                 | 1. 3. |
| 19 | 4. | • 3. 3. | ○                 | 1. 3. |
| 20 | 4. | • 3. 3. | ○                 | 1. 3. |
| 21 | 4. | • 3. 3. | ○                 | 1. 3. |
| 22 | 4. | • 3. 3. | ○                 | 1. 3. |
| 23 | 4. | • 3. 3. | ○                 | 1. 3. |
| 24 | 4. | • 3. 3. | ○                 | 1. 3. |
| 25 | 4. | • 3. 3. | ○                 | 1. 3. |
| 26 | 4. | • 3. 3. | ○                 | 1. 3. |
| 27 | 4. | • 3. 3. | ○                 | 1. 3. |
| 28 | 4. | • 3. 3. | ○                 | 1. 3. |
| 29 | 4. | • 3. 3. | ○                 | 1. 3. |
| 30 | 4. | • 3. 3. | ○                 | 1. 3. |

*Phænomena & Observationes  
Solis*

| Sol in parallelo                                       |                     |  |
|--|---------------------|--|
| 6 <sup>h</sup> & 7 <sup>h</sup> Geminorum culm.        | 23 <sup>h</sup> 0'  |  |
| & 22 <sup>h</sup> 52'                                  |                     |  |
| 8 <sup>h</sup> Arietis & 8 <sup>h</sup> Geminor. culm. |                     |  |
| 18 <sup>h</sup> 39' & ob 4'                            |                     |  |
| 9 <sup>h</sup> Canceris culm.                          | 1 <sup>h</sup> 13'  |  |
| 11 <sup>h</sup> Herculis culm.                         | 8 <sup>h</sup> 55'  |  |
| 13 <sup>h</sup> Leonis culm.                           | 8 <sup>h</sup> 29'  |  |
| 18 <sup>h</sup> Leonis culm.                           | 2 <sup>h</sup> 14'  |  |
| 21 <sup>h</sup> Aqr. culm.                             | 6 <sup>h</sup> 0'   |  |
| in signo Leonis  | 20 <sup>h</sup> 16' |  |
| 24 <sup>h</sup> Herculis culm.                         | 7 <sup>h</sup> 53'  |  |
| 25 <sup>h</sup> Bootis culm.                           | 5 <sup>h</sup> 22'  |  |

*Phænomena & Observationes  
Lunæ*

| Luna  |
|---|
| 2 Plenilunium 12 <sup>h</sup> 42'                               |
| ad + Sagitta (Im. 13 <sup>h</sup> 18') diff. 13'                |
| rii 13 <sup>h</sup> 18' (Em. 14 <sup>h</sup> 6')                |
| 3 ad A Sagittarii 7 <sup>h</sup> 50'                            |
| 4 Perigea ad + Aquarii 9 <sup>h</sup> 45'                       |
| 5 ad + Capri 6 <sup>h</sup> 45'                                 |
| 6 ad + Aquarii 10 <sup>h</sup> 6'                               |
| 8 ad δ Piscium 16 <sup>h</sup> 0'                               |
| 9 Ultimus Quadrans, 3 <sup>h</sup> 37'                          |
| ad + Piscium 14 <sup>h</sup> 18'                                |
| 10 ad 1. 2. & Arietis 11 <sup>h</sup> 56' & 12 <sup>h</sup> 13' |
| 12 ad + Tauri 3 <sup>h</sup> 30'                                |
| 14 ad δ Tauri 22 <sup>h</sup> 30'                               |
| 16 Novilunium 21 <sup>h</sup> 12'                               |
| ad Veneris 2 <sup>h</sup> 18'                                   |
| 18 Apogea   |
| 19 ad Mart. & α Leo. ob 48' & 12 <sup>h</sup> 18'               |
| 21 ad + Leo. & β Virg. 9 <sup>h</sup> 18' & 20 <sup>h</sup> 0'  |
| 23 ad + Virginis 2 <sup>h</sup> 40'                             |
| 25 Primus Quadrans 0 <sup>h</sup> 38'                           |
| 27 ad σ & α Scorp. 6 <sup>h</sup> & 13 <sup>h</sup> 30'         |
| 28 ad 43° Ophiuchi 20 <sup>h</sup> 0'                           |
| 29 ad φ Aquarii 16 <sup>h</sup> 40'                             |
| 31 Pleniluonium 19 <sup>h</sup> 47'                             |

*Planetae in parallelis fixorum*  
*Saturnus + & 2. 5 Sagitt., + Corvi,*  
*+ Scorp., γ Hydræ, + Sa-*  
*gittarii, β Corvi*

*Jup. 1 x Orion, 16 α Virg. & ζ*  
*Ophiu., 22 γ Erid. 31 δ Erid.*  
*Mars 2 δ Canceris, ε Pegasi, 4 γ*  
*Tauri, 6 γ Ariet., 10 α Sagit-*  
*tæ, 13 δ Tauri, 15 γ Serp.,*  
*17 δ Serp., α Tauri, 19 δ Leo.,*  
*22 α Delph., & γ Tauri, 24 γ*  
*Aquilæ, 2 γ Boot., ε Herc.,*  
*31 α Leonis*  
*Venus initio, Tauri, 18 μ & γ*  
*Gemin., α Ariet., δ Gemin., 21*  
*δ Herc., 25 γ Tauri, 28 Arct.*  
*Mercur. 2 γ Bootis & γ Herc., δ*  
*Arcturi, 8 γ Tauri, γ Leonis,*  
*12 δ Leonis, δ Herc., 16 & 22*  
*δ, γ, μ Gemin., 29 Arcturi*

*Phænomena & Observationes  
Planetarum*

|  |
|--|
| 1 Venus ad + Geminor. diff. lat. 55'   |
| 3 Venus ad μ Geminor. diff. lat. 57'   |
| Mercurius ad δ Tauri diff. lat. 45'    |
| 7 Mercurius in elongat. max. ma-       |
| tutina                                 |
| 11 Mercurius ad + Geminor. d. l. 44'   |
| Venus ad 1. 2. & Gemin. diff. lat.     |
| 1. 0 7' & 23'                          |
| 12 Oppositio Saturni                   |
| 13 Mercurius ad μ Gemin. d. l. 30'     |
| 14 Mercurius ad + Gemin. diff. lat.    |
| 1. 0 55'                               |
| 19 Mars ad ψ Leonis diff. lat. 50'     |
| 21 Mercurius ad δ Gemin. d. l. 30'     |
| 25 Mars ad + Leonis diff. lat. 1. 0 6' |
| Mercurius ad 2 & Geminorum             |
| diff. lat. 2°                          |
| 28 Jupiter ad + Aquarii d. l. 1. 0 26' |
| 29 Mars ad α Leonis diff. lat. 40'     |

| Dier<br>hebdomadae | Æquatio<br>addenda<br>tempori<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitude<br>Solis | Ascensio recta<br>Solis | Declinatio<br>Solis<br>Borealis |
|--------------------|--|------------------|--------------------|-------------------------|---------------------------------|
| Dier<br>mensis     | M. S.  | S.               | S. G. M. S.        | G. M. S.                | G. M. S.                        |
| 1 Jov.             | 3. 27. 7   | 11. 4            | 3. 10. 6. 51       | 101. 0. 17              | 23. 5. 1                        |
| 2 Ven.             | 3. 38. 9   | 11. 2            | 3. 11. 4. 1        | 102. 2. 13              | 23. 0. 28                       |
| 3 Sat.             | 3. 49. 8   | 10. 9            | 3. 12. 1. 11       | 103. 4. 5               | 22. 55. 31                      |
| 4 Dom              | 4. 0. 4  | 10. 6            | 3. 12. 58. 21      | 104. 5. 58              | 21. 50. 10                      |
| 5 Lun.             | 4. 10. 7   | 10. 3            | 3. 13. 55. 32      | 105. 7. 34              | 22. 44. 26                      |
| 6 Mar.             | 4. 20. 7   | 10. 0            | 3. 14. 58. 43      | 106. 9. 11              | 22. 38. 18                      |
| 7 Mer.             | 4. 30. 3   | 9. 6             | 3. 15. 49. 54      | 107. 10. 43             | 22. 31. 46                      |
| 8 Jov.             | 4. 39. 3   | 9. 0             | 3. 16. 47. 6       | 108. 12. 11             | 22. 24. 50                      |
| 9 Ven.             | 4. 48. 0   | 8. 7             | 3. 17. 44. 18      | 109. 13. 30             | 22. 17. 31                      |
| 10 Sat.            | 4. 56. 4   | 8. 4             | 3. 18. 41. 31      | 110. 14. 45             | 22. 9. 49                       |
| 11 Dom             | 5. 4. 4  | 8. 0             | 3. 19. 38. 45      | 111. 15. 54             | 22. 1. 44                       |
| 12 Lun.            | 5. 11. 9   | 7. 5             | 3. 20. 35. 59      | 112. 16. 57             | 21. 53. 17                      |
| 13 Mar.            | 5. 19. 0   | 7. 1             | 3. 21. 33. 14      | 113. 17. 53             | 21. 44. 27                      |
| 14 Mer.            | 5. 25. 8   | 6. 8             | 3. 22. 30. 30      | 114. 18. 41             | 21. 35. 15                      |
| 15 Jov.            | 5. 32. 1   | 6. 3             | 3. 23. 27. 46      | 115. 19. 28             | 21. 25. 41                      |
| 16 Ven.            | 5. 37. 8   | 5. 7             | 3. 24. 25. 3       | 116. 19. 56             | 21. 15. 45                      |
| 17 Sat.            | 5. 43. 0   | 5. 2             | 3. 25. 22. 21      | 117. 20. 23             | 21. 5. 27                       |
| 18 Dom             | 5. 47. 6   | 4. 6             | 3. 26. 19. 39      | 118. 20. 42             | 20. 54. 47                      |
| 19 Lun.            | 5. 51. 6   | 4. 0             | 3. 27. 16. 57      | 119. 20. 52             | 20. 43. 46                      |
| 20 Mar.            | 5. 55. 1   | 3. 5             | 3. 28. 14. 16      | 120. 20. 53             | 20. 32. 24                      |
| 21 Mer.            | 5. 58. 1   | 3. 0             | 3. 29. 11. 35      | 121. 20. 46             | 20. 20. 43                      |
| 22 Jov.            | 6. 0. 6  | 2. 5             | 4. 0. 8. 55        | 122. 20. 30             | 20. 8. 39                       |
| 23 Ven.            | 6. 2. 4  | 1. 8             | 4. 1. 6. 15        | 123. 20. 5              | 19. 56. 16                      |
| 24 Sat.            | 6. 3. 6  | 1. 2             | 4. 2. 3. 35        | 124. 19. 31             | 19. 48. 23                      |
| 25 Dom             | 6. 4. 2  | 0. 6             | 4. 3. 0. 56        | 125. 18. 48             | 19. 30. 30                      |
| 26 Lun.            | 6. 4. 1  | 0. 1             | 4. 3. 58. 17       | 126. 17. 56             | 19. 17. 8                       |
| 27 Mar.            | 6. 3. 5  | 0. 6             | 4. 4. 55. 38       | 127. 16. 55             | 19. 3. 27                       |
| 28 Mer.            | 6. 3. 2  | 1. 3             | 4. 5. 53. 0        | 128. 15. 44             | 18. 49. 27                      |
| 29 Jov.            | 6. 0. 3  | 1. 9             | 4. 6. 50. 23       | 129. 14. 24             | 18. 35. 9                       |
| 30 Ven.            | 5. 57. 8   | 2. 5             | 4. 7. 47. 47       | 130. 12. 55             | 18. 20. 33                      |
| 31 Sat.            | 5. 54. 7   | 3. 1             | 4. 8. 45. 11       | 131. 11. 17             | 18. 5. 29                       |
|                    |  | 3. 7             |                    |                         |                                 |

| Dies<br>hebræus | Distantia<br>ectionis<br>a Sole | Diffe-<br>rentia | In-<br>tium<br>Crepu-<br>sculi | Ortus<br>Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepu-<br>sculi | Hora<br>Italica<br>Meridi-<br>dis |
|-----------------|---------------------------------|------------------|--------------------------------|--------------------------|---------------------------------|--------------------------|-----------------------------------|
| Dies<br>meridi- | H. M. S.                        | M. S.            | H. M.                          | H. M.                    | H. M.                           | H. M.                    | H. M.                             |
| 1 Jov.          | 17. 15. 58,8                    | 4. 7. 7          | 1. 36                          | 4. 14                    | 7. 46                           | 10. 24                   | 15. 14                            |
| 2 Ven.          | 17. 11. 51,1                    | 4. 7. 4          | 1. 37                          | 4. 14                    | 7. 46                           | 10. 23                   | 15. 14                            |
| 3 Sat.          | 17. 7. 43,7                     | 4. 7. 1          | 1. 38                          | 4. 14                    | 7. 46                           | 10. 22                   | 15. 15                            |
| 4 Dom.          | 17. 3. 36,6                     | 4. 6. 8          | 1. 39                          | 4. 14                    | 7. 46                           | 10. 21                   | 15. 15                            |
| 5 Lun.          | 16. 39. 29,8                    | 4. 6. 5          | 1. 40                          | 4. 15                    | 7. 47                           | 10. 20                   | 15. 16                            |
| 6 Mar.          | 16. 55. 23,3                    | 4. 6. 2          | 1. 41                          | 4. 15                    | 7. 45                           | 10. 19                   | 15. 16                            |
| 7 Mer.          | 16. 51. 17,1                    | 4. 5. 8          | 1. 42                          | 4. 16                    | 7. 44                           | 10. 18                   | 15. 17                            |
| 8 Jov.          | 16. 47. 11,2                    | 4. 5. 4          | 1. 43                          | 4. 16                    | 7. 44                           | 10. 17                   | 15. 18                            |
| 9 Ven.          | 16. 43. 5,9                     | 4. 5. 0          | 1. 45                          | 4. 17                    | 7. 43                           | 10. 15                   | 15. 19                            |
| 10 Sat.         | 16. 39. 0,9                     | 4. 4. 6          | 1. 46                          | 4. 18                    | 7. 42                           | 10. 14                   | 15. 20                            |
| 11 Dom.         | 16. 34. 56,3                    | 4. 4. 1          | 1. 48                          | 4. 18                    | 7. 42                           | 10. 12                   | 15. 21                            |
| 12 Lun.         | 16. 30. 52,2                    | 4. 3. 7          | 1. 50                          | 4. 19                    | 7. 41                           | 10. 10                   | 15. 22                            |
| 13 Mar.         | 16. 26. 48,5                    | 4. 3. 2          | 1. 52                          | 4. 20                    | 7. 40                           | 10. 8                    | 15. 23                            |
| 14 Mer.         | 16. 22. 45,3                    | 4. 2. 8          | 1. 54                          | 4. 21                    | 7. 39                           | 10. 6                    | 15. 24                            |
| 15 Jov.         | 16. 18. 42,5                    | 4. 2. 3          | 1. 56                          | 4. 22                    | 7. 38                           | 10. 4                    | 15. 25                            |
| 16 Ven.         | 16. 14. 40,2                    | 4. 1. 8          | 1. 58                          | 4. 23                    | 7. 37                           | 10. 2                    | 15. 26                            |
| 17 Sat.         | 16. 10. 38,4                    | 4. 1. 3          | 2. 0                           | 4. 24                    | 7. 36                           | 10. 0                    | 15. 28                            |
| 18 Dom.         | 16. 6. 37,1                     | 4. 0. 7          | 2. 2                           | 4. 25                    | 7. 35                           | 9. 58                    | 15. 29                            |
| 19 Lun.         | 16. 3. 36,4                     | 4. 0. 1          | 2. 4                           | 4. 26                    | 7. 34                           | 9. 56                    | 15. 30                            |
| 20 Mar.         | 15. 58. 36,3                    | 3. 59, 5         | 2. 6                           | 4. 27                    | 7. 33                           | 9. 54                    | 15. 31                            |
| 21 Mer.         | 15. 54. 36,8                    | 3. 57, 9         | 2. 8                           | 4. 28                    | 7. 32                           | 9. 52                    | 15. 38                            |
| 22 Jov.         | 15. 50. 37,9                    | 3. 58, 3         | 2. 10                          | 4. 29                    | 7. 31                           | 9. 50                    | 15. 34                            |
| 23 Ven.         | 15. 46. 39,6                    | 3. 57, 7         | 2. 12                          | 4. 30                    | 7. 30                           | 9. 48                    | 15. 35                            |
| 24 Sat.         | 15. 42. 41,9                    | 3. 57, 1         | 2. 14                          | 4. 31                    | 7. 29                           | 9. 46                    | 15. 36                            |
| 25 Dom.         | 15. 38. 44,8                    | 3. 56, 5         | 2. 16                          | 4. 32                    | 7. 28                           | 9. 44                    | 15. 37                            |
| 26 Lun.         | 15. 34. 48,3                    | 3. 55, 9         | 2. 18                          | 4. 33                    | 7. 27                           | 9. 42                    | 15. 39                            |
| 27 Mar.         | 15. 30. 52,4                    | 3. 55, 3         | 2. 20                          | 4. 34                    | 7. 26                           | 9. 40                    | 15. 40                            |
| 28 Mer.         | 15. 26. 57,1                    | 3. 54, 7         | 2. 22                          | 4. 35                    | 7. 25                           | 9. 38                    | 15. 41                            |
| 29 Jov.         | 15. 23. 2,4                     | 3. 54, 1         | 2. 24                          | 4. 36                    | 7. 24                           | 9. 36                    | 15. 43                            |
| 30 Ven.         | 15. 19. 8,3                     | 3. 53, 5         | 2. 26                          | 4. 37                    | 7. 23                           | 9. 34                    | 15. 44                            |
| 31 Sat.         | 15. 15. 14,8                    | 3. 52, 8         | 2. 28                          | 4. 38                    | 7. 22                           | 9. 32                    | 15. 45                            |

| Dies<br>beobachtet<br>Dies<br>wirkt | Longitudo<br>Lunae<br>Meridio- | Longitudo<br>Lunae<br>media nocte | Latitudo<br>Lunae<br>Meridie | Latitudo<br>Lunae<br>med. noct. | Paral-<br>laxis<br>Lunae<br>Meri-<br>die | Paral-<br>luxis<br>Lunae<br>media<br>nocte |
|-------------------------------------|--------------------------------|-----------------------------------|------------------------------|---------------------------------|--|--|
|                                     | S. G. M. S.                    | S. G. M. S.                       | G. M. S.                     | G. M. S.                        | M. S.                                    | M. S.                                      |
| 1 Jov.                              | 5. 18. 54. 3                   | 8. 26. 13. 58                     | 4. 53. 10 A                  | 4. 39. 8 A                      | 59. 55                                   | 60. 35                                     |
| 2 Ven.                              | 9. 3. 38. 35                   | 9. 11. 6. 38                      | 4. 20. 22                    | 3. 56. 59                       | 60. 32                                   | 60. 45                                     |
| 3 Sat.                              | 9. 18. 27. 1                   | 9. 26. 8. 26                      | 3. 29. 18                    | 2. 57. 54                       | 60. 54                                   | 60. 58                                     |
| 4 Dom                               | 10. 3. 39. 55                  | 10. 11. 10. 16                    | 2. 23. 19                    | 1. 46. 21                       | 60. 59                                   | 60. 55                                     |
| 5 Lun.                              | 10. 18. 38. 31                 | 10. 26. 3. 19                     | 1. 7. 38                     | 0. 28. 2 A                      | 60. 47                                   | 60. 35                                     |
| 6 Mar.                              | 11. 3. 24. 29                  | 11. 10. 41                        | 19. 0. 11. 46 B              | 0. 51. 1                        | 60. 20                                   | 60. 3                                      |
| 7 Mer.                              | 11. 17. 53. 16                 | 11. 25. 0. 10                     | 1. 29. 2                     | 2. 5. 14                        | 59. 42                                   | 59. 20                                     |
| 8 Jov.                              | 0. 2. 1. 47                    | 0. 8. 58. 10                      | 2. 39. 4                     | 3. 10. 7                        | 58. 58                                   | 58. 35                                     |
| 9 Ven.                              | 0. 15. 49. 23                  | 0. 22. 35. 35                     | 3. 38. 3                     | 4. 2. 35                        | 58. 12                                   | 57. 49                                     |
| 10 Sat.                             | 0. 29. 16. 54                  | 1. 5. 53. 36                      | 4. 23. 29                    | 4. 40. 36                       | 57. 27                                   | 57. 5                                      |
| 11 Dom                              | 1. 12. 25. 55                  | 1. 18. 54. 7                      | 4. 53. 50                    | 5. 3. 9                         | 56. 44                                   | 56. 24                                     |
| 12 Lun.                             | 1. 25. 18. 23                  | 2. 1. 39. 15                      | 5. 8. 34                     | 5. 10. 9                        | 56. 6                                    | 55. 49                                     |
| 13 Mar.                             | 2. 7. 56. 17                   | 2. 14. 10. 23                     | 5. 7. 58                     | 5. 2. 6                         | 55. 38                                   | 55. 18                                     |
| 14 Mer.                             | 2. 20. 21. 38                  | 2. 26. 30. 10                     | 4. 52. 47                    | 4. 40. 8                        | 55. 54                                   | 53   |
| 15 Jov.                             | 3. 2. 36. 10                   | 3. 8. 39. 49                      | 4. 24. 17                    | 4. 5. 28                        | 54. 42                                   | 54. 3                                      |
| 16 Ven.                             | 3. 14. 41. 18                  | 3. 20. 40. 50                     | 3. 44. 5                     | 3. 20. 24                       | 54. 23                                   | 54. 16                                     |
| 17 Sat.                             | 3. 26. 38. 45                  | 4. 2. 35. 12                      | 2. 54. 36                    | 2. 26. 54                       | 54. 10                                   | 54. 6                                      |
| 18 Dom                              | 4. 8. 30. 28                   | 4. 14. 24. 42                     | 1. 57. 40                    | 1. 27. 14                       | 54. 3                                    | 54. 1                                      |
| 19 Lun.                             | 4. 20. 18. 27                  | 4. 26. 11. 40                     | 0. 55. 52                    | 0. 23. 53 B                     | 54. 0                                    | 54. 1                                      |
| 20 Mar.                             | 5. 2. 5. 1                     | 5. 7. 58. 42                      | 0. 8. 23 A                   | 0. 40. 38                       | 54. 3                                    | 54. 7                                      |
| 21 Mer.                             | 5. 13. 53. 12                  | 5. 19. 49. 1                      | 1. 12. 32                    | 1. 43. 48                       | 54. 14                                   | 54. 22                                     |
| 22 Jov.                             | 5. 26. 46. 46                  | 6. 1. 46. 51                      | 2. 14. 7                     | 2. 43. 9                        | 54. 32                                   | 54. 44                                     |
| 23 Ven.                             | 6. 7. 49. 46                   | 6. 13. 56. 9                      | 3. 10. 38                    | 3. 36. 13                       | 54. 59                                   | 55. 16                                     |
| 24 Sat.                             | 6. 20. 6. 37                   | 6. 26. 21. 49                     | 3. 59. 35                    | 4. 20. 22                       | 55. 35                                   | 55. 56                                     |
| 25 Dom                              | 7. 2. 41. 56                   | 7. 9. 7. 45                       | 4. 38. 19                    | 4. 53. 3                        | 56. 19                                   | 56. 44                                     |
| 26 Lun.                             | 7. 19. 39. 40                  | 7. 22. 18. 10                     | 5. 4. 14                     | 5. 11. 38                       | 57. 10                                   | 57. 37                                     |
| 27 Mar.                             | 7. 29. 3. 28                   | 8. 5. 55. 51                      | 5. 14. 44                    | 5. 13. 29                       | 58. 6                                    | 58. 35                                     |
| 28 Mer.                             | 8. 12. 55. 10                  | 8. 20. 1. 27                      | 5. 7. 38                     | 4. 57. 2                        | 59. 3                                    | 59. 30                                     |
| 29 Jov.                             | 8. 27. 14. 15                  | 9. 4. 33. 16                      | 4. 41. 33                    | 4. 21. 18                       | 59. 56                                   | 60. 30                                     |
| 30 Ven.                             | 9. 11. 57. 54                  | 9. 19. 27. 6                      | 3. 56. 18                    | 3. 27. 4                        | 60. 41                                   | 60. 58                                     |
| 31 Sat.                             | 9. 26. 59. 56                  | 10. 4. 35.                        | 6. 2. 54. 6                  | 2. 17. 49                       | 61. 11                                   | 61. 19                                     |

| Dies<br>nominis<br>et<br>ab<br>solsticio<br>ante<br>annus<br>menses | Diameter<br>boriz.<br>Lunae<br>Meridie | Diameter<br>boriz.<br>Lunae<br>media<br>nocte | Declinatio<br>Lunae<br>in Meri-<br>diano | Ortus<br>Lunae | Transit<br>Lunae<br>per Meri-<br>dianum | Occlusus<br>Lunae |
|---|--|---|--|----------------|---|-------------------|
|   | M. S.                                  | M. S.   | G. M.                                    | H. M.          | H. M.                                   | H. M.             |
| 1 Jov.  | 38. 43                                 | 32. 54  | 18. 4 A                                  | 6. 57 V        | 10. 53 V                                | 1. 59 M           |
| 2 Ven.  | 33. 3                                  | 33. 10  | 26. 53                                   | 7. 52          | 12. 59                                  | 2. 59             |
| 3 Sat.  | 33. 15                                 | 33. 18  | * *                                      | 18. 45         | *                                       | 4. 5              |
| 4 Dom.  | 33. 18                                 | 33. 16  | 23. 38                                   | 9. 20          | 1. 3 M                                  | 5. 37             |
| 5 Lun.  | 33. 12                                 | 33. 5   | 18. 39                                   | 9. 48          | 8. 3                                    | 6. 56             |
| 6 Mar.  | 32. 57                                 | 32. 47  | 13. 25                                   | 10. 10         | 2. 59                                   | 8. 20             |
| 7 Mer.  | 32. 36                                 | 32. 24  | 5. 39 A                                  | 10. 31         | 3. 50                                   | 9. 48             |
| 8 Jov.  | 32. 12                                 | 32. 0   | 1. 6 B                                   | 10. 48         | 4. 38                                   | 10. 58            |
| 9 Ven.  | 31. 47                                 | 31. 34  | 7. 56                                    | 11. 7          | 5. 25                                   | 0. 16 V           |
| 10 Sat.   | 31. 22                                 | 31. 10  | 14. 3                                    | 11. 30         | 6. 11                                   | 1. 39             |
| 11 Dom.   | 30. 59                                 | 30. 48  | 19. 19                                   | 11. 59         | 6. 59                                   | 2. 42             |
| 12 Lun.   | 30. 38                                 | 30. 29  | 23. 30                                   | 4. *           | 7. 49                                   | 3. 53             |
| 13 Mar.   | 30. 20                                 | 30. 12  | 26. 27                                   | 0. 31 M        | 8. 41                                   | 5. 1              |
| 14 Mer.   | 30. 4                                  | 29. 57  | 27. 57                                   | 1. 9           | 9. 24                                   | 5. 59             |
| 15 Jov.   | 29. 52                                 | 29. 46  | 27. 56                                   | 2. 1           | 10. 27                                  | 6. 53             |
| 16 Ven.   | 29. 41                                 | 29. 38  | 26. 22                                   | 3. 0           | 11. 18                                  | 7. 31             |
| 17 Sat.   | 29. 35                                 | 29. 32  | 23. 41                                   | 4. 4           | 0. 8 V                                  | 8. 0              |
| 18 Dom.   | 29. 31                                 | 29. 29  | 19. 53                                   | 5. 11          | 0. 54                                   | 8. 35             |
| 19 Lun.   | 29. 29                                 | 29. 29  | 15. 16                                   | 6. 18          | 1. 38                                   | 8. 46             |
| 20 Mar.   | 29. 31                                 | 29. 33  | 10. 8                                    | 7. 22          | 2. 18                                   | 9. 2              |
| 21 Mer.   | 29. 37                                 | 29. 41  | 4. 33 B                                  | 8. 25          | 2. 57                                   | 9. 17             |
| 22 Jov.   | 29. 46                                 | 29. 53  | 1. 14 A                                  | 9. 28          | 3. 37                                   | 9. 24             |
| 23 Ven.   | 30. 1                                  | 30. 10  | 7. 4                                     | 10. 34         | 4. 18                                   | 9. 52             |
| 24 Sat.   | 30. 21                                 | 30. 32  | 12. 41                                   | 11. 41         | 5. 0                                    | 10. 9             |
| 25 Dom.   | 30. 45                                 | 30. 59  | 17. 57                                   | 0. 52 V        | 5. 45                                   | 10. 30            |
| 26 Lun.   | 31. 33                                 | 31. 28  | 23. 38                                   | 8. 5           | 6. 35                                   | 10. 59            |
| 27 Mar.   | 31. 43                                 | 31. 59  | 25. 58                                   | 3. 19          | 7. 30                                   | 11. 35            |
| 28 Mer.   | 32. 15                                 | 32. 30  | 27. 52                                   | 4. 30          | 8. 30                                   | 4. *              |
| 29 Jov.   | 32. 44                                 | 33. 57  | 27. 58                                   | 5. 38          | 9. 35                                   | 0. 38 M           |
| 30 Ven.   | 33. 8                                  | 33. 18  | 25. 38                                   | 6. 29          | 10. 39                                  | 1. 34             |
| 31 Sat.   | 33. 26                                 | 33. 29  | 21. 28                                   | 7. 11          | 11. 42                                  | 2. 54             |

| <i>Die<br/>mensis</i> | <i>Longitudo<br/>Planeta-<br/>rum</i> | <i>Latitudo<br/>Plane-<br/>tarum</i> | <i>Declina-<br/>tio Pla-<br/>netarum</i> | <i>Ortus<br/>Plane-<br/>tarum</i> | <i>Transi-<br/>tus Pla-<br/>netarum<br/>per Me-<br/>ridianum</i> | <i>Occasus<br/>Plane-<br/>tarum</i> |
|-----------------------|---------------------------------------|--------------------------------------|--|-----------------------------------|--|-------------------------------------|
|                       | S. G. M.                              | G. M.                                | G. M.                                    | H. M.                             | H. M.  | H. M.                               |

## S A T U R N U S .

|    |           |        |          |         |          |         |
|----|-----------|--------|----------|---------|----------|---------|
| 1  | 9. 21. 33 | 0. 5 B | 21. 40 A | 8. 21 V | 0. 49 M  | 5. 17 M |
| 7  | 9. 21. 9  | 0. 4   | 21. 45   | 7. 55   | 0. 23    | 4. 51   |
| 13 | 9. 20. 44 | 0. 3   | 21. 50   | 7. 30   | 11. 58 V | 4. 26   |
| 19 | 9. 20. 17 | 0. 3   | 21. 54   | 7. 5    | 11. 32   | 3. 59   |
| 25 | 9. 19. 50 | 0. 3   | 21. 58   | 6. 39   | 11. 6    | 3. 33   |

## J U P I T E R .

|    |           |        |         |          |         |         |
|----|-----------|--------|---------|----------|---------|---------|
| 1  | 11. 7. 49 | 1. 9 A | 9. 43 A | 10. 29 V | 3. 52 M | 9. 15 M |
| 7  | 11. 7. 39 | 1. 11  | 9. 48   | 10. 4    | 3. 27   | 9. 50   |
| 13 | 11. 7. 22 | 1. 13  | 9. 57   | 9. 40    | 3. 3    | 8. 25   |
| 19 | 11. 7. 1  | 1. 15  | 10. 6   | 9. 15    | 2. 38   | 8. 0    |
| 25 | 11. 6. 34 | 1. 17  | 10. 17  | 8. 50    | 2. 11   | 7. 32   |

## M A R S .

|    |           |         |         |         |        |         |
|----|-----------|---------|---------|---------|--------|---------|
| 1  | 4. 9. 27  | 1. 13 B | 19. 6 B | 6. 39 M | 2. 5 V | 9. 31 V |
| 7  | 4. 13. 11 | 1. 12   | 18. 3   | 6. 35   | 1. 56  | 9. 16   |
| 13 | 4. 16. 57 | 1. 11   | 16. 55  | 6. 31   | 1. 46  | 9. 1    |
| 19 | 4. 20. 42 | 1. 9    | 15. 43  | 6. 28   | 1. 37  | 8. 46   |
| 25 | 4. 24. 29 | 1. 7    | 14. 26  | 6. 24   | 1. 28  | 8. 32   |

## V E N U S .

|    |           |         |          |         |          |        |
|----|-----------|---------|----------|---------|----------|--------|
| 1  | 2. 29. 35 | 0. 11 A | 23. 29 B | 3. 26 M | 11. 14 M | 7. 2 V |
| 7  | 3. 6. 56  | 0. 14 B | 23. 32   | 3. 34   | 11. 22   | 7. 10  |
| 13 | 3. 14. 17 | 0. 28   | 23. 8    | 3. 43   | 11. 29   | 7. 15  |
| 19 | 3. 21. 40 | 0. 41   | 22. 25   | 3. 55   | 11. 37   | 7. 19  |
| 25 | 3. 29. 3  | 0. 53   | 21. 15   | 4. 8    | 11. 45   | 7. 22  |

## M E R C U R I U S .

|    |           |         |          |        |          |        |
|----|-----------|---------|----------|--------|----------|--------|
| 1  | 2. 20. 24 | 3. 48 A | 19. 20 B | 3. 7 M | 10. 34 M | 6. 1 V |
| 7  | 2. 24. 59 | 2. 41   | 20. 41   | 3. 57  | 10. 30   | 6. 3   |
| 13 | 3. 8. 21  | 1. 21   | 22. 6    | 2. 55  | 10. 36   | 6. 17  |
| 19 | 3. 18. 12 | 0. 2    | 22. 53   | 2. 44  | 10. 56   | 6. 41  |
| 25 | 3. 33. 54 | 1. 13   | 22. 31   | 3. 43  | 11. 24   | 7. 6   |

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## ECLIPSES SATELLITUM JOVIS.

| Dies<br>mensis | I. Satelles.     |     |     | II. Satelles. |                  |     | III. Satelles. |    |                      |      |
|----------------|------------------|-----|-----|---------------|------------------|-----|----------------|----|----------------------|------|
|                | Imersiones       |     |     | Imersiones    |                  |     | Imers. Emerf.  |    |                      |      |
|                | H.               | M.  | S.  | H.            | M.               | S.  | H.             | M. | S.                   |      |
| 1              | 19               | 53. | .15 | 3             | 18.              | 53. | .36            | 5  | 22. 46.              | .61  |
| 3              | 14. <sup>*</sup> | 21. | .22 | 7             | 8.               | 11. | .32            | 6  | 2. 12.               | 30 E |
| 5              | 8.               | 49. | .30 | 10            | 21.              | 29. | .33            | 13 | 8. 45.               | 15 I |
| 7              | 3.               | 17. | .39 | 14            | 10. <sup>*</sup> | 47. | .39            | 13 | 6. 11.               | 10 E |
| 8              | 21.              | 45. | .49 | 18            | 0.               | 5.  | .50            | 20 | 6. 45.               | 4 I  |
| 10             | 16.              | 14. | .2  | 21            | 13. <sup>*</sup> | 24. | .8             | 20 | 10. <sup>*</sup> 10. | 24 E |
| 12             | 10. <sup>*</sup> | 42. | .15 | 25            | 8.               | 42. | .34            | 27 | 10. <sup>*</sup> 45. | 34 I |
| 14             | 5.               | 10. | .30 | 28            | 16.              | 1.  | .6             | 27 | 14. <sup>*</sup> 10. | 12 E |
| 15             | 23.              | 58. | .46 |               |                  |     |                |    |                      |      |
| 17             | 18.              | 7.  | .6  |               |                  |     |                |    |                      |      |
| 19             | 12. <sup>*</sup> | 35. | .30 |               |                  |     |                |    |                      |      |
| 21             | 7.               | 3.  | .56 |               |                  |     |                |    |                      |      |
| 23             | 1.               | 32. | .24 |               |                  |     |                |    |                      |      |
| 24             | 20.              | 0.  | .53 |               |                  |     |                |    |                      |      |
| 26             | 14. <sup>*</sup> | 29. | .23 |               |                  |     |                |    |                      |      |
| 28             | 8.               | 57. | .54 |               |                  |     |                |    |                      |      |
| 30             | 3.               | 26. | .28 |               |                  |     |                |    |                      |      |
| 31             | 21.              | 55. | .6  |               |                  |     |                |    |                      |      |

| Dies | Diameter<br><i>Solis</i> | Mora<br>transitus<br><i>Solis per</i><br><i>Meridian.</i> | Motus<br>horarius<br><i>Solis</i> | Logaritmus<br>distantiae<br><i>Solis a terra</i> |           | Longitude<br>Nodi Lunae |
|------|--------------------------|---|-----------------------------------|--|-----------|-------------------------|
|      |                          |   |                                   | 100000   | 1000000   |                         |
|      |                          | M. S.   | M. S.                             | M. S.  | M. S.     | S. G. M.                |
| 1    | 31. 31.0                 | 2. 17.0   | 2. 23.0                           | 5. 007235  | 11. 3. 2  |                         |
| 4    | 31. 31.1                 | 2. 16.8   | 2. 23.0                           | 5. 007222  | 11. 2. 52 |                         |
| 7    | 31. 31.2                 | 2. 16.6   | 2. 23.0                           | 5. 007190  | 11. 2. 49 |                         |
| 10   | 31. 31.4                 | 2. 16.2   | 2. 23.1                           | 5. 007140  | 11. 2. 32 |                         |
| 13   | 31. 31.7                 | 2. 15.8   | 2. 23.1                           | 5. 007072  | 11. 2. 04 |                         |
| 16   | 31. 31.0                 | 2. 15.4   | 2. 23.1                           | 5. 006985  | 11. 2. 14 |                         |
| 19   | 31. 31.4                 | 2. 15.0   | 2. 23.2                           | 5. 006880  | 11. 2. 5  |                         |
| 22   | 31. 31.0                 | 2. 14.5   | 2. 23.3                           | 5. 006760  | 11. 2. 55 |                         |
| 25   | 31. 32.6                 | 2. 14.0   | 2. 23.4                           | 5. 006619  | 11. 2. 46 |                         |
| 28   | 31. 34.3                 | 2. 13.5   | 2. 23.5                           | 5. 006515  | 11. 2. 30 |                         |

**POSITIONES SATELLITUM JOVIS**  
*Oriens*                    *11<sup>h</sup> Vespere*                    *Occidens*

|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 1  | .. | .. | .. | .. | .. |
| 2  | .. | .. | .. | .. | .. |
| 3  | .. | .. | .. | .. | .. |
| 4  | .. | .. | .. | .. | .. |
| 5  | .. | .. | .. | .. | .. |
| 6  | .. | .. | .. | .. | .. |
| 7  | .. | .. | .. | .. | .. |
| 8  | .. | .. | .. | .. | .. |
| 9  | .. | .. | .. | .. | .. |
| 10 | .. | .. | .. | .. | .. |
| 11 | .. | .. | .. | .. | .. |
| 12 | .. | .. | .. | .. | .. |
| 13 | .. | .. | .. | .. | .. |
| 14 | .. | .. | .. | .. | .. |
| 15 | .. | .. | .. | .. | .. |
| 16 | .. | .. | .. | .. | .. |
| 17 | .. | .. | .. | .. | .. |
| 18 | .. | .. | .. | .. | .. |
| 19 | .. | .. | .. | .. | .. |
| 20 | .. | .. | .. | .. | .. |
| 21 | .. | .. | .. | .. | .. |
| 22 | .. | .. | .. | .. | .. |
| 23 | .. | .. | .. | .. | .. |
| 24 | .. | .. | .. | .. | .. |
| 25 | .. | .. | .. | .. | .. |
| 26 | .. | .. | .. | .. | .. |
| 27 | .. | .. | .. | .. | .. |
| 28 | .. | .. | .. | .. | .. |
| 29 | .. | .. | .. | .. | .. |
| 30 | .. | .. | .. | .. | .. |
| 31 | .. | .. | .. | .. | .. |

| Dier.                  | Phaenomena & Observationes<br>Solis  | Dier.   | Phaenomena & Observationes<br>Lunae   |
|------------------------|--|---|---|
|                        | Sol in parallelo   |   | Luna  |
| 6 <sup>o</sup>         | Leonis, γ Geminor. & γ Serp.<br>culm. 18 <sup>h</sup> 54', 21 <sup>h</sup> 14' & 6 <sup>h</sup> 37'                        | 1   | Perigea ad ., γ & δ Capri 4 <sup>h</sup> ,<br>10 <sup>h</sup> 24' & 13 <sup>h</sup> |
| 7 <sup>3</sup>         | Serp. & α Tauri culm. 6 <sup>h</sup> 19'<br>& 19 <sup>h</sup> 8'   | 4   | ad δ Piscium 12 <sup>h</sup> 0'   |
| 8 <sup>o</sup>         | Leonis culm. 3 <sup>h</sup> 22'  | 5   | ad ε Piscium 5 <sup>h</sup> 0'  |
| 10 <sup>γ</sup>        | Delphini culm. 11 <sup>h</sup> 11'   | 6   | ad 1. 2. & Arietis 6 <sup>h</sup> 15' & 6 <sup>h</sup> 32'                          |
| 11 <sup>α</sup>        | Delphini & γ Tauri culm.<br>11 <sup>h</sup> 0' & 18 <sup>h</sup> 37'   | 7   | Ultimus Quadrans 12 <sup>h</sup> 35'  |
| 12 <sup>γ</sup>        | Aquilae, ζ Bootis & α Herc.<br>culm. 9 <sup>h</sup> 17', 4 <sup>h</sup> 58' & 7 <sup>h</sup> 32'                           | 8   | ad α Tauri 9 <sup>h</sup> 0'  |
| 13 <sup>β</sup>        | Delphini culm. 10 <sup>h</sup> 57'   | 10  | ad β Tauri 4 <sup>h</sup> 15'   |
| 14 <sup>γ</sup>        | & γ Pegasi, ξ & δ Delphini<br>culm. 11 <sup>h</sup> 14', 14 <sup>h</sup> 22', 10 <sup>h</sup> 45'<br>& 10 <sup>h</sup> 47' | 12  | ad x Geminorum 8 <sup>h</sup> 0'  |
| 15                     | Eclipsis Solis. Vide supra.  | 13  | Novilunium 12 <sup>h</sup> 54'  |
| 17 <sup>α</sup>        | Leonis culm. ob 7 <sup>h</sup>   | 19  | Apogea ad α Leonis 19 <sup>h</sup>  |
| 18 <sup>γ</sup>        | Ophiuci culm. 7 <sup>h</sup> 31'   | 20  | ad x Virginis 8 <sup>h</sup> 36'  |
| 20 <sup>ε</sup>        | Virginis culm. 2 <sup>h</sup> 51'  | 20  | ad α Virginis 7 <sup>h</sup> 40'  |
| 22 <sup>in signo</sup> | Virginis 2 <sup>h</sup> 39'  | 23  | Primus Quadrans 11 <sup>h</sup> 45'   |
| 23 <sup>δ</sup>        | Serpentis culm. 5 <sup>h</sup> 12'   | ad π Scorpii 9 <sup>h</sup> 30'   |   |
| 25 <sup>ε</sup>        | Delphini culm. 10 <sup>h</sup> 1'  | 24  | ad 43 Ophiuci 18 <sup>h</sup> 0'  |
| 26 <sup>γ</sup>        | Aquila, θ Cancri, ξ Pegasi<br>9 <sup>h</sup> 13', 21 <sup>h</sup> 39' & 12 <sup>h</sup> 6'                                 | 26  | ad φ & σ Sagittarii 2 <sup>h</sup> & 6 <sup>h</sup>                                 |
| 30 <sup>ε</sup>        | Pegasi & β Canis 10 <sup>h</sup> 54', &<br>2 <sup>h</sup> 35'  | ad τ Sagit. (Im. 9 <sup>h</sup> 55')<br>tar. 9 <sup>h</sup> 43' (Em. 10 <sup>h</sup> 40') dist. 13'   |   |
| 31 <sup>γ</sup>        | Aquilae culm. 8 <sup>h</sup> 55'   | 28  | Perigea ad 1. 2. 3. δ Aquarii 4 <sup>h</sup> ,                                      |
|                        | Phaenomena & Obser. Planet.  | 4 <sup>h</sup> 40' & 4 <sup>h</sup> 46'   |   |
| 2                      | Mercurius in conjunct. super.  | 30  | Plenilunium 3 <sup>h</sup> 27'  |
| 4                      | Jupiter ad * Aquarii diff. lat. 19'  | Eclipsis Lunae. Vide supra.   |   |
| 7                      | Mars ad 1. 2. α Leon. d. 1. 59' & 56'  | Planetae in parallelis fixiorum   |   |
| 10                     | Mercurius ad α Leonis d. l. 50'  | Saturnus & Scorp. , γ Hydrac ,<br>σ Sagitt. , β Corvi , γ Leporis   |   |
| 13                     | Jupiter ad * Aquarii diff. lat. 3'   | Jupiter initio prope α Virginis ,<br>ξ Oph. , ε & δ Erid. , 13 <sup>h</sup> Ceti ,<br>25 <sup>γ</sup> Sagittarii , 31 <sup>α</sup> Virginis |   |
|                        | Mercur. ad 2. α Leon. d. l. 1. 0 20'   | Mars 1 δ Leonis , 8 δ Serp. , 13 <sup>γ</sup><br>Aquila , 19 β Canis min. ,<br>α Aquila , 24 α Orionis ,<br>α Serpentis , 30 Procyon .      |   |
| 15                     | Venus ad α Leonis diff. lat. 55'   | Venus 1 α Bootis , 7 α Sagittae ,<br>13 Aldebaran , 13 γ & α Delphi ni ,<br>15 ξ Bootis & α Herc ,<br>18 α Leon. , 19 α Ophiu. , 22 δ       |   |
| 17                     | Mercurius ad Martis d. l. 0 2 <sup>h</sup>   | Serp. , 25 γ Aqu. , 29 β Canis ,<br>α Aquila , α Orion. , α Serp.   |   |
| 18                     | Mercurius ad γ Leonis d. l. 19'  | Mercur. 12 α Leo. , α Oph. , 15 δ   |   |
| 21                     | Mercurius ad α Leonis d. l. 1. 0 0'  | Serp. , 16 γ Aqu. , 18 α Peg. ,<br>β Canis , α Aqu. , 19 α Orion. ,   |   |
|                        | Mars ad γ Leonis diff. lat. 24'  | α Serp. , 22 β Aqu. , Procyon ,<br>25 α Ceti , β Virg. , 28 α Pisc.   |   |
| 26                     | Oppositio Jovis  |   |   |
|                        | Mercurius ad β Virginis d. l. 35'  |   |   |
| 28                     | Venus ad γ Leonis diff. lat. 4'  |   |   |
| 29                     | Jupiter ad α Aquarii diff. lat. 12'  |   |   |
| 31                     | Venus ad α Leonis diff. lat. 17'   |   |   |

| Dies<br>be-<br>domi-<br>na-<br>tus | Aequatio<br>addenda<br>tempori<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitudo<br>Solis | Ascensio recta<br>Solis |             |            | Declinatio<br>Solis<br>Borealis |
|------------------------------------|---|------------------|--------------------|-------------------------|-------------|------------|---------------------------------|
|                                    |   |                  |                    | S.                      | S. G. M. S. | G. M. S.   |                                 |
|                                    | M. S.   | S.               | S. G. M. S.        | G. M. S.                | G. M. S.    | G. M. S.   |                                 |
| 1 Dom                              | 5. 51, 0  | 3, 7             | 4. 9. 42. 36       | 132.                    | 9. 30       | 17. 50. 27 |                                 |
| 2 Lun.                             | 5. 46, 7  | 4, 3             | 4. 10. 40. 2       | 133.                    | 7. 33       | 17. 34. 57 |                                 |
| 3 Mar                              | 5. 41, 8  | 4, 9             | 4. 11. 37. 29      | 134.                    | 5. 27       | 17. 19. 10 |                                 |
| 4 Mer                              | 5. 36, 3  | 5, 5             | 4. 12. 34. 57      | 135.                    | 3. 12       | 17. 3. 6   |                                 |
| 5 Jov.                             | 5. 30, 2  | 6, 1             | 4. 13. 31. 27      | 136.                    | 0. 49       | 16. 46. 45 |                                 |
|                                    |   | 6, 6             |                    |                         |             |            |                                 |
| 6 Ven.                             | 5. 23, 6  |                  | 4. 14. 29. 58      | 136.                    | 58. 18      | 16. 30. 8  |                                 |
| 7 Sat.                             | 5. 16, 4  | 7, 2             | 4. 15. 27. 31      | 137.                    | 55. 39      | 16. 13. 16 |                                 |
| 8 Dom                              | 5. 8, 7   | 7, 7             | 4. 16. 24. 55      | 138.                    | 52. 5       | 15. 56. 8  |                                 |
| 9 Lun.                             | 5. 0, 4   | 8, 3             | 4. 17. 22. 41      | 139.                    | 49. 54      | 15. 38. 44 |                                 |
| 10 Mar                             | 4. 51, 5  | 8, 9             | 4. 18. 20. 19      | 140.                    | 46. 49      | 15. 21. 4  |                                 |
|                                    |   | 9, 4             |                    |                         |             |            |                                 |
| 11 Mer                             | 4. 42, 1  |                  | 4. 19. 17. 58      | 141.                    | 43. 36      | 15. 3. 9   |                                 |
| 12 Jov.                            | 4. 32, 2  | 9, 9             | 4. 20. 15. 38      | 142.                    | 40. 15      | 14. 45. 0  |                                 |
| 13 Ven.                            | 4. 21, 7  | 10, 5            | 4. 21. 13. 20      | 143.                    | 36. 46      | 14. 26. 37 |                                 |
| 14 Sat.                            | 4. 10, 7  | 11, 0            | 4. 22. 11. 3       | 144.                    | 33. 9       | 14. 8. 0   |                                 |
| 15 Dom                             | 3. 59, 2  | 11, 5            | 4. 23. 8. 48       | 145.                    | 29. 24      | 13. 49. 9  |                                 |
|                                    |   | 12, 0            |                    |                         |             |            |                                 |
| 16 Lun.                            | 3. 47, 2  |                  | 4. 24. 6. 34       | 146.                    | 25. 91      | 13. 30. 5  |                                 |
| 17 Mar.                            | 3. 34, 7  | 12, 5            | 4. 25. 4. 21       | 147.                    | 21. 30      | 13. 10. 49 |                                 |
| 18 Mer.                            | 3. 21, 5  | 13, 2            | 4. 26. 2. 9        | 148.                    | 17. 21      | 12. 51. 20 |                                 |
| 19 Jov.                            | 3. 7, 8   | 13, 7            | 4. 26. 59. 59      | 149.                    | 13. 5       | 12. 31. 39 |                                 |
| 20 Ven.                            | 2. 53, 7  | 14, 1            | 4. 27. 57. 50      | 150.                    | 8. 42       | 12. 11. 46 |                                 |
|                                    |   | 14, 6            |                    |                         |             |            |                                 |
| 21 Sat.                            | 2. 39, 1  |                  | 4. 28. 55. 48      | 151.                    | 4. 12       | 11. 51. 41 |                                 |
| 22 Dom                             | 2. 24, 1  | 15, 0            | 4. 29. 53. 35      | 151.                    | 59. 34      | 11. 31. 25 |                                 |
| 23 Lun.                            | 2. 8, 7   | 15, 4            | 5. 0. 51. 29       | 152.                    | 54. 49      | 11. 10. 58 |                                 |
| 24 Mar.                            | 1. 52, 8  | 15, 9            | 5. 1. 49. 24       | 153.                    | 49. 57      | 10. 50. 20 |                                 |
| 25 Mer.                            | 1. 36, 4  | 16, 4            | 5. 2. 47. 20       | 154.                    | 44. 58      | 10. 29. 33 |                                 |
|                                    |   | 16, 7            |                    |                         |             |            |                                 |
| 26 Jov.                            | 1. 19, 7  |                  | 5. 3. 45. 17       | 155.                    | 39. 53      | 10. 8. 35  |                                 |
| 27 Ven.                            | 1. 9, 6   | 17, 1            | 5. 4. 43. 16       | 156.                    | 34. 43      | 9. 47. 28  |                                 |
| 28 Sat.                            | 0. 45, 0  | 17, 6            | 5. 5. 41. 17       | 157.                    | 29. 28      | 9. 26. 13  |                                 |
| 29 Dom                             | 0. 26, 9  | 18, 1            | 5. 6. 39. 19       | 158.                    | 24. 7       | 9. 4. 47   |                                 |
| 30 Lun.                            | 0. 8, 6   | 18, 9            | 5. 7. 37. 23       | 159.                    | 18. 41      | 8. 43. 13  |                                 |
| 31 Mar.                            | 0. 9, 9   | 18, 5            | 5. 8. 35. 29       | 160.                    | 13. 11      | 8. 31. 30  |                                 |

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| <i>Dies hebdomadae</i> | <i>Distantia sectionis Y a Sole</i> | <i>Diffe- rentia</i> | <i>Ini- tium Crepu- sculi</i> | <i>Ortu s Centri Solis</i> | <i>Occa- sus Centri Solis</i> | <i>Finis Crepu- sculi</i> | <i>Hora Italica Meridi- dies</i> |
|------------------------|-------------------------------------|----------------------|-------------------------------|----------------------------|-------------------------------|---------------------------|----------------------------------|
| <i>Dies mensis</i>     |                                     | <i>H. M. S.</i>      | <i>M. S.</i>                  | <i>H. M.</i>               | <i>H. M.</i>                  | <i>H. M.</i>              | <i>H. M.</i>                     |
| 1 Dom.                 | 15. 11. 22,0                        | 3. 52, 2             | 8. 30                         | 4. 40                      | 7. 20                         | 9. 30                     | 15. 47                           |
| 2 Lun.                 | 15. 7. 29,8                         | 3. 51, 6             | 2. 32                         | 4. 42                      | 7. 18                         | 9. 28                     | 15. 49                           |
| 3 Mar.                 | 15. 3. 58,2                         | 3. 50, 0             | 2. 34                         | 4. 43                      | 7. 17                         | 9. 26                     | 15. 50                           |
| 4 Mer.                 | 14. 59. 47,2                        | 3. 50, 5             | 2. 36                         | 4. 41                      | 7. 16                         | 9. 24                     | 15. 51                           |
| 5 Juv.                 | 14. 55. 56,7                        | 3. 49, 9             | 2. 38                         | 4. 45                      | 7. 15                         | 9. 22                     | 15. 53                           |
| 6 Ven.                 | 14. 52. 6,8                         | 3. 49, 4             | 2. 41                         | 4. 46                      | 7. 14                         | 9. 19                     | 15. 54                           |
| 7 Sat.                 | 14. 48. 17,4                        | 3. 48, 8             | 2. 43                         | 4. 48                      | 7. 12                         | 9. 17                     | 15. 56                           |
| 8 Dom                  | 14. 44. 28,6                        | 3. 48, 2             | 2. 45                         | 4. 49                      | 7. 11                         | 9. 15                     | 15. 57                           |
| 9 Lun.                 | 14. 40. 40,4                        | 2. 47, 7             | 2. 47                         | 4. 50                      | 7. 10                         | 9. 13                     | 15. 59                           |
| 10 Mar.                | 14. 36. 52,7                        | 3. 47, 1             | 2. 49                         | 4. 52                      | 7. 9                          | 9. 11                     | 15. 1                            |
| 11 Mer.                | 14. 33. 5,6                         | 8. 46, 6             | 2. 42                         | 4. 53                      | 7. 7                          | 9. 8                      | 16. 3                            |
| 12 Jov.                | 14. 29. 19,0                        | 3. 46, 1             | 2. 54                         | 4. 55                      | 7. 5                          | 9. 6                      | 16. 5                            |
| 13 Ven.                | 14. 25. 32,9                        | 3. 45, 5             | 2. 56                         | 4. 56                      | 7. 4                          | 9. 4                      | 16. 7                            |
| 14 Sat.                | 14. 21. 47,4                        | 3. 45, 0             | 2. 58                         | 4. 58                      | 7. 2                          | 9. 2                      | 16. 9                            |
| 15 Dom                 | 14. 18. 2,4                         | 3. 44, 5             | 2. 0                          | 4. 59                      | 7. 1                          | 9. 0                      | 16. 61                           |
| 16 Lun.                | 14. 14. 17,9                        | 3. 43, 9             | 3. 2                          | 5. 0                       | 7. 0                          | 7. 58                     | 16. 12                           |
| 17 Mar.                | 14. 10. 34,0                        | 3. 43, 4             | 3. 4                          | 5. 1                       | 6. 59                         | 8. 56                     | 16. 14                           |
| 18 Mer.                | 14. 6. 50,6                         | 3. 42, 9             | 3. 6                          | 5. 3                       | 6. 57                         | 8. 54                     | 16. 16                           |
| 19 Jov.                | 14. 3. 7,7                          | 3. 42, 5             | 3. 8                          | 5. 4                       | 6. 56                         | 8. 52                     | 16. 18                           |
| 20 Ven.                | 13. 59. 25,2                        | 3. 42, 0             | 3. 10                         | 5. 5                       | 6. 55                         | 8. 50                     | 16. 20                           |
| 21 Sat.                | 13. 55. 43,2                        | 3. 41, 5             | 3. 13                         | 5. 7                       | 6. 53                         | 8. 47                     | 16. 22                           |
| 22 Dom                 | 13. 2. 1,7                          | 3. 41, 0             | 3. 15                         | 5. 8                       | 6. 52                         | 8. 45                     | 16. 24                           |
| 23 Lun                 | 13. 48. 20,7                        | 3. 40, 5             | 3. 17                         | 5. 10                      | 6. 50                         | 8. 43                     | 16. 26                           |
| 24 Mar.                | 13. 44. 40,2                        | 3. 40, 1             | 3. 19                         | 5. 11                      | 6. 49                         | 8. 41                     | 16. 28                           |
| 25 Mer.                | 13. 41. 0,1                         | 3. 39, 7             | 4. 21                         | 5. 13                      | 6. 47                         | 8. 39                     | 16. 30                           |
| 26 Jov.                | 13. 37. 20,4                        | 3. 39, 3             | 3. 23                         | 5. 14                      | 6. 46                         | 8. 37                     | 16. 32                           |
| 27 Ven                 | 13. 33. 41,1                        | 3. 39, 0             | 3. 25                         | 5. 16                      | 6. 44                         | 8. 35                     | 16. 34                           |
| 28 Sat.                | 13. 30. 2,1                         | 3. 38, 6             | 3. 27                         | 5. 17                      | 6. 43                         | 8. 33                     | 16. 36                           |
| 29 Dom                 | 13. 26. 23,5                        | 3. 38, 3             | 3. 29                         | 5. 19                      | 6. 41                         | 8. 31                     | 16. 37                           |
| 30 Lun                 | 13. 22. 45,2                        | 3. 38, 0             | 3. 31                         | 5. 21                      | 6. 39                         | 8. 29                     | 16. 39                           |
| 31 Mar.                | 13. 19. 7,8                         | 3. 37, 7             | 3. 33                         | 5. 22                      | 6. 38                         | 8. 27                     | 16. 41                           |

| Dies<br>meridi- | Dies<br>bedomina- | Longitudo<br>Lunae<br>Meridie | Longitudo<br>Lunae<br>media nocte | Latitudo<br>Lunae<br>Meridie | Latitudo<br>Lunae<br>med. nocte | Paral-                  | Paral-                           |
|-----------------|-------------------|-------------------------------|-----------------------------------|------------------------------|---------------------------------|-------------------------|----------------------------------|
| mense           | domi-             | S. G. M. S.                   | S. G. M. S.                       | G. M. S.                     | G. M. S.                        | laxis<br>Lunae<br>Meri- | laxis<br>Lunae<br>media<br>nocte |
| 1               | Dom.              | 10. 12. 11. 41                | 10. 19. 48. 13                    | 1. 38. 54 A                  | 0. 58. 15 A                     | 61. 23                  | 61. 22                           |
| 2               | Lun.              | 10. 27. 23. 29                | 11. 4. 56. 13                     | 0. 16. 35                    | 0. 25. 7 B                      | 61. 17                  | 61. 6                            |
| 3               | Mar.              | 11. 12. 25. 31                | 11. 19. 50. 27                    | 5. 6. 7                      | 1. 45. 37                       | 60. 50                  | 60. 30                           |
| 4               | Mer.              | 11. 37. 10. 13                | 0. 4. 24. 18                      | 2. 22. 51                    | 2. 57. 21                       | 60. 8                   | 59. 45                           |
| 5               | Jov.              | 0. 11. 32. 15                 | 0. 18. 33. 55                     | 3. 23. 37                    | 3. 56. 14                       | 59. 20                  | 58. 58                           |
| 6               | Ven.              | 0. 25. 29. 16                 | 1. 2. 18. 23                      | 4. 19. 56                    | 4. 39. 38                       | 58. 26                  | 57. 58                           |
| 7               | Sat.              | 1. 9. 1. 15                   | 1. 15. 38. 15                     | 4. 55. 8                     | 5. 6. 26                        | 57. 31                  | 57. 5                            |
| 8               | Dom.              | 1. 22. 9. 37                  | 1. 27. 35. 44                     | 5. 13. 37                    | 5. 16. 45                       | 56. 40                  | 56. 17                           |
| 9               | Lun.              | 2. 4. 57. 0                   | 2. 11. 13. 49                     | 5. 15. 56                    | 5. 21. 20                       | 55. 55                  | 55. 35                           |
| 10              | Mar.              | 2. 17. 26. 36                 | 2. 23. 35. 46                     | 5. 3. 6                      | 4. 51. 28                       | 55. 18                  | 55. 3                            |
| 11              | Mer.              | 2. 29. 41. 43                 | 3. 5. 44. 51                      | 4. 36. 36                    | 4. 18. 45                       | 54. 49                  | 54. 37                           |
| 12              | Jov.              | 3. 11. 45. 39                 | 3. 17. 44. 27                     | 3. 58. 9                     | 3. 35. 4                        | 54. 26                  | 54. 18                           |
| 13              | Ven.              | 3. 23. 41. 31                 | 3. 29. 37. 13                     | 3. 9. 43                     | 2. 42. 34                       | 54. 11                  | 54. 5                            |
| 14              | Sat.              | 4. 5. 31. 59                  | 4. 11. 26. 4                      | 2. 13. 25                    | 1. 43. 4                        | 54. 1                   | 53. 59                           |
| 15              | Dom.              | 4. 17. 19. 43                 | 4. 23. 13. 12                     | 1. 11. 37                    | 0. 39. 24                       | 53. 58                  | 53. 58                           |
| 16              | Lun.              | 4. 29. 6. 48                  | 5. 5. 0. 50                       | 0. 6. 44 B                   | 0. 26. 1 A                      | 54. 0                   | 54. 3                            |
| 17              | Mar.              | 5. 10. 55. 35                 | 5. 15. 51. 22                     | 0. 58. 34                    | 1. 30. 37                       | 54. 7                   | 54. 13                           |
| 18              | Mer.              | 5. 22. 48. 27                 | 5. 28. 47. 11                     | 2. 1. 47                     | 2. 31. 46                       | 54. 20                  | 54. 29                           |
| 19              | Jov.              | 6. 4. 47. 56                  | 6. 10. 51. 4                      | 0. 14                        | 3. 26. 53                       | 54. 39                  | 54. 51                           |
| 20              | Ven.              | 6. 16. 56. 51                 | 6. 23. 5. 25                      | 3. 51. 21                    | 4. 13. 23                       | 55. 5                   | 55. 20                           |
| 21              | Sat.              | 6. 29. 18. 14                 | 7. 5. 34. 45                      | 3. 32. 41                    | 4. 48. 55                       | 55. 37                  | 55. 56                           |
| 22              | Dom.              | 7. 11. 55. 36                 | 7. 18. 21. 15                     | 5. 1. 49                     | 5. 11. 8                        | 56. 16                  | 56. 38                           |
| 23              | Lun.              | 7. 24. 51. 58                 | 8. 1. 28. 9                       | 5. 16. 34                    | 5. 17. 57                       | 57. 1                   | 57. 26                           |
| 24              | Mar.              | 8. 8. 10. 9                   | 8. 14. 58. 9                      | 5. 15. 6                     | 5. 7. 48                        | 57. 52                  | 58. 18                           |
| 25              | Mer.              | 8. 21. 52. 15                 | 8. 28. 52. 34                     | 4. 55. 58                    | 4. 39. 33                       | 58. 44                  | 59. 10                           |
| 26              | Jov.              | 9. 5. 59. 4                   | 9. 13. 11. 31                     | 4. 18. 41                    | 3. 53. 29                       | 59. 36                  | 60. 0                            |
| 27              | Ven.              | 9. 20. 29. 30                 | 9. 27. 52. 28                     | 3. 24. 8                     | 2. 51. 6                        | 60. 22                  | 60. 41                           |
| 28              | Sat.              | 10. 5. 19. 54                 | 10. 12. 50. 47                    | 2. 14. 48                    | 1. 35. 55                       | 60. 57                  | 61. 9                            |
| 29              | Dom.              | 10. 20. 24. 17                | 10. 27. 59. 7                     | 0. 55. 8                     | 0. 13. 15 A                     | 61. 17                  | 61. 20                           |
| 30              | Lun.              | 11. 5. 34. 16                 | 11. 13. 8. 24                     | 0. 28. 54 B                  | 1. 10. 24                       | 61. 18                  | 61. 11                           |
| 31              | Mar.              | 11. 20. 40. 24                | 11. 28. 9. 61                     | 0. 50. 29                    | 2. 28. 21                       | 61. 0                   | 60. 44                           |

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| Dies<br>mensis | Lunae<br>Meridie | Diameter<br>horiz.<br>Lunae<br>media<br>nocte | Diameter<br>horiz.<br>Lunae<br>media<br>die | Declinatio<br>Lunae<br>in Meri-<br>diano | Ortus<br>Lunae | Transitus<br>Lunae<br>per Meri-<br>diunum | Occasus<br>Lunae |
|----------------|------------------|---|---|--|----------------|---|------------------|
|                |                  | M. S.   | M. S.                                       | G. M.                                    | H. M.          | H. M.                                     | H. M.            |
| 1 Dom          | 33. 31           | 33. 30  | 4.  | *  | 7. 44 V        | *   | 20 M             |
| 2 Lun.         | 33. 28           | 33. 22  | 15.   | 36 A                                     | 8. 10          | 0. 41 M                                   | 5. 48            |
| 3 Mar.         | 33. 13           | 33. 3   | 8.  | 49                                       | 8. 31          | 1. 36                                     | 7. 14            |
| 4 Mer.         | 32. 50           | 32. 37  | 1.  | 42 A                                     | 8. 52          | 2. 27                                     | 8. 36            |
| 5 Jov.         | 32. 24           | 32. 9   | 5.  | 25 B                                     | 9. 12          | 3. 16                                     | 9. 54            |
| 6 Ven.         | 31. 54           | 31. 39  | 11.   | 59                                       | 9. 34          | 4. 4                                      | 17. 32           |
| 7 Sat.         | 31. 24           | 31. 10  | 17.   | 49                                       | 10. 1          | 4. 54                                     | 0. 38 V          |
| 8 Dom          | 30. 56           | 30. 44  | 22.   | 28                                       | 10. 34         | 5. 45                                     | 1. 43            |
| 9 Lun.         | 30. 32           | 30. 21  | 25.   | 45                                       | 11. 12         | 6. 38                                     | 2. 56            |
| 10 Mar.        | 30. 12           | 30. 3   | 27.   | 44                                       | 11. 58         | 7. 31                                     | 3. 54            |
| 11 Mer.        | 29. 56           | 29. 49  | 28.   | 7  | 8. 24          | 4. 49                                     |                  |
| 12 Jov.        | 29. 43           | 29. 39  | 27.   | 5  | 0. 58 M        | 9. 16                                     | 5. 31            |
| 13 Ven.        | 29. 35           | 29. 32  | 24.   | 45                                       | 1. 57          | 10. 6                                     | 6. 5             |
| 14 Sat.        | 29. 29           | 29. 28  | 21.   | 13                                       | 3. 4           | 10. 53                                    | 6. 30            |
| 15 Dom         | 29. 28           | 29. 28  | 16.   | 52                                       | 4. 11          | 11. 38                                    | 6. 52            |
| 16 Luri.       | 29. 29           | 29. 31  | 11.   | 53                                       | 5. 16          | 0. 20 V                                   | 7. 12            |
| 17 Mar.        | 29. 33           | 29. 36  | 6.  | 20                                       | 6. 20          | 1. 0                                      | 7. 28            |
| 18 Mer.        | 29. 40           | 29. 45  | 0.  | 36 B                                     | 7. 24          | 1. 40                                     | 7. 44            |
| 19 Jov.        | 29. 50           | 29. 57  | 5.  | 11 A                                     | 8. 28          | 2. 20                                     | 8. 0             |
| 20 Ven.        | 30. 4            | 30. 13  | 10.   | 43                                       | 9. 34          | 3. 1                                      | 8. 17            |
| 21 Sat.        | 30. 22           | 30. 32  | 16.   | 17                                       | 10. 43         | 3. 45                                     | 8. 37            |
| 22 Dom         | 30. 43           | 30. 55  | 21.   | 1  | 11. 54         | 4. 32                                     | 9. 3             |
| 23 Lun.        | 31. 8            | 31. 22  | 24.   | 58                                       | 1. 5 V         | 5. 24                                     | 9. 37            |
| 24 Mar.        | 31. 36           | 31. 50  | 27.   | 21                                       | 2. 17          | 6. 21                                     | 10. 30           |
| 25 Mer.        | 32. 4            | 32. 18  | 28.   | 8  | 3. 26          | 7. 22                                     | 11. 19           |
| 26 Jov.        | 32. 33           | 32. 46  | 26.   | 57                                       | 4. 43          | 8. 25                                     | * 4 M            |
| 27 Ven.        | 32. 58           | 33. 8   | 23.   | 47                                       | 5. 9           | 9. 27                                     | 10. 31           |
| 28 Sat.        | 33. 17           | 33. 24  | 18.   | 59                                       | 5. 45          | 10. 27                                    | 1. 58            |
| 29 Dom         | 33. 28           | 33. 30  | 12.   | 30                                       | 6. 14          | 11. 25                                    | 3. 18            |
| 30 Lun.        | 33. 29           | 33. 25  | *   | *  | 6. 28          | *   | 4. 47            |
| 31 Mar.        | 33. 19           | 33. 10  | 5.  | 22                                       | 7. 0           | 0. 18 M                                   | 6. 11            |

| Di-<br>agnos-<br>is | Longitudo<br>Planeta-<br>rum | Latitudo<br>Plane-<br>tarum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Trans-<br>itus Pla-<br>netarum<br>per Me-<br>ridianum | Occlus-<br>us Plane-<br>tarum |
|---------------------|------------------------------|-----------------------------|---------------------------------|--------------------------|---|-------------------------------|
|                     | S. G. M.                     | G. M.                       | G. M.                           | H. M.                    | H. M.   | H. M.                         |
| S A T U R N U S .   |                              |                             |                                 |                          |   |                               |
| 1                   | 9. 19. 23                    | 0. 2 B                      | 22. -2 A                        | 6. 7 V                   | 10. 34 V  | 3. 1M                         |
| 7                   | 9. 18. 57                    | 0. 1                        | 22. 5                           | 5. 42                    | 10. 9   | 2. 26                         |
| 13                  | 9. 18. 37                    | 0. 1                        | 22. 9                           | 5. 19                    | 9. 45   | 2. 11                         |
| 19                  | 9. 18. 24                    | 0. 0                        | 22. 13                          | 4. 55                    | 9. 21   | 1. 47                         |
| 25                  | 9. 18. 07                    | 0. 0                        | 22. 17                          | 4. 32                    | 8. 57   | 1. 22                         |
| J U P I T E R .     |                              |                             |                                 |                          |   |                               |
| 1                   | 11. 5. 49                    | 1. 18 A                     | 10. 35 A                        | 8. 21 V                  | 1. 41 M   | 7. 1M                         |
| 7                   | 11. 5. 11                    | 1. 20                       | 10. 51                          | 7. 57                    | 1. 16   | 6. 35                         |
| 13                  | 11. 4. 27                    | 1. 21                       | 11. 7                           | 7. 34                    | 0. 51   | 6. 8                          |
| 19                  | 11. 3. 44                    | 1. 22                       | 11. 24                          | 7. 10                    | 0. 26   | 5. 42                         |
| 25                  | 11. 2. 57                    | 1. 23                       | 11. 43                          | 6. 47                    | 0. 1  | 5. 15                         |
| M A R S .           |                              |                             |                                 |                          |   |                               |
| 1                   | 4. 28. 53                    | 1. 6 B                      | 12. 55 B                        | 6. 19 M                  | 1. 17 V   | 8. 15 V                       |
| 7                   | 5. 2. 50                     | 1. 4                        | 11. 29                          | 6. 18                    | 1. 9  | 8. 0                          |
| 13                  | 5. 6. 29                     | 1. 2                        | 10. 6                           | 6. 16                    | 1. 0  | 7. 44                         |
| 19                  | 5. 10. 17                    | 1. 0                        | 8. 39                           | 6. 14                    | 0. 52   | 7. 30                         |
| 25                  | 5. 14. 6                     | 0. 58                       | 7. 10                           | 6. 12                    | 0. 44   | 7. 16                         |
| V E N U S .         |                              |                             |                                 |                          |   |                               |
| 1                   | 4. 7. 43                     | 1. 4 A                      | 19. 26 B                        | 4. 25 M                  | 11. 53 M  | 7. 21 V                       |
| 7                   | 4. 15. 4                     | 1. 13 B                     | 17. 31                          | 4. 43                    | 0. 0 V  | 7. 17                         |
| 13                  | 4. 23. 31                    | 1. 19                       | 15. 17                          | 5. 0                     | 0. 7  | 7. 14                         |
| 19                  | 4. 29. 56                    | 1. 23                       | 12. 49                          | 5. 17                    | 0. 14   | 7. 10                         |
| 25                  | 5. 7. 22                     | 1. 24                       | 10. 7                           | 5. 35                    | 0. 20   | 7. 5                          |
| M E R C U R I U S . |                              |                             |                                 |                          |   |                               |
| 1                   | 4. 8. 22                     | 1. 40 B                     | 19. 47 B                        | 4. 30 M                  | 11. 59 M  | 7. 28 V                       |
| 7                   | 4. 20. 38                    | 1. 45                       | 20. 17                          | 5. 11                    | 0. 23 V   | 7. 35                         |
| 13                  | 5. 2. 2                      | 1. 27                       | 22. 7                           | 5. 51                    | 0. 44   | 7. 37                         |
| 19                  | 5. 12. 35                    | 0. 55                       | 22. 41                          | 6. 26                    | 1. 0  | 7. 34                         |
| 25                  | 5. 22. 19                    | 0. 12                       | 22. 14                          | 6. 57                    | 1. 13   | 7. 29                         |

## ECLIPSES SATELLITUM JOVIS.

| Dies<br>mensis | I. Satelles.     |     |    | II. Satelles. |                  |     | III. Satelles. |    |                      |          |
|----------------|------------------|-----|----|---------------|------------------|-----|----------------|----|----------------------|----------|
|                | Immersiones      |     |    | Immersiones   |                  |     | Immers. Emers. |    |                      |          |
|                | H.               | M.  | S. | H.            | M.               | S.  | H.             | M. | S.                   |          |
| 3              | 16.              | 23. | 48 | 1             | 5.               | 19. | 50             | 3  | 14. <sup>7</sup> 46. | 42 I     |
| 4              | 10. <sup>4</sup> | 52. | 31 | 4             | 18.              | 38. | 40             | 3  | 18.                  | 10. 42 E |
| 6              | 5.               | 21. | 18 | 8             | 7.               | 57. | 35             | 10 | 18.                  | 48. 28 I |
| 7              | 23.              | 50. | 6  | 11            | 21.              | 16. | 35             | 10 | 22.                  | 11. 40 E |
| 9              | 18.              | 18. | 56 | 15            | 10. <sup>3</sup> | 35. | 38             | 17 | 22.                  | 30. 48 I |
| 11             | 12. <sup>7</sup> | 47. | 48 | 18            | 23.              | 54. | 48             | 18 | 2.                   | 13. 40 E |
| 13             | 7.               | 16. | 43 | 22            | 13. <sup>4</sup> | 14. | 12             | 25 | 2.                   | 53. 48 E |
| 15             | 1.               | 45. | 39 |               | Emers.           |     |                | 25 | 6.                   | 15. 50 E |
| 16             | 20.              | 14. | 38 | 26            | 5.               | 19. | 6              |    |                      |          |
| 18             | 14. <sup>7</sup> | 43. | 40 | 29            | 18.              | 38. | 6              |    |                      |          |
| 20             | 9                | 12. | 43 |               |                  |     |                |    |                      |          |
| 22             | 3.               | 41. | 48 |               |                  |     |                |    |                      |          |
| 23             | 22.              | 10. | 58 |               |                  |     |                |    |                      |          |
|                | Emers.           |     |    |               |                  |     |                |    |                      |          |
| 25             | 18.              | 54. | 48 |               |                  |     |                | 3  | 0.                   | 75. 54   |
| 27             | 13. <sup>4</sup> | 24. | 0  |               |                  |     |                | 3  | 4.                   | 51. 6    |
| 29             | 7.               | 53. | 15 |               |                  |     |                | 19 | 18.                  | 31. 30   |
| 31             | 2.               | 22. | 30 |               |                  |     |                | 19 | 23.                  | 5. 40    |

| Dies | Diameter<br>Solis |       | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>boravius<br>Solis | Logaritmus<br>distantiae<br>Solis a terra<br>posita media<br>100000 | Lōngitudo<br>Nodi Lunae |     |         |  |
|------|-------------------|-------|---|----------------------------|---|-------------------------|-----|---------|--|
|      | M. S.             |       |   | M. S.                      | M. S.   | M.                      |     |         |  |
|      | M.                | S.    |   | M.                         | S.  | S.                      | G.  | M.      |  |
| 1    | 31.               | 35. 3 | 2.  | 12. 8                      | 2. 23. 6  | 5. 006227               | 11. | — 1. 83 |  |
| 4    | 31.               | 36. 2 | 2.  | 12. 3                      | 2. 23. 7  | 5. 006033               | 11. | 1. 13   |  |
| 7    | 31.               | 37. 1 | 2.  | 11. 8                      | 2. 23. 9  | 5. 005823               | 11. | 1. 4    |  |
| 10   | 31.               | 38. 2 | 2.  | 11. 3                      | 2. 24. 1  | 5. 005598               | 11. | 0. 94   |  |
| 13   | 31.               | 39. 4 | 2.  | 10. 8                      | 2. 24. 3  | 5. 005357               | 11. | 0. 85   |  |
| 16   | 31.               | 40. 6 | 2.  | 10. 4                      | 2. 24. 4  | 5. 005103               | 11. | 0. 36   |  |
| 19   | 31.               | 41. 7 | 2.  | 10. 0                      | 2. 24. 6  | 5. 004835               | 11. | 0. 26   |  |
| 22   | 31.               | 42. 9 | 2.  | 9. 6                       | 2. 24. 8  | 5. 004553               | 11. | 0. 16   |  |
| 25   | 31.               | 44. 1 | 2.  | 9. 2                       | 2. 25. 0  | 5. 004260               | 11. | 0. 7    |  |
| 28   | 31.               | 45. 4 | 2.  | 8. 9                       | 2. 25. 2  | 5. 003956               | 10. | 59. 57  |  |

**POSITIONES SATELLITUM JOVIS**  
*Oriens*      *10<sup>h</sup> Vespere*      *Occidens*

| 1  |  |   | ○ |  |
|----|--|---|---|--|
| 2  |  |   | ○ |  |
| 3  |  | ○ | ○ |  |
| 4  |  | ○ | ○ |  |
| 5  |  | ○ |   |  |
| 6  |  | ○ |   |  |
| 7  |  | ○ |   |  |
| 8  |  | ○ |   |  |
| 9  |  | ○ |   |  |
| 10 |  | ○ |   |  |
| 11 |  | ○ |   |  |
| 12 |  | ○ |   |  |
| 13 |  | ○ |   |  |
| 14 |  | ○ |   |  |
| 15 |  | ○ |   |  |
| 16 |  | ○ |   |  |
| 17 |  | ○ |   |  |
| 18 |  | ○ |   |  |
| 19 |  | ○ |   |  |
| 20 |  | ○ |   |  |
| 21 |  | ○ |   |  |
| 22 |  | ○ |   |  |
| 23 |  | ○ |   |  |
| 24 |  | ○ |   |  |
| 25 |  | ○ |   |  |
| 26 |  | ○ |   |  |
| 27 |  | ○ |   |  |
| 28 |  | ○ |   |  |
| 29 |  | ○ |   |  |
| 30 |  | ○ |   |  |
| 31 |  | ○ |   |  |

D  
Pbaenomena & Observationes  
Solis

|                                     |  |
|-------------------------------------|--|
| " Sol in parallelo                  |  |
| 3° Orion. & x Serp. culm. 18h 48'   |  |
| & 4h 40'                            |  |
| 6° Orion. & Aquilae, & Procyon      |  |
| culm. 19h 8', 8h 40' & 20h 21'      |  |
| 8° Serpentis culm. 4h 29'           |  |
| 10° Oph. & Virg. 6h 14' & 1h 27'    |  |
| 14° Ceti & Virg. culm. 15h 16'      |  |
| & ob 8'                             |  |
| 15° Ophiuci & Aquil. culm. 6h 1'    |  |
| & 7h 38'                            |  |
| 16° Ceti culm. 14h 51'              |  |
| 18° Piscium culm. 14h 2'            |  |
| 20° & Virg. Antin. culm. ob 15'     |  |
| 1h 30' 7h 47'                       |  |
| 21 in signo Librae 23h 8'           |  |
| 23° Orion. & Ceti 17h 15' & 14h 22' |  |
| 25° Orionis, & Aquarii, γ Antinoi   |  |
| culm. 17h 11' 9h 42' & 7h 48'       |  |
| 26° Antinoi culm. 7h 9'             |  |
| 27° Orionis culm. 17h 8'            |  |
| 28° Aquar. & Orion. culm. 9h 47'    |  |
| 16h 49'                             |  |
| 29° μ & Serp. culm. 3h 12' & 5h 43' |  |
| 30° Ophiuci culm. 3h 34'            |  |

D  
Pbaenomena & Observationes  
Lunae

|                                    |                  |
|------------------------------------|------------------|
| Luna                               |                  |
| 1 ad δ Piscium                     | 8h 40'           |
| 3 ad ε Arietis                     | 19h 36'          |
| 4 ad α Tauri                       | 16h 30'          |
| 5 ad φ Tauri                       | 7h 18'           |
| 6 Ultimus Quadrans                 | 2h 56'           |
| 7 ad β Tauri                       | 1ch 48'          |
| 7 ad ε Geminorum                   | 2ch 48'          |
| 9 ad x Geminorum                   | oh 10'           |
| 11 ad J & Leonis 11h 12'           | & 19h            |
| 12 Apogea ad ε Leonis              | 1h 45'           |
| 14 Novilumium                      | 5h 21'           |
| 16 ad ε Virginis                   | 13h 54'          |
| 19 ad A & x Scorpis 12h 48'        | & 15h            |
| 20 ad + Scorpii 6h 49' cum occult. |                  |
| proprie horiz.                     |                  |
| 21 Primus Quadrans                 | 20h 59'          |
| 22 ad φ Sagittarii                 | 9h 40'           |
| 23 ad γ & τ. 2. 3 d Capri 7h 20' & | 10h &c.          |
| 26 Perigea af Jovis & x Aquarii    | 6h 24' & 15h 20' |
| 28 Plenilumium                     | 12h 22'          |
| Planetae in parallelis fixiorum    |                  |
| Saturnus δ Scorpii, γ Hydræ,       |                  |
| α Sagitt., β Corvi, γ Lepor.       |                  |
| Jupiter σ Aquarii, λ Virginis,     |                  |
| σ Ceti, α Capri                    |                  |
| Mars init. prope Proc. & Serp.     |                  |
| Venus i E Hydr. γ Orion. β Aqu.    |                  |
| Procyon, ε Serp., β Oph.,          |                  |
| δ Virginis, γ Serp., α Ceti,       |                  |
| β Virg., γ Oph., δ Aquilae,        |                  |
| γ Ceti, 13° & Virg., γ Antin.,     |                  |
| δ Orion., 4° Ceti, α Aquarii,      |                  |
| ε Orion., μ & Serp., δ Oph.,       |                  |
| 22° ε Serp., α Ceti, ε Oph.,       |                  |
| 25° α Antinoi, β Erid., 28°        |                  |
| Aquarii, 30° Rigel                 |                  |
| Mercurius 1° α Aquarii, γ &        |                  |
| Antin., 4° ε Serp., α Ceti,        |                  |
| 7° λ Aq. 10° ε Hydr.               |                  |
| Rigel, 16° β Virg., ε Oph.,        |                  |
| 19° Aquarii, 22° Ceti, 25° & 30°   |                  |
| α Capri, γ Librae, γ Erid.         |                  |

