

with exactitude how much the years become shorter in each century, I am in hopes that a great number of older observations will afford me the necessary succours.

2) Second letter: »XXIII. I am still thoroughly convinced of the truth of what I advanced that the orbs of the planets continue to be contracted, and consequently their periodic times grow less. * * * The late Dr. Halley has also remarked that the revolutions of the moon are quicker at present than they were in the time of the ancient Chaldeans, who have left us some observations of eclipses. Euler then discusses the difficulty of finding the number of days since the time of Ptolemy, and thinks the uncertainty may be a day or two, also raises the question whether the length of the day is constant. »At present we measure the length of the day by the number of oscillations which a pendulum of given length makes in this space of time; but

the ancients were not acquainted with the experiments, whereby we might have been informed, whether a pendulum of the same length made as many vibrations in a day as now. But even though the ancients had actually made such experiments, we could draw no inferences from them, without supposing, that gravity, on which the time of an oscillation depends, has always been of the same force; but who will ever be in a condition to prove this invariability in gravity? He finally concludes that both the lengths of the year and day are diminishing, »so that the same number will answer nearly to a year.«

The views of Euler here set forth that the earth and other planets were at one time farther from the Sun than at present are so remarkable that it is scarcely necessary to do more than bring them to the attention of astronomers.

U. S. Naval Observatory, Mare Island, California, 1909 April 24.

T. J. J. Sec.

Osservazioni di piccoli pianeti

fatte al R. Osservatorio di Milano (equatoriale di 0.218 m di apertura; distanza focale 3.15 m; micrometro ad anelli; ingrandimento 76).

1908	T. m. di Mil.	$\Delta\alpha$	$\Delta\delta$	Cfr.	α app.	$\log p \cdot A$	δ app.	$\log p \cdot A$	Red. ad l. app.	*
(532) Herculina.										
Gen. 31	9 ^h 33 ^m 20 ^s	-0 ^m 20 ^s 08	+3' 6 ^s 3	10	7 ^h 3 ^m 21 ^s 38	9.006 _n	+25° 27' 36 ^s 2	0.483	+0 ^s 50 - 2 ^s 3	1
Febb. 2	9 24 50	-0 18.98	+6 31.8	10	7 1 47.49	8.999 _n	+25 42 9.8	0.478	+0.49 - 2.2	2
4	9 25 18	-0 5.75	-0 56.7	10	7 0 19.09	8.907 _n	+25 56 41.7	0.470	+0.48 - 2.0	3
(19) Fortuna.										
Apr. 26	9 51 45	+1 19.53	+9 43.2	10	12 55 12.94	8.914 _n	- 6 17 29.3	0.837	+1.10 - 6.4	4
29	9 19 19	+0 5.35	-8 29.6	10	12 53 2.87	9.059 _n	- 6 2 15.9	0.834	+1.08 - 6.1	5
(313) Chaldaea.										
Apr. 29	10 50 3	-0 57.64	+0 41.2	10	13 55 37.23	8.806 _n	+ 1 9 7.8	0.787	+1.15 - 5.1	6
Mag. 1	9 56 23	-0 7.53	-0 7.7	10	13 54 5.04	9.150 _n	+ 1 24 38.8	0.785	+1.15 - 4.9	7
3	11 57 5	+1 49.28	-1 8.1	6	13 52 30.20	8.954	+ 1 39 52.5	0.783	+1.15 - 4.8	8
(511) Davida.										
Mag. 6	10 16 3	+3 2.70	-1 12.2	8	14 44 37.86	9.202 _n	+ 5 34 28.0	0.753	+1.24 - 4.3	9
8	10 12 12	+1 33.23	+1 32.7	10	14 43 8.41	9.180 _n	+ 5 37 13.0	0.752	+1.26 - 4.2	9
(28) Bellona.										
Dic. 12	9 32 47	-0 20.90	-3 51.8	8	6 19 38.06	9.500 _n	+10 30 11.2	0.734	+3.33 - 0.4	10

Luoghi medi delle stelle di confronto.

*	α 1908.0	δ 1908.0	Autorità	*	α 1908.0	δ 1908.0	Autorità
1	7 ^h 3 ^m 40 ^s 96	+25° 24' 32 ^s 2	AG Cbr E. 3769	6	13 ^h 56 ^m 33 ^s 72	+ 1° 8' 31 ^s 7	AG Alb 4839
2	7 2 5.98	+25 35 40.2	» 3749	7	13 54 11.42	+ 1 24 51.4	Bo VI + 1° 28' 68
3	7 0 24.36	+25 57 40.4	» 3735	8	13 50 39.77	+ 1 41 5.4	AG Alb 4820
4	12 53 52.31	- 6 27 6.1	AG Ott 4686	9	14 41 33.92	+ 5 35 44.5	AG Lpz II 6799
5	12 52 56.44	- 5 53 40.2	AG Strb 4719	10	6 19 55.63	+10 34 3.4	AG Lpz I 2235

Milano, marzo 1909.

L. Gabba.