D  
Pbaenomena & Observationes  
Planetarum

|   |  |
|---|--|
| 5° Mercurius ad f Virg. diff. lat. 18'  |  |
| 6° Venus ad Martis diff. lat. 31'       |  |
| 7° Venus ad δ Virginis diff. lat. 40'   |  |
| 8° Jupiter ad * Aquarii diff. lat. 4°   |  |
| 9° Mars ad δ Virginis diff. lat. 13°    |  |
| Mercurius ad J Virg. d.l. 1.º 30'       |  |
| 14° Venus ad γ Virginis diff. lat. 8'   |  |
| 15° Mercur. in elong. max. vespert.     |  |
| 16° Mercurius ad α Virg. diff. lat. 44° |  |
| 24° Venus ad ε Virginis diff. lat. 46°  |  |
| 28° Mars in coniunctione                |  |

| Dier<br>hebdomadæ<br>meridi. | Equatio<br>subtrahenda<br>a tempore<br>vero<br>ut babeatur<br>medium | Differe-<br>rentia | Longitudo<br>Solis | Ascensio recta<br>Solis |          |           | Declinatio<br>Solis<br>Borealis |
|------------------------------|--|--------------------|--------------------|-------------------------|----------|-----------|---------------------------------|
|                              |  |                    |                    | S.                      | G. M. S. | G. M. S.  |                                 |
| 1 Mer.                       | 0. 28, 7   | 18, 8              | 5. 9. 33. 37       | 161.                    | 7. 37    | 7. 59. 39 |                                 |
| 2 Jov.                       | 0. 47, 7   | 19, 0              | 5. 10. 31. 47      | 162.                    | 1. 58    | 7. 37. 40 |                                 |
| 3 Ven.                       | 1. 7, 1  | 19, 4              | 5. 11. 29. 58      | 162.                    | 56. 16   | 7. 15. 34 |                                 |
| 4 Sat.                       | 1. 26, 7   | 19, 6              | 5. 12. 28. 12      | 163.                    | 50. 29   | 6. 53. 21 |                                 |
| 5 Dom                        | 1. 46, 4   | 19, 7              | 5. 13. 26. 28      | 164.                    | 44. 40   | 6. 31. 1  |                                 |
| 6 Lun.                       | 2. 6, 3  | 19, 9              | 5. 14. 24. 46      | 165.                    | 38. 48   | 6. 8. 34  |                                 |
| 7 Mar.                       | 2. 26, 4   | 20, 1              | 5. 15. 23. 6       | 166.                    | 32. 54   | 5. 46. 1  |                                 |
| 8 Mer.                       | 2. 46, 7   | 20, 3              | 5. 16. 21. 29      | 167.                    | 26. 58   | 5. 23. 22 |                                 |
| 9 Jov.                       | 3. 7, 1  | 20, 4              | 5. 17. 19. 54      | 168.                    | 21. 0    | 5. 0. 37  |                                 |
| 10 Ven.                      | 3. 27, 7   | 20, 6              | 5. 18. 18. 21      | 169.                    | 15. 6    | 4. 37. 47 |                                 |
| 11 Sat.                      | 3. 48, 2   | 20, 5              | 5. 19. 16. 50      | 170.                    | 8. 58    | 4. 14. 52 |                                 |
| 12 Dom                       | 4. 8, 8  | 20, 6              | 5. 20. 15. 21      | 171.                    | 8. 55    | 3. 51. 53 |                                 |
| 13 Lun.                      | 4. 29, 6   | 20, 8              | 5. 21. 13. 54      | 172.                    | 56. 51   | 3. 28. 50 |                                 |
| 14 Mar.                      | 4. 50, 5   | 20, 9              | 5. 22. 12. 28      | 173.                    | 50. 45   | 3. 5. 43  |                                 |
| 15 Mer                       | 5. 11, 4   | 20, 9              | 5. 23. 11. 4       | 173.                    | 44. 38   | 2. 42. 32 |                                 |
|                              |  | 21, 0              |                    |                         |          |           |                                 |
| 16 Jov.                      | 5. 32, 4   |                    | 5. 24. 9. 42       | 174.                    | 38. 30   | 2. 19. 18 |                                 |
| 17 Ven.                      | 5. 53, 5   | 21, 1              | 5. 25. 8. 22       | 175.                    | 32. 23   | 1. 56. 1  |                                 |
| 18 Sat.                      | 6. 14, 5   | 21, 0              | 5. 26. 7. 3        | 176.                    | 26. 16   | 1. 32. 42 |                                 |
| 19 Dom                       | 6. 35, 4   | 20, 9              | 5. 27. 5. 46       | 177.                    | 20. 10   | 1. 9. 22  |                                 |
| 20 Lun.                      | 6. 56, 3   | 20, 9              | 5. 28. 4. 31       | 178.                    | 14. 4    | 0. 45. 0  |                                 |
|                              |  | 20, 8              |                    |                         |          |           |                                 |
| 21 Mar.                      | 7. 17, 1   |                    | 5. 29. 3. 17       | 179.                    | 7. 59    | 0. 22. 36 |                                 |
| 22 Mer.                      | 7. 37, 8   | 20, 7              | 6. 0. 2. 6         | 180.                    | 1. 56    | 0. 0. 49  |                                 |
| 23 Jov.                      | 7. 58, 4   | 20, 6              | 6. 1. 0. 55        | 180.                    | 55. 54   | 0. 24. 15 |                                 |
| 24 Ven.                      | 8. 19, 0   | 20, 6              | 6. 1. 59. 46       | 181.                    | 49. 93   | 0. 47. 41 |                                 |
| 25 Sat.                      | 8. 39, 5   | 20, 5              | 6. 2. 58. 39       | 182.                    | 43. 54   | 1. 11. 72 |                                 |
|                              |  | 20, 3              |                    |                         |          |           |                                 |
| 26 Dom                       | 8. 59, 8   |                    | 6. 3. 57. 34       | 183.                    | 37. 58   | 1. 34. 33 |                                 |
| 27 Lun.                      | 9. 19, 8   | 20, 0              | 6. 4. 56. 31       | 184.                    | 32. 5    | 1. 57. 58 |                                 |
| 28 Mar.                      | 9. 39, 5   | 19, 7              | 6. 5. 55. 30       | 185.                    | 26. 16   | 2. 21. 32 |                                 |
| 29 Mer.                      | 9. 59, 0   | 19, 5              | 6. 5. 54. 31       | 186.                    | 20. 31   | 2. 44. 45 |                                 |
| 30 Jov.                      | 10. 18, 3  | 19, 2              | 6. 7. 53. 35       | 187.                    | 14. 50   | 3. 8. 6   |                                 |
|                              |  | 18, 9              |                    |                         |          |           |                                 |

| Dier<br>meritis<br>Bis biebatur<br>datur | Distantia<br>fectionis<br>a Sole | Diffi-<br>centja | In-<br>tium<br>Crepus-<br>sauli | Ortu<br>Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepus-<br>sauli | Hora<br>Italica<br>Meri-<br>dies |
|--|----------------------------------|------------------|---------------------------------|-------------------------|---------------------------------|---------------------------|----------------------------------|
|  |                                  |                  |                                 |                         |                                 |                           |                                  |
|  |                                  | H.               | M.                              | S.                      | H.                              | M.                        | H.                               |
| 1 Mer.                                   | 13. 15. 29,5                     | 3. 37, 4         | 8. 37                           | 5. 23                   | 6. 37                           | 8. 26                     | 16. 43                           |
| 2 Juv.                                   | 13. 61. 52,1                     | 3. 37, 1         | 3. 35                           | 5. 25                   | 6. 35                           | 8. 23                     | 16. 45                           |
| 3 Ven.                                   | 13. 8. 15,0                      | 3. 36, 9         | 3. 39                           | 5. 27                   | 6. 33                           | 8. 21                     | 16. 57                           |
| 4 Sat.                                   | 13. 4. 28,1                      | 3. 36, 7         | 3. 42                           | 5. 29                   | 6. 31                           | 8. 18                     | 16. 49                           |
| 5 Dom.                                   | 13. 1. 1,4                       | 3. 36, 6         | 3. 44                           | 5. 30                   | 6. 30                           | 8. 16                     | 16. 51                           |
| 6 Lun.                                   | 12. 57. 24,8                     | 3. 36, 4         | 3. 46                           | 5. 31                   | 6. 29                           | 8. 14                     | 16. 53                           |
| 7 Mar.                                   | 12. 53. 48,4                     | 3. 36, 3         | 3. 48                           | 5. 33                   | 6. 27                           | 8. 12                     | 16. 55                           |
| 8 Mer.                                   | 12. 50. 12,1                     | 3. 36, 1         | 3. 50                           | 5. 35                   | 6. 25                           | 8. 10                     | 16. 57                           |
| 9 Jov.                                   | 12. 46. 36,0                     | 3. 36, 0         | 3. 52                           | 5. 36                   | 6. 24                           | 8. 8                      | 16. 59                           |
| 10 Ven.                                  | 12. 43. 0,0                      | 3. 35, 9         | 3. 54                           | 5. 38                   | 6. 22                           | 8. 6                      | 17. 1                            |
| 11 Sat.                                  | 12. 39. 24,1                     | 3. 35, 8         | 3. 56                           | 5. 41                   | 6. 21                           | 8. 4                      | 17. 3                            |
| 12 Dom.                                  | 12. 35. 48,8                     | 3. 35, 7         | 3. 58                           | 5. 42                   | 6. 19                           | 8. 2                      | 17. 5                            |
| 13 Lun.                                  | 12. 32. 52,6                     | 3. 35, 6         | 3. 60                           | 5. 44                   | 6. 18                           | 8. 0                      | 17. 7                            |
| 14 Mar.                                  | 12. 28. 37,0                     | 3. 35, 5         | 3. 62                           | 5. 45                   | 6. 16                           | 7. 58                     | 17. 9                            |
| 15 Mer.                                  | 12. 25. 1,5                      | 3. 35, 6         | 3. 64                           | 5. 47                   | 6. 15                           | 7. 56                     | 17. 11                           |
| 16 Jov.                                  | 12. 21. 26,0                     | 3. 35, 6         | 3. 66                           | 5. 48                   | 6. 13                           | 7. 54                     | 17. 13                           |
| 17 Ven.                                  | 12. 17. 50,6                     | 3. 35, 6         | 3. 68                           | 5. 50                   | 6. 12                           | 7. 52                     | 17. 15                           |
| 18 Sat.                                  | 12. 14. 14,9                     | 3. 35, 6         | 4. 10                           | 5. 51                   | 6. 10                           | 7. 50                     | 17. 17                           |
| 19 Dom.                                  | 12. 10. 39,3                     | 3. 35, 6         | 4. 12                           | 5. 53                   | 6. 8                            | 7. 48                     | 17. 18                           |
| 20 Lun.                                  | 12. 7. 3,7                       | 3. 35, 6         | 4. 14                           | 5. 55                   | 6. 7                            | 7. 46                     | 17. 20                           |
| 21 Mar.                                  | 12. 3. 28,1                      | 3. 35, 7         | 4. 16                           | 5. 57                   | 6. 5                            | 7. 45                     | 17. 22                           |
| 22 Mer.                                  | 11. 59. 52,4                     | 3. 35, 9         | 4. 17                           | 5. 58                   | 6. 3                            | 7. 43                     | 17. 24                           |
| 23 Jov.                                  | 11. 56. 46,6                     | 3. 35, 9         | 4. 18                           | 5. 59                   | 6. 2                            | 7. 42                     | 17. 26                           |
| 24 Ven.                                  | 11. 52. 40,5                     | 3. 36, 1         | 4. 19                           | 6. 0                    | 6. 0                            | 7. 41                     | 17. 28                           |
| 25 Sat.                                  | 11. 49. 4,4                      | 3. 36, 3         | 4. 21                           | 6. 1                    | 5. 59                           | 7. 39                     | 17. 29                           |
| 26 Dom.                                  | 11. 45. 28,1                     | 3. 36, 5         | 4. 22                           | 6. 2                    | 6. 57                           | 7. 38                     | 17. 31                           |
| 27 Lun.                                  | 11. 41. 51,6                     | 3. 36, 7         | 4. 24                           | 6. 5                    | 5. 55                           | 7. 36                     | 17. 33                           |
| 28 Mar.                                  | 11. 38. 14,9                     | 3. 37, 0         | 4. 25                           | 6. 6                    | 5. 54                           | 7. 35                     | 17. 35                           |
| 29 Mer.                                  | 11. 34. 37,9                     | 3. 37, 3         | 4. 27                           | 6. 8                    | 5. 53                           | 7. 33                     | 17. 37                           |
| 30 Jov.                                  | 11. 30. 9,7                      | 3. 37, 6         | 4. 29                           | 6. 9                    | 5. 51                           | 7. 31                     | 17. 38                           |

| Dies<br>bebbomus<br>Dies mensis | Longitudo<br>Lunae<br>Meridie | Longitudo<br>Lunae<br>media nocte | Latitudo<br>Lunae<br>Meridie | Latitudo<br>Lunae<br>med. noct. | Paral-<br>laxis<br>Lunae<br>Meridie | Paral-<br>laxis<br>Lunae<br>media<br>nocte |
|---------------------------------|-------------------------------|-----------------------------------|------------------------------|---------------------------------|-------------------------------------|--|
|                                 | S. G. M. S.                   | S. G. M. S.                       | G. M. S.                     | G. M. S.                        | M. S.                               | M. S.                                      |
| 1 Mer.                          | 0. 5. 33. 37                  | 0. 12. 53. 23                     | 3. 3. 21 B                   | 3. 34. 52 B                     | 60. 85                              | 60. 2                                      |
| 2 Jov.                          | 0. 20. 6. 28                  | 0. 27. 13. 35                     | 4. 2. 34                     | 4. 26. 2                        | 59. 36                              | 59. 9                                      |
| 3 Ven.                          | 1. 4. 14. 0                   | 1. 11. 7. 36                      | 4. 45. 7                     | 4. 59. 46                       | 58. 41                              | 58. 12                                     |
| 4 Sat.                          | 1. 17. 54. 22                 | 1. 24. 54. 24                     | 5. 9. 54                     | 5. 15. 40                       | 57. 43                              | 57. 15                                     |
| 5 Dom                           | 2. 1. 7. 57                   | 2. 7. 35. 16                      | 5. 17. 12                    | 5. 14. 41                       | 56. 48                              | 56. 23                                     |
| 6 Lun.                          | 2. 13. 56. 53                 | 2. 20. 13. 22                     | 5. 8. 18                     | 4. 58. 16                       | 55. 59                              | 55. 37                                     |
| 7 Mar.                          | 2. 26. 25. 3                  | 3. 2. 32. 22                      | 4. 44. 52                    | 4. 28. 25                       | 55. 18                              | 55. 1                                      |
| 8 Mer.                          | 3. 8. 36. 22                  | 3. 14. 37. 7                      | 4. 9. 6                      | 3. 47. 12                       | 54. 46                              | 54. 33                                     |
| 9 Jov.                          | 3. 20. 35. 22                 | 3. 26. 31. 39                     | 3. 22. 56                    | 2. 56. 37                       | 54. 22                              | 54. 13                                     |
| 10 Ven.                         | 4. 2. 26. 27                  | 4. 8. 20. 17                      | 2. 28. 32                    | 1. 58. 58                       | 54. 7                               | 54. 4                                      |
| 11 Sat.                         | 4. 14. 13. 37                 | 4. 20. 6. 54                      | 1. 28. 10                    | 0. 56. 26                       | 54. 2                               | 54. 1                                      |
| 12 Dom                          | 4. 26. 0. 33                  | 5. 1. 54. 54                      | 0. 24. 7 B                   | 0. 8. 29 A                      | 54. 3                               | 54. 6                                      |
| 13 Lun.                         | 5. 7. 50. 13                  | 5. 13. 46. 49                     | 0. 41. 6                     | 1. 13. 20                       | 54. 10                              | 54. 25                                     |
| 14 Mar.                         | 5. 19. 45. 2                  | 5. 25. 45. 7                      | 1. 44. 55                    | 2. 15. 28                       | 54. 22                              | 54. 30                                     |
| 15 Mer.                         | 6. 1. 47. 10                  | 6. 7. 51. 24                      | 2. 44. 39                    | 3. 12. 6                        | 54. 38                              | 54. 48                                     |
| 16 Jov.                         | 6. 13. 58. 6                  | 6. 20. 7. 35                      | 3. 37. 32                    | 4. 0. 37                        | 55. 0                               | 55. 18                                     |
| 17 Ven.                         | 6. 26. 19. 54                 | 7. 2. 35. 7                       | 4. 21. 1                     | 4. 38. 28                       | 55. 25                              | 55. 39                                     |
| 18 Sat.                         | 7. 8. 53. 21                  | 7. 15. 15. 17                     | 4. 52. 42                    | 5. 3. 28                        | 55. 54                              | 56. 10                                     |
| 19 Dom                          | 7. 21. 40. 36                 | 7. 28. 9. 41                      | 5. 10. 27                    | 5. 13. 32                       | 56. 27                              | 56. 45                                     |
| 20 Lun.                         | 8. 4. 42. 41                  | 8. 11. 19. 48                     | 5. 12. 40                    | 5. 7. 42                        | 57. 4                               | 57. 24                                     |
| 21 Mar.                         | 8. 18. 1. 14                  | 8. 24. 47. 6                      | 4. 58. 29                    | 4. 45. 2                        | 57. 45                              | 58. 6                                      |
| 22 Mer.                         | 9. 1. 37. 30                  | 9. 8. 32. 37                      | 4. 27. 23                    | 4. 5. 39                        | 58. 27                              | 58. 49                                     |
| 23 Jov.                         | 9. 15. 32. 26                 | 9. 28. 36. 48                     | 3. 40. 3                     | 3. 10. 48                       | 59. 10                              | 59. 30                                     |
| 24 Ven.                         | 9. 29. 45. 39                 | 10. 6. 58. 49                     | 2. 38. 18                    | 2. 2. 57                        | 59. 48                              | 60. 5                                      |
| 25 Sat.                         | 10. 14. 16. 0                 | 10. 21. 36. 40                    | 1. 25. 19                    | 0. 45. 58                       | 60. 19                              | 60. 31                                     |
| 26 Dom                          | 10. 29. 0. 11                 | 11. 6. 25. 44                     | 0. 5. 39 A                   | 0. 34. 53 B                     | 60. 40                              | 60. 46                                     |
| 27 Lun.                         | 11. 13. 52. 43                | 11. 21. 20. 2                     | 1. 14. 57                    | 1. 53. 45                       | 60. 47                              | 60. 44                                     |
| 28 Mar.                         | 11. 28. 46. 41                | 12. 6. 11. 35                     | 2. 20. 29                    | 2. 4. 31                        | 60. 37                              | 60. 26                                     |
| 29 Mer.                         | 0. 13. 33. 46                 | 0. 20. 52. 12                     | 3. 35. 9                     | 4. 1. 54                        | 60. 12                              | 59. 54                                     |
| 30 Jov.                         | 0. 28. 6. 3                   | 1. 5. 14. 32                      | 4. 24. 30                    | 4. 42. 43                       | 59. 32                              | 59. 8                                      |

| Dies<br>mensis | Dies<br>bris. Lunae<br>Meridie | Diameter<br>horiz.<br>Lunae<br>Meridie | Diameter<br>horiz.<br>Lunae<br>media<br>nocte | Declinatio<br>Lunae<br>in Meri-<br>diano | Ortus<br>Lunae | Transitus<br>Lunae<br>per Meri-<br>dianum | Occasus<br>Lunae |
|----------------|--------------------------------|--|---|--|----------------|---|------------------|
|                |                                | M. S.                                  | M. S.   | G. M.                                    | H. M.          | H. M.                                     | H. M.            |
| 1              | Mer.                           | 32. 59                                 | 32. 47  | 1. 54 B                                  | 7. 22 V        | 1. 9 M                                    | 7. 32 M          |
| 2              | Jov.                           | 32. 33                                 | 32. 18  | 8. 59                                    | 7. 44          | 2. 0                                      | 8. 54            |
| 3              | Ven.                           | 32. 3                                  | 31. 47  | 15. 23                                   | 8. 10          | 2. 51                                     | 10. 13           |
| 4              | Sat.                           | 31. 31                                 | 31. 16  | 20. 41                                   | 8. 37          | 3. 43                                     | 11. 30           |
| 5              | Dom                            | 31. 1                                  | 30. 47  | 24. 46                                   | 9. 11          | 4. 36                                     | 0. 51 V          |
| 6              | Lun.                           | 30. 34                                 | 30. 22  | 27. 17                                   | 9. 59          | 5. 30                                     | 1. 53            |
| 7              | Mat.                           | 30. 12                                 | 30. 2   | 28. 9                                    | 10. 56         | 6. 26                                     | 2. 53            |
| 8              | Mer.                           | 29. 54                                 | 29. 47  | 27. 33                                   | 11. 56         | 7. 19                                     | 3. 38            |
| 9              | Jov.                           | 29. 41                                 | 29. 36  | 25. 35                                   | 12. 4          | 8. 10                                     | 4. 15            |
| 10             | Ven.                           | 29. 33                                 | 29. 31  | 22. 28                                   | 0. 58 M        | 8. 58                                     | 4. 43            |
| 11             | Sat.                           | 29. 30                                 | 29. 30  | 18. 36                                   | 8. 6           | 9. 43                                     | 5. 6             |
| 12             | Dom                            | 29. 31                                 | 29. 32  | 13. 28                                   | 3. 12          | 10. 26                                    | 5. 26            |
| 13             | Lun.                           | 29. 34                                 | 29. 37  | 8. 14                                    | 4. 18          | 11. 7                                     | 5. 44            |
| 14             | Mar.                           | 29. 41                                 | 29. 45  | 2. 28 B                                  | 5. 23          | 11. 47                                    | 6. 2             |
| 15             | Mer.                           | 29. 50                                 | 29. 55  | 3. 20 A                                  | 6. 29          | 0. 28 V                                   | 6. 16            |
| 16             | Jov.                           | 30. 1                                  | 30. 8   | 9. 5                                     | 7. 35          | 1. 9                                      | 6. 33            |
| 17             | Ven.                           | 30. 15                                 | 30. 23  | 14. 38                                   | 8. 43          | 1. 52                                     | 6. 50            |
| 18             | Sat.                           | 30. 31                                 | 30. 40  | 19. 35                                   | 9. 52          | 2. 38                                     | 7. 15            |
| 19             | Dom                            | 30. 49                                 | 30. 59  | 23. 44                                   | 11. 4          | 3. 29                                     | 7. 46            |
| 20             | Lun.                           | 31. 10                                 | 31. 21  | 26. 41                                   | C. 17 V        | 4. 24                                     | 8. 28            |
| 21             | Mar.                           | 31. 32                                 | 31. 43  | 28. 2                                    | 1. 24          | 5. 22                                     | 9. 19            |
| 22             | Mer.                           | 31. 55                                 | 32. 7   | 27. 35                                   | 2. 22          | 6. 22                                     | 10. 24           |
| 23             | Jov.                           | 32. 18                                 | 32. 29  | 25. 16                                   | 3. 11          | 7. 23                                     | 11. 28           |
| 24             | Ven.                           | 32. 39                                 | 32. 48  | 31. 16                                   | 3. 50          | 8. 22                                     | +                |
| 25             | Sat.                           | 32. 56                                 | 33. 3   | 15. 41                                   | 4. 21          | 9. 18                                     | 1. 1 M           |
| 26             | Dom                            | 33. 8                                  | 33. 11  | 9. 9                                     | 4. 47          | 10. 21                                    | 2. 35            |
| 27             | Lun.                           | 33. 12                                 | 33. 10  | 1. 55 A                                  | 5. 8           | 11. 3                                     | 3. 48            |
| 28             | Mar.                           | 33. 6                                  | 33. 0   | 5. 31 B                                  | 5. 29          | 11. 54                                    | 5. 10            |
| 29             | Mer.                           | 32. 52                                 | 32. 42  | +  | 5. 48          | +   | 6. 93            |
| 30             | Jov.                           | 32. 30                                 | 32. 17  | 12. 14                                   | 6. 14          | 0. 45 M                                   | 7. 56            |

| Sy-<br>nec- | Longitu-<br>do Planeta-<br>rum | Batitudo<br>Plane-<br>tarum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Transi-<br>tus Pla-<br>netarum<br>per Me-<br>ridianum | Occlusio-<br>nem Plane-<br>tarum |
|-------------|--------------------------------|-----------------------------|---------------------------------|--------------------------|---|----------------------------------|
| I.          | S. G. M.                       | G. M.                       | G. M.                           | H. M.                    | H. M.   | H. M.                            |

## S A T U R N U S .

|    |           |        |          |        |         |          |
|----|-----------|--------|----------|--------|---------|----------|
| 1  | 9. 17. 53 | 0. 2 A | 22. 20 A | 4. 7 V | 8. 31 V | 0. 57 M  |
| 7  | 9. 17. 43 | 0. 2   | 22. 21   | 3. 45  | 8. 10   | 0. 35    |
| 13 | 9. 17. 36 | 0. 2   | 22. 22   | 3. 23  | 7. 47   | 0. 12    |
| 19 | 9. 17. 28 | 0. 3   | 22. 23   | 3. 1   | 7. 26   | 11. 51 V |
| 25 | 9. 17. 28 | 0. 3   | 22. 23   | 2. 39  | 7. 4    | 11. 29   |

## J U P I T E R .

|    |            |         |         |         |          |         |
|----|------------|---------|---------|---------|----------|---------|
| 1  | 11. 2. 0   | 1. 25 A | 12. 6 A | 6. 19 V | 11. 32 V | 4. 45 M |
| 7  | 11. 1. 16  | 1. 25   | 12. 20  | 5. 55   | 11. 7    | 4. 19   |
| 13 | 11. 10. 32 | 1. 24   | 12. 38  | 5. 38   | 10. 43   | 3. 54   |
| 19 | 10. 29. 50 | 1. 23   | 12. 49  | 5. 9    | 10. 19   | 3. 29   |
| 25 | 10. 29. 15 | 1. 22   | 13. 2   | 4. 45   | 9. 54    | 3. 3    |

## M A R S .

|    |           |         |         |         |         |        |
|----|-----------|---------|---------|---------|---------|--------|
| 1  | 5. 18. 35 | 0. 56 B | 5. 23 B | 6. 10 M | 0. 35 V | 7. 0 V |
| 7  | 5. 22. 28 | 0. 54   | 3. 49   | 6. 9    | 0. 28   | 6. 46  |
| 13 | 5. 26. 19 | 0. 52   | 8. 16   | 6. 8    | 0. 20   | 6. 32  |
| 19 | 5. 29. 49 | 0. 50   | 0. 50   | 6. 7    | 0. 12   | 6. 18  |
| 25 | 6. 4. 6   | 0. 48   | 0. 54 A | 6. 6    | 0. 6    | 6. 6   |

## V E N U S .

|    |           |         |         |         |         |         |
|----|-----------|---------|---------|---------|---------|---------|
| 1  | 5. 16. 4  | 1. 24 B | 6. 48 B | 5. 57 M | 0. 27 V | 6. 57 V |
| 7  | 5. 23. 31 | 1. 20   | 3. 48   | 6. 14   | 0. 32   | 6. 50   |
| 13 | 6. 10. 57 | 1. 15   | 0. 46   | 6. 30   | 0. 38   | 6. 44   |
| 19 | 6. 8. 25  | 1. 7    | 2. 19 A | 6. 59   | 0. 44   | 6. 38   |
| 25 | 6. 15. 53 | 0. 58   | 5. 23   | 7. 7    | 0. 49   | 6. 31   |

## M E R C U R I U S .

|    |           |         |         |         |         |         |
|----|-----------|---------|---------|---------|---------|---------|
| 1  | 6. 19. 39 | 0. 44 A | 1. 44 A | 7. 28 M | 1. 24 V | 7. 20 V |
| 7  | 6. 20. 37 | 1. 35   | 5. 39   | 7. 50   | 1. 30   | 7. 10   |
| 13 | 6. 27. 35 | 2. 24   | 9. 7    | 8. 7    | 1. 23   | 6. 59   |
| 19 | 6. 22. 7  | 3. 7    | 11. 53  | 8. 17   | 1. 31   | 6. 45   |
| 25 | 6. 26. 91 | 3. 35   | 13. 24  | 8. 16   | 1. 22   | 6. 28   |

## ECLIPSES SATELLITUM JOVIS.

| Dies<br>inclusis | I. Satelles.     |     |    | II. Satelles. |                  |     | III. Satelles. |    |                      |       |
|------------------|------------------|-----|----|---------------|------------------|-----|----------------|----|----------------------|-------|
|                  | Emerfiones       |     |    | Emerfiones    |                  |     | Imers. Emers.  |    |                      |       |
|                  | H.               | M.  | S. | H.            | M.               | S.  | H.             | M. | S.                   |       |
| 1                | 8. <sup>*</sup>  | 51. | 42 | 2             | 7. <sup>*</sup>  | 37. | 50             | 1  | 6. <sup>*</sup> 56.  | 14. I |
| 3                | 15. <sup>*</sup> | 20. | 58 | 5             | 21.              | 17. | 15             | 1  | 10. <sup>*</sup> 18. | 34 E  |
| 5                | 9.               | 50. | 16 | 9             | 10. <sup>*</sup> | 36. | 40             | 8  | 11. <sup>*</sup> 1.  | 8 I   |
| 7                | 4.               | 19. | 36 | 12            | 23.              | 56. | 5              | 8  | 14. <sup>*</sup> 21. | 45 E  |
| 8                | 22.              | 48. | 56 | 16            | 13. <sup>*</sup> | 15. | 30             | 19 | 25. <sup>*</sup> 9.  | 18 I  |
| 10               | 17.              | 18. | 18 | 20            | 2.               | 34. | 55             | 15 | 18. 25.              | 10 E  |
| 12               | 11. <sup>*</sup> | 37. | 41 | 23            | 15.              | 54. | 19             | 22 | 19. 9.               | 36 I  |
| 14               | 6.               | 16. | 54 | 27            | 5.               | 13. | 42             | 22 | 22. 28.              | 48 E  |
| 16               | 0.               | 46. | 27 | 30            | 18.              | 33. | 2              | 29 | 23. 14.              | 0 I   |
| 17               | 19.              | 15. | 50 |               |                  |     |                | 30 | 2. 32.               | 22 E  |
| 19               | 13. <sup>*</sup> | 45. | 14 |               |                  |     |                |    |                      |       |
| 21               | 8. <sup>*</sup>  | 14. | 38 |               |                  |     |                |    |                      |       |
| 23               | 2.               | 44. | 4  |               |                  |     |                |    |                      |       |
| 24               | 21.              | 13. | 30 |               |                  |     |                |    |                      |       |
| 26               | 15.              | 42. | 55 |               |                  |     |                | 5  | 22. <sup>*</sup> 52. | 50 I  |
| 28               | 10. <sup>*</sup> | 12. | 20 |               |                  |     |                | 5  | 17. 82.              | 58 E  |
| 30               | 4.               | 41. | 42 |               |                  |     |                | 22 | 7. 15.               | 9 I   |
|                  |                  |     |    |               |                  |     |                | 22 | 11. <sup>*</sup> 48. | 0 E   |

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>borarius<br>Solis | Logarithmus<br>distantiae<br>Solis a terra<br>posita media |    | Longitude<br>Nodi Lunae |  |
|------|-------------------|---|----------------------------|--|----|-------------------------|--|
|      |                   |   |                            | 100000   |    |                         |  |
|      |                   |   |                            | M.   | S. |                         |  |
| 1    | 31. 47.4          | 2. 8.4                                      | 2. 25.4                    | 5. 003536  |    | 10. 29. 45              |  |
| 4    | 31. 48.8          | 2. 8.2                                      | 2. 25.6                    | 5. 003208  |    | 10. 29. 89              |  |
| 7    | 31. 50.3          | 2. 8.1                                      | 2. 25.8                    | 5. 002857  |    | 10. 29. 26              |  |
| 10   | 31. 51.9          | 2. 8.0                                      | 2. 26.1                    | 5. 002522  |    | 10. 29. 16              |  |
| 13   | 31. 53.4          | 2. 8.0                                      | 2. 26.4                    | 5. 002169  |    | 10. 29. 7               |  |
| 16   | 31. 54.9          | 2. 8.0                                      | 2. 26.6                    | 5. 001821  |    | 10. 28. 67              |  |
| 19   | 31. 56.3          | 2. 7.9                                      | 2. 26.8                    | 5. 001446  |    | 10. 28. 48              |  |
| 22   | 31. 57.8          | 2. 7.9                                      | 2. 27.1                    | 5. 001057  |    | 10. 28. 38              |  |
| 25   | 31. 59.4          | 2. 8.0                                      | 2. 27.4                    | 5. 000707  |    | 10. 28. 29              |  |
| 28   | 31. 61.1          | 2. 8.0                                      | 2. 27.6                    | 5. 000330  |    | 10. 28. 19              |  |

SEPTEMBER 1784.

**POSITIONES SATELLITUM JOVIS**  
*Oriens*              *10<sup>h</sup> Vespere*              *Occidens*

|    |    |   |       |  |
|----|----|---|-------|--|
| 1  | 10 | ○ | 1. 2. |  |
| 2  |    | ○ |       |  |
| 3  |    | ○ |       |  |
| 4  |    | ○ |       |  |
| 5  |    | ○ |       |  |
| 6  |    | ○ |       |  |
| 7  | 4. | ○ |       |  |
| 8  | 4. | ○ |       |  |
| 9  | 4. | ○ |       |  |
| 10 | 4. | ○ |       |  |
| 11 | 4. | ○ |       |  |
| 12 | 4. | ○ | 2.    |  |
| 13 |    | ○ | 1.    |  |
| 14 |    | ○ | 1.    |  |
| 15 |    | ○ | 1. 2. |  |
| 16 | 10 | ○ |       |  |
| 17 |    | ○ |       |  |
| 18 |    | ○ |       |  |
| 19 |    | ○ |       |  |
| 20 | 10 | ○ |       |  |
| 21 |    | ○ | 4. 5. |  |
| 22 |    | ○ | 1. 2. |  |
| 23 |    | ○ | 2.    |  |
| 24 | 4. | ○ |       |  |
| 25 | 4. | ○ |       |  |
| 26 | 4. | ○ |       |  |
| 27 | 4. | ○ |       |  |
| 28 | 4. | ○ |       |  |
| 29 | 4. | ○ |       |  |
| 30 |    | ○ |       |  |

Dies      *Phænomena & Observationes  
Solis.*

| Sol in parallelo                |                                |
|---------------------------------|--------------------------------|
| 12 Serpentis                    | culm. 5h 16'                   |
| in media distantia a terra      |                                |
| 2 Ophiuci                       | culm. 3h 26'                   |
| 5 Antin. & Erid.                | culm. 6h 6'                    |
| 7 Orionis                       | culm. 6h 27'                   |
| 9 Aquarii                       | culm. 18h 17'                  |
| 12 Hydræ                        | culm. 20h 0'                   |
| 14 Rigel & Librae               | culm. 15h 42'                  |
| & 1h 45'                        |                                |
| 17 Erid. & Orion.               | culm. 13h 31'                  |
| & 16h 3'                        |                                |
| 18 Virginis, & Ophiuci, & Erid. | culm. 1h 38', 2h 50' & 13h 45' |
| Eridani                         | culm. 13h 48'                  |
| Ceti                            | culm. 11h 5'                   |
| in signo Scorpii                | 7h 5'                          |
| 26 Ceti                         | culm. 12h 21'                  |
| Capri                           | culm. 5h 55'                   |
| 30 Libr. & Erid.                | culm. 1h 12'                   |
| & 13h 25'                       |                                |

Dies      *Phænomena & Observationes  
Planetarum*

|   |
|---|
| 8 Mercurius ad Virg. diff. lat. 17'                 |
| 9 Venus ad Virginis diff. lat. 3'                   |
| 10 Jupiter ad Aquarii diff. lat. 39'                |
| Mercur. in conjunct. inferiore                      |
| 16 Venus ad Librae diff. lat. 12'                   |
| 19 Venus ad t. 2. Librae diff. lat.<br>1.0 9' & 57' |
| 24 Mercur. in elong. max; matut.                    |
| Venus ad Librae diff. lat. 13'                      |
| 26 Mercurius ad Virg. diff. lat. 19'                |
| 28 Venus ad Librae diff. lat. 27'                   |
| 30 Mercurius ad t. 1 Virg. d. l. 40'                |
| Venus ad Scorpil. d. l. 1.0 20'                     |
| Venus ad t. 2. & Scorpil. diff. lat.<br>44' & 33'   |

Dies      *Phænomena & Observationes  
Lunæ*

| Luna  |               |
|---|---------------|
| 1 ad α Arietis  | 5h 54'        |
| 2 ad φ & x Tauri  | 16h & 16h 24' |
| 3 ad β Tauri  | 19h 18'       |
| 5 Ult. Q. 17h 14' ... ad γ Gemin. 4h 12'                          |               |
| 6 ad x & t. 2. ν Geminor. 7h 20',<br>14h 20', 14h 48'             |               |
| 8 ad ↓ Leonis   | 20h 0'        |
| 9 Apog. ad α Leonis 8h 45' d. l. 12'                              |               |
| 13 Novilunium   | 21h 25'       |
| 14 ad x Virginis  | 20h 0'        |
| 16 ad τ Scorpil.  | 21h 0'        |
| 17 ad ε & τ Scorpil. 9h & 12h 20'                                 |               |
| 18 ad 43 Ophiuci  | 7h 30'        |
| 19 ad λ, φ, σ Sagittarii 7h 30',<br>11h, & 15h                    |               |
| 21 ad ε & t. 2. 3. d Capri 8h & 18h                               |               |
| 22 Perigea  |               |
| 23 ad δ & ε Piscium 6h & 11h 45'                                  |               |
| 26 Plenilunium  | 23h 3'        |
| 27 ad α Arietis   | 14h 20'       |
| 28 ad μ & ε Arietis   | 7h & 16h      |
| 29 ad τ Tauri, cum occultatione<br>aliquot stellar. int. Plejades |               |
| 31 ad β Tauri   | 4h 20'        |
| Planetae in parallelis fixarum                                    |               |
| Saturnus γ Lep., β Corvi, σ Sa-                                   |               |
| gittarii, γ Hydræ, δ Scorpil.                                     |               |
| Jup. α Capri, γ Erid., γ Librac.,<br>ε Ceti                       |               |
| Mars 20 α Erid., α Hydræ, 24                                      |               |
| Rigel, δ Librae, λ Aquarii,<br>38 γ Erid., x Orion., ε Virg.,     |               |
| 2 Ophiuci, ε Eridani  |               |
| Venus α Rigel, β Librae, φ ε                                      |               |
| Virg., & Ophiuci, ε & δ Erid.,                                    |               |
| 10 λ Virg., ε Ceti, 10 α Capri,                                   |               |
| 16 δ Corvi, γ Canis, γ Opti.,                                     |               |
| 19 Sirii, ε γ Capri, β Canis,                                     |               |
| ε Lep., 27 δ Scorp., δ & ε Ceti,                                  |               |
| 30 ε Capri, δ Canis, δ Leporis                                    |               |
| Mercur. 1 ε Capri, ε Ceti, ε Virg.,                               |               |
| γ Aquarii, δ ε Virg., 20 δ Oph.,                                  |               |
| ε Scrp., ε Ceti, 28 λ Antin.,                                     |               |
| δ Erid., 31 γ Orion., δ Aquarii                                   |               |

| Dies<br>Dies<br>sebtembrinae | Equatio<br>Subtrahenda<br>a tempore<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitudo<br>Solis | Ascensio recta<br>Solis | Dicitur<br>Solis<br>Australis |
|------------------------------|--|------------------|--------------------|-------------------------|-------------------------------|
| Dies<br>meritis              | M. S.  | S.               | S. G. M. S.        | G. M. S.                | G. M. S.                      |
| 1 Ven.                       | 10. 37, 1  | 18, 9            | 6. 8. 52. 47       | 188. 9. 14              | 3. 31. 25                     |
| 2 Sat.                       | 10. 34, 8  | 18, 7            | 6. 9. 51. 49       | 189. 3. 43              | 3. 34. 43                     |
| 3 Dom.                       | 11. 14, 1  | 18, 3            | 6. 10. 50. 59      | 189. 58. 17             | 4. 17. 57                     |
| 4 Lun.                       | 11. 32, 0  | 17, 9            | 6. 11. 50. 52      | 190. 52. 56             | 4. 41. 9                      |
| 5 Mar.                       | 11. 49, 5  | 17, 5            | 6. 12. 49. 27      | 191. 47. 41             | 5. 4. 17                      |
|                              |  | 17, 1            |                    |                         |                               |
| 6 Mer.                       | 12. 6, 6   |                  | 6. 13. 48. 45      | 192. 32. 33             | 5. 27. 21                     |
| 7 Jov.                       | 12. 23, 3  | 16, 7            | 6. 14. 48. 5       | 193. 37. 29             | 5. 30. 23                     |
| 8 Ven.                       | 12. 39, 5  | 16, 2            | 6. 15. 47. 28      | 194. 32. 33             | 6. 13. 19                     |
| 9 Sat.                       | 12. 55, 2  | 15, 7            | 6. 16. 46. 53      | 195. 27. 44             | 8. 36. 11                     |
| 10 Dom.                      | 13. 10, 5  | 15, 3            | 6. 17. 46. 21      | 196. 23. 3              | 6. 58. 9                      |
|                              |  | 14, 7            |                    |                         |                               |
| 11 Lun.                      | 13. 25, 2  |                  | 6. 18. 45. 51      | 197. 18. 59             | 7. 31. 27                     |
| 12 Mar.                      | 13. 39, 4  | 14, 2            | 6. 19. 45. 22      | 198. 14. 3              | 7. 45. 11                     |
| 13 Mer.                      | 13. 53, 2  | 13, 8            | 6. 20. 44. 55      | 199. 9. 45              | 8. 6. 49                      |
| 14 Jov.                      | 14. 6, 5   | 13, 3            | 6. 21. 44. 31      | 200. 5. 35              | 8. 29. 0                      |
| 15 Ven.                      | 14. 29, 2  | 12, 7            | 6. 22. 44. 9       | 201. 1. 33              | 8. 51. 14                     |
|                              |  | 12, 1            |                    |                         |                               |
| 16 Sat.                      | 14. 31, 3  |                  | 6. 23. 43. 48      | 202. 57. 39             | 9. 13. 20                     |
| 17 Dom.                      | 14. 42, 8  | 11, 5            | 6. 24. 43. 29      | 202. 53. 54             | 9. 35. 11                     |
| 18 Lun.                      | 14. 53, 8  | 11, 0            | 6. 25. 43. 12      | 203. 50. 18             | 9. 57. 8                      |
| 19 Mar.                      | 15. 4, 1   | 10, 3            | 6. 26. 42. 56      | 204. 46. 51             | 10. 18. 49                    |
| 20 Mer.                      | 15. 13, 7  | 9, 6             | 6. 27. 42. 42      | 205. 43. 33             | 10. 40. 21                    |
|                              |  | 9, 0             |                    |                         |                               |
| 21 Jov.                      | 15. 29, 7  |                  | 6. 28. 42. 30      | 206. 40. 24             | 11. 1. 43                     |
| 22 Ven.                      | 15. 31, 0  | 8, 3             | 6. 29. 42. 19      | 207. 37. 25             | 11. 32. 55                    |
| 23 Sat.                      | 15. 38, 7  | 7, 7             | 7. 0. 42. 10       | 208. 34. 37             | 11. 43. 55                    |
| 24 Dom.                      | 15. 45, 9  | 7, 2             | 7. 1. 42. 3        | 209. 32. 0              | 12. 4. 47                     |
| 25 Lun.                      | 15. 52, 4  | 6, 5             | 7. 2. 41. 58       | 210. 29. 33             | 12. 35. 27                    |
|                              |  | 5, 6             |                    |                         |                               |
| 26 Mar.                      | 15. 58, 0  |                  | 7. 3. 41. 54       | 211. 27. 17             | 12. 45. 55                    |
| 27 Mer.                      | 16. 2, 9   | 4, 9             | 7. 4. 41. 52       | 212. 25. 12             | 13. 6. 11                     |
| 28 Jov.                      | 16. 7, 0   | 4, 1             | 7. 5. 41. 52       | 213. 23. 17             | 13. 26. 55                    |
| 29 Ven.                      | 16. 10, 4  | 3, 4             | 7. 6. 41. 54       | 214. 21. 33             | 13. 46. 6                     |
| 30 Sat.                      | 16. 13, 0  | 2, 6             | 7. 7. 41. 58       | 215. 20. 1              | 14. 5. 44                     |
| 31 Dom.                      | 16. 24, 8  | 1, 8             | 7. 8. 42. 4        | 216. 18. 43             | 14. 25. 1                     |
|                              |  | 0, 9             |                    |                         |                               |

| Dies<br>mergi | Dies<br>secundum<br>modum | Diffinitia<br>sektionis<br>e Sole | Diffi-<br>rentia | Int-<br>itum<br>Crepus-<br>culi | Ortu-<br>s Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepus-<br>culi | Horo-<br>Italica<br>Meri-<br>diei |
|---------------|---------------------------|-----------------------------------|------------------|---------------------------------|----------------------------|---------------------------------|--------------------------|-----------------------------------|
|               |                           |                                   |                  |                                 |                            |                                 |                          |                                   |
|               |                           |                                   |                  |                                 |                            |                                 |                          |                                   |
| H.            | M.                        | S.                                | H.               | M.                              | H.                         | M.                              | H.                       | M.                                |
| 1             | Ven.                      | 11. 27. 23,0                      | 3. 37, 9         | 4. 31                           | 6. 14                      | 5. 49                           | 7. 29                    | 17. 40                            |
| 2             | Sat.                      | 11. 23. 45,1                      | 3. 38, 2         | 4. 33                           | 6. 13                      | 5. 47                           | 7. 27                    | 17. 42                            |
| 3             | Dom.                      | 11. 20. 6,9                       | 3. 38, 6         | 4. 35                           | 6. 15                      | 5. 46                           | 7. 25                    | 17. 44                            |
| 4             | Lug.                      | 11. 16. 88,3                      | 3. 39, 0         | 4. 36                           | 6. 16                      | 5. 44                           | 7. 24                    | 17. 46                            |
| 5             | Mar.                      | 11. 12. 49,3                      | 3. 39, 4         | 4. 38                           | 6. 17                      | 5. 43                           | 7. 22                    | 17. 47                            |
| 6             | Mer.                      | 11. 9. 9,9                        | 3. 39, 8         | 4. 39                           | 6. 18                      | 5. 42                           | 7. 21                    | 17. 48                            |
| 7             | Jov.                      | 11. 5. 30,1                       | 3. 40, 3         | 4. 41                           | 6. 20                      | 5. 40                           | 7. 19                    | 17. 50                            |
| 8             | Ven.                      | 11. 1. 49,8                       | 3. 40, 7         | 4. 42                           | 6. 22                      | 5. 39                           | 7. 18                    | 17. 51                            |
| 9             | Sat.                      | 10. 58. 9,1                       | 2. 41, 2         | 4. 44                           | 6. 23                      | 5. 37                           | 7. 16                    | 17. 53                            |
| 10            | Dom.                      | 10. 54. 27,9                      | 2. 41, 8         | 4. 45                           | 6. 24                      | 5. 36                           | 7. 15                    | 17. 54                            |
| 11            | Lun.                      | 10. 50. 46,1                      | 3. 42, 3         | 4. 46                           | 6. 25                      | 5. 35                           | 7. 14                    | 17. 55                            |
| 12            | Mar.                      | 10. 47. 3,8                       | 3. 42, 8         | 4. 48                           | 6. 27                      | 5. 33                           | 7. 13                    | 17. 57                            |
| 13            | Mer.                      | 10. 43. 21,0                      | 3. 43, 8         | 5. 49                           | 6. 28                      | 5. 32                           | 7. 11                    | 17. 58                            |
| 14            | Jov.                      | 10. 39. 37,7                      | 3. 43, 9         | 4. 50                           | 6. 30                      | 5. 30                           | 7. 10                    | 18. 0                             |
| 15            | Ven.                      | 10. 35. 53,8                      | 3. 44, 4         | 4. 61                           | 6. 31                      | 5. 29                           | 7. 9                     | 18. 1                             |
| 16            | Sat.                      | 10. 32. 9,4                       | 3. 45, 0         | 4. 53                           | 6. 32                      | 5. 28                           | 7. 7                     | 18. 2                             |
| 17            | Dom.                      | 10. 28. 24,4                      | 3. 45, 6         | 4. 54                           | 6. 33                      | 5. 26                           | 7. 6                     | 18. 4                             |
| 18            | Lun.                      | 10. 24. 38,8                      | 3. 45, 2         | 4. 56                           | 6. 36                      | 5. 24                           | 7. 4                     | 18. 6                             |
| 19            | Mar.                      | 10. 20. 52,6                      | 3. 46, 8         | 4. 57                           | 6. 38                      | 5. 22                           | 7. 3                     | 18. 8                             |
| 20            | Mer.                      | 10. 17. 5,8                       | 3. 47, 4         | 4. 59                           | 6. 40                      | 5. 20                           | 7. 1                     | 18. 10                            |
| 21            | Jov.                      | 10. 13. 18,4                      | 3. 47, 1         | 5. 1                            | 6. 42                      | 5. 18                           | 6. 59                    | 18. 12                            |
| 22            | Ven.                      | 10. 9. 30,3                       | 3. 48, 8         | 5. 3                            | 6. 43                      | 5. 17                           | 6. 58                    | 18. 13                            |
| 23            | Sat.                      | 10. 5. 41,5                       | 3. 49, 5         | 5. 4                            | 6. 45                      | 5. 15                           | 6. 56                    | 18. 15                            |
| 24            | Dom.                      | 10. 1. 52,0                       | 3. 50, 2         | 5. 5                            | 6. 47                      | 5. 13                           | 6. 55                    | 18. 17                            |
| 25            | Lun.                      | 9. 58. 1,8                        | 3. 50, 9         | 5. 7                            | 6. 48                      | 5. 12                           | 6. 53                    | 18. 18                            |
| 26            | Mar.                      | 9. 54. 10,9                       | 3. 51, 6         | 5. 8                            | 6. 49                      | 5. 11                           | 6. 52                    | 18. 19                            |
| 27            | Mer.                      | 9. 50. 19,3                       | 3. 52, 4         | 5. 9                            | 6. 51                      | 5. 9                            | 6. 51                    | 18. 21                            |
| 28            | Jov.                      | 9. 46. 26,9                       | 3. 53, 1         | 5. 10                           | 6. 52                      | 5. 8                            | 6. 50                    | 18. 22                            |
| 29            | Ven.                      | 9. 42. 33,8                       | 3. 53, 9         | 5. 12                           | 6. 54                      | 5. 6                            | 6. 48                    | 18. 24                            |
| 30            | Sat.                      | 9. 58. 39,9                       | 3. 54, 8         | 5. 13                           | 6. 56                      | 5. 4                            | 6. 47                    | 18. 26                            |
| 31            | Dom.                      | 9. 24. 45,1                       | 3. 55, 6         | 5. 15                           | 6. 57                      | 5. 3                            | 6. 45                    | 18. 27                            |

| Dies<br>mensis | Dies<br>brevissim<br>dominicae | Longitudo<br>Lunae<br>Meridie | Longitudo<br>Lunae<br>media nocte | Latitudo<br>Lunae<br>Meridie | Latitudo<br>Lunae<br>med. noct. | Paral.<br>laxis<br>Lunae<br>Meridi-<br>die | Paral.<br>laxis<br>Lunae<br>media<br>nocte |
|----------------|--------------------------------|-------------------------------|-----------------------------------|------------------------------|---------------------------------|--|--|
|                |                                | S. G. M. S.                   | S. G. M. S.                       | G. M. S.                     | G. M. S.                        | M. S.                                      | M. S.                                      |
| 1              | Ven.                           | 1. 12. 17. 6                  | 1. 19. E3. 19                     | 4. 56. 22 B                  | 5. 5. 25. B                     | 58. 43                                     | 58. 16                                     |
| 2              | Sat.                           | 1. 26. 2. 52                  | 2. 2. 45. 40                      | 5. 9. 56                     | 5. 30. 7                        | 57. 49                                     | 57. 22                                     |
| 3              | Dom.                           | 2. 9. 21. 49                  | 2. 15. 51. 34                     | 6. 6. 8                      | 4. 58. 13                       | 56. 55                                     | 56. 30                                     |
| 4              | Lun.                           | 2. 22. 15. 10                 | 2. 28. 53.                        | 5. 4. 46. 45                 | 4. 31. 58                       | 56. 6                                      | 55. 44                                     |
| 5              | Mar.                           | 3. 4. 45. 44                  | 3. 10. 53. 45                     | 4. 14. 0                     | 3. 53. 10                       | 55. 24                                     | 55. 6                                      |
| 6              | Mer.                           | 3. 16. 57. 43                 | 3. 22. 58. 17                     | 3. 30. 0                     | 3. 4. 54                        | 54. 50                                     | 54. 37                                     |
| 7              | Jov.                           | 3. 28. 56. 7                  | 4. 4. 51. 52                      | 2. 38. 2                     | 2. 9. 42                        | 54. 26                                     | 54. 18                                     |
| 8              | Ven.                           | 4. 10. 48. 10                 | 4. 16. 39. 31                     | 1. 40. 1                     | 1. 9. 9                         | 54. 13                                     | 54. 30                                     |
| 9              | Sat.                           | 4. 22. 32. 55                 | 4. 28. 26. 40                     | 0. 37. 34 B                  | 0. 5. 42 B                      | 54. 10                                     | 54. 10                                     |
| 10             | Dom.                           | 5. 4. 21. 14                  | 5. 10. 17. 8                      | 0. 26. 16 A                  | 0. 57. 59 A                     | 54. 13                                     | 54. 18                                     |
| 11             | Lun.                           | 5. 16. 15. 3                  | 5. 22. 15. 8                      | 1. 29. 16                    | 1. 59. 45                       | 54. 25                                     | 54. 34                                     |
| 12             | Mar.                           | 5. 28. 17. 50                 | 6. 4. 23. 18                      | 2. 28. 56                    | 2. 56. 36                       | 54. 44                                     | 54. 55                                     |
| 13             | Mer.                           | 6. 10. 31. 51                 | 6. 16. 43. 36                     | 3. 22. 30                    | 3. 46. 13                       | 55. 7                                      | 55. 20                                     |
| 14             | Jov.                           | 6. 22. 58. 40                 | 6. 29. 17. 4                      | 4. 7. 22                     | 4. 25. 37                       | 55. 53                                     | 55. 47                                     |
| 15             | Ven.                           | 7. 5. 38. 47                  | 7. 12. 3. 48                      | 4. 40. 45                    | 4. 52. 28                       | 56. 1                                      | 56. 16                                     |
| 16             | Sat.                           | 7. 18. 32. 6                  | 7. 25. 3. 37                      | 5. 20. 38                    | 5. 4. 45                        | 56. 31                                     | 56. 46                                     |
| 17             | Dom.                           | 8. 1. 38. 8                   | 8. 8. 15. 39                      | 5. 4. 59                     | 5. 1. 7                         | 57. 0                                      | 57. 15                                     |
| 18             | Lun.                           | 8. 14. 56. 6                  | 8. 21. 39. 33                     | 4. 53. 10                    | 4. 41. 8                        | 57. 29                                     | 57. 44                                     |
| 19             | Mar.                           | 8. 28. 25. 41                 | 9. 5. 14. 33                      | 4. 25. 2                     | 4. 4. 59                        | 57. 59                                     | 58. 13                                     |
| 20             | Mer.                           | 9. 12. 6. 9                   | 9. 19. 0. 28                      | 3. 41. 17                    | 3. 14. 20                       | 58. 27                                     | 58. 41                                     |
| 21             | Jov.                           | 9. 25. 57. 30                 | 10. 2. 57. 10                     | 2. 44. 25                    | 2. 11. 48                       | 58. 54                                     | 59. 6                                      |
| 22             | Ven.                           | 10. 9. 59. 30                 | 10. 17. 4. 24                     | 1. 36. 45                    | 1. 0. 10 A                      | 59. 18                                     | 59. 29                                     |
| 23             | Sat.                           | 10. 24. 11. 42                | 11. 0. 21. 14                     | 0. 22. 35 A                  | 0. 15. 59 B                     | 59. 38                                     | 59. 45                                     |
| 24             | Dom.                           | 11. 8. 32. 46                 | 11. 15. 45. 50                    | 0. 54. 0 B                   | 1. 31. 21                       | 59. 51                                     | 59. 55                                     |
| 25             | Lun.                           | 11. 22. 0. 11                 | 0. 0. 14. 57                      | 2. 7. 30                     | 2. 41. 14                       | 59. 56                                     | 59. 54                                     |
| 26             | Mar.                           | 0. 7. 29. 44                  | 0. 14. 49. 43                     | 3. 12. 27                    | 3. 40. 33                       | 59. 49                                     | 59. 41                                     |
| 27             | Mer.                           | 0. 31. 56. 2                  | 0. 29. 5. 55. 4                   | 4. 4. 58                     | 4. 25. 21                       | 59. 20                                     | 59. 16                                     |
| 28             | Jov.                           | 1. 6. 12. 42                  | 1. 13. 15. 33                     | 4. 41. 24                    | 4. 52. 55                       | 59. 0                                      | 58. 43                                     |
| 29             | Ven.                           | 1. 20. 13. 50                 | 1. 27. 7.                         | 1. 4. 59. 56                 | 5. 2. 31                        | 58. 21                                     | 57. 58                                     |
| 30             | Sat.                           | 2. 3. 54. 42                  | 2. 10. 36. 40                     | 5. 0. 42                     | 4. 54. 47                       | 57. 35                                     | 57. 13                                     |
| 31             | Dom.                           | 2. 17. 38. 37                 | 2. 23. 42. 39                     | 4. 44. 56                    | 4. 31. 31                       | 56. 50                                     | 56. 37                                     |

| Dies<br>Sabbatiales<br>meus | Diameter<br>horiz.<br>Lunae<br>Meridie | Diameter<br>horiz.<br>Lunae<br>media<br>nocte | Declinatio<br>Lunae<br>in Meri-<br>diano | Ortus<br>Lunae | Transitus<br>Lunae<br>per Meri-<br>dianum | Occafus<br>Lunae |
|-----------------------------|--|---|--|----------------|---|------------------|
|                             | M. S.                                  | M. S.   | G. M.                                    | H. M.          | H. M.                                     | H. M.            |
| 1 Ven.                      | 32. 4                                  | 31. 49  | 18. 9 B                                  | 6. 45 V        | 1. 38 M                                   | 9. 16 M          |
| 2 Sat.                      | 31. 34                                 | 31. 19  | 22. 54                                   | 7. 19          | 2. 33                                     | 10. 37           |
| 3 Dom                       | 31. 5                                  | 30. 51  | 26. 18                                   | 8. 16          | 3. 28                                     | 11. 44           |
| 4 Lun.                      | 30. 28                                 | 30. 26  | 27. 44                                   | 8. 55          | 4. 24                                     | 9. 48 V          |
| 5 Mar.                      | 30. 15                                 | 30. 5   | 27. 48                                   | 9. 56          | 5. 19                                     | 1. 43            |
| 6 Mer.                      | 29. 56                                 | 29. 49  | 26. 9                                    | 10. 59         | 6. 12                                     | 2. 23            |
| 7 Jov.                      | 29. 43                                 | 29. 39  | 23. 24                                   | *              | 7. 2                                      | 2. 59            |
| 8 Ven.                      | 29. 36                                 | 29. 34  | 19. 33                                   | 0. 7 M         | 7. 49                                     | 3. 18            |
| 9 Sat.                      | 29. 34                                 | 29. 34  | 15. 2                                    | 1. 13          | 8. 32                                     | 3. 37            |
| 10 Dom                      | 29. 36                                 | 29. 39  | 9. 49                                    | 2. 19          | 9. 13                                     | 3. 54            |
| 11 Lun.                     | 29. 43                                 | 29. 48  | 4. 16 B                                  | 3. 22          | 9. 53                                     | 4. 12            |
| 12 Mar.                     | 29. 53                                 | 29. 59  | 1. 29 A                                  | 4. 25          | 10. 33                                    | 4. 29            |
| 13 Mer.                     | 30. 6                                  | 30. 13  | 7. 21                                    | 5. 31          | 11. 14                                    | 4. 46            |
| 14 Jov.                     | 30. 20                                 | 30. 27  | 12. 59                                   | 6. 39          | 11. 57                                    | 5. 5             |
| 15 Ven.                     | 30. 35                                 | 30. 43  | 18. 8                                    | 7. 50          | 0. 43 V                                   | 5. 26            |
| 16 Sat.                     | 30. 51                                 | 30. 59  | 22. 32                                   | 9. 2           | 1. 33                                     | 5. 57            |
| 17 Dom                      | 31. 7                                  | 31. 15  | 25. 52                                   | 10. 14         | 2. 26                                     | 6. 33            |
| 18 Lun.                     | 31. 3                                  | 31. 31  | 27. 42                                   | 11. 24         | 3. 24                                     | 7. 22            |
| 19 Mar.                     | 31. 39                                 | 31. 47  | 27. 48                                   | 0. 26 V        | 4. 24                                     | 8. 24            |
| 20 Mer.                     | 31. 55                                 | 32. 3   | 26. 3                                    | 1. 16          | 5. 23                                     | 9. 35            |
| 21 Jov.                     | 32. 10                                 | 32. 16  | 22. 28                                   | 1. 56          | 6. 21                                     | 10. 52           |
| 22 Ven.                     | 32. 23                                 | 32. 29  | 17. 33                                   | 2. 28          | 7. 16                                     | 9. 4             |
| 23 Sat.                     | 32. 34                                 | 32. 38  | 11. 38                                   | 2. 53          | 8. 8                                      | 0. 12 M          |
| 24 Dom                      | 32. 41                                 | 32. 43  | 4. 46 A                                  | 3. 14          | 8. 58                                     | 1. 23            |
| 25 Lun.                     | 32. 44                                 | 32. 43  | 2. 14 B                                  | 3. 35          | 9. 48                                     | 2. 54            |
| 26 Mar.                     | 32. 40                                 | 32. 35  | 9. 13                                    | 3. 55          | 10. 37                                    | 4. 24            |
| 27 Mer.                     | 32. 29                                 | 32. 22  | 15. 27                                   | 4. 17          | 11. 28                                    | 5. 34            |
| 28 Jov.                     | 32. 13                                 | 32. 9   | *  | 4. 44          | *   | 6. 93            |
| 29 Ven.                     | 31. 51                                 | 31. 39  | 20. 49                                   | 5. 17          | 0. 22 M                                   | 8. 15            |
| 30 Sat.                     | 31. 26                                 | 31. 14  | 24. 52                                   | 5. 55          | 1. 19                                     | 9. 31            |
| 31 Dom                      | 31. 2                                  | 30. 49  | 27. 17                                   | 6. 44          | 2. 15                                     | 10. 40           |

| <i>S. G. M.</i>               | <i>G. M.</i>                 | <i>G. M.</i>                     | <i>H. M.</i>              | <i>H. M.</i>                                    | <i>H. M.</i>                 |
|-------------------------------|------------------------------|----------------------------------|---------------------------|---|------------------------------|
| <i>Longitudo Planeta- rum</i> | <i>Datitudo Planeta- rum</i> | <i>Declina- tio Planeta- rum</i> | <i>Ortus Planeta- rum</i> | <i>Trans- tus Planeta- rum per Me- ridianum</i> | <i>Occlusus Planeta- rum</i> |

|                 |              |              |              |              |              |
|-----------------|--------------|--------------|--------------|--------------|--------------|
| <i>S. G. M.</i> | <i>G. M.</i> | <i>G. M.</i> | <i>H. M.</i> | <i>H. M.</i> | <i>H. M.</i> |
|-----------------|--------------|--------------|--------------|--------------|--------------|

## S A T U R N U S .

|    |            |        |          |          |         |         |
|----|------------|--------|----------|----------|---------|---------|
| 1  | 9° 17'. 32 | 0. 4 A | 92. 24 A | 2. 18 V. | 6. 43 V | 11. 8 V |
| 7  | 9° 17'. 61 | 0. 4   | 92. 23   | 1. 57    | 6. 28   | 10. 47  |
| 13 | 9° 17'. 63 | 0. 4   | 92. 22   | 1. 35    | 6. 0    | 10. 25  |
| 19 | 9° 18'. 7  | 0. 5   | 92. 20   | 1. 13    | 5. 39   | 10. 4   |
| 25 | 9° 18'. 83 | 0. 5   | 92. 19   | 0. 51    | 5. 16   | 9. 41   |

## J U P I T E R .

|    |            |         |          |         |         |         |
|----|------------|---------|----------|---------|---------|---------|
| 1  | 10. 28. 52 | 1. 42 A | 13. 11 A | 4. 25 V | 9. 33 V | 2. 41 M |
| 7  | 10. 28. 30 | 1. 24   | 13. 16   | 4. 2    | 9. 10   | 2. 17   |
| 13 | 10. 28. 31 | 1. 29   | 13. 23   | 3. 39   | 8. 46   | 1. 53   |
| 19 | 10. 28. 1  | 1. 19   | 13. 24   | 3. 16   | 8. 23   | 1. 30   |
| 25 | 10. 27. 59 | 1. 18   | 13. 23   | 3. 52   | 8. 0    | 1. 7    |

## M A R S .

|    |           |         |         |        |          |         |
|----|-----------|---------|---------|--------|----------|---------|
| 1  | 6. 8. 1   | 0. 45 B | 2. 30 A | 6. 5 M | 11. 58 M | 5. 51 M |
| 7  | 6. 11. 58 | 0. 43   | 4. 5    | 6. 4   | 11. 51   | 5. 37   |
| 13 | 6. 15. 50 | 0. 40   | 5. 38   | 6. 3   | 11. 43   | 5. 23   |
| 19 | 6. 19. 55 | 0. 37   | 7. 14   | 6. 2   | 11. 35   | 5. 9    |
| 25 | 6. 23. 54 | 0. 34   | 8. 46   | 6. 0   | 11. 27   | 4. 54   |

## V E N U S .

|    |           |         |         |         |         |         |
|----|-----------|---------|---------|---------|---------|---------|
| 1  | 6. 23. 19 | 0. 46 B | 8. 22 A | 7. 26 M | 0. 55 V | 6. 24 V |
| 7  | 7. 0. 47  | 0. 23   | 11. 15  | 7. 45   | 1. 1    | 6. 17   |
| 13 | 7. 8. 14  | 0. 19   | 13. 59  | 8. 4    | 1. 8    | 6. 11   |
| 19 | 7. 15. 42 | 0. 4    | 16. 30  | 8. 23   | 1. 14   | 6. 6    |
| 25 | 7. 23. 5  | 0. 12 A | 18. 45  | 8. 38   | 1. 21   | 6. 4    |

## M E R C U R I U S .

|    |           |         |          |         |          |        |
|----|-----------|---------|----------|---------|----------|--------|
| 1  | 6. 25. 81 | 3. 32 A | 13. 33 A | 7. 54 M | 1. 0 V   | 6. 6 V |
| 7  | 6. 28. 72 | 2. 36   | 11. 0    | 7. 5    | 0. 23    | 5. 61  |
| 13 | 6. 18. 3  | 0. 43   | 6. 36    | 6. 9    | 11. 37 M | 5. 14  |
| 19 | 6. 14. 31 | 1. 6 B  | 3. 33    | 5. 19   | 11. 6    | 4. 57  |
| 25 | 6. 24. 18 | 2. 4    | 8. 46    | 5. 41   | 11. 59   | 4. 47  |

## ECLIPSES SATELLITUM JOVIS.

| Dies<br>mensis | I. Satelles. |     |    | II. Satelles. |     |     | III. Satelles.   |    |     |     |    |   |
|----------------|--------------|-----|----|---------------|-----|-----|------------------|----|-----|-----|----|---|
|                | Emersiones   |     |    | Emersiones    |     |     | Transit. Eclips. |    |     |     |    |   |
|                | H.           | M.  | S. | H.            | M.  | S.  | H.               | M. | S.  |     |    |   |
| I              | 22.          | 21. | 6  | 4             | 7.  | 42. | 16               | 7  | 9.  | 48. | 4  | I |
| 3              | 17.          | 40. | 30 | 7             | 91. | 11. | 24               | 7  | 6.  | 35. | 42 | E |
| 5              | 12.          | 9.  | 54 | 11            | 10. | 30. | 25               | 14 | 7.  | 22. | 6  | I |
| 7              | 6.           | 39. | 18 | 14            | 23. | 49. | 18               | 14 | 10. | 38. | 57 | E |
| 9              | 1.           | 8.  | 40 | 18            | 43. | 8.  | 2                | 21 | 11. | 25. | 45 | I |
| 10             | 19.          | 38. | 2  | 22            | 2.  | 26. | 26               | 21 | 14. | 41. | 46 | E |
| 12             | 24.          | 7.  | 22 | 25            | 15. | 45. | 6                | 28 | 15. | 28. | 54 | I |
| 14             | 8.           | 36. | 40 | 29            | 5.  | 2.  | 26               | 28 | 18. | 44. | 6  | E |
| 16             | 3.           | 5.  | 56 |               |     |     |                  |    |     |     |    |   |
| 17             | 27.          | 35. | 12 |               |     |     |                  |    |     |     |    |   |
| 19             | 16.          | 4.  | 26 |               |     |     |                  |    |     |     |    |   |
| 21             | 10.          | 33. | 38 |               |     |     |                  |    |     |     |    |   |
| 23             | 5.           | 2.  | 48 |               |     |     |                  |    |     |     |    |   |
| 24             | 23.          | 31. | 54 |               |     |     |                  |    |     |     |    |   |
| 26             | 18.          | 1.  | 0  |               |     |     |                  | 9  | 1.  | 37. | 40 | I |
| 28             | 12.          | 30. | 5  |               |     |     |                  | 9  | 6.  | 1.  | 3  | E |
| 30             | 6.           | 59. | 10 |               |     |     |                  | 25 | 19. | 57. | 51 | I |
|                |              |     |    |               |     |     |                  | 26 | 0.  | 17. | 36 | E |

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>borarius<br>Solis | Logarithmus<br>distantiae<br>Solis a Terra<br>per se medie<br>100000 | Longitude<br>Nodi Lunae |         |          |
|------|-------------------|---|----------------------------|--|-------------------------|---------|----------|
|      |                   |   |                            |  | M. S.                   | M. S.   | S. O. M. |
| 1    | 32.               | 2, 8  | 2. 8, 4                    | 2. 27, 8   | 4. 999954               | 10. 28. | 50       |
| 4    | 32.               | 4, 5  | 2. 8, 7                    | 2. 28, 1   | 4. 999978               | 10. 28. | 50       |
| 7    | 32.               | 6, 2  | 2. 9, 0                    | 2. 28, 4   | 4. 999202               | 10. 27. | 45       |
| 10   | 32.               | 8, 0  | 2. 9, 3                    | 2. 28, 6   | 4. 998827               | 10. 27. | 45       |
| 13   | 32.               | 9, 7  | 2. 9, 6                    | 2. 28, 9   | 4. 998454               | 10. 27. | 45       |
| 16   | 32.               | 11, 3                                       | 2. 10, 3                   | 2. 29, 2   | 4. 998083               | 10. 27. | 22       |
| 19   | 32.               | 12, 9                                       | 2. 10, 6                   | 2. 29, 3   | 4. 997721               | 10. 27. | 03       |
| 22   | 32.               | 14, 5                                       | 2. 11, 4                   | 2. 29, 5   | 4. 997363               | 10. 27. | 03       |
| 25   | 32.               | 16, 2                                       | 2. 12, 5                   | 2. 29, 8   | 4. 997004               | 10. 26. | 44       |
| 26   | 32.               | 17, 7                                       | 2. 12, 6                   | 2. 30, 0   | 4. 996663               | 10. 26. | 44       |

OCTOBER 1784.

**POSITIONES SATELLITUM JOVIS**  
*Oriens*      *10<sup>h</sup>* *Vespere*      *Occidens*

|    |    |    |   |    |    |
|----|----|----|---|----|----|
| 1  | 3. | 2. | ○ | 1. | 4. |
| 2  |    | 1. | ○ | 2. | 3. |
| 3  | 10 |    | ○ | 2. | 3. |
| 4  |    | 1. | ○ | 1. | 4. |
| 5  | 10 |    | ○ | 1. | 4. |
| 6  |    |    | ○ | 1. | 4. |
| 7  |    |    | ○ | 1. | 4. |
| 8  |    | 1. | ○ | 1. | 4. |
| 9  |    | 1. | ○ |    | 3. |
| 10 | 4. |    | ○ | 1. | 3. |
| 11 |    | 1. | ○ | 1. | 3. |
| 12 | 1. |    | ○ | 1. | 3. |
| 13 | 1. |    | ○ | 1. | 3. |
| 14 |    | 1. | ○ | 1. | 3. |
| 15 |    | 1. | ○ | 1. | 3. |
| 16 |    | 1. | ○ | 1. | 3. |
| 17 |    |    | ○ | 1. | 3. |
| 18 | 10 |    | ○ | 1. | 3. |
| 19 |    | 1. | ○ | 1. | 3. |
| 20 | 10 |    | ○ | 1. | 3. |
| 21 | 10 |    | ○ | 1. | 3. |
| 22 |    | 1. | ○ | 1. | 3. |
| 23 |    | 1. | ○ | 1. | 3. |
| 24 |    | 1. | ○ | 1. | 3. |
| 25 |    | 1. | ○ | 1. | 3. |
| 26 |    | 1. | ○ | 1. | 3. |
| 27 | 4. |    | ○ | 1. | 3. |
| 28 | 4. |    | ○ | 1. | 3. |
| 29 | 1. |    | ○ | 1. | 3. |
| 30 | 1. |    | ○ | 1. | 3. |
| 31 | 1. |    | ○ | 1. | 3. |

D  
22 Pbaenomena & Observations  
Solis

| Sol in parallelo |                           |                             |
|------------------|---------------------------|-----------------------------|
| 1                | 53° Eridani               | culm. 13h 57'               |
| 2                | γ Librae                  | culm. ob 5'                 |
| 3                | Corvi & γ Canis           | culm. 21h 38' & 16h 15'     |
| 4                | Oph. & δ Capri            | culm. 2h 20' & 5h 30'       |
| 5                | Corvi & Sirii             | culm. 21h 12' & 15h 42'     |
| 6                | in nodo descend. Mercurii |                             |
| 7                | Crat. & δ Aquar.          | culm. 19h 45' & 7h 41'      |
| 8                | Capr. & δ Canis           | culm. 6h 18' & 15h 2'       |
| 9                | Leporis                   | culm. 14h 8'                |
| 10               | Scorp., δ & ε Ceti        | culm. ob 18' 8h 57', 9h 38' |
| 11               | in signo Sagittarii       | 3h 17'                      |
| 12               | ε Eridani                 | culm. 12h 38'               |
| 13               | δ & ε Lep.                | culm. 13h 32' & 13h 9'      |
| 14               | Corvi                     | culm. 19h 40'               |

D  
22 Pbaenomena & Observaciones  
Planetarum

|    |                             |                              |
|----|-----------------------------|------------------------------|
| 1  | Mercurius ad m Virg.        | d. l. 22'                    |
| 7  | Jupiter ad * Aquarii        | diff. lat. 44'               |
| 8  | Mercurius ad x Virg.        | d. l. 1.0 5'                 |
| 9  | Mars ad x Virginis          | diff. lat. 4'                |
| 13 | Mercurius ad x Librae       | d. l. 1. 43'                 |
| 14 | Venus ad e Ophiuci          | diff. lat. 44'               |
| 16 | Venus e & c Ophiuci         | 25' & 32'                    |
|    | Mercurius ad l. 2. γ Librae | d. l. 28' & 16'              |
| 20 | Mars ad e Librae            | diff. lat. 1'                |
| 21 | Venus ad b & i Sagittarii   | d. l. 59' & 32'              |
|    | Mercurius ad x Librae       | d. l. 9'                     |
| 26 | Mars ad l. 2. Libr.         | d. l. 54' & 42'              |
| 27 | Venus ad x Sagitt.          | diff. lat. 37'               |
| 30 | Venus ad e & γ Sagitt.      | diff. lat. 1.0 47' & 1.0 44' |

D  
22 Pbaenomena & Observaciones  
Lunae

| Luna                           |   |                   |
|--------------------------------|---|-------------------|
| 1                              | ad s Geminorum  | 13h 0'            |
| 2                              | ad A & x Geminorum  | 6h & 15h          |
| 3                              | ad s Cancer   | 14h 45'           |
| 4                              | Ultimus Quadrans  | 12h 54'           |
| 5                              | Apogea ad γ & ε Leonis  | 11h 24' & 16h 24' |
| 7                              | ad τ Leonis   | 12h 26'           |
| 9                              | ad ↓ Virginis   | 13h 12'           |
| 10                             | ad ε Virginis   | 4h 0'             |
| 12                             | Novilunium.   | 12h 18'           |
| 13                             | ad τ Scorpii 4h 10' diff. lat. 26'  |                   |
| 14                             | ad 43 Ophiuci   | 13h 20'           |
| 16                             | ad τ Sagittarii   | 5h 40'            |
| 19                             | Perig. ad Capri 13h 30' d. l. 20'   |                   |
| 20                             | Primus Quadrans   | 12h 42'           |
| ad μ Capri                     | 3h 24'  |                   |
| 20                             | ad λ Aquarii  | 6h 30'            |
| 22                             | ad δ Piscium  | 13h 30'           |
| 24                             | ad μ Arietis  | 18h 15'           |
| 25                             | ad τ Tauri  | 8h 50'            |
| 26                             | Plen. 1h 56... ad x Taur. 11h 30'   |                   |
| 28                             | ad e Geminorum  | 22h 0'            |
| 29                             | ad A Geminorum  | 15h 0'            |
| 30                             | ad μ Geminorum  | 1ch 40'           |
| Planetae in parallelis fixarum |   |                   |
| Saturnus                       | γ Leporis, δ Corvi, o Sagitt., γ Hydræ, δ Scorpii   |                   |
| Jupiter                        | ε Capri, γ Erid., γ Librae, δ Ceti, x Virginis  |                   |
| Mars                           | 1 Erid., 4 γ Ceti, 7 x Virg., ε Ceti, ε Capri, 16 γ Librae, γ Erid., 53 Erid., 22 γ Canis, δ Ophiuci, δ Capri, 26 Sirii, 30 δ Capri, δ Aquarii, ε Crat. |                   |
| Venus                          | 1 δ Leporis, μ, τ, ε Sagittarii, ε Corvi, 7 δ Corvi, γ Lepor. 13 ε Corvi, ε Navis, 16 &c. ε Navis, γ Scorpii, ε Ophiuci, ε Scorpii                      |                   |
| Mercurius                      | 1. β & φ Aquarii, 4 Rigel, δ Librae, x Aquarii, 7 γ Virg., ε & δ Erid., 10 ε Virg., ε Ceti, ε Capri, 14 δ Corvi, γ Can., 18 δ Capri, γ Corvi, Sirii     |                   |

| Dies<br>brisdomae<br>mensis | Equatio<br>subtrahenda<br>a tempore<br>vero<br>ut habeatur<br>medium | Differe-<br>rentia: | Longitude<br>Solis | Ascensio. recta<br>Solis | Declinatio.<br>Solis.<br>Australis |    |
|-----------------------------|--|---------------------|--------------------|--------------------------|------------------------------------|----|
|                             |  |                     |                    |                          | M. S.                              | S. |
| 1 Lun.                      | 16. 15. 7  | 0. 9                | 7. 9. 42. 13       | 217. 17. 37              | 14. 44. 19                         |    |
| 2 Mar.                      | 16. 15. 7  | 0. 0                | 7. 10. 42. 24      | 218. 26. 45              | 15. 3. 16                          |    |
| 3 Mer.                      | 16. 14. 9  | 0. 8                | 7. 11. 42. 37      | 219. 16. 53              | 15. 81. 58                         |    |
| 4 Jov.                      | 16. 13. 3  | 1. 6                | 7. 12. 42. 52      | 220. 15. 37              | 15. 30. 24                         |    |
| 5 Ven.                      | 16. 11. 0  | 2. 3                | 7. 13. 43. 10      | 221. 15. 22              | 15. 58. 34                         |    |
|                             |  | 3. 2                |                    |                          |                                    |    |
| 6 Sat.                      | 16. 7. 8   |                     | 7. 14. 43. 30      | 222. 15. 19              | 16. 16. 29                         |    |
| 7 Dom.                      | 16. 3. 6   | 4. 2                | 7. 15. 43. 31      | 223. 15. 29              | 16. 34. 8                          |    |
| 8 Lun.                      | 15. 58. 6  | 5. 0                | 7. 16. 44. 14      | 224. 15. 22              | 16. 51. 31                         |    |
| 9 Mar.                      | 15. 52. 8  | 5. 8                | 7. 17. 44. 39      | 225. 16. 28              | 17. 8. 37                          |    |
| 10 Mer.                     | 15. 46. 1  | 6. 7                | 7. 18. 45. 6       | 226. 17. 17              | 17. 25. 25                         |    |
|                             |  | 7. 5                |                    |                          |                                    |    |
| 11 Jov.                     | 15. 38. 6  |                     | 7. 19. 49. 35      | 227. 18. 19              | 17. 41. 54                         |    |
| 12 Ven.                     | 15. 30. 2  | 8. 4                | 7. 20. 46. 6       | 228. 19. 34              | 17. 58. 4                          |    |
| 13 Sat.                     | 15. 20. 9  | 9. 3                | 7. 21. 46. 38      | 229. 21. 2               | 18. 13. 56                         |    |
| 14 Dom.                     | 15. 10. 8  | 10. 1               | 7. 22. 47. 11      | 230. 22. 42              | 18. 29. 39                         |    |
| 15 Lun.                     | 14. 59. 8  | 11. 0               | 7. 23. 47. 46      | 231. 24. 35              | 18. 44. 42                         |    |
|                             |  | 11. 7               |                    |                          |                                    |    |
| 16 Mar.                     | 14. 48. 1  |                     | 7. 24. 48. 22      | 232. 26. 40              | 18. 59. 35                         |    |
| 17 Mer.                     | 14. 35. 6  | 12. 5               | 7. 25. 48. 59      | 233. 28. 57              | 19. 14. 7                          |    |
| 18 Jov.                     | 14. 22. 2  | 13. 4               | 7. 26. 49. 37      | 234. 31. 26              | 19. 28. 19                         |    |
| 19 Ven.                     | 14. 7. 9   | 14. 3               | 7. 27. 50. 17      | 235. 34. 17              | 19. 42. 10                         |    |
| 20 Sat.                     | 13. 53. 0  | 14. 9               | 7. 28. 50. 58      | 236. 37. 1               | 19. 55. 39                         |    |
|                             |  | 15. 6               |                    |                          |                                    |    |
| 21 Dom.                     | 13. 37. 4  |                     | 7. 29. 51. 40      | 237. 40. 6               | 20. 8. 46                          |    |
| 22 Lun.                     | 13. 21. 0  | 16. 4               | 8. 0. 52. 23       | 238. 43. 23              | 20. 21. 31                         |    |
| 23 Mar.                     | 13. 3. 7   | 17. 3               | 8. 1. 53. 7        | 239. 46. 51              | 20. 33. 53                         |    |
| 24 Mer.                     | 12. 45. 6  | 18. 1               | 8. 2. 53. 52       | 240. 50. 30              | 20. 45. 32                         |    |
| 25 Jov.                     | 12. 26. 8  | 18. 8               | 8. 3. 54. 38       | 241. 54. 20              | 20. 57. 38                         |    |
|                             |  | 19. 4               |                    |                          |                                    |    |
| 26 Ven.                     | 12. 7. 4   |                     | 8. 4. 55. 25       | 242. 58. 21              | 21. 8. 40                          |    |
| 27 Sat.                     | 11. 47. 2  | 20. 1               | 8. 5. 56. 14       | 244. 2. 23               | 21. 19. 18                         |    |
| 28 Dom.                     | 11. 26. 3  | 21. 0               | 8. 6. 57. 14       | 245. 6. 56               | 21. 29. 51                         |    |
| 29 Lun.                     | 11. 4. 6   | 21. 7               | 8. 7. 57. 56       | 246. 11. 30              | 21. 59. 51                         |    |
| 30 Mar.                     | 10. 42. 3  | 22. 3               | 8. 8. 58. 49       | 247. 16. 14              | 21. 49. 55                         |    |
|                             |  | 22. 8               |                    |                          |                                    |    |

| Dies<br>meritorius | Distantia<br>a Sole | Diffe-<br>rentia | Ini-<br>tium<br>Crepus-<br>culi | Ortu-<br>s Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepus-<br>culi | Hora<br>Italica<br>Meridi- |
|--------------------|---------------------|------------------|---------------------------------|----------------------------|---------------------------------|--------------------------|----------------------------|
|                    | H. M. S.            | M. S.            | H. M.                           | H. M.                      | H. M.                           | H. M.                    | H. M.                      |
| 1 Lun.             | 9. 30. 49.5         | 3. 56. 5         | 5. 16.                          | 6. 58                      | 5. 2                            | 6. 44                    | 18. 38                     |
| 2 Mar.             | 9. 26. 53.0         | 3. 57. 3         | 5. 18.                          | 7. 0                       | 5. 0                            | 6. 47                    | 18. 40                     |
| 3 Mer.             | 9. 22. 55.7         | 3. 58. 2         | 5. 19.                          | 7. 1                       | 4. 59                           | 6. 41                    | 18. 31                     |
| 4 Jov.             | 9. 18. 57.5         | 3. 59. 0         | 5. 20.                          | 7. 3                       | 4. 57                           | 6. 40                    | 18. 33                     |
| 5 Ven.             | 9. 14. 59.5         | 3. 59. 8         | 5. 21.                          | 7. 4                       | 4. 56                           | 6. 39                    | 18. 34                     |
| 6 Sat.             | 9. 10. 58.7         | 4. 0. 7          | 5. 22.                          | 7. 5                       | 4. 55                           | 6. 38                    | 18. 35                     |
| 7 Dom              | 9. 16. 58.0         | 4. 1. 5          | 5. 24.                          | 7. 6                       | 4. 54                           | 6. 26                    | 18. 36                     |
| 8 Lun.             | 9. 12. 56.5         | 4. 2. 4          | 5. 25.                          | 7. 8                       | 4. 52                           | 6. 35                    | 18. 38                     |
| 9 Mar.             | 8. 58. 54.1         | 4. 3. 3          | 5. 26.                          | 7. 9                       | 4. 51                           | 6. 34                    | 18. 39                     |
| 10 Mer.            | 8. 54. 50.8         | 4. 4. 1          | 5. 27.                          | 7. 10                      | 4. 50                           | 6. 33                    | 18. 40                     |
| 11 Jov.            | 8. 50. 46.7         | 4. 5. 0          | 5. 28.                          | 7. 12                      | 4. 48                           | 6. 32                    | 18. 42                     |
| 12 Ven.            | 8. 46. 41.7         | 4. 5. 8          | 5. 29.                          | 7. 13                      | 4. 47                           | 6. 31                    | 18. 43                     |
| 13 Sat.            | 8. 42. 35.9         | 4. 6. 7          | 5. 30.                          | 7. 14                      | 4. 46                           | 6. 30                    | 18. 44                     |
| 14 Dom             | 8. 38. 29.2         | 4. 7. 5          | 5. 31.                          | 7. 15                      | 4. 45                           | 6. 29                    | 18. 45                     |
| 15 Lun.            | 8. 34. 21.7         | 4. 8. 3          | 5. 32.                          | 7. 16                      | 4. 44                           | 6. 28                    | 18. 46                     |
| 16 Mar.            | 8. 30. 13.4         | 4. 9. 1          | 5. 33.                          | 7. 17                      | 4. 43                           | 6. 27                    | 18. 47                     |
| 17 Mer.            | 8. 26. 4.3          | 4. 10. 0         | 5. 34.                          | 7. 19                      | 4. 41                           | 6. 26                    | 18. 49                     |
| 18 Inv.            | 8. 21. 54.3         | 4. 10. 8         | 5. 35.                          | 7. 20                      | 4. 40                           | 6. 25                    | 18. 50                     |
| 19 Ven.            | 8. 17. 43.5         | 4. 11. 6         | 5. 36.                          | 7. 21                      | 4. 39                           | 6. 24                    | 18. 51                     |
| 20 Sat.            | 8. 13. 31.9         | 4. 12. 3         | 5. 37.                          | 7. 22                      | 4. 38                           | 6. 23                    | 18. 52                     |
| 21 Dom             | 8. 9. 19.6          | 4. 13. 1         | 5. 38.                          | 7. 23                      | 4. 37                           | 6. 22                    | 18. 53                     |
| 22 Lun.            | 8. 5. 6.5           | 4. 13. 9         | 5. 38.                          | 7. 24                      | 4. 36                           | 6. 22                    | 18. 54                     |
| 23 Mar.            | 8. 0. 52.6          | 4. 13. 6         | 5. 39.                          | 7. 25                      | 4. 35                           | 6. 21                    | 18. 55                     |
| 24 Mer.            | 7. 56. 38.0         | 4. 15. 3         | 5. 40.                          | 7. 26                      | 4. 34                           | 6. 20                    | 18. 56                     |
| 25 Jov.            | 7. 52. 22.7         | 4. 16. 0         | 5. 40.                          | 7. 27                      | 4. 33                           | 6. 20                    | 18. 57                     |
| 26 Ven.            | 7. 48. 6.7          | 4. 16. 8         | 5. 41.                          | 7. 28                      | 4. 32                           | 6. 19                    | 18. 58                     |
| 27 Sat.            | 7. 43. 49.9         | 4. 17. 6         | 5. 42.                          | 7. 29                      | 4. 31                           | 6. 18                    | 18. 59                     |
| 28 Dom             | 7. 39. 32.3         | 4. 18. 3         | 5. 43.                          | 7. 30                      | 4. 30                           | 6. 17                    | 19. 0                      |
| 29 Lun.            | 7. 35. 14.0         | 4. 18. 9         | 5. 43.                          | 7. 31                      | 4. 29                           | 6. 17                    | 19. 1                      |
| 30 Mar.            | 7. 30. 55.1         | 4. 19. 6         | 5. 44.                          | 7. 32                      | 4. 28                           | 6. 16                    | 19. 2                      |

| Dies<br>mensis | Dies<br>bebdomadae | Longitudo<br>Lunae<br>Meridie | Longitudo<br>Lunae<br>media nocte | Latitudo<br>Lunae<br>Meridie | Latitudo<br>Lunae<br>med. noct. | Paral.<br>laxis<br>Lunae<br>Meridi- | Paral.<br>laxis<br>Lunae<br>media<br>nocte |
|----------------|--------------------|-------------------------------|-----------------------------------|------------------------------|---------------------------------|-------------------------------------|--|
|                |                    | S. G. M. S.                   | S. G. M. S.                       | G. M. S.                     | G. M. S.                        | M. S.                               | M. S.                                      |
| 1 Lun.         | 3. 0. 6. 53        | 3. 6. 25. 38                  | 4. 14. 49 B                       | 3. 55. 11 B                  | 56. 55. 44                      |                                     |  |
| 2 Mar.         | 3. 12. 39. 14      | 3. 18. 48. 11                 | 3. 33. 4                          | 3. 8. 47                     | 55. 25. 55. 8                   |                                     |  |
| 3 Mer.         | 3. 24. 52. 58      | 4. 0. 54. 13                  | 2. 42. 30                         | 2. 14. 31                    | 54. 57. 54. 40                  |                                     |  |
| 4 Jov.         | 4. 6. 52. 31       | 4. 12. 48. 36                 | 1. 45. 19                         | 1. 15. 11                    | 54. 30. 54. 22                  |                                     |  |
| 5 Ven.         | 4. 18. 43. 10      | 4. 24. 36. 59                 | 0. 44. 22                         | 0. 13. 10 B                  | 54. 17. 54. 15                  |                                     |  |
| 6 Sat.         | 5. 0. 30. 38       | 5. 6. 24. 52                  | 0. 18. 10 A                       | 0. 49. 21                    | 54. 15. 54. 18                  |                                     |  |
| 7 Dom          | 5. 12. 20. 18      | 5. 18. 17. 59                 | 1. 20. 2                          | 1. 49. 56                    | 54. 23. 54. 30                  |                                     |  |
| 8 Lun.         | 5. 24. 17. 22      | 6. 0. 20. 5                   | 2. 18. 50                         | 2. 46. 28                    | 54. 40. 54. 51                  |                                     |  |
| 9 Mar.         | 6. 6. 26. 16       | 6. 12. 36. 18                 | 3. 12. 18                         | 3. 36. 18                    | 55. 4. 55. 19                   |                                     |  |
| 10 Met.        | 6. 18. 50. 23      | 6. 25. 8. 56                  | 3. 57. 44                         | 4. 16. 35                    | 55. 35. 55. 53                  |                                     |  |
| 11 Jov.        | 7. 1. 31. 48       | 7. 7. 59. 16                  | 4. 32. 28                         | 4. 45. 0                     | 56. 9. 56. 27                   |                                     |  |
| 12 Ven.        | 7. 14. 31. 7       | 7. 21. 7. 10                  | 4. 53. 56                         | 4. 59. 2                     | 56. 45. 57. 2                   |                                     |  |
| 13 Sat.        | 7. 27. 47. 18      | 8. 4. 31. 1                   | 5. 0. 7                           | 4. 57. 5                     | 57. 19. 57. 35                  |                                     |  |
| 14 Dom         | 8. 11. 18. 22      | 8. 18. 8. 34                  | 4. 49. 18                         | 4. 38. 17                    | 57. 50. 58. 4                   |                                     |  |
| 15 Lun.        | 8. 25. 1. 28       | 9. 1. 56. 22                  | 4. 22. 38                         | 4. 3. 4                      | 58. 17. 58. 28                  |                                     |  |
| 16 Mar.        | 9. 8. 52. 57       | 9. 15. 51. 9                  | 3. 39. 47                         | 3. 13. 8                     | 58. 3. 58. 47                   |                                     |  |
| 17 Mer.        | 9. 22. 50. 27      | 9. 29. 50. 40                 | 2. 49. 28                         | 2. 11. 14                    | 58. 5. 59. 0                    |                                     |  |
| 18 Jov.        | 10. 6. 51. 42      | 10. 13. 53. 2                 | 1. 36. 54                         | 1. 0. 59                     | 59. 5. 59. 9                    |                                     |  |
| 19 Ven.        | 10. 20. 55. 20     | 10. 27. 57. 33                | 0. 24. 10 A                       | 0. 13. c B                   | 59. 12. 59. 14                  |                                     |  |
| 20 Sat.        | 11. 5. 0. 4        | 11. 12. 2. 50                 | 0. 50. 5                          | 1. 26. 26                    | 59. 14. 59. 13                  |                                     |  |
| 21 Dom         | 11. 19. 5. 46      | 11. 26. 8. 35                 | 2. 1. 26                          | 2. 34. 29                    | 59. 11. 59. 8                   |                                     |  |
| 22 Lun.        | 0. 3. 11. 12       | 0. 10. 13. 15                 | 3. 5. 12                          | 3. 33. 4                     | 59. 4. 58. 58                   |                                     |  |
| 23 Mar.        | 0. 17. 14. 37      | 0. 24. 14. 48                 | 3. 57. 29                         | 4. 18. 18                    | 58. 5. 58. 42                   |                                     |  |
| 24 Mer.        | 1. 1. 13. 30       | 1. 8. 10. 12                  | 4. 35. 52                         | 4. 47. 52                    | 58. 32. 58. 20                  |                                     |  |
| 25 Jov.        | 1. 15. 4. 22       | 1. 21. 55. 30                 | 4. 56. 54                         | 5. 0. 17                     | 58. 7. 57. 53                   |                                     |  |
| 26 Ven.        | 1. 28. 43. 26      | 2. 5. 27. 38                  | 4. 59. 58                         | 4. 55. 27                    | 57. 37. 57. 20                  |                                     |  |
| 27 Sat.        | 2. 12. 7. 27       | 2. 18. 42. 42                 | 4. 46. 55                         | 4. 34. 39                    | 57. 9. 56. 43                   |                                     |  |
| 28 Dom         | 2. 25. 13. 22      | 3. 1. 39. 21                  | 4. 18. 53                         | 3. 59. 55                    | 56. 25. 56. 7                   |                                     |  |
| 29 Lun.        | 3. 8. 0. 36        | 2. 14. 17. 15                 | 3. 28. 13                         | 3. 14. 1                     | 55. 49. 55. 51                  |                                     |  |
| 30 Mar.        | 3. 20. 29. 28      | 3. 26. 37. 35                 | 2. 47. 48                         | 2. 12. 53                    | 55. 85. 55. 1                   |                                     |  |

| Dies<br>nominis | Diameter<br>horiz.<br>Lunae<br>Meridie | Diameter<br>horiz.<br>Lunae<br>media<br>nocte | Declinatio<br>Lunae<br>in Meri-<br>diano | Ortus<br>Lunae | Transitus<br>Lunae<br>per Meri-<br>dianum | Occasus<br>Lunae |
|-----------------|--|---|--|----------------|---|------------------|
|                 | M. S.                                  | M. S.   | G. M.                                    | H. M.          | H. M.                                     | H. M.            |
| 1 Lun.          | 30. 37                                 | 30. 26  | 27. 57 B                                 | 7. 45 V        | 3. 12 M                                   | 11. 40 M         |
| 2 Mar.          | 30. 15                                 | 30. 6   | 27. 2                                    | 8. 49          | 4. 6                                      | 0. 27 V          |
| 3 Mer.          | 29. 58                                 | 29. 51  | 24. 47                                   | 9. 56          | 4. 58                                     | 0. 57            |
| 4 Jov.          | 29. 45                                 | 29. 41  | 21. 20                                   | 11. * 3        | 5. 46                                     | 1. 23            |
| 5 Ven.          | 29. 38                                 | 29. 37  | 16. 58                                   |                | 6. 31                                     | 1. 45            |
| 6 Sat.          | 29. 37                                 | 29. 39  | 12. 2                                    | 0. 8 M         | 7. 13                                     | 2. 6             |
| 7 Dom.          | 29. 42                                 | 29. 45  | 6. 35                                    | 1. 13          | 7. 53                                     | 2. 21            |
| 8 Lun.          | 29. 51                                 | 29. 57  | 0. 52 B                                  | 2. 16          | 8. 33                                     | 2. 38            |
| 9 Mar.          | 30. 4                                  | 30. 12  | 4. 51 A                                  | 3. 20          | 9. 13                                     | 2. 56            |
| 10 Mer.         | 30. 21                                 | 30. 30  | 10. 34                                   | 4. 27          | 9. 55                                     | 3. 13            |
| 11 Jov.         | 30. 39                                 | 30. 49  | 15. 58                                   | 5. 35          | 10. 39                                    | 3. 33            |
| 12 Ven.         | 30. 59                                 | 31. 8   | 20. 48                                   | 6. 47          | 11. 28                                    | 4. 1             |
| 13 Sat.         | 31. 17                                 | 31. 26  | 24. 35                                   | 8. 0           | 0. 21 V                                   | 4. 35            |
| 14 Dom.         | 31. 35                                 | 31. 42  | 27. I                                    | 9. 12          | 1. 17                                     | 5. 18            |
| 15 Lun.         | 31. 49                                 | 31. 55  | 27. 44                                   | 10. 18         | 2. 17                                     | 6. 17            |
| 16 Mar.         | 32. 1                                  | 32. 6   | 26. 32                                   | 11. 11         | 3. 16                                     | 7. 26            |
| 17 Mer.         | 32. 10                                 | 32. 13  | 23. 41                                   | 11. 50         | 4. 15                                     | 8. 45            |
| 18 Jov.         | 32. 16                                 | 32. 18  | 19. 12                                   | 0. 29 V        | 5. 11                                     | 10. 0            |
| 19 Ven.         | 32. 20                                 | 32. 21  | 13. 27                                   | 0. 57          | 6. 3                                      | 11. 20           |
| 20 Sat.         | 32. 21                                 | 32. 20  | 7. 6                                     | 1. 19          | 6. 52                                     | * 9              |
| 21 Dom.         | 32. 19                                 | 32. 17  | 0. 22 A                                  | 1. 39          | 7. 40                                     | 0. 37 M          |
| 22 Lun.         | 32. 15                                 | 32. 12  | 6. 23 B                                  | 1. 59          | 8. 28                                     | 1. 54            |
| 23 Mar.         | 32. 8                                  | 32. 3   | 18. 50                                   | 2. 19          | 9. 17                                     | 3. 10            |
| 24 Mer.         | 31. 58                                 | 31. 51  | 18. 27                                   | 2. 43          | 10. 8                                     | 4. 99            |
| 25 Jov.         | 31. 44                                 | 31. 36  | 23. 4                                    | 3. 12          | 11. 1                                     | 5. 47            |
| 26 Ven.         | 31. 27                                 | 31. 18  | 26. 6                                    | 3. 47          | 11. 55                                    | 7. 5             |
| 27 Sat.         | 31. 8                                  | 30. 58  | * *                                      | 4. 31          | * 4                                       | 8. 13            |
| 28 Dom.         | 30. 84                                 | 30. 38  | 27. 32                                   | 5. 24          | 0. 52 M                                   | 9. 16            |
| 29 Lun.         | 30. 28                                 | 30. 19  | 27. 26                                   | 6. 26          | 1. 48                                     | 10. 9            |
| 30 Mar.         | 30. 10                                 | 30. 2   | 25. 39                                   | 7. 29          | 2. 41                                     | 10. 48           |

| Die<br>mensis       | Longitudo<br>Planeta-<br>rum | Latitudo<br>Plane-<br>tarum | Declina-<br>tio Pla-<br>netarum | Orsus<br>Plane-<br>tarum | Transi-<br>tus Pla-<br>netarum<br>per Me-<br>ridianum | Occasus<br>Plane-<br>tarum |
|---------------------|------------------------------|-----------------------------|---------------------------------|--------------------------|---|----------------------------|
|                     | S. G. M.                     | G. M.                       | G. M.                           | H. M.                    | H. M.   | H. M.                      |
| S A T U R N U S .   |                              |                             |                                 |                          |   |                            |
| 1.                  | 9. 18. 50                    | 0. 5 A                      | 22. 14 A                        | 0. 26 V                  | 4. 52 V   | 9. 18 V                    |
| 7.                  | 9. 19. 35                    | 0. 6                        | 22. 11                          | 0. 3                     | 4. 29   | 8. 55                      |
| 13.                 | 9. 19. 42                    | 0. 7                        | 22. 8                           | 11. 40 M                 | 4. 7  | 8. 33                      |
| 19.                 | 9. 20. 13                    | 0. 8                        | 22. 4                           | 11. 18                   | 3. 44   | 8. 11                      |
| 25.                 | 9. 20. 45                    | 0. 8                        | 22. c                           | 10. 55                   | 3. 23   | 7. 50                      |
| J U P I T E R .     |                              |                             |                                 |                          |   |                            |
| 1.                  | 10. 28. 8                    | 1. 16 A                     | 13. 18 A                        | 2. 26 V                  | 7. 35 V   | 0. 40 M                    |
| 7.                  | 10. 28. 20                   | 1. 15                       | 13. 14                          | 2. 2                     | 7. 10   | 0. 18                      |
| 13.                 | 10. 28. 41                   | 1. 14                       | 13. 6                           | 1. 38                    | 6. 47   | 11. 56 V                   |
| 19.                 | 10. 29. 8                    | 1. 13                       | 12. 56                          | 1. 15                    | 6. 24   | 11. 33                     |
| 25.                 | 10. 29. 43                   | 1. 12                       | 12. 41                          | 0. 51                    | 6. 1  | 11. 11                     |
| M A R S .           |                              |                             |                                 |                          |   |                            |
| 1.                  | 6. 28. 37                    | 0. 31 B                     | 10. 31                          | 5. 58 M                  | 11. 18 M  | 4. 28 V                    |
| 7.                  | 7. 2. 40                     | 0. 28                       | 11. 59                          | 5. 56                    | 11. 9   | 4. 22                      |
| 13.                 | 7. 6. 43                     | 0. 25                       | 13. 23                          | 5. 53                    | 11. 0   | 4. 7                       |
| 19.                 | 7. 10. 49                    | 0. 22                       | 14. 45                          | 5. 50                    | 10. 52  | 3. 53                      |
| 25.                 | 7. 14. 56                    | 0. 19                       | 16. 3                           | 5. 46                    | 10. 42  | 3. 39                      |
| V E N U S .         |                              |                             |                                 |                          |   |                            |
| 1.                  | 8. 1. 51                     | 0. 30 A                     | 21. 4 A                         | 8. 53 M                  | 1. 30 V   | 6. 3 V                     |
| 7.                  | 8. 9. 18                     | 0. 45                       | 22. 39                          | 9. 11                    | 1. 27   | 6. 0                       |
| 13.                 | 8. 16. 44                    | 1. 0                        | 23. 49                          | 9. 27                    | 1. 45   | 6. 2                       |
| 19.                 | 8. 24. 11                    | 1. 13                       | 24. 34                          | 9. 49                    | 1. 52   | 6. 5                       |
| 25.                 | 9. 1. 37                     | 1. 26                       | 24. 53                          | 9. 49                    | 2. 0  | 6. 31                      |
| M E R C U R I U S . |                              |                             |                                 |                          |   |                            |
| 1.                  | 6. 22. 45                    | 2. 6 B                      | 6. 54 A                         | 5. 23 M                  | 11. 7 2 M   | 4. 25 V                    |
| 7.                  | 7. 1. 49                     | 1. 42                       | 10. 31                          | 5. 39                    | 11. 9   | 4. 29                      |
| 13.                 | 7. 7. 21                     | 1. 5                        | 14. 13                          | 6. 8                     | 11. 21  | 4. 24                      |
| 19.                 | 7. 20. 54                    | 0. 24                       | 17. 37                          | 6. 46                    | 11. 34  | 4. 23                      |
| 25.                 | 8. 6. 24                     | 0. 16 A                     | 20. 32                          | 7. 3                     | 11. 47  | 4. 22                      |

# ECLIPSE'S SATELLITUM JOVIS.

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>horarius<br>Solis | Logaritmus<br>distantiae<br>Solis a terra<br>post media<br>100000 | Longitudo<br>Nodi Lunae |
|------|-------------------|---|----------------------------|---|-------------------------|
|      | M. S.             | M. S.                                       | M. S.                      | S. G. F.M.  |                         |
| 1    | 32. 19, 8         | 2. 13, 6                                    | 2. 30, 4                   | 4. 996191   | 10. 26. 31              |
| -4   | 32. 20, 9         | 2. 14, 3                                    | 2. 30, 6                   | 4. 995867   | 10. 26. 42              |
| 7    | 32. 22, 1         | 2. 15, 0                                    | 2. 30, 8                   | 4. 995766   | 10. 26. 42              |
| 10   | 32. 23, 5         | 2. 15, 7                                    | 2. 31, 1                   | 4. 995255   | 10. 26. 42              |
| 13   | 32. 24, 9         | 2. 16, 4                                    | 2. 31, 3                   | 4. 994968   | 10. 25. 15              |
| 16   | 32. 26, 2         | 2. 17, 1                                    | 2. 31, 5                   | 4. 994593   | 10. 25. 24              |
| 19   | 32. 27, 4         | 2. 17, 8                                    | 2. 31, 7                   | 4. 994493   | 10. 25. 24              |
| -22  | 32. 28, 6         | 2. 18, 4                                    | 2. 31, 9                   | 4. 994191   | 10. 25. 24              |
| 25   | 32. 29, 6         | 2. 19, 0                                    | 2. 32, 0                   | 4. 993960   | 10. 25. 15              |
| 28   | 32. 30, 5         | 2. 19, 6                                    | 2. 32, 1                   | 4. 993749   | 10. 25. 46              |

POSITIONES SATELLITUM JOVIS

|               |                              |                 |
|---------------|------------------------------|-----------------|
| <i>Oriens</i> | <i>7<sup>h</sup> Vespere</i> | <i>Occidens</i> |
|---------------|------------------------------|-----------------|

| 1  |    | ..    | ..          | ○ 2. σ,       |       |
|----|----|-------|-------------|---------------|-------|
| 2  |    |       | .. ..       | ○ 1.          | ..    |
| 3  |    |       | .. ..       | ○ ..          | ..    |
| 4  |    |       |             | ○ 1. 1. 1.    | .. .. |
| 5  | 10 |       | ..          | ○ ..          | ..    |
| 6  | 10 |       | .. ..       | ○ ..          | ..    |
| 7  |    |       | ..          | ○ ..          | ..    |
| 8  | 10 |       | ..          | ○ ..          | ..    |
| 9  |    |       | ..          | ○ ..          | .. 4. |
| 10 |    |       | .. ..       | ○ ..          | 4. 3. |
| 11 |    |       |             | ○ 4. 1. 1. 1. | 2.    |
| 12 | 10 |       | 4. 3.       | ○ ..          |       |
| 13 |    | 4. 3. | ..          | ○ ..          |       |
| 14 | 4. |       | ..          | ○ ..          |       |
| 15 | 4. |       | .. ..       | ○ ..          |       |
| 16 | .. |       | 2.          | ○ ..          | ..    |
| 17 | .. |       | 1. 1.       | ○ ..          | ..    |
| 18 |    | ..    |             | ○ 1. 1. 1. 1. |       |
| 19 |    |       | 1. 1. 1. 4. | ○ 1.          |       |
| 20 |    | 1.    | ..          | ○ 1.          | ..    |
| 21 | 10 |       | ..          | ○ ..          | ..    |
| 22 |    |       | 1. σ,       | ○ ..          | ..    |
| 23 |    |       | 2.          | ○ ..          | ..    |
| 24 |    |       | 1. σ²       | ○ ..          | ..    |
| 25 |    |       |             | ○ 1. 1. σ,    | ..    |
| 26 | 10 |       | ..          | ○ 1.          | ..    |
| 27 |    |       | 1. 1.       | ○ 1. 1.       | 4.    |
| 28 |    | ..    | ..          | ○ 1. 1. σ,    |       |
| 29 | 10 |       | ..          | ○ ..          | ..    |
| 30 | 4. |       | 2.          | ○ ..          | ..    |
|    |    |       |             | ○             |       |

*Phænomena & Observationes  
Solis*

| Sol in parallelo                               |
|--|
| 18 Scorp. & γ Hydræ culm.<br>23h 11' & 20h 31' |
| 28 Corvi culm. 19h 42'                         |
| 5 Leporis culm. 12h 42'                        |
| 6 in nodo descendente Veneris                  |
| 20 Corvi culm. 17h 57'                         |
| 21 in signo Capri 15h 39'                      |
| 29 in nodo descendente Jovis                   |
| 30 in Perigeo                                  |

*Phænomena & Observationes  
Lunæ*

| Luna                                   |
|--|
| 1 ad δ Cancri 6h 0'                    |
| ad ψ Leonis 11h 42'                    |
| 3 Apogeia ad α Leonis 0h 38'           |
| 4 Ultimus Quadrans 1ch 28'             |
| ad τ Leonis 20h 36'                    |
| 6 ad x Virginis 13h 0'                 |
| 7 ad ε Virginis 12h 40'                |
| 10 ad A & π Scorp. 10h & 12h 48'       |
| 12 Novilunium 1h 42'                   |
| 13 ad φ & τ Sagitt. 5h & 12h 30'       |
| 15 ad ζ & θ Aquatii 11h & 13h 0'       |
| 16 ad μ Capri 8h 40'                   |
| Perigea ad λ Aquarii 1h 30'            |
| 18 Pr. Qn. 20h 38' ... λ Pisc. 12h 50' |
| 20 ad β & τ Pisc. 17h 30' & 17h 42'    |
| 22 ad ε Arietis 6h 0'                  |
| 23 ad γ & φ Tauri 5h 20' & 18h 30'     |
| 26 Plenilunium 15h 24'                 |
| 27 ad x Geminorum 8h 20'               |
| ad δ & γ Cancri 7h 6' & 11h 48'        |
| ad α Leonis 8h 18'                     |

*Phænomena & Observationes  
Planetarum*

|  |
|--|
| 1 Mercur. in conjunct. superiore                                   |
| 4 Jupiter ad Α Aquarii diff. lat. 10'                              |
| 7 Venus ad 1. 2. 3. x Sagittarii<br>diff. lat. 43', 38' & 8'       |
| 9 Mars ad x Librae diff. lat. 7'                                   |
| Venus ad * Sagittarii diff. lat. 9'                                |
| 13 Mars ad λ Librae diff. lat. 0'                                  |
| 14 Jupiter ad σ & * Aquarii d.l.<br>3' & 21'                       |
| 17 Mars ad β & 1. 2. δ Scorpii d.l.<br>48', 43', & 0' 1/2          |
| 24 Mercurius ad 1. 2. 3. x Sagittarii<br>diff. lat. 16', 11' & 16' |
| 25 Venus ad * Aquatii diff. lat. 1'                                |
| Jupiter ad * Aquatii diff. lat. 10'                                |
| 26 Venus ad β Aquarii d.l. 1. 0 6'                                 |
| 27 Mars ad α Ophiuchi diff. lat. 30'                               |
| 30 Venus ad β Capri diff. lat. 29'                                 |

*Planetae in parallelis fixorum*  
 Saturnus δ Corvi, ο Sagittarii,  
 γ Hydræ, δ Scorp., ε Corvi,  
 τ & 2. ξ Sagittarii  
 Jupiter ε Ceti, λ Virgin., σ Aqu.,  
 η Ceti  
 Mars 1 Aqu., δ Capri, μ Crat.,  
 γ Capri, ι Canis, τ x Libr.,  
 γ Scorp., 13 δ Scorp., 8. δ Ceti,  
 λ Librae, 20. 54 Erid., b Can.,  
 δ Leporis, ξ Sagitt., δ Lep.,  
 25 μ, τ, 2. ξ Sagitt., ε Corvi  
 Venus 1 σ & γ Scorp., ε Oph.,  
 ε Navis, 10. ε Navis, α Corvi,  
 16. γ Lep., δ Corvi, 19. ε Corvi,  
 ξ, τ, ξ Sagitt., 22 γ & δ Lep.,  
 b Cahis, 25 λ Libr. δ & β Ceti,  
 δ Scorp., 31. δ Lep., δ Canis  
 Mercurius 15 α, τ, δ Scorp.,  
 25 ε Oph., γ Scorp., ε Navis,  
 28 ε Navis, α Corvi, 31 γ Le-  
 poris, δ Corvi

| Dies<br>brisbanus | Dies<br>mensis | Æquatio<br>subtrahenda<br>a tempore<br>vero<br>ut habeatur<br>medium | Diffe-<br>rentia | Longitudo<br>Solis | Ascensio recta<br>Solis | Declinatio<br>Solis<br>Australis |
|-------------------|----------------|--|------------------|--------------------|-------------------------|----------------------------------|
|                   |                | M. S.  | S.               | S. G. M. S.        | G. M. S.                | G. M. S.                         |
| 1                 | Mer.           | 10. 19. 5  | 22. 8            | 8. 9. 59. 43       | 248. 21. 8              | 21. 58. 36                       |
| 2                 | Jov.           | 9. 56. 0   | 23. 5            | 8. 11. 0. 38       | 249. 26. 11             | 22. 7. 20                        |
| 3                 | Ven.           | 9. 31. 7   | 24. 3            | 8. 12. 1. 35       | 250. 31. 23             | 22. 15. 38                       |
| 4                 | Sat.           | 9. 6. 8  | 24. 9            | 8. 13. 2. 33       | 251. 36. 44             | 22. 23. 31                       |
| 5                 | Dom            | 8. 41. 4   | 25. 4            | 8. 14. 3. 33       | 252. 42. 14             | 22. 30. 58                       |
| 6                 | Lun.           | 8. 15. 5   | 25. 9            | 8. 15. 4. 34       | 253. 47. 52             | 22. 37. 58                       |
| 7                 | Mar.           | 7. 49. 2   | 26. 3            | 8. 16. 5. 36       | 254. 53. 38             | 22. 44. 31                       |
| 8                 | Mer.           | 7. 32. 3   | 26. 9            | 8. 17. 6. 39       | 255. 59. 32             | 22. 50. 58                       |
| 9                 | Jov.           | 6. 54. 9   | 27. 4            | 8. 18. 7. 43       | 257. 5. 33              | 22. 56. 18                       |
| 10                | Ven.           | 6. 27. 1   | 27. 8            | 8. 19. 8. 48       | 258. 11. 40             | 23. 1. 30                        |
| 11                | Sat.           | 5. 58. 9   | 28. 2            | 8. 20. 9. 54       | 259. 17. 52             | 23. 6. 15                        |
| 12                | Dom            | 5. 30. 4   | 28. 5            | 8. 21. 11. 1       | 260. 24. 10             | 23. 10. 33                       |
| 13                | Lun.           | 5. 1. 6  | 28. 8            | 8. 22. 12. 8       | 261. 30. 32             | 23. 14. 23                       |
| 14                | Mar.           | 4. 32. 5   | 29. 1            | 8. 23. 13. 16      | 262. 36. 58             | 23. 17. 45                       |
| 15                | Mer.           | 4. 3. 1  | 29. 4            | 8. 24. 14. 24      | 263. 43. 26             | 23. 20. 39                       |
| 16                | Jov.           | 3. 33. 5   | 29. 6            | 8. 25. 15. 32      | 264. 50. 1              | 23. 23. 5                        |
| 17                | Ven.           | 3. 3. 8  | 29. 7            | 8. 26. 16. 41      | 265. 56. 36             | 23. 25. 2                        |
| 18                | Sat.           | 2. 24. 0   | 29. 8            | 8. 27. 17. 50      | 267. 3. 14              | 23. 26. 31                       |
| 19                | Dom            | 2. 4. 0  | 30. 0            | 8. 28. 18. 59      | 268. 9. 52              | 23. 27. 31                       |
| 20                | Lun.           | 1. 34. 0   | 30. 0            | 8. 29. 20. 8       | 269. 16. 32             | 23. 28. 5                        |
| 21                | Mar.           | 1. 4. 0  | 30. 0            | 9. 0. 21. 17       | 270. 23. 12             | 23. 28. 9                        |
| 22                | Mer.           | 0. 33. 9   | 30. 1            | 9. 1. 22. 26       | 271. 29. 52             | 23. 27. 45                       |
| 23                | Jov.           | 0. 3. 9  | 30. 0            | 9. 2. 23. 36       | 272. 36. 31             | 23. 26. 53                       |
| 24                | Ven.           | +0. 26. 1 <small>adindeo</small>                                     | 30. 0            | 9. 3. 24. 45       | 273. 43. 9              | 23. 25. 31                       |
| 25                | Sat.           | 0. 56. 0   | 29. 9            | 9. 4. 25. 55       | 274. 49. 46             | 23. 23. 43                       |
| 26                | Dom            | 1. 25. 7   | 29. 7            | 9. 5. 27. 4        | 275. 56. 21             | 23. 21. 26                       |
| 27                | Lun.           | 1. 55. 2   | 29. 5            | 9. 6. 28. 14       | 277. 2. 54              | 23. 18. 41                       |
| 28                | Mar.           | 2. 24. 5   | 29. 3            | 9. 7. 29. 24       | 278. 9. 24              | 23. 15. 38                       |
| 29                | Mer.           | 2. 53. 6   | 29. 1            | 9. 8. 30. 34       | 279. 15. 52             | 23. 11. 47                       |
| 30                | Jov.           | 3. 22. 4   | 28. 8            | 9. 9. 31. 44       | 280. 22. 18             | 23. 7. 27                        |
| 31                | Ven.           | 3. 50. 9   | 28. 5            | 9. 10. 32. 55      | 281. 28. 38             | 23. 2. 59                        |
|                   |                | 28. 3  |                  |                    |                         |                                  |

DECEMBER 1784.

xi

| Dies<br>debet<br>mensis | Distantia<br>seclionis<br>a Sole | Diffe-<br>rentia | Int-<br>tium<br>(Crepus-<br>culi) | Ortus<br>Centri<br>Solis | Occa-<br>sus<br>Centri<br>Solis | Finis<br>Crepus-<br>culi | Hora<br>Italica<br>Meridi-<br>dies |
|-------------------------|----------------------------------|------------------|-----------------------------------|--------------------------|---------------------------------|--------------------------|------------------------------------|
|                         | H. M. S.                         | M. S.            | H. M.                             | H. M.                    | H. M.                           | H. M.                    | H. M.                              |
| 1 Mer.                  | 7. 26. 35.5                      | 4. 20, 2         | 5. 45                             | 7. 33                    | 4. 27                           | 6. 15                    | 19. 3                              |
| 2 Jov.                  | 7. 23. 15.3                      | 4. 20, 8         | 5. 45                             | 7. 33                    | 4. 27                           | 6. 15                    | 19. 3                              |
| 3 Ven.                  | 7. 17. 54.5                      | 4. 21, 4         | 5. 46                             | 7. 34                    | 4. 26                           | 6. 14                    | 19. 4                              |
| 4 Sat.                  | 7. 13. 33.4                      | 4. 22, 0         | 5. 46                             | 7. 35                    | 4. 25                           | 6. 14                    | 19. 5                              |
| 5 Dom.                  | 7. 9. 11.1                       | 4. 22, 5         | 5. 47                             | 7. 36                    | 4. 24                           | 6. 13                    | 19. 6                              |
| 6 Lun.                  | 7. 4. 48.6                       | 4. 23, 1         | 5. 47                             | 7. 36                    | 4. 24                           | 6. 13                    | 19. 6                              |
| 7 Mar.                  | 7. 0. 25.5                       | 4. 23, 6         | 5. 48                             | 7. 37                    | 4. 23                           | 6. 12                    | 19. 7                              |
| 8 Mer.                  | 6. 56. 1.9                       | 4. 24, 1         | 5. 49                             | 7. 37                    | 4. 23                           | 6. 11                    | 19. 7                              |
| 9 Jov.                  | 6. 51. 37.8                      | 4. 24, 5         | 5. 49                             | 7. 38                    | 4. 22                           | 6. 11                    | 19. 8                              |
| 10 Ven.                 | 6. 47. 13.3                      | 4. 24, 8         | 5. 50                             | 7. 39                    | 4. 21                           | 6. 10                    | 19. 9                              |
| 11 Sat.                 | 6. 42. 48.5                      | 4. 25, 2         | 5. 50                             | 7. 39                    | 4. 21                           | 6. 10                    | 19. 9                              |
| 12 Dom.                 | 6. 38. 23.3                      | 4. 25, 5         | 5. 50                             | 7. 39                    | 4. 21                           | 6. 10                    | 19. 9                              |
| 13 Lun.                 | 6. 33. 57.9                      | 4. 25, 7         | 5. 50                             | 7. 40                    | 4. 20                           | 6. 10                    | 19. 10                             |
| 14 Mar.                 | 6. 29. 32.1                      | 4. 25, 0         | 5. 51                             | 7. 40                    | 4. 20                           | 6. 9                     | 19. 10                             |
| 15 Mer.                 | 6. 25. 6.2                       | 4. 26, 2         | 5. 51                             | 7. 40                    | 4. 20                           | 6. 9                     | 19. 10                             |
| 16 Jov.                 | 6. 20. 41.0                      | 4. 26, 4         | 5. 51                             | 7. 41                    | 4. 19                           | 6. 9                     | 19. 11                             |
| 17 Ven.                 | 6. 16. 13.6                      | 4. 26, 5         | 5. 52                             | 7. 41                    | 4. 19                           | 6. 8                     | 19. 11                             |
| 18 Sat.                 | 6. 21. 47.1                      | 4. 26, 6         | 5. 52                             | 7. 41                    | 4. 19                           | 6. 8                     | 19. 11                             |
| 19 Dom.                 | 6. 7. 20.5                       | 4. 26, 6         | 5. 52                             | 7. 42                    | 4. 18                           | 6. 8                     | 19. 12                             |
| 20 Lun.                 | 6. 2. 53.9                       | 4. 27, 7         | 5. 52                             | 7. 42                    | 4. 18                           | 6. 8                     | 19. 12                             |
| 21 Mar.                 | 5. 58. 27.8                      | 4. 26, 7         | 5. 52                             | 7. 42                    | 4. 18                           | 6. 8                     | 19. 12                             |
| 22 Mer.                 | 5. 54. 0.5                       | 4. 26, 6         | 5. 52                             | 7. 42                    | 4. 18                           | 6. 8                     | 19. 12                             |
| 23 Jov.                 | 5. 49. 23.9                      | 4. 26, 6         | 5. 52                             | 7. 42                    | 4. 18                           | 6. 8                     | 19. 12                             |
| 24 Ven.                 | 5. 45. 47.3                      | 4. 26, 5         | 5. 52                             | 7. 42                    | 4. 18                           | 6. 8                     | 19. 12                             |
| 25 Sat.                 | 5. 40. 40.8                      | 4. 26, 3         | 5. 51                             | 7. 41                    | 4. 19                           | 6. 9                     | 19. 12                             |
| 26 Dom.                 | 5. 36. 14.6                      | 4. 26, 1         | 5. 51                             | 7. 41                    | 4. 19                           | 6. 9                     | 19. 11                             |
| 27 Lun.                 | 5. 31. 48.4                      | 4. 26, 0         | 5. 51                             | 7. 41                    | 4. 19                           | 6. 9                     | 19. 11                             |
| 28 Mar.                 | 5. 27. 22.4                      | 4. 25, 9         | 5. 50                             | 7. 40                    | 4. 20                           | 6. 10                    | 19. 10                             |
| 29 Mer.                 | 5. 22. 56.5                      | 4. 25, 8         | 5. 50                             | 7. 40                    | 4. 20                           | 6. 10                    | 19. 10                             |
| 30 Jov.                 | 5. 18. 50.7                      | 4. 24, 7         | 5. 50                             | 7. 39                    | 4. 21                           | 6. 10                    | 19. 9                              |
| 31 Ven.                 | 5. 14. 6.0                       | 6. 50            | 7. 39                             | 4. 21                    | 6. 10                           | 19. 9                    | 9                                  |

| Dies<br>seculi<br>mense | Dies<br>bebboniane | Longitudo<br>Lunae<br>Meridie | Longitudo<br>Lunae<br>media nocte | Latitudo<br>Lunae<br>Meridie | Latitudo<br>Lunae<br>med. noct. | Paral-<br>laxis<br>Lunae<br>Meri-<br>die | Paral-<br>laxis<br>Lunae<br>media<br>nocte |
|-------------------------|--------------------|-------------------------------|-----------------------------------|------------------------------|---------------------------------|--|--|
|                         |                    | S. G. M. S.                   | S. G. M. S.                       | G. M. S.                     | G. M. S.                        | M. S.                                    | M. S.                                      |
| 1                       | Mer.               | 4. 2 41. 58                   | 4. 8. 43. 5                       | 1. 50 33 B                   | 1. 20. 8 B                      | 54. 48                                   | 54. 37                                     |
| 2                       | Jov.               | 4. 14. 41. 36                 | 4. 20. 38. 2                      | 0. 49. 13                    | 0. 17. 47 B                     | 54. 28                                   | 54. 21                                     |
| 3                       | Ven.               | 4. 26. 32. 41                 | 5. 2. 26. 29                      | 0. 13. 43 A                  | 0. 45. 0                        | 54. 17                                   | 54. 15                                     |
| 4                       | Sat.               | 5. 8. 20. 12                  | 5. 14. 14. 32                     | 1. 15. 48                    | 1. 41. 50                       | 54. 16                                   | 54. 20                                     |
| 5                       | Dom.               | 5. 20. 10. 8                  | 5. 26. 7 44                       | 2. 14. 50                    | 2. 42. 32                       | 54. 26                                   | 54. 35                                     |
| 6                       | Lun.               | 6. 2. 7. 49                   | 6. 8. 11. 11                      | 3. 8. 37                     | 3. 32. 49                       | 54. 46                                   | 54. 59                                     |
| 7                       | Mar.               | 6. 14. 18. 27                 | 6. 20. 30                         | 7. 54. 46                    | 4. 14. 14                       | 55. 15                                   | 55. 33                                     |
| 8                       | Mer.               | 6. 26. 46. 43                 | 7. 3. 8. 34                       | 4. 50. 57                    | 4. 44. 33                       | 55. 53                                   | 56. 14                                     |
| 9                       | Jov.               | 7. 9. 35. 47                  | 7. 16. 8. 38                      | 4. 54. 40                    | 5. 1. 7                         | 56. 36                                   | 56. 58                                     |
| 10                      | Ven.               | 7. 22. 47. 17                 | 7. 29. 31. 37                     | 5. 3. 33                     | 5. 1. 51                        | 57. 21                                   | 57. 43                                     |
| 11                      | Sat.               | 8. 6. 21. 21                  | 8. 13. 15. 59                     | 4. 55. 51                    | 4. 45. 28                       | 58. 5                                    | 58. 25                                     |
| 12                      | Dom.               | 8. 20. 15. 8                  | 8. 27. 18. 12                     | 4. 30. 37                    | 4. 11. 32                       | 58. 44                                   | 59. 1                                      |
| 13                      | Lun.               | 9. 4. 24. 28                  | 9. 11. 33. 26                     | 3. 48. 28                    | 3. 21. 36                       | 59. 15                                   | 59. 27                                     |
| 14                      | Mar.               | 9. 18. 44. 14                 | 9. 25. 55. 59                     | 2. 51. 21                    | 2. 18. 16                       | 59. 36                                   | 59. 42                                     |
| 15                      | Mer.               | 10. 3. 8. 18                  | 10. 10. 20. 30                    | 1. 42. 56                    | 1. 5. 53                        | 59. 45                                   | 59. 46                                     |
| 16                      | Jov.               | 10. 17. 32. C                 | 10. 24. 42. 22                    | 0. 27. 46 A                  | C. 10. 45 B                     | 59. 4                                    | 59. 41                                     |
| 17                      | Ven.               | 11. 1. 51. 18                 | 11. 8. 58. 32                     | 0. 48. 54                    | 1. 26. 13 A                     | 59. 35                                   | 59. 28                                     |
| 18                      | Sat.               | 11. 16. 3. 45                 | 11. 23. 6. 53                     | 2. 2. 3                      | 2. 45. 49                       | 59. 19                                   | 59. 9                                      |
| 19                      | Dom.               | 0. 0. 7. 51                   | 0. 7. 6. 35                       | 3. 7. 4                      | 3. 35. 20                       | 58. 58                                   | 58. 47                                     |
| 20                      | Lun.               | 0. 14. 3. 0                   | 0. 20. 57. 2                      | 4. 0 16                      | 4. 21. 34                       | 58. 35                                   | 58. 22                                     |
| 21                      | Mar.               | 0. 27. 48. 39                 | 1. 4. 37. 44                      | 4. 38. 56                    | 4. 32. 13                       | 58. 8                                    | 57. 55                                     |
| 22                      | Mer.               | 1. 11. 21. 14                 | 1. 18. 8. 0                       | 5. 1. 18                     | 5. 6. 9                         | 57. 41                                   | 57. 27                                     |
| 23                      | Jov.               | 1. 24. 49. 57                 | 2. 1. 26. 56                      | 5. 6. 46                     | 5. 3. 15                        | 57. 13                                   | 56. 59                                     |
| 24                      | Ven.               | 2. 8. 1. 51                   | 2. 14. 33. 34                     | 4. 55. 43                    | 4. 44. 20                       | 56. 44                                   | 56. 29                                     |
| 25                      | Sat.               | 2. 21. 1. 56                  | 2. 27. 26. 52                     | 4. 29. 25                    | 4. 11. 6                        | 56. 15                                   | 56. 1                                      |
| 26                      | Dom.               | 3. 3. 48. 21                  | 3. 10. 6. 18                      | 3. 49. 51                    | 3. 25. 55                       | 55. 47                                   | 55. 33                                     |
| 27                      | Lun.               | 3. 16. 20. 45                 | 3. 22. 31. 48                     | 2. 59. 43                    | 2. 31. 35                       | 55. 19                                   | 55. 6                                      |
| 28                      | Mar.               | 3. 23. 39. 35                 | 4. 4. 44. 19                      | 2. 1. 54                     | 1. 31. I                        | 54. 54                                   | 54. 43                                     |
| 29                      | Mer.               | 4. 10. 46. 14                 | 4. 16. 45. 40                     | 0. 59. 20 B                  | 0. 27. 6 B                      | 54. 33                                   | 54. 35                                     |
| 30                      | Jov.               | 4. 22. 43. 1                  | 4. 28. 38. 42                     | 0. 5. 15 A                   | 0. 37. 27 A                     | 54. 18                                   | 54. 13                                     |
| 31                      | Ven.               | 5. 4. 33. 6                   | 5. 10. 26. 49                     | 1. 4. 8                      | 1. 40. 4                        | 54. 10                                   | 54. 10                                     |

| Dies<br>septem.<br>bris<br>meridi. | Diameter<br>horiz.<br>Lunae<br>Meridie | Diameter<br>horiz.<br>Lunae<br>media<br>nocte | Declinatio<br>Lunae<br>in Meri-<br>diano | Orsus<br>Lunae | Transitus<br>Lunae<br>per Meri-<br>diunum | Occensus<br>Lunae |          |    |
|------------------------------------|--|---|--|----------------|---|-------------------|----------|----|
|                                    | M.                                     | S.  | M.                                       | M.             | H.  | M.                | H.       | M. |
| 1 Mer.                             | 29. 55                                 | 29. 49  | 22. 39 B                                 | 8. 58 V        | 3.  | 30 M              | 11. 18 M |    |
| 2 Jov.                             | 29. 44                                 | 29. 40  | 19. 39                                   | 9. 46          | 4.  | 17                | 11. 42   |    |
| 3 Ven.                             | 29. 38                                 | 29. 37  | 13. 53                                   | 10. 51         | 5.  | 1                 | 0. 2 V   |    |
| 4 Sat.                             | 29. 38                                 | 29. 40  | 8. 35                                    | 11. 55         | 5.  | 41                | 0. 19    |    |
| 5 Dom.                             | 29. 43                                 | 29. 48  | 3. 5 B                                   | *              | 6.  | 20                | 0. 33    |    |
| 6 Lun.                             | 29. 54                                 | 30. 1   | 2. 34 A                                  | 0. 57 M        | 7.  | 0                 | 0. 53    |    |
| 7 Mar.                             | 30. 10                                 | 30. 20  | 8. 17                                    | 2. 1           | 7.  | 40                | 1. 9     |    |
| 8 Mer.                             | 30. 31                                 | 30. 42  | 13. 46                                   | 3. 8           | 8.  | 22                | 1. 26    |    |
| 9 Jov.                             | 30. 54                                 | 31. 6   | 18. 48                                   | 4. 17          | 9.  | 8                 | 1. 51    |    |
| 10 Ven.                            | 31. 19                                 | 31. 31  | 23. 7                                    | 5. 31          | 9.  | 58                | 2. 18    |    |
| 11 Sat.                            | 31. 43                                 | 31. 54  | 26. 12                                   | 6. 45          | 10.                                       | 34                | 3. 0     |    |
| 12 Dom.                            | 32. 4                                  | 32. 13  | 27. 35                                   | 7. 53          | 11.                                       | 53                | 3. 52    |    |
| 13 Lun.                            | 32. 21                                 | 32. 28  | 27. 9                                    | 8. 55          | 0.  | 56 V              | 4. 59    |    |
| 14 Mar.                            | 32. 33                                 | 32. 36  | 24. 46                                   | 9. 42          | 1.  | 56                | 6. 15    |    |
| 15 Mer.                            | 32. 38                                 | 32. 38  | 20. 37                                   | 10. 19         | 2.  | 54                | 7. 35    |    |
| 16 Jov.                            | 32. 38                                 | 32. 35  | 15. 8                                    | 10. 50         | 3.  | 49                | 8. 58    |    |
| 17 Ven.                            | 32. 33                                 | 32. 28  | 8. 53                                    | 11. 13         | 4.  | 39                | 10. 17   |    |
| 18 Sat.                            | 32. 23                                 | 32. 18  | 2. 20 A                                  | 11. 32         | 5.  | 27                | 11. 34   |    |
| 19 Dom.                            | 32. 12                                 | 32. 6   | 4. 30 B                                  | 11. 52         | 6.  | 14                | *        |    |
| 20 Lun.                            | 31. 59                                 | 31. 52  | 10. 49                                   | 0. 11 V        | 7.  | 1                 | 0. 50 M  |    |
| 21 Mar.                            | 31. 45                                 | 31. 37  | 16. 48                                   | 0. 54          | 7.  | 50                | 2. 5     |    |
| 22 Mer.                            | 31. 30                                 | 31. 22  | 21. 38                                   | 1. 0           | 8.  | 41                | 3. 25    |    |
| 23 Jov.                            | 31. 14                                 | 31. 7   | 25. 4                                    | 1. 36          | 9.  | 35                | 4. 36    |    |
| 24 Ven.                            | 31. 59                                 | 30. 51  | 27. 12                                   | 2. 14          | 10.                                       | 30                | 5. 45    |    |
| 25 Sat.                            | 30. 43                                 | 30. 35  | 27. 39                                   | 3. 1           | 11.                                       | 26                | 6. 50    |    |
| 26 Dom.                            | 30. 27                                 | 30. 20  | *  | *              | *   | *                 | 7. 50    |    |
| 27 Lun.                            | 30. 12                                 | 30. 5   | 26. 28                                   | 5. 5           | 0.  | 20 M              | 8. 33    |    |
| 28 Mar.                            | 29. 58                                 | 29. 52  | 23. 55                                   | 6. 11          | 1.  | 10                | 9. 6     |    |
| 29 Mer.                            | 29. 47                                 | 29. 43  | 20. 14                                   | 7. 18          | 1.  | 58                | 9. 32    |    |
| 30 Jov.                            | 29. 39                                 | 29. 36  | 15. 46                                   | 8. 23          | 2.  | 42                | 9. 53    |    |
| 31 Ven.                            | 29. 34                                 | 29. 34  | 10. 42                                   | 9. 29          | 3.  | 23                | 10. 9    |    |

| Dies<br>mensis | Longitudo<br>Planeta-<br>rum | Latitudo<br>Plane-<br>tarum | Declina-<br>tio Pla-<br>netarum | Ortus<br>Plane-<br>tarum | Trans-<br>itus PLA-<br>netarum<br>per Me-<br>ridianum | Occasus<br>Plane-<br>tarum |
|----------------|------------------------------|-----------------------------|---------------------------------|--------------------------|---|----------------------------|
|                | S. G. M.                     | G. M.                       | G. M.                           | H. M.                    | H. M.   | H. M.                      |

## S A T U R N U S .

|    |           |        |          |          |         |         |
|----|-----------|--------|----------|----------|---------|---------|
| 1  | 9. 21. 16 | 0. 8 A | 21. 55 A | 10. 32 M | 2. 59 V | 7. 26 V |
| 7  | 9. 21. 56 | 0. 8   | 21. 49   | 10. 8    | 2. 36   | 7. 3    |
| 13 | 9. 22. 31 | 0. 8   | 21. 43   | 9. 44    | 2. 12   | 6. 40   |
| 19 | 9. 23. 15 | 0. 9   | 21. 39   | 9. 20    | 1. 48   | 6. 16   |
| 25 | 9. 23. 51 | 0. 9   | 21. 31   | 8. 55    | 1. 24   | 5. 53   |

## J U P I T E R .

|    |           |         |          |          |         |          |
|----|-----------|---------|----------|----------|---------|----------|
| 3  | 11. 0. 83 | 1. 11 A | 12. 27 A | 6. 28 V  | 5. 39 V | 10. 50 V |
| 7  | 11. 1. 22 | 1. 10   | 12. 10   | 0. 4     | 5. 16   | 10. 28   |
| 13 | 11. 2. 8  | 1. 9    | 11. 47   | 11. 40 M | 4. 53   | 10. 7    |
| 19 | 11. 3. 6  | 1. 8    | 11. 26   | 11. 15   | 4. 31   | 9. 46    |
| 25 | 11. 3. 7  | 1. 7    | 11. c    | 10. 49   | 4. 7    | 9. 35    |

## M A R S .

|    |           |         |          |         |          |         |
|----|-----------|---------|----------|---------|----------|---------|
| 1  | 7. 19. 2  | 0. 15 B | 17. 16 A | 5. 42 M | 10. 32 M | 8. 52 V |
| 7  | 7. 23. 11 | 0. 10   | 18. 26   | 5. 39   | 10. 23   | 3. 7    |
| 13 | 7. 27. 22 | 0. 8    | 19. 29   | 5. 34   | 10. 13   | 2. 53   |
| 19 | 8. 1. 25  | 0. 4    | 20. 27   | 5. 30   | 10. 4    | 2. 38   |
| 25 | 8. 5. 48  | 0. 0    | 21. 19   | 5. 25   | 9. 55    | 2. 25   |

## V E N U S .

|    |           |         |          |         |        |         |
|----|-----------|---------|----------|---------|--------|---------|
| 1  | 9. 9. 2   | 1. 36 A | 24. 46 A | 9. 55 M | 2. 7 V | 6. 19 V |
| 7  | 9. 16. 28 | 1. 43   | 24. 10   | 9. 58   | 2. 13  | 6. 28   |
| 13 | 9. 23. 53 | 1. 48   | 23. 8    | 9. 59   | 2. 19  | 6. 30   |
| 19 | 10. 1. 16 | 1. 52   | 23. 44   | 9. 55   | 2. 23  | 6. 51   |
| 25 | 10. 8. 38 | 1. 52   | 19. 56   | 9. 50   | 2. 27  | 7. 4    |

## M E R C U R I U S .

|    |           |         |          |         |        |         |
|----|-----------|---------|----------|---------|--------|---------|
| 1  | 8. 9. 51  | 0. 55 A | 28. 52 A | 7. 39 M | 0. 1 V | 4. 23 V |
| 7  | 8. 19. 16 | 1. 27   | 24. 29   | 8. 0    | 0. 13  | 4. 26   |
| 13 | 8. 28. 45 | 1. 53   | 25. 21   | 8. 19   | 0. 28  | 4. 37   |
| 19 | 9. 8. 17  | 1. 9    | 25. 21   | 8. 35   | 0. 44  | 4. 53   |
| 25 | 9. 17. 49 | 1. 9    | 24. 28   | 8. 45   | 0. 59  | 5. 13   |

## ECLIPSES SATELLITUM JOVIS.

| Dies<br>mensis | I. Satelles. |     |    | II. Satelles. |     |     | III. Satelles. |    |     |     |    |   |
|----------------|--------------|-----|----|---------------|-----|-----|----------------|----|-----|-----|----|---|
|                | Emerfiones   |     |    | Emerfiones    |     |     | Imers. Emerf.  |    |     |     |    |   |
|                | H.           | M.  | S. | H.            | M.  | S.  | H.             | M. | S.  |     |    |   |
| I              | 3.           | 34. | 50 | 3             | 17. | 55. | 48             | 3  | 11. | 35. | 30 | I |
| 2              | 22.          | 3.  | 6  | 7             | 7.  | 12. | 8              | 3  | 14. | 46. | 6  | E |
| 4              | 16.          | 31. | 21 | 10            | 20. | 28. | 18             | 10 | 15. | 35. | 4  | I |
| 6              | 10.          | 59. | 36 | 14            | 9.  | 44. | 24             | 10 | 18. | 44. | 40 | E |
| 8              | 5.*          | 27. | 43 | 17            | 23. | 0.  | 30             | 17 | 19. | 34. | 24 | I |
| 9              | 23.          | 55. | 58 | 21            | 12. | 16. | 35             | 17 | 22. | 43. | 4  | E |
| 11             | 18.          | 24. | 8  | 25            | 1.  | 32. | 38             | 24 | 23. | 33. | 33 | I |
| 13             | 12.          | 52. | 16 | 28            | 14. | 48. | 40             | 25 | 2.  | 41. | 15 | E |
| 15             | 7.*          | 20. | 24 |               |     |     |                |    |     |     |    |   |
| 17             | 1.           | 48. | 30 |               |     |     |                |    |     |     |    |   |
| 18             | 20.          | 16. | 36 |               |     |     |                |    |     |     |    |   |
| 20             | 14.          | 44. | 42 |               |     |     |                |    |     |     |    |   |
| 22             | 9.*          | 12. | 48 |               |     |     |                |    |     |     |    |   |
| 24             | 3.           | 40. | 54 |               |     |     |                |    |     |     |    |   |
| 26             | 22.          | 9.  | 0  |               |     |     |                |    |     |     |    |   |
| 27             | 16.          | 37. | 6  |               |     |     |                |    |     |     |    |   |
| 29             | 11.          | 5.  | 12 |               |     |     |                |    |     |     |    |   |
| 31             | 5.*          | 33. | 18 |               |     |     |                |    |     |     |    |   |

| Dies | Diameter<br>Solis | Mora<br>transitus<br>Solis per<br>Meridian. | Motus<br>barariorum<br>Solis | Logarithmus<br>distantiae<br>Solis a terra<br>potica media<br>100000 | Longitude<br>Node Lunae |     |    |
|------|-------------------|---|------------------------------|--|-------------------------|-----|----|
|      |                   |   |                              |  | S.                      | G.  | A. |
|      | M. S.             | M. S.                                       | M. S.                        |  |                         |     |    |
| I    | 32. 21. 4         | 2. 20. 2                                    | 2. 32. 2                     | 4. 992672  | 10.                     | 24. | 56 |
| 4    | 32. 32. 3         | 2. 20. 7                                    | 2. 32. 4                     | 4. 993391  | 10.                     | 24. | 92 |
| 7    | 32. 33. 0         | 2. 21. 2                                    | 2. 32. 5                     | 4. 992330  | 10.                     | 24. | 27 |
| 10   | 32. 33. 7         | 2. 21. 5                                    | 2. 32. 6                     | 4. 993087  | 10.                     | 24. | 59 |
| 13   | 32. 34. 3         | 2. 21. 8                                    | 2. 32. 7                     | 4. 992964  | 10.                     | 24. | 18 |
| 16   | 32. 34. 8         | 2. 21. 9                                    | 2. 32. 7                     | 4. 992860  | 10.                     | 24. | 9  |
| 19   | 32. 35. 2         | 2. 22. 0                                    | 2. 32. 8                     | 4. 992776  | 10.                     | 24. | 59 |
| 22   | 32. 35. 5         | 2. 22. 0                                    | 2. 32. 8                     | 4. 992712  | 10.                     | 24. | 50 |
| 25   | 32. 35. 6         | 2. 22. 0                                    | 2. 32. 9                     | 4. 992668  | 10.                     | 24. | 49 |
| 28   | 32. 35. 7         | 2. 22. 0                                    | 2. 32. 9                     | 4. 992645  | 10.                     | 24. | 31 |

DECEMBER 1784.

**POSITIONES SATELLITUM JOVIS**  
*Oriens*      *6<sup>th</sup> Mane*      *Occidens*

| 1  | 4.  | .2.2.     | ○ | .            |
|----|-----|-----------|---|--------------|
| 2  | 4.  |           | ○ | .2.1.        |
| 3  | 4.  | .2.       | ○ | .1.3.        |
| 4  | .4  | 3.2.      | ○ | .            |
| 5  |     | .3.4.1.2. | ○ |              |
| 6  |     | .3.       | ○ | 4.3.         |
| 7  | 1   | 2.        | ○ | .2.3.4.      |
| 8  |     | .2.2.     | ○ | .            |
| 9  |     |           | ○ | .2.3.3.      |
| 10 |     | 2.        | ○ | 2.           |
| 11 |     | 3.2.      | ○ | .            |
| 12 |     | .3.2.2.   | ○ | .            |
| 13 |     | .3.       | ○ | .2.4.        |
| 14 | 3.0 |           | ○ | 4.0.         |
| 15 |     | .2.4.     | ○ | .            |
| 16 |     | 4.        | ○ | .2.3.        |
| 17 | 4.  | 2.        | ○ | .2.3.        |
| 18 | 4.  | 2.        | ○ | .            |
| 19 | 4.  | 3.1.2.    | ○ |              |
| 20 | .4  | .3.       | ○ | .2.3.        |
| 21 |     | .4.       | ○ | 3.0.4.       |
| 22 | 3.0 | 3.0.4.    | ○ | .            |
| 23 |     |           | ○ | 3.0.4.1.     |
| 24 |     |           | ○ | .            |
| 25 |     | 3.0.2.    | ○ | .            |
| 26 |     | .2.1.     | ○ | .            |
| 27 |     | .1.       | ○ | .            |
| 28 |     |           | ○ | .            |
| 29 |     | 3.        | ○ | .            |
| 30 |     |           | ○ | 3.0.4.1.3.0. |
| 31 |     | 3.        | ○ | 4.1.3.2.     |

Positiones mediae 300 principalium stellarum fixarum pro 1. Jan. 1784, ex Catalogo D. *de la Caille* computatae secundum earum ascensionem rectam, declinationem, longitudinem, latitudinem & angulum positionis, quibus adjiciuntur variationes annuae, aberrationes maxima lucis, & argumenta aberrationis in ascensionem rectam, & declinationem.

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SIDERIS                        | Ascensio recta |     |     |     |     |      | Va-<br>riatio max.<br>annua | Aber.<br>ri-<br>atio<br>max. | Argum.<br>aberra-<br>tionis |
|--------------------------------------|----------------|-----|-----|-----|-----|------|-----------------------------|------------------------------|-----------------------------|
|                                      | H.             | M.  | S.  | G.  | M.  | S.   |                             |                              |                             |
| $\gamma$ Pegasii Algenib . 2         | 0.             | 2.  | 8.  | 0.  | 32. | 2,2  | 46,2                        | 18,7                         | 3. 0. 32                    |
| $\alpha$ Phoenicis . . . . 2. 3      | 0.             | 15. | 50. | 3.  | 53. | 30,1 | 44,9                        | 25,3                         | 3. 4. 12                    |
| $\delta$ Andromedae . . . . 3        | 0.             | 27. | 48. | 6.  | 57. | 6,6  | 47,5                        | 21,1                         | 3. 7. 32                    |
| $\alpha$ Cassiopeiae . . . . 3       | 0.             | 28. | 21. | 7.  | 5.  | 9,4  | 49,6                        | 32,3                         | 3. 7. 41                    |
| $\epsilon$ Ceti . . . . . 2          | 0.             | 32. | 44. | 8.  | 11. | 6,6  | 45,2                        | 19,4                         | 3. 8. 53                    |
| $\gamma$ Cassiopeiae . . . . 3       | 0.             | 43. | 48. | 10. | 56. | 59,6 | 52,5                        | 36,2                         | 3. 11. 52                   |
| $\gamma$ Ursae min. <i>Poralis</i> 2 | 0.             | 48. | 28. | 12. | 6.  | 57,2 | 175,6                       | 566,3                        | 3. 13. 8                    |
| $\epsilon$ Andromedae . . . . 3      | 0.             | 57. | 40. | 14. | 25. | 3,8  | 49,5                        | 22,3                         | 3. 15. 37                   |
| $\gamma$ Ceti . . . . . 3. 4         | 0.             | 57. | 41. | 14. | 25. | 49,7 | 45,1                        | 18,8                         | 3. 15. 38                   |
| $\beta$ Cassiopeiae . . . . 3        | 1.             | 11. | 48. | 17. | 57. | 6,3  | 56,3                        | 36,0                         | 3. 19. 24                   |
| $\epsilon$ Ceti . . . . . 3. 4       | 1.             | 13. | 15. | 18. | 18. | 45,8 | 45,1                        | 18,7                         | 3. 19. 48                   |
| $\epsilon$ Cassiopeiae . . . . 3     | 1.             | 39. | 2.  | 24. | 45. | 35,3 | 62,7                        | 40,5                         | 3. 26. 38                   |
| $\alpha$ Trianguli bor. . 3. 4       | 1.             | 40. | 49. | 25. | 12. | 10,3 | 50,7                        | 21,2                         | 3. 27. 7                    |
| $\gamma$ Arietis . . . . . 4         | 1.             | 41. | 42. | 25. | 25. | 27,8 | 49,0                        | 19,6                         | 3. 27. 22                   |
| $\beta$ Arietis . . . . . 3. 4       | 1.             | 42. | 44. | 25. | 40. | 56,0 | 49,2                        | 19,8                         | 3. 27. 38                   |
| $\gamma$ Andromedae . . . . 2        | 1.             | 50. | 42. | 27. | 40. | 36,6 | 54,2                        | 24,9                         | 3. 29. 44                   |
| $\alpha$ Pisces . . . . . 3          | 1.             | 50. | 54. | 27. | 43. | 24,0 | 46,4                        | 18,7                         | 3. 29. 46                   |
| $\alpha$ Arietis . . . . . 3         | 1.             | 55. | 2.  | 28. | 45. | 26,4 | 50,1                        | 20,2                         | 4. 0. 40                    |
| $\epsilon$ Trianguli bor. . 4        | 1.             | 56. | 44. | 29. | 11. | 8,6  | 52,7                        | 22,6                         | 4. 1. 18                    |
| $\gamma$ . . . . . . . 4             | 2.             | 4.  | 32. | 31. | 7.  | 52,6 | 52,8                        | 22,4                         | 4. 3. 19                    |
| $\epsilon$ Ceti . . . . . var.       | 2.             | 8.  | 22. | 32. | 5.  | 36,2 | 45,4                        | 18,9                         | 4. 4. 20                    |
| $\delta$ . . . . . . . 3             | 2.             | 28. | 23. | 37. | 5.  | 37,7 | 46,6                        | 19,0                         | 4. 9. 26                    |
| $\epsilon$ . . . . . . . 3           | 2.             | 29. | 28. | 37. | 17. | 0,4  | 43,4                        | 19,4                         | 4. 9. 39                    |
| $\gamma$ . . . . . . . 3             | 2.             | 32. | 8.  | 38. | 2.  | 1,0  | 46,6                        | 19,0                         | 4. 10. 35                   |
| Lilii Borea . . . . 4                | 2.             | 35. | 2.  | 38. | 45. | 37,2 | 52,9                        | 21,1                         | 4. 11. 9                    |
| Lilii Austrina . . . . 4             | 2.             | 37. | 18. | 39. | 19. | 26,7 | 52,4                        | 23,0                         | 4. 11. 44                   |
| $\gamma$ Persei . . . . . 3          | 2.             | 49. | 16. | 42. | 18. | 57,5 | 63,7                        | 31,5                         | 4. 14. 44                   |
| $\theta$ Eridani . . . . . 3         | 2.             | 50. | 5.  | 42. | 31. | 20,4 | 34,3                        | 25,4                         | 4. 14. 58                   |
| $\times$ Ceti . . . . . 2            | 2.             | 51. | 1.  | 42. | 45. | 9,0  | 46,9                        | 19,2                         | 4. 15. 11                   |
| $\epsilon$ Persei <i>Algol</i> . . 2 | 2.             | 54. | 11. | 43. | 32. | 42,2 | 57,8                        | 25,0                         | 4. 15. 50                   |
| $\alpha$ Fornacis . . . . 3. 4       | 3.             | 2.  | 54. | 45. | 43. | 29,7 | 37,9                        | 22,1                         | 4. 18. 10                   |
| $\zeta$ Eridani . . . . . 3          | 3.             | 5.  | 22. | 46. | 20. | 27,3 | 43,6                        | 19,5                         | 4. 18. 46                   |
| $\times$ Persei . . . . . 3          | 3.             | 9.  | 1.  | 47. | 15. | 7,5  | 63,0                        | 29,2                         | 4. 19. 40                   |
| $\tau$ Eridani . . . . . 3           | 3.             | 22. | 49. | 50. | 42. | 7,7  | 43,3                        | 19,7                         | 4. 23. 5                    |
| $\beta$ Persei . . . . . 3           | 3.             | 27. | 37. | 51. | 54. | 14,0 | 63,0                        | 28,5                         | 4. 24. 14                   |

Prot. Jan. 1784. ex Catalogo D. de la Caille computatae &amp;c.

| Declinatio    | Varia-       | $\frac{M}{N}$ | Argum.    | Longitude      | Latitudo    | Angulus    |
|---------------|--------------|---------------|-----------|----------------|-------------|------------|
| G. M. S.      | sio<br>annua | S.            | aberra-   | S. G. M.       | S. G. M. S. | positionis |
|               |              | S.            | tionis    |                | G. M. S.    | G. M. S.   |
| 13. 58. 59.6B | + 20.0       | 9, 1          | 4. 2. 6   | 0. 6. 8. 57    | 12. 35. 38B | 24. 5. 9   |
| 43. 28. 32.2A | - 20.0       | 15, 2         | 6. 25. 46 | 11. 12. 26. 25 | 40. 35. 48A | 31. 33. 28 |
| 29. 40. 39.9B | + 19.9       | 11, 4         | 4. 29. 19 | 0. 18. 48. 15  | 24. 20. 50B | 25. 43. 10 |
| 59. 21. 0.0B  | + 19.9       | 16, 6         | 5. 20. 41 | 1. 4. 47. 24   | 46. 36. 18B | 35. 7. 20  |
| 19. 16. 32.1A | - 19.8       | 10, 6         | 7. 22. 1C | 11. 29. 32. 30 | 20. 47. 2A  | 24. 56. 27 |
| 59. 31. 33.9B | + 19.7       | 17, 0         | 5. 26. 27 | 1. 10. 56. 15  | 18. 47. 33B | 36. 24. 43 |
| 88. 9. 13.2B  | + 19.6       | 19, 9         | 6. 10. 22 | 2. 25. 32. 44  | 66. 4. 21B  | 73. 46. 32 |
| 34. 28. 19.1B | + 19.4       | 11, 6         | 5. 10. 0  | 0. 27. 33. 30  | 25. 56. 19B | 25. 24. 6  |
| 11. 19. 45.9A | - 19.4       | 9, 5          | 8. 6. 21  | 0. 8. 44. 3    | 16. 6. 44A  | 23. 40. 20 |
| 59. 6. 22.1B  | + 19.1       | 16, 3         | 6. 2. 36  | 1. 14. 54. 42  | 46. 23. 33B | 33. 19. 27 |
| 9. 18. 10.0A  | - 19.0       | 9, 3          | 8. 10. 44 | 0. 13. 13. 4   | 15. 46. 3A  | 23. 8. 19  |
| 61. 35. 46.7B | + 18.2       | 16, 4         | 6. 11. 1  | 1. 21. 45. 48  | 47. 31. 23B | 32. 23. 5  |
| 28. 30. 19.7B | + 18.2       | 9, 2          | 5. 9. 14  | 1. 3. 51. 30   | 16. 47. 46B | 6. 30      |
| 18. 13. 54.3B | + 18.1       | 7, 6          | 4. 17. 52 | 1. 0. 10. 8    | 7. 9. 19B   | 21. 15. 25 |
| 19. 44. 49.9B | + 18.1       | 7, 8          | 4. 21. 39 | 1. 0. 57. 12   | 8. 28. 44B  | 21. 16. 47 |
| 41. 17. 7.0B  | + 17.8       | 11, 7         | 5. 28. 10 | 1. 11. 12. 10  | 27. 47. 15B | 23. 29. 51 |
| 1. 42. 53.7B  | + 17.8       | 7, 7          | 3. 3. 53  | 0. 26. 21. 33  | 9. 4. 36A   | 20. 55. 9  |
| 32. 26. 6.5B  | + 17.6       | 7, 8          | 4. 29. 8  | 1. 4. 38. 36   | 9. 57. 31B  | 20. 45. 31 |
| 33. 57. 27.9B | + 17.5       | 9, 9          | 5. 26. 30 | 1. 9. 20. 9    | 20. 33. 53B | 21. 47. 45 |
| 32. 50. 24.3B | + 17.2       | 9, 4          | 5. 20. 28 | 1. 10. 30. 31  | 18. 55. 48B | 21. 7. 37  |
| 3. 57. 48.5A  | - 17.0       | 8, 7          | 8. 22. 15 | 0. 28. 30. 14  | 15. 56. 20A | 20. 32. 26 |
| 0. 36. 30.1A  | - 16.0       | 9, 1          | 8. 28. 47 | 1. 4. 33. 12   | 14. 28. 57A | 19. 9. 19  |
| 12. 47. 45.8A | - 16.0       | 10, 8         | 8. 10. 57 | 1. 0. 18. 44   | 26. 0. 16A  | 20. 38. 48 |
| 2. 19. 7.0B   | + 16.0       | 7, 5          | 2. 4. 49  | 1. 6. 25. 35   | 12. 0. 38A  | 18. 48. 28 |
| 28. 20. 26.9B | + 15.7       | 7, 6          | 5. 18. 2  | 1. 15. 20. 25  | 12. 28. 17B | 18. 32. 57 |
| 26. 21. 36.9B | + 15.5       | 7, 2          | 5. 13. 54 | 1. 15. 11. 14  | 10. 26. 5B  | 18. 15. 29 |
| 52. 38. 45.6B | + 14.9       | 12, 8         | 6. 28. 54 | 1. 27. 0. 58   | 34. 30. 7B  | 20. 56. 23 |
| 41. 10. 40.5A | - 14.8       | 17, 6         | 7. 25. 32 | 0. 20. 13. 30  | 53. 45. 34A | 29. 46. 21 |
| 3. 13. 49.3B  | + 14.8       | 7, 3          | 3. 6. 30  | 1. 11. 18. 11  | 12. 36. 16A | 17. 56. 31 |
| 40. 6. 36.9B  | + 14.5       | 9, 6          | 6. 12. 18 | 1. 23. 9. 31   | 21. 24. 3B  | 18. 11. 45 |
| 29. 51. 13.0A | - 14.0       | 15, 1         | 8. 2. 39  | 1. 1. 51. 15   | 44. 44. 37A | 23. 2. 49  |
| 9. 37. 57.5A  | - 13.8       | 10, 3         | 8. 17. 4  | 1. 10. 48. 16  | 25. 56. 57A | 17. 48. 24 |
| 49. 4. 37.9B  | + 13.1       | 11, 4         | 6. 25. 45 | 1. 29. 4. 30   | 30. 5. 51B  | 18. 11. 57 |
| 10. 11. 56.3A | - 12.7       | 10, 6         | 8. 17. 46 | 1. 15. 13. 3   | 27. 45. 37A | 16. 23. 49 |
| 47. 4. 47.8B  | + 12.4       | 10, 4         | 6. 29. 37 | 2. 1. 47. 24   | 27. 16. 31B | 16. 3. 2   |

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SIDERIS                       | Ascenso rectus |     |     |              | Va-<br>riatio<br>annua | Aber.<br>max. | Argum.<br>Aberra-<br>tionis |           |
|-------------------------------------|----------------|-----|-----|--------------|------------------------|---------------|-----------------------------|-----------|
|                                     | H.             | M.  | S.  | G.           |                        |               |                             |           |
| b Plejadum <i>Electra</i>           | 5              | 3.  | 32. | 5            | 53. 1. 10,8            | 53,0          | 21,1                        | 4. 25. 19 |
| d Eridani . . . . .                 | 3              | 3.  | 32. | 56           | 53. 13. 59,6           | 43,2          | 19,7                        | 4. 25. 32 |
| + Plejadum <i>Alicrone</i>          | 3              | 3.  | 34. | 40           | 53. 40. 6,1            | 53,1          | 21,1                        | 4. 25. 57 |
| f . . . . <i>Atlas</i> . . . .      | 5              | 3.  | 36. | 21           | 54. 5. 14,5            | 53,1          | 21,1                        | 4. 26. 22 |
| g Persei . . . . .                  | 3              | 3.  | 40. | 35           | 55. 8. 48,5            | 56,1          | 22,7                        | 4. 27. 23 |
| f Eridani . . . . .                 | 4              | 3.  | 40. | 38           | 55. 9. 34,7            | 33,2          | 24,8                        | 4. 27. 25 |
| e Persei . . . . .                  | 3              | 3.  | 43. | 25           | 55. 51. 15,9           | 59,7          | 25,2                        | 4. 28. 4  |
| i Eridani . . . . . 4               | 5              | 3.  | 44. | 32           | 56. 7. 54,4            | 38,3          | 21,5                        | 4. 28. 20 |
| y . . . . . . . . .                 | 3              | 3.  | 47. | 58           | 56. 59. 36,2           | 41,9          | 20,1                        | 4. 29. 11 |
| o . . . . . . . . .                 | 4              | 4.  | 1.  | 21           | 60. 20. 16,1           | 43,9          | 19,7                        | 5. 2. 23  |
| y Tauri . . . . .                   | 3              | 4.  | 3.  | 31           | 60. 52. 44,5           | 50,9          | 20,3                        | 5. 3. 51  |
| g Eridani . . . . . 3               | 4              | 4.  | 9.  | 45           | 62. 26. 8,6            | 34,0          | 23,8                        | 5. 4. 23  |
| d Tauri <i>praeced.</i>             | 4              | 4.  | 10. | 30           | 62. 37. 27,4           | 51,6          | 20,6                        | 5. 4. 33  |
| d . . . sequens . .                 | 4              | 4.  | 11. | 40           | 62. 55. 4,4            | 51,1          | 20,5                        | 4. 5. 50  |
| s Tauri . . . . . 4                 | 4              | 4.  | 16. | 1            | 64. 0. 15,7            | 52,2          | 20,8                        | 5. 5. 52  |
| w . . . . <i>Aldebaran</i>          | 1              | 4.  | 23. | 33           | 65. 53. 10,3           | 51,4          | 20,5                        | 5. 7. 39  |
| v Eridani . . . . . 3               | 4              | 4.  | 27. | 10           | 66. 47. 37,0           | 35,1          | 23,0                        | 5. 8. 30  |
| s3 <sup>a</sup> Eridani . . . . . 3 | 4              | 4.  | 28. | 11           | 67. 4. 44,7            | 41,3          | 20,4                        | 5. 8. 45  |
| s4 <sup>a</sup> Eridani . . . . . 3 | 4              | 4.  | 31. | 2            | 67. 45. 28,5           | 39,4          | 21,0                        | 5. 9. 55  |
| s Tauri . . . . . 4                 | 5              | 4.  | 50. | 1            | 72. 33. 5,7            | 53,6          | 21,3                        | 5. 13. 53 |
| e Eridani . . . . .                 | 3              | 4.  | 57. | 16           | 74. 18. 53,1           | 44,3          | 20,0                        | 5. 15. 32 |
| a Aurigae <i>Capella</i>            | 1              | 5.  | 0.  | 45           | 75. 11. 17,2           | 66,0          | 28,5                        | 5. 16. 19 |
| c Orionis <i>Rigel</i> . .          | 1              | 5.  | 4.  | 11           | 76. 2. 41,2            | 43,3          | 20,1                        | 5. 17. 7  |
| c Tauri . . . . .                   | 2              | 5.  | 12. | 38           | 78. 9. 35,9            | 56,7          | 22,7                        | 5. 19. 4  |
| y Orionis . . . . .                 | 2              | 5.  | 13. | 33           | 78. 23. 22,2           | 48,3          | 20,0                        | 5. 19. 17 |
| y Orionis . . . . .                 | 3              | 5.  | 13. | 36           | 78. 24. 24,9           | 45,2          | 19,9                        | 5. 19. 18 |
| c Leporis . . . . . 3               | 4              | 5.  | 18. | 59           | 79. 44. 53,0           | 38,6          | 21,3                        | 5. 20. 33 |
| d Orionis . . . . .                 | 2              | 5.  | 21. | 0            | 80. 14. 55,2           | 46,0          | 20,0                        | 5. 21. 1  |
| a Leporis . . . . . 3               | 5.             | 23. | 13  | 80. 48. 21,8 | 39,7                   | 21,1          | 5. 21. 33                   |           |
| g Tauri . . . . . 3                 | 5.             | 24. | 45  | 81. 11. 8,0  | 53,7                   | 21,2          | 5. 21. 53                   |           |
| s Orionis . . . . . 3               | 4              | 5.  | 24. | 53           | 81. 13. 14,2           | 44,0          | 20,0                        | 5. 21. 55 |
| s . . . . . . . . . 2               | 5.             | 25. | 16  | 81. 19. 4,0  | 45,7                   | 19,8          | 5. 22. 0                    |           |
| g . . . . . . . . . 2               | 5.             | 29. | 53  | 82. 38. 19,3 | 45,4                   | 20,0          | 5. 23. 4                    |           |
| a Columbae . . . . 2                | 5.             | 31. | 51  | 82. 57. 42,6 | 32,6                   | 24,2          | 5. 23. 21                   |           |
| y Leporis . . . . . 3               | 4              | 5.  | 35. | 29           | 83. 52. 13,7           | 37,9          | 21,6                        | 5. 24. 20 |

pro 1. Jan. 1784. ex Catalogo D. de la Caille computatae &amp;c.

| <i>Declinatio-</i> | <i>Varia-</i> | <i>Argum.</i>   | <i>Longitudo</i> | <i>Lutitudo</i> | <i>Angulus</i>         |
|--------------------|---------------|-----------------|------------------|-----------------|------------------------|
| <i>G. M. S.</i>    | <i>annua</i>  | <i>s. m. d.</i> | <i>s. g. m.</i>  | <i>G. M. S.</i> | <i>positionis</i>      |
| S.                 | S.            | S.              | S. G. M.         | G. M. S.        | G. M. S.               |
| 23. 25. 49.0B      | + 12.1        | 5.0             | 5. 13. 44        | 1. 26. 23. 57   | 4. 10. 26B 13. 54. 1   |
| 16. 30. 39.7A      | - 12.0        | 10.7            | 8. 18. 15        | 1. 17. 50. 0    | 28. 45. 13A 15. 47. 46 |
| 23. 25. 26.5B      | + 11.9        | 4.9             | 5. 13. 0         | 1. 26. 58. 34   | 4. 1. 34B 13. 41. 2    |
| 23. 22. 45.5B      | + 11.8        | 4.8             | 5. 13. 2         | 1. 27. 20. 28   | 3. 53. 31B 13. 32. 34  |
| 31. 13. 38.3B      | + 11.5        | 6.0             | 6. 9. 26         | 2. 0. 6. 33     | 11. 18. 19B 13. 25. 20 |
|                    |               |                 |                  |                 |                        |
| 38. 17. 22.8A      | - 11.5        | 17.1            | 8. 5. 34         | 1. 7. 30. 6     | 55. 35. 0A 23. 44. 24  |
| 39. 22. 11.7B      | + 11.3        | 7.9             | 6. 5. 54         | 2. 2. 39. 56    | 19. 5. 13B 13. 41. 6   |
| 25. 15. 45.7A      | - 11.2        | 14.5            | 8. 10. 50        | 1. 15. 49. 46   | 43. 40. 24A 17. 52. 18 |
| 14. 8. 5.1A        | - 10.9        | 11.7            | 8. 16. 57        | 1. 20. 50. 32   | 33. 13. 23A 15. 1. 56  |
| 7. 23. 54.6A       | - 9.9         | 10.0            | 8. 22. 40        | 1. 26. 23. 48   | 7. 29. 13A 13. 50. 15  |
|                    |               |                 |                  |                 |                        |
| 15. 5. 32.7B       | + 9.5         | 4.3             | 4. 5. 12         | 2. 2. 46. 54    | 5. 45. 31A 10. 52. 35  |
| 34. 20. 6.8A       | - 9.3         | 16.6            | 8. 11. 38        | 1. 19. 27. 4    | 53. 59. 31A 18. 16. 15 |
| 17. 1. 21.1B       | + 9.2         | 3.9             | 4. 13. 22        | 2. 3. 50. 54    | 3. 59. 44A 10. 34. 45  |
| 16. 55. 48.0B      | + 9.1         | 3.9             | 4. 12. 46        | 2. 4. 6. 22     | 4. 8. 15A 10. 28. 38   |
| 18. 41. 15.4B      | + 8.8         | 3.6             | 4. 21. 9         | 2. 5. 26. 30    | 2. 35. 34A 10. 3. 52   |
|                    |               |                 |                  |                 |                        |
| 16. 3. 45.5B       | + 8.2         | 3.9             | 4. 6. 47         | 2. 6. 46. 16    | 5. 29. 0A 9. 24. 38    |
| 31. 0. 52.2A       | - 7.9         | 16.0            | 8. 15. 17        | 1. 26. 51. 43   | 51. 50. 48A 14. 43. 4  |
| 14. 44. 12.6A      | - 7.8         | 12.1            | 8. 20. 36        | 2. 2. 14. 38    | 36. 1. 24A 11. 3. 28   |
| 20. 5. 45.8A       | - 7.6         | 11.0            | 8. 23. 2         | 2. 1. 42. 52    | 41. 24. 28A 11. 36. 48 |
| 21. 15. 56.4B      | + 6.0         | 2.4             | 5. 3. 39         | 2. 13. 46. 12   | 1. 13. 39A 6. 51. 3    |
|                    |               |                 |                  |                 |                        |
| 5. 22. 40.4A       | - 5.4         | 9.6             | 8. 26. 59        | 2. 12. 16. 1    | 27. 53. 18A 6. 59. 52  |
| 45. 45. 39.8B      | + 5.1         | 8.0             | 8. 2. 46         | 2. 18. 50. 25   | 22. 51. 43B 6. 21. 9   |
| 8. 27. 47.9A       | - 4.9         | 10.6            | 8. 26. 8         | 2. 13. 48. 55   | 31. 9. 13A 6. 26. 42   |
| 28. 24. 23.5B      | + 4.1         | 2.5             | 7. 8. 2          | 2. 19. 53. 24   | 5. 21. 56B 4. 42. 29   |
| 6. 8. 17.8B        | + 4.1         | 6.0             | 3. 4. 6          | 2. 17. 55. 54   | 16. 50. 53A 4. 48. 17  |
|                    |               |                 |                  |                 |                        |
| 8. 36. 36.0A       | - 4.0         | 8.8             | 8. 28. 47        | 2. 17. 8. 30    | 25. 23. 58A 5. 5. 27   |
| 20. 56. 36.0A      | - 3.6         | 13.9            | 8. 24. 45        | 2. 16. 39. 24   | 43. 56. 29A 5. 38. 29  |
| 0. 28. 19.9A       | - 3.4         | 8.1             | 8. 29. 48        | 2. 19. 21. 1    | 23. 35. 2A 4. 13. 19   |
| 17. 59. 24.9A      | - 4.2         | 13.1            | 8. 25. 43        | 2. 18. 22. 3    | 41. 5. 49A 4. 50. 38   |
| 20. 59. 41.9B      | + 3.1         | 1.5             | 4. 19. 21        | 2. 21. 46. 8    | 2. 13. 31A 3. 29. 52   |
|                    |               |                 |                  |                 |                        |
| 6. 3. 54.7A        | - 3.1         | 9.8             | 8. 28. 8         | 2. 19. 59. 2    | 29. 13. 25A 3. 59. 42  |
| 1. 21. 14.6A       | - 3.0         | 8.4             | 8. 29. 31        | 2. 20. 27. 3    | 24. 32. 18A 3. 47. 23  |
| 2. 4. 15.4A        | - 2.6         | 8.6             | 8. 29. 22        | 2. 21. 40. 19   | 25. 19. 32A 3. 18. 35  |
| 34. 11. 55.4A      | - 2.5         | 16.4            | 8. 25. 18        | 2. 19. 9. 22    | 57. 24. 21A 5. 11. 21  |
| 22. 31. 40.1A      | - 2.2         | 14.3            | 8. 26. 43        | 2. 21. 51. 46   | 45. 49. 36A 3. 30. 57  |

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SIDERIS                       | Ascensio recta |     |    | Varia-<br>tio<br>annua | Aber.<br>max. | Argum.<br>aberra-<br>tionis |           |
|-------------------------------------|----------------|-----|----|------------------------|---------------|-----------------------------|-----------|
|                                     | H.             | M.  | S. |                        |               |                             |           |
| $\pi$ Orionis . . . . 2. 3          | 5.             | 37. | 32 | 84. 23. 2,9            | 42, 7         | 20, 2                       | 5. 24. 49 |
| $\delta$ Leporis . . . . 3. 4       | 5.             | 42. | 2  | 85. 30. 37,0           | 38, 5         | 21, 4                       | 5. 25. 51 |
| $\epsilon$ Columbae . . . . 3       | 5.             | 43. | 22 | 85. 50. 29,8           | 31, 7         | 24, 8                       | 5. 26. 19 |
| $\alpha$ Orionis . . . . 1          | 5.             | 43. | 29 | 85. 52. 18,6           | 48, 7         | 20, 0                       | 5. 26. 10 |
| $\epsilon$ Aurigae . . . . 2. 3     | 5.             | 43. | 9  | 85. 54. 22,1           | 66, 0         | 28, 1                       | 5. 26. 12 |
| $\theta$ . . . . . . . . . . 3      | 5.             | 44. | 59 | 86. 14. 51,2           | 61, 3         | 25, 0                       | 5. 26. 31 |
| $\gamma$ Castoris . . . . 3. 4      | 6.             | 1.  | 50 | 90. 27. 32,7           | 54, 5         | 20, 0                       | 6. 0. 23  |
| $\mu$ Pollucis . . . . 3. 4         | 6.             | 9.  | 55 | 92. 28. 15,2           | 54, 5         | 20, 0                       | 6. 2. 13  |
| $\zeta$ Canis maj. . . . 3. 3       | 6.             | 12. | 3  | 93. 0. 36,4            | 34, 6         | 23, 0                       | 6. 2. 44  |
| $\epsilon$ . . . . . . . . . . 2. 3 | 6.             | 13. | 12 | 93. 17. 55,6           | 39, 7         | 21, 0                       | 6. 2. 5:  |
| $\beta$ Columbae . . . . 4          | 6.             | 14. | 15 | 93. 32. 38,8           | 33, 0         | 23, 9                       | 6. 3. 14  |
| $\gamma$ Pollucis . . . . 2. 3      | 6.             | 25. | 5  | 96. 17. 22,0           | 52, 1         | 20, 8                       | 5. 5. 45  |
| $\gamma$ Castoris . . . . 3         | 6.             | 30. | 38 | 97. 39. 34,7           | 55, 5         | 22, 1                       | 6. 7. 0   |
| $\tau$ Navis . . . . . . 3          | 6.             | 31. | 10 | 97. 47. 24,3           | 27, 6         | 27, 3                       | 6. 7. 8   |
| $\alpha$ Canis maj. Sirius          | 6.             | 35. | 40 | 98. 54. 53,4           | 40, 3         | 20, 8                       | 6. 8. 9   |
| $\pi$ . . . . . . . . . . 3         | 6.             | 50  | 9  | 102. 32. 13,8          | 35, 4         | 22, 7                       | 6. 21. 31 |
| $\xi$ Pollucis . . . . 3            | 6.             | 51. | 17 | 102. 49. 9,8           | 53, 6         | 21, 3                       | 6. 11. 45 |
| $b$ Canis maj. . . . 4              | 6.             | 53. | 7  | 103. 16. 49,2          | 35, 9         | 22, 4                       | 6. 12. 11 |
| $\gamma$ . . . . . . . . . . 4      | 6.             | 53. | 59 | 103. 29. 48,5          | 40, 8         | 20, 6                       | 6. 12. 23 |
| $\delta$ . . . . . . . . . . 2      | 6.             | 59. | 37 | 104. 54. 14,8          | 36, 7         | 22, 1                       | 6. 13. 42 |
| $\delta$ Pollucis . . . . . 3       | 7.             | 7.  | 12 | 106. 48. 2,0           | 54, 0         | 21, 5                       | 6. 15. 28 |
| $\tau$ Navis . . . . . . 3          | 7.             | 9.  | 37 | 107. 22. 50,4          | 31, 9         | 24, 8                       | 6. 16. 0  |
| $\epsilon$ Canis min. . . . . 3     | 7.             | 15. | 26 | 108. 51. 23,3          | 49, 1         | 20, 1                       | 6. 17. 22 |
| $\gamma$ Canis maj. . . . . 2       | 7.             | 15. | 33 | 108. 53. 18,2          | 35, 7         | 18, 0                       | 6. 17. 23 |
| $\alpha$ Castoris . . . . . 1. 2    | 7.             | 20. | 48 | 110. 11. 56,9          | 58, 1         | 23, 5                       | 6. 18. 37 |
| $\sigma$ Navis . . . . . . 3        | 7.             | 22. | 24 | 110. 35. 59,4          | 38, 7         | 27, 0                       | 6. 19. 0  |
| $\alpha$ Canis min. Procyon         | 7.             | 28. | 1  | 112. 0. 11,3           | 48, 0         | 19, 9                       | 6. 20. 18 |
| In ventre Monoc.                    | 7.             | 31. | 56 | 112. 44. 1,1           | 43, 1         | 20, 1                       | 6. 20. 59 |
| $\epsilon$ Pollucis . . . . . 2. 3  | 7.             | 32. | 6  | 113. 1. 29,0           | 56, 1         | 22, 5                       | 6. 21. 15 |
| $\xi$ Navis . . . . . . 4           | 7.             | 40. | 13 | 115. 3. 17,9           | 37, 9         | 21, 3                       | 6. 23. 11 |
| $\alpha$ . . . . . . . . . . 4      | 7.             | 44. | 48 | 116. 12. 4,0           | 31, 1         | 25, 7                       | 6. 24. 19 |
| $\zeta$ . . . . . . . . . . 2       | 7.             | 56. | 0  | 119. 0. 4,8            | 31, 8         | 25, 4                       | 6. 26. 36 |
| $\rho$ . . . . . . . . . . 3. 2     | 7.             | 58. | 21 | 119. 35. 16,2          | 38, 5         | 21, 4                       | 6. 27. 29 |
| $\epsilon$ Cancri . . . . . . 3. 4  | 8.             | 4.  | 48 | 121. 11. 55,6          | 49, 1         | 19, 9                       | 6. 29. 0  |
| $\gamma$ . . . . . . . . . . 4      | 8.             | 30. | 46 | 127. 41. 30,6          | 52, 6         | 21, 0                       | 7. 5. 7   |

pro 1. Jan. 1784. ex Catalogo D. de la Caille computatae &amp;c.

| <i>Declinatio-</i> | <i>Varia-</i> | <i>Argum.</i>  | <i>Longitude</i> | <i>Latitude</i>           | <i>Angulus</i>    |
|--------------------|---------------|----------------|------------------|---------------------------|-------------------|
| <i>G. M. S.</i>    | <i>annua</i>  | <i>aberra-</i> | <i>S. G. M.</i>  | <i>G. M. S.</i>           | <i>positionis</i> |
|                    | <i>S.</i>     | <i>S.</i>      | <i>S. G. M.</i>  | <i>G. M. S.</i>           | <i>G. M. S.</i>   |
| 9. 45. 29.7A       | - 2,0         | 10. 9          | 8. 28. 15        | 2. 23. 23. 20 33. 6. 5A   | 2. 40. 1          |
| 20. 54. 16.7A      | - 1,6         | 14. 0          | 8. 27. 43        | 2. 24. 8 12 44. 17. 7A    | 2. 29. 48         |
| 35. 51. 47.5A      | - 1,5         | 17. 2          | 8. 27. 8         | 8. 23. 24. 5 59. 14. 23A  | 3. 14. 5          |
| 7. 21. 7.7B        | + 1,5         | 5. 6           | 3. 1. 55         | 2. 25. 44. 22 16. 3. 32A  | 1. 42. 36         |
| 44. 54. 12.1B      | + 1,5         | 7. 3           | 8. 22. 11        | 2. 26. 53. 52 21. 28. 31B | 1. 44. 38         |
| 37. 10. 42.1B      | + 1.3         | 4. 8           | 8. 20. 21        | 2. 26. 55. 21 13. 44. 46B | 1. 32. 16         |
| 22. 33. 19.6B      | - 0.1         | 0. 3           | 2. 20. 12        | 3. 0. 25. 27 0. 55. 5A    | 0. 10. 58         |
| 22. 36. 32.3B      | - 0.8         | 0. 4           | 1. 3. 22         | 3. 2. 16. 52 0. 50. 87A   | 0. 59. 2          |
| 29. 58. 42.1A      | + 1,0         | 16. 0          | 9. 1. 55         | 3. 4. 22. 33 53. 84. 17A  | 2. 0. 38          |
| 17. 51. 45.0A      | + 1,1         | 13. 2          | 9. 1. 30         | 3. 4. 10. 49 41. 17. 12A  | 1. 44. 56         |
| 33. 20. 14.5A      | + 1,2         | 16. 7          | 9. 2. 19         | 3. 5. 25. 50 56. 44. 32A  | 2. 35. 7          |
| 16. 34. 8.3B       | - 2,2         | 2. 5           | 2. 15. 43        | 3. 6. 5. 9 6. 46. 13A     | 2. 31. 6          |
| 25. 19. 35.8B      | - 2,6         | 1. 3           | 11. 2. 57        | 3. 6. 55. 28 4. 2. 19B    | 3. 2. 44          |
| 43. 0. 55.6A       | + 2,7         | 18. 2          | 9. 5. 47         | 3. 14. 9. 43 66. 6. 16A   | 7. 36. 32         |
| 16. 25. 17.8A      | + 3,1         | 12. 8          | 9. 3. 54         | 3. 11. 6. 53 59. 37. 58A  | 4. 35. 28         |
| 28. 41. 21.9A      | + 4,3         | 15. 7          | 9. 7. 36         | 3. 17. 46. 3 51. 23. 24A  | 7. 57. 51         |
| 20. 52. 19.0B      | - 4,4         | 1. 9           | 1. 4. 0          | 3. 11. 58. 24 3. 4. 6A    | 5. 4. 24          |
| 27. 38. 16.2A      | + 4,6         | 15. 4          | 9. 7. 53         | 3. 18. 33. 36 50. 15. 24A | 8. 13. 40         |
| 15. 19. 31.5A      | + 4,6         | 12. 4          | 9. 5. 40         | 3. 16. 36. 9 38. 1. 18A   | 6. 46. 36         |
| 26. 3. 45.1A       | + 5,1         | 15. 1          | 9. 8. 56         | 3. 20. 24. 1 48. 29. 0A   | 8. 53. 36         |
| 22. 21. 54.4B      | - 5,8         | 2. 3           | 0. 17. 12        | 3. 15. 30. 13 0. 12. 22A  | 6. 36. 39         |
| 36. 43. 5.0A       | + 6,0         | 17. 2          | 9. 11. 57        | 3. 27. 19. 7 58. 33. 3A   | 13. 10. 54        |
| 8. 42. 46.6B       | - 6,5         | 5. 3           | 2. 19. 26        | 3. 19. 11. 4 13. 30. 37A  | 7. 36. 83         |
| 28. 53. 34.8A      | + 6,5         | 15. 7          | 9. 11. 29        | 3. 26. 32. 38 50. 38. 11A | 11. 43. 47        |
| 32. 20. 44.6B      | - 6,9         | 4. 4           | 10. 26. 1        | 3. 17. 14. 3 10. 4. 33B   | 8. 1. 45          |
| 42. 53. 23.3A      | + 7,0         | 18. 2          | 9. 15. 16        | 3. 5. 44. 41 63. 48. 46A  | 18. 39. 39        |
| 5. 46. 30.1B       | - 7,5         | 6. 3           | 2. 23. 4         | 3. 22. 48. 45 15. 58. 9A  | 8. 55. 45         |
| 9. 3. 27.7A        | + 7,7         | 10. 6          | 9. 6. 35         | 3. 26. 16. 59 39. 28. 34A | 10. 17. 15        |
| 28. 31. 59.9B      | - 7,8         | 3. 9           | 11. 13. 58       | 3. 20. 14. 27 6. 40. 0B   | 9. 3. 26          |
| 24. 19. 46.5A      | + 8,5         | 14. 5          | 9. 18. 52        | 4. 3. 3. 3. 3 34. 57. 53A | 13. 47. 41        |
| 40. 1. 33.7A       | + 8,8         | 17. 6          | 9. 18. 46        | 4. 12. 6. 32 59. 43. 16A  | 20. 24. 45        |
| 39. 24. 7.6A       | + 7,9         | 17. 5          | 9. 20. 38        | 4. 15. 35. 3 58. 51. 57A  | 21. 24. 13        |
| 23. 41. 37.7A      | + 9,9         | 14. 3          | 9. 16. 7         | 4. 8. 24. 18 42. 17. 66A  | 15. 40. 36        |
| 9. 50. 19.0B       | - 10,4        | 5. 5           | 2. 11. 7         | 4. 1. 14. 58 19. 18. 32A  | 13. 6. 19         |
| 22. 14. 5.4B       | - 12,2        | 5. 0           | 0. 22. 4         | 4. 4. 31. 44 3. 19. 51A   | 14. 7. 0          |

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SIDERIS        | Ascenso recta |     |     |    |      | Varia-<br>riatio<br>annua | Aber.<br>max. | Argum.<br>aberra-<br>tionis |          |
|----------------------|---------------|-----|-----|----|------|---------------------------|---------------|-----------------------------|----------|
|                      | H.            | M.  | S.  | G. | M.   |                           |               |                             |          |
| δ Cancri . . . . .   | 4             | 8.  | 32. | 24 | 128. | 5. 55,2                   | 51,6          | 20,5                        | 7. 5.41  |
| ζ Hydræ . . . . .    | 4. 5          | 8.  | 43. | 58 | 130. | 59. 26,6                  | 47,9          | 19,4                        | 7. 8.31  |
| ι Ursæ maj. . . . .  | 3             | 8.  | 44. | 21 | 131. | 5. 8,3                    | 63,5          | 29,4                        | 7. 8.36  |
| α Canceris . . . . . | 5             | 8.  | 46. | 40 | 131. | 39. 55,6                  | 49,5          | 19,8                        | 7. 9.11  |
| κ Ursaæ maj. . . . . | 3. 4          | 8.  | 48. | 47 | 132. | 11. 41,0                  | 62,7          | 28,8                        | 7. 9.11  |
| λ Navis . . . . .    | 2. 3          | 9.  | 0.  | 41 | 135. | 1. 4,2                    | 33,1          | 26,1                        | 7. 12.31 |
| ε Hydræ . . . . .    | 2             | 9.  | 16. | 59 | 139. | 14. 49,5                  | 44,4          | 19,3                        | 7. 16.41 |
| θ Ursæ maj. . . . .  | 3             | 9.  | 18. | 22 | 139. | 35. 31,9                  | 63,3          | 31,4                        | 7. 17. 3 |
| ο Leonis . . . . .   | 4             | 9.  | 29. | 37 | 142. | 24. 13,8                  | 48,5          | 19,3                        | 7. 19.47 |
| σ . . . . .          | 3             | 9.  | 33. | 34 | 143. | 23. 22,6                  | 51,7          | 20,9                        | 7. 20.57 |
| μ . . . . .          | 3             | 9.  | 40. | 27 | 145. | 6. 48,5                   | 52,0          | 21,1                        | 7. 22.57 |
| η . . . . .          | 3             | 9.  | 55. | 31 | 148. | 52. 54,4                  | 49,4          | 19,8                        | 7. 26.57 |
| α Leonis Regulus .   | 1             | 9.  | 56. | 52 | 149. | 12. 54,4                  | 48,5          | 19,3                        | 7. 26.57 |
| ξ . . . . .          | 3             | 10. | 4.  | 38 | 151. | 9. 34,1                   | 50,6          | 20,6                        | 7. 28.59 |
| γ . . . . .          | 3             | 10. | 8.  | 2  | 152. | 0. 30,0                   | 49,8          | 20,0                        | 7. 29.57 |
| ρ Leonis . . . . .   | 4             | 10. | 21. | 29 | 155. | 21. 20,2                  | 47,7          | 19,0                        | 8. 3.23  |
| ε Ursæ maj. . . . .  | 2             | 10. | 48. | 37 | 162. | 9. 9,6                    | 55,8          | 34,5                        | 8. 10.38 |
| η Crateris . . . . . | 4             | 10. | 49. | 17 | 162. | 19. 19,8                  | 44,3          | 19,4                        | 8. 10.48 |
| α Ursæ maj. . . . .  | 2             | 10. | 50. | 15 | 162. | 33. 41,1                  | 57,9          | 41,0                        | 8. 11. 3 |
| δ Leonis . . . . .   | 2. 3          | 11. | 2.  | 47 | 165. | 41. 42,5                  | 48,1          | 19,9                        | 8. 14.22 |
| φ . . . . .          | 3             | 11. | 2.  | 53 | 165. | 43. 15,2                  | 47,6          | 19,3                        | 8. 14.27 |
| α Hydræ . . . . .    | 4. 5          | 11. | 21. | 36 | 170. | 24. 5,1                   | 44,3          | 20,8                        | 8. 19.31 |
| ξ . . . . .          | 3. 4          | 11. | 22. | 26 | 170. | 36. 27,7                  | 44,2          | 21,4                        | 8. 19.44 |
| ε Leonis . . . . .   | 2             | 11. | 38. | 3  | 174. | 30. 45,2                  | 46,7          | 19,2                        | 8. 23.59 |
| ε Virginis . . . . . | 3             | 11. | 39. | 26 | 174. | 51. 31,3                  | 46,3          | 18,4                        | 8. 24.21 |
| γ Ursæ maj. . . . .  | 2             | 11. | 42. | 22 | 175. | 35. 34,7                  | 48,4          | 31,9                        | 8. 25. 9 |
| α Corvi . . . . .    | 4             | 11. | 57. | 19 | 179. | 19. 38,6                  | 46,0          | 20,0                        | 8. 29.14 |
| ε . . . . .          | 3. 4          | 11. | 59. | 4  | 179. | 45. 54,7                  | 46,1          | 19,7                        | 8. 29.42 |
| δ Ursæ maj. . . . .  | 3             | 12. | 4.  | 39 | 181. | 9. 39,8                   | 45,8          | 34,9                        | 9. 1.14  |
| γ Corvi . . . . .    | 3             | 12. | 4.  | 44 | 181. | 10. 59,0                  | 46,3          | 19,1                        | 9. 1.14  |
| γ Virginis . . . . . | 3. 4          | 12. | 8.  | 52 | 182. | 12. 56,6                  | 46,1          | 18,4                        | 9. 2.33  |
| δ Corvi . . . . .    | 3. 4          | 12. | 18. | 44 | 184. | 40. 55,9                  | 46,6          | 19,0                        | 9. 5. 4  |
| ε . . . . .          | 2             | 12. | 23. | 5  | 185. | 46. 10,5                  | 47,0          | 19,8                        | 9. 6.14  |
| γ Virginis . . . . . | 3             | 12. | 30. | 46 | 187. | 41. 30,8                  | 46,2          | 18,4                        | 9. 8.20  |
| ε Ursæ maj. . . . .  | 2             | 12. | 44. | 26 | 191. | 6. 33,9                   | 40,3          | 33,9                        | 9. 12. 4 |

pro 1. Jan. 1784. ex Catalogo D. de la Caille computatae &c.

| <i>Declinatio-</i> | <i>Varia-</i> | <i>S.</i> | <i>Argum.</i>   | <i>Longitudo</i>   | <i>Lutitudo</i> | <i>Angulus</i>    |
|--------------------|---------------|-----------|-----------------|--------------------|-----------------|-------------------|
| <i>G. M. S.</i>    | <i>annus</i>  | <i>S.</i> | <i>s. g. m.</i> | <i>S. G. M. S.</i> | <i>G. M. S.</i> | <i>positionis</i> |
| 18. 56. 25. 3B     | - 12.3        | 4. 9      | 1. 5. 23        | 4. 5. 40. 18       | 0. 4. 18B       | 14. 13. 35        |
| 6. 45. 49. 7B      | - 13.1        | 6. 4      | 2. 16. 10       | 4. 11. 34. 9       | 10. 58. 59A     | 15. 26. 3         |
| 48. 53. 38. 0B     | - 13.2        | 11. 2     | 11. 2. 19       | 3. 29. 47. 56      | 29. 34. 31B     | 17. 30. 56        |
| 12. 41. 6. 6B      | - 13.3        | 5. 6      | 1. 28. 28       | 4. 10. 27. 38      | 5. 5. 53A       | 15. 24. 59        |
| 43. 0. 2. 5B       | - 13.4        | 11. 1     | 11. 4. 23       | 4. 0. 54. 44       | 28. 57. 33B     | 17. 49. 18        |
| 47. 34. 3. 5A      | + 14.2        | 17. 5     | 10. 3. 9        | 5. 8. 13. 31       | 55. 52. 42A     | 30. 8. 57         |
| 7. 43. 46. 3A      | + 15.2        | 9. 7      | 9. 12. 5        | 4. 24. 16. 52      | 22. 23. 48A     | 19. 2. 48         |
| 52. 39. 19. 0B     | - 15.3        | 13. 0     | 11. 9. 3        | 4. 4. 17. 30       | 34. 55. 53B     | 21. 43. 58        |
| 10. 52. 5. 9B      | - 15.8        | 6. 4      | 2. 2. 21        | 4. 21. 14. 33      | 3. 46. 0A       | 18. 26. 36        |
| 24. 45. 34. 7B     | - 16.1        | 7. 2      | 0. 21. 28       | 4. 17. 41. 15      | 9. 41. 53B      | 18. 55. 35        |
| 27. 0. 58. 2B      | - 16.4        | 7. 8      | 11. 17. 29      | 4. 18. 25. 22      | 12. 20. 22B     | 19. 32. 19        |
| 17. 45. 40. 1B     | - 17.1        | 7. 0      | 1. 11. 46       | 4. 24. 53. 8       | 4. 51. 9B       | 20. 0. 43         |
| 13. 1. 8. 1B       | - 17.2        | 6. 8      | 1. 25. 33       | 4. 26. 49. 44      | 0. 27. 33B      | 20. 0. 36         |
| 24. 29. 13. 3B     | - 17.5        | 8. 1      | 0. 26. 13       | 4. 24. 32. 28      | 11. 50. 58B     | 20. 53. 5         |
| 20. 55. 50. 5B     | - 17.7        | 7. 7      | 1. 4. 38        | 4. 26. 34. 23      | 8. 48. 19B      | 20. 50. 55        |
| 10. 24. 55. 7B     | - 18.2        | 7. 2      | 2. 2. 58        | 5. 3. 22. 22       | 0. 8. 30B       | 21. 13. 27        |
| 57. 32. 9. 4B      | - 19.1        | 16. 1     | 11. 28. 18      | 4. 16. 23. 15      | 45. 6. 31B      | 32. 29. 34        |
| 17. 9. 14. 6A      | + 19.1        | 10. 8     | 10. 1. 14       | 5. 20. 43. 31      | 22. 42. 45A     | 24. 17. 33        |
| 52. 54. 52. 8B     | - 19.1        | 17. 0     | 11. 25. 41      | 4. 1. 9. 29        | 49. 40. 4B      | 35. 57. 10        |
| 21. 42. 25. 2B     | - 19.4        | 9. 2      | 1. 8. 33        | 5. 8. 16. 38       | 14. 19. 48B     | 23. 28. 9         |
| 16. 36. 36. 6B     | - 19.4        | 8. 4      | 1. 18. 48       | 5. 10. 24. 6       | 9. 40. 30B      | 23. 3. 6          |
| 28. 4. 54. 0A      | + 19.8        | 12. 6     | 10. 17. 36      | 6. 3. 27. 25       | 29. 21. 55A     | 26. 46. 1         |
| 30. 59. 45. 0A     | + 19.8        | 13. 1     | 10. 20. 11      | 6. 5. 0. 28        | 31. 34. 49A     | 27. 28. 9         |
| 15. 46. 52. 0B     | - 19.9        | 9. 0      | 1. 22. 58       | 5. 18. 37. 26      | 12. 17. 13B     | 23. 56. 22        |
| 2. 59. 7. 3B       | - 19.9        | 7. 9      | 2. 22. 27       | 5. 24. 5. 51       | 0. 41. 41B      | 23. 21. 46        |
| 54. 53. 47. 4B     | - 20.0        | 16. 7     | 0. 11. 48       | 4. 27. 25. 13      | 47. 7. 23B      | 35. 42. 30        |
| 23. 31. 23. 9A     | + 20.0        | 10. 9     | 10. 17. 11      | 6. 9. 14. 8        | 21. 44. 21A     | 25. 23. 21        |
| 21. 25. 2. 9A      | + 20.0        | 10. 4     | 10. 14. 25      | 6. 8. 40. 10       | 19. 39. 43A     | 25. 1. 17         |
| 58. 14. 3. 7B      | - 20.0        | 17. 6     | 0. 14. 50       | 4. 2. 0. 9         | 51. 38. 14B     | 39. 54. 49        |
| 16. 20. 31. 5A     | + 20.0        | 9. 4      | 10. 6. 42       | 6. 7. 43. 57       | 14. 29. 21A     | 24. 17. 11        |
| 0. 32. 15. 0B      | - 20.0        | 8. 0      | 2. 28. 37       | 6. 1. 49. 8        | 1. 22. 31B      | 23. 27. 39        |
| 15. 18. 35. 3A     | + 20.0        | 9. 0      | 10. 5. 48       | 6. 10. 27. 18      | 12. 10. 16A     | 23. 57. 37        |
| 22. 21. 55. 0A     | + 19.9        | 10. 1     | 10. 18. 20      | 6. 14. 21. 41      | 18. 1. 42A      | 24. 37. 47        |
| 0. 15. 35. 5A      | + 19.8        | 8. 0      | 9. 0. 36        | 6. 7. 9. 41        | 2. 48. 56B      | 23. 16. 43        |
| 57. 8. 12. 5B      | - 19.7        | 18. 0     | 0. 23. 50       | 5. 5. 52. 3        | 54. 18. 16B     | 41. 3. 17         |

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SIDERIS         | Ascensio recta |     |      |    |      | Varia<br>tio max.<br>annua | Aber. | Argum.<br>aberra-<br>tionis |      |
|-----------------------|----------------|-----|------|----|------|----------------------------|-------|-----------------------------|------|
|                       | H.             | M.  | SAG. | M. | S.   |                            |       |                             |      |
| δ Virginis . . . .    | 3              | 12. | 44.  | 45 | 191. | 21.                        | 18,5  | 45,8                        | 18,6 |
| Cor Caroli H. . . .   | 3              | 12. | 45.  | 15 | 191. | 18.                        | 37,5  | 42,9                        | 23,9 |
| ε Virginis . . . .    | 3              | 12. | 51.  | 25 | 192. | 51.                        | 19,1  | 45,2                        | 18,9 |
| ζ . . . . . . . . . . | 3              | 12. | 58.  | 47 | 194. | 41.                        | 51,1  | 46,5                        | 18,5 |
| γ Hydræ . . . . .     | 3              | 13. | 7.   | 13 | 196. | 48.                        | 16,7  | 48,5                        | 19,8 |
| α Centauri . . . .    | 3              | 13. | 8.   | 32 | 197. | 8.                         | 0,2   | 50,4                        | 23,3 |
| α Virg Spica . . . .  | 3              | 13. | 13.  | 51 | 198. | 27.                        | 41,4  | 47,3                        | 18,8 |
| β Ursæ maj. . . . .   | 3              | 13. | 15.  | 10 | 198. | 47.                        | 35,6  | 36,6                        | 23,2 |
| β Virginis . . . . .  | 3              | 13. | 23.  | 43 | 200. | 55.                        | 40,3  | 46,1                        | 18,9 |
| γ Centauri . . . . .  | 3              | 13. | 36.  | 38 | 204. | 9.                         | 33,8  | 53,2                        | 24,5 |
| μ Centauri . . . . .  | 3              | 13. | 36.  | 41 | 204. | 10.                        | 21,7  | 53,4                        | 24,8 |
| g . . . . . . . . . . | 3              | 13. | 37.  | 1  | 204. | 15.                        | 8,1   | 53,6                        | 21,8 |
| γ Ursæ maj. . . . .   | 3              | 13. | 39.  | 2  | 204. | 45.                        | 26,0  | 36,0                        | 39,3 |
| k Centauri . . . . .  | 3              | 13. | 39.  | 26 | 204. | 51.                        | 32,2  | 51,4                        | 21,5 |
| γ Bootis . . . . .    | 3              | 13. | 44.  | 24 | 206. | 5.                         | 56,1  | 43,0                        | 19,8 |
| α Centauri . . . . .  | 3              | 13. | 54.  | 4  | 208. | 31.                        | 1,2   | 52,9                        | 22,9 |
| α Draconis . . . . .  | 3              | 13. | 58.  | 33 | 209. | 38.                        | 15,0  | 24,5                        | 45,1 |
| α Virginis . . . . .  | 4              | 14. | 1.   | 24 | 210. | 21.                        | 4,9   | 47,8                        | 19,0 |
| γ Bootis Arcturus     | 3              | 14. | 5.   | 52 | 211. | 47.                        | 57,4  | 42,3                        | 40,0 |
| α Virginis . . . . .  | 4              | 14. | 7.   | 27 | 211. | 51.                        | 48,6  | 48,5                        | 19,3 |
| γ Centauri . . . . .  | 3              | 14. | 21.  | 52 | 215. | 38.                        | 3,7   | 56,3                        | 25,7 |
| γ Bootis . . . . .    | 3              | 14. | 23.  | 22 | 215. | 50.                        | 37,3  | 36,6                        | 24,4 |
| ζ . . . . . . . . . . | 3              | 14. | 30.  | 50 | 217. | 42.                        | 32,7  | 42,9                        | 19,6 |
| ζ . . . . . . . . . . | 3              | 14. | 35.  | 34 | 218. | 53.                        | 35,1  | 39,5                        | 21,5 |
| γ Librae . . . . .    | 3              | 14. | 38.  | 58 | 219. | 44.                        | 39,2  | 49,6                        | 19,7 |
| ε Lupi . . . . .      | 3              | 14. | 44.  | 28 | 221. | 7.                         | 5,0   | 58,1                        | 25,8 |
| α Centauri . . . . .  | 3              | 14. | 45.  | 11 | 221. | 17.                        | 52,2  | 57,7                        | 35,4 |
| γ Scorpionis . . . .  | 3              | 14. | 51.  | 29 | 222. | 52.                        | 9,1   | 58,3                        | 21,0 |
| ε Ursæ min. . . . .   | 3              | 14. | 51.  | 32 | 222. | 58.                        | 56,9  | 55,0                        | 24,3 |
| ε Bootis . . . . .    | 3              | 14. | 53   | 49 | 223. | 27.                        | 74,8  | 34,1                        | 25,5 |
| ζ Librae . . . . .    | 3              | 15. | 5.   | 25 | 226. | 21.                        | 8,2   | 48,1                        | 19,4 |
| δ Bootis . . . . .    | 3              | 15. | 6.   | 48 | 226. | 41.                        | 56,7  | 56,3                        | 23,2 |
| δ Lupi . . . . .      | 3              | 15. | 7.   | 46 | 226. | 49.                        | 2,7   | 58,3                        | 25,3 |
| ζ . . . . . . . . . . | 3              | 15. | 8.   | 6  | 227. | 1.                         | 30,8  | 60,2                        | 26,7 |
| γ Ursæ min. gr.       | 3              | 15. | 27.  | 24 | 229. | 20.                        | 54,5  | 52,4                        | 24,7 |

pro i. Jan. 1784. ex Catalogo D de la Caille computatae &c.

| Declinatio-    | Varia-        | Argum. | Longitudo  | Latitudo      | Angulus     |
|----------------|---------------|--------|------------|---------------|-------------|
| G. M. S.       | tio<br>annig. | S.     | S. G. M.   | S. G. M. S.   | positionis  |
|                |               | S.     | S.         | G. M. S.      | G. M. S.    |
| 4. 34. 40. 2B  | - 19. 7       | 8. 4   | 2. 19. 18  | 6. 8. 28. 13  | 23. 16. 46  |
| 39. 29. 21. 7B | - 19. 6       | 15. 1  | 1. 4. 10   | 5. 21. 32. 38 | 10. 42. 18  |
| 12. 7. 32. 1B  | - 19. 5       | 9. 6   | 2. 4. 37   | 6. 6. 55. 59  | 16. 13. 13B |
| 4. 22. 45. 1A  | + 19. 4       | 7. 7   | 9. 10. 59  | 6. 15. 13. 24 | 1. 45. 38B  |
| 22. 1. 33. 9A  | + 19. 2       | 9. 0   | 10. 23. 2  | 6. 24. 0. 19  | 13. 43. 26A |
|                |               |        |            |               | 23. 6. 36   |
| 31. 33. 56. 7A | + 19. 2       | 9. 6   | 10. 27. 4C | 7. 0. 8. 52   | 25. 58. 48A |
| 10. 1. 37. 9A  | + 19. 0       | 7. 6   | 9. 25. 45  | 6. 20. 49. 49 | 2. 2. 5A    |
| 56. 3. 31. 6B  | - 19. 0       | 18. 3  | 1. 0. 43   | 5. 12. 36. 44 | 6. 22. 4B   |
| 6. 30. 51. 9B  | - 18. 7       | 8. 0   | 2. 28. 46  | 6. 19. 8. 3   | 8. 39. 21L  |
| 40. 26. 11. 4A | + 18. 3       | 11. 9  | 11. 24. 22 | 7. 8. 9. 19   | 28. 14. 31A |
|                |               |        |            |               | 24. 21. 49  |
| 41. 23. 20. 4A | + 18. 3       | 12. 1  | 11. 25. 20 | 7. 8. 32. 10  | 28. 57. 13A |
| 33. 20. 48. 9A | + 18. 3       | 10. 3  | 11. 15. 54 | 7. 5. 1. 28   | 21. 54. 50A |
| 50. 23. 51. 1B | - 18. 2       | 17. 8  | 1. 8. 8    | 5. 23. 53. 5  | 54. 23. 45B |
| 31. 54. 51. 5A | + 18. 2       | 10. 0  | 1. 14. 19  | 7. 4. 55. 45  | 20. 2. 46A  |
| 19. 29. 34. 2B | - 18. 0       | 11. 8  | 1. 29. 29  | 6. 16. 17. 44 | 28. 6. 57B  |
|                |               |        |            |               | 23. 55. 30  |
| 35. 17. 33. 9A | + 17. 6       | 10. 6  | 11. 21. 51 | 7. 9. 19. 35  | 28. 0. 30A  |
| 68. 24. 46. 4B | - 17. 4       | 19. 6  | 1. 6. 10   | 5. 4. 22. 52  | 66. 21. 14B |
| 9. 15. 31. 4A  | + 17. 3       | 6. 9   | 9. 23. 30  | 7. 1. 28. 52  | 8. 55. 37B  |
| 50. 19. 56. 6B | - 17. 1       | 13. 3  | 2. 1. 15   | 6. 21. 13. 17 | 30. 54. 31B |
| 12. 42. 40A    | + 17. 0       | 6. 8   | 10. 2. 28  | 7. 3. 56. 21  | 0. 30. 40B  |
|                |               |        |            |               | 19. 46. 23  |
| 41. 16. 46. 1A | + 16. 3       | 10. 8  | 0. 5. 22   | 7. 17. 14. 38 | 25. 29. 57A |
| 39. 15. 36. 6B | - 16. 2       | 16. 3  | 1. 21. 57  | 6. 14. 37. 43 | 49. 33. 30B |
| 14. 39. 57. 1B | - 15. 9       | 11. 3  | 2. 9. 11   | 7. 0. 0. 10   | 27. 53. 57B |
| 27. 59. 39. 5B | - 15. 6       | 14. 4  | 1. 29. 33  | 6. 25. 4. 21  | 40. 38. 38B |
| 15. 7. 54. 6A  | + 15. 4       | 6. 8   | 10. 10. 54 | 7. 12. 4. 23  | 0. 21. 55B  |
|                |               |        |            |               | 17. 50. 6   |
| 42. 24. 49. 4A | + 15. 1       | 10. 4  | 0. 12. 17  | 7. 22. 1. 13  | 25. 0. 43A  |
| 41. 13. 20. 9A | + 15. 1       | 6. 8   | 6. 11. 17  | 7. 21. 07. 19 | 23. 59. 59A |
| 24. 25. 12. 1A | + 14. 7       | 6. 4   | 0. 16. 54  | 7. 12. 40. 46 | 7. 36. 46A  |
| 75. 2. 31. 9B  | - 14. 7       | 20. 0  | 1. 14. 54  | 6. 10. 52. 49 | 72. 58. 0B  |
| 41. 15. 24B    | - 14. 5       | 17. 2  | 1. 26. 11  | 6. 21. 11. 57 | 54. 10. 11B |
|                |               |        |            |               | 29. 35. 56  |
| 8. 34. 21. 5A  | + 13. 8       | 6. 3   | 9. 19. 11  | 7. 16. 21. 39 | 8. 31. 36B  |
| 34. 7. 54. 2B  | - 13. 1       | 16. 1  | 2. 1. 19   | 7. 0. 6. 57   | 48. 59. 29B |
| 39. 57. 56. 5A | + 13. 7       | 9. 1   | 9. 15. 21  | 7. 55. 30. 58 | 31. 22. 38A |
| 43. 53. 43. 0A | + 13. 1       | 10. 1  | 0. 29. 5   | 7. 27. 6. 57  | 25. 12. 43A |
| 72. 36. 31. 9B | - 13. 1       | 16. 0  | 1. 21. 53  | 4. 18. 31. 43 | 74. 56. 17B |
|                |               |        |            |               | 93. 13. 7   |

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SIDERIS             | Ascensio recta |     |    | Varia-<br>tiō<br>annua | Aber-<br>ratiō<br>max. | Argum.<br>Aberra-<br>tionis |       |       |            |
|---------------------------|----------------|-----|----|------------------------|------------------------|-----------------------------|-------|-------|------------|
|                           | H.             | M.  | S. |                        |                        |                             |       |       |            |
| δ Draconis . . . . 3. 4   | 15.            | 20. | 9  | 230.                   | 2.                     | 11,1                        | 19, 8 | 38, 4 | 10. 22. 26 |
| γ Lupi . . . . . 3        | 15.            | 20. | 49 | 230.                   | 12.                    | 14,3                        | 59, 3 | 25, 4 | 10. 22. 34 |
| 2. γ Ursae min. sequo. 3  | 15.            | 21. | 12 | 230.                   | 18.                    | 2,7                         | -3, 1 | 64, 7 | 10. 22. 43 |
| γ Librae . . . . . 5      | 15.            | 23. | 28 | 230.                   | 52.                    | 5,9                         | 50, 0 | 20, 0 | 10. 23. 14 |
| δ Serpentis . . . . 3     | 15.            | 24. | 30 | 231.                   | 7.                     | 32,0                        | 43, 0 | 19, 7 | 10. 23. 29 |
| α Coronae . . . . 2. 3    | 15.            | 25. | 33 | 231.                   | 23.                    | 10,3                        | 38, 0 | 21, 8 | 10. 23. 44 |
| κ Librae . . . . . 4      | 15.            | 29. | 33 | 232.                   | 23.                    | 12,4                        | 51, 6 | 20, 5 | 10. 24. 43 |
| α Serpentis . . . . 2. 3  | 15.            | 33. | 38 | 233.                   | 24.                    | 37,1                        | 44, 1 | 19, 6 | 10. 25. 43 |
| ε . . . . . . . . . 3     | 15.            | 36. | 13 | 234.                   | 3.                     | 21,0                        | 41, 5 | 20, 3 | 10. 26. 20 |
| μ . . . . . . . . . 4     | 15.            | 38. | 22 | 234.                   | 35.                    | 34,5                        | 46, 9 | 19, 5 | 10. 26. 51 |
| ε . . . . . . . . . 3. 4  | 15.            | 40. | 3  | 235.                   | 0.                     | 49,6                        | 44, 7 | 19, 6 | 10. 27. 16 |
| λ Librae . . . . . 4      | 15.            | 40. | 50 | 235.                   | 12.                    | 26,3                        | 51, 9 | 20, 6 | 10. 27. 27 |
| θ . . . . . . . . . 4     | 15.            | 41. | 33 | 235.                   | 23.                    | 22,1                        | 51, 0 | 20, 3 | 10. 27. 38 |
| ρ Scorpionis . . . . 4    | 15.            | 43. | 36 | 235.                   | 53.                    | 57,3                        | 55, 2 | 22, 2 | 10. 28. 7  |
| π . . . . . . . . . 3. 4  | 15.            | 45. | 56 | 236.                   | 27.                    | 24,0                        | 54, 1 | 21, 6 | 10. 28. 39 |
| ↓ Librae . . . . . 4      | 15.            | 46. | 8  | 236.                   | 31.                    | 57,4                        | 53, 2 | 20, 1 | 10. 28. 43 |
| γ Serpentis . . . . 3     | 15.            | 46. | 29 | 236.                   | 37.                    | 15,4                        | 41, 2 | 20, 3 | 10. 28. 49 |
| δ Scorpionis . . . . 2    | 15.            | 47. | 36 | 236.                   | 53.                    | 57,3                        | 52, 9 | 21, 1 | 10. 29. 5  |
| ε . . . . . . . . . 2     | 15.            | 53. | 55 | 238.                   | 13.                    | 41,4                        | 52, 1 | 20, 7 | 11. 0. 51  |
| θ Draconis . . . . 3. 4   | 15.            | 57. | 51 | 239.                   | 28.                    | 15,6                        | 17, 3 | 38, 2 | 11. 1. 34  |
| ρ Scorpionis . . . . 4    | 15.            | 59. | 28 | 239.                   | 52.                    | 4,3                         | 52, 1 | 20, 7 | 11. 1. 55  |
| δ Ophiuchi . . . . 3      | 16.            | 3.  | 3  | 240.                   | 45.                    | 41,9                        | 47, 1 | 19, 6 | 11. 2. 47  |
| ε . . . . . . . . . 3     | 16.            | 6.  | 55 | 241.                   | 43.                    | 43,0                        | 47, 4 | 19, 7 | 11. 3. 42  |
| ε Scorpionis . . . . 3. 4 | 16.            | 8.  | 6  | 242.                   | 1.                     | 28,7                        | 54, 4 | 21, 7 | 11. 3. 57  |
| γ Herculis . . . . 3      | 16.            | 12. | 24 | 243.                   | 5.                     | 58,9                        | 39, 8 | 20, 9 | 11. 5. 1   |
| α Scorp. Antares . 1      | 16.            | 16. | 12 | 244.                   | 3.                     | 1,2                         | 54, 9 | 21, 9 | 11. 5. 54  |
| φ Ophiuchi . . . . 4      | 16.            | 18. | 48 | 244.                   | 41.                    | 57,5                        | 51, 4 | 20, 5 | 11. 6. 31  |
| ε Herculis . . . . 3      | 16.            | 20. | 58 | 245.                   | 14.                    | 25,3                        | 38, 8 | 21, 3 | 11. 7. 3   |
| γ Draconis . . . . 3. 4   | 16.            | 21. | 6  | 245.                   | 16.                    | 25,7                        | 11, 9 | 42, 0 | 11. 7. 5   |
| τ Scorpionis . . . . 3. 4 | 16.            | 22. | 28 | 245.                   | 37.                    | 6,2                         | 55, 8 | 22, 3 | 11. 7. 23  |
| ζ Ophiuchi . . . . 3      | 16.            | 25. | 17 | 246.                   | 19.                    | 18,9                        | 49, 4 | 20, 1 | 11. 8. 3   |
| ζ Herculis . . . . 3      | 16.            | 23. | 10 | 248.                   | 17.                    | 37,4                        | 34, 5 | 23, 3 | 11. 9. 5   |
| η . . . . . . . . . 3. 4  | 16.            | 35. | 30 | 248.                   | 52.                    | 25,2                        | 30, 8 | 25, 6 | 11. 10. 28 |
| ε Scorpionis . . . . 3    | 16.            | 36. | 14 | 249.                   | 3.                     | 34,8                        | 58, 7 | 23, 2 | 11. 10. 36 |
| μ . . . . . . . . . 3     | 16.            | 37. | 17 | 249.                   | 19.                    | 16,3                        | 60, 6 | 25, 0 | 11. 10. 51 |

pro 1. Jan. 1784. ex Catalogo D. de la Caille computatae &c.

| <i>Declinatio</i> | <i>Varia-</i><br><i>tio</i><br><i>annua</i> | <i>S.</i> | <i>S.</i> | <i>Argum.</i><br><i>abbera-</i><br><i>tionis</i> | <i>Longitudo</i>   | <i>Latitudo</i> | <i>Angulus</i><br><i>positionis</i> |
|-------------------|---|-----------|-----------|--|--------------------|-----------------|-------------------------------------|
| <i>G. M. S.</i>   | <i>S.</i>                                   | <i>S.</i> | <i>S.</i> | <i>G. M. S.</i>                                  | <i>S. G. M. S.</i> | <i>G. M. S.</i> | <i>G. M. S.</i>                     |
| 59. 43. 41. 8B    | - 12.9                                      | 19. 6     |           | 1. 25. 31  | 6. 1. 50. 29       | 71. 5. 52B      | 52. 9. 29                           |
| 40. 25. 22. 4A    | + 12.8                                      | 8. 9      |           | 0. 20. 16  | 7. 28. 29. 19      | 21. 12. 40A     | 15. 52. 18                          |
| 71. 36. 11. 7B    | - 12.8                                      | 20. 0     |           | 1. 22. 26  | 4. 18. 28. 51      | 75. 13. 21B     | 94. 10. 26                          |
| 14. 3. 19. 7A     | + 12.6                                      | 5. 3      |           | 10. 5. 38  | 7. 22. 7. 7        | 4. 24. 47B      | 14. 36. 10                          |
| 11. 16. 21. 1B    | - 12.6                                      | 10. 9     |           | 2. 16. 57  | 7. 15. 19. 20      | 28. 54. 30B     | 16. 35. 33                          |
|                   |   |           |           |  |                    |                 |                                     |
| 27. 27. 14. 1B    | - 12.5                                      | 14. 8     |           | 2. 7. 9  | 7. 9. 14. 38       | 44. 21. 4B      | 20. 20. 31                          |
| 18. 57. 46. 0A    | + 12.3                                      | 4. 9      |           | 10. 24. 38                                       | 7. 24. 43. 50      | 0. 0. 52B       | 14. 4. 9                            |
| 7. 7. 5. 5B       | - 12.0                                      | 9. 8      |           | 2. 21. 21  | 7. 19. 2. 40       | 25. 31. 54B     | 15. 15. 27                          |
| 16. 6. 37. 4B     | - 11.8                                      | 12. 2     |           | 2. 14. 31  | 7. 16. 54. 48      | 34. 21. 2cB     | 16. 27. 2                           |
| 2. 45. 16. 7A     | + 11.6                                      | 7. 3      |           | 9. 4. 23   | 7. 22. 55. 31      | 16. 16. 15B     | 13. 54. 36                          |
|                   |   |           |           |  |                    |                 |                                     |
| 5. 8. 27. 3B      | - 11.5                                      | 9. 3      |           | 2. 23. 40  | 7. 21. 17. 56      | 24. 1. 45B      | 14. 28. 49                          |
| 19. 21. 13. 5A    | + 11.5                                      | 4. 6      |           | 10. 26. 55                                       | 7. 27. 25. 39      | 0. 15. 54B      | 13. 8. 12                           |
| 16. 4. 53. 7A     | + 11.4                                      | 4. 7      |           | 10. 12. 12                                       | 7. 26. 51. 18      | 3. 29. 28B      | 13. 5. 1                            |
| 28. 33. 58. 2A    | + 11.3                                      | 5. 4      |           | 0. 2. 48   | 8. 0. 8. 7         | 8. 33. 56A      | 13. 3. 6                            |
| 25. 28. 33. 7A    | + 11.1                                      | 4. 8      |           | 11. 22. 36                                       | 7. 29. 55. 38      | 5. 26. 33A      | 12. 46. 32                          |
|                   |   |           |           |  |                    |                 |                                     |
| 13. 39. 29. 0A    | + 11.1                                      | 4. 9      |           | 10. 2. 15  | 7. 27. 23. 6       | 6. 7. 1B        | 12. 45. 45                          |
| 10. 23. 26. 3B    | - 11.0                                      | 12. 4     |           | 2. 15. 26  | 7. 19. 42. 9       | 35. 18. 15B     | 15. 34. 34                          |
| 21. 59. 29. 7A    | + 11.0                                      | 4. 4      |           | 11. 8. 11  | 7. 29. 33. 28      | 1. 57. 15A      | 12. 34. 15                          |
| 19. 11. 55. 1A    | + 10.6                                      | 4. 2      |           | 10. 25. 20                                       | 8. 0. 10. 34       | 1. 2. 24B       | 12. 6. 34                           |
| 59. 8. 36. 5B     | - 10.2                                      | 19. 7     |           | 2. 3. 41   | 6. 13. 39. 33      | 74. 26. 53B     | 48. 59. 31                          |
|                   |   |           |           |  |                    |                 |                                     |
| 18. 53. 3. 7A     | + 10.1                                      | 4. 0      |           | 10. 23. 20                                       | 8. 1. 37. 47       | 1. 39. 54B      | 11. 32. 19                          |
| 2. 7. 20. 4A      | + 9.8                                       | 7. 1      |           | 9. 4. 17   | 7. 29. 17. 2       | 17. 16. 56B     | 15. 45. 20                          |
| 4. 9. 2. 5A       | + 9.5                                       | 6. 8      |           | 9. 5. 48   | 8. 0. 29. 15       | 16. 28. 5B      | 11. 20. 43                          |
| 25. 3. 22. 2A     | + 9.4                                       | 4. 0      |           | 11. 25. 34                                       | 8. 4. 47. 13       | 4. 0. 10A       | 10. 47. 57                          |
| 19. 40. 21. 3B    | - 9.1                                       | 13. 4     |           | 2. 16. 49  | 7. 26. 11. 26      | 40. 2. 7B       | 13. 36. 49                          |
|                   |   |           |           |  |                    |                 |                                     |
| 25. 56. 8. 3A     | + 8.8                                       | 3. 8      |           | 0. 0. 40   | 8. 6. 45. 0        | 4. 32. 12A      | 10. 4. 9                            |
| 16. 7. 30. 5A     | + 8.7                                       | 3. 9      |           | 10. 7. 54  | 8. 5. 39. 7        | 5. 11. 48B      | 9. 50. 32                           |
| 21. 58. 22. 2B    | - 8.4                                       | 14. 0     |           | 2. 17. 2   | 7. 28. 4. 34       | 42. 44. 9B      | 13. 7. 39                           |
| 63. 0. 20. 6B     | - 8.4                                       | 19. 8     |           | 2. 8. 10   | 6. 11. 20. 28      | 78. 26. 56B     | 56. 18. 19                          |
| 27. 44. 56. 1A    | + 8.3                                       | 3. 9      |           | 0. 10. 39  | 8. 8. 26. 39       | 6. 5. 7A        | 9. 31. 5                            |
|                   |   |           |           |  |                    |                 |                                     |
| 10. 6. 51. 1A     | + 8.1                                       | 5. 1      |           | 9. 16. 4   | 8. 6. 12. 46       | 11. 25. 17B     | 9. 23. 22                           |
| 32. 0. 5. 9B      | - 7.4                                       | 16. 3     |           | 2. 16. 3   | 7. 28. 29. 25      | 53. 7. 19B      | 14. 12. 35                          |
| 39. 20. 41. 4B    | - 7.2                                       | 17. 6     |           | 2. 14. 57  | 7. 25. 44. 9       | 60. 19. 30B     | 16. 51. 22                          |
| 33. 52. 46. 7A    | + 7.2                                       | 4. 7      |           | 1. 6. 16   | 8. 12. 21. 45      | 11. 40. 56A     | 8. 21. 43                           |
| 37. 39. 22. 6A    | + 7.1                                       | 6. 0      |           | 1. 14. 0   | 8. 13. 8. 39       | 15. 23. 17A     | 8. 23. 18                           |

Positiones mediae 300 principalium stellarum fixarum

| NOMEN SIDERIS          |      | Ascensio recta             | Variatio<br>annua | Aber.<br>max. | Argum.<br>aberrationis<br>S. G. M. |
|------------------------|------|----------------------------|-------------------|---------------|------------------------------------|
|                        |      | M. M. S. O. M. S.          | S.                | S.            |                                    |
| Scorpionis . . . . .   | 3    | 16. 39. 26. 24. 51. 32. 3  | 63, 1             | 26, 6         | 11. 11. 21                         |
| Herculis . . . . .     | 3    | 16. 52. 2453. 0. 23. 4     | 34, 9             | 23, 2         | 11. 14. 20                         |
| Scorpionis . . . . .   | 3. 4 | 16. 56. 43254. 10. 50. 5   | 64, 1             | 27, 2         | 11. 15. 23                         |
| Ophiuci . . . . .      | 2. 3 | 16. 58. 454. 30. 6. 1      | 51, 5             | 30, 6         | 11. 15. 43                         |
| Herculis . . . . .     | 2. 3 | 17. 4. 48. 256. 12. 5. 6   | 41, 1             | 20, 6         | 11. 17. 16                         |
| .                      | 3    | 17. 7. 10. 156. 47. 31. 1  | 27, 0             | 22, 0         | 11. 17. 50                         |
| Ophiuci . . . . .      | 3    | 17. 8. 4. 257. 11. 29. 4   | 55, 2             | 21, 9         | 11. 18. 10                         |
| Scorpionis . . . . .   | 3. 4 | 17. 16. 6. 259. 1. 36. 7   | 61, 0             | 25, 0         | 11. 19. 22                         |
| .                      | 2. 3 | 17. 18. 58. 259. 44. 33. 2 | 61, 0             | 25, 0         | 11. 20. 32                         |
| .                      | 2. 3 | 17. 21. 50. 260. 27. 23. 4 | 64, 5             | 27, 2         | 11. 21. 11                         |
| Ophiuci . . . . .      | 2. 3 | 17. 24. 55. 261. 13. 39. 6 | 41, 7             | 20, 4         | 11. 21. 56                         |
| Draconis . . . . .     | 3    | 17. 25. 34. 261. 23. 34. 3 | 20, 5             | 32, 8         | 11. 22. 4                          |
| Scorpionis . . . . .   | 2. 3 | 17. 27. 50. 261. 57. 31. 4 | 62, 2             | 25, 7         | 11. 22. 36                         |
| .                      | 3    | 17. 33. 30. 263. 7. 34. 5  | 62, 9             | 26, 1         | 11. 23. 39                         |
| Ophiuci . . . . .      | 3    | 17. 38. 49. 263. 12. 9. 1  | 44, 5             | 80, 0         | 11. 23. 44                         |
| .                      | 3    | 17. 37. 5. 264. 16. 14. 0  | 45, 2             | 20, 0         | 11. 24. 42                         |
| Herculis . . . . .     | 3. 4 | 17. 38. 1. 264. 30. 17. 8  | 35, 6             | 22, 6         | 11. 24. 6                          |
| .                      | 3    | 17. 48. 51. 267. 12. 44. 1 | 30, 9             | 25, 1         | 11. 27. 5                          |
| Serpentis . . . . .    | 4    | 17. 49. 5. 267. 16. 15. 1  | 47, 4             | 20, 0         | 11. 27. 28                         |
| Sagittar. praeo. . . . | 4    | 17. 51. 14. 267. 48. 34. 5 | 57, 5             | 23, 1         | 11. 27. 56                         |
| .                      | 3. 4 | 17. 51. 57. 267. 59. 11. 4 | 57, 9             | 23, 2         | 11. 28. 7                          |
| Draconis . . . . .     | 3    | 17. 54. 36267. 53. 53. 0   | 20, 9             | 22, 1         | 11. 28. 3                          |
| Sagittaril . . . . .   | 4    | 18. 0. 51. 270. 18. 54. 0  | 53, 9             | 21, 4         | 0. 0. 9                            |
| .                      | 4    | 18. 3. 270. 45. 25. 9      | 61, 2             | 25, 0         | 0. 0. 35                           |
| .                      | 3    | 18. 7. 9. 271. 47. 17. 2   | 57, 7             | 23, 1         | 0. 1. 37                           |
| .                      | 3    | 19. 9. 51. 272. 27. 43. 8  | 59, 9             | 23, 3         | 0. 1. 13                           |
| Serpentis . . . . .    | 3. 4 | 18. 10. 10272. 33. 33. 0   | 47, 2             | 20, 0         | 0. 1. 18                           |
| Sagittaril . . . . .   | 3    | 18. 14. 39273. 39. 46. 2   | 55, 7             | 22, 2         | 0. 1. 19                           |
| Lirae Lucidae . . .    | 1    | 18. 29. 37277. 24. 14. 7   | 30, 3             | 35, 6         | 0. 6. 47                           |
| Sagittaril . . . . .   | 3. 4 | 18. 32. 10278. 2. 30. 3    | 56, 4             | 22, 5         | 0. 7. 20                           |
| Sagittaril . . . . .   | 2. 3 | 18. 41. 52. 280. 28. 4. 2  | 56, 0             | 23, 3         | 0. 9. 51                           |
| Lyras . . . . .        | 2. 3 | 18. 42. 6. 280. 31. 37. 3  | 33, 3             | 23, 8         | 0. 9. 49                           |
| Serpentis . . . . .    | 4    | 18. 45. 29281. 32. 16. 8   | 44, 8             | 20, 6         | 0. 10. 15                          |
| Lyras . . . . .        | 2    | 18. 46. 58281. 44. 27. 6   | 31, 6             | 24, 8         | 0. 10. 46                          |
| Sagittaril . . . . .   | 2    | 18. 48. 52. 282. 12. 52. 3 | 57, 5             | 23, 1         | 0. 11. 11                          |

pro 1. Jan. 1784. ex Catalogo D. de la Caille computatae &amp;c.

| Decinatio<br>G. M. S. | Varia-<br>tio<br>annua<br>S. | Ab-<br>erratio-<br>nis<br>S. | Argum.<br>aberra-<br>tionis<br>S. G. M. | Longitudo<br>S. G. M. S. | Latitudo<br>S. G. M. S. | Angulus<br>positionis<br>G. M. S. |
|-----------------------|------------------------------|------------------------------|---|--------------------------|-------------------------|-----------------------------------|
| 41. 57. 59.6A         | + 6.9                        | 7.8                          | 1. 20. 26                               | 8. 14. 13. 52            | 19. 35. 32B             | 8. 22. 14                         |
| 31. 15. 23.8B         | - 5.9                        | 16.2                         | 2. 19. 12                               | 8. 5. 18. 3              | 53. 16. 45B             | 11. 13. 96                        |
| 42. 55. 49.2A         | + 5.5                        | 7.2                          | 1. 28. 56                               | 8. 17. 43. 34            | 10. 7. 50A              | 6. 38. 26                         |
| 15. 26. 29.6A         | + 5.6                        | 9.3                          | 9. 25. 42                               | 8. 14. 57. 9             | 7. 13. 23B              | 6. 9. 31                          |
| 14. 39. 0.9B          | - 4.8                        | 12.3                         | 2. 34. 21                               | 8. 13. 7. 57             | 37. 19. 0B              | 6. 51. 99                         |
| 25. 6. 89.8B          | - 4.6                        | 16.9                         | 2. 22. 31                               | 8. 12. 4. 29             | 47. 45. 39B             | 7. 46. 51                         |
| 24. 45. 52.3A         | + 4.5                        | 1.9                          | 0. 7. 47                                | 8. 18. 22. 51            | 1. 48. 29A              | 5. 4. 7                           |
| 37. 6. 9.4A           | + 3.8                        | 6.9                          | 2. 2. 53                                | 8. 20. 59. 58            | 13. 58. 23A             | 4. 28. 52                         |
| 36. 55. 39.7A         | + 3.5                        | 5.0                          | 2. 4. 22                                | 8. 21. 34. 20            | 13. 45. 14A             | 4. 11. 16                         |
| 42. 50. 20.6A         | + 3.3                        | 6.8                          | 2. 10. 38                               | 8. 22. 25. 5             | 19. 36. 14A             | 4. 1. 12                          |
| 13. 43. 2.4B          | - 3.4                        | 14.8                         | 2. 26. 45                               | 8. 19. 25. 12            | 35. 52. 1B              | 4. 18. 35                         |
| 52. 23. 6.3B          | - 3.0                        | 19.9                         | 2. 22. 56                               | 8. 8. 55. 33             | 75. 18. 43B             | 13. 35. 49                        |
| 38. 53. 58.8A         | + 2.8                        | 5.5                          | 2. 11. 5                                | 8. 23. 27. 20            | 15. 36. 38A             | 3. 20. 58                         |
| 40. 1. 13.8A          | + 2.9                        | 5.8                          | 2. 14. 34                               | 8. 24. 30. 34            | 16. 40. 47A             | 2. 51. 9                          |
| 4. 40. 18.4B          | - 2.3                        | 9.4                          | 2. 28. 50                               | 8. 22. 19. 28            | 27. 57. 55B             | 3. 3. 34                          |
| 2. 18. 19.0B          | - 3.0                        | 14.2                         | 2. 29. 21                               | 8. 23. 37. 19            | 26. 9. 2B               | 2. 82. 50                         |
| 27. 51. 59.6B         | - 1.9                        | 15.0                         | 2. 26. 41                               | 8. 22. 14. 15            | 51. 11. 28B             | 2. 29. 31                         |
| 37. 17. 21.9B         | - 1.0                        | 17.5                         | 3. 16. 2                                | 8. 25. 27. 46            | 60. 43. 3B              | 2. 26. 14                         |
| 3. 39. 29.7A          | + 1.0                        | 9.8                          | 9. 0. 31                                | 8. 27. 6. 19             | 49. 47. 11B             | 1. 9. 13                          |
| 29. 33. 18.9A         | + 0.8                        | 6.1                          | 2. 19. 59                               | 8. 28. 5. 0              | 6. 6. 45A               | 0. 43. 59                         |
| 30. 24. 19.8A         | + 0.7                        | 8.4                          | 2. 31. 22                               | 8. 28. 15. 3             | 6. 56. 43A              | 0. 48. 49                         |
| 51. 31. 16.8B         | - 0.7                        | 19.3                         | 2. 28. 17                               | 8. 24. 57. 21            | 74. 57. 23B             | 3. 13. 97                         |
| 21. 5. 55.1A          | - 0.1                        | 9.8                          | 8. 28. 31                               | 9. 0. 12. 0              | 3. 22. 24B              | 0. 4. 5                           |
| 36. 43. 17.9A         | - 0.2                        | 6.7                          | 3. 1. 49                                | 9. 0. 37. 22             | 13. 20. 3A              | 0. 48. 56                         |
| 29. 53. 58.2A         | - 0.6                        | 8.2                          | 3. 7. 42                                | 9. 1. 33. 36             | 6. 26. 23B              | 0. 42. 59                         |
| 34. 27. 53.1A         | - 0.8                        | 9.8                          | 3. 7. 10                                | 9. 2. 4. 4               | 11. 0. 26A              | 0. 59. 55                         |
| 3. 56. 1.8A           | - 0.9                        | 7.0                          | 8. 29. 38                               | 9. 2. 42. 40             | 20. 30. 51B             | 1. 4. 51                          |
| 25. 31. 15.2A         | - 1.3                        | 0.9                          | 4. 7. 48                                | 9. 3. 18. 26             | 2. 5. 27A               | 4. 57. 58                         |
| 38. 35. 21.8B         | + 2.5                        | 17.7                         | 3. 5. 13                                | 9. 12. 17. 3             | 61. 44. 50B             | 6. 43. 29                         |
| 27. 11. 31.4A         | - 2.8                        | 1.8                          | 3. 16. 16                               | 9. 7. 9. 53              | 3. 55. 19A              | 8. 38. 7                          |
| 26. 32. 43.5A         | - 3.6                        | 1.9                          | 4. 79. 49                               | 9. 9. 22. 24             | 3. 84. 54A              | 4. 9. 24                          |
| 33. 7. 28.6B          | + 3.6                        | 16.6                         | 3. 6. 53                                | 9. 15. 53. 54            | 56. 4. 1B               | 7. 38. 76                         |
| 3. 36. 17.4B          | + 3.9                        | 9.2                          | 3. 1. 20                                | 9. 12. 43. 36            | 26. 53. 29B             | 3. 3. 4                           |
| 36. 38. 8.2B          | + 4.1                        | 17.3                         | 3. 8. 2                                 | 9. 18. 40. 47            | 59. 80. 54B             | 9. 18. 49                         |
| 30. 20. 13.1A         | - 4.3                        | 3.0                          | 4. 14. 52                               | 9. 10. 37. 23            | 4. 8. 53A               | 4. 30. 55                         |

## Positiones mediae 300 principalium stellarum fixarum

| NOMEN SIDERIS                    | Ascensio recta |     |    |      |          | Va-<br>riatio<br>annua | Aber.<br>max. | Argum.<br>aberra-<br>tionis |
|----------------------------------|----------------|-----|----|------|----------|------------------------|---------------|-----------------------------|
|                                  | H.             | M.  | S. | G.   | M.       |                        |               |                             |
| $\delta$ Aquilae . . . . 3. 4    | 18.            | 49. | 46 | 292. | 26. 29,3 | 41,0                   | 20,6          | 0. 11. 25                   |
| $\gamma$ Licae . . . . . 3       | 18.            | 50. | 52 | 282. | 42. 59,1 | 33,7                   | 23,6          | 0. 11. 40                   |
| $\circ$ Sagittari . . . . 4      | 18.            | 51. | 44 | 282. | 56. 1,0  | 54,1                   | 21,4          | 0. 11. 51                   |
| $\tau$ . . . . . 4               | 18.            | 53. | 27 | 283. | 21. 41,5 | 56,5                   | 22,6          | 0. 12. 15                   |
| $\lambda$ Antinoi . . . . 3. 4   | 18.            | 54. | 47 | 283. | 41. 50,1 | 47,9                   | 20,0          | 0. 12. 39                   |
| $\zeta$ Aquilae . . . . 3. 4     | 18.            | 55. | 29 | 283. | 52. 18,6 | 41,5                   | 21,0          | 0. 12. 44                   |
| $\tau$ Sagittarii . . . . 3      | 18.            | 56. | 55 | 284. | 13. 44,6 | 53,8                   | 21,4          | 0. 13. 3                    |
| $\alpha$ . . . . . 4             | 19.            | 8.  | 53 | 287. | 13. 21,1 | 62,8                   | 26,3          | 0. 15. 49                   |
| $\delta$ Draconis . . . . 3      | 19.            | 12. | 27 | 288. | 6. 44,7  | 0,7                    | 51,2          | 0. 16. 43                   |
| $\delta$ Aquilae . . . . 3       | 19.            | 14. | 36 | 288. | 39. 4,6  | 45,3                   | 19,9          | 0. 17. 10                   |
| $\zeta$ Cygni . . . . . 3        | 19.            | 22. | 1  | 290. | 30. 10,1 | 36,4                   | 22,3          | 0. 18. 55                   |
| $\tau$ Antinoi . . . . 3. 4      | 19.            | 25. | 33 | 291. | 23. 14,5 | 46,7                   | 20,0          | 0. 19. 40                   |
| $\alpha$ Sagittae . . . . 4      | 19.            | 30. | 27 | 292. | 36. 49,3 | 40,3                   | 20,7          | 0. 21. 2                    |
| $\gamma$ Aquilae . . . . 3       | 19.            | 35. | 59 | 293. | 59. 46,8 | 42,9                   | 20,0          | 0. 22. 7                    |
| $\delta$ Cygni . . . . . 3       | 19.            | 38. | 14 | 294. | 33. 24,8 | 28,2                   | 27,7          | 0. 22. 43                   |
| $\alpha$ Aquilae . . . . 1. 2    | 19.            | 40. | 14 | 295. | 3. 26,8  | 43,5                   | 19,9          | 0. 23. 11                   |
| $\tau$ Antinoi . . . . . 3       | 19.            | 41. | 28 | 295. | 22. 4,1  | 46,C                   | 19,7          | 0. 23. 28                   |
| $\zeta$ Aquilae . . . . . 3      | 19.            | 44. | 42 | 296. | 10. 27,4 | 44,3                   | 19,8          | 0. 24. 14                   |
| $\theta$ Antinoi . . . . 3. 4    | 20.            | 0.  | 10 | 300. | 2. 22,8  | 46,6                   | 19,6          | 0. 27. 55                   |
| $\alpha$ Capricorni sequ. 3      | 20.            | 6.  | 3  | 301. | 30. 51,5 | 50,2                   | 20,1          | 0. 29. 19                   |
| $\zeta$ . . . . . . . . 3        | 20.            | 8.  | 52 | 302. | 12. 53,5 | 50,9                   | 20,3          | 0. 39. 59                   |
| $\gamma$ Cygni . . . . . 3       | 20.            | 14. | 29 | 303. | 37. 8,1  | 32,4                   | 25,3          | 1. 1. 23                    |
| $\epsilon$ Delphini . . . . 3. 4 | 20.            | 22. | 53 | 305. | 43. 20,6 | 42,1                   | 19,8          | 1. 3. 13                    |
| $\zeta$ . . . . . . . . 4        | 20.            | 25. | 13 | 306. | 18. 8,8  | 42,2                   | 20,0          | 1. 3. 56                    |
| $\zeta$ . . . . . . . . 3        | 20.            | 27. | 26 | 306. | 51. 26,7 | 42,2                   | 20,0          | 1. 4. 29                    |
| $\alpha$ Delphini . . . . 3      | 20.            | 29. | 36 | 307. | 24. 3 6  | 41,9                   | 20,1          | 1. 5. 0                     |
| $\delta$ . . . . . . . . 3. 4    | 20.            | 33. | 22 | 308. | 20. 35,6 | 42,1                   | 20,0          | 1. 5. 56                    |
| $\alpha$ Cygni . . . . . 2       | 20.            | 34. | 4  | 308. | 31. 1,3  | 30,7                   | 27,3          | 1. 6. 6                     |
| $\gamma$ Delphini . . . . 3. 4   | 20.            | 36. | 39 | 309. | 9. 44,9  | 41,9                   | 20,1          | 1. 6. 44                    |
| $\epsilon$ Cygni . . . . . 3     | 20.            | 37. | 27 | 309. | 21. 42,9 | 36,0                   | 23,1          | 1. 6. 56                    |
| $\zeta$ . . . . . . . . 3. 4     | 21.            | 3.  | 44 | 315. | 56. 6,8  | 38,3                   | 22,0          | 1. 13. 26                   |
| $\alpha$ Equuli . . . . . 4      | 21.            | 5.  | 0  | 316. | 15. 6,6  | 45,1                   | 19,2          | 1. 13. 45                   |
| $\epsilon$ Pegasi . . . . . 4    | 21.            | 12. | 4  | 318. | 1. 0,5   | 41,6                   | 19,3          | 1. 15. 31                   |
| $\alpha$ Cephei . . . . . 3      | 21.            | 13. | 23 | 318. | 20. 48,7 | 21,4                   | 40,2          | 1. 15. 53                   |

pro 1. Jan. 1784. ex Catalogo D. de la Caille computatae &c.

| <i>Declinatio-</i> | <i>Varia-</i> | <i>Argum.</i>       | <i>Longitudo</i> | <i>Latitudo</i> | <i>Angulus</i>    |
|--------------------|---------------|---------------------|------------------|-----------------|-------------------|
| <i>G. M. S.</i>    | <i>annua</i>  | <i>aberrationis</i> | <i>S. G. M.</i>  | <i>G. M. S.</i> | <i>positionis</i> |
|                    | <i>S.</i>     | <i>S.</i>           | <i>S. G. M.</i>  | <i>G. M. S.</i> | <i>G. M. S.</i>   |
| 14. 47. 22. 1B     | + 4.3         | 12. 3               | 3. 5. 7          | 9. 15. 15. 52   | 37. 36. 11B       |
| 32. 24. 20. 1B     | + 4.4         | 16. 5               | 3. 8. 12         | 9. 18. 55. 39   | 55. 2. 58B        |
| 22. 2. 28. 8A      | - 4.5         | 1. 8                | 6. 21. 55        | 9. 11. 58. 31   | 0. 53. 38B        |
| 17. 57. 58. 0A     | - 4.6         | 2. 6                | 4. 28. 17        | 9. 11. 49. 26   | 5. 2. 29A         |
| 5. 11. 26. 8A      | - 4.7         | 6. 3                | 8. 26. 55        | 9. 14. 19. 27   | 17. 36. 7B        |
|                    |               |                     |                  |                 | 5. 95. 21         |
| 13. 33. 26. 3B     | + 4.8         | 11. 9               | 3. 5. 22         | 9. 16. 47. 33   | 36. 13. 23B       |
| 21. 21. 1. 9A      | - 4.9         | 2. C                | 6. 27. 50        | 9. 13. 14. 19   | 1. 28. 7B         |
| 41. 0. 4. 1A       | - 5.9         | 6. 7                | 4. 5. 13         | 9. 13. 36. 57   | 18. 20. 26A       |
| 67. 16. 53. 5B     | + 6.2         | 20. 0               | 3. 16. 41        | 0. 14. 20. 42   | 82. 52. 52B       |
| 2. 41. 55. 1B      | + 6.4         | 8. 8                | 3. 1. 58         | 9. 20. 36. 42   | 87. 38. 47        |
|                    |               |                     |                  |                 | 8. 4. 9           |
| 27. 31. 3. 1B      | + 7.0         | 15. 4               | 3. 12. 10        | 9. 28. 15. 27   | 48. 59. 43B       |
| 1. 45. 3. 3. 1     | - 7.3         | 6. 8                | 8. 28. 15        | 9. 22. 49. 46   | 20. 2. 24B        |
| 17. 31. 49. 2B     | + 7.7         | 12. 9               | 3. 10. 47        | 9. 28. 4. 27    | 58. 49. 16B       |
| 10. 5. 55. 0B      | + 8.1         | 10. 9               | 3. 7. 30         | 9. 27. 55. 57   | 31. 16. 16B       |
| 44. 26. 42. 8B     | + 8.3         | 18. 3               | 3. 18. 32        | 9. 13. 16. 56   | 64. 26. 7B        |
|                    |               |                     |                  |                 | 22. 33. 24        |
| 8. 18. 31. 0B      | + 8.5         | 10. 6               | 3. 6. 47         | 9. 28. 43. 33   | 29. 18. 46B       |
| 0. 27. 57. 3B      | + 8.6         | 8. 1                | 3. 0. 29         | 9. 27. 25. 38   | 21. 33. 11B       |
| 5. 53. 8. 0B       | + 8.8         | 9. 6                | 3. 5. 21         | 9. 29. 25. 28   | 26. 43. 10B       |
| 1. 26. 55. 5A      | - 10.0        | 7. 6                | 8. 28. 5         | 10. 1. 54. 15   | 18. 45. 13B       |
| 13. 11. 49. 6A     | - 10.4        | 4. 8                | 8. 0. 15         | 10. 0. 50. 30   | 12. 6. 25         |
|                    |               |                     |                  |                 |                   |
| 15. 26. 59. 8A     | - 10.7        | 4. 5                | 7. 21. 16        | 10. 1. 1. 52    | 4. 36. 53B        |
| 39. 34. 31. 3B     | + 11.1        | 17. 4               | 3. 23. 58        | 10. 21. 52. 9   | 57. 8. 36B        |
| 10. 34. 56. 2B     | + 11.7        | 10. 8               | 3. 11. 28        | 10. 11. 3. 31   | 29. 5. 55B        |
| 13. 56. 33. 3B     | + 11.8        | 11. 6               | 3. 14. 9         | 10. 12. 45. 22  | 32. 10. 40B       |
| 13. 51. 19. 5B     | + 12.0        | 11. 6               | 3. 14. 19        | 10. 13. 20. 16  | 31. 56. 35B       |
|                    |               |                     |                  |                 | 16. 21. 0         |
| 15. 9. 43. 0B      | + 12.2        | 11. 9               | 3. 15. 25        | 10. 14. 22. 38  | 33. 2. 43B        |
| 14. 18. 37. 8B     | + 12.4        | 11. 7               | 3. 15. 12        | 10. 15. 7. 7    | 31. 58. 0B        |
| 44. 30. 57. 9B     | + 12.5        | 18. 0               | 3. 28. 59        | 11. 2. 21. 53   | 59. 55. 6B        |
| 15. 21. 31. 3B     | + 12.6        | 11. 9               | 3. 16. 16        | 10. 16. 22. 50  | 32. 44. 3B        |
| 33. 10. 3. 8B      | + 12.7        | 16. 0               | 3. 25. 40        | 10. 24. 42. 43  | 49. 25. 43B       |
|                    |               |                     |                  |                 | 22. 51. 16        |
| 29. 20. 51. 3B     | + 14.4        | 15. 0               | 3. 28. 4         | 11. 0. 3. 16    | 43. 42. 46B       |
| 4. 21. 59. 4B      | + 14.5        | 9. 0                | 3. 7. 1          | 10. 20. 6. 25   | 20. 8. 55B        |
| 18. 53. 19. 7B     | + 14.9        | 12. 5               | 3. 22. 40        | 10. 27. 17. 47  | 33. 18. 1B        |
| 61. 40. 29. 8B     | + 15.0        | 15. 6               | 4. 12. 11        | 0. 9. 49. 13    | 68. 54. 46B       |
| 6. 30. 42. 5A      | - 15.4        | 6. 8                | 8. 15. 10        | 10. 20. 23. 1C  | 55. 48. 29        |
|                    |               |                     |                  |                 | 8. 37. 58B        |
|                    |               |                     |                  |                 | 17. 59. 19        |

## Positiones medie 300 principalium stellarum fixarum

| NOMEN SIDERIS          | Ascensio recta |              |      | Varia-<br>tiō<br>annua | dber.<br>max. | Argum.<br>aberra-<br>tōnis |
|------------------------|----------------|--------------|------|------------------------|---------------|----------------------------|
|                        | H. M. S.       | G. M. S.     | S.   |                        |               |                            |
| ε Cephei . . . . .     | 3. 421. 25.    | 51. 321. 27. | 40,3 | 12,6                   | 54,6          | 1. 19. 1                   |
| γ Capricorni . . . . . | 321. 28.       | 6. 322. 1.   | 22,7 | 50,1                   | 19,9          | 1. 19. 33                  |
| α Pegasi . . . . .     | 321. 33.       | 34. 323. 23. | 23,7 | 44,3                   | 19,2          | 1. 20. 57                  |
| α Cygni . . . . .      | 3. 421. 34.    | 29. 322. 37. | 14,5 | 39,9                   | 21,4          | 1. 21. 13                  |
| δ Capricorni . . . . . | 321. 35.       | 6. 323. 46.  | 23,3 | 49,8                   | 19,8          | 1. 21. 20                  |
| γ Groris . . . . .     | 321. 40.       | 48. 325. 11. | 55,2 | 55,2                   | 24,1          | 1. 22. 38                  |
| α Aquarii . . . . .    | 321. 54.       | 41. 328. 40. | 20,6 | 46,4                   | 18,8          | 1. 26. 21                  |
| γ . . . . .            | 322. 10.       | 30. 332. 37. | 29,1 | 46,6                   | 18,7          | 2. 0. 26                   |
| ζ Pegasii . . . . .    | 322. 30.       | 40. 337. 40. | 2,9  | 44,9                   | 18,9          | 2. 5. 50                   |
| η . . . . .            | 322. 32.       | 53. 338. 13. | 21,2 | 42,0                   | 21,8          | 2. 6. 26                   |
| λ Aquarii . . . . .    | 422. 41.       | 17. 340. 19. | 14,9 | 47,2                   | 18,3          | 2. 8. 40                   |
| δ . . . . .            | 322. 43.       | 10. 340. 47. | 35,1 | 48,2                   | 19,4          | 2. 9. 10                   |
| Fomahant . . . . .     | 122. 45.       | 40. 341. 24. | 52,7 | 50,0                   | 21,5          | 2. 9. 50                   |
| ο Andromedae . . . . . | 422. 52.       | 0. 343. 0.   | 3,2  | 41,0                   | 24,6          | 2. 11. 33                  |
| ε Pegasi . . . . .     | 222. 53.       | 19. 343. 19. | 41,0 | 43,2                   | 20,7          | 2. 11. 53                  |
| α . . . . .            | 222. 54.       | 1. 343. 30.  | 8,3  | 44,7                   | 19,1          | 2. 12. 4                   |
| φ Aquarii . . . . .    | 4. 523. 3.     | 8. 345. 47.  | 1,7  | 46,8                   | 18,6          | 2. 14. 31                  |
| α Cephei . . . . .     | 3. 423. 30.    | 37. 352. 39. | 22,0 | 35,5                   | 78,2          | 2. 21. 59                  |
| γ Andromedae . . . . . | 223. 57.       | 15. 359. 18. | 44,4 | 46,0                   | 20,7          | 2. 29. 13                  |
| α Cassiopeae . . . . . | 2. 323. 57.    | 42. 359. 25. | 24,1 | 45,8                   | 34,6          | 2. 29. 20                  |



pro 1. Jan. 1784. ex Catalogo D. de la Caille computatae &amp;c.

| Declinatio<br>G. M. S. | Varia-<br>tio<br>annua<br>S. | <sup>g</sup><br><sup>m</sup><br>Argum.<br>aberra-<br>tionis<br>S. G. M. | Longitudo<br>S. G. M. S. | Latitudo<br>G. M. S. | Angulus<br>positionis<br>G. M. S. |
|------------------------|------------------------------|---|--------------------------|----------------------|-----------------------------------|
| 69. 36. 52,2 B         | + 15,7                       | 19,9  | 4. 17. 23                | 1. 2. 36. 26         | 71. 8. 0 B 74. 24. 41             |
| 17. 37. 45,0 A         | - 15,8                       | 6,3   | 7. 11. 7                 | 10. 18. 45. 42       | 2. 32. 2 A 18. 19. 1              |
| 8. 53. 36,6 B          | + 16,1                       | 9,9   | 3. 14. 31                | 10. 28. 52. 32       | 22. 6. 58 B 20. 11. 16            |
| 27. 46. 35,0 B         | + 16,1                       | 14,3  | 4. 1. 45                 | 11. 7. 27. 11        | 39. 31. 49 B 24. 34. 3            |
| 17. 5. 45,9 A          | - 16,2                       | 6,5   | 7. 12. 58                | 10. 20. 31. 0        | 2. 35. 35 A 18. 45. 39            |
| 38. 22. 11,1 A         | - 16,4                       | 10,2  | 5. 28. 20                | 10. 14. 13. 17       | 23. 1. 32 A 20. 48. 58            |
| 1. 22. 42,0 A          | - 17,1                       | 7,7   | 8. 26. 57                | 11. 0. 20. 36        | 10. 10. 29 B 20. 15. 23           |
| 2. 28. 7,4 A           | - 17,8                       | 7,6   | 8. 24. 13                | 11. 3. 41. 49        | 8. 14. 54 B 20. 56. 24            |
| 9. 42. 37,5 B          | + 18,5                       | 9,6   | 3. 19. 2                 | 11. 13. 8. 13        | 17. 41. 31 B 22. 45. 0            |
| 29. 5. 49,3 B          | + 19,6                       | 13,7  | 4. 11. 19                | 11. 22. 43. 10       | 35. 6. 43 B 26. 52. 58            |
| 8. 43. 25,6 A          | - 18,9                       | 7,9   | 8. 7. 35                 | 11. 8. 33. 45        | 0. 22. 52 A 22. 1. 46             |
| 16. 57. 52,9 A         | - 18,9                       | 8,0   | 7. 16. 42                | 11. 5. 51. 27        | 8. 10. 52 A 22. 20. 1             |
| 30. 45. 36,8 A         | - 19,0                       | 10,4  | 6. 21. 38                | 11. 0. 49. 4         | 21. 6. 13 A 23. 52. 24            |
| 41. 10. 6,7 B          | + 19,2                       | 15,8  | 4. 22. 51                | 0. 4. 47. 25         | 43. 44. 46 B 31. 49. 13           |
| 26. 54. 45,7 B         | + 19,2                       | 12,8  | 4. 12. 24                | 11. 26. 21. 30       | 31. 8. 12 B 26. 27. 57            |
| 14. 2. 51,6 B          | + 19,2                       | 10,1  | 3. 27. 20                | 11. 20. 28. 44       | 19. 24. 46 B 23. 53. 15           |
| 7. 13. 29,8 A          | - 19,4                       | 7,7   | 8. 11. 37                | 11. 14. 7. 37        | 1. 2. 3 A 22. 43. 58              |
| 76. 25. 26,7 B         | + 19,9                       | 19,7  | 5. 17. 50                | 1. 27. 5. 4          | 64. 37. 57 B 67. 13. 46           |
| 27. 43. 56,7 B         | + 20,0                       | 11,8  | 4. 22. 36                | 0. 11. 18. 15        | 25. 41. 6 B 26. 13. 41            |
| 57. 57. 33,7 B         | + 20,0                       | 17,5  | 5. 15. 28                | 1. 2. 5. 54          | 51. 13. 42 B 39. 29. 41           |



## DIFFERENTIAE MERIDIANORUM

*Inter. Observatorium Mediolanense, & praecipua loca terrae  
cum eorumdem longitudine & latitudine.*

Ex tabulis Berolinensibus & D. LA LANDE.

| NOMINA<br>LOCORUM.   | Differentia<br>Meridianorum. |     |         | Longitudo. | Latitudo. |            |
|----------------------|------------------------------|-----|---------|------------|-----------|------------|
|                      | H.                           | M.  | S.      | G.         | M.        | G. M. S.   |
| Aboe Finniae         | 0.                           | 52. | 9. or.  | 39.        | 52        | 0. 27. 08  |
| Agra Mogolis         | 3.                           | 30. | 11. or. | 94.        | 24        | 36. 42. 0  |
| Agris Erzau          | 0.                           | 44. | 5. or.  | 37.        | 52        | 47. 42. 0  |
| Aleppum Syriæ        | 1.                           | 52. | 35. or. | 55.        | 0         | 35. 45. 23 |
| Alexandria Ægypti    | 1.                           | 24. | 21. or. | 47.        | 57        | 31. 11. 20 |
| Alexandria Liguriae  | 0.                           | 2.  | 52. or. | 27.        | 34        | 53. 35. 0  |
| Amstelodamum         | 0.                           | 17. | 13. ec. | 22.        | 39        | 52. 22. 45 |
| Ancona               | 0.                           | 17. | 17. or. | 31.        | 11        | 43. 37. 54 |
| Antissidorum Auxerre | 0.                           | 22. | 28. oc. | 21.        | 14        | 47. 47. 54 |
| Antwerpia            | 0.                           | 19. | 12. oc. | 22.        | 4         | 51. 13. 35 |
| Aquae Sextiae Aix    | 0.                           | 15. | 0. oc.  | 23.        | 7         | 43. 31. 36 |
| Archangelus          | 1.                           | 58. | 55. or. | 56.        | 35        | 64. 34. 0  |
| Arimirium            | 0.                           | 13. | 56. or. | 30.        | 20        | 44. 3. 43  |
| Athenæ Graeciae      | 1.                           | 5.  | 20. or. | 43.        | 11        | 37. 40. 0  |
| Avenio Avignon       | 0.                           | 19. | 31. oc. | 22.        | 29        | 43. 57. 25 |
| Augusta Vindel.      | 0.                           | 7.  | 0. or.  | 28.        | 36        | 48. 34. 0  |
| Aurelianum Orleans   | 0.                           | 29. | 8. ec.  | 19.        | 34        | 47. 54. 4  |
| Bafilea              | 0.                           | 6.  | 25. oc. | 25.        | 15        | 47. 55. 0  |
| Bajoce Bajeux        | 0.                           | 39. | 36. oc. | 16.        | 57        | 49. 16. 30 |
| Bajonna              | 0.                           | 42. | 45. oc. | 16.        | 10        | 43. 29. 31 |
| Belgradum            | 0.                           | 49. | 5. or.  | 39.        | 7         | 45. 3. 0   |
| Bergomum             | 0.                           | 0.  | 48. or. | 27.        | 3         | 45. 41. 0  |
| Berolinum            | 0.                           | 17. | 0. or.  | 31.        | 6         | 58. 31. 30 |
| Biteræ Beziers       | 0.                           | 23. | 59. oc. | 20.        | 53        | 43. 20. 30 |
| Bononia Italæ        | 0.                           | 8.  | 40. or. | 29.        | 1         | 44. 29. 36 |
| Brandenburgum        | 0.                           | 13. | 52. or. | 30.        | 19        | 52. 27. 0  |
| Brixia               | 0.                           | 3.  | 0. or.  | 27.        | 36        | 45. 51. 0  |
| Burdigala Bourdeaux  | 0.                           | 39. | 4. ec.  | 17.        | 5         | 44. 50. 18 |
| Burgum in Bressia    | 0.                           | 29. | 1. ec.  | 22.        | 54        | 46. 13. 30 |
| Brestia Brest        | 0.                           | 54. | 48. ec. | 13.        | 9         | 48. 23. 0  |

| NOMINA<br>LOCORUM.          | Differentia<br>Meridianorum. |     |         | Longitudo. | Latitudo. |     |     |      |
|-----------------------------|------------------------------|-----|---------|------------|-----------|-----|-----|------|
|                             | H.                           | M.  | S.      | G.         | M.        | G.  | M.  | S.   |
| Buenos-aires ———            | 4.                           | 30. | 50. oc. | 319.       | 9         | 34. | 35. | 26 A |
| Cadomum Caen ———            | 0.                           | 38. | 12. oc. | 17.        | 18        | 49. | 11. | 10 B |
| Cajaneburgum ———            | 1.                           | 14. | 17. or. | 45.        | 25        | 64. | 13. | 30   |
| Cajrus Egypti ———           | 1.                           | 29. | 15. or. | 29.        | 10        | 30. | 3.  | 12   |
| Caletum Calais ———          | 0.                           | 39. | 21. oc. | 19.        | 31        | 50. | 57. | 31   |
| Canton ———                  | 6.                           | 55. | 28. oc. | 130.       | 43        | 23. | 8.  | 0    |
| Capara ———                  | 0.                           | 19. | 0. or.  | 31.        | 56        | 41. | 7.  | 0    |
| Caput bonae Spei ———        | 0.                           | 36. | 50. or. | 36.        | 4         | 33. | 35. | 15 A |
| Caput Gallicum ———          | 5.                           | 26. | 5. ac.  | 305.       | 1         | 19. | 46. | 40 B |
| Caput Vrude ———             | 1.                           | 45. | 25. oc. | 0.         | 30        | 14. | 43. | 0    |
| Carthago Americae ———       | 5.                           | 38. | 30. oc. | 302.       | 14        | 10. | 26. | 35   |
| Cayenna ———                 | 4                            | 5.  | 5. oc.  | 325.       | 25        | 4.  | 56. | 0    |
| Colonia ———                 | 0.                           | 8.  | 25. oc. | 24.        | 45        | 50. | 55. | 0    |
| Conceptio Chili ———         | 5.                           | 27. | 25. oc. | 305.       | 0         | 36. | 48. | 53 A |
| Constantinopolis ———        | 1.                           | 19. | 0. or.  | 46.        | 36        | 41. | 1.  | 0 B  |
| Cracovia ———                | 0.                           | 42. | 35. or. | 37.        | 30        | 50. | 10. | 0    |
| Cramifanium Cremfumster ——— | 0.                           | 19. | 45. or. | 31.        | 48        | 48. | 3.  | 36   |
| Cremona ———                 | 0.                           | 3.  | 28. or. | 27.        | 43        | 45. | 7.  | 49   |
| Curia Coira ———             | 0.                           | 1.  | 0. or.  | 27.        | 6         | 46. | 30. | 0    |
| Dresda ———                  | 0.                           | 17. | 0. or.  | 31.        | 6         | 51. | 6.  | 0    |
| Dunquerque ———              | 0.                           | 27. | 15. oc. | 20.        | 2         | 51. | 2.  | 4    |
| Edenburgum ———              | 0                            | 49. | 6. oc.  | 14.        | 35        | 55. | 58. | 0    |
| Ferraria ———                | 0.                           | 9.  | 32. or. | 29.        | 14        | 44. | 54. | 0    |
| Florentia ———               | 0.                           | 7.  | 23. or. | 28.        | 42        | 43. | 46. | 30   |
| Francofurtum ———            | 0.                           | 2.  | 25. oc. | 26.        | 15        | 50. | 6.  | 0    |
| Gades Cadice ———            | 1.                           | 1.  | 41. oc. | 11.        | 26        | 36. | 31. | 7    |
| Gedanum Danzica ———         | 0.                           | 37. | 19. or. | 36.        | 11        | 54. | 23. | 23   |
| Geneva ———                  | 0.                           | 12. | 35. oo. | 23.        | 49        | 46. | 12. | 0    |
| Genua ———                   | 0                            | 2.  | 22. oc. | 26.        | 16        | 44. | 25. | 0    |
| Gta ———                     | 4.                           | 18. | 16. or. | 91.        | 25        | 15. | 31. | 0 A  |
| Goritia ———                 | 0.                           | 17. | 34. or. | 31.        | 15        | 45. | 57. | 30 B |
| Gothenburgum ———            | 0.                           | 9.  | 50. or. | 20.        | 19        | 57. | 42. | 0    |
| Gottinga ———                | 0.                           | 2.  | 51. or. | 27.        | 34        | 51. | 32. | 0    |
| Graecium Gratz ———          | 0.                           | 34. | 50. or. | 33.        | 4         | 47. | 4   | 18   |
| Greenovicum ———             | 0.                           | 36. | 41. oc. | 17.        | 41        | 5.  | 28. | 40   |

| NOMINA<br>LOCORUM.             | Differentia<br>Meridianorum. | Longitudo | Latitudo.   |
|--------------------------------|------------------------------|-----------|-------------|
|                                | H. M. S.                     | G. M.     | G. M. S.    |
| Grißwald                       | 0. 17. 43. or.               | 31. 17    | 5. 16. 0B   |
| Haphnia Copenbagne             | 0. 14. 16. or.               | 30. 25    | 55. 40. 45  |
| Havana                         | 6. 3. 56. ec.                | 29. 52    | 23. 14. 50  |
| Herbipolis Wartsburg           | 0. 4. 10. ec.                | 27. 54    | 49. 46. 6   |
| Hierosolima                    | 1. 44. 35. or.               | 53. 0     | 31. 50. 0   |
| Imola                          | 0. 10. 31. or.               | 29. 29    | 44. 21. 32  |
| Ingolstadium                   | 0. 8. 45. or.                | 29. 2     | 48. 46. 0   |
| Insula Borbonica ad S. Dionis. | 3. 5. 15. or.                | 73. 10    | 20. 51. 43A |
| Insula Ferri ad Opp.           | 1. 47. 0. ec.                | 0. 6      | 27. 47. 20B |
| Insula Gailiae ad port. Ludov. | 3. 13. 7. or.                | 75. 8     | 20. 9. 45A  |
| S. Joseph in California        | 7. 55. 24. ec.               | 268. 0    | 23. 3. 36B  |
| Ispahan                        | 2. 54. 35. or.               | 70. 32    | 32. 25. 0   |
| Julia Caesarea Algeri          | 0. 27. 54. ec.               | 19. 53    | 36. 49. 30  |
| Kebecum                        | 5. 16. 17. ec.               | 307. 47   | 46. 55. 0   |
| Leodium Liegl                  | 0. 14. 28. ec.               | 23. 14    | 50. 38. 0   |
| Leopolis                       | 0. 57. 15. or.               | 41. 42    | 49. 51. 40  |
| Leyda                          | 0. 19. 0. ec.                | 22. 6     | 52. 8. 40   |
| Ligurnus                       | 0. 4. 0. or.                 | 27. 51    | 43. 32. 0   |
| Lima Peruyiae                  | 5. 44. 3. ec.                | 300. 50   | 12. 1. 15A  |
| Lipia                          | 0. 12. 35. or.               | 30. 0     | 51. 19. 14B |
| Londinum                       | 0. 37. 6. ec.                | 17. 35    | 51. 31. 0   |
| Luca                           | 0. 4. 24. or.                | 27. 57    | 43. 49. 3   |
| Lugdunum                       | 0. 17. 6. ec.                | 22. 20    | 45. 45. 51  |
| Lunden                         | 0. 16. 40. or.               | 31. 1     | 55. 41. 36  |
| Lutetiae Parifiorum            | 0. 27. 25. ec.               | 20. 0     | 48. 50. 18  |
| Macaum                         | 6. 58. 20. or.               | 131. 26   | 22. 12. 44  |
| Madras                         | 4. 43. 20. or.               | 97. 43    | 13. 8. 0    |
| Macerata                       | 0. 17. 29. or.               | 31. 13    | 43. 18. 36  |
| Malaca                         | 6. 11. 35. or.               | 19. 45    | 2. 12. 0    |
| Manilla                        | 7. 24. 35. or.               | 138. 0    | 14. 30. 0   |
| Mantua                         | 0. 3. 56. or.                | 27. 50    | 45. 2. 0    |
| Martinica                      | 4. 40. 40. ec.               | 316. 41   | 14. 43. 9   |
| Magiliae                       | 0. 15. 16. ec.               | 23. 2     | 43. 17. 45  |
| Matriatum                      | 0. 50. 28. ec.               | 14. 14    | 40. 25. 0   |
| Mediolanum                     | 0. 0. 0.                     | 26. 51    | 45. 27. 57  |

| NOMINA<br>LOCORUM.                | Differentia<br>Meridianorum. |         | Longitudo.   | Latitudo. |
|-----------------------------------|------------------------------|---------|--------------|-----------|
|                                   | H. M. S.                     | G. M.   | G. M. S.     |           |
| Melita                            | 0. 21. 9. or.                | 32. 9   | 35. 54. 0 B  |           |
| Messana                           | 0. 24. 29. or.               | 32. 58  | 38. 21. 0    |           |
| Mexicum                           | 7. 31. 25. oc.               | 274. 0  | 20. 0. 0     |           |
| Moguntia                          | 0. 3. 25. oc.                | 25. 59  | 49. 54. 0    |           |
| Monachium Bav.                    | 0. 9. 15. or.                | 29. 15  | 48. 9. 55    |           |
| Monspessulanum <i>Montpellier</i> | 0. 21. 14. oc.               | 21. 53  | 43. 36. 33   |           |
| Moscou                            | 1. 54. 20. or.               | 55. 26  | 55. 45. 20   |           |
| Mutina                            | 0. 8. 4. or.                 | 28. 52  | 44. 34. 0    |           |
| Neapolis                          | 0. 20. 5. or.                | 31. 53  | 40. 50. 15   |           |
| Nicea Prov.                       | 0. 7. 36. oc.                | 24. 57  | 42. 41. 54   |           |
| Norimberga                        | 0. 7. 31. or.                | 28. 44  | 49. 37. 0    |           |
| Oxonium <i>Oxford</i>             | 0. 41. 45. oc.               | 16. 25  | 51. 44. 57   |           |
| Padua                             | 0. 10. 57. or.               | 29. 36  | 45. 28. 26   |           |
| Panormum                          | 0. 16. 16. or.               | 30. 55  | 38. 9. 0     |           |
| Parma                             | 0. 2. 58. or.                | 27. 35  | 44. 44. 50   |           |
| Pekinum                           | 7. 9. 10. or.                | 134. 9  | 39. 54. 13   |           |
| Perusium                          | 0. 14. 57. or.               | 30. 35  | 43. 33. 54   |           |
| Petropolis                        | 1. 24. 23. or.               | 48. 0   | 59. 56. 0    |           |
| Philadelphia                      | 5. 37. 28. oc.               | 302. 29 | 39. 56. 55   |           |
| Pisae                             | 0. 5. 4. or.                 | 28. 7   | 43. 43. 7    |           |
| Pistorium                         | 0. 6. 8. or.                 | 28. 23  | 43. 36. 0    |           |
| Placentia                         | 0. 0. 52. or.                | 27. 4   | 45. 3. 0     |           |
| Pondicery                         | 4. 43. 5. or.                | 97. 37  | 11. 56. 30   |           |
| Portobelo                         | 5. 56. 5. oc.                | 297. 50 | 9. 33. 5     |           |
| Praga                             | 0. 22. 15. or.               | 32. 25  | 50. 4. 30    |           |
| Quanton                           | 6. 55. 28. or.               | 130. 43 | 28. 8. 0     |           |
| Quito                             | 5. 48. 25. oc.               | 299. 45 | 0. 13. 17 A  |           |
| Ravenna                           | 0. 11. 8. or.                | 29. 38  | 44. 25. 5 B  |           |
| Regium Lepidi                     | 0. 6. 20. or.                | 28. 26  | 44. 39. 0    |           |
| Rio-Janeiro                       | 3. 27. 45. oc.               | 334. 55 | 22. 54. 10 A |           |
| Roma                              | 0. 13. 12. or.               | 30. 9   | 41. 53. 54 B |           |
| Rothomagus <i>Roán</i>            | 0. 52. 24. oc.               | 18. 45  | 49. 26. 43   |           |
| Savona                            | 0. 3. 40. oc.                | 25. 56  | 44. 18. 0    |           |
| Schwezingen                       | 0. 2. 10. or.                | 26. 19  | 49. 23. 4    |           |
| Senae                             | 0. 7. 44. or.                | 28. 47  | 43. 20. 0    |           |

| NOMINA<br>LOCORUM. | Differentia<br>Meridianorum. | Longitudo. | Latitudo.    |
|--------------------|------------------------------|------------|--------------|
|                    | H. M. S.                     | G. M.      | G. M. S.     |
| Senoges Sens       | 0. 23. 37. oc.               | 20. 57     | 48. 11. 56 B |
| Siam               | 6. 6. 35. or.                | 118. 30    | 14. 18. 0    |
| Smirna             | 1. 12. 32. or.               | 44. 59     | 38. 28. 7    |
| Stokolmnia         | 0. 35. 25. or.               | 35. 43     | 59. 30. 30   |
| Taurinum           | 0. 6. 5. oc.                 | 25. 20     | 45. 4. 14    |
| Telo-Martius Tolon | 0. 12. 59. oc.               | 23. 37     | 43. 7. 24    |
| Tergeste           | 0. 18. 40. or.               | 31. 31     | 45. 33. 0    |
| Ticinum            | 0. 0. 1. oc.                 | 26. 51     | 45. 10. 59   |
| Tobolk             | 3. 56. 55. or.               | 186. 5     | 58. 12. 22   |
| Tolosa             | 0. 30. 40. oc.               | 19. 6      | 43. 35. 54   |
| Tornea             | 1. 0. 3. or.                 | 41. 53     | 65. 50. 50   |
| Trajectum Superior | 0. 13. 48. oc.               | 23. 23     | 50. 49. 0    |
| Tridentum          | 0. 6. 24. or.                | 28. 27     | 46. 1. 0     |
| Tyrnavia           | 0. 33. 30. or.               | 35. 14     | 48. 23. 30   |
| Varsavia           | 0. 47. 35. or.               | 38. 45     | 52. 14. 0    |
| Venetiae           | 0. 11. 33. or.               | 29. 45     | 45. 25. 0    |
| Vercelliae         | 0. 3. 48. oc.                | 25. 54     | 45. 13. 0    |
| Verona             | 0. 8. 29. or.                | 28. 58     | 45. 26. 26   |
| Versailles         | 0. 28. 16. oc.               | 19. 47     | 48. 28. 18   |
| Vienna Austriae    | 0. 28. 45. or.               | 34. 2      | 43. 12. 32   |
| Vierbom            | 0. 12. 7. or.                | 29. 53     | 42. 24. 54   |
| Ultrajectum        | 0. 16. 16. oc.               | 22. 47     | 52. 6. 0     |
| Olyssippo          | 1. 13. 20. oc.               | -8. 31     | 33. 42. 20   |
| Urbinum            | 0. 14. 4. or.                | 30. 22     | 47. 43. 36   |
| Upsala             | 0. 33. 45. or.               | 35. 25     | 59. 51. 50   |
| Uraniburgum        | 0. 14. 45. or.               | 30. 33     | 55. 54. 15   |
| Wardus             | 1. 27. 39. or.               | 46. 46     | 70. 22. 35   |
| Wilna              | 1. 5. 5. or.                 | 43. 7      | 54. 41. 0    |
| Wigtemberga        | 0. 13. 29. or.               | 30. 14     | 51. 43. 10   |

1784.

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APPENDIX  
AD EPHÆMERA RIDÆS

1784.

Q



# OBSERVATIONES SOLIS

habitae Mediolani

*ab anno 1773 ad finem 1782*

AB ANGELO DE CESARIS ET FRANCISCO REGGIO.

**D**ublii juris fuit distantiae a vertice limbi superioris Solis culminantis a nobis observatae ab anno 1773 ad initium 1783. Earum accurationem maximè commendat instrumentum sane eximium, quo institutae sunt, sextans nempe radii pedum sex parisiensium rite quoad omnia ad trutinam vocatus, ut videre est in commentario dato in Ephemeridibus anni 1782.

Distantiae hujusmodi apparentes sunt affectae nempe parallaxi, & refractione, ad veras easdem redigere quisque potest, ubi res ferat, adhibitis juxta morem sequationibus respondentibus. Ad hunc scopum tempore singularium observationum adnotantur altitudines barometri & thermometri.

Observationibus dubiis apponetur signum \*.



DISTANTIAE A VERTICE LIMBI SUPERIORIS SOLIS  
 in Meridiano observatae an. 1773  
 AB ANGELO DE CESARIS.

| 1773      | Barom. |       | Thermom. |       | Dist. <sup>a</sup> ap. L. S. |     |       |
|-----------|--------|-------|----------|-------|------------------------------|-----|-------|
|           | P.     | L. D. | Gr.      | D.    | Gr.                          | M.  | S. D. |
| Januar. 2 | 27.    | 3 ,0  | +        | 3 ,0  | 68.                          | 1.  | 42    |
| 6         |        | 9 ,2  |          | 2 ,3  | 67.                          | 35. | 37    |
| 7         |        | 10 ,3 |          | 1 ,8  | 67.                          | 27. | 42    |
| 8         | 28.    | 0 ,0  |          | 1 ,5  | 67.                          | 19. | 31    |
| 9         | 27.    | 11 ,4 |          | 1 ,6  | 67.                          | 10. | 55    |
| 10        |        | 10 ,3 |          | 2 ,5  | 67.                          | 1.  | 49    |
| 11        | 28.    | 0 ,0  |          | 3 ,5  | 66.                          | 52. | 35    |
| 16        | 27.    | 6 ,5  |          | 5 ,3  | 65.                          | 58. | 53    |
| 17        |        | 6 ,5  |          | 3 ,5  | 65.                          | 47. | 38    |
| 20        | 28.    | 0 ,5  |          | 2 ,6  | 65.                          | 9.  | 16    |
| Febr. 21  |        | 1 ,0  |          | 3 ,2  | 64.                          | 55. | 45    |
| 30        | 27.    | 7 ,0  |          | 4 ,6  | 62.                          | 39. | 3     |
| 31        |        | 8 ,0  |          | 4 ,0  | 62.                          | 22. | 26    |
| Febr. 2   |        | 4 ,5  |          | 3 ,6  | 61.                          | 47. | 54    |
| 12        |        | 11 ,0 |          | 5 ,5  | 58.                          | 39. | 4 ,5  |
| 13        | 28.    | 0 ,0  |          | 4 ,2  | 58.                          | 19. | 5     |
| 19        | 27.    | 11 ,0 |          | 3 ,0  | 56.                          | 13. | 41    |
| 21        |        | 9 ,0  |          | 4 ,5  | 55.                          | 30. | 28 ,5 |
| 27        |        | 10 ,0 |          | 7 ,0  | 53.                          | 16. | 56    |
| Mart. 1   | 28.    | 0 ,0  |          | 6 ,5  | 52.                          | 31. | 39    |
| 4         | 27.    | 9 ,0  |          | 8 ,0  | 51.                          | 22. | 31    |
| 7         |        | 8 ,7  |          | 10 ,0 | 50.                          | 12. | 58    |
| 17        |        | 9 ,0  |          | 6 ,0  | 46.                          | 17. | 29    |
| 18        |        | 10 ,0 |          | 7 ,0  | 45.                          | 53. | 42    |
| 19        |        | 11 ,0 |          | 6 ,0  | 45.                          | 29. | 59    |

| 1773     | Barom. |    |    | Thermom. |     |    | Dist. <sup>a</sup> ap. L. S. ☷ |     |       |
|----------|--------|----|----|----------|-----|----|--------------------------------|-----|-------|
|          | P.     | L. | D. |          | Gr. | D. | Gr.                            | M.  | S. D. |
| Mart. 20 | 27.    | 9  | ,0 | +        | 8   | ,5 | 45.                            | 6.  | 23    |
| 21       |        | 9  | ,0 |          | 9   | ,0 | 44.                            | 42. | 52    |
| April. 5 |        | 5  | ,0 |          | 9   | ,0 | 38.                            | 53. | 51    |
| 11       |        | 8  | ,5 |          | 13  | ,0 | 36.                            | 39. | 47    |
| 12       |        | 8  | ,0 |          | 13  | ,0 | 36.                            | 18. | 12    |
| 23       |        | 9  | ,5 |          | 16  | ,5 | 32.                            | 28. | 38    |
| 24       |        | 10 | ,0 |          | 13  | ,0 | 32.                            | 8.  | 46    |
| Maji 9   |        | 10 | ,3 |          | 13  | ,0 | 27.                            | 41. | 21    |
| 12       |        | 8  | ,0 |          | 9   | ,5 | 26.                            | 55. | 10    |
| 17       |        | 10 | ,0 |          | 17  | ,0 | 25.                            | 44. | 33    |
| 20       |        | 8  | ,0 |          | 18  | ,0 | 25.                            | 5.  | 57    |
| 22       |        | 8  | ,5 |          | 19  | ,5 | 24.                            | 41. | 57    |
| Junii 9  |        | 7  | ,5 |          | 18  | ,5 | 22.                            | 12. | 13    |
| 11       |        | 9  | ,0 |          | 18  | ,0 | 22.                            | 3.  | 47    |
| 22       |        | 10 | ,5 |          | 18  | ,0 | 21.                            | 44. | 12    |
| 23       |        | 10 | ,0 |          | 18  | ,0 | 21.                            | 45. | 4     |
| 24       |        | 9  | ,5 |          | 18  | ,0 | 21.                            | 46. | 4     |
| 29       |        | 8  | ,0 |          | 18  | ,5 | 21.                            | 57. | 55    |
| Julii 5  |        | 8  | ,0 |          | 19  | ,3 | 22.                            | 25. | 30 ,6 |
| 10       |        | 8  | ,0 |          | 18  | ,0 | 22.                            | 59. | 29 ,4 |
| 11       |        | 10 | ,0 |          | 18  | ,3 | 23.                            | 7.  | 25    |
| 12       |        | 11 | ,0 |          | 21  | ,5 | 23.                            | 15. | 39 ,3 |
| 13       |        | 10 | ,5 |          | 21  | ,0 | 23.                            | 24. | 26    |
| 14       |        | 9  | ,0 |          | 21  | ,6 | 23.                            | 33. | 32    |
| 15       |        | 8  | ,0 |          | 22  | ,6 | 23.                            | 42. | 53    |
| 16       |        | 9  | ,5 |          | 21  | ,6 | 23.                            | 52. | 43 ,5 |
| 19       |        | 9  | ,0 |          | 22  | ,0 | 24.                            | 24. | 25 ,5 |
| 23       |        | 8  | ,0 |          | 21  | ,0 | 25.                            | 11. | 21 ,6 |
| 24       |        | 9  | ,0 |          | 22  | ,0 | 25.                            | 24. | 2 ,3  |
| 26       |        | 9  | ,0 |          | 21  | ,7 | 25.                            | 50. | 8 ,4  |

| 1773      | Barom. |    |    | Thermom. |    |     | Dist. <sup>a</sup> ap. L. S. C. |     |      |
|-----------|--------|----|----|----------|----|-----|---------------------------------|-----|------|
|           | P.     | L. | D. | Gr.      | D. | Gr. | M.                              | S.  | D.   |
| August. 3 | 27.    | 8  | ,0 | +        | 21 | ,0  | 27.                             | 47. | 12,5 |
| 4         |        | 9  | ,0 |          | 19 | ,7  | 28.                             | 3.  | 10,3 |
| 5         |        | 8  | ,3 |          | 20 | ,0  | 28.                             | 19. | 22,3 |
| 7         |        | 9  | ,0 |          | 20 | ,0  | 28.                             | 52. | 45,0 |
| 8         |        | 10 | ,3 |          | 18 | ,3  | 29.                             | 9.  | 36   |
| 9         |        | 11 | ,0 |          | 20 | ,0  | 29.                             | 27. | 0,6  |
| 10        |        | 11 | ,5 |          | 20 | ,0  | 29.                             | 44. | 32,5 |
| 11        |        | 11 | ,3 |          | 20 | ,5  | 30.                             | 2.  | 24,6 |
| 13        |        | 9  | ,0 |          | 21 | ,5  | 30.                             | 38. | 44,6 |
| 16        |        | 9, | 0  |          | 21 | ,0  | 31.                             | 34. | 56,3 |
| 17        |        | 8  | ,7 |          | 22 | ,0  | 31.                             | 54. | 12,4 |
| 21        |        | 9  | ,0 |          | 18 | ,0  | 33.                             | 13. | 3,7  |

## DISTANTIAE A VERTICE LIMBI SUPERIORIS SOLIS

in Meridiano observatae an. 1774

AB ANGELO DE CESARIS.

| 1774      | Barom. |    |    | Thermom. |    |     | Dist. <sup>a</sup> ap. L. S. C. |     |      |
|-----------|--------|----|----|----------|----|-----|---------------------------------|-----|------|
|           | P.     | L. | D. | Gr.      | D. | Gr. | M.                              | S.  | D.   |
| Januar. 3 | 27.    | 2  | ,0 | +        | 1  | ,0  | 67.                             | 57. | 36   |
| 4         |        | 7  | ,0 | -        | 1  | ,0  | 67.                             | 51. | 11   |
| 8         |        | 7  | ,0 | +        | 1  | ,0  | 67.                             | 21. | 31   |
| 22        |        | 9  | ,0 |          | 1  | ,0  | 64.                             | 45. | 6,7  |
| 29        |        | 6  | ,0 |          | 1  | ,5  | 62.                             | 59. | 33,2 |
| 30        |        | 6  | ,0 |          | 1  | ,5  | 62.                             | 43. | 9,7  |
| Febr. 14  | 28.    | 0  | ,0 |          | 3  | ,6  | 58.                             | 3.  | 17   |
| 15        | 27.    | 11 | ,5 |          | 4  | ,0  | 57.                             | 42. | 45,3 |
| 24        |        | 11 | ,5 |          | 5  | ,0  | 55.                             | 85. | 27,2 |

| 1774      | Barom. |    |    | Thermom. |     | Dist. ap. L. S. ② |     |     |    |    |
|-----------|--------|----|----|----------|-----|-------------------|-----|-----|----|----|
|           | P.     | L. | D. |          | Gr. | D.                | Gr. | M.  | S. |    |
| Febr. 22  | 27.    | 10 | ,5 | +        | 6   | ,0                | 55. | 13. | 39 | ,2 |
| 28        | 28.    | 1  | ,5 |          | 6   | ,0                | 52. | 59. | 50 | ,5 |
| Mart. 4   | 27.    | 6  | ,2 |          | 6   | ,0                | 51. | 28. | 39 |    |
| 6         | 28.    | 0  | ,0 |          | 7   | ,0                | 50. | 42. | 15 | ,5 |
| 13        | 27.    | 6  | ,2 |          | 8   | ,0                | 47. | 38. | 6  |    |
|           |        |    |    |          |     |                   |     |     |    |    |
| 14        |        | 10 | ,5 |          | 8   | ,0                | 47. | 34  | 22 | ,7 |
| 25        | 28.    | 0  | ,7 |          | 8   | ,0                | 43. | 14  | 21 | ,6 |
| 26        | 27.    | 11 | ,3 |          | 8   | ,5                | 42. | 50. | 54 |    |
| 27        |        | 10 | ,5 |          | 9   | ,5                | 42. | 27. | 34 | ,5 |
| 30        |        | 8  | ,6 |          | 11  | ,0                | 41. | 17. | 30 | ,3 |
|           |        |    |    |          |     |                   |     |     |    |    |
| April. 31 |        | 6  | ,5 |          | 11  | ,7                | 40. | 54. | 12 | ,5 |
| 22        |        | 10 | ,0 |          | 12  | ,5                | 32. | 53. | 35 | ,7 |
| 23        |        | 10 | ,5 |          | 13  | ,0                | 32. | 33. | 30 | ,5 |
| 24        |        | 11 | ,2 |          | 14  | ,0                | 32. | 13. | 41 |    |
| 25        |        | 9  | ,5 |          | 16  | ,0                | 31. | 54. | 7  | ,8 |
|           |        |    |    |          |     |                   |     |     |    |    |
| 26        |        | 8  | ,3 |          | 14  | ,5                | 31. | 34  | 46 |    |
| 29        |        | 9  | ,0 |          | 15  | ,0                | 30. | 38. | 0  | ,5 |
| 30        |        | 9  | ,0 |          | 15  | ,7                | 30. | 19. | 40 |    |
| Maji 8    |        | 10 | ,5 |          | 14  | ,6                | 28. | 1.  | 28 | ,6 |
| 13        |        | 8  | ,5 |          | 16  | ,3                | 26. | 44. | 8  | ,5 |
|           |        |    |    |          |     |                   |     |     |    |    |
| 21        |        | 10 | ,5 |          | 15  | ,5                | 24. | 56. | 48 |    |
| 27        |        | 7  | ,0 |          | 13  | ,7                | 23. | 50. | 33 | ,7 |
| 29        |        | 8  | ,0 |          | 13  | ,6                | 23. | 31. | 27 | ,7 |
| 31        |        | 8  | ,5 |          | 16  | ,0                | 23. | 13. | 42 | ,5 |
| Junii 2   |        | 9  | ,5 |          | 18  | ,5                | 22. | 57. | 40 | ,5 |
|           |        |    |    |          |     |                   |     |     |    |    |
| 3         |        | 9  | ,0 |          | 20  | ,3                | 22. | 50. | 17 | ,6 |
| 5         |        | 5  | ,0 |          | 17  | ,0                | 22. | 36. | 25 | ,7 |
| 7         |        | 6  | ,0 |          | 16  | ,5                | 22. | 24. | 11 | ,4 |
| 9         |        | 10 | ,0 |          | 18  | ,0                | 22. | 13. | 28 | ,6 |
| 10        |        | 9  | ,0 |          | 19  | ,0                | 22. | 8.  | 43 | ,8 |

|       |    | Barom.   | Thermom. | Dist. <sup>a</sup> ap. L. S. & |     |       |
|-------|----|----------|----------|--------------------------------|-----|-------|
| 1774  |    | P. L. D. | Gr. D.   | Gr.                            | M.  | S. D. |
| Junii | 11 | 27. 9 ,0 | + 19 ,0  | 22.                            | 4   | 31 ,8 |
|       | 12 | 9 ,0     | 18 ,5    | 22.                            | 0.  | 35 ,0 |
|       | 16 | 10 ,0    | 19 ,0    | 21.                            | 49. | 4 ,3  |
|       | 17 | 10 ,0    | 20 ,5    | 21.                            | 47. | 17 ,3 |
|       | 19 | 10 ,0    | 23 ,0    | 21.                            | 44. | 53 ,3 |
|       | 25 | 9 ,0     | 17 ,3    | 21.                            | 47. | 14 ,3 |
|       | 29 | 9 ,0     | 21 ,0    | 21.                            | 57. | 11 ,7 |
|       | 30 | 9 ,0     | 21 ,0    | 22.                            | 0.  | 41 ,7 |
|       | 1  | 9 ,0     | 21 ,5    | 22.                            | 4   | 32 ,2 |
|       | 2  | 10 ,6    | 21 ,5    | 22.                            | 8.  | 57 ,0 |
| Julii | 3  | 10 ,6    | 22 ,5    | 22.                            | 13. | 37 ,8 |
|       | 4  | 10 ,0    | 22 ,0    | 22.                            | 18. | 42 ,4 |
|       | 7  | 8 ,5     | 22 ,0    | 22.                            | 36. | 31 ,9 |
|       | 8  | 10 ,5    | 20 ,5    | 22.                            | 43. | 14 ,2 |
|       | 9  | 10 ,0    | 21 ,0    | 22.                            | 50. | 17 ,4 |
|       | 10 | 9 ,3     | 22 ,0    | 22.                            | 57. | 41 ,9 |
|       | 13 | 8 ,3     | 17 ,5    | 23.                            | 22. | 29 ,2 |
|       | 14 | 9 ,0     | 19 ,0    | 23.                            | 31. | 24 ,9 |
|       | 16 | 8 ,5     | 20 ,5    | 23.                            | 50. | 27 ,7 |
|       | 17 | 9 ,0     | 19 ,7    | 24.                            | 0.  | 33 ,2 |
| Augg. | 18 | 10 ,0    | 20 ,0    | 24.                            | 10. | 57 ,4 |
|       | 19 | 9 ,5     | 18 ,0    | 24.                            | 21. | 41 ,5 |
|       | 21 | 9 ,0     | 20 ,0    | 24.                            | 44. | 18 ,2 |
|       | 22 | 10 ,0    | 19 ,0    | 24.                            | 56. | 11 A  |
|       | 23 | 11 ,5    | 20 ,0    | 25.                            | 8.  | 20 ,7 |
|       | 24 | 11 ,5    | 20 ,0    | 25.                            | 20. | 57 ,6 |
|       | 25 | 11 ,5    | 20 ,0    | 23.                            | 33. | 47 ,6 |
|       | 27 | 11 ,0    | 21 ,0    | 26.                            | 0.  | 24 ,6 |
|       | 28 | 10 ,3    | 21 ,0    | 26.                            | 14. | 7 ,2  |
|       | 29 | 11 ,0    | 22 ,0    | 26.                            | 28. | 13 ,2 |

| 1774      | Barom.    | Thermom. | Dist. <sup>a</sup> ap. L. S. ° |        |              |
|-----------|-----------|----------|--------------------------------|--------|--------------|
|           |           |          | P. L. D.                       | Gr. D. | Gr. M. S. D. |
| Julii 30  | 27. 10 ,5 | + 22 ,5  | 26.                            | 42.    | 42 ,6        |
| August. 2 | 10 ,5     | 24 ,0    | 27.                            | 27.    | 41 ,5        |
| 3         | 11 ,0     | 24 ,0    | 27.                            | 43.    | 22 ,6        |
| 4         | 10 ,0     | 24 ,0    | 27.                            | 59.    | 17 ,5        |
| 5         | 9 ,5      | 24 ,0    | 28.                            | 15.    | 32 ,3        |
| 6         | 9 ,0      | 24 ,5    | 28.                            | 32.    | 0 ,5         |
| 7         | 11 ,0     | 24 ,0    | 28.                            | 48.    | 42 ,3        |
| 8         | 11 ,0     | 23 ,5    | 29.                            | 5.     | 39 ,7        |
| 9         | 9 ,0      | 24 ,0    | 28.                            | 22.    | 55 ,5        |
| 10        | 8 ,3      | 24 ,0    | 29.                            | 40.    | 28 ,1        |
| 13        | 10 ,5     | 21 ,5    | 30.                            | 34.    | 15 ,9        |
| 23        | 11 ,3     | 19 ,5    | 33.                            | 48.    | 36 ,0        |
| 24        | 10 ,5     | 19 ,0    | 34.                            | 9.     | 10 ,1        |
| 26        | 9 ,5      | 20 ,0    | 34.                            | 50.    | 43 ,5        |
| 28        | 9 ,0      | 18 ,5    | 35.                            | 33.    | 0 ,2         |
| 30        | 10 ,0     | 17 ,5    | 36.                            | 15.    | 48 ,5        |
| Sept. 1   | 10 ,5     | 19 ,0    | 36.                            | 37.    | 23 ,6        |
| 2         | 11 ,0     | 19 ,5    | 36.                            | 59.    | 8 ,3         |
| 3         | 10 ,0     | 20 ,0    | 37.                            | 21.    | 4 ,5         |
| 4         | 10 ,0     | 21 ,0    | 37.                            | 43.    | 6 ,7         |
| 6         | 10 ,5     | 26 ,5    | 38.                            | 5.     | 12 ,8        |
| 8         | 9 ,0      | 18 ,5    | 38.                            | 49.    | 54 ,0        |
| 10        | 10 ,5     | 20 ,5    | 39.                            | 34.    | 53 ,1        |
| 16        | 5 ,7      | 18 ,5    | 40.                            | 20.    | 18 ,6        |
| 17        | 7 ,5      | 15 ,0    | 42.                            | 38.    | 34 ,1        |
| Octob. 8  | 28.       | 13 ,5    | 43.                            | 48.    | 20 ,7        |
| 17        | 2 ,0      | 14 ,0    | 46.                            | 32.    | 11 ,6        |
| 18        | 0 ,0      | 12 ,5    | 51.                            | 20.    | 33 ,0        |
|           | 0 ,5      | 10 ,0    | 54.                            | 33.    | 4 ,6         |
|           | 0 ,5      | 10 ,0    | 54.                            | 55.    | 5 ,2         |

| 1774      | Barom. |       | Thermom. |       | Dist. <sup>o</sup> ap. L. S. |     |       |
|-----------|--------|-------|----------|-------|------------------------------|-----|-------|
|           | P.     | L. D. | Gr.      | D.    | Gr.                          | M.  | S. D. |
| Octob. 19 | 28.    | 0 ,0  | +        | 9 ,0  | 55.                          | 36. | 57 ,2 |
| 20        |        | 0 ,0  |          | 10 ,7 | 55.                          | 38. | 32 ,5 |
| 21        |        | 0 ,5  |          | 10 ,0 | 35.                          | 59. | 59 ,0 |
| 22        |        | 0 ,5  |          | 11 ,0 | 56.                          | 21. | 4 ,9  |
| 24        | 27.    | 10 ,0 |          | 11 ,0 | 57.                          | 3.  | 6 ,6  |
| 25        |        | 6 ,0  |          | 11 ,0 | 57.                          | 23. | 44 ,3 |
| Nov. 1    |        |       | —        | 3 ,0  | 66.                          | 43. | 23 ,1 |
| 29        |        | 6 ,0  |          | 0 ,0  | 66.                          | 53. | 35 ,5 |
| 30        |        | 1 ,7  |          |       |                              |     |       |

| 1775      | Barom. |       | Thermom. |       | Dist. <sup>o</sup> ap. L. S. |     |       |
|-----------|--------|-------|----------|-------|------------------------------|-----|-------|
|           | P.     | L. D. | Gr.      | D.    | Gr.                          | M.  | S. D. |
| Januar. 6 | 27.    | 9 ,9  | +        | 1 ,0  | 67.                          | 38. | 52 ,9 |
| 10        |        | 10 ,0 |          | 1 ,0  | 67.                          | 6.  | 20 ,3 |
| 17        |        | 10 ,5 |          | 1 ,0  | 65.                          | 52. | 48 ,4 |
| Mart. 11  |        | 9 ,5  |          | 9 ,0  | 49.                          | 50. | 58 ,8 |
| 12        |        | 9 ,5  |          | 9 ,0  | 48.                          | 27. | 26 ,8 |
| 15        | 28.    | 2 ,3  |          | 8 ,2  | 47.                          | 16. | 34 ,3 |
| 16        |        | 0 ,5  |          | 7 ,0  | 46.                          | 53. | 2 ,2  |
| 17        | 27.    | 10 ,5 |          | 7 ,3  | 46.                          | 29. | 19 ,4 |
| 18        |        | 9 ,0  |          | 8 ,5  | 46.                          | 5.  | 35 ,0 |
| 20        |        | 5 ,5  |          | 10 ,5 | 45.                          | 18. | 19 ,3 |
| 21        |        | 7 ,5  |          | 10 ,7 | 44.                          | 54. | 41 ,5 |
| 23        |        | 10 ,0 |          | 12 ,0 | 44.                          | 7.  | 23 ,3 |

DISTANTIAE A VERTICE LIMBI SUPERIORIS SOLIS

in Meridiano observatae an. 1775

AB ANGELO DE CESARIS.

| 1775     | Barom. |       | Thermom. |        | Diff. ap. L. S. |     |       |
|----------|--------|-------|----------|--------|-----------------|-----|-------|
|          | P.     | L. D. |          | Gr. D. | Gr.             | M.  | S. D. |
| Junii 14 | 27.    | 10 ,0 | +        | 19 ,0  | 21.             | 54. | 37 ,3 |
| 16       |        | 9 ,0  |          | 19 ,0  | 21.             | 49. | 32 ,7 |
| 18       |        | 7 ,0  |          | 18 ,0  | 21.             | 45. | 56 ,4 |
| 19       |        | 9 ,0  |          | 19 ,0  | 21.             | 44. | 56 ,4 |
| 24       |        | 9 ,0  |          | 21 ,5  | 21.             | 45. | 24 ,3 |
| 26       |        | 9 ,5  |          | 21 ,3  | 21.             | 48. | 33 ,8 |
| 30       |        | 10 ,0 |          | 21 ,0  | 21.             | 59. | 46 ,9 |

## DISTANTIAS A VERTICE LIMBI SUPERIORIS SOLIS

in Meridiano observatae an. 1777

A FRANCISCO REGGIO.

| 1777      | Barom. |       | Thermom. |        | Diff. ap. L. S. |     |       |
|-----------|--------|-------|----------|--------|-----------------|-----|-------|
|           | P.     | L. D. |          | Gr. D. | Gr.             | M.  | S. D. |
| April. 12 | 27.    | 11 ,0 | +        | 14 ,0  | 36.             | 17. | 27 ,5 |
| 16        |        | 8 ,3  |          | 12 ,5  | 34.             | 51. | 37 ,5 |
| 17        |        | 7 ,0  |          | 12 ,5  | 34.             | 30. | 38 ,3 |
| 19        |        | 4 ,0  |          | 11 ,5  | 33.             | 49. | 3 ,5  |
| 26        |        | 10 ,5 |          | 13 ,5  | 31.             | 29. | 35 ,0 |
| 29        |        | 8 ,5  |          | 14 ,0  | 30.             | 33. | 4 ,3  |
| 30        |        | 8 ,0  |          | 13 ,5  | 30.             | 24. | 39 ,0 |
| Maji 1    |        | 7 ,0  |          | 14 ,0  | 29.             | 56. | 38 ,0 |
| 5         |        | 7 ,5  |          | 15 ,0  | 28.             | 46. | 40 ,4 |
| 6         |        | 8 ,3  |          | 17 ,0  | 28.             | 29. | 47 ,5 |
| 8         |        | 9 ,5  |          | 17 ,0  | 27.             | 56. | 57 ,0 |
| 9         |        | 10 ,0 |          | 17 ,0  | 27.             | 40. | 59 ,6 |
| 23        |        | 6 ,0  |          | 13 ,0  | 26.             | 39. | 56 ,8 |

|       |         | Barom.   | Thermom. | Dist. <sup>2</sup> ap. L. S. ° |
|-------|---------|----------|----------|--------------------------------|
| 1777  |         | P. L. D. | Gr. D.   | Gr. M. S. D.                   |
| Maji  | 14      | 27. 3 ,0 | + 14 ,5  | 26. 25. 36 ,2                  |
|       | 15      | 3 ,5     | 13 ,0    | 26. 11. 26 ,4                  |
|       | 17      | 5 ,5     | 12 ,0    | 25. 44. 11 ,8                  |
|       | 18      | 8 ,0     | 13 ,5    | 25. 30. 56 ,0                  |
|       | 19      | 9 ,0     | - 13 ,5  | 25. 18. 0 ,4                   |
|       | 20      | - 11 ,0  | 14 ,0    | 25. 5. 43 ,7                   |
|       | 23      | 9 ,5     | 16 ,0    | 24. 30. 12 ,7                  |
|       | 28      | 9 ,0     | 14 ,5    | 23. 38. 8 ,5                   |
|       | 29      | 10 ,7    | 14 ,0    | 23. 28. 52 ,3                  |
|       | Junii 2 | 10 ,0    | 16 ,5    | 22. 55. 28 ,0                  |
|       | 6       | 9 ,3     | 15 ,8    | 22. 28. 15 ,6                  |
|       | 10      | 6 ,0     | 15 ,8    | 22. 7. 26 ,7                   |
|       | 14      | 6 ,3     | 16 ,5    | 21. 52. 57 ,5                  |
|       | 15      | 9 ,0     | 19 ,0    | 21. 50. 29 ,2                  |
|       | 16      | 9 ,3     | 20 ,0    | 21. 48. 22 ,0                  |
|       | 18      | 9 ,0     | 17 ,0    | 21. 45. 12 ,0                  |
|       | 19      | 10 ,5    | 19 ,0    | 21. 44. 18 ,0                  |
|       | 20      | 7 ,5     | 19 ,0    | 21. 43. 47 ,0                  |
|       | 21      | 6 ,0     | 19 ,0    | 21. 43. 47 ,0                  |
|       | 22      | 7 ,5     | 17 ,5    | 21. 43. 59 ,0                  |
| Julii | 24      | 8 ,5     | 17 ,0    | 21. 45. 52 ,0                  |
|       | 26      | 9 ,3     | 19 ,0    | 21. 49. 30 ,0                  |
|       | 28      | 8 ,0     | 20 ,0    | 21. 54. 59 ,6                  |
|       | 29      | 9 ,0     | 18 ,5    | 21. 57. 55 ,6                  |
|       | Julii 1 | 8 ,6     | 17 ,5    | 22. 5. 32 ,0                   |
|       | 2       | 7 ,5     | 19 ,5    | 22. 9. 56 ,6                   |
|       | 4       | 9 ,0     | 20 ,5    | 22. 19. 58 ,8                  |
|       | 5       | 10 ,0    | 21 ,0    | 22. 25. 34 ,8                  |
|       | 6       | 10 ,0    | 20 ,5    | 22. 31. 40 ,2                  |
|       | 8       | 7 ,0     | 16 ,5    | 22. 44. 45 ,6                  |

| 1777   | Barom. |       | Thermom. |      | Dist. <sup>a</sup> ap. L. S. ♦ |     |                   |
|--------|--------|-------|----------|------|--------------------------------|-----|-------------------|
|        | P.     | L. D. | Gr.      | D.   | Gr.                            | M.  | S. D.             |
| Dec. 9 | 27.    | 9 ,0  | +        | 0 ,0 | 68.                            | 3.  | 28 ,0             |
| 10     |        | 11 ,5 |          | 0 ,0 | 68.                            | 8.  | 48 ,4             |
| 11     | 28.    | 3 ,5  |          | 0 ,0 | 68.                            | 13. | 41 ,2             |
| 12     |        | 3 ,0  |          | 0 ,0 | 68.                            | 18. | 6 ,7              |
| 13     |        | 3 ,0  |          | 0 ,0 | 68.                            | 22. | 8 ,0              |
| 14     |        | 1 ,2  |          | 0 ,0 | 68.                            | 25. | 40 ,7             |
| 16     | 27.    | 10 ,0 |          | 1 ,5 | 68.                            | 31. | 37 ,0             |
| 17     |        | 6 ,7  | —        | 0 ,5 | 68.                            | 33. | 21 ,4             |
| 21     |        | 4 ,5  | +        | 1 ,0 | 68.                            | 37. | 6 ,2              |
| 22     |        | 3 ,5  | —        | 3 ,0 | 68.                            | 36. | 39 ,0             |
| 23     |        | 3 ,5  |          | 9 ,0 | 68.                            | 36. | 5 ,6 <sup>b</sup> |

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in Meridiano observatae an. 1778

A FRANCISCO RECCIO.

| 1778      | Barom. |       | Thermom. |      | Dist. <sup>a</sup> ap. L. S. ♦ |     |                    |
|-----------|--------|-------|----------|------|--------------------------------|-----|--------------------|
|           | P.     | L. D. | Gr.      | D.   | Gr.                            | M.  | S. D.              |
| Januar. 5 | 27.    | 6 ,7  | —        | 0 ,6 | 67.                            | 44. | 8 ,0               |
| 7         |        | 10 ,0 |          | 1 ,0 | 67.                            | 29. | 14 ,3              |
| 8         | 28.    | 0 ,0  |          | 2 ,9 | 67.                            | 21. | 14 ,0              |
| Febr. 10  | 27.    | 10 ,0 | +        | 3 ,0 | 59.                            | 22. | 59 ,0              |
| 20        |        | 4 ,0  |          | 0 ,3 | 55.                            | 56. | 41 ,5              |
| 21        |        | 8 ,0  |          | 1 ,0 | 55.                            | 34. | 51 ,4              |
| 27        |        | 4 ,5  |          | 4 ,5 | 53.                            | 21. | 49 ,4              |
| Mart. 15  |        | 7 ,5  |          | 6 ,0 | 47.                            | 9.  | 43 ,8 <sup>c</sup> |
| 16        |        | 8 ,5  |          | 6 ,0 | 46.                            | 46. | 23 ,8              |
| 17        |        | 10 ,0 |          | 6 ,0 | 46.                            | 27. | 35 ,6              |

| 1778   |    | Barom.    | Thermom. | Dist. <sup>a</sup> ap. L. S. |
|--------|----|-----------|----------|------------------------------|
|        |    | P. I. D.  | Gr. D.   | Gr. M. S. D.                 |
| Mart.  | 18 | 27. 11 ,5 | + 6 ,5   | 45. 58. 43 ,0                |
|        | 23 | 6 ,0      | 10 ,0    | 44. 0. 52 ,5                 |
|        | 24 | 4 ,6      | 10 ,3    | 43. 37. 21 ,0                |
|        | 25 | 2 ,5      | 10 ,0    | 43. 13. 46 ,5                |
|        | 26 | 3 ,0      | 10 ,0    | 42. 50. 12 ,5                |
|        | 27 | 7 ,5      | 10 ,0    | 42. 26. 40 ,7                |
|        | 28 | 11 ,5     | 8 ,0     | 42. 3. 18 ,7                 |
| April. | 2  | 8 ,5      | 14 ,5    | 40. 7. 17 ,8                 |
|        | 4  | 9 ,0      | 14 ,5    | 39. 21. 34 ,6                |
|        | 5  | 10 ,0     | 15 ,0    | 38. 58. 52 ,6                |
|        | 9  | 11 ,5     | 14 ,0    | 37. 28. 58 ,7                |
|        | 10 | 11 ,0     | 14 ,3    | 37. 6. 46 ,0                 |
|        | 11 | 10 ,6     | 15 ,0    | 36. 44. 45 ,0                |
|        | 12 | 10 ,0     | 14 ,5    | 36. 22. 33 ,0                |
|        | 13 | 7 ,6      | 15 ,0    | 36. 1. 7 ,5                  |
|        | 14 | 3 ,2      | 15 ,0    | 35. 39. 25 ,0                |
|        | 15 | 5 ,0      | 12 ,0    | 35. 18. 2 ,0                 |
|        | 16 | 5 ,0      | 12 ,0    | 34. 56. 51 ,8                |
|        | 17 | 6 ,5      | 13 ,5    | 34. 35. 37 ,7                |
| Junii  | 9  | 11 ,0     | 17 ,0    | 22. 13. 15 ,4                |
|        | 10 | 10 ,0     | 17 ,6    | 22. 8. 27 ,2                 |
|        | 11 | 10 ,0     | 17 ,0    | 22. 4. 10 ,3                 |
|        | 13 | 9 ,5      | 20 ,5    | 21. 56. 50 ,0                |
|        | 14 | 9 ,5      | 20 ,0    | 21. 53. 47 ,6                |
|        | 15 | 9 ,0      | 17 ,2    | 21. 51. 3 ,0                 |
|        | 18 | 9 ,5      | 16 ,0    | 21. 45. 30 ,0                |
|        | 19 | 9 ,5      | 17 ,0    | 21. 44. 32 ,8                |
|        | 20 | 9 ,5      | 17 ,0    | 21. 43. 33 ,5                |
|        | 21 | 9 ,8      | 18 ,5    | 21. 43. 42 ,6                |
|        | 22 | 10 ,0     | 19 ,0    | 21. 43. 54 ,0                |

| 1778      | Barem.    | Thermom. | Dist. ap. L. S. |
|-----------|-----------|----------|-----------------|
|           | P. L. D.  | Gr. D.   | Gr. M. S. D.    |
| Junii 23  | 27. 9 ,6  | + 20 ,0  | 21. 44. 33 ,9   |
| 24        | 9 ,0      | 20 ,5    | 21. 45. 38 ,0   |
| 25        | 9 ,0      | 18 ,5    | 21. 47. 4 ,3    |
| 26        | 10 ,0     | 20 ,0    | 21. 48. 55 ,3   |
| 27        | 10 ,0     | 21 ,0    | 21. 51. 13 ,8   |
| Julii 1   | 9 ,0      | 19 ,0    | 22. 4. 28 ,7    |
| 19        | 7 ,7      | 22 ,0    | 24. 21. 50 ,0   |
| 21        | 7 ,5      | 21 ,5    | 24. 44. 14 ,7*  |
| 22        | 8 ,0      | 20 ,6    | 24. 56. 13 ,0   |
| 23        | 11 ,0     | 21 ,0    | 25. 8. 25 ,8    |
| 24        | 10 ,5     | 22 ,0    | 25. 21. 2 ,0    |
| 25        | 10 ,5     | 23 ,0    | 25. 33. 47 ,6   |
| 26        | 8 ,5      | 23 ,3    | 25. 47. 8 ,7*   |
| 27        | 9 ,0      | 24 ,0    | 26. 0. 28 ,6    |
| 28        | 10 ,5     | 24 ,0    | 26. 14. 17 ,0   |
| 29        | 9 ,0      | 24 ,0    | 26. 28. 24 ,4   |
| August. 1 | 8 ,5      | 21 ,5    | 27. 12. 40 ,7   |
| 2         | 10 ,3     | 20 ,0    | 27. 27. 55 ,7   |
| 4         | 10 ,0     | 21 ,0    | 27. 59. 26 ,0   |
| 11        | 10 ,5     | 22 ,0    | 29. 58. 15 ,7*  |
| 16        | 10 ,0     | 23 ,0    | 31. 30. 37 ,8   |
| 19        | 28. 0 ,0  | 20 ,0    | 32. 28. 36 ,9   |
| 20        | 27. 11 ,5 | 19 ,6    | 32. 48. 29 ,0   |
| 21        | 11 ,0     | 20 ,5    | 33. 8. 27 ,4    |
| 25        | 10 ,5     | 23 ,0    | 34. 30. 17 ,4   |
| 26        | 9 ,0      | 23 ,0    | 34. 51. 7 ,6    |
| 27        | 6 ,5      | 22 ,0    | 35. 12. 8 ,7    |
| 29        | 11 ,5     | 16 ,0    | 35. 54. 35 ,2   |
| 30        | 9 ,0      | 17 ,0    | 36. 16. 7 ,8    |
| 31        | 7 ,0      | 17 ,0    | 36. 37. 29 ,4*  |

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1784.

|       |    | Barom.    | Thermom. | Dist. <sup>*</sup> | ap. L. S. <sup>o</sup> |
|-------|----|-----------|----------|--------------------|------------------------|
| 1778  |    | P. L. D.  | Gr. D.   | Gr. M. S. D.       |                        |
| Sept. | 1  | 27. 8 ,0  | + 16 ,0  | 36. 39.            | 28 ,7                  |
|       | 3  | 7 ,0      | 16 ,5    | 37. 43.            | 22 ,4                  |
|       | 8  | 5 ,3      | 14 ,3    | 39. 35.            | 16 ,5                  |
|       | 9  | 8 ,0      | 17 ,5    | 39. 57.            | 53 ,5                  |
|       | 10 | 8 ,5      | 17 ,3    | 40. 20.            | 44 ,7                  |
|       | 12 | 8 ,0      | 15 ,0    | 41. 6.             | 27 ,9                  |
|       | 13 | 9 ,5      | 16 ,0    | 41. 29.            | 22 ,6                  |
|       | 14 | 10 ,0     | 17 ,0    | 41. 52.            | 29 ,2                  |
|       | 15 | 10 ,5     | 17 ,5    | 42. 15.            | 27 ,2                  |
| Dec.  | 2  | 6 ,5      | 4 ,0     | 67. 11.            | 46 ,3                  |
|       | 3  | 6 ,0      | 4 ,0     | 67. 20.            | 22 ,7                  |
|       | 5  | 3 ,6      | 4 ,5     | 67. 36.            | 4 ,0                   |
|       | 6  | 4 ,5      | 6 ,0     | 67. 43.            | 33 ,0                  |
|       | 7  | 9 ,0      | 5 ,5     | 67. 50.            | 4 ,3                   |
|       | 9  | 28. 0 ,0  | 4 ,5     | 68. 2.             | 27 ,2                  |
|       | 10 | 27. 10 ,5 | 5 ,5     | 68. 7.             | 52 ,3                  |
|       | 11 | 10 ,0     | 6 ,0     | 68. 12.            | 52 ,4                  |
|       | 17 | 11 ,2     | 5 ,0     | 68. 33.            | 8 ,1                   |
|       | 18 | 11 ,6     | 3 ,0     | 68. 34.            | 56 ,7                  |
|       | 19 | 28. 0 ,0  | 3 ,0     | 68. 36.            | 1 ,6                   |
|       | 20 | 27. 10 ,5 | 3 ,0     | 68. 36.            | 55 ,8                  |
|       | 21 | 28. 0 ,0  | 3 ,0     | 68. 37.            | 19 ,0                  |
|       | 22 | 0 ,7      | 1 ,2     | 68. 36.            | 53 ,2                  |
|       | 23 | 0 ,3      | 4 ,0     | 68. 36.            | 24 ,3                  |
|       | 25 | 0 ,5      | 4 ,0     | 68. 33.            | 57 ,5                  |
|       | 27 | 3 ,0      | 3 ,0     | 68. 29.            | 5 ,5                   |
|       | 28 | 27. 11 ,7 | 3 ,0     | 68. 26.            | 13 ,7                  |
|       | 29 | 7 ,0      | 3 ,0     | 68. 22.            | 54 ,2                  |
|       | 31 | 6 ,0      | 4 ,5     | 68. 14.            | 34 ,0                  |

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A FRANCISCO REGGIO.

| 1779      | Barom. |       | Thermom. |      | Dist. <sup>a</sup> ap. L. S. $\odot$ |     |         |
|-----------|--------|-------|----------|------|--------------------------------------|-----|---------|
|           | P.     | L. D. | Gr.      | D.   | Gr.                                  | M.  | S. D.   |
| Januar. 1 | 27.    | 0 ,5  | +        | 3 ,0 | 68.                                  | 8.  | 46 ,8   |
| 4         | 28.    | 1 ,3  |          | 1 ,0 | 67.                                  | 52. | 37 ,5   |
| 8         |        | 0 ,0  |          | 1 ,0 | 67.                                  | 23. | 22 ,6   |
| 9         | 27.    | 11 ,5 | —        | 2 ,0 | 67.                                  | 14. | 58 ,1   |
| 10        | 28.    | 1 ,0  |          | 2 ,0 | 67.                                  | 6.  | 8 ,4    |
| 11        |        | 1 ,3  |          | 1 ,0 | 66.                                  | 56. | 54 ,2   |
| 12        |        | 1 ,0  |          | 0 ,0 | 66.                                  | 47. | 10 ,1   |
| 13        | 27.    | 10 ,5 |          | 1 ,0 | 66.                                  | 36. | 57 ,3   |
| 14        |        | 10 ,5 |          | 1 ,0 | 66.                                  | 26. | 37 ,7   |
| 15        |        | 10 ,7 |          | 1 ,0 | 66.                                  | 19. | 38 ,6   |
| 16        |        | 11 ,0 |          | 1 ,0 | 66.                                  | 4.  | 30 ,2 * |
| 18        | 28.    | 1 ,3  |          | 0 ,6 | 65.                                  | 40. | 23 ,3   |
| 19        |        | 0 ,7  |          | 0 ,5 | 65.                                  | 27. | 55 ,4   |
| 20        |        | 0 ,5  |          | 0 ,0 | 65.                                  | 15. | 2 ,4    |
| 21        |        | 0 ,7  | +        | 0 ,3 | 65.                                  | 1.  | 55 ,1   |
| 22        | 27.    | 10 ,0 |          | 0 ,0 | 64.                                  | 48. | 20 ,4   |
| 23        |        | 11 ,5 |          | 1 ,5 | 64.                                  | 34. | 14 ,1   |
| 24        | 28.    | 1 ,6  |          | 0 ,2 | 64.                                  | 19. | 45 ,4   |
| 25        | 27.    | 11 ,0 | —        | 0 ,5 | 64.                                  | 5.  | 8 ,6 *  |
| 26        |        | 11 ,0 |          | 0 ,0 | 63.                                  | 50. | 19 ,6   |
| 29        | 28.    | 1 ,5  | +        | 3 ,0 | 63.                                  | 3.  | 11 ,6   |
| 30        |        | 1 ,3  |          | 3 ,0 | 62.                                  | 46. | 38 ,5   |
| Febr. 1   |        | 1 ,0  |          | 3 ,0 | 62.                                  | 13. | 12 ,3   |
| 2         |        | 0 ,0  |          | 3 ,0 | 61.                                  | 55. | 52 ,3   |
| 4         | 27.    | 10 ,5 |          | 2 ,5 | 61.                                  | 10. | 25 ,4 * |

| 1779    | Barom.    | Thermom. | Dist. <sup>a</sup> ap. L. S. |
|---------|-----------|----------|------------------------------|
|         | P. L. D.  | Gr. D.   | Gr. M. S. D.                 |
| Febr. 6 | 27. 11 ,0 | + 2 ,3   | 60. 43. 57 ,2                |
| 8       | 9 ,5      | 6 ,0     | 60. 6. 18 ,1                 |
| 10      | 28. 1 ,0  | 4 ,3     | 59. 27. 56 ,2                |
| 11      | 0 ,0      | 4 ,5     | 59. 8. 18 ,7                 |
| 14      | 2 ,0      | 4 ,7     | 58. 7. 51 ,2                 |
| 15      | 2 ,3      | 4 ,5     | 57. 47. 23 ,5                |
| 17      | 2 ,5      | 6 ,0     | 57. 5. 36 ,3                 |
| 18      | 2 ,5      | 6 ,5     | 56. 44. 40 ,7                |
| 19      | 1 ,0      | 7 ,5     | 56. 23. 19 ,6                |
| 21      | 1 ,0      | 8 ,0     | 55. 40. 17 ,4                |
| 22      | 0 ,0      | 8 ,0     | 55. 18. 24 ,8                |
| 23      | 1 ,0      | 8 ,0     | 54. 56. 30 ,1                |
| 24      | 0 ,3      | 8 ,3     | 54. 34. 43 ,6                |
| 26      | 28. 1 ,3  | 9 ,3     | 53. 50. 4 ,0                 |
| 27      | 3 ,0      | 9 ,0     | 53. 27. 39 ,4                |
| Mart. 1 | 0 ,0      | 13 ,0    | 52. 42. 14 ,8                |
| 3       | 27. 11 ,5 | 11 ,0    | 51. 56. 29 ,0                |
| 4       | 10 ,6     | 11 ,0    | 31. 33. 28 ,5                |
| 6       | 28. 2 ,3  | 4 ,5     | 50. 47. 3 ,5                 |
| 7       | 27. 11 ,5 | 7 ,5     | 50. 23. 49 ,9                |
| 10      | 11 ,8     | 5 ,0     | 49. 13. 36 ,8                |
| 11      | 11 ,0     | 4 ,0     | 48. 50. 6 ,1                 |
| 13      | 10 ,5     | 9 ,0     | 48. 2. 57 ,9                 |
| 14      | 10 ,6     | 8 ,5     | 47. 39. 27 ,9                |
| 15      | 9 ,8      | 9 ,5     | 47. 15. 45 ,1                |
| 18      | 8 ,0      | 9 ,0     | 46. 4. 41 ,5                 |
| 19      | 8 ,0      | 10 ,5    | 45. 41. 3 ,2                 |
| 20      | 9 ,5      | 11 ,0    | 45. 17. 18 ,9                |
| 23      | 28. 1 ,6  | 10 ,0    | 44. 6. 21 ,5                 |
| 24      | 0 ,8      | 10 ,2    | 43. 42. 43 ,9                |

| 1779     | Barom.    | Thermom. | Dist. <sup>a</sup> ap. L. S. ° |
|----------|-----------|----------|--------------------------------|
|          | P. L. D.  | Gr. D.   | Gr. M. S. D.                   |
| Mart. 25 | 28. 0 ,0  | + 11 ,0  | 43. 19. 0 ,6                   |
| 28       | 27. 10 ,5 | 11 ,0    | 42. 8. 47 ,6                   |
| 29       | 19 ,0     | 12 ,5    | 41. 45. 25 ,1                  |
| 30       | 10 ,0     | 13 ,0    | 41. 22. 15 ,0                  |
| 31       | 11 ,0     | 11 ,5    | 40. 58. 56 ,0 *                |
| April. 2 | 28. 3 ,0  | 9 ,0     | 40. 12. 46 ,6                  |
| 4        | 1 ,5      | 12 ,0    | 39. 26. 59 ,8                  |
| 7        | 0 ,0      | 13 ,3    | 38. 19. 3 ,0                   |
| 8        | 27. 10 ,5 | 14 ,0    | 37. 56. 34 ,7                  |
| 9        | 8 ,0      | 14 ,0    | 37. 34. 14 ,9                  |
| 10       | 10 ,0     | 11 ,0    | 37. 11. 59 ,6                  |
| 11       | 11 ,0     | 12 ,0    | 36. 49. 55 ,7                  |
| 12       | 11 ,0     | 14 ,0    | 36. 28. 3 ,8                   |
| 13       | 11 ,0     | 14 ,5    | 36. 6. 10 ,7                   |
| 14       | 11 ,5     | 15 ,5    | 35. 44. 37 ,7                  |
| 15       | 10 ,5     | 16 ,5    | 35. 23. 8 ,8                   |
| 17       | 10 ,0     | 16 ,8    | 34. 40. 47 ,1                  |
| 19       | 28. 0 ,0  | 16 ,3    | 33. 58. 57 ,9                  |
| 20       | 0 ,0      | 11 ,0    | 33. 38. 17 ,8                  |
| 21       | 27. 11 ,0 | 17 ,0    | 33. 17. 50 ,3                  |
| 22       | 28. 0 ,0  | 18 ,3    | 32. 57. 36 ,3                  |
| 24       | 27. 8 ,3  | 17 ,0    | 32. 17. 45 ,0                  |
| 25       | 6 ,5      | 14 ,7    | 31. 58. 5 ,2                   |
| 26       | 8 ,0      | 14 ,3    | 31. 38. 31 ,2                  |
| 27       | 8 ,3      | 14 ,0    | 31. 19. 33 ,5                  |
| 28       | 9 ,0      | 14 ,0    | 31. 0. 36 ,2                   |
| Maji 1   | 9 ,0      | 15 ,5    | 29. 5. 15 ,3                   |
| Junii 5  | 7 ,6      | 16 ,5    | 22. 37. 26 ,5                  |
| 6        | 7 ,6      | 17 ,0    | 22. 31. 5 ,4                   |
| 7        | 8 ,8      | 17 ,3    | 22. 25. 4 ,8                   |

| 1779     | Barom. |    |    | Thermom. |    |     | Dist. <sup>1</sup> ap. L. S. & |    |    |
|----------|--------|----|----|----------|----|-----|--------------------------------|----|----|
|          | P.     | L. | D. | Gr.      | D. | Gr. | M.                             | S. | D. |
| Junii 8  | 27.    | 8  | ,5 | + 19     | ,0 | 22. | 19.                            | 25 | ,4 |
| 10       |        | 7  | ,6 | 18       | ,0 | 22. | 9.                             | 23 | ,9 |
| 15       |        | 6  | ,3 | 15       | ,0 | 21. | 51.                            | 37 | ,0 |
| 18       |        | 6  | ,7 | 18       | ,0 | 21. | 45.                            | 53 | ,2 |
| 19       |        | 6  | ,5 | 18       | ,0 | 21. | 44.                            | 44 | ,4 |
| 22       |        | 9  | ,0 | 17       | ,3 | 21. | 43.                            | 49 | ,3 |
| 26       |        | 6  | ,5 | 17       | ,0 | 21. | 48.                            | 30 | ,4 |
| 27       |        | 7  | ,0 | 19       | ,0 | 21. | 50.                            | 42 | ,7 |
| 28       |        | 10 | ,0 | 19       | ,0 | 21. | 53.                            | 17 | ,0 |
| 29       |        | 10 | ,2 | 20       | ,0 | 21. | 56.                            | 20 | ,0 |
| Julii 30 |        | 9  | ,5 | 21       | ,5 | 21. | 59.                            | 41 | ,3 |
| 1        |        | 7  | ,0 | 22       | ,0 | 22. | 3.                             | 35 | ,9 |
| 3        |        | 7  | ,3 | 20       | ,0 | 22. | 12.                            | 23 | ,1 |
| 8        |        | 7  | ,0 | 19       | ,3 | 22. | 41.                            | 28 | ,2 |
| 9        |        | 8  | ,2 | 19       | ,6 | 22. | 48.                            | 28 | ,9 |
| 10       |        | 9  | ,6 | 20       | ,0 | 22. | 55.                            | 53 | ,0 |
| 11       |        | 11 | ,0 | 20       | ,0 | 23. | 3.                             | 40 | ,4 |
| 13       |        | 9  | ,0 | 23       | ,0 | 23. | 20.                            | 18 | ,9 |
| 15       | 28.    | 0  | ,0 | 21       | ,0 | 23. | 38.                            | 30 | ,6 |
| 16       |        | 0  | ,0 | 20       | ,0 | 23. | 48.                            | 6  | ,7 |
| 17       | 27.    | 10 | ,7 | 21       | ,0 | 23. | 58.                            | 6  | ,9 |
| 18       |        | 10 | ,0 | 22       | ,0 | 24. | 8.                             | 31 | ,0 |
| 19       |        | 9  | ,5 | 22       | ,3 | 24. | 19.                            | 17 | ,8 |
| 21       |        | 9  | ,5 | 23       | ,0 | 24. | 41.                            | 41 | ,1 |
| 22       |        | 9  | ,0 | 22       | ,8 | 24. | 53.                            | 39 | ,4 |
| 24       |        | 7  | ,0 | 22       | ,0 | 25. | 18.                            | 2  | ,9 |
| 25       |        | 7  | ,5 | 21       | ,0 | 25. | 30.                            | 48 | ,5 |
| 29       |        | 8  | ,5 | 21       | ,3 | 26. | 25.                            | 6  | ,6 |
| 30       |        | 8  | ,5 | 22       | ,0 | 26. | 39.                            | 25 | ,9 |
| 31       |        | 8  | ,2 | 21       | ,0 | 26. | 53.                            | 55 | ,6 |

| 1779      | Barom.   | Thermom. | Dist. <sup>a</sup> ap. L. S. |
|-----------|----------|----------|------------------------------|
|           | P. L. D. | Gr. D.   | Gr. M. S. D.                 |
| August. 1 | 27. 9 ,0 | + 19 ,7  | 27. 9. 0 ,0                  |
| 2         | 10 ,3    | 19 ,6    | 27. 24. 17 ,8                |
| 4         | 9 ,3     | 21 ,0    | 27. 35. 40 ,7                |
| 12        | 7 ,5     | 19 ,5    | 30. 12. 1 ,6                 |
| Dec. 14   | 8 ,6     | 21 ,0    | 30. 48. 37 ,5                |
| 6         | 11 ,0    | 5 ,0     | 67. 41. 38 ,8                |
| 9         | 7 ,0     | 3 ,3     | 68. 1. 3 ,4                  |
| 10        | 7 ,7     | 4 ,0     | 68. 6. 38 ,0                 |
| 15        | 6 ,8     | 5 ,0     | 68. 27. 31 ,9                |
| 16        | 7 ,0     | 4 ,0     | 68. 30. 26 ,3                |
| 18        | 7 ,5     | 3 ,0     | 68. 34. 21 ,3                |
| 30        | 8 ,0     | 3 ,3     | 68. 19. 56 ,5                |

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in Meridiano observatae an. 1780

a FRANCISCO REGGIO.

| 1780      | Barom.    | Thermom. | Dist. <sup>a</sup> ap. L. S. |
|-----------|-----------|----------|------------------------------|
|           | P. L. D.  | Gr. D.   | Gr. M. S. D.                 |
| Januar. 1 | 27. 11 ,5 | + 1 ,5   | 68. 11. 2 ,3                 |
| 2         | 10 ,0     | 1 ,5     | 68. 6. 0 ,2                  |
| 3         | 6 ,6      | 2 ,0     | 68. 0. 16 ,0                 |
| 4         | 7 ,0      | 2 ,0     | 67. 54. 15 ,8                |
| 7         | 8 ,0      | 0 ,5     | 67. 33. 16 ,6                |
| 8         | 11 ,5     | 3 ,0     | 67. 25. 24 ,6                |
| 12        | 5 ,0      | 1 ,0     | 66. 49. 31 ,3                |
| 13        | 7 ,0      | 1 ,0     | 66. 39. 35 ,1                |
| 20        | 5 ,0      | 2 ,0     | 65. 18. 16 ,3                |

| 1780    | Barom.   | Thermom. | Dift. <sup>o</sup> ap. L. S. |
|---------|----------|----------|------------------------------|
|         | P. L. D. | Gr. D.   | Gr. M. S. D.                 |
| Febr. 9 | 28. 0 ,0 | + 2 ,6   | 59. 51. 43 ,7                |
| 10      | 27. 0 ,6 | 2 ,6     | 59. 32. 33 ,0                |
| 12      | 27. 9 ,5 | 3 ,0     | 58. 53. 8 ,2                 |
| 13      | 10 ,0    | 2 ,0     | 58. 33. 8 ,7                 |
| 14      | 9 ,5     | 2 ,0     | 58. 12. 42 ,6                |
| 15      | 8 ,0     | 0 ,0     | 57. 52. 23 ,5                |
| 16      | 5 ,0     | 4 ,5     | 57. 31. 50 ,4                |
| 19      | 7 ,5     | 0 ,0     | 56. 28. 31 ,3                |
| 23      | 6 ,0     | 3 ,0     | 55. 1. 48 ,0                 |
| 24      | 10 ,7    | 1 ,5     | 54. 39. 47 ,2                |
| 25      | 11 ,5    | 1 ,0     | 54. 17. 35 ,8                |
| 27      | 8 ,0     | 4 ,0     | 53. 32. 49 ,1                |
| 28      | 8 ,5     | 4 ,0     | 53. 10. 17 ,1                |
| Mart. 1 | 9 ,0     | 6 ,0     | 52. 24. 42 ,2                |
| 2       | 9 ,5     | 5 ,5     | 52. 1. 42 ,9                 |
| 5       | 28. 1 ,0 | 7 ,5     | 50. 52. 31 ,7                |
| 7       | 0 ,5     | 6 ,5     | 50. 5. 44 ,3                 |
| 8       | 0 ,0     | 10 ,0    | 49. 42. 38 ,4                |
| 9       | 1 ,2     | 9 ,6     | 49. 19. 8 ,5                 |
| 10      | 0 ,2     | 8 ,0     | 48. 55. 42 ,8                |
| 14      | 0 ,3     | 9 ,0     | 48. 32. 4 ,7                 |
| 13      | 0 ,0     | 10 ,3    | 47. 45. 1 ,6                 |
| 15      | 27. 8 ,7 | 11 ,3    | 46. 57. 48 ,2                |
| 17      | 9 ,0     | 10 ,0    | 46. 10. 35 ,7                |
| 18      | 11 ,3    | 11 ,0    | 45. 46. 35 ,2                |
| 19      | 8 ,5     | 12 ,0    | 45. 23. 0 ,3                 |
| 20      | 10 ,0    | 12 ,0    | 44. 59. 17 ,9                |
| 21      | 11 ,5    | 11 ,5    | 44. 35. 41 ,3                |
| 23      | 8 ,0     | 12 ,0    | 43. 48. 30 ,2                |
| 24      | 9 ,5     | 10 ,0    | 43. 25. 0 ,0                 |

| 1780     | Barom.    | Thermom. | Dift. <sup>a</sup> ap. L. S. ° |
|----------|-----------|----------|--------------------------------|
|          | P. L. D.  | Gr. D.   | Gr. M. S. D.                   |
| Mart. 25 | 27. 11 ,0 | + 9 ,6   | 43. 1. 25 ,1                   |
| 27       | 10 ,5     | 12 ,3    | 42. 14. 37 ,3                  |
| 28       | 10 ,0     | 12 ,7    | 41. 51. 9 ,3                   |
| April. 1 | 6 ,0      | 12 ,5    | 40. 18. 23 ,8                  |
| 2        | 7 ,0      | 12 ,5    | 39. 55. 23 ,7                  |
| 5        | 4 ,0      | 9 ,0     | 38. 46. 55 ,5                  |
| 7        | 5 ,0      | 9 ,0     | 38. 1. 55 ,8                   |
| 10       | 6 ,0      | 8 ,5     | 36. 55. 5 ,3                   |
| 11       | 6 ,0      | 9 ,3     | 36. 33. 7 ,8                   |
| 16       | 7 ,0      | 9 ,5     | 34. 45. 48 ,5*                 |
| 17       | 7 ,5      | 12 ,0    | 34. 24. 36 ,9                  |
| 18       | 7 ,2      | 13 ,0    | 34. 3. 46 ,8                   |
| 19       | 6 ,0      | 12 ,0    | 33. 43. 7 ,3                   |
| 20       | 7 ,0      | 10 ,0    | 33. 22. 37 ,8                  |
| 21       | 8 ,6      | 11 ,0    | 33. 2. 21 ,5                   |
| 22       | 9 ,3      | 11 ,0    | 32. 42. 16 ,5                  |
| 23       | 8 ,0      | 12 ,0    | 32. 22. 26 ,0                  |
| 24       | 6 ,3      | 12 ,0    | 32. 2. 43 ,6                   |
| 27       | 7 ,0      | 13 ,5    | 31. 3. 2 ,6                    |
| 28       | 8 ,0      | 16 ,5    | 30. 46. 14 ,0                  |
| 29       | 10 ,0     | 15 ,6    | 30. 27. 41 ,5                  |
| 30       | 9 ,0      | 17 ,0    | 30. 9. 27 ,0                   |
| Maij. 5  | 10 ,0     | 18 ,2    | 28. 41. 46 ,5                  |
| 7        | 9 ,0      | 17 ,0    | 28. 8. 47 ,3                   |
| 9        | 8 ,7      | 19 ,0    | 27. 36. 25 ,7                  |
| 10       | 8 ,6      | 18 ,5    | 27. 30. 46 ,6                  |
| 13       | 8 ,8      | 16 ,0    | 26. 35. 44 ,6                  |
| 17       | 8 ,5      | 15 ,5    | 25. 40. 13 ,0                  |
| 19       | 9 ,5      | 17 ,0    | 25. 48. 21 ,7                  |
| 20       | 8 ,7      | 18 ,3    | 25. 11. 59 ,0                  |

|       |     | Barom.    | Thermom. | Diff. <sup>a</sup> ap. L. S. |
|-------|-----|-----------|----------|------------------------------|
| 1780  |     | P. L. D.  | Gr. D.   | Gr. M. S. D.                 |
| Maji  | 26  | 27. 11 ,5 | + 17 ,0  | 23. 54. 48 ,9                |
|       | 27. | 10 ,0     | 19 ,5    | 23. 44. 52 ,9                |
|       | 28  | 10 ,5     | 19 ,3    | 23. 35. 22 ,3                |
|       | 29  | 11 ,0     | 19 ,5    | 23. 26. 7 ,0                 |
|       | 31  | 10 ,0     | 21 ,0    | 23. 8. 53 ,7                 |
| Junii | 4   | 8 ,6      | 22 ,0    | 22. 39. 9 ,3*                |
|       | 5   | 9 ,0      | 21 ,5    | 22. 32. 32 ,0*               |
|       | 7   | 6 ,7      | 20 ,3    | 22. 20. 52 ,1                |
|       | 9   | 7 ,0      | 17 ,0    | 22. 10. 43 ,0*               |
|       | 12  | 6 ,5      | 18 ,0    | 21. 58. 19 ,0                |
|       | 14  | 8 ,5      | 18 ,8    | 21. 52. 13 ,0                |
|       | 15  | 7 ,5      | 19 ,8    | 21. 50. 48 ,0                |
|       | 16  | 7 ,0      | 17 ,5    | 21. 47. 48 ,5                |
|       | 20  | 11 ,0     | 21 ,0    | 21. 43. 47 ,2                |
|       | 21  | 10 ,5     | 22 ,0    | 21. 43. 52 ,8                |
| Julii | 22  | 9 ,5      | 20 ,5    | 21. 44. 16 ,2                |
|       | 23  | 10 ,2     | 19 ,0    | 21. 45. 6 ,8                 |
|       | 24  | 16 ,3     | 21 ,3    | 21. 46. 22 ,0                |
|       | 25  | 10 ,5     | 22 ,0    | 21. 47. 59 ,3                |
|       | 26  | 8 ,5      | 22 ,5    | 21. 50. 10 ,5                |
|       | 27  | 10 ,0     | 20 ,0    | 21. 52. 29 ,3                |
|       | 28  | 10 ,5     | 19 ,0    | 21. 55. 29 ,2                |
|       | 29  | 11 ,5     | 20 ,0    | 21. 58. 47 ,5                |
|       | 30  | 10 ,5     | 21 ,5    | 22. 2. 32 ,3                 |
|       | 1   | 11 ,0     | 22 ,0    | 22. 6. 36 ,4                 |
|       | 2   | 10 ,3     | 23 ,0    | 22. 11. 14 ,2                |
|       | 3   | 10 ,0     | 22 ,5    | 22. 16. 6 ,5                 |
|       | 4   | 10 ,5     | 20 ,0    | 22. 21. 30 ,1                |
|       | 6   | 10 ,5     | 23 ,3    | 22. 33. 21 ,3                |
|       | 7   | 7 ,0      | 23 ,0    | 22. 39. 52 ,2                |

| 1780  | Barom. |          | Thermom. |    | Dist. ap. L. S. |     |         |
|-------|--------|----------|----------|----|-----------------|-----|---------|
|       | P.     | L. D.    | Gr.      | D. | Gr.             | M.  | S. D.   |
| Julii | 8      | 27. 8 ,5 | + 20     | ,3 | 22.             | 46. | 41 ,8   |
|       | 9      | 9 ,0     | 22 ,0    |    | 22.             | 54. | 11 ,7 * |
|       | 10     | 8 ,5     | 22 ,0    |    | 23.             | 1.  | 43 ,6   |
|       | 12     | 8 ,6     | 19 ,0    |    | 23.             | 18. | 12 ,8   |
|       | 15     | 9 ,0     | 20 ,0    |    | 23.             | 45. | 37 ,4   |
|       | 18     | 8 ,5     | 21 ,0    |    | 24.             | 16. | 24 ,3   |
|       | 20     | 9 ,0     | 20 ,0    |    | 24.             | 38. | 44 ,0   |
|       | 22     | 7 ,0     | 21 ,0    |    | 25.             | 2.  | 24 ,3   |
|       | 26     | 9 ,5     | 22 ,5    |    | 25.             | 53. | 50 ,3   |
|       | 27     | 10 ,0    | 22 ,0    |    | 26.             | 7.  | 28 ,0   |
|       | 28     | 10 ,0    | 23 ,5    |    | 26.             | 21. | 32 ,6   |
|       | 30     | 10 ,7    | 21 ,0    |    | 26.             | 50. | 21 ,6   |
|       | 31     | 10 ,5    | 22 ,0    |    | 27.             | 5.  | 14 ,6   |
| Aug.  | 1      | 9 ,6     | 23 ,0    |    | 27.             | 20. | 23 ,0   |
|       | 2      | 9 ,3     | 21 ,3    |    | 27.             | 35. | 54 ,4   |
|       | 5      | 8 ,5     | 21 ,0    |    | 28.             | 24. | 6 ,0    |
|       | 6      | 9 ,0     | 20 ,0    |    | 28.             | 40. | 35 ,0   |
|       | 7      | 8 ,3     | 19 ,5    |    | 28.             | 57. | 38 ,6   |
|       | 10     | 8 ,3     | 17 ,7    |    | 29.             | 49. | 39 ,6   |
|       | 11     | 9 ,3     | 20 ,0    |    | 30.             | 7.  | 32 ,0   |
|       | 12     | 8 ,5     | 19 ,5    |    | 30.             | 25. | 40 ,7   |
|       | 13     | 8 ,5     | 20 ,6    |    | 30.             | 43. | 58 ,2   |
|       | 22     | 10 ,0    | 19 ,5    |    | 33.             | 38. | 59 ,0   |
|       | 26     | 9 ,5     | 17 ,5    |    | 35.             | 1.  | 47 ,5   |
|       | 27     | 8 ,0     | 19 ,5    |    | 35.             | 22. | 54 ,0 * |
|       | 30     | 11 ,5    | 17 ,5    |    | 36.             | 27. | 9 ,8    |
|       | 31     | 11 ,5    | 18 ,0    |    | 36.             | 48. | 45 ,2   |
| Sept. | 3      | 7 ,7     | 20 ,0    |    | 37.             | 54. | 53 ,0   |
| Nov.  | 27     | 9 ,5     | 5 ,0     |    | 66.             | 28. | 27 ,6   |
| Dec.  | 6      | 28. 9 ,0 | 3 ,0     |    | 67.             | 47. | 4 ,5    |

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| Dec. <sup>i</sup> | 1780      | Barom. |       | Thermom. |       | Dist. <sup>a</sup> ap. L. S. $\odot$ |    |       |
|-------------------|-----------|--------|-------|----------|-------|--------------------------------------|----|-------|
|                   |           | P.     | L. D. | Gr.      | D.    | Gr.                                  | M. | S. D. |
| 7                 | 27. 11 ,6 | +      | 2 ,3  | 67.      | 53.   | 36 ,8                                |    |       |
| 8                 | 8 ,3      | 0 ,6   | 67.   | 59.      | 49 ,0 |                                      |    |       |
| 9                 | 10 ,5     | 1 ,6   | 68.   | 55.      | 26 ,6 |                                      |    |       |
| 12                | 10 ,0     | 1 ,0   | 68.   | 59.      | 32 ,8 |                                      |    |       |
| 13                | 10 ,0     | 1 ,6   | 68.   | 23.      | 24 ,8 |                                      |    |       |
| 17                | 11 ,6     | 1 ,6   | 68.   | 33.      | 57 ,5 |                                      |    |       |
| 19                | 11 ,0     | — 2 ,0 | 68.   | 36.      | 31 ,3 |                                      |    |       |
| 26                | 11 ,5     | 1 ,0   | 68.   | 30.      | 27 ,2 |                                      |    |       |

DISTANTIAE A VERTICE LIMBI SUPERIORIS SOLIS

in Meridiano observatae an. 1781

a FRANCISCO REGGIO.

| Januar. | 1781     | Barom. |       | Thermom. |                    | Dist. <sup>a</sup> ap. L. S. $\odot$ |    |       |
|---------|----------|--------|-------|----------|--------------------|--------------------------------------|----|-------|
|         |          | P.     | L. D. | Gr.      | D.                 | Gr.                                  | M. | S. D. |
| 4       | 27. 5 ,0 | +      | 3 ,0  | 67.      | 49.                | 4 ,6 <sup>b</sup>                    |    |       |
| 5       | 7 ,5     | 1 ,0   | 67.   | 42.      | 19 ,4              |                                      |    |       |
| 6       | 8 ,5     | 0 ,0   | 67.   | 34.      | 52 ,0 <sup>c</sup> |                                      |    |       |
| 7       | 9 ,3     | — 0 ,5 | 67.   | 26.      | 56 ,6              |                                      |    |       |
| 8       | 9 ,6     | 0 ,6   | 67.   | 18.      | 48 ,2              |                                      |    |       |
| 11      | 28. 0 ,5 | +      | 1 ,5  | 66.      | 51.                | 41 ,0                                |    |       |
| 20      | 27. 8 ,3 | 0 ,0   | 65.   | 8.       | 17 ,3              |                                      |    |       |
| 27      | 8 ,5     | 2 ,7   | 63.   | 26.      | 27 ,4              |                                      |    |       |
| 28      | 28. 2 ,2 | 2 ,0   | 63.   | 10.      | 46 ,2 <sup>d</sup> |                                      |    |       |
| 29      | 2 ,5     | 1 ,5   | 62.   | 54.      | 29 ,1 <sup>e</sup> |                                      |    |       |
| 30      | 1 ,0     | 1 ,3   | 62.   | 37.      | 51 ,6              |                                      |    |       |
| 31      | 27. 9 ,0 | 1 ,0   | 62.   | 21.      | 6 ,2               |                                      |    |       |

| 1781    | Barom.    | Thermom. | Dist <sup>o</sup> ap. L. S. |
|---------|-----------|----------|-----------------------------|
|         | P. L. D.  | Gr. D.   | Gr. M. S. D.                |
| Febr. 1 | 27. 10 ,3 | + 2 ,6   | 62. 3. 59 ,2                |
| 2       | 8 ,3      | 2 ,5     | 61. 46. 36 ,7               |
| 3       | 9 ,6      | 2 ,0     | 61. 28. 47 ,3               |
| 4       | 11 ,0     | 3 ,0     | 61. 10. 47 ,7               |
| 5       | 8 ,3      | 3 ,0     | 60. 32. 35 ,7               |
| 15      | 7 ,0      | 7 ,0     | 57. 36. 24 ,6               |
| 16      | 6 ,5      | 8 ,0     | 57. 15. 38 ,4               |
| 17      | 9 ,3      | 6 ,6     | 56. 14. 35 ,6               |
| 18      | 8 ,5      | 5 ,2     | 56. 33. 21 ,5               |
| 19      | 7 ,5      | 4 ,2     | 56. 12. 0 ,0                |
| 27      | 3 ,3      | 3 ,0     | 53. 15. 26 ,6               |
| 28      | 2 ,5      | 7 ,5     | 52. 32. 45 ,1               |
| Mart. 3 | 11 ,5     | 3 ,6     | 51. 44. 0 ,0                |
| 4       | 11 ,3     | 3 ,0     | 51. 21. 1 ,0                |
| 5       | 11 ,5     | 6 ,0     | 50. 37. 44 ,7               |
| 7       | 9 ,0      | 8 ,0     | 50. 11. 17 ,0               |
| 8       | 10 ,5     | 11 ,0    | 49. 47. 55 ,6               |
| 9       | 9 ,0      | 9 ,0     | 49. 24. 25 ,0               |
| 10      | 10 ,0     | 10 ,0    | 49. 1. 1 ,7                 |
| 12      | 8 ,5      | 8 ,6     | 48. 14. 7 ,1                |
| 14      | 28. 1 ,0  | 8 ,5     | 47. 26. 45 ,1               |
| 15      | 27. 11 ,6 | 8 ,5     | 47. 34. 3 ,9                |
| 18      | 28. 0 ,0  | 10 ,0    | 45. 32. 1 ,1                |
| 20      | 27. 10 ,3 | 10 ,0    | 45. 5. 0 ,0                 |
| 21      | 11 ,0     | 10 ,5    | 44. 41. 19 ,5               |
| 23      | 8 ,0      | 13 ,0    | 43. 54. 6 ,7                |
| 24      | 28. 0 ,0  | 10 ,6    | 43. 30. 31 ,3               |
| 25      | 1 ,0      | 15 ,0    | 43. 6. 58 ,2                |
| 26      | 27. 9 ,3  | 12 ,0    | 42. 43. 26 ,7               |
| 27      | 5 ,0      | 10 ,0    | 42. 19. 59 ,8               |

| 1781     | Barom.   | Thermom. | Dist. <sup>2</sup> | ap. L. S. |
|----------|----------|----------|--------------------|-----------|
|          | P. L. D. | Gr. D.   | Gr. M. S. D.       |           |
| Mart. 30 | 27. 6 ,5 | + 10 ,0  | 41. 10.            | 1 ,8      |
| April. 1 | 8 ,5     | 13 ,5    | 40. 0.             | 45 ,7     |
| 8        | 9 ,0     | 11 ,0    | 37. 44.            | 48 ,8     |
| 9        | 10 ,5    | 11 ,0    | 37. 22.            | 36 ,4     |
| 10       | 10 ,5    | 13 ,0    | 37. 0.             | 29 ,4     |
| 11       | 8 ,0     | 12 ,2    | 34. 50.            | 42 ,2     |
| 18       | 9 ,7     | 14 ,0    | 34. 8.             | 47 ,7     |
| 20       | 11 ,5    | 15 ,2    | 33. 27.            | 34 ,5     |
| 21       | 11 ,3    | 16 ,2    | 33. 7.             | 15 ,3     |
| 22       | 11 ,0    | 16 ,0    | 32. 47.            | 7 ,1      |
| 23       | 9 ,3     | 17 ,0    | 32. 27.            | 20 ,0     |
| 24       | 8 ,2     | 16 ,0    | 32. 7.             | 20 ,3     |
| 25       | 9 ,3     | 15 ,0    | 31. 47.            | 56 ,1     |
| 29       | 5 ,5     | 14 ,0    | 30. 32.            | 56 ,7     |
| Maji 4   | 8 ,0     | 16 ,3    | 29. 3.             | 11 ,2     |
| 5        | 7 ,0     | 16 ,0    | 28. 45.            | 42 ,3     |
| 6        | 6 ,6     | 16 ,2    | 28. 28.            | 53 ,2     |
| 13       | 9 ,6     | 18 ,0    | 26. 39.            | 25 ,9     |
| 15       | 9 ,0     | 19 ,0    | 26. 10.            | 52 ,3     |
| 16       | 9 ,0     | 20 ,0    | 25. 57.            | 4 ,3      |
| 19       | 8 ,2     | 20 ,3    | 25. 17.            | 25 ,2     |
| 21       | 8 ,0     | 29 ,0    | 24. 52.            | 55 ,2     |
| 22       | 8 ,0     | 19 ,0    | 24. 41.            | 3 ,4      |
| 26       | 8 ,7     | 12 ,3    | 23. 57.            | 18 ,0     |
| 27       | 8 ,7     | 14 ,0    | 23. 47.            | 20 ,8     |
| 30       | 9 ,5     | 19 ,0    | 23. 19.            | 31 ,8     |
| Junii 1  | 9 ,3     | 20 ,0    | 23. 10.            | 58 ,3     |
| 2        | 10 ,0    | 20 ,0    | 22. 55.            | 5 ,2      |
| 3        | 9 ,0     | 20 ,0    | 22. 47.            | 40 ,5     |
| 4        | 8 ,5     | 20 ,0    | 22. 40.            | 39 ,2     |

| 1781  | Barom. |       | Thermom. |       | Dist. <sup>a</sup> ap. L. S. |     |       |
|-------|--------|-------|----------|-------|------------------------------|-----|-------|
|       | P.     | L. D. | Gr.      | D.    | Gr.                          | M.  | S. D. |
| Junii |        |       | +        | 21 ,0 | 22.                          | 34. | 6 ,8  |
| 5     | 27.    | 8 ,3  |          |       | 22.                          | 27. | 53 ,4 |
| 6     |        | 7 ,5  |          | 20 ,0 | 22.                          | 31. | 40 ,2 |
| 9     |        | 6 ,7  |          | 17 ,0 | 22.                          | 7.  | 10 ,4 |
| 10    |        | 8 ,3  |          | 18 ,0 | 22.                          | 2.  | 58 ,6 |
| 11    |        | 7 ,0  |          | 17 ,0 |                              |     |       |
| 12    |        | 7 ,5  |          | 18 ,5 | 21.                          | 59. | 10 ,7 |
| 14    |        | 6 ,5  |          | 16 ,2 | 21.                          | 52. | 41 ,4 |
| 15    |        | 6 ,5  |          | 19 ,0 | 21.                          | 50. | 16 ,0 |
| 17    |        | 8 ,3  |          | 18 ,0 | 21.                          | 46. | 25 ,6 |
| 18    |        | 10 ,0 |          | 19 ,0 | 21.                          | 45. | 0 ,4  |
| 19    |        | 10 ,0 |          | 21 ,0 | 21.                          | 44. | 12 ,1 |
| 25    |        | 5 ,5  |          | 18 ,0 | 21.                          | 47. | 26 ,8 |
| 29    |        | 10 ,5 |          | 21 ,0 | 21.                          | 57. | 54 ,7 |
| Julii |        |       |          |       | 22.                          | 5.  | 31 ,6 |
| 1     |        | 4 ,6  |          | 22 ,0 | 22.                          | 9.  | 57 ,2 |
| 2     |        | 9 ,5  |          | 22 ,3 |                              |     |       |
| 3     |        | 10 ,3 |          | 23 ,5 | 22.                          | 14. | 56 ,2 |
| 4     |        | 10 ,3 |          | 23 ,3 | 22.                          | 20. | 9 ,2  |
| 5     |        | 9 ,5  |          | 19 ,0 | 22.                          | 25. | 39 ,8 |
| 7     |        | 9 ,5  |          | 24 ,0 | 22.                          | 38. | 6 ,7  |
| 8     |        | 9 ,3  |          | 23 ,5 | 22.                          | 45. | 1 ,8  |
| 9     |        | 8 ,6  |          | 22 ,7 | 22.                          | 52. | 8 ,9  |
| 10    |        | 9 ,0  |          | 22 ,0 | 22.                          | 59. | 49 ,2 |
| 11    |        | 9 ,5  |          | 21 ,5 | 23.                          | 7.  | 42 ,3 |
| 12    |        | 11 ,0 |          | 23 ,0 | 23.                          | 15. | 59 ,3 |
| 13    |        | 11 ,6 |          | 24 ,0 | 23.                          | 24. | 43 ,9 |
| 14    |        | 11 ,0 |          | 24 ,0 | 23.                          | 33. | 51 ,2 |
| 15    |        | 9 ,5  |          | 23 ,3 | 23.                          | 43. | 17 ,7 |
| 16    |        | 9 ,0  |          | 22 ,3 | 23.                          | 53. | 5 ,6  |
| 17    |        | 10 ,3 |          | 21 ,0 | 24.                          | 3.  | 21 ,3 |
| 18    |        | 10 ,5 |          | 21 ,0 | 24.                          | 13. | 42 ,1 |

|         |    | Barom. |    | Thermom. |      | Dist. ap. L. S. & |     |     |       |
|---------|----|--------|----|----------|------|-------------------|-----|-----|-------|
|         |    | P.     | L. | D.       | Gr.  | D.                | Gr. | M.  | S.-D. |
| 1781    |    |        |    |          |      |                   |     |     |       |
| Julii   | 21 | 27.    | 11 | ,2       | + 19 | ,0                | 24. | 47. | 32 ,6 |
|         | 22 |        | 9  | ,5       | 19   | ,2                | 24. | 49. | 32 ,2 |
|         | 23 |        | 7  | ,5       | 21   | ,0                | 25. | 11. | 50 ,8 |
|         | 24 |        | 9  | ,0       | 20   | ,2                | 25. | 24. | 31 ,3 |
|         | 26 |        | 9  | ,5       | 21   | ,0                | 25. | 50. | 36 ,1 |
|         | 28 |        | 9  | ,0       | 20   | ,0                | 26. | 18. | 5 ,9  |
|         | 29 |        | 10 | ,0       | 20   | ,0                | 26. | 32. | 18 ,0 |
|         | 30 |        | 10 | ,6       | 21   | ,0                | 26. | 46. | 50 ,7 |
|         | 31 |        | 10 | ,5       | 21   | ,0                | 27. | 1.  | 37 ,4 |
| August. | 1  |        | 10 | ,3       | 21   | ,6                | 27. | 16. | 48 ,0 |
|         | 2  |        | 9  | ,8       | 21   | ,3                | 27. | 32. | 10 ,7 |
|         | 4  |        | 10 | ,5       | 20   | ,5                | 28. | 3.  | 53 ,6 |
|         | 11 |        | 10 | ,3       | 22   | ,0                | 30. | 3.  | 7 ,3  |
|         | 12 |        | 10 | ,5       | 23   | ,0                | 30. | 21. | 13 ,6 |
|         | 13 |        | 10 | ,0       | 23   | ,0                | 30. | 39. | 29 ,6 |
|         | 17 |        | 9  | ,3       | 21   | ,5                | 31. | 55. | 2 ,5  |
|         | 18 |        | 9  | ,2       | 21   | ,5                | 32. | 14. | 21 ,0 |
|         | 20 |        | 6  | ,5       | 20   | ,0                | 32. | 53. | 52 ,7 |
|         | 21 |        | 7  | ,5       | 18   | ,6                | 33. | 34. | 3 ,2  |
|         | 23 |        | 8  | ,0       | 18   | ,0                | 33. | 54. | 27 ,2 |
|         | 24 |        | 8  | ,0       | 18   | ,2                | 34. | 15. | 4 ,7  |
|         | 28 |        | 10 | ,0       | 21   | ,5                | 35. | 38. | 59 ,2 |
|         | 29 |        | 10 | ,0       | 21   | ,6                | 36. | 0.  | 20 ,0 |
|         | 31 |        | 10 | ,5       | 21   | ,0                | 36. | 43. | 30 ,5 |
| Sept.   | 13 |        | 11 | ,5       | 18   | ,0                | 41. | 35. | 38 ,3 |
|         | 14 |        | 10 | ,7       | 17   | ,6                | 41. | 58. | 49 ,1 |
|         | 20 |        | 9  | ,3       | 16   | ,0                | 44. | 18. | 19 ,5 |
| Oktob.  | 3  |        | 8  | ,3       | 13   | ,7                | 49. | 22. | 15 ,7 |
|         | 6  |        | 9  | ,5       | 14   | ,0                | 31. | 16. | 0 ,0  |
|         | 8  |        | 10 | ,0       | 12   | ,5                | 31. | 17. | 20 ,8 |

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| 1781      | Barom. |       | Thermom. |    | Dist. ap. L. S. |     |        |
|-----------|--------|-------|----------|----|-----------------|-----|--------|
|           | P.     | L. D. | Gr.      | D. | Gr.             | M.  | S. D.  |
| Octob. 9  | 27.    | 11 ,5 | + 12     | ,0 | 51.             | 40. | 8 ,1   |
| 10        | 28.    | 0 ,0  | 11       | ,3 | 52.             | 2.  | 55 ,8* |
| 12        | 27.    | 9 ,3  | 12       | ,2 | 52.             | 48. | 15 ,5  |
| 14        |        | 10 ,0 | 11       | ,7 | 53.             | 33. | 12 ,0  |
| 15        | 28.    | 0 ,5  | 11       | ,5 | 53.             | 55. | 32 ,0  |
| 16        | 27.    | 11 ,0 | 11       | ,2 | 54.             | 17. | 35 ,6  |
| 17        |        | 10 ,7 | 10       | ,0 | 54.             | 39. | 36 ,0* |
| 18        |        | 11 ,3 | 10       | ,0 | 55.             | 1.  | 27 ,1  |
| 19        |        | 8 ,0  | 11       | ,0 | 55.             | 23. | 5 ,8   |
| 20        |        | 7 ,3  | 11       | ,0 | 55.             | 44. | 34 ,0* |
| 21        |        | 8 ,5  | 12       | ,0 | 56.             | 6.  | 11 ,0  |
| 22        |        | 7 ,6  | 12       | ,0 | 56.             | 27. | 20 ,0  |
| 23        |        | 8 ,5  | 10       | ,5 | 56.             | 48. | 17 ,0  |
| 24        |        | 9 ,5  | 9        | ,0 | 57.             | 9.  | 11 ,0  |
| Nov. 1 20 |        | 8 ,5  | 5        | ,3 | 65.             | 1.  | 37 ,1  |
| Dec. 1 22 |        | 5 ,7  | 5        | ,0 | 65.             | 27. | 43 ,0  |
| 24        |        | 10 ,5 | 9        | ,0 | 68.             | 26. | 9 ,0   |
| 29        |        | 10 ,0 | 3        | ,0 | 68.             | 22. | 0 ,3   |
| 30        |        | 9 ,0  | 2        | ,0 | 68.             | 18. | 0 ,7   |



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DISTANTIAE A VERTICE LIMBI SUPERIORIS SOLIS  
 in Meridiano observatae an. 1782  
 A FRANCISCO REGGIO.

| 1782      | Barom.   | Thermom. | Dift. <sup>a</sup> ap. L. S. |
|-----------|----------|----------|------------------------------|
|           | P. L. D. | Gr. D.   | Gr. M. S. D.                 |
| Januar. 9 | 27. 9 ,0 | + 1 ,3   | 67. 12. 50 A                 |
| 14        | 10 ,5    | 1 ,0     | 66. 25. 42 ,2                |
| 15        | 10 ,0    | 0 ,3     | 66. 12. 48 ,5                |
| 16        | 7 ,5     | 0 ,0     | 66. 1. 22 ,0                 |
| 18        | 2 ,0     | 3 ,0     | 65. 37. 15 ,6                |
| 19        | 7 ,0     | 3 ,0     | 65. 21. 41 ,4                |
| 20        | 10 ,0    | 1 ,0     | 65. 11. 37 ,5                |
| 22        | 10 ,0    | 2 ,0     | 64. 44. 23 ,7                |
| 24        | 28. 0 ,0 | 3 ,0     | 64. 15. 53 ,2                |
| Febr. 3   | 27. 9 ,0 | 2 ,5     | 61. 33. 24 ,1                |
| 14        | 8 ,0     | — 1 ,0   | 58. 2. 12 ,3                 |
| 15        | 5 ,5     | 0 ,7     | 57. 41. 29 ,3                |
| 18        | 11 ,3    | 3 ,0     | 56. 38. 38 ,0                |
| 20        | 11 ,5    | 0 ,0     | 55. 55. 46 ,6                |
| 21        | 28. 1 ,0 | + 0 ,3   | 55. 34. 5 A                  |
| 26        | 3 ,5     | 4 ,6     | 53. 43. 31 A                 |
| 27        | 0 ,6     | 4 ,3     | 53. 21. 2 ,2                 |
| Mart. 4   | 27. 9 ,0 | 7 ,0     | 51. 26. 54 A                 |
| 5         | 10 ,3    | 6 ,0     | 51. 3. 48 ,7                 |
| 14        | 7 ,0     | 7 ,3     | 47. 32. 33 ,3                |
| 18        | 8 ,0     | 4 ,0     | 45. 57. 50 ,8                |
| 19        | 9 ,0     | 4 ,0     | 45. 34. 6 ,2                 |
| 20        | 7 ,5     | 7 ,0     | 45. 10. 24 ,7                |
| 21        | 5 ,5     | 7 ,0     | 44. 47. 4 ,6                 |
| 22        | 3 ,5     | 7 ,7     | 44. 23. 30 ,7                |

| 1782     | Barom. |    |    | Thermom. |     | Dist. <sup>a</sup> ap. L. S. * |     |    |       |
|----------|--------|----|----|----------|-----|--------------------------------|-----|----|-------|
|          | P.     | L. | D. |          | Gr. | D.                             | Gr. | M. | S. D. |
| Mart. 25 | 27.    | 5  | ,2 | + 4      | ,7  | 43.                            | 12. | 40 | ,7    |
| 26       |        | 9  | ,0 | 5        | ,0  | 42.                            | 49. | 7  | ,6    |
| April. 5 |        | 5  | ,0 | 8        | ,0  | 38.                            | 57. | 54 | ,5    |
| 7        |        | 7  | ,0 | 9        | ,0  | 38.                            | 12. | 45 | ,9    |
| 8        |        | 6  | ,0 | 8        | ,8  | 37.                            | 50. | 18 | ,6    |
|          |        |    |    |          |     |                                |     |    |       |
| 11       |        | 4  | ,7 | 9        | ,0  | 36.                            | 43. | 48 | ,0    |
| 20       |        | 6  | ,0 | 11       | ,0  | 33.                            | 32. | 27 | ,5    |
| 26       |        | 3  | ,0 | 10       | ,7  | 31.                            | 33. | 9  | ,2    |
| 27       |        | 4  | ,5 | 12       | ,5  | 31.                            | 14. | 9  | ,7    |
| 28       |        | 6  | 3, | 13       | ,0  | 30.                            | 55. | 13 | ,4    |
|          |        |    |    |          |     |                                |     |    |       |
| Maji 6   |        | 3  | ,7 | 13       | ,0  | 28.                            | 32. | 59 | ,3    |
| 9        |        | 7  | ,5 | 13       | ,0  | 27.                            | 44. | 4  | ,8    |
| 11       |        | 8  | ,2 | 13       | ,7  | 27.                            | 12. | 43 | ,1    |
| 12       |        | 9  | ,5 | 15       | ,5  | 26.                            | 57. | 35 | ,0    |
| 15       |        | 6  | ,5 | 17       | ,0  | 26.                            | 14. | 7  | ,7    |
|          |        |    |    |          |     |                                |     |    |       |
| 19       |        | 4  | ,6 | 16       | ,0  | 25.                            | 20. | 29 | ,9    |
| 23       |        | 7  | ,8 | 16       | ,0  | 24.                            | 32. | 11 | ,4    |
| 25       |        | 11 | ,5 | 16       | ,5  | 24.                            | 10. | 8  | ,2    |
| 26       |        | 11 | ,0 | 16       | ,5  | 23.                            | 59. | 40 | ,5    |
| 27       |        | 10 | ,0 | 17       | ,5  | 23.                            | 49. | 34 | ,3    |
|          |        |    |    |          |     |                                |     |    |       |
| 28       |        | 10 | ,2 | 19       | ,0  | 23.                            | 39. | 47 | ,7    |
| 29       |        | 10 | ,0 | 20       | ,3  | 23.                            | 30. | 30 | ,5    |
| 30       |        | 9  | ,7 | 20       | ,0  | 23.                            | 21. | 27 | ,3    |
| 31       |        | 8  | ,2 | 19       | ,7  | 23.                            | 12. | 49 | ,7    |
| Junii 2  |        | 8  | ,3 | 16       | ,3  | 22.                            | 56. | 45 | ,4    |
|          |        |    |    |          |     |                                |     |    |       |
| 3        |        | 9  | ,0 | 16       | ,0  | 22.                            | 49. | 17 | ,3    |
| 5        |        | 11 | ,0 | 17       | ,0  | 22.                            | 35. | 28 | ,1    |
| 7        |        | 9  | ,6 | 17       | ,7  | 22.                            | 23. | 18 | ,6    |
| 8        |        | 10 | ,2 | 19       | ,3  | 22.                            | 17. | 47 | ,8    |
| 9        |        | 10 | ,2 | 19       | ,0  | 22.                            | 12. | 38 | ,8    |

| 1782  |    | Barom.    | Thermom. | Dist. <sup>a</sup> ap. L. S. |
|-------|----|-----------|----------|------------------------------|
|       |    | P. L. D.  | Gr. D.   | Gr. M. S. D.                 |
| Junii | 10 | 27. 9 ,6  | + 20 ,0  | 22. 8. 12 ,4                 |
|       | 11 | 9 ,0      | 19 ,6    | 22. 3. 54 ,7                 |
|       | 12 | 10 ,3     | 20 ,5    | 22. 0. 1 ,8                  |
|       | 14 | 28. 0 ,5  | 20 ,6    | 21. 53. 38 ,0                |
|       | 16 | 0 ,2      | 21 ,5    | 21. 48. 39 ,9                |
|       | 17 | 27. 11 ,2 | 22 ,0    | 21. 46. 48 ,2                |
|       | 18 | 9 ,5      | 23 ,0    | 21. 45. 21 ,4                |
|       | 20 | 11 ,5     | 23 ,0    | 21. 43. 49 ,3                |
|       | 21 | 11 ,7     | 23 ,0    | 21. 43. 37 ,3                |
|       | 22 | 11 ,0     | 23 ,6    | 21. 43. 53 ,4                |
| Julii | 23 | 11 ,3     | 22 ,5    | 21. 44. 53 ,5                |
|       | 24 | 9 ,6      | 23 ,0    | 21. 45. 39 ,9                |
|       | 25 | 10 ,3     | 23 ,0    | 21. 47. 8 ,4                 |
|       | 26 | 9 ,5      | 23 ,6    | 21. 48. 59 ,5                |
|       | 27 | 9 ,0      | 24 ,0    | 21. 51. 20 ,7                |
|       | 29 | 10 ,0     | 23 ,0    | 21. 57. 4 ,9                 |
|       | 1  | 10 ,0     | 23 ,0    | 22. 4. 31 ,4                 |
|       | 2  | 8 ,3      | 24 ,0    | 22. 8. 54 ,5                 |
|       | 6  | 9 ,0      | 19 ,0    | 22. 30. 16 ,9                |
|       | 9  | 5 ,5      | 21 ,0    | 22. 50. 11 ,0                |
|       | 10 | 6 ,6      | 23 ,0    | 22. 57. 41 ,8                |
|       | 11 | 8 ,3      | 22 ,0    | 23. 5. 25 ,1                 |
|       | 12 | 9 ,3      | 22 ,0    | 23. 13. 51 ,6                |
|       | 14 | 10 ,5     | 24 ,2    | 23. 31. 39 ,2                |
|       | 15 | 10 ,3     | 24 ,0    | 23. 40. 57 ,4                |
|       | 16 | 9 ,6      | 25 ,0    | 23. 50. 44 ,6                |
|       | 17 | 8 ,3      | 25 ,0    | 24. 0. 49 ,4                 |
|       | 18 | 7 ,3      | 24 ,5    | 24. 11. 14 ,9                |
|       | 19 | 10 ,5     | 21 ,0    | 24. 21. 59 ,4                |
|       | 20 | 4 ,6      | 20 ,7    | 24. 33. 16 ,3                |

| 1782                | Barom. |       | Thermom. |        | Dist. <sup>a</sup> ap. L. S. ☽ |     |       |
|---------------------|--------|-------|----------|--------|--------------------------------|-----|-------|
|                     | P.     | L. D. |          | Gr. D. | Gr.                            | M.  | S. D. |
| Julii 21            | 27.    | 11 ,6 | +        | 21 ,3  | 24.                            | 44. | 41 ,6 |
| 22                  |        | 10 ,6 |          | 21 ,8  | 24.                            | 56. | 31 ,8 |
| 23                  |        | 9 ,6  |          | 23 ,0  | 25.                            | 8.  | 50 ,8 |
| 24                  |        | 10 ,3 |          | 24 ,0  | 25.                            | 21. | 24 ,0 |
| 25                  |        | 10 ,3 |          | 24 ,5  | 25.                            | 34. | 9 ,8  |
| 26                  |        | 10 ,3 |          | 25 ,0  | 25.                            | 47. | 22 ,4 |
| 27                  |        | 10 ,3 |          | 25 ,0  | 26.                            | 0.  | 52 ,0 |
| 28                  |        | 8 ,5  |          | 24 ,8  | 26.                            | 14. | 41 ,6 |
| 29                  |        | 6 ,0  |          | 24 ,0  | 26.                            | 28. | 48 ,0 |
| 30                  |        | 7 ,0  |          | 21 ,5  | 26.                            | 43. | 16 ,3 |
| August. 1           |        | 8 ,0  |          | 19 ,7  | 27.                            | 13. | 2 ,0  |
| 4                   |        | 9 ,0  |          | 21 ,0  | 27.                            | 59. | 53 ,7 |
| 5                   |        | 8 ,3  |          | 21 ,2  | 28.                            | 16. | 9 ,6  |
| 6                   |        | 8 ,6  |          | 20 ,5  | 28.                            | 32. | 37 ,9 |
| 7                   |        | 6 ,6  |          | 19 ,7  | 28.                            | 49. | 34 ,1 |
| 15                  |        | 8 ,5  |          | 20 ,5  | 31.                            | 12. | 28 ,2 |
| 16                  |        | 9 ,5  |          | 21 ,0  | 31.                            | 31. | 23 ,8 |
| 17                  |        | 9 ,5  |          | 22 ,0  | 31.                            | 50. | 29 ,2 |
| 18                  |        | 9 ,5  |          | 21 ,0  | 32.                            | 9.  | 53 ,3 |
| 20                  |        | 9 ,3  |          | 20 ,7  | 32.                            | 49. | 15 ,4 |
| 21                  |        | 10 ,3 |          | 22 ,0  | 33.                            | 9.  | 9 ,1  |
| 22                  |        | 9 ,6  |          | 22 ,3  | 33.                            | 29. | 24 ,0 |
| 23                  |        | 9 ,3  |          | 23 ,0  | 33.                            | 49. | 41 ,8 |
| 26                  |        | 9 ,6  |          | 23 ,3  | 34.                            | 51. | 48 ,8 |
| Nov. <sup>i</sup> 8 |        | 6 ,6  |          | 4 ,3   | 61.                            | 52. | 38 ,4 |
| 9                   |        | 5 ,5  |          | 3 ,6   | 62.                            | 9.  | 49 ,9 |
| 18                  |        | 3 ,7  |          | 4 ,0   | 64.                            | 30. | 51 ,0 |
| 19                  |        | 4 ,7  |          | 2 ,5   | 64.                            | 44. | 46 ,3 |
| 20                  |        | 5 ,5  |          | 1 ,7   | 64.                            | 58. | 8 ,6  |
| 21                  |        | 6 ,0  |          | 1 ,0   | 65.                            | 11. | 36 ,0 |

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| 1782                 | Barom. |    |    | Thermom. |    | Dist. <sup>2</sup> ap. L. S. ☿ |     |       |       |
|----------------------|--------|----|----|----------|----|--------------------------------|-----|-------|-------|
|                      | P.     | L. | D. | Gr.      | D. | Gr.                            | M.  | S. D. |       |
| Nov. <sup>1</sup> 22 | 27.    | 6  | ,0 | +        | 1  | ,6                             | 65. | 24.   | 28 ,9 |
| 23                   |        | 5  | ,5 |          | 1  | ,3                             | 65. | 36.   | 59 ,3 |
| 29                   |        | 7  | ,0 |          | 4  | ,8                             | 66. | 33.   | 49 ,7 |
| Dec. <sup>1</sup> 8  |        | 9  | ,0 |          | 4  | ,6                             | 67. | 56.   | 47 ,0 |
| 11                   |        | 4  | ,5 |          | 2  | ,0                             | 68. | 13.   | 11 ,9 |
| 12                   |        | 6  | ,0 |          | 1  | ,0                             | 68. | 17.   | 16 ,5 |
| 16                   |        | 4  | ,3 |          | 0  | ,3                             | 68. | 31.   | 7 ,0  |
| 17                   |        | 8  | ,8 | —        | 0  | ,5                             | 68. | 33.   | 57 ,9 |
| 18                   | 28.    | 0  | ,5 |          | 0  | ,3                             | 68. | 34.   | 52 ,1 |
| 19                   |        | 0  | ,5 |          | 2  | ,3                             | 68. | 36.   | 6 ,3  |
| 20                   |        | 0  | ,2 |          | 1  | ,0                             | 68. | 36.   | 54 ,7 |
| 21                   |        | 0  | ,5 | +        | 0  | ,6                             | 68. | 37.   | 13 ,5 |
| 22                   | 27.    | 8  | ,0 |          | 2  | ,5                             | 68. | 37.   | 9 ,3  |
| 23                   |        | 9  | ,5 |          | 1  | ,0                             | 68. | 36.   | 30 ,2 |
| 25                   |        | 7  | ,2 |          | 1  | ,7                             | 68. | 33.   | 45 ,2 |
| 26                   |        | 11 | ,5 |          | 1  | ,0                             | 68. | 31.   | 41 ,4 |
| 28                   |        | 10 | ,5 |          | 2  | ,0                             | 68. | 26.   | 8 ,3  |
| 29                   |        | 9  | ,3 |          | 4  | ,0                             | 68. | 28.   | 52 ,4 |
| 31                   |        | 5  | ,7 |          | 0  | ,5                             | 68. | 34.   | 19 ,8 |



## OBSERVATIONES MERCURII

*Annis 1780 & 1781 institutae*

A BARNABA ORIANI.

Transitus Mercurii per Solem , quem Ephemerides  
 adnotabant pro die 12 Novembris an. 1782 , a nobis  
 ob coeli intemperiem observari non potuit . Haec ipsa ob-  
 servatio valuissest alias plures communes , in quibus planetae  
 locus determinatur per elementa & instrumenta , quae er-  
 roribus & aberrationibus obnoxia sunt . Ut autem numero  
 saltem observationum non peregrino accurationi illius sup-  
 plerem , observationibus Mercurii , quae in nostris Ephe-  
 meridibus ad annum 1783 expositae fuerunt , sequentes  
 adjeci .

Ex hisce vero illas tantum cum tabulis *Halley* compa-  
 randas selegi , quae per aliquot continuos dies institutae  
 fuerunt , ut dijudicetur quantum erroris astronomicis tabulis  
 tribui debeat , & quantum observationibus vel supputationi .  
 Etenim si accipiatur medius errorum seu differentiarum  
 inter locum Mercurii ex tabulis & illum ex observatio-  
 nibus erutum , ipse erit satis accurate error tabularum  
 pro dato tempore , non autem ille , qui ex una vel altera  
 singulari observatione cum tabulis comparata colligitur .  
 Idipsum exemplo ostensum fuit in nostris Ephemeridibus  
 ad annum 1783 , pag. 193. Differentia erroris medii a ma-  
 ximo vel minimo errore erit error observationi tribuendus .

Quare si reperiatur differentia inter errorem medium & maximum aliquantulum magis, seu quod eodem redit, si errores inter se valde discrepant, observationibus minus fidendum erit, vel supputationes accuratae non erunt censendae.

Quadrante murali institui observations fere omnes, paucis exceptis, quae sectore aequatoreali habitae fuerunt. Descriptio observationum aliquantulum diversa est ab ea, qua usus sum in Ephemeridibus ad an. 1783. Nam praeter tempus penduli pro instanti transitus fixarum & planetarum, addidi etiam tempus verum & medium. Deinde omisi altitudinem hydrargiri in barometro & thermometro, quae ad computandam differentiam refractionis inter planetam & fixas in usum adhiberi solet, cum in aliquibus tantum observationibus differentia declinationis vix quatuor gradus supereret, in ceteris vero semper minor sit. Praeterea si ea opus esset, consuli poterunt observations meteorologicae a D. Reggio expositae, in quibus pro singulis diebus observata altitudo hydrargiri in barometro & thermometro adnotatur.

Horologium, quo in hisce observationibus usus sum, illud ipsum est, quod in nostris Ephemeridibus ad an. 1782 littera M indicavi; atque ibidem reperietur ejus motus descriptus pro integro anno 1780, & pro quinque prioribus mensibus an. 1781. Quare si quod dubium in observationibus Mercurii nunc exponendis oriatur circa aequalitatem motus penduli, consuli poterit tabula, quae in citatis Ephemeridibus, pag. 234. & sequ. exhibet aberrationem temporis Horologii a tempore medio.

Distantiae a zenith observatae quadrante murali & declinationes observatae sectore aequatoreali non sunt correctae a deviatione lineae collimationis instrumenti, cum deviatio ipsa tam planetae quam fixis communis sit, & propere in differentiam declinationis inter planetam & fixas inde deductam nullum errorem ingerat.



## Observationes Mercurii Quadrante murali habitae An. 1780 &amp; 1781.

| 1780    | Meridies<br>verus<br>tempore<br>Penduli. | Nomina<br>Siderum. | Transitus<br>per<br>Meridian.<br>tempore<br>Penduli. | Transitus<br>tempore<br>vero. | Transitus<br>tempore<br>medio. | Distan-<br>tia<br>a zenith<br>obser-<br>vata. |
|---------|--|--------------------|--|-------------------------------|--------------------------------|---|
|         | Dies.                                    | H. M. S.           | H. M. S.   | H. M. S.                      | H. M. S.                       | G.M.S.  |
| Maji 25 | 23.54.59,5                               | Mercur.            | 22.20.57,7   | 22.25.56,0                    | 22.22.34,5                     | 33. 2.36                                      |
| 26      | 23.55. 1,8                               | $\alpha$ Leonis    | 5.35.36,8  | 5.40.34,5                     | 5.37.15,1                      | 32.34.37                                      |
| 26      |  | Virginis           | 8.29.44,0  | 8.34.41,2                     | 8.31.22,6                      | 33.18. 4                                      |
| 26      |  | Mercur.            | 22.21.57,3   | 22.26.53,0                    | 22.23.39,3                     | 32.33.38                                      |
| 27      | 23.55. 4,5                               | $\gamma$ Bootis    | 10. 4.53,3   | 10. 9.48,1                    | 10. 6.36,9                     | 30.45.57                                      |
| 27      |  | Mercur.            | 22.23. 7,6   | 22.28. 0,7                    | 22.24.53,2                     | 32. 3.35                                      |
| 28      | 23.55. 7,0                               | $\alpha$ Leonis    | 5.27.35,7  | 5.32.28,1                     | 5.29.22,9                      | 32.24.38                                      |
| 28      |  | $\gamma$ Bootis    | 10. 0.52,3   | 10. 5.44,1                    | 10. 2.39,2                     | 30.45.58                                      |
| 28      |  | Mercur.            | 22.24.29,5   | 22.29.20,6                    | 22.26.20,8                     | 31.32.45                                      |
| 29      | 23.55. 9,1                               | $\alpha$ Leonis    | 5.23.34,6  | 5.28.24,8                     | 5.25.27,6                      | 32.24.37                                      |
| 29      |  | Mercur.            | 22.26. 2,4   | 22.30.50,6                    | 22.27.59,0                     | 31. 1.10                                      |
| 30      | 23.55.12,0                               | $\alpha$ Leonis    | 5.19.33,3  | 5.24.20,6                     | 5.21.31,4                      | 32.24.37                                      |
| 30      |  | Mercur.            | 22.27.47,2   | 22.32.32,5                    | 22.29.49,5                     | 30.28.57                                      |
| 31      | 23.55.14,9                               | $\alpha$ Leonis    | 5.15.31,4  | 5.20.15,9                     | 5.17.34,3                      | 32.24.37                                      |
| Jun. 1  | 23.55.17,8                               | Mercur             | 22.29.43,3   | 22.34.25,7                    | 22.31.51,6                     | 29.56.20                                      |
| 1       |  | $\alpha$ Leonis    | 5.11.28,7  | 5.16.10,3                     | 5.13.38,9                      | 32.24.37                                      |
| 2       | 23.55.21,1                               | Mercur             | 22.31.51,7   | 22.36.30,8                    | 22.34. 6,2                     | 29.23.15                                      |
| 2       |  | $\alpha$ Leonis    | 5. 7.27,3  | 5.12. 5,6                     | 5. 9.43,7                      | 32.24.36                                      |
| 2       |  | Mercur.            | 22.34.12,7   | 22.38.48,3                    | 22.36.33,6                     | 28.49.52                                      |
| 3       | 23.55.24,6                               | $\alpha$ Leonis    | 5. 3.24,7  | 5. 7.59,5                     | 5. 5.47,6                      | 32.24.37                                      |
| 3       |  | $\gamma$ Bootis    | 8.50.23,0  | 8.54.57,0                     | 8.52.46,7                      | 25.56.20                                      |
| 3       |  | Mercur.            | 22.36.46,1   | 22.41.18,1                    | 22.39.13,5                     | 28.16.15                                      |
| 4       | 23.55.28,2                               | $\alpha$ Leonis    | 4.59.22,4  | 5. 3.53,7                     | 5. 1.52,0                      | 32.24.37                                      |
| 4       |  | $\gamma$ Bootis    | 8.46.20,3  | 8.50.50,8                     | 8.48.50,7                      | 25.56.20                                      |
| 28      | 23.58.21,5                               | Mercur.            | 0.30. 4,3  | 0.31.42,7                     | 0.34.42,9                      | 21. 1.48                                      |
| 28      |  | Arcturus           | 7.31.19,5  | 7.32.56,6                     | 7.35.50,4                      | 25. 6.37                                      |
| 28      |  | Hercul.            | 9.46. 6,0  | 9.47.42,7                     | 9.50.37,6                      | 23.28. 4                                      |

| 1780    | Meridies<br>verus<br>tempore<br>Penduli . | Nominis<br>Siderum. | Transitus<br>per<br>Meridian.<br>tempore<br>Penduli . | Transitus<br>tempore<br>vero . | Transitus<br>tempore<br>medio . | Distan-<br>tia<br>a zenith<br>obser-<br>vata . |
|---------|---|---------------------|---|--------------------------------|---------------------------------|--|
|         | Dies .                                    | H. M. S.            | H. M. S.  | H. M. S.                       | H. M. S.                        | G. M. S.                                       |
| Jun. 29 | 23.58.36,9                                | Mercur.             | 0.35. 6,7   | 0.36.39.7                      | 0.39.42.1                       | 21.13.13                                       |
| 29      |   | Arcturus            | 7.27.17,5   | 7.28.48.9                      | 7.31.54.7                       | 25. 0.37                                       |
| 29      |   | Hercul.             | 9.42. 3,5   | 9.43.34.4                      | 9.46.41.4                       | 23.28. 4                                       |
| 30      | 23.58.32,3                                | Mercur.             | 0.40. 0,6   | 0.41.27.2                      | 0.44.41.6                       | 21.27. 5                                       |
| 30      |   | Arcturus            | 7.23.15,4   | 7.24.41.6                      | 7.27.59.3                       | 25. 6.40                                       |
| 30      |   | Hercul.             | 9.38. 1,5   | 9.39.27.0                      | 9.43.45.8                       | 23.28. 3                                       |
| Jul. 1  | 23.58.27,9                                | Mercur.             | 0.44.44.4   | 0.46. 6,4                      | 0.49.32.3                       | 21.43.10                                       |
| 1       |   | Arcturus            | 7.19.12,4   | 7.20.33.2                      | 7.24. 2,4                       | 25. 6.42                                       |
| 2       | 23.58.41,5                                | Mercur.             | 0.49.16,4   | 0.50.34.8                      | 0.54.12.1                       | 22. 1.24                                       |
| 2       |   | Arcturus            | 7.15. 9,7   | 7.16.26.8                      | 7.20. 7,3                       | 25. 6.42                                       |
| 2       |   | Hercul.             | 9.29.55,0   | 9.31.11,5                      | 9.34.53.2                       | 23.28. 4                                       |
| 3       | 23.58.48,3                                | Mercur.             | 0.53.38.2   | 0.54.50.2                      | 0.58.38.6                       | 22.21.35                                       |
| 3       |   | Hercul.             | 9.25.52,5   | 9.27. 3,5                      | 9.30.56,2                       | 23.28. 5                                       |
| 4       | 23.58.50,3                                | Mercur.             | 0.57.48.7   | 0.58.58,3                      | 1. 2.57,5                       | 22.43.39                                       |
| 4       |   | Hercul.             | 9.31.49,7   | 9.32.58.4                      | 9.27. 1,9                       | 23.25. 5                                       |
| 5       | 23.58.53,0                                | Mercur.             | 1. 1.48,6   | 1. 2.55,5                      | 1. 7. 5,2                       | 23. 7.26                                       |
| 6       | 23.58.56,7                                | Mercur.             | 1. 5.36,3   | 1. 6.39,5                      | 1.10.59,4                       | 23.32.39                                       |
| 6       | Pendul.<br>hora 7. a<br>rectificat.       | Arcturus            | 6.58.57,6   | 7. 0. 0,0                      | 7. 4.21,3                       | 25. 6.42                                       |
| 7       | 23.57.14,0                                | Mercur.             | 1. 7.26,9   | 1.10.13,0                      | 1.14.42,7                       | 23.59.33                                       |
| 7       |   | Hercul.             | 9. 7.54,8   | 9.10.41,7                      | 9.15.14,8                       | 23.29. 8                                       |
| 13      | 23.57.11,0                                | Mercur.             | 1.24.58,1   | 1.27.47,1                      | 1.33. 5,5                       | 27. 3.51                                       |
| 13      |   | Arcturus            | 6.28.43,6   | 6.31.31,7                      | 6.36.51,5                       | 25. 6.42                                       |
| 19      | 23.57. 9,2                                | Mercur.             | 1.29.22,3   | 1.32.13,2                      | 1.37.44,3                       | 28.11.38                                       |
| 19      |   | Arcturus            | 6.20.35,7   | 6.23.27,2                      | 6.28.59,5                       | 25. 6.44                                       |
| 16      | 23.57. 6,7                                | Mercur.             | 1.31.19,0   | 1.34.12,4                      | 1.39.49,1                       | 28.45.54                                       |
| 16      |   | Arcturus            | 6.16.32,5   | 6.19.26,1                      | 6.25. 5,6                       | 25. 6.44                                       |

| 1780    | Meridies<br>verus<br>tempore<br>Penduli. | Nomina<br>Siderum. | Transitus<br>per<br>Meridian.<br>tempore<br>Penduli. | Transitus<br>tempore<br>vero. | Transitus<br>tempore<br>medio. | Distan-<br>tia<br>a zenith<br>obser-<br>vata. |
|---------|--|--------------------|--|-------------------------------|--------------------------------|---|
|         | Dies .                                   | H. M. S.           | H. M. S.   | H. M. S.                      | H. M. S.                       | G. M.S.                                       |
| Jul. 17 | 23.57. 5,0                               | Mercur.            | 1.33. 4,3  | 1.35.59,4                     | 1.41.41,0                      | 29.21. 3                                      |
| 17      |  | Arcturus           | 6.12.29,3  | 6.15.25,1                     | 6.21. 7,8                      | 25. 6.42                                      |
| 18      | 23.57. 2,0                               | Mercur.            | 1.34.40,3  | 1.37.38,6                     | 1.43.24,6                      | 29.56.23                                      |
| 18      |  | Arcturus           | 6. 8.26,0  | 6.11.25,3                     | 6.17.12,2                      | 25. 6.43                                      |
| 18      |  | β Serp.            | 7.38.35,7  | 7.41.35,2                     | 7.47.22,4                      | 29.19.26                                      |
| 20      | 23.56.49,0                               | Mercur.            | 1.37.20,4  | 1.40.31,7                     | 1.46.25,0                      | 31. 7.34                                      |
| 20      |  | β Serp.            | 7.30.28,2  | 7.33.40,6                     | 7.39.34,6                      | 29.19.23                                      |
| 21      | 23.56.25,8                               | Mercur.            | 1.41. 8,5  | 1.44.43,1                     | 1.50.45,2                      | 34. 5. 8                                      |
| 21      |  | γ Serp.            | 7. 7.37,6  | 7.11.13,7                     | 7.17.15,8                      | 38.18.50                                      |
| 21      | 23.56.19,3                               | Mercur.            | 1.41.24,2  | 1.35. 5,4                     | 1.51. 7,6                      | 34.40.11                                      |
| 26      |  | δ Serp.            | 6.54.27,3  | 6.58.10,3                     | 7. 4.12,4                      | 34. 9.28                                      |
| 26      |  | α Serp.            | 7. 3.35,0  | 7. 7.18,0                     | 7.13.20,1                      | 38.18.49                                      |
| 27      | 23.56.11,5                               | Mercur.            | 1.41.29,2  | 1.45.18,3                     | 1.51.20,0                      | 35.14.34                                      |
| 27      |  | δ Serp.            | 6.50.24,3  | 6.54.15,1                     | 7. 0.16,5                      | 34. 9.25                                      |
| 27      |  | α Serp.            | 6.59.31,4  | 7. 3.22,3                     | 7. 9.23,8                      | 38.18.49                                      |
| 28      | 23.56. 3,4                               | Mercur.            | 1.41.23,5  | 1.45.20,7                     | 1.51.21,2                      | 35.48.37                                      |
| 28      |  | δ Serp.            | 6.46.21,4  | 6.50.20,3                     | 6.56.20,5                      | 34. 9.24                                      |
| 28      |  | γ Serp.            | 6.55.28,3  | 6.59.27,3                     | 7. 5.27,6                      | 38.18.49                                      |
| 29      | 23.55.53,7                               | Mercur.            | 1.41. 7,0  | 1.45.14,0                     | 1.51.12,8                      | 36.22.10                                      |
| 29      |  | γ Serp.            | 6.51.24,0  | 6.55.33,1                     | 7. 1.31,4                      | 38.18.49                                      |
| 30      | 23.55.43,8                               | Mercur.            | 1.40.39,2  | 1.44.56,2                     | 1.50.52,7                      | 36.54.56                                      |
| 30      |  | α Serp.            | 6.47.20,3  | 6.51.39,9                     | 6.57.35,7                      | 38.18.50                                      |
| 31      | 23.55.32,0                               | Mercur.            | 1.40. 0,5  | 1.44.28,3                     | 1.50.21,7                      | 37.27. 6                                      |
| 31      |  | α Serp.            | 6.43.16,3  | 6.47.47,2                     | 6.53.40,0                      | 38.18.49                                      |
| Okt. 30 | 23.29.21,1                               | Mercur.            | 0.15.46,6  | 0.46.25,5                     | 0.30.14,6                      | 64.16. 9                                      |
| 30      |  | β Ceti             | 9.39. 1,3  | 10. 9.40,9                    | 9.53.29,3                      | 64.36.53                                      |
| 31      | 23.29.19,4                               | • • •              | • • •  | • • •                         | • • •                          | • • •   |

| 1780    | Meridies<br>versus<br>tempore<br>Penduli. | Nomina<br>Siderum | Transitus<br>per<br>Meridian<br>tempore<br>Penduli. | Transitus<br>tempore<br>vero. | Transitus<br>tempore<br>medio. | Distan-<br>tia<br>a zenith<br>obser-<br>vata. |
|---------|---|-------------------|---|-------------------------------|--------------------------------|---|
|         | Dies.                                     | H. M. S.          | H. M. S.  | H. M. S.                      | H. M. S.                       | H. M. S.                                      |
| Nov. 26 | 23.35.12,7                                | Mercur.           | 1. 7.13,0   | 1.31.58,7                     | 1. 19.54.571.                  | 6.42  |
| 26      |   | Capric.           | 4.36.45,0   | 5. 1.27,0                     | 4.49.26,5                      | 68.46. 3                                      |
| 26      |   | Capric.           | 4.47.23,3   | 5.12. 5,1                     | 5. 0. 4.6.65                   | 51.45   |
| 27      | 23.35.38,2                                | .....             | .....   | .....                         | .....                          | .....   |

| 1781 | Mart. 9 | 0.17.12,3  | Mercur.    | 1.14.11,3  | 0.56.59,5  | 1. 7.40,7 | 12.44.20 |
|------|---------|------------|------------|------------|------------|-----------|----------|
|      | 9       | 8 Ca. min. | 8.10.28,6  | 7.53.20,7  | 8. 3.57,3  | 36.43.50  |          |
|      | 9       | Procyon    | 8.23. 0,5  | 8. 5.52,6  | 8.16.29,2  | 39.40.25  |          |
|      | 10      | 0 17. 0,0  | Mercur.    | 1.15.52,6  | 0.58.53,2  | 1. 9.18,3 | 41.53.52 |
|      | 10      | 8 Ca. min. | 8. 6.34,3  | 7.49.40,1  | 8. 0. 0,7  | 36.43.50  |          |
|      | 10      | Procyon    | 8.19. 6,3  | 8. 2.12,1  | 8.12.32,7  | 39.40.25  |          |
|      | 11      | 0.16.45,3  | Mercur.    | 1.17.19,3  | 1. 0.34,7  | 1.10.43,5 | 41. 5. 0 |
|      | 11      | 8 Ca. min. | 8. 2.40,5  | 7.46. 0,3  | 7.56. 4,3  | 36.43.50  |          |
|      | 11      | Procyon    | 8.15.13,0  | 7.58.32,9  | 8. 8.36,9  | 39.40.22  |          |
|      | 12      | 0.16.29,5  | Mercur.    | 1.18.29,3  | 1. 2. 0,4  | 1.11.52,6 | 40.18. 8 |
|      | 12      | 8 Hydræ    | 9.27. 4,9  | 9.10.40,1  | 9.20.26,5  | 38.40.40  |          |
|      | 14      | 0.15.59,0  | Mercur.    | 1.19.50,7  | 1. 3.52,3  | 1.13.10,4 | 38.51.38 |
|      | 14      | 8 Orionis  | 5.49.25,6  | 5.33.29,9  | 5.42.44,8  | 39.18.40  |          |
|      | 14      | Procyon    | 8. 3.30,8  | 7.47.36,5  | 7.56.39,7  | 39.40.25  |          |
|      | 16      | 0.15.30,1  | Mercur.    | 1.19.47,6  | 1. 4.18,2  | 1.13. 1,0 | 37.36. 1 |
|      | 16      | 8 Orionis  | 5.41.39,3  | 5.26.12,9  | 5.34.52,4  | 39.18.40  |          |
|      | 16      | Procyon    | 7.55.44,2  | 7.40.19,4  | 7.48.57,5  | 39.40.24  |          |
|      | 17      | 0.15.13,6  | .....      | .....      | .....      | .....     |          |
|      | 19      | 0.14.42,0  | Mercur.    | 1.16.37,4  | 1. 1.56,1  | 1. 9.44,7 | 36. 8. 9 |
|      | 19      | 8 Aquilæ   | 19.54.18,5 | 19.39.50,0 | 19.47.24,5 | 37. 8.50  |          |
|      | 20      | 0.14.25,9  | Mercur.    | 1.14.41,2  | 1. 0.16,4  | 1. 7.46,7 | 35.46. 5 |
|      | 20      | 8 Orionis  | 5.26. 3,6  | 5.11.41,6  | 5.19. 8,7  | 39.18.43  |          |
|      | 21      | 0.14. 9,3  | Mercur.    | 1.12.17,6  | 0.58. 8,9  | 1. 5.20,9 | 35.27.55 |
|      | 21      | 8 Orionis  | 5.22. 8,7  | 5. 8. 2,8  | 5.15.12,7  | 39.18.45  |          |
|      | 21      | Procyon    | 7.36.13,6  | 7.22. 9,1  | 7.29.16,3  | 39.40.25  |          |

| 1784    | Merid. es<br>verus<br>tempore<br>Penduli. | Nomina<br>siderum. | Transitus<br>per<br>Meridian.<br>tempore<br>Penduli. | Transitus<br>tempore<br>vero. | Transitus<br>tempore<br>medio. | Distan-<br>tia<br>a zenith<br>obser-<br>vata. |
|---------|---|--------------------|--|-------------------------------|--------------------------------|---|
|         | H. M. S.                                  | H. M. S.           | H. M. S.   | H. M. S.                      | G. M. S.                       |   |
| Dresd.  |   |                    |  |                               |                                |   |
| Apr. 20 | 0. 6. 21,3                                | Mercur.            | 22.40.44,0   | 22.34.33,8                    | 22.33. 3,8                     | 43.53.51                                      |
| 21      | 0. 6. 9,5                                 | Leonis             | 9.32.20,3  | 9.26.15,4                     | 9.24.40,0                      | 45. 3,41                                      |
| 21      |   | Virgin.            | 9.45.51,3  | 9.39.46,5                     | 9.38.11,0                      | 42.26.52                                      |
| 21      |   | Mercur.            | 22.38.27,6   | 22.32.31,4                    | 22.30.49,3                     | 43.54.35                                      |
| 22      | 0. 5.55,3                                 |                    |  |                               |                                |   |
| Maji 2  | 0. 4.25,7                                 | Mercur.            | 22.27.50,8   | 22.23.31,4                    | 22.20. 7,5                     | 41.57.56                                      |
| 3       | 0. 4.19,0                                 | Procyon            | 4.47.55,4  | 4.43.37,7                     | 4.40.12,1                      | 39.40.26                                      |
| 3       |   | Mercur.            | 22.27.58,5   | 22.23.45,1                    | 22.20.15,0                     | 41.14.25                                      |
| 4       | 0. 4.13,1                                 | Procyon            | 4.43.59,9  | 4.39.49,1                     | 4.36.16,4                      | 39.40.24                                      |
| 11      | 0. 3.57,6                                 | Mercur.            | 22.34.28,3   | 22.30.43,9                    | 22.26.44,5                     | 37.18.20                                      |
| 12      | 0. 3.44,3                                 | Procyon            | 4.12.35,2  | 4. 8.50,9                     | 4. 4.51,2                      | 39.40.21                                      |
| 12      |   | Leonis             | 7.54. 0,3  | 7.50.16,0                     | 7.46.16,2                      | 38.13. 6                                      |
| 13      | 0. 3.45,1                                 |                    |  |                               |                                |   |
| 15      | 0. 3.43,0                                 | Mercur.            | 22.41.13,3   | 22.37.30,7                    | 22.33.30,5                     | 34.54.21                                      |
| 16      | 0. 3.42,6                                 | 8 Serp.            | 11.32. 1,6   | 11.48.19,3                    | 11.44.19,5                     | 34.10. 0                                      |
| 16      |   | 9 Serp.            | 12. 1. 9,5   | 11.57.27,2                    | 11.53.27,4                     | 38.19. 6                                      |
| 17      |   | Mercur.            | 22.45.32,6   | 22.41.50,6                    | 22.37.53,4                     | 33.37.39                                      |
| 18      | 0. 3.41,4                                 | Mercur.            | 22.47.55,9   | 22.44.14,5                    | 22.40.19,8                     | 33.58.26                                      |
| Jän. 15 | 0. 6.37,0                                 | Mercur.            | 0.51. 4,5  | 0.44.27,6                     | 0.44.28,7                      | 20.16.30                                      |
| 15      |   | * Coron.           | 9.54. 4,0  | 9.47.22,8                     | 9.47.28,4                      | 17.59.11                                      |
| 17      | 0. 6.57,8                                 | Mercur.            | 1. 1. 0,6  | 0.54. 2,4                     | 0.54.29,3                      | 20.23. 0                                      |
| 17      |   | Arcturus           | 8.26.35,5  | 8.19.34,7                     | 8.20. 5,3                      | 26. 7. 8                                      |
| 19      | 0. 7.17,9                                 | Mercur.            | 1.10.16,7  | 1. 2.58,4                     | 1. 3.51,2                      | 20.39. 5                                      |
| 28      |   | Mercur.            | 1.42.25,8  | 1.33.36,2                     | 1.36.24,4                      | 23.33.34                                      |
| 28      |   | Arcturus           | 7.42.58,2  | 7.33.59,5                     | 7.36.50,6                      | 26. 7.10                                      |
| 28      |   | 9 Hercul.          | 9.57.36,6  | 9.48.44,0                     | 9.51.36,3                      | 23.38.15                                      |

| 1781    | Meridies<br>verus<br>tempore<br>Penduli. | Nomina<br>Siderum. | Transitus<br>per<br>Meridian.<br>tempore<br>Penduli. | Transitus        | Transitus         | Transitus | Distan-<br>tia<br>a zenith<br>obser-<br>vata. |
|---------|--|--------------------|--|------------------|-------------------|-----------|---|
|         |  |                    |  | tempore<br>vero. | tempore<br>medio. | G.M.S.    |   |
| Dies.   | H. M. S.                                 |                    | H. M. S.   | H. M. S.         | H. M. S.          | G.M.S.    |   |
| Jun. 29 | 0. 8.58,6                                | Mercur.            | 1.45. 1,0  | 1.36. 1,8        | 1.39. 2,1         | 23.49. 5  |   |
| 29      |  | Arcturus           | 7.38.52,4  | 7.29.50,8        | 7.32.54,0         | 25. 7. 9  |   |
| 29      |  | η Hercul.          | 9.53.39,0  | 9.44.36,4        | 9.47.40,8         | 23.28.11  |   |
| 30      | 0. 9. 8,3                                | Mercur.            | 1.47.21,5  | 1.38.12,7        | 1.41.14,8         | 24.15. 9  |   |
| 30      |  | Arcturus           | 7.34.53,3  | 7.25.42,9        | 7.28.58,0         | 25. 7. 8  |   |
| 30      |  | δ Hercul.          | 9.49.40,4  | 9.40.29,4        | 9.43.45,5         | 23.28.30  |   |
| Jul. 1  | 0. 9.14,7                                | Mercur.            | 1.49.29,4  | 1.40.14,4        | 1.43.38,1         | 24.41.54  |   |
| 1       |  | Arcturus           | 7.30.53,6  | 7.21.36,3        | 7.25. 2,8         | 25. 7. 8  |   |
| 1       |  | η Hercul.          | 9.45.39,2  | 9.36.20,9        | 9.39.48,5         | 23.28.16  |   |
| 2       | 0. 9.22,3                                | Mercur.            | 1.51.25,6  | 1.42. 2,9        | 1.45.37,7         | 25. 9.28  |   |
| 2       |  | Arcturus           | 7.26.52,8  | 7.17.28,7        | 7.21. 6,1         | 25. 7. 7  |   |
| 2       |  | γ Hercul.          | 9.33. 7,3  | 9.23.42,7        | 9.27.21,1         | 25.46. 7  |   |
| 3       | 0. 9.28,3                                | Mercur.            | 1.53. 8,9  | 1.43.40,2        | 1.47.26,0         | 24.37.45  |   |
| 3       |  | Arcturus           | 7.22.52,3  | 7.13.22,2        | 7.17.10,4         | 25. 7. 7  |   |
| 3       |  | γ Hercul.          | 9.29. 7,0  | 9.19.36,4        | 9.23.25,6         | 25.46.10  |   |
| 4       | 0. 9.34,2                                | Mercur.            | 1.54.39,2  | 1.45. 4,6        | 1.49. 1,1         | 26. 6.43  |   |
| 4       |  | η Hercul.          | 9.25. 6,0  | 9.15.29,6        | 9.19.29,4         | 25.46. 6  |   |
| 6       | 0. 9.43,8                                | Mercur.            | 1.57. 4,7  | 1.47.20,6        | 1.51.37,3         | 27. 5.23  |   |
| 6       |  | Arcturus           | 7.10.48,4  | 7. 1. 3,4        | 7. 5.32,1         | 25. 7. 6  |   |
| 6       |  | β Serp.            | 8.40.58,4  | 8.31.13,2        | 8.35.32,5         | 29.19.41  |   |
| 7       | 0. 9.47,7                                | Mercur.            | 1.57.59,4  | 1.48.10,4        | 1.52.36,6         | 27.35.10  |   |
| 7       |  | Arcturus           | 7. 6.46,6  | 6.56.58,0        | 7. 1.26,2         | 25. 7. 5  |   |
| 7       |  | β Serp.            | 8.36.56,4  | 8.27. 7,6        | 8.31.36,4         | 29.19.45  |   |
| 8       | 0. 9.51,0                                | Mercur.            | 1.58.40,3  | 1.48.49,0        | 1.53.24,5         | 28. 5. 3  |   |
| 8       |  | Arcturus           | 7. 2.44,6  | 6.52.53,6        | 6.57.30,6         | 25. 7. 8  |   |
| 8       |  | β Serp.            | 8.32.55,0  | 8.23. 2,6        | 8.27.40,7         | 29.19.43  |   |
| 9       | 0. 9.55,0                                | Mercur.            | 1.59. 9,5  | 1.49.14,1        | 1.53.58,4         | 28.34.57  |   |
| 9       |  | β Serp.            | 8.28.53,5  | 8.18.56,0        | 8.23.48,2         | 29.19.42  |   |
| 9       |  | γ Serp.            | 8.39. 7,3  | 8.29. 9,7        | 8.33.55,9         | 29. 3.33  |   |

| 1781    | Meridies<br>verus<br>tempore<br>Penduli. | Nomina<br>Siderum. | Transitus<br>per<br>Meridian.<br>tempore<br>Penduli. | Transitus<br>tempore<br>vero. | Transitus<br>tempore<br>medio. | Distan-<br>tia<br>a zenith<br>obser-<br>vata. |
|---------|--|--------------------|--|-------------------------------|--------------------------------|---|
|         | Dies.                                    | H. M. S.           | H. M. S.   | H. M. S.                      | H. M. S.                       | G M. S.                                       |
| Jul. 10 | 0.10. 2,6                                | Mercur.            | 1.59.25,8  | 1.49.23,4                     | 1.54.16,2                      | 29. 4.52                                      |
| 10      |  | Arcturus           | 6.54.41,5  | 6.44.39,8                     | 6.49.34,3                      | 25. 7. 6                                      |
| 10      |  | β Serp.            | 8.24.52,0  | 8.14.51,6                     | 8.19.46,4                      | 29.19.42                                      |
| —       | —  | —                  | —  | —                             | —                              | —   |
| 12      | 0.10. 1,3                                | Mercur.            | 1.59.22,6  | 1.49.21,2                     | 1.54.29,6                      | 30. 3.55                                      |
| 12      |  | Arcturus           | 6.46.39,0  | 6.36.37,2                     | 6.41.47,0                      | 25. 7. 6                                      |
| 12      |  | β Serp.            | 8.16.48,8  | 8. 6.46,8                     | 8.11.57,1                      | 29.19.42                                      |
| —       | —  | —                  | —  | —                             | —                              | —   |
| 13      | 0.10. 3,2                                | Mercur.            | 1.59. 1,3  | 1.48.58,3                     | 1.54.13,9                      | 30.33.13                                      |
| 13      |  | Arcturus           | 6.42.37,0  | 6.32.35,2                     | 6.37.52,2                      | 25. 7. 6                                      |
| 13      |  | β Serp.            | 8.12.47,1  | 8. 2.45,7                     | 8. 8. 3,2                      | 29.19.43                                      |
| 14      | 0. 9.58,0                                | —                  | —  | —                             | —                              | —   |
| —       | —  | —                  | —  | —                             | —                              | —   |
| Oct. 7  | 23.48.17,4                               | Mercur.            | 0.27.24,2  | 0.39. 7,2                     | 0.26.47,9                      | 55.15.56                                      |
| 7       |  | α Antino.          | 5.48.27,5  | 6. 0.14,3                     | 5.47.51,3                      | 50.37.57                                      |
| 7       |  | γ Capric.          | 6.59.31,5  | 7.11.19,1                     | 6.58.55,3                      | 58.38.22                                      |
| 8       | 23.48. 0,4                               | —                  | —  | —                             | —                              | —   |
| —       | —  | —                  | —  | —                             | —                              | —   |
| 12      | 23.47. 1,5                               | Mercur.            | 0.36.46,3  | 0.49.45,2                     | 0.36. 8,8                      | 58.34.58                                      |
| 12      |  | α Capric.          | 6.39.55,5  | 6.52.57,2                     | 6.39.17,6                      | 58.38.87                                      |
| 12      |  | β Capric.          | 6.42.43,8  | 6.55.45,8                     | 6.43. 5,9                      | 60.53. 8                                      |
| —       | —  | —                  | —  | —                             | —                              | —   |
| 14      | 23.46.37,2                               | Mercur.            | 0.40.26,8  | 0.53.49,9                     | 0.39.46,2                      | 59.49.59                                      |
| 14      |  | α Capric.          | 6.32. 6,3  | 6.45.32,1                     | 6.31.25,3                      | 58.38.24                                      |
| 14      |  | β Capric.          | 6.34.54,5  | 6.48.20,3                     | 6.34.13,5                      | 60.53. 6                                      |
| —       | —  | —                  | —  | —                             | —                              | —   |
| 15      | 23.46.26,2                               | Mercur.            | 0.42.16,3  | 0.55.49,5                     | 0.41.33,9                      | 60.25.54                                      |
| 15      |  | α Capric.          | 6.28.11,7  | 6.41.47,8                     | 6.27.29,3                      | 58.38.23                                      |
| 15      |  | β Capric.          | 6.30.59,6  | 6.44.35,7                     | 6.30.17,2                      | 60.53. 9                                      |
| —       | —  | —                  | —  | —                             | —                              | —   |
| 16      | 23.46.15,3                               | Mercur.            | 0.44. 5,3  | 0.57.50,4                     | 0.43.21,6                      | 61. 1.30                                      |
| 16      |  | α Capric.          | 6.24.16,6  | 6.38. 4,1                     | 6.23.32,5                      | 58.38.23                                      |
| 16      |  | β Capric.          | 6.27. 5,0  | 6.40.52,5                     | 6.26.20,9                      | 60.53. 8                                      |
| —       | —  | —                  | —  | —                             | —                              | —   |
| 18      | 23.45.56,1                               | Mercur.            | 0.47.41,5  | 1. 1.45,8                     | 0.46.54,4                      | 62. 9.58                                      |
| —       | —  | —                  | —  | —                             | —                              | —   |
| 19      | 23.45.47,0                               | α Capric.          | 0.49.28,8  | 1. 3.42,2                     | 0.48.40,5                      | 62.43. 0                                      |
| 19      |  | β Capric.          | 6.12.34,0  | 6.26.39,2                     | 6.11.45,3                      | 58.38.23                                      |
| 19      |  | γ Mercur.          | 6.15.22,4  | 6.29.37,6                     | 6.14.33,7                      | 60.53. 8                                      |

| 1781    | Meridies<br>verus<br>tempore<br>Penduli. | Nomina<br>Siderum. | Transitus<br>per<br>Meridian.<br>tempore<br>Penduli. | Transitus<br>tempore<br>vero. | Transitus<br>tempore<br>medio. | Distan-<br>tia<br>a zenith<br>obser-<br>vata. |
|---------|--|--------------------|--|-------------------------------|--------------------------------|---|
|         | Dies.                                    | H. M. S.           | H. M. S.   | H. M. S.                      | H. M. S.                       | G. M. S.                                      |
| Oct. 22 | 23.45.25,3                               | Mercur.            | 0.54.48,2  | 1. 9.23,3                     | 0.53.54,3                      | 64.16.20                                      |
| 22      |  | z Capric.          | 6. 0.52,3  | 6.15.29,2                     | 5.59.58,5                      | 58.38.24                                      |
| .       | 22                                       | 3 Capric.          | 6. 3.40,3  | 6.18.17,2                     | 6. 2.46,6                      | 60.53. 8                                      |
| 23      | 23.45.16,7                               | Mercur.            | 0.56.32,6  | 1.11.16,1                     | 0.55.39,2                      | 64.45.45                                      |
| 23      |  | z Capric.          | 5.56.58,0  | 6.11.42,3                     | 5.56. 3,9                      | 58.38.22                                      |
| 23      |  | 3 Capric.          | 5.59.46,2  | 6.14.30,5                     | 5.58.52,1                      | 60.53. 9                                      |
| 24      | 23.45.12,7                               | Mercur.            | 0.58.16,2  | 1.13. 3,8                     | 0.57.19,8                      | 65.13.55                                      |
| 24      |  | z Capric.          | 7.14.54,7  | 7.29.43,1                     | 7.13.57,4                      | 63. 3.55                                      |
| 24      |  | 3 Capric.          | 7.21.53,4  | 7.36.41,8                     | 7.20.56,1                      | 62.32. 6                                      |
| 25      | 23.45. 9,5                               |                    | • • • •  | • • • •                       | • • • •                        | • • • •                                       |
| Nov. 1  | 23.45.18,3                               | Mercur.            | 1.11. 8,0  | 1.25.50,0                     | 1. 9.35,4                      | 68.21. 9                                      |
| 1       |  | z Capric.          | 6.30. 7,7  | 6.44.50,8                     | 6.28.36,1                      | 68.45.39                                      |
| 1       |  | 3 Capric.          | 6.40.45,8  | 6.55.28,9                     | 6.39.14,2                      | 65.51. 9                                      |
| 2       | 23.45.13,8                               | Mercur.            | 1.12.30,0  | 1.27.16,8                     | 1.11. 1,8                      | 68.39.11                                      |
| 2       |  | z Capric.          | 6.26.16,2  | 6.41. 3,4                     | 6.24.48,5                      | 68.45.36                                      |
| 2       |  | 3 Capric.          | 6.36.53,7  | 6.51.40,9                     | 6.35.26,0                      | 65.51.17                                      |
| 8       | 23.45.53,7                               | Mercur.            | 1.18. 9,3  | 1.32.14,9                     | 1.16.15,1                      | 69.57.35                                      |
| 8       |  | An. Capr.          | 5.59.25,0  | 6.13.28,4                     | 5.57.30,                       | 69. 0.21                                      |
| 8       |  | z Capric.          | 6. 3. 6,9  | 6.17.10,3                     | 6. 1.12,                       | 68.45.35                                      |
| 8       |  | 3 Capric.          | 6.13.44,5  | 6.27.47,9                     | 6.11.48,8                      | 65.51. 9                                      |
| 9       | 23.46. 5,1                               |                    | • • • •  | • • • •                       | • • • •                        | • • • •                                       |
| 11      | 23.46.28,2                               | Mercur.            | 1.18.18,4  | 1.31.51,0                     | 1.16.11,3                      | 70.15.27                                      |
| 11      |  | An. Capr.          | 5.47.51,7  | 6. 1.20,1                     | 5.45.42,0                      | 69. 0.29                                      |
| 11      |  | z Capric.          | 5.51.33,8  | 6. 5. 2,2                     | 5.49.24,1                      | 68.45.37                                      |
| 11      |  | 3 Capric.          | 6. 2.11,4  | 6.15.39,8                     | 6. 0. 1,7                      | 65.51.10                                      |
| 11      | 23.46.41,7                               |                    | • • • •  | • • • •                       | • • • •                        | • • • •                                       |



In observationibus sequentibus, quas habuit sectore aequatoriali saepe Mercurium cum Sole comparavi. Notatur autem appulsus ad filum tum Mercurii tum centri Solis; atque in postrema columna notatur apparentia declinatio Mercurii & Solis limbi *superioris* vel *inferioris* prout littera *S* vel *I* ibidem apponitur; Littera vero *A* vel *B* declinationem *australem* vel *borealem* significat.

| 1780 | Meridies<br>verius<br>tempore<br>Penduli. | Nomina<br>Siderum. | Appulsus<br>ad filum<br>tempore<br>Penduli. | Appulsus<br>tempore<br>vero. | Appulsus<br>tempore<br>medio. | Declinatio<br>apparentia<br>observata. |
|------|---|--------------------|---|------------------------------|-------------------------------|--|
|      | Dies.                                     | H. M. S            |   | H. M. S                      | H. M. S                       | H. M. S                                |
| 8    | 23. 57.44,3                               | Mercur.            | 23. 7.17,7                                  | 23. 9.26,9                   | 23.16.59,7                    | 20.36. 0 A                             |
| 9    | 23. 57.51,1                               | Sol                | 0.32.18,5                                   | 0.24.27,3                    | 0.32. 1,4                     | 21.55.34 S                             |
| 27   | 0.10.47,7                                 | Mercur.            | 23.31. 2,4                                  | 23.20.32,2                   | 23.33.45,1                    | 22.32.31 A                             |
| 28   | 0.10.40,0                                 | Sol                | 1. 9.57,8                                   | 0.59.18,1                    | 1.12.41,8                     | 18.32.20 I                             |
| 28   | ...                                       | Mercur.            | 23.14.17,5                                  | 23. 3.47,1                   | 23.17.20,6                    | 22.33. 0 A                             |
| 29   | 0.10.30,0                                 | Sol                | 0.92.56,1                                   | 0.42.26,4                    | 0.56. 0,6                     | 18.16.22 I                             |
| 26   | 0. 5.34,3                                 | Mercur.            | 3.48.26,4                                   | 3.42.54,6                    | 3.48.35,6                     | 10.22.10 B                             |
| 26   | 0. 5.36,3                                 | Aquilae            | 23. 1.25,3                                  | 21.56. 7,5                   | 22. 1.24,3                    | 8.14.44 B                              |
| 27   | 0. 5.16,0                                 | ...                | ...   | ...                          | ...                           | ...                                    |

| 1781 |           |         |            |            |            |            |
|------|-----------|---------|------------|------------|------------|------------|
| 6    | 0.22.45,3 | Mercur. | 22.97.14,0 | 23.34.28,5 | 23.41.31,7 | 23.14.47 A |
| 7    | 0.22.45,5 | Sol     | 0.35.45,7  | 0.13. 0,1  | 0.20. 4,5  | 23. 4.14 S |
| 7    | ...       | Mercur. | 23.58. 2,8 | 23.35.57,8 | 22.42.45,7 | 22.26. 7 A |
| 8    | 0.22.45,0 | Sol     | 0.35.46,0  | 0.13. 1,0  | 0.20.30,5  | 21.55.55 S |
| 9    | ...       | Mercur. | 23. 9.38,9 | 22.46.45,0 | 22.55. 2,4 | 22.46.50 A |
| 10   | 0.22.43,9 | Sol     | 0.45. 8,5  | 0.22.24,6  | 0.30.43,1  | 21.38.16 S |
| 26   | ...       | Mercur. | 23.26.58,8 | 23.21.23,0 | 23.34.46,0 | 22.54.37 A |
| 27   | 0. 5.35,0 | Sol     | 0.29.24,6  | 0.23.49,9  | 0.37.13,4  | 18.36.24 I |

| 1781    | Meridies<br>versus<br>tempore<br>Penduli. | Nomina<br>Siderum. | Appulsus<br>ad filum<br>tempore<br>Penduli. | Appulsus<br>tempore<br>vero. | Appulsus<br>tempore<br>medio. | Declinatio<br>apparens<br>oblivata. |
|---------|---|--------------------|---|------------------------------|-------------------------------|-------------------------------------|
|         | Dies.                                     | H. M. S.           | H. M. S.                                    | H. M. S.                     | H. M. S.                      | G. M. S.                            |
| Ju. 28  | 0. 5 18,2                                 | Mercur.            | 23.26.59,7                                  | 23.21.58,3                   | 23.35.42,5                    | 22.31.53 A                          |
| 29      | 0. 5. 0,7                                 | Sol                | 0.24.21,0                                   | 0.19.20,6                    | 0.33. 5,3                     | 18. 4. 6 I                          |
| 29      |   |                    |   |                              |                               |                                     |
| 30      | 0. 4.42,9                                 | Mercur.            | 23.26.58,3                                  | 23.22.15,0                   | 23.36. 8,6                    | 22.18.25 A                          |
|         |   | Sol                | 0.21.44,2                                   | 0.17. 1,5                    | 0.30.55,5                     | 17.47.49 I                          |
| 30      |   |                    |   |                              |                               |                                     |
| 31      | 0. 4.23,5                                 | Mercur.            | 23.29.18,3                                  | 23.24.54,3                   | 23.38.56,5                    | 22. 3.38 A                          |
|         |   | Sol                | 0.21.25,4                                   | 0.17. 1,6                    | 0.31. 4,1                     | 17.30.54 I                          |
| Feb. 1  | 0. 4. 2,4                                 | Mercur.            | 23.32. 7,7                                  | 23.28.44,2                   | 23.43. 1,1                    | 21.30. 0 A                          |
| 2       | 0. 3.23,0                                 | Sol                | 0.18.51,4                                   | 0.15.28,7                    | 0.29.45,8                     | 16.56.13 I                          |
| 2       |   |                    |   |                              |                               |                                     |
| 3       | 0. 2.56,4                                 | Merent.            | 23.24.25,5                                  | 23.21.28,6                   | 23.35.51,5                    | 21.11.15 A                          |
|         |   | Sol                | 0. 8.24,0                                   | 0. 5.27,2                    | 0.19.50,2                     | 16.38.30 I                          |
| 3       |   |                    |   |                              |                               |                                     |
| 4       | 0. 2.37,0                                 | Mercur.            | 23.26.49,0                                  | 23.24.15,3                   | 23.38.43,3                    | 20.50.29 A                          |
|         |   | Sol                | 0. 8. 0,7                                   | 0. 5.26,8                    | 0.19.54,9                     | 16.20.22 I                          |
| 4       |   |                    |   |                              |                               |                                     |
| 5       | 0. 2.12,8                                 | Mercur.            | 23.34.19,5                                  | 23.32. 6,3                   | 23.46.38,6                    | 20.28.54 A                          |
|         |   | Sol                | 0.12.42,6                                   | 0.10.30,0                    | 0.23. 2,4                     | 16. 2.31 I                          |
| 5       |   |                    |   |                              |                               |                                     |
| Mar. 17 | 23.36.59,2                                | Mercur.            | 1. 2. 6,3                                   | 1.25. 9,5                    | 1.33.34,2                     | 8.20. 9 B                           |
| 17      |   | Orionis            | 5.20.34,2                                   | 5.43.44,7                    | 5.52. 6,0                     | 6. 4.46 B                           |
| 17      |   | Ca. min.           | 7.22. 6,3                                   | 7.45.20,3                    | 7.53.40,5                     | 8.39.40 B                           |
| 18      | 23.56.19,7                                |                    |   |                              |                               |                                     |

Loca fixarum ex determinationibus Bradley & de la Caille desumpsi; pro Arcturo, & Aquilae, & Leonis, & Procyone in computum quoque duxi motum proprium a Tob. Mayer determinatum. Itaque positiones mediae omnium siderum cum quibus Mercurius comparatus fuit, ita se habent. Centri Solis loca sunt apparentia non autem media, eaque sunt ad singulos dies pro instanti observationis Mercurii.

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1784

| 1780    | Nomina<br>siderum . | Ascensio<br>recta . |     |      | Declinatio . |     |        | Aber-<br>ratio<br>& Nut.<br>in asc.<br>rect. | Aber-<br>ratio<br>& Nut.<br>in De-<br>clinat. | Var.<br>diur.<br>asc.<br>rect. |
|---------|---------------------|---------------------|-----|------|--------------|-----|--------|--|---|--------------------------------|
|         | Dies .              | G.                  | M.  | S.   | G.           | M.  | S.     | S.   | S.  | S.                             |
| Jan. 9  | Sol                 | 290.                | 30. | 40,1 | 22.          | 7.  | 45,5 A | -  | -   | -                              |
| 28      | Sol                 | 310.                | 43. | 24,4 | 18.          | 12. | 50,5 A | -  | -   | -                              |
| 29      | Sol                 | 311.                | 44. | 29,6 | 17.          | 57. | 2,2 A  | -  | -   | -                              |
| Mar. 27 | $\alpha$ Aquilae    | 295.                | I.  | 1,6  | 8.           | 17. | 56,7 B | - 17,0                                       | - 16,8  | 0,13                           |
| Maji 26 | $\alpha$ Leonis     | 149.                | 9.  | 52,5 | 13.          | 2.  | 11,0 B | - 14,8                                       | + 8,7   | 0,13                           |
| 26      | $\epsilon$ Virginis | 192.                | 48. | 43,4 | 12.          | 8.  | 34,8 B | + 7,5  | + 11,9  | 0,13                           |
| 27      | $\zeta$ Bootis      | 217.                | 39. | 55,8 | 14.          | 40. | 52,5 B | + 4,1  | + 8,5   | 0,13                           |
| Jun. 3  | $\gamma$ Bootis     | 206.                | 3.  | 22,7 | 19.          | 30. | 37,1 B | - 0,8  | + 9,0   | 0,13                           |
| 28      | Arcturus            | 211.                | 24. | 36,5 | 20.          | 20. | 41,5 B | - 1,6  | + 10,2  | 0,13                           |
| 28      | $\beta$ Herculis    | 245.                | 12. | 9,1  | 21.          | 58. | 50,4 L | + 9,3  | + 1,2   | 0,11                           |
| Jul. 18 | $\beta$ Serpent.    | 234.                | 0.  | 59,2 | 16.          | 7.  | 17,0 L | + 0,8  | + 7,5   | 0,11                           |
| 25      | $\alpha$ Serpent.   | 233.                | 22. | 9,2  | 7.           | 7.  | 44,0 B | - 3,1  | + 4,7   | 0,13                           |
| 26      | $\delta$ Serpent.   | 231.                | 5.  | 4,1  | 11.          | 17. | 5,1 B  | - 3,3  | + 6,4   | 0,13                           |
| Okt. 30 | $\beta$ Ceti        | 8.                  | 8.  | 43,5 | 19.          | 11. | 34,9 B | + 11,0                                       | + 1,5   | 0,13                           |
| Nov. 26 | $\zeta$ Capric.     | 318.                | 31. | 48,4 | 23.          | 20. | 56,0 A | - 16,8                                       | + 14,6  | 0,14                           |
| 26      | $\epsilon$ Capric.  | 321.                | 11. | 55,0 | 20.          | 26. | 13,9 A | - 15,7                                       | + 11,8  | 0,14                           |
| <hr/>   |                     |                     |     |      |              |     |        |  |   |                                |
| J. 1781 |                     |                     |     |      |              |     |        |  |   |                                |
| Jan. 7  | Sol                 | 289.                | 9.  | 21,1 | 23.          | 18. | 3,2 A  | -  | -   | -                              |
| 8       | Sol                 | 290.                | 14. | 47,9 | 22.          | 9.  | 50,8 A | -  | -   | -                              |
| 10      | Sol                 | 292.                | 26. | 41,4 | 21.          | 52. | 3,4 A  | -  | -   | -                              |
| 11      | Sol                 | 293.                | 30. | 54,5 | 21.          | 42. | 32,8 A | -  | -   | -                              |
| 27      | Sol                 | 310.                | 27. | 36,3 | 18.          | 16. | 52,7 A | -  | -   | -                              |
| 29      | Sol                 | 312.                | 31. | 1,2  | 17.          | 45. | 1,5 A  | -  | -   | -                              |
| 20      | Sol                 | 313.                | 32. | 24,7 | 17.          | 28. | 15,0 A | -  | -   | -                              |
| 31      | Sol                 | 314.                | 33. | 40,8 | 17.          | 11. | 23,9 A | -  | -   | -                              |
| Febr. 2 | Sol                 | 316.                | 35. | 31,3 | 16.          | 36. | 49,0 A | -  | -   | -                              |
| 3       | Sol                 | 317.                | 35. | 44,2 | 16.          | 19. | 12,3 A | -  | -   | -                              |
| 4       | Sol                 | 318.                | 36. | 9,8  | 16.          | I.  | 11,1 A | -  | -   | -                              |
| 5       | Sol                 | 319.                | 36. | 36,3 | 15.          | 42. | 50,1 A | -  | -   | -                              |
| Mar. 9  | Can.min.            | 108.                | 49. | 15,4 | 8.           | 43. | 5,5 B  | 0,0  | + 2,8   | 0,13                           |
| 9       | Procyon             | 111.                | 57. | 35,5 | 5.           | 46. | 19,9 B | + 0,7  | + 1,6   | 0,13                           |
| 12      | $\zeta$ Hydræ       | 130.                | 57. | 13,2 | 6.           | 46. | 27,0 B | + 4,5  | + 2,1   | 0,13                           |

| 1781    | Nomina<br>Siderum . | Ascensio<br>recta . | Declinatio .   | Aber-<br>ratio<br>& Nut.<br>in asc.<br>rect. |      |    | Aber-<br>ratio<br>& Nut.<br>in De-<br>clinat. |       |    | Var.<br>diur.<br>asc.<br>rect. |
|---------|---------------------|---------------------|----------------|--|------|----|---|-------|----|--------------------------------|
|         |                     |                     |                | G.   | M.   | S. | G.  | M.    | S. |                                |
| Dies .  |                     |                     |                |  |      |    |   |       |    |                                |
| Mar. 14 | $\gamma$ Orionis    | 78. 21. 9,6         | 6. 8. 6,6 B    | —  | 14,7 | +  | 7,0   | 0, 13 |    |                                |
| 19      | $\alpha$ Aquilae    | 295. 1. 44,7        | 8. 18. 5,3 B   | —  | 17,7 | —  | 18,3  | 0, 12 |    |                                |
| Apr. 21 | $\nu$ Leonis        | 171. 26. 21,2       | 0. 22. 56,2 B  | +  | 4,7  | —  | 1,5   | 0, 13 |    |                                |
| 31      | $\beta$ Virginis    | 174. 49. 23,1       | 2. 59. 58,9 B  | +  | 6,7  | —  | 2,0   | 0, 13 |    |                                |
| Maji 3  | Procion             | 181. 57. 42,5       | 5. 46. 18,6 B  | —  | 16,2 | +  | 3,8   | 0, 13 |    |                                |
| 12      | $\sigma$ Leonis     | 167. 27. 55,4       | 7. 13. 30,9 B  | —  | 1,1  | +  | 2,7   | 0, 13 |    |                                |
| 16      | $\delta$ Serpent.   | 231. 5. 38,6        | 11. 16. 54,0 B | +  | 12,8 | —  | 7,6   | 0, 12 |    |                                |
| 16      | $\gamma$ Serpent.   | 233. 22. 44,8       | 7. 7. 34,5 B   | +  | 11,5 | —  | 8,0   | 0, 12 |    |                                |
| Jun. 14 | $\beta$ Herculis    | 256. 45. 56,8       | 25. 6. 42,3 B  | +  | 15,9 | —  | 6,4   | 0, 10 |    |                                |
| 15      | $\gamma$ Coronae    | 231. 21. 37,8       | 27. 27. 45,6 B | +  | 14,4 | +  | 0,8   | 0, 10 |    |                                |
| 28      | Arcturus            | 211. 25. 22,2       | 20. 19. 46,5 B | +  | 2,3  | +  | 7,0   | 0, 12 |    |                                |
| 28      | $\beta$ Herculis    | 245. 12. 47,8       | 21. 58. 43,6 B | —  | 12,9 | —  | 1,7   | 0, 11 |    |                                |
| Jul.    | $\gamma$ Herculis   | 243. 4. 19,6        | 19. 40. 44,1 B | —  | 11,3 | —  | 0,0   | 0, 11 |    |                                |
| 6       | $\beta$ Serpent.    | 234. 1. 38,5        | 16. 7. 6,9 B   | +  | 7,6  | +  | 1,9   | 0, 11 |    |                                |
| 9       | $\gamma$ Serpent.   | 236. 35. 33,5       | 16. 83. 53,3 B | +  | 7,8  | +  | 1,2   | 0, 11 |    |                                |
| Okt.    |                     |                     |                |  |      |    |   |       |    |                                |
| 7       | $\lambda$ Antinoi   | 283. 40. 3,1        | 5. 11. 37,4 A  | —  | 7,5  | +  | 3,0   | 0, 13 |    |                                |
| 7       | $\alpha$ Capric.    | 301. 29. 1,6        | 13. 12. 26,6 A | —  | 1,5  | +  | 2,7   | 0, 14 |    |                                |
| 12      | $\beta$ Caprio.     | 308. 10. 59,3       | 15. 27. 24,4 A | —  | 1,4  | +  | 6,3   | 0, 14 |    |                                |
| 24      | $\gamma$ Capric.    | 321. 59. 47,9       | 17. 38. 17,4 A | +  | 0,8  | +  | 6,7   | 0, 14 |    |                                |
| 24      | $\delta$ Capric.    | 323. 44. 36,2       | 17. 6. 21,9 A  | +  | 1,9  | +  | 5,9   | 0, 14 |    |                                |
| Nov.    |                     |                     |                |  |      |    |   |       |    |                                |
| 1       | Anom. Ca.           | 317. 36. 58,0       | 23. 35. 31,0 A | —  | 8,0  | +  | 13,0  | 0, 14 |    |                                |
| 1       | $\gamma$ Capric.    | 318. 32. 26,7       | 23. 20. 41,0 A | —  | 8,3  | +  | 12,7  | 0, 14 |    |                                |
| 1       | $\delta$ Capric.    | 321. 22. 42,6       | 20. 25. 58,6 A | —  | 9,2  | +  | 8,8   | 0, 14 |    |                                |

Hicce constitutis, turque supputatis parallaxi Mercurii & differentiis refractionis inter declinationem Mercurii & illam fixarum vel Solis, eruuntur sequentes determinations pro loco Mercurii.



| 1780       | Tempus<br>medium. | Ascensio recta<br>Mercurii<br>apparens. |     |    | Declinatio<br>Mercurii<br>apparens. |
|------------|-------------------|---|-----|----|-------------------------------------|
|            |                   | G.                                      | M.  | S. |                                     |
| Januar. 8  | H. M. S.          | 271.                                    | 42. | 10 | 20. 21. 44 A                        |
| 27         | 23. 35. 45        | 285.                                    | 56. | 9  | 22. 29. 43                          |
| 28         | 23. 17. 21        | 287.                                    | 0.  | 26 | 22. 30. 23                          |
| Martius 26 | 3. 48. 26         | 21.                                     | 1.  | 11 | 10. 24. 10 B                        |
| Majus 25   | 22. 22. 34        | 40.                                     | 11. | 48 | 12. 24. 18                          |
| 26         | 22. 23. 39        | 41.                                     | 26. | 52 | 12. 53. 26                          |
| 27         | 22. 24. 53        | 42.                                     | 44. | 50 | 13. 23. 21                          |
| 28         | 22. 20. 21        | 44.                                     | 5.  | 43 | 13. 54. 10                          |
| 29         | 22. 27. 59        | 45.                                     | 29. | 33 | 14. 25. 46                          |
| 30         | 22. 29. 49        | 46.                                     | 56. | 22 | 14. 57. 59                          |
| Junius 31  | 22. 31. 52        | 48.                                     | 26. | 32 | 15. 30. 40                          |
| 1          | 22. 34. 6         | 49.                                     | 59. | 6  | 16. 3. 44                           |
| 2          | 22. 36. 34        | 51.                                     | 35. | 5  | 16. 37. 6                           |
| 3          | 22. 39. 13        | 53.                                     | 14. | 12 | 17. 10. 44                          |
| 28         | 0. 34. 33         | 105.                                    | 48. | 47 | 24. 25. 11                          |
| Julius 29  | 0. 39. 42         | 108.                                    | 5.  | 24 | 24. 13. 43                          |
| 30         | 0. 44. 41         | 110.                                    | 19. | 26 | 23. 59. 54                          |
| 1          | 0. 49. 32         | 112.                                    | 30. | 55 | 23. 43. 49                          |
| 2          | 0. 54. 12         | 114.                                    | 39. | 52 | 23. 25. 35                          |
| 3          | 0. 58. 39         | 116.                                    | 46. | 18 | 23. 5. 21                           |
| 4          | 1. 2. 57          | 118.                                    | 50. | 14 | 22. 43. 16                          |
| 5          | 1. 7. 5           | 120.                                    | 51. | 41 | 22. 19. 31                          |
| 6          | 1. 10. 59         | 122.                                    | 50. | 30 | 21. 54. 28                          |
| 7          | 1. 14. 43         | 124.                                    | 45. | 39 | 21. 27. 36.                         |
| 13         | 1. 33. 5          | 135.                                    | 15. | 51 | 18. 23. 6                           |
| 15         | 1. 37. 44         | 138.                                    | 24. | 49 | 17. 15. 21                          |
| 16         | 1. 39. 49         | 139.                                    | 54. | 24 | 16. 41. 1                           |
| 17         | 1. 41. 41         | 141.                                    | 21. | 40 | 16. 6. 0                            |
| 18         | 1. 43. 25         | 142.                                    | 46. | 37 | 15. 30. 23                          |
| 20         | 1. 46. 25         | 145.                                    | 29. | 6  | 14. 19. 11                          |

| 1780       | Tempus<br>medium. | Ascensio recta<br>Mercurii<br>apparens. |     |    | Declinatio<br>Mercurii<br>apparens. |     |    |
|------------|-------------------|---|-----|----|-------------------------------------|-----|----|
|            |                   | G.                                      | M.  | S. | G.                                  | M.  | S. |
| Dies .     | H. M. S.          |   |     |    |                                     |     |    |
| Julius 25  | I. 50. 55         | 151.                                    | 31. | 6  | II.                                 | 21. | 34 |
| 26         | I. 51. 7          | 152.                                    | 35. | 57 | 10.                                 | 46. | 35 |
| 27         | I. 51. 20         | 153.                                    | 38. | 9  | 10.                                 | 12. | 3  |
| 28         | I. 51. 21         | 154.                                    | 37. | 40 | 9.                                  | 38. | 1  |
| 29         | I. 51. 13         | 155.                                    | 34. | 31 | 9.                                  | 4.  | 32 |
|            | I. 50. 53         | 156.                                    | 28. | 39 | 8.                                  | 31. | 45 |
|            | I. 50. 22         | 157.                                    | 20. | 5  | 7.                                  | 59. | 30 |
| Oktob. 30  | O. 30. 15         | 226.                                    | 57. | 5  | 18.                                 | 50. | 50 |
| Novem. 26  | I. 19. 54         | 266.                                    | 0.  | 0  | 25.                                 | 42. | 5  |
| <hr/>      |                   |   |     |    |                                     |     |    |
| 1781       |                   |   |     |    |                                     |     |    |
| Januar. 6  | 22. 41. 31        | 264.                                    | 26. | 57 | 22.                                 | 12. | 18 |
| 7          | 22. 42. 46        | 265.                                    | 44. | 35 | 22.                                 | 23. | 48 |
| 9          | 22. 55. 2         | 268.                                    | 26. | 35 | 22.                                 | 44. | 25 |
| 26         | 23. 34. 46        | 294.                                    | 48. | 1  | 22.                                 | 51. | 50 |
| 28         | 23. 35. 42        | 298.                                    | 7.  | 57 | 22.                                 | 29. | 32 |
|            | 23. 36. 9         | 299.                                    | 48. | 28 | 22.                                 | 15. | 36 |
|            | 23. 38. 56        | 301.                                    | 29. | 39 | 22.                                 | 0.  | 49 |
| Februar. 1 | 23. 43. 1         | 304.                                    | 52. | 26 | 21.                                 | 27. | 16 |
| 2          | 23. 35. 51        | 306.                                    | 34. | 15 | 21.                                 | 8.  | 38 |
| 3          | 23. 38. 43.       | 308.                                    | 16. | 35 | 20.                                 | 47. | 58 |
|            | 23. 46. 38        | 309.                                    | 59. | 4  | 20.                                 | 26. | 2  |
| Martius 9  | I. 7. 41          | 4.                                      | 27. | 50 | 2.                                  | 42. | 29 |
| 10         | I. 9. 18          | 5.                                      | 52. | 0  | 3.                                  | 32. | 57 |
| 11         | I. 10. 44         | 7.                                      | 12. | 20 | 4.                                  | 21. | 51 |
| 12         | I. 11. 52         | 8.                                      | 28. | 41 | 5.                                  | 8.  | 58 |
|            | I. 13. 10         | 10.                                     | 46. | 15 | 6.                                  | 35. | 18 |
| 14         | I. 13. 1          | 12.                                     | 42. | 18 | 7.                                  | 50. | 56 |
| 16         | I. 33. 34         | 13.                                     | 32. | 16 | 8.                                  | 23. | 39 |
| 17         | I. 9. 45          | 14.                                     | 50. | 36 | 9.                                  | 18. | 30 |
| 19         | I. 7. 47          | 15.                                     | 20. | 6  | 9.                                  | 40. | 58 |

| 1783       | Tempus<br>medium. | Ascensio recta<br>Mercurii<br>apparens. |            |    | Declinatio<br>Mercurii<br>apparens. |
|------------|-------------------|---|------------|----|-------------------------------------|
|            |                   | G.                                      | M.         | S. |                                     |
| Martius 21 | 1. 5. 21          | 15. 43. 0                               | 9. 59. 8   | B  |                                     |
| Aprilis 20 | 22. 33. 4         | 8. 5. 31                                | 1. 32. 51  |    |                                     |
| 21         | 22. 30. 49        | 8. 22. 38                               | 1. 32. 7   |    |                                     |
| Majus 2    | 22. 20. 7         | 6. 39. 43                               | 3. 48. 53  |    |                                     |
| 3          | 22. 20. 15        | 7. 41. 49                               | 4. 12. 25  |    |                                     |
|            |                   |   |            |    |                                     |
| 11         | 22. 26. 44        | 27. 11. 59                              | 8. 8. 37   |    |                                     |
| 15         | 22. 33. 30        | 32. 51. 0                               | 10. 32. 20 |    |                                     |
| 17         | 22. 37. 53        | 35. 55. 12                              | 11. 49. 4  |    |                                     |
| 18         | 22. 40. 29        | 37. 30. 58                              | 12. 28. 8  |    |                                     |
| Junius 15  | 0. 44. 29         | 95. 14. 45                              | 25. 10. 28 |    |                                     |
|            |                   |   |            |    |                                     |
| 17         | 0. 54. 29         | 99. 43. 26                              | 25. 3. 58  |    |                                     |
| 19         | 1. 3. 51          | 103. 3. 24                              | 24. 57. 53 |    |                                     |
| 28         | 1. 36. 24         | 121. 4. 40                              | 22. 3. 20  |    |                                     |
| 29         | 1. 39. 2          | 122. 43. 5                              | 21. 37. 54 |    |                                     |
| 30         | 1. 41. 25         | 124. 18. 23                             | 21. 11. 49 |    |                                     |
|            |                   |   |            |    |                                     |
| Julius 1   | 1. 43. 38         | 125. 50. 33                             | 20. 45. 2  |    |                                     |
| 2          | 1. 45. 38         | 127. 19. 34                             | 20. 17. 28 |    |                                     |
| 3          | 1. 47. 26         | 128. 45. 50                             | 19. 49. 10 |    |                                     |
| 4          | 1. 49. 1          | 130. 8. 55                              | 19. 20. 8  |    |                                     |
| 6          | 1. 51. 37         | 132. 46. 31                             | 18. 21. 31 |    |                                     |
|            |                   |   |            |    |                                     |
| 7          | 1. 52. 36         | 134. 0. 40                              | 17. 51. 44 |    |                                     |
| 8          | 1. 53. 24         | 135. 11. 37                             | 17. 21. 51 |    |                                     |
| 9          | 1. 53. 58         | 136. 19. 19                             | 16. 51. 57 |    |                                     |
| 10         | 1. 54. 16         | 137. 23. 43                             | 16. 22. 6  |    |                                     |
| 12         | 1. 54. 29         | 139. 24. 29                             | 15. 22. 56 |    |                                     |
|            |                   |   |            |    |                                     |
| Octob. 13  | 1. 54. 14         | 140. 19. 18                             | 14. 53. 38 | B  |                                     |
| 7          | 0. 26. 48         | 203. 10. 58                             | 9. 49. 33  | A  |                                     |
| 12         | 0. 36. 9          | 210. 26. 57                             | 13. 9. 5   |    |                                     |
| 14         | 0. 39. 46         | 213. 19. 38                             | 14. 24. 55 |    |                                     |
| 25         | 0. 41. 34         | 214. 46. 0                              | 15. 1. 12  |    |                                     |

| 1781      | Tempus<br>medium. | Ascensio recta<br>Mercurii<br>apparens. |     |    | Declinatio<br>Mercurii<br>apparens. |
|-----------|-------------------|---|-----|----|-------------------------------------|
|           |                   | G.                                      | M.  | S. |                                     |
| Octob. 16 | 0. 43. 21         | 216.                                    | 12. | 12 | 15. 36. 51 A                        |
| 18        | 0. 46. 54         | 219.                                    | 3.  | 47 | 16. 44. 21                          |
| 19        | 0. 48. 40         | 220.                                    | 29. | 27 | 17. 17. 26                          |
| 22        | 0. 53. 54         | 224.                                    | 45. | 28 | 18. 50. 55                          |
| 23        | 0. 55. 39         | 226.                                    | 10. | 20 | 19. 20. 22                          |
| Novem. 24 | 0. 57. 20         | 227.                                    | 34. | 58 | 19. 48. 34                          |
| 1         | 1. 9. 35          | 238.                                    | 34. | 16 | 22. 56. 23                          |
| 2         | 1. 11. 2          | 239.                                    | 53. | 3  | 23. 14. 27                          |
| 8         | 1. 16. 16         | 247.                                    | 6.  | 55 | 24. 33. 3                           |
| 11        | 1. 16. 11         | 250.                                    | 3.  | 13 | 24. 50. 57                          |

Hiac comparationes cum tabulis *Halley* collegi, quae sequuntur pro temporibus supra indicatis.

| 1780     | Longitudo   | Longitudo  | Diffe- | Latitudo  | Latitudo  | Diffe- |
|----------|-------------|------------|--------|-----------|-----------|--------|
|          | vera        | vera       | rentia | vera      | vera      | rentia |
|          | geocentrica | ex tabulis | Longi- | geocen-   | ex tabul. | Latи-  |
|          | Mercurii    | Halley.    | tud.   | Mercurii  | Halley.   | tud.   |
|          | ex observ.  |            |        | ex obs.   |           |        |
| Dies.    | S.G.        | M.S.       | S.G.   | M.S.      | M.S.      | M.S.   |
| Maij. 25 | 1.11.40.18  | 1.11.40.12 | -0. 6. | 3. 5.36 A | 3. 5.23 A | -0. 15 |
| 26       | 1.12.59. 4  | 1.12.58.57 | -0. 7. | 3. 0. 1   | 2.59.49   | -0. 12 |
| 27       | 1.14.20.34  | 1.14.40.10 | -0. 24 | 2.53.54   | 2.53.63   | -0. 11 |
| 28       | 1.15.44.51  | 1.15.44.36 | -0. 15 | 2.47. 9   | 2.47. 2   | -0. 7  |
| 29       | 1.17.11.53  | 1.17.11.33 | -0. 20 | 2.39.51   | 2.39.51   | 0. 0   |
|          |             |            |        |           |           |        |
| 30       | 1.18.41.36  | 1.18.41.17 | -0. 19 | 2.32. 9   | 2.32.12   | +0. 9  |
| 31       | 1.20.13.59  | 1.20.13.46 | -0. 13 | 2.23.49   | 2.23.40   | -0. 9  |
| Jun. 1   | 1.21.49. 0  | 1.21.48.25 | -0. 35 | 2.15.10   | 2.15.20   | +0. 10 |
| 2        | 1.23.26.39  | 1.23.26.11 | -0. 28 | 2. 6. 5   | 2. 6.14   | +0. 9  |
| 3        | 1.25. 6.51  | 1.25. 6.27 | -0. 24 | 1.56.30   | 1.56.45   | +0. 15 |

| 1780    | Longitndo<br>vera<br>geocentrica<br>Mercurii<br>ex observ. | Longitudo<br>vera<br>ex tabulis<br>Halley. | Diffe-<br>rentia<br>Longi-<br>tud. | Latitude<br>vera<br>geocent.<br>Mercurii<br>ex obs. | Latitude<br>vera<br>ex tabulis<br>Halley. | Diffe-<br>rentia<br>Latit-<br>tud. |
|---------|--|--|------------------------------------|---|---|------------------------------------|
| Dies.   | S.G. M.S.  | S.G. M.S.                                  | M.S.                               | G.M.S.  | G.M.S.                                    | M.S.                               |
| Jun. 28 | 3.14.23.32   | 3.14.23. 7                                 | - 0. 25                            | 1.44.13 E   | 1.44. 2 E                                 | - 0.11                             |
| 29      | 3.16.28.33   | 3.16.28.10                                 | - 0. 23                            | 1.47.16   | 1.47. 9                                   | - 0. 7                             |
| 30      | 3.18.31.42   | 3.18.31.37                                 | - 0. 5                             | 1.49.37   | 1.49.32                                   | - 0. 5                             |
| Jul. 1  | 3.20.33. 3   | 3.20.33.17                                 | + 0.14                             | 1.51.12   | 1.51. 9                                   | - 0. 3                             |
| 2       | 3.22.32.40   | 3.22.33.10                                 | + 0.30                             | 1.52. 2   | 1.52. 7                                   | + 0. 5                             |
| 3       | 3.24.30.36   | 3.24.31.16                                 | + 0. 40                            | 1.52.12   | 1.52.19                                   | + 0. 7                             |
| 4       | 3.26.26.55   | 3.26.27.18                                 | + 0. 23                            | 1.51.42   | 1.51.50                                   | + 0. 8                             |
| 5       | 3.28.21.39   | 3.28.21.30                                 | - 0. 9                             | 1.50.40   | 1.50.43                                   | + 0. 3                             |
| 15      | 4.15.36.36   | 4.15.35.55                                 | - 0. 41                            | 1. 7.30   | 1. 7.50                                   | + 0.20                             |
| 16      | 4.17. 8.39   | 4.17. 8.14                                 | - 0. 25                            | 1. 0.35   | 1. 0.51                                   | + 0.16                             |
| 17      | 4.18.39. 5   | 4.18.39.28                                 | + 0. 83                            | 0.53. 1   | 0.53.27                                   | + 0.26                             |
| 18      | 4.20. 7.52   | 4.20. 7.41                                 | - 0. 11                            | 0.44.57   | 0.45.41                                   | + 0.44                             |
| 25      | 4.29.31.32   | 4.29.31.52                                 | + 0. 20                            | 0.18. 4 A   | 0.18.12 A                                 | + 0. 8                             |
| 26      | 5. 0.43. 6   | 5. 0.44. 4                                 | + 0. 58                            | 0.29.26   | 0.28.29                                   | - 0.57                             |
| 27      | 5. 1.52.49   | 5. 1.53.53                                 | + 1. 40                            | 0.39.59   | 0.38.59                                   | - 1. 0                             |
| 28      | 5. 2.59.45   | 5. 3. 0.14                                 | + 0. 29                            | 0.50.45   | 0.49.40                                   | - 1. 5                             |
| 29      | 5. 4. 4. 9   | 5. 4. 4.45                                 | + 0. 36                            | 1. 1.42   | 1. 0.33                                   | - 1. 9                             |
| 30      | 5. 5. 5.52   | 5. 5. 7. 5                                 | + 1. 13                            | 1.12.46   | 1.11.38                                   | - 1. 8                             |
| 31      | 5. 6. 5. 3   | 5. 6. 6.30                                 | + 1. 27                            | 1.24. 7   | 1.22.52                                   | - 1. 15                            |
| <hr/>   |  |  |                                    |   |   |                                    |
| 1781    |  |  |                                    |   |   |                                    |
| Jan. 26 | 9.22.45.29   | 9.22.43. 4                                 | - 2. 25                            | 1.20. 1 A   | 1.19.37 A                                 | - 0.24                             |
| 28      | 9.25.51. 3   | 9.25.48.41                                 | - 2. 22                            | 1.30.49   | 1.29.48                                   | - 1. 1                             |
| 29      | 9.27.25. 0   | 9.27.22.35                                 | - 2. 25                            | 1.35. 5   | 1.34.29                                   | - 0.36                             |
| 30      | 9.28.59.49   | 9.28.57.21                                 | - 2. 28                            | 1.39.38   | 1.38.52                                   | - 0.46                             |
| Febr. 1 | 10. 2.11. 4  | 10. 2. 9. 4                                | - 2. 01                            | 1.47.59   | 1.46.44                                   | - 1. 15                            |
| 2       | 10. 3.47.43  | 10. 3.45.23                                | - 2. 20                            | 1.51.56   | 1.50.10                                   | - 1. 46                            |
| 3       | 10. 5.25.29  | 10. 5.23. 9                                | - 2. 20                            | 2.55. 2   | 1.53.18                                   | - 1. 44                            |
| 4       | 10. 7. 3.55  | 10. 7. 2. 7                                | - 1. 48                            | 1.57.58   | 1.56. 7                                   | - 1. 51                            |
| Mart. 9 | 0. 5.11. 4   | 0. 5.10.17                                 | - 0. 47                            | 0.42.38 B   | 0.42.11 B                                 | - 0.27                             |
| 10      | 0. 6.48.11   | 0. 6.47.46                                 | - 0. 29                            | 0.55.37   | 0.55.12                                   | - 0.25                             |

| 1781     | Longitudo           | Longitudo                                    | Diffe-                   | Latitudo         | Latitudo                                 | Dife                    |
|----------|---------------------|--|--------------------------|------------------|--|-------------------------|
|          | vera<br>geocentrica | vera<br>ex tabulis<br>Mercurii<br>ex observ. | rentia<br>Longi-<br>tud. | vera<br>geocent. | vera<br>ex tabul.<br>Mercurii<br>ex obs. | rentia<br>Latitu-<br>d. |
| Dies.    | S.G. M.S.           | S G. M.S                                     | M.S.                     | G M.S.           | G M.S                                    | M.S.                    |
| Mart. 11 | 0. 8.21. 8          | 0. 8.20.59                                   | -0. 9                    | 1. 8.49 B        | 1. 8.18 B                                | -0. 31                  |
| 12       | 0. 9.49.35          | 0. 9.49. 3                                   | -0. 32                   | 1.22. 4          | 1.21.23                                  | -0. 41                  |
| 14       | 0.12.29.40          | 0.12.29.18                                   | -0. 22                   | 1.47.43          | 1.47.15                                  | -0. 28                  |
| 17       | 0.15.43. 9          | 0.15.43.12                                   | +0. 3                    | 2.23.19          | 2.23.26                                  | +0. 7                   |
| 19       | 0.17.15.44          | 0.17.15.54                                   | +0. 10                   | 2.44. 2          | 2.44. 9                                  | +0. 7                   |
| 20       | 0.17.51.16          | 0.17.51.45                                   | +0. 29                   | 2.53.34          | 2.53.18                                  | -0. 16                  |
| 21       | 0.18.19. 4          | 0.18.19.30                                   | +0. 26                   | 3. 1.40          | 3. 1.23                                  | -0. 17                  |
| Jun. 28  | 3.28.36.22          | 3.28.36.40                                   | +0. 18                   | 1.37.10          | 1.37.13                                  | +0. 3                   |
| 29       | 4. 0.11. 4          | 4. 0.11.18                                   | +0. 14                   | 1.31.38          | 1.31.52                                  | +0. 14                  |
| 30       | 4. 1.43.24          | 4. 1.43.34                                   | +0. 10                   | 1.25.42          | 1.26. 3                                  | +0. 21                  |
| Jul.     |                     |  |                          |                  |  |                         |
| 1        | 4. 3.13.17          | 4. 3.13.20                                   | +0. 3                    | 1.19.25          | 1.19.44                                  | +0. 24                  |
| 2        | 4. 4.40.48          | 4. 4.41.28                                   | +0. 40                   | 1.12.21          | 1.12.41                                  | +0. 20                  |
| 3        | 4. 6. 6.21          | 4. 6. 6.58                                   | +0. 37                   | 1. 4.47          | 1. 5.15                                  | +0. 28                  |
| 4        | 4. 7.29.25          | 4. 7.30.35                                   | +1. 10                   | 0.56.29          | 0.57. 2                                  | +0. 33                  |
| 6        | 4.10. 8.43          | 4.10. 9.16                                   | +0. 33                   | 0.39.18          | 0.40. 3                                  | +0. 45                  |
| 7        | 4.11.24.39          | 4.11.25. 8                                   | +0. 29                   | 0.29.57          | 0.30.43                                  | +0. 46                  |
| 8        | 4.12.37.54          | 4.12.38.32                                   | +0. 38                   | 0.20. 9          | 0.21. 2                                  | +0. 53                  |
| 9        | 4.13.48.25          | 4.13.49.20                                   | +0. 55                   | 0. 9.58 B        | 0.10.53                                  | +0. 55                  |
| 10       | 4.14.56. 7          | 4.14.57.29                                   | +1. 22                   | 0. 0.40 A        | 0. 0.23 B                                | -1. 3                   |
| 12       | 4.17. 4.37          | 4.17. 5.38                                   | +1. 1                    | 0.22.33          | 0.21.43 A                                | -0. 50                  |
| 13       | 4.18. 5.55          | 4.18. 5.21                                   | +1. 26                   | 0.34.21          | 0.33.17                                  | -1. 4                   |
| 14       | 7. 5.58.53          | 7. 5.57. 0                                   | -1. 53                   | 0.56.32          | 0.54.49                                  | -1. 43                  |
| 15       | 7. 7.29.43          | 7. 7.27.59                                   | -1. 44                   | 1. 3.12          | 1. 1.29                                  | -1. 43                  |
| 16       | 7. 8.59.56          | 7. 8.58. 1                                   | -1. 55                   | 1.10. 7          | 1. 8. 9                                  | -1. 58                  |
| 18       | 7.11.57.38          | 7.11.55.48                                   | -1. 50                   | 1.22. 0          | 1.20.49                                  | -1. 11                  |
| 19       | 7.13.25.46          | 7.13.24.13                                   | -1. 33                   | 1.28.26          | 1.27.33                                  | -0. 53                  |
| 22       | 7.17.45.55          | 7.17.44.26                                   | -1. 29                   | 1.46.28          | 1.45.43                                  | -0. 45                  |
| 22       | 7.19.11.10          | 7.19. 9.42                                   | -1. 28                   | 1.52.19          | 1.51.28                                  | -0. 21                  |
| 24       | 7.20.35.56          | 7.20.35. 9                                   | -0. 27                   | 1.57.45          | 1.57. 9                                  | -0. 36                  |

Differentiae, quas pro observationibus expositis invenimus inter locum Mercurii ex tabulis *Halley* supputatum & locum observatum, generatim non sunt valde magnae,

praecipue quando Mercurius circa elongationem maximam a Sole versatur. Sed tunc differentia quantumvis exigua errorem non parvum arguit in longitudine planetae heliocentrica a tabulis collecta, siquidem supponatur nulla hallucinatio in calculis, nullusve error in observatione. Ut autem dignoscatur quidnam addi debeat longitudini heliocentricae ex tabulis erutae, vel ab ipsa subtrahi, tuncque qualis sit variatio radii vectoris planetae pro qualibet differentia inter locum observatum & supputatum oportet, ut computetur elongatio Mercurii, positâ primum è longitudine Planetae heliocentrica, quae ex tabulis immediate colligitur pro tempore observationis, & positâ distantia Planetae a Sole, quam pariter perhibent tabulae pro eodem tempore; deinde imminuantur vel augeantur quantitate data longitude heliocentrica, & distantia planetae a Sole, atque iterum computetur inde elongatio Mercurii. Differentia harum elongationum comparata cum differentia inventâ per observationem dabit errorem tabularum in longitudine Mercurii heliocentrica. Simili modo inveniri potest error in latitudine heliocentrica ex dato errore in latitudine geocentrica. Id ipsum vero obtinebitur quoque si differentietur formula, per quam supputatur longitude vel latitudo planetae geocentrica ex data longitude vel latitudine heliocentrica. Etenim si ponatur

|   |              |
|---|--------------|
| <b>Longitude heliocentrica Mercurii . . . . .</b>     | <b>= M</b>   |
| <b>Error in longitude heliocentrica . . . . .</b>     | <b>= d M</b> |
| <b>Longitude Telluris e Sole visa . . . . .</b>       | <b>= T</b>   |
| <b>Distantia curtata Mercurii a Sole, sive radius</b> |              |

vector orbitae Mercurii in eclipticam projectus . =  $m$   
 Variatio distantiae Mercurii a Sole . . . . . =  $dm$   
 Distantia Telluris a Sole . . . . . . . . . =  $s$   
 Elongatio Mercurii a Sole e Terrâ visa & in  
 eclipticâ computata , seu differentia inter longitu-  
 dinem geocentricam Mercurii & longitudinem Solis =  $e$

Variatio ipsius  $e$  , sive differentia inter longitudinem geo-  
 centricam Mercurii ex tabulis supputatam , & illam ex  
 observatione elicitem =  $de$  , facili calculo eruetur  
 $de = \frac{(t \cos.(M-T) - m) \sin.e^a dM}{m \sin.(M-T)^a} + \frac{t \sin.e^a dm}{m^2 \sin.M-T}$

Quando Mercurius circa maximam elongationem versa-  
 tur , angulus **Commutationis**  $M-T$  est circiter =  $90^\circ$  ,  
 vel =  $270^\circ$  , tumque formula praecedens contrahitur & sim-  
 plior evadit , scilicet

$$de = \frac{\sin.e^a . dM - t \sin.e^a dm}{m^2}$$

vel

$$de = \sin.e^a dM + \frac{t \sin.e^a dm}{m^2}$$

Ut aliquo exemplo res illustretur , sumatur primo ob-  
 servatio diei 2 Junii an. 1780 , pro qua erat

$$M = 11^\circ 14' 3'' 9''$$

$$T = 8. 13. 18. 15$$

&  $M-T = 3^\circ 0' 44' 54''$  , sive proxime  $M-T = 90^\circ$  . Fiant modo hypotheses , quae sequuntur pro quantitatibus  $dM$  , &  $dm$

$$dM = + 5' = 300'' , dm = - 0,00012$$

Hic suppono distantiam  $m$  Mercurii a Sole in eclipticam projectam exprimi per partes decimales distantiae Telluris mediae a Sole, quae est = 1. Inde calculus per logarithmos hoc modo institui potest:

$$\log. \sin. e^a = \log. (\sin. 19^\circ 52')^a = 9,06258$$

$$\log. dM = \log. 300'' \dots = \underline{2,47712}$$

$$\log. 35'' \dots = \underline{1,53970}$$

$$\log. t \dots = 0,00650$$

$$\log. m^a \dots = \underline{9,13305}$$

$$\log. \frac{t}{m^a} \dots = 0,87345$$

$$\log. \sin. e^a \dots = 9,06258$$

$$\log. dm = \log. -0,00012. = 6,07918$$

$$\log. constantis \dots = \underline{5,31443}$$

$$\log. 21'' \dots = \underline{1,32964}$$

eritque propterea  $de = -35'' - 21'' = -56''$ . Quare, cum pro dato tempore longitudine geocentrica Mercurii ex tabulis *Halley* supputata fuerit =  $T - 180^\circ - 1^\circ 13' 18' 15'' - 19^\circ 52' 4'' = 1^\circ 23' 26' 11''$ , ex factis hypothefibus fieret modo eadem longitudine  $1^\circ 23' 26' 11'' - de = 1^\circ 23' 26' 11'' + 56'' = 1^\circ 23' 27' 7''$ .

Jamvero longitudine geocentrica observata eodem tempore reperta fuit =  $1^\circ 23' 26' 39''$ , atque error tabularum =  $-28''$  fere medius est inter errorem praecedentem =  $-35''$  diei 1 Junii & sequentem =  $-24''$  diei 3 Junii; adeoque observatio diei 2 Junii tamquam accurata spectari potest; fieret igitur

$$de = -28'' = -\frac{56''}{2}$$

Itaque colligetur pro dato tempore error tabularum in longitudine heliocentrica Mercurii

$$dM = +\frac{5'}{2} = +2'30''$$

atque erit error ipsius  $m$ , sive radii vectoris pro eodem tempore  $d m = \frac{-0,00012}{2} = -0,00006$

Si longitudo Aphelii orbitae Mercurii in tabulis *Halley* bene constituta supponatur, oportet ut variatio  $d m$  distantiae  $m$  a Sole, quae a variatione anomaliae mediae Mercurii pendet, proficiscatur ab errore in longitudine mediâ heliocentricâ; & sane pro dato tempore anomalia media ex tabulis inventa est  $= 3^\circ 23' 24'' 15''$ , cui respondeat radius vector in eclipticam projectus  $m = 0,36857$ . Aucta vero longitudine heliocentricâ mediâ Mercurii quantitate  $d M = 5'$ , fit anomalia media  $3^\circ 23' 29' 15''$ , cui respondeat radius vector similiter in planum eclipticae projectus  $m' = 0,36845$ ; & propterea ex dato incremento  $d M = 5'$  necessario sequitur decrementum  $m' - m = d m = -0,00012$  ipsius radii vectoris, quod antea supposui- mus. Cum aliunde *aequatio centri* pro dato tempore expositâ variatione 5 minutorum anomaliae mediae quantitate tantum 20 minutorum secundorum mutetur; & *reductio* longitudinis Mercurii *ad eclipticam* ex aucto *argumento* lo-

*titudinis* quantitate eadem 5', nullatenus pro eodem tempore immutetur.

Iude vero consequitur, errorem inventum tabularum in longitudine geocentricâ Mercurii ex tabulis supputata pro die data 2 Junii an. 1780, scilicet — 28'' penitus de medio tolli, si tantummodo augeatur quantitate = 2' 30'' *longitudo media* Mercurii in tabulis Halleyanis assumpta. Siquidem perturbationes ex viribus aliorum planetarum ortae, quae in motum Mercurii influere possunt, negligantur; & spectato tantum ejus motu in ellipsi, excentricitas ipsius bene constituta supponatur.

In tabulis Mercurii a Celeb. D. *de la Lande* editis in primo volumine *Astronomiae* longitudo media Mercurii ad initium anni 1750 major ponitur, quam in tabulis *Halley*, quantitate = 2' 5''. Quare, si in illis tabulis cetera manerent ut in tabulis Halleyanis, error per nostram observationem inventus in ipsis tabulis esset tantum = — 4''  $\frac{1}{2}$ .

Aliud exemplum sumam ex observationibus anni 1781 ad diem 28 Junii, atque omnia brevius persequar. Pro dato tempore inveni.

$$M = 6^{\circ} 7' 11''$$

$$T = 9. 7. 3. 12$$

$$\& \text{ propterea } M - T = 8^{\circ} 29' 59'', \text{ sive proxime } = 270^{\circ}.$$

Factis hypothesibus

$$dM = + 4' \frac{1}{4}$$

$$dm = + 0,000112$$

calculus ut supra absolvitur.

|                      |   |  |   |                  |
|----------------------|---|--|---|------------------|
| log. fin. $e^2$      | = | log. (fin. $21^\circ 33' \frac{1}{2}$ ) <sup>2</sup> | = | <u>9,13034</u>   |
| log. $dM$            | = | log. $255''$   | = | <u>2,40654</u>   |
| log. $34''$          | = |  | = | <u>1,53688</u>   |
| log. $t$             | = |  | = | <u>0,00723</u>   |
| log. $m^2$           | = |  | = | <u>9,20799</u>   |
| log. $\frac{t}{m^2}$ | = |  | = | <u>0,79925</u>   |
| log. fin. $e^2$      | = |  | = | <u>9,13034</u>   |
| log. $dm$            | = | log. $+ 0,000112 \dots$                              | = | <u>6,04922</u>   |
| log. const.          | = |  | = | <u>5,31443</u>   |
| log. $19''$          | = |  | = | <u>1,29324</u> . |

Erit ergo variatio  $de = 34'' + 19'' = 53''$ .

Porro cum pro dato tempore anomalia media Mercurii fuerit  $= 8^\circ 29' 55'' 35''$ , cui respondent in tabulis Halley aequatio centri  $= + 22^\circ 58' 15''$ , & distantia a Sole in eclipticam projecta, seu  $m = 0,401784$ , si augeatur longitudo media quantitate  $= 5'$ , augetur quoque anomalia media quantitate eadem, & fit  $9^\circ 0' 0' 35''$ , cui respondent aequatio centri  $= + 22^\circ 57' 45''$ , & distantia a Sole curta  $m' = 0,401896$ . Reductio vero ad eclipticam ob augmentum 5 minutorum in argumento latitudinis manet immutabilis.

Ex observatione diei praedictae 28 Junii an. 1781 inventus est error in longitudine geocentrica Mercurii, sive  $de = + 18''$ . Quare si aequatio centri maxima, seu quod eodem reddit, si excentricitas orbitae Mercurii maneat immutabilis, ceteraque sint paria, obtinebitur quamproxime

$$dM = + \frac{18.4}{53} = + 1'.30''$$

$$\& \quad dm = \frac{18.0,000112}{53} = + 0,000038.$$

Si itaque admitteretur in longitudine mediâ Mercurii ex tabulis *Halley* deducta augmentum  $\frac{18.5'}{53} = + 1'.42''$ ,  
error inventus  $+ 18''$  evanesceret.

Ex pluribus hujusmodi comparationibus inter longitudinem geocentricam supputatam ex tabulis, & observatam, non solum longitudine media Mercurii corrigeretur, si opus esset, sed & cetera elementa orbitae vel confirmarentur vel emendari possent; similes vero comparationes institui deberent inter observatam & supputatam latitudinem Mercurii geocentricam, ut inveniantur correctiones, si quae sunt, longitudinis Nodi, & inclinationis orbitae ad eclipticam.

### OPPOSITIO JOVIS

*Anni 1782.*

Observationibus & calculo definita

a CAJETANO ALLODIO.

 Observationes Jovis circa ejus oppositionem cum Sole,  
& correspondentes stellae c Ophiuci habitaे sunt  
ad quadranteum muralem.

Ascensio recta apparenſ ſtelle ad tempus observationum  
ex catalogo Mayeri deprompta . . . . .  $259^{\circ} 32' 42'',_0$   
Declinatio australis apparenſ . . . . .  $23. 46. 30 ,3$

## 8. Junii.

|                            |                          |                           |
|----------------------------|--------------------------|---------------------------|
| $12^h 29' 21'',_1$         | Tempus ver. obſerv.      | $12^h 24' 40'',_5$        |
| $23. 56. \ 0 ,0$           | Revolutio ſiderea . . .  | $23. 55. 59 ,8$           |
| $+ \ 0. 19. 38 ,3$         | Diff. asc.r. 24 & c Oph. | $+ \ 0. 19. \ 5 ,6$       |
| $4^{\circ} 55' 23'',_7$    | Eadem in part. aequat.   | $4^{\circ} 47' 11'',_9$   |
| $- \ 0. 48. 43 ,0$         | Diff. declinationis . .  | $- \ 0. 48. 52 ,2$        |
| $8^{\circ} 24. 28. \ 5 ,7$ | Asc. recta apparenſ 24   | $8^{\circ} 24. 19. 53 ,9$ |
| $22. 57. 47 ,3$            | Decl. australis appar.   | $22. 57. 38 ,1$           |
| $8. 24. 54. 27 ,6$         | Longit. geoc. apparenſ   | $8. 24. 46. 54 ,6$        |
| $0. 24. 32 ,6$             | Latitudo boreal. appar.  | $0. 24. 25 ,4$            |
| $2. 18. \ 9. 55 ,0$        | Longit. ♂ appar. . . .   | $2. 19. \ 7. \ 4 ,6$      |

## 9. Junii.

|                           |                          |                            |
|---------------------------|--------------------------|----------------------------|
| $12^h 20' \ 0'',_1$       | Tempus ver. obſerv.      | $12^h 15' 17'',_3$         |
| $23. 55. 59 ,6$           | Revolutio ſiderea . . .  | $23. 55. 59 ,9$            |
| $+ \ 0. 18. 32 ,6$        | Diff. asc.r. 24 & c Oph. | $+ \ 0. 17. 59 ,9$         |
| $4^{\circ} 38' 55'',_4$   | Eadem in part. aequat.   | $4^{\circ} 30' 43'',_6$    |
| $- \ 0. 49. \ 3 ,7$       | Diff. declinationis . .  | $- \ 0. 49. 16 ,3$         |
| $8^{\circ} 24. 11. 37 ,4$ | Asc. recta apparenſ 24   | $8^{\circ} 24. \ 3. 25 ,6$ |
| $22. 57. 26 ,6$           | Decl. australis appar.   | $22. 57. 14 ,0$            |
| $8. 24. 39. 18 ,6$        | Longit. geoc. apparenſ   | $8. 24. 31. 44 ,2$         |
| $0. 24. 18 ,1$            | Latitudo boreal. appar.  | $0. 24. 11 ,9$             |
| $8. 20. \ 4. 14 ,2$       | Longit. ♂ appar. . . .   | $2. 11. \ 1. 22 ,7$        |

## 12. Junii.

|                             |  |                              |
|-----------------------------|--|------------------------------|
| 12 <sup>h</sup> 10' 38",7   | Tempus ver. observ.                    | 12 <sup>h</sup> 5' 56",6     |
| 23. 55. 59 ,2               | Revolutio siderea . . .                | 23. 55. 59 ,0                |
| + 0. 17. 26 ,6              | Diff. <sup>a</sup> asc.r.24 & c Oph.   | + 0. 16. 53 ,2               |
| 4° 22' 22",8                | Eadem in part. aequat.                 | 4° 13' 59",8                 |
| — 0. 49. 30 ,2              | Diff. <sup>a</sup> declinationis . . . | — 0. 49. 45 ,8               |
| 8 <sup>h</sup> 23. 55. 4 ,8 | Asc. recta apparen <sup>s</sup> 24     | 8 <sup>h</sup> 23. 46. 41 ,8 |
| 22. 57. 0 ,1                | Decl. <sup>o</sup> australis appar.    | 22. 56. 44 ,5                |
| 8. 24. 24. 3 ,6             | Longit. geoc. apparen <sup>s</sup>     | 8. 24. 16. 19 ,9             |
| 0. 24. 8 ,1                 | Latitudo boreal. appar.                | 0. 24. 3 ,2                  |
| 2. 21. 58. 31 ,0            | Longit. ☽ appar. . . .                 | 2. 22. 55. 38 ,2             |

## 14. Junii.

|                              |  |                              |
|------------------------------|--|------------------------------|
| 12 <sup>h</sup> 1' 5",0      | Tempus ver. observ.                    | 11 <sup>h</sup> 56' 32",8    |
| 23. 55. 58 ,6                | Revolutio siderea . . .                | 23. 55. 58 ,3                |
| + 0. 16. 19 ,7               | Diff. <sup>a</sup> asc.r.24 & c Oph.   | + 0. 15. 46 ,4               |
| 4° 5' 36",5                  | Eadem in part. aequat.                 | 3° 57' 15",6                 |
| — 0. 50. 0 ,0                | Diff. <sup>a</sup> declinationis . . . | — 0. 50. 12 ,0               |
| 8 <sup>h</sup> 23. 38. 18 ,5 | Asc. recta apparen <sup>s</sup> 24     | 8 <sup>h</sup> 23. 29. 55 ,9 |
| 22. 56. 30 ,3                | Decl. <sup>o</sup> australis appar.    | 22. 56. 18 ,3                |
| 8. 24. 8. 35 ,9              | Longit. geoc. apparen <sup>s</sup>     | 8. 24. 0. 54 ,7              |
| 0. 23. 57 ,3                 | Latitudo boreal. appar.                | 0. 23. 48 ,8                 |
| 2. 23. 52. 45 ,1             | Longit. ☽ appar. . . .                 | 2. 24. 49. 51 ,5             |

17. Junii.

|                              |                         |                              |
|------------------------------|-------------------------|------------------------------|
| 11 <sup>h</sup> 47' 9",6     | Tempus ver. observ.     | 11 <sup>h</sup> 37' 45",9    |
| 23. 55. 58 ,2                | Revolutio siderea . . . | 23. 55. 58 ,7                |
| + 0. 14. 39 ,8               | Diff. asc.r. 24 &c Oph. | + 0. 13. 34 ,5               |
| 3° 40' 35",7                 | Eadem in part. aequat.  | 3° 24' 10",6                 |
| — 0. 50. 37 ,8               | Diff. declinationis . . | — 0. 51. 4 ,7                |
| 8 <sup>h</sup> 23. 13. 17 ,7 | Afc. recta apparenſ 24  | 8 <sup>h</sup> 22. 56. 52 ,6 |
| 22. 56. 52 ,5                | Decl.º australis appar. | 22. 55. 25 ,6                |
| 8. 23. 45. 34 ,1             | Longit. geoc. apparenſ  | 8. 23. 30. 20 ,7             |
| 0. 23. 31 ,6                 | Latitudo boreal. appar. | 0. 23. 15 ,6                 |
| 2. 26. 44. 1 ,0              | Longit. ☽ appar. . . .  | 2. 28. 38. 7 ,9              |

20. Junii . . . 11<sup>h</sup> 3' 4",3

|  |                              |
|--|------------------------------|
| Revolutio siderea . . . .                | 23. 55. 58 ,4                |
| Diff. asc. r. 24 &c. Oph. + 0. 13. 1 ,6  | = 3° 15' 51",7               |
| Differentia declinationis . . . . .      | — 0. 51. 17 ,9               |
| Ascensio recta apparenſ 24 . . . . .     | 8 <sup>h</sup> 22. 48. 33 ,7 |
| Declinatio australis apparenſ . . . . .  | 22. 55. 12 ,4                |
| Longitudo geocentrica apparenſ . . . . . | 8. 23. 22. 47 ,0             |
| Latitudo geocentr. borealis apparenſ . . | 0. 23. 6 ,1                  |
| Longitudo ☽ apparenſ . . . . .           | 2. 29. 35. 9 ,9              |

Ex longitudinibus praecedentibus planetae & Solis patet Jovem attigisse punctum verae oppositionis post instans observationis diei 14. Correctiones adhibendae locis apparentibus Solis & planetae sunt, ex aberratione pro loco Solis + 20",0, & pro loco planetae — 11",0; ex nutatione pro utriusque loco + 3",7.

|  |         |       |                 |              |
|--|---------|-------|-----------------|--------------|
| Quare longitudine vera                     | $\odot$ | ..... | 2° 23' 53"      | 8",8         |
|  | 24      | ..... | 8. 24.          | 8. 28 ,6     |
| Arcus distantiae a vera oppositione        |         |       |                 | 15. 19 ,8    |
| Motus Solis ab instanti observationis diei |         |       |                 |              |
| 14 ad instans observationis diei 15 ..     |         |       |                 | 57. 6 ,4     |
| Motus 24 intra idem tempus supputatus      |         |       |                 |              |
| ex tabulis .. . . . .                      |         |       |                 | 7. 38 ,6     |
| Motus itaque relativus .. . . . .          |         |       |                 | 1. 4. 45 ,0  |
| Hicce elementis, arcui distantiae respon-  |         |       |                 |              |
| denter 5° 39' 52",0, quae additae horis    |         |       |                 |              |
| observationis diei 14 suppeditant mo-      |         |       |                 |              |
| mentū verae oppositionis 17° 41' 7",0.     |         |       |                 |              |
| Pro quo instanti longitudine vera          | $\odot$ | ..... | 2° 24' 6' 40",0 |              |
| Longitudine vera 24 ex observatione        |         | ..... | 8. 24.          | 6. 40 ,0     |
| Eadem ex Hallejanis tab. supputata ..      |         |       | 8. 24.          | 12. 34 ,0    |
| Differentia tabularum in longitudine ..    | +       |       |                 | 5. 54 ,0     |
| Latit. vera bor. geoc. planetae ex obser.  |         |       | 0. 23.          | 55 ,3        |
| Eadem ex tabulis <i>Halley</i> .. . . . .  |         |       |                 | 0. 24. 34 ,3 |
| Differentia tabularum in latitudine ..     | +       |       |                 | 0. 39 ,0     |

## OBSERVATIONES NOVI PLANETAE

habitae

A FRANCISCO REGGIO.

Observationes novi planetae a die 12 Maii ad 23 Octob.  
anno 1781 dedimus in vol. Ephemeridum ad an. 1782 :

hic recenseo, quas dein supputavi ex observationibus planetae & stellae, quae in catalogo *Mayeri* siderum zodiacalium juxta ascensionem rectam notatur ordine 4° post η Geminorum. Positionem veram stellae ex observatione determinavi. Ad initium scilicet

An. 1782. Asc. r. 91° 24' 23'', i. Decl.° bor. 23° 40' 9'', o

An. 1783. . . . . 91. 25. 17, 6. . . . . 23. 40. 8, 5

Differentias juxta ascensionem rectam inter planetam & stellam definivi ad sectorem aequatoriale ex appulsi- bus ad quatuor fila reticuli, juxta declinationem supra limbum sectoris. Si quae observationes dubiae \* notantur.

*Tabula observationum ascensionis rectae & declinationis apparentis novi planetae.*

|                 | Temp. ver. | Asc. rect. ap. |     |      | Decl. bor. ap. |     |      |    |    |    |
|-----------------|------------|----------------|-----|------|----------------|-----|------|----|----|----|
|                 |            | H.             | M.  | S.   | G.             | M.  | S.D. | G. | M. | S. |
| 1781. Octob. 31 | 18. 4. 46  | 92.            | 54. | 56,8 | 23.            | 40. | 54*  |    |    |    |
| Novemb. 1       | 6. 30. 51  |                | 53. | 25,0 |                | 40. | 51   |    |    |    |
| 2               | 6. 33. 13  |                | 52. | 23,8 |                | 40. | 56*  |    |    |    |
| 8               | 10. 30. 58 |                | 43. | 3,0  |                | 41. | 14   |    |    |    |
| 11              | 8. 11. 2   |                | 37. | 51,6 |                | 41. | 30   |    |    |    |
| 12              | 8. 7. 16   |                | 36. | 3,6  |                | 41. | 30   |    |    |    |
| 13              | 8. 26. 32  |                | 33. | 57,7 |                | 41. | 31   |    |    |    |
| 16              | 8 45. 28   |                | 28. | 8,7  |                | 41. | 36   |    |    |    |
| 19              | 9. 40. 10  |                | 21. | 39,2 |                | 41. | 47   |    |    |    |
| 20              | 8. 11. 42  |                | 19. | 38,7 |                | 41. | 54   |    |    |    |
| 22              | 8. 7. 10   |                | 15. | 1,0  |                | 41. | 57   |    |    |    |
| 28              | 9. 17. 42  |                | 0.  | 44,5 |                | 42. | 36   |    |    |    |

|               |    | Temp. ver. | Asc. rect. ap. | Decl. bor. ap. |
|---------------|----|------------|----------------|----------------|
|               |    | H. M. S.   | G. M. S.D.     | G. M. S.       |
| 1781. Decemb. | 2  | 8. 6. 39   | 91. 50. 35,5   | 23. 42. 45     |
|               | 4  | 7. 59. 14  | 45. 23,0       |                |
|               | 13 | 9. 27. 0   | 20. 40,8       | 42. 53         |
|               | 14 | 7. 21. 21  | 18. 9,0        | 42. 55         |
|               | 21 | 6. 19. 20  | 90. 58. 39,2   | 43. 5          |
| 1782. Januar. | 27 | 5. 59. 51  | 42. 13,2       | 43. 12         |
|               | 12 | 6. 27. 34  | 89. 58. 30,0   | 43. 21         |
|               | 13 | 6. 19. 40  | 55. 58,0       | 43. 26         |
|               | 14 | 6. 24. 36  | 53. 34,0       | 43. 29         |
|               | 15 | 5. 42. 6   | 51. 2,0        | 43. 29         |
|               | 17 | 6. 48. 55  | 46. 7,0        | 43. 26,4       |
|               | 19 | 7. 51. 3   | 41. 15,4       | 43. 26         |
|               | 20 | 6. 11. 51  | 39. 2,6        | 43. 32         |
|               | 22 | 6. 42. 36  | 34. 35,4       | 43. 30,5       |
|               | 24 | 6. 28. 46  | 30. 11,3       | 43. 27,8       |
| Februar.      | 28 | 6. 11. 16  | 21. 57,4       | 43. 24,8       |
|               | 4  | 6. 10. 23  | 9. 13,0        | 43. 20,8       |
|               | 11 | 7. 56. 10  | 88. 58. 44,2   | 43. 17,8       |
|               | 14 | 6. 24. 36  | 54. 56,8       | 43. 13,0       |
|               | 15 | 5. 42. 6   | 53. 59,6       | 43. 11,7       |
|               | 17 | 6. 48. 55  | 51. 57,0       | 43. 14,0       |
|               | 19 | 7. 51. 3   | 50. 0,4        | 43. 15,7       |
|               | 21 | 6. 11. 51  | 48. 22,8       | 43. 16,7       |
|               | 26 | 7. 46. 34  | 45. 6,3        | 43. 12,7       |
|               | 27 | 6. 0. 22   | 44. 45,0       | 43. 7,6        |
| Mart.         | 17 | 9. 13. 8   | 47. 2,0        | 43. 11,6       |
|               | 19 | 8. 45. 34  | 48. 2,0        | 43. 6,6        |
|               | 26 | 6. 46. 23  | 54. 46,0       | 43. 4,6        |
| April.        | 19 | 7. 49. 31  | 89. 37. 40,0   | 43. 15,6       |
|               | 21 | 8. 24. 15  | 42. 29,0       | 43. 16,6       |

|         |         | Temp. ver. | Afc. rect. ap. | Decl. bor. ap. |
|---------|---------|------------|----------------|----------------|
|         |         | H. M. S.   | G. M. S.D.     | G. M. S.       |
| 1782.   | April.  | 30         | 8. 27. 40      | 90. 6. 31,7    |
| Maj.    |         | 2          | 8. 12. 19      | 12. 18,2       |
|         |         | 6          | 7. 38. 33      | 24. 11,0       |
|         |         | 7          | 8. 3. 56       | 27. 20,4       |
|         |         | 10         | 8. 9. 0        | 36. 57,7       |
|         |         |            |                | 43. 11,0       |
|         |         | 17         | 8. 12. 40      | 59. 57,0       |
|         |         | 27         | 8. 43. 44      | 91. 35. 25,4   |
|         |         | 28         | 8. 34. 15      | 39. 11,0       |
| Jul.    |         | 18         | 15. 21. 39     | 94. 57. 11,6   |
|         |         | 19         | 15. 26. 24     | 95. 0. 48,0    |
|         |         |            |                | 38. 54,6       |
|         |         | 21         | 15. 47. 17     | 8. 20,5        |
|         |         | 22         | 15. 44. 53     | 12. 0,0        |
|         |         | 23         | 15. 40. 37     | 15. 36,6       |
|         |         | 24         | 15. 22. 30     | 19. 20,2*      |
|         |         | 25         | 15. 46. 8      | 22. 49,3       |
|         |         |            |                | 38. 21,6       |
|         |         | 26         | 15. 48. 21     | 26. 17,0       |
|         |         | 27         | 16. 0. 0       | 29. 37,0       |
|         |         | 31         | 15. 41. 37     | 43. 46,6       |
| August. |         | 13         | 16. 8. 23      | 96. 26. 2,0    |
|         |         | 20         | 16. 30. 37     | 46. 19,8       |
|         |         |            |                | 35. 29,0       |
|         |         | 22         | 16. 10. 2      | 51. 35,7       |
| Decemb. | 18      | 6.         | 47. 11         | 13. 9,0        |
|         |         | 19         | 6. 42. 33      | 10. 23,0       |
|         |         | 20         | 18. 34. 55     | 6. 16,0        |
|         |         | 22         | 18. 38. 50     | 0. 31,5        |
|         |         |            |                | 40. 4,0        |
|         |         | 24         | 18. 46. 11     | 95. 54. 54,5   |
|         |         | 26         | 9. 32. 39      | 50. 18,0       |
|         |         | 27         | 6. 53. 3       | 47. 50,7       |
| 1783.   | Januar. | 10         | 6. 13. 18      | 9. 5,1         |
|         |         | 18         | 6. 31. 6       | 94. 48. 15,0   |
|         |         |            |                | 42. 49,6       |

|               |    | Temp. ver. | Afc. rect. ap. | Decl. bor. ap. |
|---------------|----|------------|----------------|----------------|
|               |    | H. M. S.   | G. M. S.D.     | G. M. S.       |
| 1783. Januar. | 20 | 7. 18. 52  | 94. 43. 25,7   | 23. 42. 57,1   |
|               | 25 | 6. 17. 6   | 31. 40,8       | 43. 18,0       |
| Februar.      | 1  | 6. 19. 55  | 16. 10,3       | 43. 43,0       |
|               | 6  | 7. 20. 43  | 7. 0,5         | 44. 10,8       |
| Mart.         | 10 | 8. 10. 44  | 0. 9,9         | 44. 17,3       |
|               | 17 | 10. 17. 4  | 93. 50. 0,6    | 44. 18,5       |
| April.        | 24 | 10. 9. 46  | 42. 52,5       | 44. 28,0       |
|               | 2  | 10. 19. 21 | 38. 36,1       | 44. 28,5       |
| Maj.          | 9  | 8. 29. 31  | 36. 27,7       | 44. 32,0       |
|               | 17 | 8. 16. 0   | 37. 26,7       | 44. 24,0       |
| August.       | 20 | 10. 0. 12  | 38. 54,0       | 44. 23,0       |
|               | 2  | 8. 11. 25  | 49. 25,5       | 44. 3,0        |
| Septemb.      | 3  | 8. 56. 34  | 52. 7,7        | 44. 0,0        |
|               | 6  | 9. 26. 16  | 56. 25,3       | 43. 49,0       |
| Septemb.      | 8  | 9. 35. 17  | 59. 39,7       | 43. 44,5       |
|               | 18 | 8. 16. 30  | 94. 18. 3,0    | 43. 12,2       |
| Maj.          | 19 | 8. 9. 4    | 20. 10,0       | 43. 8,2        |
|               | 1  | 8. 2. 48   | 49. 39,2       | 42. 15,0       |
| Septemb.      | 4  | 9. 4. 51   | 58. 0,0        | 41. 57,5       |
|               | 24 | 7. 23. 47  | 96. 1. 29,0    | 39. 47,6       |
| Septemb.      | 8  | 15. 43. 11 | 100. 48. 34,8  | 24. 49,2       |
|               | 10 | 16. 20. 4  | 55. 15,0       | 24. 34,0       |
| Septemb.      | 22 | 16. 36. 8  | 101. 32. 10,0  | 21. 59,8       |
|               | 6  | 17. 10. 0  | 102. 10. 52,3  | 19. 33,3       |

Inter exhibitas positiones nonnullas feligo observatas ante & post conjunctiones planetae eum Sole anni 1781 & 1782, aliasque tempore duarum oppositionum, ad supputandum ex iis tempus & locum harum configurationum.

Calculus duarum conjunctionum minus accuratus censendus videtur: nam planeta integro circiter mense ante & post conjunctiones radiis solaribus mihi abrepto, observationes per id tempus peragere datum non est. Circumstantiae tamen cum paulo accuratiorem reddunt, quam caeterum supponi posset. Tellus quae intra id tempus versabatur prope suum aphelium, & motus eliocentricus planetae ad sensum aequabilis, motum hujus geocentricum satis aequabilem reddebat ad aequas utrinque distantias a conjunctione, ut ex observationibus aequidistantibus ab hac positione calculus institui possit.

*Supputatio conjunctionis Planetae cum Sole anni 1781.*

Longit. app. . . . Latit.app.bor.

|                                   |                |               |
|-----------------------------------|----------------|---------------|
| 16. Maij 9 <sup>h</sup> 26' 1'',0 | 86° 40' 32'',5 | 0° 11' 52'',3 |
| 20. Jul. . . . .                  | 90. 26. 8 ,7   | 0. 12. 33 ,3  |
| 22. . . . .                       | 90. 32. 58 ,3  | 0. 12. 33 ,0  |

Ex his supputatur longitudine apparente

ad diem 19. Jul. 9<sup>h</sup> 26' 1,0 temp. m. . . 88° 38' 31'',2

Aequatio ex aber. . . . + 24 ,4

ex nut. . . . + 8 ,7

Longitude vera . . . . . 88. 39. 4 ,3

Longitude ☽ . . . . . 88. 46. 50 ,1

Dist. a conjunct. . . . . 7. 45 ,8

Motus diurnus Solis 57° 15'',0; motus planetae 3° 38'',5; motus relativus 53° 36'',5. Instituta analogia arcui 7° 45'',8 respondent 3<sup>h</sup> 28' 58'',8 subducenda a 9<sup>h</sup> 16' 1'',0, & pro-

dit tempus verae conjunctionis  $5^h 57' 3'',2$ , quo tempore  
longitudo Solis & planetae  $88^\circ 38' 32'',0$ , latitudo bor.  
planetae  $0^\circ 12' 12'',6$ .

*Supputatio oppositionis Planetae cum Sole anni 1781.*

|             | temp. m.        | Longit. app.          | Latit. app.          |
|-------------|-----------------|-----------------------|----------------------|
| 13. Decemb. | $9^h 26' 0'',0$ | $91^\circ 13' 52'',0$ | $0^\circ 14' 58'',5$ |
| 14. . . . . | $7. 20. 21 ,0$  | $91. 11. 33 ,0$       | $0. 15. 3 ,0$        |
| 21. . . . . | $6. 18. 19 ,0$  | $90. 53. 42 ,5$       | $0. 15. 3 ,0$        |
| 27. . . . . | $5. 58. 10'',0$ | $90. 38. 39 ,2$       | $0. 15. 45$          |

|                  |                       |
|------------------|-----------------------|
| 21. Decemb.      | $90^\circ 53' 42'',5$ |
| Æquat. ex aberr. | $— 16 ,6$             |
| ex nutat.        | $+ 6 ,1$              |

|                     |                  |
|---------------------|------------------|
| Long. vera Planetae | $90. 53. 32 ,0$  |
| Long. vera          | $270. 21. 24 ,9$ |
| Dist. ab oppos.     | $32. 7 ,1$       |

Motus diurnus Solis  $61' 10'',0$ , Planetae retrogradi  
 $2' 33'',3$ , motus relatus  $63' 43'',3$ . Hinc arcui  $32' 7'',1$ ,  
distantiae ab oppositione respondent  $12^\circ 5' 46''$ , quibus  
additis horae observationis, assequimur tempus medium  
oppositionis  $18^h 24' 5'',0$ , & locum heliocentricum pla-  
netae  $90^\circ 52' 17'',2$  . . latit. bor.  $0^\circ 15' 3'$ .



*Supputatio conjunctionis Planetae cum Sole an. 1782.*

| temp. med. . . . | Longit. app. . . . | Latit. app. |
|------------------|--------------------|-------------|
|------------------|--------------------|-------------|

|                                  |               |              |
|----------------------------------|---------------|--------------|
| 17. Maij 8 <sup>h</sup> 31' 3",0 | 90° 54' 57",0 | 0° 15' 2",0  |
| 28. . . . .                      | 91. 34. 48 ,5 | 0. 15. 3 ,0  |
| 21. Jul. . . . .                 | 94. 41. 24 ,0 | 0. 15. 35 ,0 |
| 31. . . . .                      | 95. 13. 53 ,8 | 0. 15. 38 ,0 |

Concluditur inde longitudine geocentrica

ad diem 24. Jun. 8<sup>h</sup> 31' 3",9 temp. med. 93° 6' 6",6

|                          |   |       |
|--------------------------|---|-------|
| Æquat. ex aberr. . . . . | + | 24 .4 |
| ex nut. . . . .          | + | 3 .5  |

Longitudo vera . . . . . 93. 6. 34 ,5

Longitudo ~~z~~ . . . . . 93. 17. 15 ,0

Dist. a conjunct. . . . . 10. 40 ,5

Motus diurnus Solis 57' 12",0, planetae 3' 37",3, motus relatus Solis & planetae 53' 34",7, adeoque arcui 10' 40",5, descripto post conjunctionem a Sole & planeta respondent 4<sup>h</sup> 46' 37",2, quibus subductis a 8<sup>h</sup> 31' 3",0 obtinetur tempus conjunctionis 3<sup>h</sup> 44' 26",0, quo tempore longitudo vera Solis & planetae 93° 6' 5",0, latit. bor. planetae geocentrica 0° 15' 20",5.

*Supputatio oppositionis Planetae cum Sole an. 1782.*

| temp. m. . . . . | Longit. app. . . . . | Latit. bor. |
|------------------|----------------------|-------------|
|------------------|----------------------|-------------|

|             |                          |               |
|-------------|--------------------------|---------------|
| 18. Decemb. | 6 <sup>h</sup> 44' 31",0 | 95° 41' 41",5 |
| 19. . . . . | 6. 41. 23 ,0             | 95. 39. 7 ,4  |
| 20. . . . . | 18. 33. 25 ,0            | 95. 35. 22 ,5 |
| 22. . . . . | 18. 38. 10 ,0            | 95. 30. 6 ,5  |

|             | temp. m.                               | Longit. app.   | Latit. bor.  |
|-------------|--|----------------|--------------|
| 24. Decemb. | 18 <sup>h</sup> 46' 31",0              | 95° 24' 57",3  | 0° 18' 45",0 |
| 26. ....    | 9. 34. 0 ,0                            | 95. 20. 44 ,1  | 0. 18. 45 ,0 |
| 27. ....    | 6. 54. 51 ,0                           | 95. 18. 28 ,0  | 0. 18. 48 ,0 |
| 28. ....    | 6. 47. 36 ,0                           | 95. 15. 57 ,0  | 0. 18. 52 ,0 |
| 26. Decemb. | 9 <sup>h</sup> 34' 0",0 t.m. long.app. | 95° 20' 44",1  |              |
|             | Æquat. ex aberr.                       | —              | 16 ,6        |
|             | ex nut.                                | +              | 0 ,6         |
|             | Longit. vera planetæ                   | 95. 20. 28 ,1  |              |
|             | Solis                                  | 275. 20. 16 ,3 |              |
|             | Dift. ab opposit.                      | 11 ,8          |              |

Motus diurnus Solis 61' 10",0, planetæ retrogradi 2' 34",1; motus relativus Solis & planetæ 63' 40",1. Hinc arcui 11",3, emetiendo ante oppositionem motu relativo respondent  $0^h 4' 15'',2$ , quibus additis tempori observationis dìei 26 mensis consequimur tempus oppositionis  $9^h 38' 15'',2$ , quo instanti longitudine eliocentrica planetæ  $95^\circ 20' 27'',6$  . latit. bor. geoc.  $0^\circ 18' 46'',0$ .

Ex observationibus hactenus comparatis orbitam novi planetæ circa Solem ellipsem esse parum excentricam ratum habemus. Astronomorum nonnulli orbitæ speciem, quantitatem, & elementa omnia determinare methodis diversis aggressi sunt. Inter has recensenda est elegantissima methodus, quam Clar. Boscovich tradit in volumine 1.º Commentariorum nuperrime edito Veronae a Societate Italica.

Comparato jam ex meis observationibus arcu satis ampio a planeta emenso, eam methodum periclitari censui. At-

tento lentissimo planetae motu , atque adeo ingenti ejus distantia a Sole , quod docent observationes , arcus descriptus etiam aliquot graduum censeri potest proximè rectilineus , & planetae motus intra id tempus satis aequabilis . Facta hac hypothesi laudatus Boscovich ostendit definiri posse quatuor observationibus arcus descripsi distantiam a Sole , quantitatem , & positionem , adhibita ad hanc determinacionem solutione problematis olim a Newtono propositi rectae ita secantis quatuor alias rectas , ut tria illius rectae segmenta his intercepta sint in ratione data . Distantiae curtatae planetae a terra tempore quatuor observationum , segmenta arcus , seu chordae iis distantias intercepta , quae assumantur in ratione intervallorum temporis inter observationes , satisfaciunt conditionibus problematis , cuius solutionem , & methodum omnem definiendi reliqua elementa orbitae concinna constructione persequitur & demonstrat Clar. Boscovich in citatis Commentariis .

Positionibus veris planetae dierum 16 Maii & 21 Decembris anni 1781 , 28 Maii & 26 Decembris 1782 selectis , & tempore observationis 16 Maii assumpto tanquam epocha , a qua longitudines planetae juxta motum sideralem computarentur , sequentia obtinui orbitae elementa supposita = 1 media distantia telluris a Sole .

|                           |          |
|---------------------------|----------|
| Semiaxis major . . . . .  | 18,99581 |
| Excentricitas . . . . .   | 0,79105  |
| Distantia aphelia . . . . | 19,78686 |
| Distantia perihelia . . . | 18,20476 |
| Semiaxis minor . . . . .  | 18,97933 |

Longitudo perihelii . . . . .  $5^{\circ} 25' 40'' 21'',_0$   
 Revolutio sideralis annorum sideralium 82,7917  
                                   seu dierum 30240,1842  
**Tempus transitus per perihelium 1800. 22 Maii**  
     13<sup>h</sup> 12' temp. med.  
 Longitudo nodi ascendentis .  $2^{\circ} 12' 33'' 5'',_0$   
 Inclinatio orbitae . . . . . 0. 46. 1,0  
 Arcus eliocentricus planetae descriptus a die 16 Maii 1781  
     ad diem 26 Decembris 1782 intervallo dierum 589,0083  
     est  $7^{\circ} 5' 6'',_3$ .

Expositis conclusionibus haud tamen censeo me vera attigisse elementa orbitae planetae : sentio enim difficultatem, quam huic accuratae determinationi parit defectus idonearum observationum. In exposita methodo immutatio vel minima distantiae curtatae planetae a terra non exigua inducit variationem inclinationis chordae ab eodem descriptae ad radium vectorem, ex qua variatione excentricitas & longitudo perihelii valde mutantur. Inaequabilitas motus planetae, & differentia inter arcum & chordam possent aliquam etiam variationem in his elementis efficere (\*). Hinc fieri potest, ut ex diversis methodis, vel ex diversis observationibus ad supputationem adhibitis diversae prodeant orbitae, quarum singulae praesentibus observationibus satisfaciant intra limites paucorum secundorum.

(\*). Clar. Bošković formulam supputavit pro correctione adhibenda aliquibus in casibus ob inaequalitatem motus, & differentiam inter chordam & arcum, quam dabit in nova suorum operum editione.

*Clar. de Caluso* novae Scientiarum Accademiae Taurinensis Socius nonnullis ex observationibus nostris a die 12 Maii 1781 ad 8 Novembris 1782 in usum vocatis, supputavit *prius* tres areas proximè proportionales temporibus inter quatuor observationes, atque dein usitatis methodis parametrum, & reliqua orbitae elementa, quae mecum per litteras humanissimè communicavit mense Decembris an. 1782 quaeque hic expono.

|   |                  |
|---|------------------|
| Parameter . . . . .   | 37,88            |
| Axis major . . . . .  | 37,94            |
| Excentricitas . . . . .   | 0,754            |
| Axis minor . . . . .  | 37,91            |
| Longitudo perihelii . . . . .   | 5° 27' 42" 0'',0 |
| Longitudo nodi ascendentis . . . . .  | 2. 12. 47. 10 ,0 |
| Inclinatio orbitae . . . . .  | 0. 45. 23 ,0     |
| Tempus periodicum dierum . . . . .  | 30178,58         |
| Tempus transitus per perihelium 1800. 11 Novembris 10 <sup>h</sup> 17' 0'',0. |                  |

Arcus eliocentricus planetae a die 12 Maii 1781 ad diem 9 Novembris 1782 intervallo dierum 545. 23' 44" est 6° 33' 4'',0.

Haec dum conscriberem a *Clar. de Angos* Astronomo Melitensi (\*) accepi, quae nuntiabant *Clar. de la Place* hu-

(\*) *Eques de Angos* regiae Scientiarum Academiae Socius nupetrimè Melitam accitus est, eique a summo totius Equestris Ordinis Jerosolimitani Principe cura demandata instruendi exquisitis instrumentis Speculam Astronomicam ad novum Astronomiae incrementum ejusdem Principis munificentia excitatam.

jusmodi comperisse orbitae elementa, ex quibus locus geocentricus planetae supputatus ad epocham an. 1756. 25 Septembris 10<sup>h</sup> t. m. congruit penè cum loco cuiusdam stellulae unica observatione eadem die definito a Mayero, quam stellulam novi mus loco cessisse, nec amplius ibidem reperiri.

Id sane probaret novum planetam non effugisse Mayeri indaginem & soleritatem; licet eum vir celeberrimus inter stellas zodiacales recensuerit ex defectu alterius observationis, ex qua ejus motum facile deprehenderet.

Stellula in catalogo Mayeri est numero 194°, ejusque longitudo vera geocentrica 25 Septembris an. 1756 ex observatione Mayeriana erat 346° 58' 16'', o, si computetur juxta motum sideralem a die 11 Maji, quae pro epocha hujus motus assumitur in elementis D. de la Place; longitudo vera geocentrica planetae juxta haec elementa eadem ratione computata fuisset die 25 Septembris an. 1756. 346° 58' 26'', o.

Juxta iudicium Virum est semiaxis major orbitae novi planetae = 19,0818; ratio eccentricitatis ad semiaxem majorem = 0,047587; longitudo perihelii = 173° 22' 27''. Quod ad longitudinem nodi ascendentis, & inclinationem orbitae spectat, ex collatione oppositionis planetae cum Sole diei 21 Decembris an. 1781 cum observatione Mayeriana ipse censet statuendam alteram 78° 47' 20'', alteram 46' 20''.



## OPPOSITIO SATURNI CUM SOLE

An. 1782

determinata ex observationibus habitis

A BARNABA ORIANI.

 Observationes Saturni institui Quadrante Murali, atque eodem modo exposui ac praecedentes Mercurii observationes. Inter plures stellas fixas, quae per id tempus observabam eodem instrumento, selegi duas ♀ & b Ophiuci cum Saturno comparandas, quia in ascensione rectâ parum distabant a Planeta, in declinatione vero altera uno tantum gradu cum dimidio borealior, altera eadem circiter quantitate australior erat quam Planeta; hoc enim pacto errores, si qui aderant adhuc ignoti five in motu horologii, five in divisionibus & deviationibus limbi Quadrantis, vitari poterant. Observationes ipsae ita se habent.



| 1782<br>Dies. | Meridies<br>verus<br>tempore<br>Penduli. |     | Nomina<br>Siderum. |          | Transitus<br>per<br>Meridian.<br>t. Pend. |       | Transitus<br>tempore<br>vero. |       | Transitus<br>tempore<br>medio. |       | Distan-<br>tia<br>a zenith<br>observ. |
|---------------|--|-----|--------------------|----------|---|-------|-------------------------------|-------|--------------------------------|-------|---------------------------------------|
|               | H.                                       | M.  | S.                 | H.       | M.  | S.    | H.                            | M.    | S.                             | G.    | M.S.                                  |
| Jun. 13       | 23.                                      | 41. | 43.                | Ophiuci  | 11.20.                                    | 36.6  | 11.38                         | 50.7  | 11.38                          | 30.4  | 66.16.46                              |
| 13            |  |     |                    | bOphiuci | 11.25.                                    | 43.5  | 11.43                         | 57.6  | 11.43                          | 37.3  | 69.22.7                               |
| 13            |  |     |                    | Saturnus | 12. 5.                                    | 13.0  | 11.23.                        | 26.9  | 12.23.                         | 7.0   | 67.44.24                              |
| 14            | 23.                                      | 41. | 50.                | Ophiuci  | 11.16.                                    | 35.9  | 11.34.                        | 42.5  | 11.34.                         | 34.8  | 66.16.47                              |
| 14            |  |     |                    | bOphiuci | 11.21.                                    | 42.3  | 11.39.                        | 48.9  | 11.39.                         | 41.2  | 69.22.6                               |
| 14            |  |     |                    | Saturnus | 12. 0                                     | 53.6  | 12.19.                        | 0.0   | 12.18.                         | 52.7  | 67.44.25                              |
| 15            | 23.                                      | 41. | 47.                | Ophiuci  | 11.12.                                    | 34.6  | 11.30.                        | 34.1  | 11.30.                         | 39.3  | 66.16.46                              |
| 15            |  |     |                    | bOphiuci | 11.17.                                    | 41.0  | 11.35.                        | 40.6  | 11.35.                         | 45.7  | 69.22.7                               |
| 15            |  |     |                    | Saturnus | 11.56.                                    | 33.5  | 12.14.                        | 32.9  | 12.14.                         | 38.4  | 67.44.26                              |
| 16            | 23.                                      | 42. | 4                  | .....    | .....                                     | ..... | .....                         | ..... | .....                          | ..... | .....                                 |
| 17            | 23.                                      | 42. | 12.                | Ophiuci  | 11. 4.                                    | 31.4  | 11.22.                        | 16.6  | 11.22.                         | 47.4  | 66.16.46                              |
| 17            |  |     |                    | bOphiuci | 11. 9.                                    | 38.5  | 11.27.                        | 23.2  | 11.27.                         | 54.0  | 69.22.7                               |
| 17            |  |     |                    | Saturnus | 11.47.                                    | 52.3  | 12. 5.                        | 36.8  | 12. 6.                         | 8.0   | 67.44.28                              |
| 18            | 23.                                      | 42. | 19                 | .....    | .....                                     | ..... | .....                         | ..... | .....                          | ..... | .....                                 |
| 19            | 23.                                      | 42. | 26                 | Ophiuci  | 10.56.                                    | 28.5  | 11.13.                        | 58.3  | 11.14.                         | 55.8  | 66.16.45                              |
| 19            |  |     |                    | bOphiuci | 11. 1.                                    | 34.6  | 11.19.                        | 5.4   | 11.20.                         | 1.9   | 69.22.6                               |
| 19            |  |     |                    | Saturnus | 11.39.                                    | 11.3  | 11.56.                        | 41.9  | 11.57.                         | 38.8  | 67.44.28                              |
| 20            | 23.                                      | 42. | 33                 | Ophiuci  | 10.52.                                    | 25.8  | 11. 9.                        | 50.6  | 11.11.                         | 0.0   | 66.16.45                              |
| 20            |  |     |                    | bOphiuci | 10.57.                                    | 32.2  | 11.14.                        | 57.0  | 11.16.                         | 6.3   | 69.22.6                               |
| 20            |  |     |                    | Saturnus | 11.34.                                    | 49.7  | 11.52.                        | 14.3  | 11.53.                         | 24.1  | 67.44.30                              |
| 21            | 23.                                      | 42. | 40                 | .....    | .....                                     | ..... | .....                         | ..... | .....                          | ..... | .....                                 |
| 22            | 23.                                      | 42. | 46                 | Ophiuci  | 10.44.                                    | 21.8  | 11. 1.                        | 32.5  | 11. 3.                         | 7.5   | 66.16.44                              |
| 22            |  |     |                    | bOphiuci | 10.49.                                    | 28.0  | 11. 6.                        | 38.7  | 11. 8.                         | 13.7  | 69.22.5                               |
| 22            |  |     |                    | Saturnus | 11.26.                                    | 7.2   | 11.43.                        | 17.7  | 11.44.                         | 53.1  | 67.44.23                              |
| 23            | 23.                                      | 42. | 53                 | Ophiuci  | 10.40.                                    | 19.3  | 10.57.                        | 23.5  | 10.59                          | 11.3  | 66.16.44                              |
| 23            |  |     |                    | bOphiuci | 10.45.                                    | 25.5  | 11. 2.                        | 29.7  | 11. 4.                         | 17.5  | 69.22.6                               |
| 23            |  |     |                    | Saturnus | 11.21.                                    | 46.0  | 11.38.                        | 49.9  | 11.40.                         | 38.1  | 67.44.32                              |
| 24            | 23.                                      | 42. | 59                 | .....    | .....                                     | ..... | .....                         | ..... | .....                          | ..... | .....                                 |

Loca fixarum media defumpsi ex catalogo Tob. Mayer,  
& correctionibus ex praecessione aequinoctiorum, nutatione  
& aberratione lucis affecta ita se habent ad diem 19 Junii.

Ascensio recta ♀ Ophiuci  $256^{\circ} 59' 51''$ ,<sup>o</sup>

Declinatio ipsius australis  $20. 51. 38\frac{1}{2}$

Ascensio recta b Ophiuci  $258^{\circ} 16' 51''$ ,<sup>o</sup>

Declinatio australis . . .  $23. 57. 23$ ,<sup>o</sup>

ex quibus obtinui loca apparentia Saturni, quae sequuntur:

| 1782<br>Dies. | Tempus<br>verum . |     |    | Tempus<br>medium . |     |    | Ascensio<br>recta Saturni<br>apparens . |     |    | Declinatio<br>australis<br>apparens . |     |    |
|---------------|-------------------|-----|----|--------------------|-----|----|---|-----|----|---------------------------------------|-----|----|
|               | H.                | M.  | S. | H.                 | M.  | S. | G.                                      | M.  | S. | G.                                    | M.  | S. |
| Junii 13      | 12.               | 23. | 27 | 12.                | 23. | 7  | 268.                                    | 10. | 50 | 22.                                   | 19. | 27 |
| 14            | 12.               | 19. | 0  | 12.                | 18. | 53 | 268.                                    | 6.  | 8  | 22.                                   | 19. | 28 |
| 15            | 12.               | 14. | 33 | 12.                | 14. | 38 | 268.                                    | 1.  | 26 | 22.                                   | 19. | 29 |
| 17            | 12.               | 5.  | 37 | 12.                | 6.  | 8  | 267.                                    | 51. | 56 | 22.                                   | 19. | 30 |
| 19            | 11.               | 56. | 42 | 11.                | 57. | 39 | 267.                                    | 42. | 27 | 22.                                   | 19. | 31 |
| 20            | 11.               | 52. | 14 | 11.                | 53. | 24 | 267.                                    | 37. | 41 | 22.                                   | 19. | 32 |
| 22            | 11.               | 43. | 18 | 11.                | 44. | 53 | 267.                                    | 28. | 7  | 22.                                   | 19. | 33 |
| 23            | 11.               | 38. | 50 | 11.                | 40. | 38 | 267.                                    | 23. | 20 | 22.                                   | 19. | 33 |

Hinc obtinentur sequentes cum tabulis *Halley* comparationes pro temporibus modo adnotatis.

| 1782<br>Dies. | Longit. vera<br>geocentrica<br>Saturni<br>ex observ. |     | Longitude<br>vera<br>ex tabulis<br><i>Halley</i> . |    | Diffe-<br>rentia<br>in Lon-<br>gitud. | Lat. vera<br>geoc.<br>Satur. ex<br>obs. Bor. | Latitudo<br>vera<br>ex tabul.<br><i>Halley</i> . | Diffe-<br>rentia<br>in Latit-<br>tud. |         |    |    |    |    |       |        |
|---------------|--|-----|--|----|---------------------------------------|--|--|---------------------------------------|---------|----|----|----|----|-------|--------|
|               | S.   | G.  | M.   | S. |                                       |  |  |                                       |         |    |    |    |    |       |        |
| Jun. 13       | 8.   | 28. | 18.  | 50 | 8.                                    | 28.  | 12.  | 58                                    | --5. 52 | 1. | 8. | 8  | 1. | 7. 24 | -0. 40 |
| 14            | 8.   | 28. | 14.  | 29 | 8.                                    | 28.  | 8.   | 33                                    | -5. 56  | 1. | 8. | 4  | 1. | 7. 23 | -0. 41 |
| 15            | 8.   | 28. | 10.  | 8  | 8.                                    | 28.  | 4.   | 9                                     | -5. 59  | 1. | 7. | 59 | 1. | 7. 18 | -0. 41 |
| 17            | 8.   | 28. | 1.   | 21 | 8.                                    | 27.  | 55.  | 22                                    | -5. 59  | 1. | 7. | 51 | 1. | 7. 8  | -0. 43 |
| 19            | 8.   | 27. | 52.  | 34 | 8.                                    | 27.  | 46.  | 33                                    | -6. 1   | 1. | 7. | 42 | 1. | 6. 58 | -0. 44 |
| 20            | 8.   | 27. | 48.  | 95 | 8.                                    | 27.  | 42.  | 8                                     | -6. 1   | 1. | 7. | 36 | 1. | 6. 53 | -0. 43 |
| 22            | 8.   | 27. | 39.  | 19 | 8.                                    | 27.  | 33.  | 21                                    | -5. 58  | 1. | 7. | 26 | 1. | 6. 42 | -0. 44 |
| 23            | 8.   | 27. | 34.  | 54 | 8.                                    | 27.  | 58.  | 57                                    | -5. 57  | 1. | 7. | 21 | 1. | 6. 27 | -0. 44 |

Medius ergo error tabularum in longitudine geocentricâ Saturni colligitur  $= -5' 58''$ , in latitudine geocentricâ  $= -0' 43''$ . Hincque deducitur error tabularum *Halley* in longitudine heliocentricâ Saturni  $= -5' 25''$ .

Ad diem 17 Junii longitudo vera centri Solis inventa est ex tabulis *Tob. Mayer*  $2^\circ 26^\circ 45' 10''$ , ad diem vero 19 Junii longitudo Solis vera erat  $2^\circ 28^\circ 39' 18''$ . Quare eruitur tempus oppositionis Saturni cum Sole ex relatis observationibus 18 Junii  $17^\text{h} 45' 7''$  temp. vero.

five 17. 45. 54 temp. medio.

Pro quo instanti

Longitudo vera geoc. Saturni  $= 8^\circ 27^\circ 55' 55''$

Latitudo vera geoc. . . . .  $= 1. 7. 45$  Bor.

Latitudo heliocentrica . . . .  $= 1. 0. 58$

### OBSERVATIONES MACULARUM SOLIS

habitae mensibus Januario, Februario, & Martio  
An. 1779

A BARNABA ORIANI.

**C**Um praeter expectationem tota fere hyeme anni 1778-79 Sol lucidissimus quotidie affulserit, & coelum sudum optime faveret observationibus, occasionem arripui illas macularum solarium novo studio, & majori, qua potui, diligentia prosequendi. Itaque eodem instrumento, eademque methodo, quam in nostris Ephemer-

dibus ad ann. 1780 meimotavi, observationes sequentes institui. Evidem optavi in usum adhibere methodum, quam D. Maskelyne proposuerat (\*) ad determinandam declinationem & ascensionem rectam planetae super discum solarem transcurrentis, & cuius ope recta ascensio non solum per temporis intervallum, sed etiam per actualem arcus aequatoris vel ejus parallelis dimensionem obtineri potest; quod quidem si in omnibus exiguum arcuum mensuris fieri posse optandum est, in determinandis macularum positionibus fere necessarium videtur, cum ex erroribus perparvis in temporis fractionibus immanes discrepantiae in positu macularum heliocentrico oriri possint. Sed telescopium heliometro & micrometro filari instructum ad hunc usum idoneum adhuc non paravimus; quapropter, ut recta ascensio obtineretur intra arctissimos erroris limites, intervallum temporis inter primum Solis limbū, & maculas saepe saepius duabus, & aliquando tribus vel quatuor vi- cibus observavi.

Calculum harum observationum, si quando otium erit, suscipiam; interim si quis illas supputare velit, praeter ea, quae in citatis Ephemeribus, pag. 162 & 163 adnotata sunt, sequentia animadvertere poterit. Primo scilicet rationem habendam esse differentiae refractionis in determinanda differentia declinationis inter limbum Solis superiorem & maculas, cum hyberno tempore ob exiguum Solis altitudinem meridianam, effectus refractionis sensibilis fieri possit;

(\*) Vid. Philosophical Transactions, Vol. 61. pag. 536.

extrema exactitudo postularet, ut refractio ea in computum duceretur, quae convenit gradibus caloris in thermometro, & altitudini hydrargiri in barometro tempore observationis, quae quidem pro qualibet die videri possunt in nostris Ephemeridibus ad an. 1782 artic. *Observationes meteorologicae anni 1779.* Secundo ad supputandam eamdem differentiam declinationis consuli posse tertiam tabulam pag. 206. *Ephem.* ad an. 1780, in qua valores partium micrometri adnotantur; una autem pars aequatur  $1'',018$ . Tertio ad determinandam longitudinem & latitudinem macularum geocentricam in usum adhiberi posse sequentes formulas, in quibus  $p$  est angulus positionis Solis,  $\alpha$  differentia ascensionis rectae inter Solis centrum & maculam,  $\delta$  differentia declinationis inter maculam & centrum Solis. Differentia longitudinis inter Solis centrum & maculam  $= \alpha \cos. p \mp \delta \sin. p$ .

Latitudo maculae  $= \delta \cos. p \pm \alpha \sin. p$ .

Signum superius est pro maculis, quae occidentiores & borealiores sunt centro Solis, tum pro iis, quae orientiores & australiores sunt centro Solis; pro aliis vero valebit signum inferius. In secunda tabula ad calcem observationum reperientur valores  $\sin. p$ , &  $\cos. p$ , atque Solis diameter ex tabulis solaribus elicita pro qualibet die observationis.



## T A B U L A I.

## O B S E R V A T I O N E S M A C U L A R U M S O L I S .

| 1779  | Tempore<br>vero. | Signa<br>macular. | Differen-<br>tia trans-<br>int. prim.<br>limb. Sol.<br>& macul.<br>in secun-<br>dis temp. | Differen-<br>tia decli-<br>nationis<br>int. limb. | Differen-<br>tia decli-<br>nationis<br>superior.<br>Solis, &<br>macul. in<br>part. mi-<br>crometri.      |                   |
|-------|------------------|-------------------|---|---|--|-------------------|
| Dies. | H. M.            |                   | S.  |   |  |                   |
| Jan.  | 9                | I                 | 76,7  | 1015 <sup>p</sup>                                 |  | <i>Adnotanda.</i> |
|       |                  | II                | 78,1  | 628   |  |                   |
|       |                  | III               | 96,9  | 623   |  |                   |
|       |                  | IV                | 124,9   | 640   |  |                   |
|       |                  | V                 | 137,1   | 1040  |  |                   |
|       |                  | ⊗                 | 140,8   | 1926  |  |                   |
| 10    | 0.15             | I                 | 60,2  | 1023  | III. Est omnium maxima,<br>ejus diameter 2'',3 temp.<br>in ascens. recta & 33 <sup>p</sup> in<br>declin. |                   |
|       |                  | II                | 63,1  | 634   | V. Hodie primum videtur,<br>ceterae sunt valde exiguae.<br>In coma mac. III altera<br>nata est.          |                   |
|       |                  | III               | 82,3  | 625   | Inter IV & V plures fa-<br>culae conspicuntur.   |                   |
|       |                  | IV                | 113,2   | 626   |  |                   |
|       |                  | V                 | 131,2   | 1100  |  |                   |
|       |                  | ⊗                 | 140,7   | 1926  |  |                   |
| II    | 0.20             | I                 | 44,2  | 1047  | 2IV. Ex duabus perparvis<br>maculis conflatur.   |                   |
|       |                  | II                | 47,3  | 655   | VI. Hodie primum videtur,<br>eam sequitur altera, quae<br>penitus in 2.º limbo jacet.                    |                   |
|       |                  | III               | 66,6  | 637   |  |                   |
|       |                  | IV                | 100,2   | 619   |  |                   |
|       |                  | 2IV               | 101,3   | 1041  |  |                   |
|       |                  | V                 | 122,5   | 1091  |  |                   |
| 12    | 0.25             | VI                | 136,4   | 1196  |  |                   |
|       |                  | ⊗                 | 141,0   | 1926  |  |                   |
|       |                  | I                 | 29,5  | 1082  | VI. Circumdatur a corona<br>exiguarum macularum.   |                   |
|       |                  | II                | 32,8  | 678   |  |                   |
|       |                  | III               | 51,0  | 666   |  |                   |
|       |                  | 2IV               | 85,7  | 1052  |  |                   |
|       |                  | IV                | 86,1  | 626   |  |                   |
|       |                  | V                 | 110,3   | 1093  |  |                   |

| 1779  | Tempore<br>vero. | Signa<br>macular. | Differentia   | Differentia   | <i>Adnotanda.</i>   |
|-------|------------------|-------------------|---|---|---|
|       |                  |                   | transit. inter<br>prim. limb.<br>Sol. & macu.<br>in secundis<br>temporis. | declinationis<br>int. limbum<br>superiorem<br>Solis & mac.<br>in part. mi-<br>crometri. |   |
| Dies. | H. M.            |                   | S.  |   |   |
| 13    | 0.32             | VI                | 131,0   | 1177 <sup>8</sup>   | Diameter ipsius III in<br>ascens. rect. est 3''.0<br>temp., & in decl.<br>32°.  |
|       |                  | VII               | 134,4   | 1235  |   |
|       |                  | ●                 | 140,8   | 1928  |   |
|       |                  | I                 | 18,7  | 1109  |   |
|       |                  | II                | 20,8  | 702   |   |
|       |                  | III               | 37,6  | 678   |   |
|       |                  | 2IV               | 70,5  | 1065  |   |
|       |                  | IV                | 71,5  | 638   |   |
|       |                  | V                 | 97,6  | 1094  |   |
|       |                  | VI                | 122,8   | 1159  |   |
| 14    | 0.15             | VII               | 129,9   | 1216  | Diameter VI in asc.r.<br>2'',1 temp. & 24° in<br>declin.; maculae,<br>quas ex ejus halone<br>effici diximus, ma-<br>iores sunt.<br>Limbus omnis Solis<br>occupatur a pul-<br>cherrimis faculis. |
|       |                  | ●                 | 140,9   | 1926  |   |
|       |                  | I                 | 9,6   | 1134  |   |
|       |                  | II                | 11,6  | 731   |   |
|       |                  | III               | 24,4  | 699   |   |
|       |                  | 3IV               | 40,8  | 1077  |   |
|       |                  | 2IV               | 54,5  | 1083  |   |
|       |                  | IV                | 56,3  | 652   |   |
|       |                  | V                 | 82,5  | 1098  |   |
|       |                  | VI                | 111,5   | 1147  |   |
| 15    | 0.15             | VII               | 121,0   | 1199  | I. Vix conspicitur.<br><br>3IV. Est servus pu-<br>ctorum, quae modo<br>inter se separari vi-<br>dentur.   |
|       |                  | ●                 | 140,6   | 1924  |   |
|       |                  | I                 | 3,7   | 1169  |   |
|       |                  | II                | 4,5   | 758   |   |
|       |                  | III               | 13,2  | 732   |   |
|       |                  | 3IV               | 25,8  | 1109  |   |
|       |                  | 2IV               | 40,0  | 1115  |   |
|       |                  | IV                | 41,7  | 682   |   |
|       |                  | V                 | 66,9  | 1115  |   |
|       |                  | VI                | 98,1  | 1152  |   |
|       |                  | VII               | 110,6   | 1195  |   |
|       |                  | ●                 | 140,4   | 1928  |   |

| 1779<br>Jan. | Tempore<br>vero. | Signa<br>macular. | Differentia<br>transit. inter<br>prim. limb.<br>Sol. & macul.<br>in secundis<br>temporis. | Differentia<br>declinationis<br>int. limbum<br>superiorem<br>Solis & mac.<br>in part. mi-<br>crometri. | <i>Adnotanda.</i>   |
|--------------|------------------|-------------------|---|--|---|
|              |                  |                   | S.  |  |   |
| 16           | H. M.<br>0.10    | III               | 7,0   | 764 <sup>p</sup>   | I & II abierunt in<br>hemisphaerium in-<br>visibile.  |
|              |                  | 3IV               | 15,8  | 1143   | 4IV & 5IV in medio<br>disci natae sunt, &<br>hodie primum vi-<br>denter.  |
|              |                  | 4IV               | 22,5  | 1424   | VI tota abrumptur.  |
|              |                  | 5IV               | 34,7  | 1453   |   |
|              |                  | 2IV               | 28,0  | 1143   | VIII est nova.  |
|              |                  | IV                | 30,0  | 710  |   |
|              |                  | V                 | 52,0  | 1143   | IV evanescit in me-<br>dio disci.   |
|              |                  | VI                | 83,5  | 1164   | 3IV major facta est.  |
|              |                  | VII               | 98,0  | 1198   | 2IV non conspicitur.  |
|              |                  | VIII              | 134,3   | 624  | III est ferme in lim-<br>bo, pars ejus nigra<br>supra Solis superfi-<br>ciem prominere vi-<br>detur.                  |
|              |                  | 3                 | 140,1   | 1928   |   |
|              |                  | III               | 2,5   | 801  |   |
|              |                  | 3IV               | 7,7   | 1175   |   |
| 17           | 0.16             | 4IV               | 15,7  | 1456   |   |
|              |                  | 5IV               | 26,0  | 1485   |   |
|              |                  | V                 | 37,5  | 1182   |   |
|              |                  | VI                | 68,6  | 1177   |   |
|              |                  | VII               | 83,5  | 1207   |   |
|              |                  | VIII              | 128,0   | 609  |   |
|              |                  | 3                 | 139,9   | 1928   |   |
|              |                  | 3IV               | 3,7   | 1210   |   |
|              |                  | 4IV               | 12,0  | 1485   |   |
|              |                  | 5IV               | 20,0  | 1520   |   |
|              |                  | V                 | 25,5  | 1214   |   |
| 18           | 0.10             | VI                | 53,3  | 1211   |   |
|              |                  | VII               | 70,0  | 1230   |   |
|              |                  | 2VIII             | 111,0   | 540  | 2VIII & 3VIII sunt<br>exilia puncta nigra<br>a pluribus aliis mi-<br>noribus hinc inde<br>vagantibus circum-<br>data. |
|              |                  | 3VIII             | 116,5   | 493  |   |
|              |                  | VIII              | 120,3   | 599  |   |
|              |                  | 3                 | 140,0   | 1928   |   |
|              |                  | V                 | 16,8  | 1240   |   |
|              |                  | 2V                | 18,3  | 1222   |   |
|              |                  |                   |   |  |   |
|              |                  |                   |   |  |   |
| 19           | 0.22             |                   |   |  |   |
|              |                  |                   |   |  |   |

| 1779<br>Jan. | T. mo-<br>dore<br>vero | Signa<br>macular. | Differentia<br>translat. inter<br>prim. limb.<br>Sol. & macul.<br>in secundis<br>temporis. | Differentia<br>declinationis<br>int. limbum<br>superioreum<br>Solis & mac.<br>in part. mi-<br>crometrii. | Adnotanda.  |
|--------------|------------------------|-------------------|--|--|---|
|              |                        |                   |  |  |   |
| Dies.        | H. M.                  |                   |  |  |   |
| 19           | 0.22                   | VI                | 40,1   | 1230 <sup>p</sup>  | VI in particulas re-<br>solvitur, & disper-<br>gitur.<br><br>IX & X sunt novae.<br><br>VIII, 2VIII, & 3VIII<br>instabiles videntur. |
|              |                        | VII               | 55,7   | 1242   |   |
|              |                        | 2VIII             | 99,0   | 546  |   |
|              |                        | 3VIII             | 105,0  | 486  |   |
|              |                        | VIII              | 109,0  | 595  |   |
|              |                        | IX                | 122,0  | 1005   |   |
|              |                        | X                 | 123,8  | 476  |   |
|              |                        | •                 | 139,8  | 1925   |   |
|              |                        | V                 | 9,0  | 1278   |   |
|              |                        | 2V                | 10,3   | 1254   |   |
| 20           | 0.30                   | VI                | 27,4   | 1273   | VIII est fere invisi-<br>bilis.<br>VI quotidie formam<br>mutat.   |
|              |                        | VII               | 41,5   | 1275   |   |
|              |                        | 2VIII             | 86,0   | 553 +  |   |
|              |                        | 3VIII             | 92,0   | 487 +  |   |
|              |                        | VIII              | 96,0   | 593  |   |
|              |                        | IX                | 110,2  | 1007   |   |
|              |                        | X                 | 116,5  | 465  |   |
|              |                        | •                 | 139,4  | 1929   |   |
|              |                        | V                 | 5,6  | 1304   |   |
|              |                        | 2V                | 6,1  | 1280   |   |
| 21           | 0.12                   | VI                | 17,6   | 1298 +   | 2VIII, 3VIII infor-<br>mes sunt, & eva-<br>nescere incipiunt.   |
|              |                        | VII               | 29,8   | 1308   |   |
|              |                        | 2VIII             | 69,0   | .....  |   |
|              |                        | 3VIII             | 77,5   | 510  |   |
|              |                        | IX                | 95,7   | 1015   |   |
|              |                        | X                 | 105,8  | 461  |   |
|              |                        | I                 | 135,1  | 1217   |   |
|              |                        | II                | 137,0  | 1000   |   |
|              |                        | •                 | 139,4  | 1926   |   |
|              |                        | VI                | 11,1   | 1340   |   |
| 22           | 0.12                   | VII               | 20,3   | 1342   | VI fere tota evanuit.<br>2VIII & 3VIII in le-<br>ves nebulas conser-<br>fac sunt.   |
|              |                        | 2VIII             | 53,3   | 607  |   |

| 1779<br>Jan.   | Tempore<br>vero | Signa<br>matular. | Differentia<br>transit. inter<br>prim. limb.<br>Sol. & macul.<br>in secundis<br>temporis. | Differentia<br>declinationis<br>int. limbum<br>superioreum<br>Solis & mac.<br>in part. mi-<br>crometri. | <i>Adnotanda.</i>   |
|--|-----------------|-------------------|---|---|---|
|  |                 |                   | S.  | P.  |   |
| 22   | 0.12            | 3VIII             | 63,5  | 548   | VII est omnium ma-<br>xima.   |
|  |                 | IX                | 81,2  | 1042  |   |
|  |                 | X                 | 93,8  | 473   |   |
|  |                 | I                 | 131,8   | 1210  |   |
|  |                 | II                | 131,8   | 992   |   |
|  |                 | III               | 136,1   | 959   |   |
|  |                 | ⊗                 | 139,3   | 1927  |   |
|  |                 | VI                | 7,6   | 1374  |   |
|  |                 | VII               | 13,6  | 1381  |   |
|  |                 | 2VIII             | 38,5  | 643   |   |
| 23   | 0.14            | 3VIII             | 48,6  | 574   | Pulcherrimae faculae<br>mac. VI circumdant,<br>plures quoque con-<br>spiciuntur inter I<br>& III. |
|  |                 | IX                | 65,4  | 1065  |   |
|  |                 | X                 | 80,1  | 485   |   |
|  |                 | II                | 123,5   | 976   |   |
|  |                 | I                 | 125,6   | 1195  |   |
|  |                 | III               | 130,6   | 929   |   |
|  |                 | ⊗                 | 139,0   | 1927  |   |
|  |                 | VII               | 10,2  | 1410  |   |
|  |                 | 2VIII             | 25,8  | 684   |   |
|  |                 | 3VIII             | 35,5  | 609   |   |
| 24   | 0.15            | IX                | 50,6  | 1094  | X incipit disjungi &<br>in nebulam conver-<br>ti.   |
|  |                 | X                 | 66,0  | 515   |   |
|  |                 | II                | 111,4   | 974   |   |
|  |                 | I                 | 116,0   | 1189  |   |
|  |                 | III               | 120,3   | 912   |   |
|  |                 | ⊗                 | 138,8   | 1925  |   |
|  |                 | 2VIII             | 15,3  | 727   |   |
|  |                 | 3VIII             | 23,8  | 647   |   |
|  |                 | IX                | 36,3  | 1141  |   |
|  |                 | X                 | 52,3  | 545   |   |
| 25   | 0.12            | II                | 99,4  | 990   | IX resolvitur in ex-<br>illissima puncta nigra.   |
|  |                 | I                 | 106,3   | 1199  |   |
| VII abiit in alterum<br>hemisphaerium.<br>IV & V sunt novae,<br>& exiguae, |                 |                   |   |   |   |

| 1779<br>Jan. | Tempore<br>vero | Signa<br>macular. | Differentia  | Differentia  | <i>Adnotanda.</i>   |
|--------------|-----------------|-------------------|--|--|---|
|              |                 |                   | transit. inter<br>prim. limb.<br>Sol. & macul.<br>in secundis<br>temporis. | declinationis<br>int. limbum<br>superiorum<br>Solis & mae.<br>in part. mi-<br>crometrii. |   |
| Dies.        | H. M.           |                   | S.   |  |   |
| 25           | 0.12            | III               | 108,4  | 930 <sup>p</sup>   | IX & X in nebulas<br>solvuntur.   |
|              |                 | IV                | 128,2  | 495  |   |
|              |                 | V                 | 131,5  | 1339   |   |
|              |                 | *                 | 138,8  | 1926   |   |
|              |                 | 2VIII             | 7,0  | 767  |   |
|              |                 | IX                | 24,0   | 1185   |   |
|              |                 | X                 | 38,4   | 588  |   |
|              |                 | II                | 83,2   | 1020   |   |
|              |                 | I                 | 93,0   | 1215   |   |
|              |                 | III               | 93,7   | 940  |   |
| 26           | 0.10            | 2IV               | 122,0  | 490  | Circa 2VIII & infra<br>X plures maculae<br>orientur, sed eae<br>sunt valde tenues.  |
|              |                 | IV                | 123,7  | 510  |   |
|              |                 | V                 | 127,0  | 1324   |   |
|              |                 | *                 | 138,6  | 1924   |   |
|              |                 | II                | 68,5   | 1073   |   |
|              |                 | III               | 77,7   | 980  |   |
|              |                 | I                 | 79,4   | 1251   |   |
|              |                 | 2IV               | 112,8  | 488  |   |
|              |                 | IV                | 116,1  | 503  |   |
|              |                 | 3IV               | 118,3  | 479  |   |
| 27           | 0.30            | V                 | 119,3  | 1335   | VI nata est. in medio<br>disci.<br>Inter nubes Sol ver-<br>satur, unde aliquod<br>dubium erit in ob-<br>serv.; differentia de-<br>clin. praecipue du-<br>bia est, deficit a vera.<br>X non conspicitur,<br>licet nondum abiexit<br>in heliosphaerium<br>invisibile. |
|              |                 | VI                | 79,4   | 220  |   |
|              |                 | *                 | 138,3  | .....  |   |
|              |                 | II                | 52,7   | 1117   |   |
|              |                 | III               | 61,3   | 1018   |   |
|              |                 | VI                | 65,0   | 245  |   |
|              |                 | I                 | 65,7   | 1283   |   |
|              |                 | 2IV               | 102,0  | 501  |   |
|              |                 | IV                | 104,0  | 504  |   |
|              |                 | 3IV               | 106,0  | 479  |   |
| 28           | 0.13            | V                 | 107,5  | 1330   | Plures faculae con-<br>spiciuntur in primo<br>Solis limbo, quae ad<br>centrum disci termi-<br>nантur.   |
|              |                 | *                 | 138,0  | 1925   |   |

| lun.     | Differen-        | declinatio-  | nibus        |
|----------|------------------|--------------|--------------|
| z.       | nter-            | ne.          | int. limb.   |
| lun.     | macul.           | sciam        | solis & mac. |
| z.       | in part. mi-     | in part. mi- | in part. mi- |
| crocent. | crocent.         | crocent.     | crocent.     |
| 4        | 930 <sup>8</sup> |              |              |
| 2        | 495              |              |              |
| 6        | 1339             |              |              |
| 3        | 1926             |              |              |
| 9        | 767              |              |              |
| 0        | 1185             |              |              |
| 4        | 588              |              |              |
| 2        | 1020             |              |              |
| 7        | 1215             |              |              |
| 0        | 940              |              |              |
| 3        | 490              |              |              |
| 5        | 510              |              |              |
| 3        | 1324             |              |              |
| 6        | 1924             |              |              |
| 1        | 1073             |              |              |
| 8        | 980              |              |              |
| 5        | 1251             |              |              |
| 4        | 488              |              |              |
| 0        | 503              |              |              |
| 7        | 479              |              |              |
| 1        | 1335             |              |              |
| 2        | 220              |              |              |
| ....     |                  |              |              |
| 1117     |                  |              |              |
| 1018     |                  |              |              |
| 245      | Plures luna-     |              |              |
| 1283     | epicleres        |              |              |
| 501      | Sols lat. 3      |              |              |
| 504      | centres          |              |              |
| 479      | maxima           |              |              |
| 1330     |                  |              |              |
| 1925     |                  |              |              |

| 1779 | Tem-  | Signa  | Differen-  | Differen-   | Adnotanda.  |
|------|-------|--|--|---|---|
|      | pore  | macular.   | transit. inter   | declinationis   |   |
|      | vero. |  | prim. limb.  | int. limbum   |   |
| Jan. |       |  |  |   |   |
|      |       |  |  |   |   |
| 29   | 0.35  | II<br>III<br>I<br>VI<br>2IV<br>IV<br>3IV<br>V<br>VII         | 39,0<br>45,4<br>52,1<br>53,0<br>88,0<br>93,0<br>97,0<br>99,0<br>118,3    | 1164 <sup>8</sup><br>1065<br>1315<br>265<br>.....<br>522<br>491<br>1345<br>1027 | 2IV, IV & 3IV in nebulas abeunt sed ita dilatantur, ut in unam maximam maculam converti videantur. Ejus diameter est 10', temp. in ascens. r., & 67° in declin. |
| 30   | 0.12  | II<br>III<br>I<br>VI<br>2IV<br>V<br>VII<br>V<br>2VII<br>3VII | 26,8<br>32,7<br>40,0<br>43,0<br>73,5<br>88,2<br>107,1<br>133,4<br>134,4  | 1211<br>1112<br>1360<br>302<br>533<br>1368<br>1032<br>1112<br>1085              | VII, 2VII, 3VII sunt novae.<br>2VII videtur eadem esse, ac I diei 9 Jan. quae modo iterum ad hemisph. visibile rediit.  |
| 31   | 0.20  | II<br>III<br>I<br>V<br>VII<br>2VII<br>VIII<br>V<br>2VII      | 137,4<br>18,0<br>21,7<br>29,5<br>75,5<br>94,5<br>128,0<br>108,3<br>137,1 | 1923<br>1260<br>1169<br>1408<br>1405<br>1059<br>1105<br>1253<br>1924            | 3VII cum 2VII conjuncta est.<br>VI attenuata est, & difficilime conspicitur.  |
| Feb. | 0.20  | II<br>III<br>I<br>2IV  | 9,5<br>12,6<br>21,1<br>42,2  | 1315<br>1220<br>1459<br>635   | IX fortasse est II diei 9 Januarii.<br>Item 2IX eadem esse videtur ad III ejusdem diei 9 Jan.   |

| 1779<br>Feb. | Tempore<br>vero. | Signa<br>macularia, | Differentia<br>transit. inter<br>prim. limb.<br>Solis & macul.<br>in secundis<br>temporis. | Differentia<br>declinationis<br>int. limbum<br>superiorum<br>Solis & mac.<br>in part. mi-<br>crometrii. | <i>Adoptanda.</i>  |
|--------------|------------------|---------------------|--|---|--|
|              |                  |                     | S.   | S.  |  |
| Dies.        | H. M.            |                     |  |   |  |
| 1            | 0.20             | V                   | 53,0   | 1451°   | VII evanescit in me-<br>dio disci.   |
|              |                  | VII                 | 69,8   | .....   |  |
|              |                  | VIII                | 96,0   | 1283  |  |
|              |                  | 2VII                | 118,6  | 1107  |  |
|              |                  | IX                  | 121,6  | 477   |  |
|              |                  | 2IX                 | 127,5  | 511   |  |
|              |                  | 3IX                 | 129,5  | 563   |  |
|              |                  | *                   | 137,0  | 1924  |  |
|              |                  | III                 | 7,0  | 1267  |  |
|              |                  | I                   | 15,3   | 1492  |  |
|              |                  | 2IV                 | 29,0   | 692   |  |
|              |                  | V                   | 52,4   | 1485  |  |
| 2            | 0.17             | VIII                | 84,0   | 1313  | II abiit in hemispha-<br>rium invibile.<br>X, quae hodie pri-<br>mum conspicitur,<br>fortasse eadem est ac<br>V dico 9 Jan.                          |
|              |                  | 2VII                | 107,8  | 1120  |  |
|              |                  | IX                  | 114,3  | 473   |  |
|              |                  | 2IX                 | 122,8  | 492   |  |
|              |                  | 3IX                 | 124,9  | 542   |  |
|              |                  | X                   | 135,0  | 852   |  |
|              |                  | *                   | 136,6  | 1921  |  |
|              |                  | 2IV                 | 17,7   | 760   |  |
|              |                  | V                   | 42,7   | 1533  |  |
|              |                  | 2VII                | 95,0   | 1150  |  |
|              |                  | IX                  | 103,8  | 494   |  |
| 3            | 0.17             | 2IX                 | 115,5  | 495   | III & I abierunt in<br>hemisph. invibile.<br>VIII modo non con-<br>spicitur.<br>Diameter ipsius 2IX<br>in ascens. r. est 1°.7<br>temp., in decl. 24° |
|              |                  | 3IX                 | 127,2  | 541   |  |
|              |                  | X                   | 129,7  | 835   |  |
|              |                  | *                   | 136,5  | 1923  |  |
|              |                  | 2IV                 | 8,7  | 810   |  |
|              |                  | V                   | 34,9   | 1583  |  |
|              |                  | 2VII                | 81,5   | 1185  |  |
|              |                  | IX                  | 91,6   | 521   |  |
|              |                  | 2IX                 | 105,4  | 502   |  |
|              |                  | *                   | 115,0  | 1924  |  |
|              |                  | 3IV                 | 17,7   | 760   |  |
|              |                  | V                   | 42,7   | 1533  |  |
| 4            | 0.18             | 2VII                | 95,0   | 1150  | 2IX & X sunt om-<br>nium maximas &<br>formam regulares.<br>Inter IX & 2IX plu-<br>res exiguae maculae<br>efformantur.                                |
|              |                  | IX                  | 103,8  | 494   |  |
|              |                  | 2IX                 | 115,5  | 495   |  |
|              |                  | X                   | 127,2  | 541   |  |
|              |                  | *                   | 129,7  | 835   |  |
|              |                  | 2IV                 | 8,7  | 810   |  |
|              |                  | V                   | 34,9   | 1583  |  |
|              |                  | 2VII                | 81,5   | 1185  |  |
|              |                  | IX                  | 91,6   | 521   |  |
|              |                  | 2IX                 | 105,4  | 502   |  |
|              |                  | *                   | 115,0  | 1924  |  |
|              |                  | 3IV                 | 17,7   | 760   |  |

| 1779 | Tempore vero. | Signa macular.  | Differentia transit. inter prim. limb. Sol. & macul. in secundis temporis.  | Differentia declinationis int. limbum superiorem Solis & mac. in part. micrometri.                        |   |
|------|---------------|---|---|---|---|
| Feb. | Dies.         | H. M.   | S.  |   | Adnotanda.  |
| 4    | 0.18          | 3IX<br>X<br>⊗   | 107,0<br>121,7<br>136,4   | 552°<br>838<br>1923   |   |
| 5    | ...           |   |   |   | Nubes.  |
| 6    | 0.20          | V<br>2VII<br>IX<br>2IX<br>3IX<br>X<br>I<br>2I<br>3I<br>II<br>2II<br>III<br>⊗          | 25,0<br>51,7<br>62,0<br>77,9<br>79,0<br>97,2<br>120,3<br>121,4<br>124,1<br>130,2<br>131,2<br>132,3<br>135,8                   | 1653<br>1291<br>604<br>562<br>613<br>875<br>392<br>411<br>484<br>896<br>1033<br>881<br>2919               | Diametet ipsius X in aseens. rect. est 21°,0 temp., & 22° in declin.<br>I, 2I & ceterae sequentes hodie primum videntur.  |
| 7    | 0.25          | 2VII<br>IX<br>2IX<br>3IX<br>X<br>I<br>2I<br>3I<br>4I<br>II<br>2II<br>III<br>2III<br>⊗ | 39,2<br>47,7<br>64,0<br>64,3<br>82,4<br>114,0<br>116,0<br>117,7<br>120,0<br>123,4<br>125,3<br>125,8<br>134,1<br>135,7<br>28,8 | 1348<br>659<br>609<br>655<br>922<br>391<br>405<br>473<br>375<br>893<br>1028<br>886<br>979<br>1917<br>1410 | Limbus Solis optime terminatus est.<br>V abiit in aliud hemispherium.<br>In halone ipsius X altera macula nascitur.<br>I, & 2I in unam coire videntur, ambas circumdat unicus halo. |
| 8    | 0.30          | 2VII  |   |   | : III est nova, & una ex majoribus. Perplures eaeque pulcherrimae adstant facultæ in 1.º & 2.º Solis limbo.   |

| 1779<br>Feb. | Tempore<br>vero. | Signa<br>macular.   | Differentia<br>transit. inter<br>prim. & limb.<br>Sol. & macul.<br>in secundis<br>temporis.  | Differentia<br>declinationis<br>inr. limbum<br>superiore<br>Solis & mac.<br>in part. mi-<br>crometri.                         | <i>Adnotanda.</i>  |
|--------------|------------------|---|--|---|--|
|              |                  |   |  |   |  |
| Dies.        | H. M.            |   |  | S.  |  |
| 8            | 0.30             | IX<br>2IX<br>3IX<br>X<br>(1) I<br>I<br>2I<br>4I<br>II<br>2II<br>III<br>(1) 2III<br>2III<br>IV<br>5<br>135,2   | 33,9<br>50,0<br>50,2<br>68,0<br>100,8<br>106,2<br>108,0<br>113,8<br>113,2<br>116,3<br>116,0<br>121,3<br>129,0<br>134,2<br>135,2            | 728 <sup>p</sup><br>675<br>722<br>975<br>180<br>408<br>405<br>376<br>915<br>1044<br>897<br>922<br>973<br>1030<br>1918         |  |
| 9            | 3.10             | 2VII<br>IX<br>2IX<br>3IX<br>X<br>(1) I<br>I<br>2I<br>II<br>2II<br>III<br>(1) 2III<br>2III<br>IV<br>5<br>135,2 | 20,5<br>20,4<br>34,3<br>34,5<br>51,4<br>92,0<br>94,5<br>96,5<br>99,2<br>103,8<br>102,9<br>110,0<br>120,0<br>129,8<br>134,8<br>13,7<br>16,8 | 1457 +<br>797<br>740<br>786<br>1036<br>198 +<br>439<br>426<br>937<br>1061<br>914<br>937<br>970<br>1000<br>1911<br>837<br>1515 | Hodie 9 Febr. differ.<br>declin. aliquantisper<br>dubia est ; deficit<br>a vera.<br>Ex 21 pars separatur,<br>quae in distinctam<br>maculam componi-<br>tur.<br>II, III, & (1) 2III<br>inter se & cum aliis<br>adjacentibus ita e-<br>niuntur, ut in uni-<br>cam maculam co-<br>alescere videantur.<br><br>(1) I in nebulam ite-<br>rum converci, vide-<br>tur. |
| 10           | 0.30             | IX<br>2VII  |  |   |  |

| 1779<br>Feb. | Tempore<br>vero. | Signa<br>macular. | Differentia<br>grauit. inter<br>prim. limb.<br>Sol. & macul.<br>in secundis<br>temporis. | Differentia<br>declinatiois<br>int. limbum<br>superiorum<br>Solis & mac.<br>in part. mac-<br>ulae prope. | <i>Adnotanda.</i>   |
|--------------|------------------|-------------------|--|--|---|
|              |                  |                   | S.   |  |   |
| 10           | 0.30             | 3IX               | 22,7   | 848 <sup>p</sup>   |   |
|              |                  | 2IX               | 23,5   | 806  |   |
|              |                  | X                 | 34,0   | 1092   |   |
|              |                  | (1) I             | 84,0   | 200  | (1) I denuo conden-<br>satur, nigrescit &<br>ab halone tenuissimo<br>clauditur. |
|              |                  | I                 | 86,0   | 457  | I in oblongam ma-<br>culam producitur.  |
|              |                  | 2I                | 87,0   | 464  |   |
|              |                  | II                | 87,7   | 975  |   |
|              |                  | III               | 91,0   | 947  |   |
|              |                  | 2II               | 92,8   | 1100   |   |
|              |                  | (1) 2III          | 99,5   | 970  |   |
|              |                  | 2III              | 113,0  | 986  |   |
|              |                  | IV                | 134,7  | 1004   | Limbus Solis valde<br>tremulus.   |
|              |                  |                   | 135,0  | 1917   |   |
| 11           | 0.12             | 2IX               | 15,0   | 874  | 2VII abiit in hemis-<br>phaerium invibile.                                      |
|              |                  | 3IX               | 28,0   | .....  |   |
|              |                  | I                 | 73,3   | 503  |   |
|              |                  | (1) I             | 74,5   | 227  | IX vix distingui po-<br>test.   |
|              |                  | 2I                | 74,7   | 510  | III, III & (1) III<br>mutuam positionem<br>perpetuo variant.                    |
|              |                  | II                | 77,0   | .....  |   |
|              |                  | 2II               | 80,3   | 1159   |   |
|              |                  | III               | 82,3   | 1003   |   |
|              |                  | (1) 2III          | 86,5   | 1012   |   |
|              |                  | 2III              | 101,3  | 1024   |   |
|              |                  | IV                | 116,5  | 1020   |   |
|              |                  |                   | 134,5  | 1918   | Limbus Solis male<br>terminatus.  |
| 12           | -                | -                 | -  | -  | Nubes.  |
| 13           | -                | I                 | 31,0   | 695  | Nubes.  |
| 14           | 0.25             | 2I                | 33,3   | 698  | 2IX, 3IX abierunt<br>in aliud hemisphae-<br>rium.                               |
|              |                  | 2II               | 41,7   | 1347   |   |
|              |                  | (1) I             | 42,0   | 370  |   |
|              |                  | (1) 2III          | 44,0   | 1197   |   |
|              |                  | 2III              | 60,2   | 1178   |   |

| 1779<br>Feb. | Tempore<br>vero | Signa<br>macular. | Differentia<br>transit. inter<br>prim. limb.<br>Sol. & macul.<br>in secundis<br>temporis. | Differentia<br>declinationis<br>int. limbum<br>superioreum<br>Solis & mac.<br>in part. mi-<br>crometrii. | Adnotanda.   |
|--------------|-----------------|-------------------|---|--|--|
| Dies.        | H. M.           |                   | S.  |  |  |
| 14           | 0.25            | IV                | 78,5  | 1147 <sup>p</sup>  | V, 2V, & 3V sunt<br>novae, & exiguae,<br>maculam 3V praec-<br>dit cumulus perexi-<br>guarum macularum<br>quae simul coire vi-<br>dentur. |
|              |                 | V                 | 98,0  | 394  |  |
|              |                 | 2V                | 101,8   | 416  |  |
|              |                 | 3V                | 112,0   | 416  |  |
|              |                 | *                 | 134,0   | 1917   |  |
|              |                 | I                 | 21,1  | 752  | Omnium maxima est<br>alii, ejus diameter<br>in ascens. r. est 1",7<br>temp. & in declin.<br>2,9.   |
|              |                 | 2I                | 22,8  | 767  |  |
|              |                 | II                | 25,0  | 1265   |  |
|              |                 | (1) I             | 32,2  | 421  |  |
|              |                 | 2II               | 32,2  | 1406   |  |
| 15           | 0.20            | (1) 2III          | 33,0  | 1258   | Inter 2V & 3V plures<br>adsumunt maculae, sed<br>tam vagae sunt & si-<br>gura inconstantes, ut<br>notari non merean-<br>tur.             |
|              |                 | 2III              | 47,8  | 1244   |  |
|              |                 | IV                | 65,7  | 1203   |  |
|              |                 | V                 | 86,5  | 427  |  |
|              |                 | 2V                | 91,1  | 450  |  |
|              |                 | 3V                | 103,7   | 438  |  |
|              |                 | 4V                | 121,8   | 448  | 4V est nova, & so-<br>litaria.   |
|              |                 | *                 | 134,0   | 1912   |  |
|              |                 | I                 | 11,3  | 801  |  |
|              |                 | II                | 16,7  | 1315   |  |
| 16           | 0.17            | 2II               | 24,0  | 1458   |  |
|              |                 | (1) 2III          | 22,7  | 1311   |  |
|              |                 | 2III              | 35,8  | 1301   |  |
|              |                 | IV                | 53,0  | 1253   |  |
|              |                 | V                 | 74,0  | 468  |  |
|              |                 | 2V                | 78,8  | 486  |  |
|              |                 | 3V                | 92,0  | .....  |  |
|              |                 | VI                | 107,7   | 296  | VI & (1) 4V sunt<br>novae.   |
|              |                 | 4V                | 116,0   | 433  |  |
|              |                 | (1) 4V            | 119,7   | 455  |  |
| 17           | 0.20            | *                 | 133,8   | 1913   |  |
|              |                 | I                 | 4,5   | 864  |  |

| 1779    | Tempore vero | Signa macular.   | Differentia transit. inter prim. limb. Sol. & macul. in secundis temporis.               | Differentia declinatio- nis int. limbum superiorem Solis & macul. in part. micrometri.        | <i>Anotanda.</i>  |
|---------|--------------|--|--|---|---|
| Dies.   | H. M.        |  | S.   |   |   |
| Feb. 17 | o. 20        | (1) 2 III<br>2 II<br>2 III<br>IV<br>V<br>2 V<br>4 V<br>(1) + V<br>2 VI<br>2 VI | 15,0<br>17,7<br>26,0<br>40,7<br>59,6<br>63,7<br>107,5<br>112,0<br>131,5<br>133,4<br>18,8 | 1376 <sup>p</sup><br>.....<br>1376<br>1327<br>529<br>546<br>447<br>467<br>903<br>1913<br>1440 | 3 V, & V! figuram & situm sensibiliter mutarunt, unde praefstabat illas relinquere.<br>2 VI est nova, & mediocris magnitudinis, figuram habet regularem quasi circularem,             |
| 18      | o. 18        | IV<br>V<br>2 V<br>3 V<br>4 V<br>(1) 4 V<br>2 VI                                | 30,7<br>46,8<br>51,3<br>64,0<br>97,0<br>111,1<br>126,5                                   | 1404<br>612<br>625<br>527<br>486<br>510<br>909  | (1) 4 V est omniam max. diameter ipsius in ascens. r. est 2", 3 temp. & 21° in declin.<br>V dubito an sit praecedens diei 17.<br>2 VI major appetet ejus diameter in declin. est 25°. |
| 19      | o. 15        | 2 III<br>IV<br>V<br>2 V<br>4 V<br>(1) 4 V<br>2 VI                              | 15,5<br>22,5<br>33,1<br>37,3<br>83,0<br>87,5<br>117,3                                    | 1490<br>1461<br>666<br>687<br>516<br>543<br>918   | (1) 4 V in duas dividitur.<br>2 VI habet nucleum subobscurum ita ut videatur quampri- mum in nebulam abire posse.   |
| 20      | o. 15        | 2 VI<br>2 VI   | 133,0  | 1914  | 2 III abiit in hemisphaerium invisiibile.   |
|         |              | IV<br>V<br>2 V<br>4 V<br>(1) 4 V   | 18,1<br>21,8<br>25,0<br>69,2<br>73,3   | 1515<br>740<br>754<br>574<br>597  | (1) 4 V circumambi- tur ab altera, quae in modum dimidiæ zonee constituta est; habet praeterea co- mam valde magnum.  |

| 1779<br>Feb. | Tempore<br>vero | Signa<br>macular. | Differentia<br>transit. inter<br>palm. limb.<br>Sol. & macul.<br>in secundis<br>temporis. | Differentia<br>declinationis<br>int. limbum<br>superiorum<br>Solis & mar.<br>in part. mi-<br>crometrii. | Adnotanda.   |
|--------------|-----------------|-------------------|---|---|--|
| Dies.        | H. M.           |                   | S.  |   |  |
| 20           | 0.15            | 2VI               | 107,7   | 948 <sup>P</sup>  |  |
|              |                 | (*)               | 132,5   | 1915  |  |
| 21           | 0.15            | V                 | 12,9  | 808   |  |
|              |                 | 2V                | 15,8  | 826   |  |
|              |                 | 4V                | 55,4  | 647 —   |  |
|              |                 | (1) 4V            | 59,0  | 670 ±   |  |
|              |                 | 2VI               | 94,8  | 1002  |  |
|              |                 | (*)               | 132,4   | 1913  | IV abiit in hemi-<br>phaerium invisibile.  |
| 22           | 0.15            | V                 | 55  | 870   |  |
|              |                 | 2V                | 8,0   | 884   |  |
|              |                 | 4V                | 41,0  | 728   |  |
|              |                 | (1) 4V            | 44,4  | 748   |  |
|              |                 | 2VI               | 82,0  | 1056  |  |
|              |                 | I                 | 127,5   | 916   | I est nova, & non<br>ex exiguis.   |
|              |                 | (*)               | 132,2   | 1913  |  |
| 23           | 0.15            | 4V                | 28,2  | 822   |  |
|              |                 | (1) 4V            | 31,2  | 846   | (2) 4V est in extre-<br>mitate caudae supe-<br>rius dictae, quae<br>adnexa est maculae               |
|              |                 | (2) 4V            | 64,5  | 474   | (1) 4V.  |
|              |                 | 2VI               | 67,6  | 1135  | 21 est nova & valde<br>parva.  |
|              |                 | I                 | 121,5   | 927   |  |
|              |                 | 2I                | 125,5   | 1116  |  |
|              |                 | (*)               | 132,1   | 1912  |  |
| 24           | 0.15            | 4V                | 17,4  | 889   | 2VI modo ab halone<br>semicirculari, qui<br>ab ejus nucleo ali-<br>quantulum distat,<br>circumdatur. |
|              |                 | (1) 4V            | 19,3  | 914   | (2) 4V videtur locum<br>suum respectivum<br>sensibiliter mutasse.                                    |
|              |                 | (2) 4V            | 51,0  | 543   |  |
|              |                 | 2VI               | 53,7  | 1216  |  |
|              |                 | I                 | 112,0   | 947 +   |  |
|              |                 | 2I                | 117,8   | 1123  |  |
|              |                 | (*)               | 131,8   | 1912  |  |
| 25           | 0.15            | 4V                | 8,7   | 957   | (1) 4V iterum major<br>fit, pars zonae, quae<br>nucleum ambiebat<br>nunc cum ipso con-               |
|              |                 | (1) 4V            | 11,0  | 986   |  |
|              |                 | (2) 4V            | 38,6  | 620   |  |

| 1779  | Tempore<br>vero. | Signa<br>macular.  | Differentia<br>transit. inter<br>prim. limb.<br>Sol. & macul.<br>in secundis<br>temporis. | Differentia<br>declinationis<br>int. limbum<br>superiorem.<br>Solis & mac.<br>in part. mi-<br>crometri. | <i>Adnotandw.</i>   |
|-------|------------------|--|---|---|---|
|       |                  |  | S.  |   |   |
| Feb.  |                  |  |   |   |   |
| Dies. | H. M.            |  |   |   |   |
| 25    | 0.15             | 2VI<br>I<br>2I<br>⊗  | 42,0<br>101,8<br>110,0<br>131,8   | 1285°<br>988<br>1146°<br>1910°  | juncta est, ita tamen<br>ut in medio sinus<br>vacuum admittat.  |
| 26    | 0.15             | (1)4V<br>(2)4V<br>2VI<br>I<br>2I<br>II<br>⊗                | 5,0<br>26,7<br>31,0<br>89,3<br>99,7<br>108,0<br>131,5                                     | 1046<br>700<br>1357<br>1038<br>1183<br>997<br>1911  | 2VI fere tota dispersa<br>est.<br>Post 2VI & ex ipsis<br>fragmentis conflatur<br>macula satis ampla,<br>quae tamen adhuc<br>notari non meretur<br>ob ipsius irregulari-<br>tatem.   |
| 27    | 0.20             | (1)4V<br>(2)4V<br>2VI<br>I<br>2I<br>II<br>III<br>⊗         | 1,5<br>15,7<br>23,0<br>76,2<br>88,3<br>94,5<br>130,0<br>131,3                             | 1098<br>779<br>1430<br>1099<br>1228<br>1044<br>889<br>1909  | Diameter maculae,<br>quam post 2VI effici<br>diximus est 9°, temp-<br>oris in ascensione<br>recta, & 8,4° in decli-<br>natione.   |
| 28    | 0.17             | (2)4V<br>2VI<br>(1)2VI<br>I<br>II<br>2II<br>IV<br>III<br>⊗ | 8,5<br>17,0<br>27,6<br>63,0<br>79,5<br>89,7<br>113,6<br>125,5<br>131,0                    | 845<br>1489<br>1501<br>1180<br>1120<br>1150<br>360<br>881<br>1909                                       | III est nova & exigua.<br>2I non videtur, & pro-<br>babiliter evanuit.<br>2I, & 4V sunt novae.<br>(1)2VI est illa ipsa,<br>quam ex fragmentis<br>mac. 2VI effici dixi-<br>mus; a pluribus aliis<br>minotibus circum-<br>datur. Ejus diameter<br>in ascens. r. est 3°, o<br>temp. & 45° in decl. |
| Mar.  | 0.15             | (2)4V<br>2VI<br>(1)2VI<br>I                                | 5,8<br>15,0<br>23,0<br>50,8   | 870<br>1541<br>1554<br>1257   | Differentia declinat.<br>maculae (2)4V ali-<br>quantisper dubia est;<br>deficit, ni fallor, a<br>vera.  |

| 1779 | Tempore<br>vero. | Signa<br>mascular. | Differentia<br>transit. inter<br>prim. limb.<br>Sol. & macul.<br>in secundis<br>temporis. | Differentia<br>declinationis<br>int. limbum<br>superiorem<br>Solis & mac.<br>in part. mi-<br>crometri. | Anotanda.   |       |
|------|------------------|--------------------|---|--|---|-------|
|      |                  |                    |   |  | Dies.   | H. M. |
|      |                  |                    |   |  |   | S.    |
| Mar. |                  |                    |   |  |   |       |
| 1    | 0.15             | II                 | 65,0  | 1188 <sup>p</sup>  |   |       |
|      |                  | 2II                | 78,0  | 1219   |   |       |
|      |                  | IV                 | 107,5   | 370  |   |       |
|      |                  | 2IV                | 114,5   | 370  |   |       |
|      |                  | III                | 118,3   | 895  |   |       |
|      |                  | 2III               | 124,5   | 702  |   |       |
|      |                  | V                  | 127,3   | 884  |   |       |
|      |                  | *                  | 130,7   | 1909   |   |       |
| 2    | 0.17             | (2)+V              | 1,5   | 908  | I duplex facta est, sed<br>quaenam pars refe-<br>rat I praecedentem,<br>ignoro. |       |
|      |                  | (1)2VI             | 20,5  | 1608   |   |       |
|      |                  | I                  | 38,5  | 1340 +   |   |       |
|      |                  | II                 | 51,0  | 1262   |   |       |
|      |                  | 2II                | 61,0  | 1292   |   |       |
|      |                  | (1)2II             | 65,0  | 1292   |   |       |
|      |                  | IV                 | 98,5  | 397  |   |       |
|      |                  | 2IV                | 108,0   | 372  |   |       |
|      |                  | III                | 108,5   | 928  |   |       |
|      |                  | 2III               | 118,0   | 713  |   |       |
|      |                  | V                  | 122,5   | 883  |   |       |
|      |                  | *                  | 130,5   | 1908   |   |       |
| 3    | 0.23             | I                  | 30,7  | 1424   | (2)4V,&(1)2VI abie-<br>runt in hemisphae-<br>rium invisible.                    |       |
|      |                  | 2II                | 50,5  | 1376   |   |       |
|      |                  | (1)2II             | 53,7  | 1366   |   |       |
|      |                  | IV                 | 88,0  | 442  |   |       |
|      |                  | III                | 98,6  | 974  |   |       |
|      |                  | 2IV                | 100,5   | 392  |   |       |
|      |                  | 2III               | 108,8   | 741  |   |       |
|      |                  | V                  | 113,8   | 910  |   |       |
|      |                  | *                  | 130,5   | 1908   |   |       |
| 4    | 0.17             | II                 | 32,4  | 1403   |   |       |
|      |                  | 2II                | 40,5  | 1442   |   |       |
|      |                  | (1)2II             | 42,4  | 1440   | II cum altera non no-<br>tata fortasse confusa<br>fuit.                         |       |

| 1779<br>Mar. | Tempore<br>vero.<br>Dies. | H. M. | Signa<br>macular. | Differentia<br>transit. inter<br>prim. limb.<br>Sol. & macul.<br>in secundis<br>temporis. | Differentia<br>declinationis<br>int. limbum<br>superiorem<br>Solis & mac.<br>in part. mil-<br>crometri. | S.   |
|--------------|---------------------------|-------|-------------------|---|---|--|
| 4            | 0.17                      |       | IV                | 75,7  | 498°  |  |
|              |                           |       | III               | 86,3  | 1035  | V suum locum respe-<br>& vivu. mutat. videtur.                         |
|              |                           |       | 2IV               | 89,7  | 434   | 2V est nova, & una ex<br>majoribus.                                    |
|              |                           |       | 2III              | 97,5  | 789   | Maximae faculae cir-<br>ca secundum Solis<br>limbum conspicun-<br>tur. |
|              |                           |       | V                 | 102,7   | 953   |  |
|              |                           |       | 2V                | 129,7   | 974   |  |
|              |                           |       | ⊕                 | 130,0   | +   |  |
| 5            | 0.15                      |       | II                | 23,8  | 1477  |  |
|              |                           |       | (1)2II            | 34,0  | 1513  | Diameter ipsius 2V in<br>ascens. t. est 0°,5                           |
|              |                           |       | IV                | 62,0  | 577   | temp. sin declin. vero<br>est 23°                                      |
|              |                           |       | III               | 74,2  | 1102  |  |
|              |                           |       | 2IV               | 77,3  | 489   |  |
|              |                           |       | 2III              | 83,3  | 855   |  |
|              |                           |       | V                 | 91,6  | 997   |  |
|              |                           |       | 2V                | 126,0   | 957   |  |
|              |                           |       | ⊕                 | 130,0   | +   |  |
| 6            | 0.19                      |       | (1)2II            | 28,0  | 1575  | V vel evanuit, vel<br>cum aliis adiacenti-<br>bus coivit.              |
|              |                           |       | IV                | 49,7  | 655   | Circa (1)2II conspicu-<br>untur plures eaque<br>maximae faculae.       |
|              |                           |       | III               | 61,3  | 1190  | Limbus Solis valde<br>tremulus, & male<br>terminatus.                  |
|              |                           |       | 2IV               | 64,1  | 562   | Maculam 2V prece-<br>dunt duae aliae pere-<br>xiguae circulares;       |
|              |                           |       | 2III              | 70,0  | 935   | omnesque ab unico<br>halone circum am-<br>biuntur.                     |
|              |                           |       | 2V                | 121,3   | 965   | I est nova, & medio-<br>cris magnitudinis.                             |
|              |                           |       | ⊕                 | 130,5   | 1913  |  |
| 7            | 0.22                      |       | (1)2II            | 23,7  | 1619  |  |
|              |                           |       | IV                | 36,5  | 748   |  |
|              |                           |       | III               | 48,4  | 1273  |  |
|              |                           |       | (1)III            | 40,8  | 1469  |  |
|              |                           |       | 2IV               | 49,6  | 656   |  |
|              |                           |       | 2III              | 55,6  | 1026  |  |
|              |                           |       | (1)2IV            | 59,6  | 536   |  |
|              |                           |       | 2V                | 114,0   | 992   |  |

*Adnotanda.*

| 1779<br>Mar. | Tempore<br>vero. | Signa<br>macularia. | Differencia<br>transit. inter<br>prim. limb.<br>Solis & macul.<br>in secundis<br>temporis. | Differencia<br>declinationis<br>int. limbum<br>superiorum<br>Solis & mac.<br>in part. mil-<br>lometri. | <i>Adnotanda.</i>   |
|--------------|------------------|---------------------|--|--|---|
|              |                  |                     | S.   |  |   |
| 7            | 0.22             | I                   | 127,5  | 850 <sup>p</sup>   | Limbus Solis optime terminatus.   |
|              |                  |                     | 130,3  | 1904   | Practer a V & I sunt omnes novae.   |
|              |                  | 2V                  | 39,8   | 1486   | Macula 2V in duas partes divisa est, altera habet formam circularem, altera vero tamquam dimidia zenza circumlitur illam. |
|              |                  | I                   | 45,3   | 1326   |   |
|              |                  | II                  | 46,1   | 531  |   |
|              |                  | III                 | 102,8  | 1102   |   |
|              |                  | IV                  | 103,0  | -332   |   |
|              |                  | 2IV                 | 109,0  | 335  |   |
|              |                  | 3IV                 | 113,6  | 351  |   |
|              |                  | V                   | 128,0  | 893  |   |
| 15           | 0.22             |                     | 129,3  | 1903   | 2V modo in duas diff. etas maculas divisa est.  |
|              |                  | 2V                  | 32,0   | 1553   |   |
|              |                  | II                  | 33,8   | 615  |   |
|              |                  | I                   | 35,0   | 1420   |   |
|              |                  | III                 | 92,3   | 1165   | 2III est acervus panorum nigrorum.  |
|              |                  | 2III                | 90,7   | 885  |   |
|              |                  | IV                  | 92,0   | 365  |   |
|              |                  | 2IV                 | 101,0  | 357  |   |
|              |                  | 3IV                 | 109,0  | 347  |   |
|              |                  | (1)3IV              | 110,2  | 355  | Dubio an (1)3IV sit eadam cum 3IV dicti praecedentis.   |
| 20           | 0.20             | V                   | 123,3  | 897  | Vfortass. cum alia non notata, confunditur.   |
|              |                  |                     | 129,3  | 1903   | Diameter 2IV in af. r. 2", 0 temp. & 27° in declin.   |
|              |                  | IV                  | 31,7   | 765  | Diameter 3IV in af. r. 1", 7 temp. & 23° in declin.   |
|              |                  | 2IV                 | 41,0   | 749  | In disco Sol. plusq. 20 macul, modo conspicuntur, quae 8 tant. sunt medioc. magnit.                                       |
|              |                  | III                 | 43,0   | 1539   | Limb. Sol. val. tremul.   |
|              |                  | 3IV                 | 59,0   | 630  |   |
|              |                  | V                   | 105,0  | 1006   |   |
| 24           | 0.22             |                     | 129,0  | 1902   |   |
|              |                  | IV                  | 2,3  | 1056   |   |
|              |                  | 2IV                 | 5,2  | 1078   |   |
|              |                  | 2IV                 | 14,2   | 991  |   |
|              |                  |                     | 129,0  | 1900   |   |

## TABULA II.

| Januar.     |  | Anguli positionis<br>Solis<br>pro instanti<br>observation. |           | Diamet.<br>Solis. |      | Februar. |  | Anguli positionis<br>Solis<br>pro instanti<br>observation. |           | Diamet.<br>Solis. |         |
|-------------|--|--|-----------|-------------------|------|----------|--|--|-----------|-------------------|---------|
| Dies        |  | Sinus.   | Cosinus.  | M.                | S.   | Dies     |  | Sinus.   | Cosinus.  | M.                | S.      |
| 9           |  | 0,14125  | 0,98997   | 32.               | 35,3 | 9        |  | 0,31891  | 0,94778   | 32.               | 27,0    |
| 10          |  | 0,14826  | 0,98494   | 32.               | 35,2 | 10       |  | 0,32253  | 0,94656   | 32.               | 26,6    |
| 11          |  | 0,15528  | 0,98787   | 32.               | 35,1 | 11       |  | 0,32645  | 0,94521   | 32.               | 26,2    |
| 12          |  | 0,16222  | 0,98673   | 32.               | 34,9 | 12       |  | · · · · ·  | · · · · · | · · · ·           | · · · · |
| 13          |  | 0,16907  | 0,98550   | 32.               | 34,7 | 13       |  | · · · · ·  | · · · · · | · · · ·           | · · · · |
| 14          |  | 0,17575  | 0,98443   | 32.               | 34,6 | 14       |  | 0,33775  | 0,94123   | 32.               | 25,0    |
| 15          |  | 0,18243  | 0,9832    | 32.               | 34,4 | 15       |  | 0,34125  | 0,93996   | 32.               | 24,6    |
| 16          |  | 0,18899  | 0,98197   | 32.               | 34,2 | 16       |  | 0,34471  | 0,93871   | 32.               | 24,2    |
| 17          |  | 0,19582  | 0,98069   | 32.               | 34,1 | 17       |  | 0,34803  | 0,93748   | 32.               | 23,8    |
| 18          |  | 0,20193  | 0,97940   | 32.               | 33,9 | 18       |  | 0,35134  | 0,93628   | 32.               | 23,4    |
| 19          |  | 0,20832  | 0,97806   | 32.               | 33,7 | 19       |  | 0,35434  | 0,93511   | 32.               | 23,0    |
| 20          |  | 0,21459  | 0,97670   | 32.               | 33,5 | 20       |  | 0,35733  | 0,93397   | 32.               | 22,5    |
| 21          |  | 0,22067  | 0,97535   | 32.               | 33,3 | 21       |  | 0,36022  | 0,93286   | 32.               | 22,1    |
| 22          |  | 0,22672  | 0,97396   | 32.               | 33,1 | 22       |  | 0,36300  | 0,93179   | 32.               | 21,7    |
| 23          |  | 0,23270  | 0,97255   | 32.               | 32,9 | 23       |  | 0,36547  | 0,93074   | 32.               | 21,3    |
| 24          |  | 0,23858  | 0,97112   | 32.               | 32,7 | 24       |  | 0,36822  | 0,92974   | 32.               | 20,8    |
| 25          |  | 0,24434  | 0,96969   | 32.               | 32,4 | 25       |  | 0,37068  | 0,92876   | 32.               | 20,3    |
| 26          |  | 0,24998  | 0,96825   | 32.               | 32,1 | 26       |  | 0,37300  | 0,92781   | 32.               | 19,8    |
| 27          |  | 0,25553  | 0,96677   | 32.               | 31,8 | 27       |  | 0,37527  | 0,92691   | 32.               | 19,2    |
| 28          |  | 0,26103  | 0,96533   | 32.               | 31,5 | 28       |  | 0,37741  | 0,92605   | 32.               | 18,8    |
| 29          |  | 0,26657  | 0,96384   | 32.               | 31,2 | Martii . |  |  |           |                   |         |
| 30          |  | 0,27166  | 0,96239   | 32.               | 30,9 | 1        |  | 0,37946  | 0,92521   | 32.               | 18,0    |
| 31          |  | 0,27683  | 0,96091   | 32.               | 30,5 | 2        |  | 0,38150  | 0,92437   | 32.               | 17,7    |
| Februarii . |  |  |           |                   |      | 3        |  | 0,38318  | 0,92367   | 32.               | 17,3    |
| 1           |  | 0,38189  | 0,91945   | 32.               | 30,0 | 4        |  | 0,38487  | 0,92296   | 32.               | 16,9    |
| 2           |  | 0,38680  | 0,91799   | 32.               | 29,6 | 5        |  | 0,38648  | 0,92228   | 32.               | 16,5    |
| 3           |  | 0,39166  | 0,91653   | 32.               | 29,2 | 6        |  | 0,38801  | 0,92165   | 32.               | 16,0    |
| 4           |  | 0,39639  | 0,91508   | 32.               | 28,8 | 7        |  | 0,38941  | 0,92106   | 32.               | 15,5    |
| 5           |  | · · · · ·  | · · · · · | 32.               | 28,4 | 14       |  | 0,39644  | 0,91810   | 32.               | 14,9    |
| 6           |  | 0,39553  | 0,91218   | 32.               | 28,1 | 15       |  | 0,39692  | 0,91781   | 32.               | 14,5    |
| 7           |  | 0,39996  | 0,91075   | 32.               | 27,8 | 20       |  | 0,39830  | 0,91725   | 32.               | 8,6     |
| 8           |  | 0,31427  | 0,94933   | 32.               | 27,4 | 24       |  | 0,39761  | 0,91755   | 32.               | 6,3     |

## OCCULTATIO VENERIS

observata &amp; supputata

AB ANGELO DE CESARIS.

**S**æpe quinta Octobris anni 1782 Venerem superveniente Luna occultatam observavi tubo achromatico octo pedum. Externum internumque contactum in immersione accurate adnotare datum est ; secus in emersione. Cum enim Lunæ facies telescopii area vix caperetur , ejusdemque Lunæ tenuissima lux , progrediente Sole , pene extincta evanesceret , difficile admodum fuit tubum in ea constanter directione retinere , ut ibi oculi acies praesertim intenderetur , ubi futura erat emersio . Itaque cum parum mihi ipsi satisfeci in altera hac observationis parte ; tum eamdem inter inutiles seponere malui , quam nimia forte incertitudine vitiosam edere . Immersionis autem ejusmodi sunt tempora observata .

Initium Immersionis 7<sup>h</sup> 26' 6'',5 Temp. vero mane .  
Totalis Immersio . . 7. 26. 38 ,5

Conversione temporis veri in medium , factisque ex tabulis *la Lande* computationibus , habentur elementa quæ sequuntur .

| Octobris 4.                     |  |
|---------------------------------|--|
| 19 <sup>h</sup> 14' 31'',4 T.m. |  |
| 5° 18° 44' 32'',0               | Longitudo Lunæ . . . . .                 |
| — 8 ,7                          | Aequatio ob normalem . —                 |
| 5. 18. 44. 23 ,3                | Longitudo Lunæ correcta 5. 18. 44. 30 ,6 |

| Octobris 4.               |  |
|---------------------------|--|
| 19 <sup>h</sup> 15' 3'',4 |  |
| 5° 18° 44' 50'',6         |  |
| — 8 ,7                    |  |
| 5. 18. 44. 30 ,6          |  |

|                         |  |                        |
|-------------------------|--|------------------------|
| $1^{\circ} 40' 47'', 0$ | Latitud $\circ$ Lunae borealis         | $1^{\circ} 40' 45', 3$ |
| + 20 ,2                 | Aequar. ob excess. normal.             | + 20 ,2                |
| 1. 41. 7 ,2             | Latitudo correcta . . . .              | 1. 41. 5 ,5            |
| 58. 52 ,6               | Parallax. Lunae Mediol.                | 58. 52 ,6              |
| + 15 ,7                 | Aequatio ob normalem .                 | + 15 ,7                |
| 59. 8 ,3                | Parallaxis correcta P. . .             | 59. 8 ,3               |
| 32. 9 ,0                | Diameter Lunae . . . .                 | 32. 9 ,0               |
| + 17 ,7                 | Augment. ob altitud. Lun.              | + 17 ,7                |
| 16. 13 ,3               | Semidiameter correcta . .              | 16. 13 ,3              |
| 5. 19. 42. 13 ,0        | Longitudo Veneris . . . .              | 5. 19. 42. 14 ,7       |
| 1. 24. 52 ,5            | Latitudo Veneris . . . .               | 1. 24. 52 ,5           |
| 5 ,5                    | Parallaxis Veneris . . . .             | 5 ,5                   |
| 5 ,5                    | Semidiameter Veneris . .               | 5 ,5                   |
| 33. 15 ,0               | Mot. long. over. int. 57', 1           | 33. 15 ,0              |
| 3. 1 ,8                 | Mot. Veneris intra 57', 1              | 3. 1 ,8                |
| 30. 13 ,2               | Mot. relat. long. intra 57', 1         | 30. 13 ,2              |
| 59. 2 ,8                | Diff. <sup>2</sup> parall. Lun. & Ven. | 59. 2 ,8               |
| 16. 18 ,8               | Summa semidiametrorum                  | 16. 18 ,8              |
| 16. 7 ,8                | Diff. <sup>2</sup> semidiametrorum ..  | 16. 7 ,8               |
| 3. 24. 5. 36 ,0         | Longitudo nonagesimi . . .             | 3. 24. 11. 29 ,0       |
| 65. 21. 29 ,0           | Altitudo nonagesimi H. .               | 65. 20. 15 ,0          |
| 55. 22. 40 ,0           | Diff. <sup>2</sup> app. Lun. nonag. D. | 55. 17. 0 ,0           |
| 1. 17. 11 ,6            | Latitudo Lunae appar. L.               | 1. 17. 8 ,5            |

Parallaxim & diametrum Veneris supputavi per formulas

$$\rho = \frac{\pi \delta}{4}, \quad D = \frac{\Delta \delta}{4}, \quad \text{in quibus } \pi \text{ & } \delta \text{ ponuntur sequentes parallaxi & distantiae medie Solis a terra; } \Delta \text{ dia-}$$

metrum Veneris.  $\rho$  est pars secundum radius Terrae.

metro planetae in distantia  $\delta$ ,  $d$  actuali planetae distantiae a terra. Diametrum  $\Delta$  assumptum cum *la Londe* =  $16'',7$ . Diametrum praeterea partis lucidae, quae est ad diametrum totam ut sinus versus elongationis terrae a Sole in planeta observatae, habetur nostro in easu =  $\frac{11}{12}$ . Itaque summam semidiametrorum Lunae & Veneris, quae in usu venit supputando primo contactui imminui  $0'',8$  ut certiorem haberem centrorum distantiam.

Parallaxim vero longitudinis & latitudinis Lunae deduxi ex nostris formulis  $\pi = \frac{P \cdot \sin. D \cdot \sin. H}{\cos. L}$ ,  $\pi' = P \cdot \cos. H \cdot \cos. L - P \cdot \sin. L \cdot \sin. H \cdot \cos. D$ , quibus primo usus sum ut proxime haberem apparentem Lunae distantiam a nonagesimo, itemque apparentem Lunae latitudinem; mox restituto calculo inveni  $\pi = 44'10'',5$ ;  $\pi' = 23'55'',6$  tempore primi contactus:  $\pi = 44'7'',1$ ;  $\pi' = 23'57'',0$  tempore contactus alterius, ex quibus obtinentur apparentes Lunae longitudines in ecliptica  $5^\circ 19^\circ 28' 33'',8$  &  $5^\circ 19^\circ 28' 49'',0$ ; motus Lunae apprens longit. intra  $32''$  temporis =  $15'',2$ ; motus Veneris =  $1'',7$ ; motus relativus  $13'',5$ . Latitudines Lunae apparentes  $1^\circ 17' 11'',6$  &  $1^\circ 17' 8'',5$ ; motus latitudinis =  $3'',1$ .

Cum sit tangens inclinationis orbitae relativae ad eclipticam aequalis motui latitudinis diviso per motum longitudinis; & motus  $M$  in orbita aequalis motui latitudinis diviso per sinum inclinationis, ex notis tribus lateribus  $M$ ,  $R$ ,  $R'$  resolvendo triangulum habebuntur anguli in-

clinationis ad eclipticam laterum  $R$  &  $R'$ , atque inde differentiae longitudinum & latitudinum Lunae & Veneris, distantiaeque a coniunctione. Re diligenter peracta quantitates inveni quae sequuntur.

Ex observatione

primi contactus.

|                  |                               |                            |   |            |
|------------------|-------------------------------|----------------------------|---|------------|
| —                | 14' 27'',0                    | Differentia longitudinum   | — | 14' 13'',8 |
| —                | 7. 32 ,5                      | Differentia latitudinum .. | — | 7. 35 ,6   |
| 5° 19' 42. 13 ,0 | Longitudo Veneris . . . . .   | 5° 19' 42. 14 ,7           |   |            |
| 1. 24. 52 ,5     | Latitudo Veneris . . . . .    | 1. 24. 52 ,5               |   |            |
| 5. 18. 43. 35 ,5 | Longit. Lunae ver. obser. .   | 5. 18. 43. 53 ,8           |   |            |
| 5. 18. 44. 32 ,0 | Longit. Lunae ver. supput. .  | 5. 18. 44. 50 ,6           |   |            |
| + 0. 56 ,5       | Differentia . . . . .         | + 0. 56 ,8                 |   |            |
| 1. 41. 15 ,6     | Latit. Lunae ver. observata . | 1. 41. 13 ,9               |   |            |
| 1. 40. 47 ,8     | Latit. Lunae ver. supputata . | 1. 40. 45 ,3               |   |            |
| — 0. 28 ,6       | Differentia . . . . .         | — 0. 28 ,6                 |   |            |
| 0. 58' 37 ,5     | Dist. a coniunctione vera .   | 0. 58. 20 ,0               |   |            |
| 21° 16. 52 ,4    | Temp.ver.coniunct.verae       | 21° 16. 53 ,0              |   |            |

Inventas longitudinum & latitudinum differentias non pertinere totas ad errorem tabularum lunarium ex eo patet, quod tabulae Veneris, ex quibus ejusdem positiones tamquam accuratae assumptae sunt, suo & ipsae laborent vitio. Itaque ex allatis differentiis relativus tantum error elicetur, qui ex tabulis coalescit utriusque planetae. Diameterm Veneris paulo majorem habemus ex temporis duratione quo totalis haec immersio facta est, quam ex observationibus aliis. Evidem non inficior errore unius secundi temporis vitiatam forte observationem primi con-

tactus, sed nec ejusmodi quantitas differentiam componere posse videtur, quae differentia ad quatuor fere secunda arcus extenditur. Rem definisset observatio emersionis, si felicius evenisset; quae etiam totam suppurationis seriem extatque accuratiorem certioremque reddidisset.

### OCCULTATIONES FIXARUM

sub Discum Lunae observatae

A BARNABA ORIANI.

Ubo achromatico octo pedum observavi an. 1782 die 25 Januarii immersionem fixae 13<sup>h</sup> Tauri in partem Lunae obscurata 13<sup>h</sup> 2' 46'' tempore vero. Emersionis tempore Luna a nubibus recta erat.

Eodem tubo observavi die 26 Septembris an. 1782 immersionem X Tauri in partem lucidam Lunae 12<sup>h</sup> 47' 31'' temp. v.

Emersionem 14. 5. 48

Tempus immersions tanquam accuratum exhibeo, in emersione vero aliquod extat dubium, vidi enim fixam jam egressam tempore vero 14<sup>h</sup> 5' 41'', ejusque apparent distansia a limbo Lunae mihi visa est dupla post 20''; quare satis proxime statui potest instans emersionis 14<sup>h</sup> 5' 41''—20''.

Tubo achromatico quinque pedum observavi die 4 Octobris an. 1782 principium Immersionis planetae Veneris sub discum Lunae 19<sup>h</sup> 26' 8'' temp. v. Immersionem totam 19<sup>h</sup> 26' 38''. Emersionem non observavi.

Die 5 Martii an. 1783 observavi tube achromatico

octo pedum immersionem & Pisciam in partem Lunae obscuram . . . . . 6<sup>h</sup> 40<sup>m</sup> 43<sup>s</sup>,5 temp. v.  
Emersionem . . . . . 7. 15. 33 ,0

Duas priores observationes supputavi eadem pereleganti methodo a summo Geometra *de la Grange* tradita in Ephemeribus Berolinensibus ad an. 1782, quam jam indicavi in nostris Ephemeridibus ad an. 1782, pag. 247. Elementa calculi pro prima observatione diei 25 Januarii 1782 ex tabulis Mayerianis derivata ita se habent.

|  |                          |
|--|--------------------------|
| Tempus verum Immersi. 136° 8 . . . .   | 13 <sup>h</sup> 2' 46",0 |
| Tempus medium . . . . .                | 13. 15. 48 ,0            |
| Ascensio recta Solis . . . . .         | 308° 41' 0",0            |
| Longitudo Lunae . . . . .              | 2° 25. 49. 26 ,0         |
| Latitudo Lunae borealis . . . . .      | 4. 37. 13 ,5             |
| Latitudo 136° Tauri . . . . .          | 4. 9. 19 ,0              |
| Longitudo 136° Tauri . . . . = A =     | 2. 25. 28. 43 ,0         |
| Parallaxis horizon. aequatorea . . . . | 55. 46 ,7                |
| Semidiameter Lunae . . . . = d =       | 15. 17 ,0                |
| Motus horarius in longit. . . . = a =  | 31. 24 ,4                |
| in latit. . . . = β = +                | 1. 5 ,6                  |
| Ascensio recta medii coeli . . . = θ = | 4. 24. 22. 30 ,0         |
| Latitudo vera geographicæ . . . = φ =  | 1. 15. 13. 1 ,0          |
| Log. δ = . . . . .                     | 9,9990446                |

Ex quibus elementis colliguntur in hypothesi parallaxis horizontalis = 60' valores sequentes:

$$\begin{aligned}\lambda \psi &= + 36' 42",8 \\ \mu \psi &= + 37. 21 ,8 \\ \nu \psi &= + 29. 16 ,5\end{aligned}$$

Quare pro actuali parallaxi  $\psi = \rho$  fin.  $55' 46'',7$   
 $= 55' 39'',3$  habebitur:

$$\lambda \psi = 34' 3'',3$$

$$\mu \psi = 34. 39. 5$$

$$\nu \psi = 27. 9. 3$$

Ex hisce vero obtinetur aequatio

$$(0,0044215)^2 = (0,9965702 \sin. t - 0,0100815)^2 + (0,0731798 - 0,0722262 \cos. t)^2$$

Ex cuius solutione prodit  $t = 19' 52'',8$ . Cum autem tempore immersionis fuerit  $t$  seu differentia longitudinis Lunae & fixae  $= 20' 43'',$  fiet error tabularum Lunarium Tob. Mayer in longitudine Lunae pro eodem instanti  $= + 50'',2$ .

Pro Immersione  $\chi$  Tauri ad diem 26 Septemb. an. 1782 elementa calculi sunt sequentia:

|   |                   |
|---|-------------------|
| Tempus verum . . . . .                          | 12° 47' 51'',0    |
| Tempus medium . . . . .                         | 12. 38. 52. ,0    |
| Ascensio recta Solis . . . . .                  | 183° 38' 51'',0   |
| Longitudo Lunae . . . . .                       | 2° 4. 27. 52. ,0  |
| Latitudo Lunae borealis . . . . .               | 4. 27. 18. 3      |
| Latitudo $\chi$ Tauri . . . . .                 | 3. 59. 48. ,2     |
| Longitudo $\chi$ Tauri = A . . . . .            | 2. 5. 5. 8. ,0    |
| Parallaxis horizontalis aequatorea . . . . .    | 54. 17. ,6        |
| Semidiometer Lunae = d . . . . .                | 14. 47. ,7        |
| Ascensio recta medii coeli = $\theta$ . . . . . | 0. 15. 36. 36. ,0 |

$\Phi$  }      Log.  $\rho$  } ut supra pag. praeced.

Pro parallaxi horizontali  $= 60''$  . . . prodeunt sequentes valores:

$$\lambda \psi = + 41' 59'',4$$

$$\mu \psi = - 25. 22 ,9$$

$$\nu \psi = + 34. 33 ,1$$

Quare pro actuali parallaxi  $\psi = 9 \sin. 54' 17'',6$   
 $= 54' 10'',4$  fit

$$\lambda \psi = + 37' 54'',4$$

$$\mu \psi = - 22. 55 ,0$$

$$\nu \psi = + 31. 11 ,8$$

Ex quibus obtinetur aequatio

$$(0,0043041)^{\circ} = (0,9969787 \sin. t + 0,0066661)^{\circ} \\ + (0,0684360 - 0,0694878 \cos. t)^{\circ}$$

Atque inde prodit  $t = - 37' 47'',8$ . Ex tabulis lunaribus *Mayeri* colligitur differentia longitudinis Lunae &  $\chi$  Tauri pro instanti immersionis, seu  $t = - 37' 16''$ . Erit propterea pro eodem instanti error tabularum in longitudine Lunae  $= + 31'',8$ .

Postremam observationem diei 5 Martii an. 1783 non supputavi; interim elementa calculi pro eo initanti inveni sequentia.

|                                    | Pro Imm. $\varepsilon$ Piscium . | Pro Emerf.                |
|------------------------------------|----------------------------------|---------------------------|
| Tempus verum . . .                 | 6 <sup>h</sup> 27' 3',5          | 7 <sup>h</sup> 15' 33'',0 |
| Tempus medium . . .                | 6. 38. 47 ,0                     | 7. 27. 16 ,0              |
| Ascensio recta Solis . .           | 346° 17' 14'',0                  | 346° 19' 6'',0            |
| Longitudo Lunae . . .              | 0° 15. 6. 52 ,0                  | .....                     |
| Latit. Lunae borealis .            | 1. 34. 22 ,4                     | .....                     |
| Latitudo $\varepsilon$ Piscium . . | 1. 5. 42 ,4                      | .....                     |
| Longit. $\varepsilon$ Piscium = A  | 0. 14. 30. 20 ,0                 | .....                     |
| Parallax. horiz. aequat.           | 56. 37 ,3                        | .....                     |

Pro Imm. &amp; Piscium.

Pro Emerf.

|                       |              |       |
|-----------------------|--------------|-------|
| Semidiameter Lunae .. | 0° 0' 15" ,7 | ..... |
| Mot.horar. in longit. | 32. 12 ,8    | ..... |
| in latit.. +          | 2. 51 ,7     | ..... |

In nostris Ephemeridibus ad an. 1780 ad supputandum Eclipsem Solis & occultationes fixarum sub discum Lunae usus sum methodo a Celeb. Lexell tradita in novis Commentariis Academiae Petropolitanae vol. 12.º In illam vero supputationem error irrepsit, quem primus animadvertisit ipse Clariss. Lexell in volumine posteriori Actorum Acad. Scientiarum Petropolitanae ad ann. 1778, pag. 329. Posui enim pro apparenti geographicâ latitudine  $45^{\circ} 28' 10''$  logarithmum rectæ ex loco observatoris ad centrum telluris ductæ = 9,9980893 cum revera poni debuisse 9,9990446 quemadmodum reperitur in nostris Ephemeridibus ad ann. 1782, pag. 250.



OBSERVATIONES METEOROLOGICAE  
habitae in Specula Mediolanensi anno 1781.  
A FRANCISCO REGGIO.

| 1781<br>Jan. | Mane.          |                 |               | Vespere.       |                 |               |              |         |
|--------------|----------------|-----------------|---------------|----------------|-----------------|---------------|--------------|---------|
|              | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli. | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli. |              |         |
| 1            | 27. 10,9       | —               | 2,8           | E. nub-ser.    | 27. 9,0         | +             | 1,5          | E. nub. |
| 2            | 7,5            | +               | 1,0           | O. pluvia      | 4,5             | 1,5           | N. O. pluvia |         |
| 3            | 2,6            | 1,0             | O. pluv.nix   | 3,0            | 2,5             | N. E. nub.    |              |         |
| 4            | 4,6            | 1,6             | N. ser-nub.   | 6,0            | 5,0             | N. ser.       |              |         |
| 5            | 7,6            | —               | 0,5           | N. E. ser.     | 8,0             | 1,3           | O. ser.      |         |
| 6            | 8,5            | 2,5             | O. ser.       | 9,3            | 0,0             | O. ser.       |              |         |
| 7            | 9,6            | 4,0             | N. ser.       | 9,6            | 0,0             | O. ser.       |              |         |
| 8            | 9,6            | 3,0             | O. ser.       | 9,5            | 0,0             | O. ser.       |              |         |
| 9            | 9,3            | 3,0             | O. nub-ser.   | 10,5           | 0,0             | O. nub.       |              |         |
| 10           | 11,6           | 1,5             | O. nub-ser.   | 28. 0,5        | 2,0             | O. ser.       |              |         |
| 11           | 28. 1,0        | 0,0             | E. nub-ser.   | 1,6            | 2,0             | O. ser.       |              |         |
| 12           | 1,5            | 0,0             | E. nub.       | 0,5            | 1,6             | E. nub.nix    |              |         |
| 13           | 27. 11,8       | 0,3             | N. O. nix     | 27. 10,3       | 1,0             | O. nub.       |              |         |
| 14           | 9,7            | 0,0             | N. E. nub.    | 10,0           | 1,5             | N. E. nub.    |              |         |
| 15           | 10,0           | +               | 0,5           | E. nub.        | 10,0            | 1,6           | E. nub.      |         |
| 16           | 9,3            | 0,0             | O. nebul.     | 9,6            | 0,5             | N. E. nebul.  |              |         |
| 17           | 9,6            | —               | 2,5           | O. nebul.      | 9,6             | 0,5           | O. nebul.    |         |
| 18           | 9,6            | 3,0             | O. nebul.     | 9,0            | —               | O. nebul.     |              |         |
| 19           | 8,3            | 1,0             | O. nub.       | 8,3            | +               | O. nub.       |              |         |
| 20           | 8,5            | 2,8             | N. ser.       | 10,0           | 0,0             | O. nebul.     |              |         |
| 21           | 9,8            | 0,0             | N. O. nub.    | 8,5            | 1,6             | nebul.        |              |         |
| 22           | 7,0            | 0,0             | nebul.        | 6,0            | 1,0             | N. O. nebul.  |              |         |
| 23           | 6,0            | 0,0             | nebul.        | 6,2            | 1,3             | E. nub.       |              |         |
| 24           | 6,3            | +               | 1,0           | N. E. pluvia   | 6,0             | 2,0           | E. pluvia    |         |
| 25           | 5,3            | 1,6             | E. pluvia     | 5,5            | 1,7             | O. pluvia     |              |         |
| 26           | 6,5            | —               | 1,0           | O. ser.        | 7,5             | 3,7           | O. ser-nub.  |         |
| 27           | 9,0            | 0,0             | O. ser.       | 28. 0,0        | 3,7             | O. ser.       |              |         |
| 28           | 28. 2,3        | 0,0             | O. ser.       | 3,2            | 3,0             | O. ser.       |              |         |
| 29           | 3,3            | 0,0             | O. ser.       | 2,5            | 2,6             | O. ser.       |              |         |
| 30           | 1,7            | 1,5             | O. ser.       | 27. 11,0       | 2,3             | O. ser.       |              |         |
| 31           | 27. 9,6        | 0,0             | O. ser.       | 10,0           | 2,0             | O. ser.       |              |         |

Altit. max. Bar. poll. 28. lin. 3,3 | Altitudo maxima Therm. + 5.  
minima... poll. 27. lin. 2,6 | minima.....— 4.  
media... poll. 27. lin. 9,6 | media.....+ 0,4  
Quant. aquae pluv. poll. 1. lin. 3,3  
Dies sereni .... 13.

| 1784<br>M<br>o<br>n<br>t<br>h<br>e<br>r | Mane .         |                 |               | Vespere .      |                 |               |                |
|---|----------------|-----------------|---------------|----------------|-----------------|---------------|----------------|
|   | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli. | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli. |                |
| 1                                       | 27.10,6        | +               | 0,6           | E. fer-nub.    | 27.11,0         | +             | 4,0            |
| 2                                       | 10,0           | -               | 0,3           | O. fer-nub.    | 8,5             | 3,3           | E. nub-fer.    |
| 3                                       | 9,7            |                 | 0,0           | O. fer.        | 10,5            | 4,0           | O. fer.        |
| 4                                       | 11,3           |                 | 0,0           | E. fer.        | 10,3            | 3,6           | O. fer.        |
| 5                                       | 9,1            |                 | 0,0           | O. fer.        | 8,5             | 4,0           | O. fer.        |
| 6                                       | 8,3            |                 | 0,0           | E. fer-nub.    | 9,3             | 2,6           | E. fer-nub.    |
| 7                                       | 10,5           | +               | 2,0           | E. nub.        | 11,3            | 4,2           | O. nub.        |
| 8                                       | 11,4           |                 | 2,5           | O. nub.        | 28. 0,2         | 4,3           | O. nub.        |
| 9                                       | 28. 0,0        |                 | 2,6           | O. nub.pluv.   | 27.11,6         | 4,3           | O. nub pluv.   |
| 10                                      | 27.10,8        |                 | 3,0           | O. nub.        | 10,0            | 4,0           | E. nub.        |
| 11                                      | 11,0           |                 | 3,5           | O. nebul.      | 28. 0,0         | 5,0           | E. nub.        |
| 12                                      | 28. 0,2        |                 | 3,0           | O. nebul.      | 27.11,3         | 4,0           | O. nub.        |
| 13                                      | 27.10,1        |                 | 2,0           | E. nebul.      | 9,0             | 4,0           | O. nub.        |
| 14                                      | 7,0            |                 | 3,0           | N. O. nub.     | 5,5             | 6,6           | O. nub-fer.    |
| 15                                      | 7,0            |                 | 4,9           | O. fer.        | 5,5             | 8,6           | N. fer.        |
| 16                                      | 5,8            |                 | 5,2           | N.*fer.        | 8,5             | 8,3           | O.*fer.        |
| 17                                      | 9,0            |                 | 2,0           | N. O.*fer.     | 9,5             | 7,3           | N. E.*nub-fer. |
| 18                                      | 9,0            |                 | 2,4           | E. nub.        | 9,5             | 6,0           | O. fer.        |
| 19                                      | 9,3            |                 | 1,0           | N. fer.        | 7,9             | 5,0           | E. nub.        |
| 20                                      | 6,6            |                 | 3,0           | E. nub.        | 6,3             | 4,0           | N. E. nub.     |
| 21                                      | 6,3            |                 | 3,0           | E. nub pluv.   | 4,5             | 3,6           | N. E. nix      |
| 22                                      | 3,0            |                 | 2,0           | O. nix         | 2,6             | 3,0           | O. pluvia      |
| 23                                      | 3,2            |                 | 1,7           | O. nub.        | 5,5             | 4,0           | N. fer.        |
| 24                                      | 4,0            |                 | 0,0           | N. fer.        | 6,3             | 4,0           | E. fer.        |
| 25                                      | 6,5            | -               | 0,5           | E. fer.        | 5,0             | 3,6           | N. E.*nub.     |
| 26                                      | 3,0            | +               | 1,0           | N. E. nix      | 1,0             | 3,0           | O. fer.        |
| 27                                      | 3,0            |                 | 0,0           | nebul.         | 2,6             | 4,3           | N. E. fer.     |
| 28                                      | 2,0            |                 | 1,6           | O. fer-nub.    | 6,5             | 8,0           | N. O.*fer-nub. |

1

|                                       |                              |
|---------------------------------------|------------------------------|
| Altit. max. Bar. poll. 28. lin. 0,2   | Altitudo maxima Therm. + 8,6 |
| minima . . . poll. 27. lin. 1.        | minima . . . . . - 0,5       |
| media . . . poll. 27. lin. 7,9        | media . . . . . + 3,2        |
| Quant. aquae pluv. poll. 1. lin. 11,4 |                              |
| Dies sereni . . . . II.               |                              |

| 1781<br>Martius. | Mane.          |                 |                | Vespere.       |                 |                |
|------------------|----------------|-----------------|----------------|----------------|-----------------|----------------|
|                  | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli.  | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli.  |
| 1                | 27. 8,3        | + 0,0           | N. *fer.       | 27. 8,5        | + 8,3           | N. *fer.       |
| 2                | 10,3           | 2,2             | O. fer.        | 10,7           | 7,5             | O. fer.        |
| 3                | 11,6           | 1,6             | O. fer.        | 11,5           | 6,0             | E. fer.        |
| 4                | 11,6           | 2,0             | E. fer.        | 11,6           | 7,3             | E. fer.        |
| 5                | 28. 0,0        | 2,6             | E. fer.        | 11,0           | 8,0             | O. *fer.       |
| 6                | 27.10,0        | 2,6             | O.*fer.        | 10,2           | 9,5             | O. fer.        |
| 7                | 9,6            | 4,0             | O. nub-ser.    | 8,5            | 12,0            | O.*fer.        |
| 8                | 7,6            | 6,0             | O. fer.        | 7,5            | 12,0            | O.*nub-ser.    |
| 9                | 9,3            | 5,0             | O. fer.        | 10,3           | 11,3            | O. fer.        |
| 10               | 10,3           | 6,0             | E. fer.        | 9,6            | 11,5            | S. E. fer.     |
| 11               | 9,0            | 5,6             | E. nub-ser.    | 7,0            | 10,5            | O.*nub-ser.    |
| 12               | 8,6            | 6,0             | E. nub.        | 10,3           | 8,6             | S. E.*nub.     |
| 13               | 28. 0,2        | 5,0             | E. nub.        | 28. 1,5        | 7,6             | E. fer.        |
| 14               | 2,0            | 3,6             | E. fer.        | 0,5            | 9,3             | O. fer.        |
| 15               | 0,5            | 3,5             | O. fer.        | 27.10,5        | 10,3            | O. fer.        |
| 16               | 27.10,5        | 4,6             | E. fer.        | 11,5           | 12,0            | O. fer.        |
| 17               | 28. 0,6        | 5,0             | E. fer.        | 28. 0,5        | 10,0            | O. fer.        |
| 18               | 0,3            | 4,5             | E. fer.        | 0,3            | 11,5            | N. O. fer.     |
| 19               | 0,5            | 6,6             | N. O. fer.     | 27.11,3        | 12,3            | O.*fer.        |
| 20               | 27.11,3        | 6,0             | N. E. fer.     | 11,2           | 12,5            | O. fer.        |
| 21               | 28. 0,0        | 7,0             | E. fer.        | 11,0           | 12,5            | S. O. fer.     |
| 22               | 27.11,0        | 6,5             | O.*fer.        | 9,5            | 14,5            | O.*            |
| 23               | 8,0            | 7,5             | O. E.*fer-nub. | 11,8           | 14,5            | E.*fer.        |
| 24               | 28. 0,6        | 6,6             | S. E. fer.     | 28. 1,0        | 12,5            | N. fer.        |
| 25               | 2,0            | 6,5             | E. fer.        | 0,5            | 12,5            | N. O. fer.     |
| 26               | 27.10,5        | 6,6             | O. fer.        | 27. 7,5        | 13,5            | S. O.*fer.     |
| 27               | 7,0            | 7,0             | N. O. fer-nub. | 4,6            | 12,5            | S. O.*fer-nub. |
| 28               | 4,0            | 8,0             | E. pluvia      | 4,5            | 8,0             | E. pluvia      |
| 29               | 5,7            | 7,0             | O. nub.        | 7,3            | 10,5            | E. nub-fer.    |
| 30               | 7,3            | 7,5             | N. fer-nub.    | 7,5            | 12,5            | S. fer.        |
| 31               | 7,5            | 9,0             | E. nub.        | 8,5            | 13,6            | E. fer-nub.    |

Altit. max. Bar. poll. 28. lin. 2. | Altitudo maxima Therm. + 14,5  
 minima . . . poll. 27. lin. 4. | minima . . . . . 0,0  
 media . . . poll. 27. lin. 10. | media . . . . . + 8,3  
 Quant. aquae pluv. poll. 1. lin. 2,6  
 Dies fereni . . . . . 24.

| 1784<br>Aprilis. | Mane.          |                 |                | Vespere.       |                 |                |
|------------------|----------------|-----------------|----------------|----------------|-----------------|----------------|
|                  | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli.  | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli.  |
| 1                | 27. 8,6        | + 9,5           | E. nub-ser.    | 27. 8,7        | + 15,0          | E. fer-nub.    |
| 2                | 8,3            | 10,0            | E. nub-ser.    | 8,3            | 14,0            | E. nub.pluv.   |
| 3                | 7,6            | 10,5            | E. pluv.nub.   | 5,5            | 12,0            | E. nub.pluv.   |
| 4                | 4,3            | 10,0            | O. nub.        | 3,5            | 12,5            | E. pluvia      |
| 5                | 4,5            | 9,6             | E. nub.        | 5,3            | 10,0            | E. nub.pluv.   |
| 6                | 5,5            | 6,3             | E. pluvia      | 6,0            | 7,3             | E. pluvia      |
| 7                | 7,5            | 7,2             | O. nub-ser.    | 9,0            | 10,0            | O. fer.        |
| 8                | 9,5            | 7,7             | N. O. fer.     | 9,5            | 11,6            | O. fer.        |
| 9                | 10,6           | 9,6             | E. fer.        | 11,0           | 12,6            | E. fer.        |
| 10               | 11,0           | 9,5             | E. fer-nub.    | 9,6            | 14,6            | S. O. fer-nub. |
| 11               | 10,0           | 10,6            | O. nub.        | 9,0            | 14,6            | S. O. fer-nub. |
| 12               | 9,0            | 10,5            | O. nub-ser.    | 8,3            | 12,2            | N. O. pluvia   |
| 13               | 7,3            | 10,3            | O. nub.        | 8,0            | 14,0            | E. *nub.       |
| 14               | 8,0            | 10,5            | E. pluvia      | 6,5            | 10,6            | E. pluvia      |
| 15               | 6,3            | 8,5             | S. O. nub-ser. | 7,0            | 12,6            | O. fer.        |
| 16               | 8,3            | 8,0             | E. fer.        | 9,5            | 13,3            | S. fer.        |
| 17               | 10,5           | 9,5             | E. fer.        | 9,5            | 14,5            | E. fer.        |
| 18               | 10,0           | 10,0            | E. fer.        | 10,3           | 15,2            | E. fer.        |
| 19               | 10,3           | 10,5            | E. nub-ser.    | 10,0           | 16,0            | E. fer-nub.    |
| 20               | 11,9           | 10,5            | E. nub-ser.    | 11,5           | 16,2            | S. fer.        |
| 21               | 11,6           | 12,0            | E. far.        | 11,5           | 16,2            | E. fer.        |
| 22               | 11,6           | 12,8            | E. nub-ser.    | 10,5           | 17,2            | fer.           |
| 23               | 10,0           | 12,5            | E. fer-nub.    | 8,5            | 17,5            | S. E. fer.     |
| 24               | 8,3            | 12,0            | E. fer-nub.    | 9,0            | 16,5            | S. E. fer-nub. |
| 25               | 9,6            | 12,8            | E. nub.        | 9,0            | 16,0            | E. fer-nub.    |
| 26               | 9,0            | 12,0            | E. sub.pluv.   | 7,0            | 11,0            | E. *pluv.proc. |
| 27               | 7,0            | 10,0            | E. nub.        | 7,5            | 10,0            | O.proc.grand.  |
| 28               | 7,6            | 7,5             | N. O. nub.     | 7,0            | 12,5            | E. fer-nub.    |
| 29               | 6,5            | 9,5             | E. nub.        | 5,5            | 13,3            | S. E. pluvia   |
| 30               | 5,0            | 10,6            | N. O. pluvia   | 6,2            | 12,3            | E. pluvia      |

Altit. max. Bar. poll. 27. lin. 11,6 | Altitudo maxima Therm. + 17,5  
 minima.. poll. 27. lin. 3,5 | minima ..... 6,5  
 media ... poll. 27. lin. 8,3 | media ..... 11,5  
 Quant. aquae pluv. poll. 7. lin. 2.  
 Dies fereni .... 18.

## Mane .

## Vespere .

| Wijns. | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli.    | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli.   |
|--------|----------------|-----------------|------------------|----------------|-----------------|-----------------|
| 1      | 27. 6,2        | + 14,3          | E. pluvia        | 27. 8,5        | + 13,0          | E. nub.         |
| 2      | 9,5            | 11,3            | E. nub.          | 9,5            | 15,5            | E. fer-nub.     |
| 3      | 9,5            | 11,0            | E. fer.          | 8,5            | 16,0            | O. fer.         |
| 4      | 8,5            | 12,0            | E. fer.          | 8,0            | 17,5            | O. fer.         |
| 5      | 7,6            | 12,0            | O. fer.          | 6,5            | 16,5            | S. O.*nub-fer.  |
| 6      | 6,5            | 12,0            | O. fer-nub.      | 9,0            | 17,0            | O. nub.proc.    |
| 7      | 8,8            | 11,5            | E. nub.          | 8,3            | 15,0            | S. E. nub.pluv. |
| 8      | 7,3            | 12,5            | E. pluvia        | 6,6            | 10,3            | E. pluvia       |
| 9      | 6,6            | 12,0            | E. nub.pluv.     | 6,6            | 15,0            | E. pluv:proc.   |
| 10     | 6,6            | 12,5            | E. nub.          | 7,5            | 14,0            | E. pluvia       |
| 11     | 8,3            | 12,0            | E. nub.          | 9,6            | 16,0            | S. O. fer.      |
| 12     | 10,6           | 12,5            | O. fer.          | 10,5           | 17,3            | O. fer.         |
| 13     | 10,3           | 14,3            | E. fer.          | 9,6            | 18,6            | S. O. fer.      |
| 14     | 8,6            | 15,0            | E. nub-fer.      | 8,6            | 19,0            | O. fer-hub.     |
| 15     | 8,6            | 15,0            | E. fer.          | 9,0            | 20,0            | S. O. fer.      |
| 16     | 9,5            | 16,0            | E. fer.          | 9,0            | 21,0            | O. nub.         |
| 17     | 9,0            | 16,0            | E. fer.          | 8,7            | 21,0            | E. nub.pluv.    |
| 18     | 8,7            | 17,0            | E. fer.          | 8,0            | 20,5            | E. nub.         |
| 19     | 8,2            | 16,5            | E. fer.          | 7,7            | 21,0            | E. nub.         |
| 20     | 7,7            | 16,6            | N. E. nub.pluv.  | 8,6            | 20,0            | N. E. nub-fer.  |
| 21     | 8,6            | 15,5            | O. fer.          | 8,5            | 20,0            | E. nub.         |
| 22     | 8,3            | 16,0            | E. fer.          | 7,7            | 19,0            | S. E. nub.      |
| 23     | 7,6            | 15,0            | S. E. pluv.proc. | 7,2            | 15,2            | S. E. pluvia    |
| 24     | 7,0            | 13,0            | S. E. pluvia     | 8,3            | 13,0            | S. E. nub.      |
| 25     | 8,6            | 9,3             | E. fer-nub.      | 9,2            | 12,5            | S. E. nub.      |
| 26     | 9,5            | 9,2             | E. fer.          | 9,5            | 14,0            | S. E. nub-fer.  |
| 27     | 9,6            | 11,0            | E. nub-fer.      | 9,6            | 14,8            | S. E. nub.      |
| 28     | 10,0           | 12,0            | E. fer.          | 10,3           | 16,0            | S. E. fer.      |
| 29     | 10,3           | 12,0            | N. fer.          | 9,3            | 18,0            | O. fer.         |
| 30     | 9,6            | 14,0            | N. O. fer.       | 9,2            | 20,0            | S. O. fer.      |
| 31     | 9,6            | 14,5            | K. fer.          | 10,0           | 20,7            | S. O. fer.      |

Altit. max. Aar. poll. 27. lin. 10,5 | Altitudo maxima Therm. + 21.  
 minima .. poll. 27. lin. 6,3 | minima ..... 9,2  
 media... poll. 27. lin. 7,9 | media ..... 14,3  
 Quant. aquae pluv. poll. 3. lin. 6,8  
 Dies fereni .... 14.

| Mane . |         |        |        |            | Vespere . |        |                |            |  |
|--------|---------|--------|--------|------------|-----------|--------|----------------|------------|--|
| 1781   | Altit.  | Altit. | Status | Coeli.     | Altit.    | Altit. | Status         | Coeli.     |  |
| Bar.   | Bar.    | Ther.  |        |            | Bar.      | Bar.   | Ther.          |            |  |
| 1      | 27.10,3 | + 15,3 | N. O.  | ser.       | 27. 9,6   | + 21,2 | S. O.          | ser.       |  |
| 2      | 9,6     | 15,7   | N. O.  | ser-nub.   | 9,0       | 20,5   | S. O.          | ser.       |  |
| 3      | 9,5     | 15,0   | N. O.  | ser.       | 9,0       | 15,5   | S. O.          | ser.       |  |
| 4      | 9,0     | 15,5   | S. O.  | ser.       | 8,5       | 21,0   | S. O.          | ser-nub.   |  |
| 5      | 8,5     | 16,5   | N. E.  | nub.       | 7,6       | 21,2   | S. O.          | ser-nub.   |  |
| 6      | 7,5     | 16,3   | N. O.  | nub.       | 6,5       | 20,0   | S. O.          | nub-ser.   |  |
| 7      | 6,3     | 15,3   | E.     | nub.pluv.  | 6,0       | 16,3   | E.             | pluv.N.*   |  |
| 8      | 6,7     | 15,0   | N.     | ser.       | 6,2       | 19,5   | N. E.          | nub-ser.   |  |
| 9      | 6,6     | 15,0   | N. E.  | pluvia     | 8,0       | 17,0   | N. E.          | procella   |  |
| 10     | 8,5     | 14,0   | N. E.  | fer-nub.   | 7,8       | 18,0   | E.             | nub.       |  |
| 11     | 7,5     | 14,3   | O.     | pluv.S.O.* | 7,0       | 18,5   | S. O.          | nub-ser.   |  |
| 12     | 7,2     | 15,5   | N. O.  | nub-ser.   | 7,7       | 18,5   | S. O.*nub-ser. |            |  |
| 13     | 8,0     | 15,0   | N. O.  | nub.       | 7,3       | 17,5   | S. O.          | nub.       |  |
| 14     | 7,3     | 12,3   | N. O.  | nebul.     | 7,0       | 17,3   | S. O.          | fer-nub.   |  |
| 15     | 7,5     | 14,0   | S. O.  | ser.       | 7,0       | 20,0   | S. O.          | ser.       |  |
| 16     | 7,5     | 15,5   | S. O.  | pluvia     | 7,5       | 16,8   | S. O.          | pluv.proc. |  |
| 17     | 8,5     | 14,5   | E.     | ser.       | 9,5       | 19,0   | S. E.          | ser.       |  |
| 18     | 10,5    | 16,0   | E.     | ser.       | 9,5       | 21,0   |                | ser.       |  |
| 19     | 10,5    | 16,6   | E.     | ser.       | 9,5       | 21,7   | E.             | ser-nub    |  |
| 20     | 9,0     | 18,0   | E.     | pluvia     | 7,5       | 18,7   | E.             | pluvia     |  |
| 21     | 6,5     | 15,5   | E.     | pluvia     | 6,0       | 16,2   | S. E.          | pluvia     |  |
| 22     | 5,5     | 14,5   | N. E.  | nub-ser.   | 6,0       | 18,0   | O.             | fer-nub.   |  |
| 23     | 6,6     | 15,0   | S.     | nub.       | 8,0       | 19,5   | S. O.          | *procella  |  |
| 24     | 8,3     | 16,0   | S.     | nub.       | 6,5       | 19,0   | E.             | nub pluv.  |  |
| 25     | 5,5     | 16,0   | E.     | ubb.       | 5,0       | 19,0   | S.             | pluvia     |  |
| 26     | 4,7     | 15,0   | E.     | pluvia     | 5,7       | 17,0   | S. O.          | nub.       |  |
| 27     | 5,7     | 15,0   | E.     | nub.       | 7,3       | 15,6   | E.             | pluvia     |  |
| 28     | 8,7     | 13,5   | O.     | nub-ser.   | 7,6       | 19,0   | N. O.          | fer-nub.   |  |
| 29     | 8,3     | 16,0   | S. E.  | ser.       | 10,5      | 22,0   | N.             | ser.       |  |
| 30     | 11,6    | 18,0   | E.     | ser.       | 11,3      | 22,3   | S. E.          | ser.       |  |

Altit. max. Bar. poll. 27. lin. 11,6 | Altitudo maxima Thermt. + 21,7  
 minima .. poll. 27. lin. 4,7 | minima ..... 12,3  
 media ... poll. 27. lin. 7,8 | media ..... 17,1  
 Quant. aquae pluv. poll. 2. lin. 6,75  
 Dies sereni .... 11.

| Mane . |                |                 |                  | Vespere .      |                 |                  |  |
|--------|----------------|-----------------|------------------|----------------|-----------------|------------------|--|
| 1781   | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli.    | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli.    |  |
| 1      | 27.11.0        | 18.0            | E. fer.          | 27.10.1        | 22.0            | E. fer.          |  |
| 2      | 10.2           | 19.0            | E. fer.          | 9.7            | 23.0            | E. fer.          |  |
| 3      | 10.2           | 19.0            | E. fer.          | 10.2           | 24.0            | S. O. fer.       |  |
| 4      | 10.2           | 24.0            | S. O. fer.       | 10.0           | 24.0            | S. O. fer.       |  |
| 5      | 10.0           | 19.0            | S. O. fer.       | 9.5            | 24.0            | S. fer.          |  |
| 6      | 9.3            | 19.0            | S. E. fer.       | 9.5            | 24.0            | fer.             |  |
| 7      | 9.5            | 20.0            | O. fer.          | 9.5            | 24.0            | S. O. fer.       |  |
| 8      | 9.6            | 19.0            | N. O. fer.       | 9.3            | 24.0            | S. O. nub.       |  |
| 9      | 9.0            | 17.0            | O. fer.          | 8.2            | 23.0            | S. O. nub.proc.  |  |
| 10     | 9.0            | 17.0            | E. fer.          | 8.6            | 23.0            | S. E. nub-fer.   |  |
| 11     | 9.2            | 18.0            | E. nub.          | 9.2            | 22.0            | S. O. fer-nub.   |  |
| 12     | 10.5           | 18.0            | O. fer.          | 11.0           | 24.0            | S. fer.          |  |
| 13     | 12.0           | 19.0            | E. fer.          | 11.0           | 24.0            | S. fer.          |  |
| 14     | 27.11.3        | 20.0            | E. nub-fer.      | 10.5           | 25.0            | S nub-fer.proc.  |  |
| 15     | 10.0           | 19.0            | N. E. nub-fer.   | 8.5            | 24.0            | O. fer-nub.      |  |
| 16     | 9.0            | 19.0            | E. nub-fer.      | 8.5            | 23.0            | S. E. fer.       |  |
| 17     | 10.5           | 17.0            | E. fer-nub.      | 10.5           | 21.0            | E. fer.          |  |
| 18     | 10.5           | 17.0            | E. fer.          | 10.3           | 21.0            | E. nub-fer.      |  |
| 19     | 10.3           | 17.0            | E. nub.          | 9.5            | 21.0            | E. nub-fer.proc. |  |
| 20     | 9.7            | 16.0            | E. nub.          | 10.5           | 19.0            | E. fer.          |  |
| 21     | 11.0           | 13.0            | E. fer.          | 10.6           | 19.0            | S. E. fer.       |  |
| 22     | 10.5           | 15.0            | N. E. fer.       | 8.5            | 20.0            | O. fer.          |  |
| 23     | 8.2            | 16.0            | Q. fer.          | 7.0            | 21.0            | O. fer.          |  |
| 24     | 8.7            | 16.0            | E. nub-fer.      | 9.0            | 21.0            | O. fer.          |  |
| 25     | 9.6            | 17.0            | E. fer.          | 9.6            | 22.0            | S. fer.          |  |
| 26     | 9.6            | 17.0            | E. nub.          | 8.5            | 22.0            | S. E. nub-pluv.  |  |
| 27     | 7.2            | 17.0            | N. E. pluv.proc. | 7.0            | 20.0            | S. O. fer.       |  |
| 28     | 8.6            | 16.0            | E. fer.          | 8.6            | 20.0            | S. E. fer-nub.   |  |
| 29     | 10.0           | 17.0            | E. nub.proc.     | 10.0           | 21.0            | N. E. fer.       |  |
| 30     | 10.6           | 18.0            | E. fer.          | 10.5           | 22.0            | N. E. fer.       |  |
| 31     | 10.7           | 18.0            | E. nub-fer.      | 10.5           | 23.0            | E. fer.          |  |

Altitud. max. Alt. poll. 28. lin. a. Altitud. maxima Ther. + 25.  
 minima... poll. 27. lin. 7. minima..... 13.  
 media... poll. 27. lin. 9.6 media..... 20.7  
 Quant. aquae pluv. goll. & lin. 9.3  
 Dies fereni .... 21.

|      | Mense.         |                 |                | Vespere.       |                 |                    |
|------|----------------|-----------------|----------------|----------------|-----------------|--------------------|
| 1781 | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli.  | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli.      |
| 1    | 27.10,5        | + 18.0          | E. nub.        | 27. 9,7        | + 17,7          | E. fer.            |
| 2    | 9,7            | 17,7            | E. fer.        | 9,5            | 21,5            | S. ser-nub.        |
| 3    | 9,0            | 17,3            | E. proc.nub.   | 10,5           | 20,5            | E. npb.pluv.       |
| 4    | 10,5           | 17,0            | O. nub.        | 10,3           | 21,0            | E. npb.præ.        |
| 5    | 10,3           | 17,0            | E. nub.        | 10,0           | 21,5            | E. sub-fer.        |
| 6    | 10,3           | 16,5            | E. nub-fer.    | 9,6            | 22,0            | E. fer.            |
| 7    | 10,0           | 17,0            | E. fer-nub.    | 10,0           | 23,0            | O. fer.            |
| 8    | 9,6            | 18,0            | E. nub.        | 10,0           | 23,0            | S. O. fer.         |
| 9    | 10,2           | 16,5            | S. E. fer-nub. | 10,0           | 23,0            | S. O. fer.         |
| 10   | 10,2           | 17,3            | S. E. fer.     | 10,2           | 23,0            | S. O. fer-nub.     |
| 11   | 10,5           | 17,5            | E. fer.        | 10,2           | 24,0            | E. fer.            |
| 12   | 10,5           | 18,0            | E. fer.        | 10,0           | 23,3            | E. fer.            |
| 13   | 10,2           | 18,2            | E. fer.        | 9,5            | 24,2            | N. E. fer-nub. pr. |
| 14   | 9,3            | 17,5            | N. E. fer-nub. | 9,5            | 25,0            | N. E. fer.         |
| 15   | 9,0            | 17,3            | N. E. sub.     | 9,0            | 21,9            | N. E. procella     |
| 16   | 9,0            | 16,6            | O. nub.        | 9,0            | 21,0            | S. E. sub-fer.     |
| 17   | 9,0            | 17,4            | E. sub-fer.    | 9,5            | 22,3            | O. fer-nub.        |
| 18   | 9,2            | 18,5            | E. npb-fer.    | 8,0            | 22,0            | S. E. nub.         |
| 19   | 8,0            | 18,0            | E. procella    | 6,0            | 19,7            | E. pluvia.         |
| 20   | 8,9            | 16,0            | E. fer.        | 7,5            | 20,0            | O. procella.       |
| 21   | 7,0            | 12,0            | N. E. procella | 7,5            | 26,0            | S. O. fer.         |
| 22   | 7,6            | 12,6            | E. fer-nub.    | 7,0            | 19,5            | O. fer.            |
| 23   | 8,5            | 13,2            | O. fer.        | 8,5            | 19,0            | S. fer.            |
| 24   | 8,3            | 13,5            | E. fer.        | 8,3            | 19,5            | O. fer.            |
| 25   | 9,4            | 14,1            | N. O. fer.     | 8,7            | 20,4            | O. fer.            |
| 26   | 9,6            | 16,0            | N. fer-nub.    | 9,5            | 21,5            | O. fer.            |
| 27   | 10,0           | 17,0            | N. E. nub-fer. | 10,0           | 21,7            | S. E. fer.         |
| 28   | 10,0           | 17,0            | E. fer-nub.    | 9,5            | 22,0            | S. E. fer-nub.     |
| 29   | 10,0           | 18,0            | N. O. nub-fer. | 10,0           | 22,0            | E. fer.            |
| 30   | 10,3           | 17,5            | E. fer.        | 11,0           | 23,0            | S. E. fer.         |
| 31   | 11,0           | 17,5            | E. fer.        | 10,0           | 23,0            | O. fer.            |

Altit. max. Bar. poll. 27. lin. 11. Altitudo maxima Ther. 27,2,3  
 minima . . . poll. 27. lin. 6,8 minima . . . . . 12.  
 media . . . poll. 27. lin. 9,3 media . . . . . 12,3  
 Quant. aerae, pluv. poll. 3. lin. 11,8  
 Dies sercni . . . 40.

## Mare.

## Vespere.

| 1781<br>SS<br>quadr. | Altit.<br>Bar. |        |                | Altit.<br>Ther. |   |   | Status Coeli. |   |   | Altit.<br>Bar. |        |                     | Altit.<br>Ther. |    |    | Status Coeli. |    |    | Altit.<br>Bar. |    |    | Altit.<br>Ther. |    |    | Status Coeli. |    |    |    |    |
|----------------------|----------------|--------|----------------|-----------------|---|---|---------------|---|---|----------------|--------|---------------------|-----------------|----|----|---------------|----|----|----------------|----|----|-----------------|----|----|---------------|----|----|----|----|
|                      | 1              | 2      | 3              | 4               | 5 | 6 | 7             | 8 | 9 | 10             | 11     | 12                  | 13              | 14 | 15 | 16            | 17 | 18 | 19             | 20 | 21 | 22              | 23 | 24 | 25            | 26 | 27 | 28 | 29 |
| 1                    | 27,16,5        | + 17,0 | N. ser.        |                 |   |   |               |   |   | 27,10,         | + 23,0 | O. ser.             |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 2                    | 16,6           | 17,0   | N. ser.        |                 |   |   |               |   |   | 11,0           | 23,0   | S. O. ser.          |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 3                    | 11,3           | 17,0   | N. ser.        |                 |   |   |               |   |   | 10,5           | 23,0   | S. E. ser.          |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 4                    | 16,6           | 17,0   | E. ser.        |                 |   |   |               |   |   | 9,5            | 22,6   | E. ser.             |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 5                    | 9,2            | 16,6   | E. ser.        |                 |   |   |               |   |   | 8,0            | 22,0   | E. nub.             |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 6                    | 7,5            | 17,0   | N. E. fer-nub. |                 |   |   |               |   |   | 6,5            | 21,5   | E. procella         |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 7                    | 6,6            | 14,6   | O. nub-pluv.   |                 |   |   |               |   |   | 7,5            | 17,5   | N. E. nub pluv.     |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 8                    | 6,5            | 15,0   | E. pluvia      |                 |   |   |               |   |   | 9,6            | 18,3   | E. pluvia           |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 9                    | 10,5           | 15,3   | E. procella    |                 |   |   |               |   |   | 11,5           | 15,5   | E. pluvia           |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 10                   | 11,3           | 15,0   | E. pluvia      |                 |   |   |               |   |   | 11,5           | 18,6   | f. e. nub. terraem. |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 11                   | 20,5           | 15,0   | O. pluvia      |                 |   |   |               |   |   | 11,5           | 17,5   | S. E. nub-pluv.     |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 12                   | 11,8           | 15,0   | N. O. nebul.   |                 |   |   |               |   |   | 11,8           | 19,0   | O. ser.             |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 13                   | 11,8           | 14,9   | N. O. fer.     |                 |   |   |               |   |   | 11,0           | 19,0   | O. fer.             |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 14                   | 10,8           | 15,5   | O. fer.        |                 |   |   |               |   |   | 10,0           | 19,7   | S. fer.             |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 15                   | 10,0           | 15,0   | E. fer.        |                 |   |   |               |   |   | 9,6            | 20,0   | S. E. fer.          |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 16                   | 8,6            | 16,2   | E. nub.        |                 |   |   |               |   |   | 8,0            | 19,7   | E. nub. proc.       |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 17                   | 7,5            | 16,0   | E. nub.        |                 |   |   |               |   |   | 7,6            | 19,0   | E. nub.             |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 18                   | 7,6            | 15,6   | O. fer-nub.    |                 |   |   |               |   |   | 7,6            | 19,0   | O. fer. proc.       |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 19                   | 8,8            | 12,6   | N. fer.        |                 |   |   |               |   |   | 9,5            | 18,0   | N. fer.             |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 20                   | 9,5            | 11,3   | O. fer.        |                 |   |   |               |   |   | 9,5            | 17,5   | O. fer.             |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 21                   | 9,0            | 12,3   | E. nub.        |                 |   |   |               |   |   | 7,2            | nub.   |                     |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 22                   | 5,3            | 13,6   | E. pluvia      |                 |   |   |               |   |   | 4,5            | 19,6   | N. O. pluvia        |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 23                   | 5,6            | 10,0   | N. O. nub.     |                 |   |   |               |   |   | 2,0            | 14,0   | N. O. fer.          |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 24                   | 2,7            | 10,0   | N. O. fer.     |                 |   |   |               |   |   | 3,3            | 14,0   | N. O. fer.          |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 25                   | 3,3            | 7,0    | O. fer.        |                 |   |   |               |   |   | 3,5            | 14,5   | O. fer-nub.         |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 26                   | 4,3            | 7,5    | S. E. fer.     |                 |   |   |               |   |   | 5,3            | 13,0   | N. O. fer.          |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 27                   | 5,7            | 7,3    | N. fer.        |                 |   |   |               |   |   | 7,2            | 12,5   | E. nub.             |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 28                   | 6,0            | 8,2    | E. nub-fer.    |                 |   |   |               |   |   | 9,3            | 13,0   | E. fer.             |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 29                   | 11,0           | 8,0    | E. fer-nub.    |                 |   |   |               |   |   | 11,3           | 14,0   | S. E. fer.          |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |
| 30                   | 11,8           | 8,0    | E. nub.        |                 |   |   |               |   |   | 11,0           | 14,0   | S. E. nub-fer.      |                 |    |    |               |    |    |                |    |    |                 |    |    |               |    |    |    |    |

Altitud. max. Bar. poll. 28. lin. o. | Altitudo maxima Therm. + 23.  
minima . . . poll. 27. lin. 2. | minima . . . . . 7.  
media . . . poll. 27. lin. 6,2 | media . . . . . 15,7  
Quant. aquae pluv. poll. 5. lin. 7,05  
Dies sereni . . . . 16.

|                 | Manc.          |                 |               | Vespere.       |                 |               |
|-----------------|----------------|-----------------|---------------|----------------|-----------------|---------------|
| 1781<br>October | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli. | Altit.<br>Bar. | Altit.<br>Ther. | Status Coeli. |
| 1               | 27.10.3        | + 10.0          | E. nub.       | 27. 9.3        | + 14.0          | O. fer-nub.   |
| 2               | 9.2            | 10.0            | E. nub.       | 8.5            | 13.0            | E. nub.       |
| 3               | 8.0            | 10.0            | E. nub.       | 9.3            | 14.2            | E. nub.       |
| 4               | 10.3           | 12.0            | E. nub.       | 11.0           | 14.5            | E. sub-set.   |
| 5               | 11.0           | 10.5            | E. fer.       | 10.3           | 15.0            | S. E. fer.    |
| 6               | 11.0           | 10.0            | E. fer.       | 8.7            | 15.3            | O. fer.       |
| 7               | 8.0            | 11.0            | S. O. fer.    | 9.0            | 15.2            | N. E. " fer.  |
| 8               | 10.2           | 8.5             | N. E. fer.    | 11.0           | 13.5            | S. E. fer.    |
| 9               | 28. 0.0        | 7.3             | E. fer.       | 28. 0.0        | 13.3            | N. O. fer.    |
| 10              | 0.3            | 6.6             | N. E. fer.    | 0.0            | 12.3            | N. E. fer.    |
| 11              | 0.0            | 7.2             | E. fer-nub.   | 27.11.0        | 12.2            | fer.          |
| 12              | 27.10.2        | 7.5             | N. nub.       | 9.5            | 15.0            | O. fer.       |
| 13              | 10.0           | 7.3             | E. fer.       | 10.6           | 12.0            | E. fer.       |
| 14              | 23. 0.0        | 8.0             | S. O. fer.    | 28. 1.0        | 12.5            | S. O. fer.    |
| 15              | 1.0            | 8.5             | E. nub.       | 1.0            | 11.5            | O. fer.       |
| 16              | 27.11.7        | 9.6             | E. nub.       | 27.11.0        | 12.5            | S. E. fer.    |
| 17              | 10.6           | 7.9             | N. E. nab.    | 11.0           | 12.0            | E. nub.       |
| 18              | 11.5           | 6.5             | E. fer.       | 11.0           | 9.5             | E. fer.       |
| 19              | 9.5            | 7.0             | E. fer.       | 7.3            | 11.0            | O. fer.       |
| 20              | 7.8            | 7.0             | E. fer-nub    | 8.6            | 11.5            | O. fer.       |
| 21              | 9.0            | 6.0             | O. fer.       | 8.5            | 13.0            | O. fer.       |
| 22              | 8.3            | 7.0             | O. nub.       | 7.5            | 13.5            | O. " fer.     |
| 23              | 8.3            | 7.5             | S. E. " fer.  | 9.5            | 11.3            | S. E. " fer.  |
| 24              | 9.5            | 5.6             | E. fer.       | 10.0           | 10.0            | E. fer.       |
| 25              | 20.0           | 7.0             | E. nub-set.   | 9.0            | 11.3            | E. nub.       |
| 26              | 9.0            | 5.2             | E. nub.       | 11.5           | 7.7             | S. E. pluvia  |
| 27              | 11.3           | 7.0             | S. nub.       | 10.5           | 8.3             | O. pluvia     |
| 28              | 9.6            | 7.0             | S. pluvia     | 5.3            | 10.0            | S. E. pluvia  |
| 29              | 3.3            | 8.0             | S. O. nub.    | 3.0            | 10.2            | E. pluvia     |
| 30              | 3.6            | 8.3             | E. nub.       | 4.0            | 10.5            | E. procella   |
| 31              | 2.6            | 8.2             | S. E. "pluvia | 5.5            | 9.2             | E. "pluvia    |

Altit. max Bar. poll. 28. lin. 1.0 | Altitudo maxima Therm. + 15.3  
 minima .. poll. 27. lin. 2.6 | minima ..... 5.5  
 media .. poll. 27. lin. 9.6 | media ..... 9.9  
 Quant. aquae pluv. poll. 3. lin. 10.  
 Dies sereni, .... 17.

## Mense.

## Vespere.

| 1781<br>No. & mē. | Altit.<br>Bar. | Altit.<br>Ther. | Status Cœli.     | Altit.<br>Bar. | Altit.<br>Ther. | Status Cœli.     |
|-------------------|----------------|-----------------|------------------|----------------|-----------------|------------------|
|                   | +              | +               | O. fer.          | +              | +               | N. O. fer.       |
| 1                 | 27. 5,6        | 4,6             | N. O. fer.       | 27. 5,5        | 9,3             | O. fer.          |
| 2                 | 7,5            | 4,0             | S. O. nub.       | 8,5            | 8,3             | O. nub.          |
| 3                 | 8,5            | 5,0             | O. nub.          | 9,0            | 7,6             | O. nub.          |
| 4                 | 9,5            | 7,0             | E. pluvia        | 10,3           | 9,0             | O. pluvia        |
| 5                 | 11,0           | 6,3             | N. E. nub.       | 11,0           | 9,3             | N. O. nub.       |
| 6                 | 10,3           | 8,8             | O. nub.          | 9,8            | 9,3             | E. pluvia        |
| 7                 | 7,0            | 8,3             | O. nebul.        | 7,0            | 9,3             | S. O. fer-nub.   |
| 8                 | 7,0            | 8,0             | E. nebul.        | 9,0            | 9,5             | S. E. fer.       |
| 9                 | 9,5            | 5,0             | N. E. fer-nub.   | 10,0           | 8,0             | E. nub.          |
| 10                | 10,0           | 4,0             | S. E. nub.       | 10,0           | 8,5             | O. fer.          |
| 11                | 9,3            | 2,6             | O. fer-nub.      | 9,0            | 6,2             | O. nub.          |
| 12                | 8,3            | 2,0             | O. pruina nebul. | 6,3            | 5,2             | E. nebul.        |
| 13                | 6,5            | 2,3             | E. nub.          | 6,0            | 6,0             | E. sub-fer.      |
| 14                | 7,5            | 2,0             | E. nub-fer.      | 8,0            | 6,0             | E. nub.          |
| 15                | 7,3            | 5,0             | N. E. nub.       | 5,5            | 6,0             | N. E. sub-pluv.  |
| 16                | 3,5            | 5,3             | N. E. nub.       | 4,7            | 7,0             | O. fer.          |
| 17                | 5,0            | 4,5             | nebul.           | 4,8            | 6,3             | nebul.           |
| 18                | 4,3            | 4,5             | nebul.           | 3,6            | 6,3             | nub.             |
| 19                | 2,6            | 5,6             | N. E. pluvia     | 5,6            | 5,8             | E. pluvia        |
| 20                | 8,0            | 2,7             | O. fer.          | 9,0            | 7,0             | O. fer.          |
| 21                | 7,7            | 2,6             | N. E. nub.       | 6,0            | 4,6             | N. O. npb. pluv. |
| 22                | 5,6            | 2,6             | O. nub-fer.      | 6,3            | 6,7             | O. fer.          |
| 23                | 6,7            | 3,2             | S. nub.          | 7,0            | 5,6             | E. nub.          |
| 24                | 8,0            | 4,6             | O. pluv. nub     | 9,0            | 6,5             | O. nub.          |
| 25                | 9,0            | 4,0             | N. fer-nub.      | 9,5            | 6,0             | nub. pluv.       |
| 26                | 9,0            | 5,5             | N. E. nub.       | 9,0            | 7,0             | nub. pluv.       |
| 27                | 8,5            | 6,5             | N. E. pluvia     | 8,5            | 8,0             | N. E. nub.       |
| 28                | 8,0            | 6,0             | O. fer.          | 8,5            | 8,0             | O. fer.          |
| 29                | 10,0           | 3,0             | O. nebul.        | 10,5           | 5,5             | O. nebul.        |
| 30                | 28. 0,0        | 5,0             | O. nub. pluv.    | 28. 0,0        | 7,0             | E. nub.          |

Altitud. max. Bar. poll. 28. lin. o | Altitud. maxima Therm. + 9,5  
 minima... poll. 27. lin. 3,3 | minima..... 2.  
 media... poll. 27. lin. 7,8 | media..... 5,8  
 Quant. aquæ pluv. poll. 1. lin. 5.  
 Dies sereni.... 7.

| Mare.          |                  |               |     | Vespere.       |                  |               |     |
|----------------|------------------|---------------|-----|----------------|------------------|---------------|-----|
| Altit.<br>Bar. | Altit.<br>Therm. | Status Coeli. |     | Altit.<br>Bar. | Altit.<br>Therm. | Status Coeli. |     |
| D              | S                | E             | N   | D              | S                | E             | N   |
| 1              | 7.30,5           | #             | 5,3 | E. nubl.       | 27. 9,0          | +             | 6,6 |
| 2              | 8,0              |               | 5,0 | E. nubl.       | 8,6              |               | 6,6 |
| 3              | 8,6              |               | 5,0 | N. E. publ.    | 8,0              |               | 7,0 |
| 4              | 7,6              |               | 5,5 | N. E. nubl.    | 7,0              |               | 6,6 |
| 5              | 7,0              |               | 5,6 | nubl.          | 7,5              |               | 4,6 |
| 6              | 7,5              |               | 5,0 | E. pluvia      | 6,7              |               | 4,0 |
| 7              | 6,6              |               | 5,6 | nubl.          | 7,7              |               | 3,7 |
| 8              | 7,7              |               | 5,3 | nubl.          | 8,0              |               | 3,3 |
| 9              | 5,2              |               | 5,0 | E. nubl.       | 8,0              |               | 2,0 |
| 10             | 5,8              |               | 5,3 | pluvia         | 9,5              |               | 4,0 |
| 11             | 10,0             |               | 5,5 | pluvia         | 10,0             |               | 4,0 |
| 12             | 10,5             |               | 5,0 | N. nub.        | 10,0             |               | 4,0 |
| 13             | 10,5             |               | 5,0 | O. nub.        | 11,0             |               | 4,5 |
| 14             | 11,8             |               | 5,2 | O. ser.        | 11,0             |               | 3,6 |
| 15             | 11,0             |               | 6,6 | O. pluv. nubl. | 11,0             |               | 2,6 |
| 16             | 10,5             |               | 5,0 | O. nubl.       | 10,0             |               | 4,0 |
| 17             | 9,5              |               | 4,0 | SS. E. pluvia  | 9,0              |               | 4,7 |
| 18             | 9,2              |               | 4,6 | S. E. pluvium  | 9,5              |               | 6,0 |
| 19             | 9,6              |               | 5,7 | O. nub.        | 10,5             |               | 7,0 |
| 20             | 11,0             |               | 6,0 | O. nubl.       | 11,5             |               | 7,0 |
| 21             | 28. 6,0          |               | 6,0 | O. nub-ser.    | 11,0             |               | 7,5 |
| 22             | 6,0              |               | 5,5 | E. nubal.      | 18. 0,0          |               | 5,0 |
| 23             | 6,0              |               | 4,0 | N. O. nub.     | 0,0              |               | 4,0 |
| 24             | 6,0              |               | 2,5 | N. O. nub.     | 27. 11,8         |               | 3,3 |
| 25             | 6,0              |               | 6,6 | nubl.          | 28. 0,0          |               | 2,2 |
| 26             | 6,0              |               | 1,3 | S. nub.        | 0,0              |               | 2,2 |
| 27             | 27. 11,0         |               | 1,5 | E. nub.        | 0,0              |               | 4,0 |
| 28             | 28. 6,6          |               | 0,5 | nubl.          | 0,6              |               | 2,5 |
| 29             | 27. 11,0         |               | 0,2 | nubl.          | 9,7              |               | 4,5 |
| 30             | 9,5              |               | 6,0 | nubl.          | 9,0              |               | 3,5 |
| 31             | 9,0              |               | 1,0 | nubl.          | 5,7              |               | 2,0 |

Altit. max. Bar. poll. 28. lin. 0,6 | Altitudo maxima Therm. + 7,5  
 minima . . . poll. 27. lin. 5,7 | minima . . . . . 0,0  
 media . . . poll. 27. lin. 9,0 | media . . . . . 3,5  
 Quant. aquae pluv. poll. o. lin. 11,48  
 Dies serent . . . 4.

Quantitas aquae pluviae inter annos 1820-1821 o. lin. 11,48















