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THE LIGHT VARIABILITY OF THE Be STAR HD 58050 (OT Gem)

HD 58050 is a Be star (Hubert A.M. et al., 1979) whose variability has been suspected by Hoffmeister (1934). Recently, members of European Group GEOS visually observed a remarkable increase in its brightness (Ballereau et al., 1981 and Figer, 1981a, 1981b), to which some spectral changes have been correlated (Hubert A.M. et al., 1981). Recently HD 58050 has been named OT Gem (Kholopov et al., 1981).

In his remarks, Hoffmeister also supposed a variability on short time-scale, comparing HD 58050 with HD 59059. This possibility has been also suggested by Figer (1981a, 1981b): he proposed a period of 0.1250 or 0.1429 days on the basis of visual estimates.

In order to establish the reliability of this periodicity, some photoelectric observations have been carried out in the nights of 1982 January, 30 and March, 15 and 16 at Merate Observatory. HD 59059 ( $V=6.18$ ,  $B-V=-0.03$ , A0) has been used as comparison star and HD 60107 ( $V=5.25$ ,  $B-V=+0.05$ , A1V) as check star. During each night no appreciable variation has been detected, as Table I and Table II show. Each  $\Delta V$  (or  $\Delta B$ ) is the mean of several (4 or 5) measures;  $\sigma$  is the standard error. On the other hand, small changes in brightness are present in the night-to-night mean magnitudes. This variability on large time-scale is also proved by photographic observations (Berthold, 1982). Consequently, HD 58050 is a  $\gamma$  Cas variable only. Mean  $\Delta V$  values of each night are, respectively:  $-0.185$ ,  $-0.190$ ,  $-0.198$ ; no variation is found in the colour index  $B-V$ .

An additional remark must be made about HD 60107, the check star: it has been suspected to be a variable star on the basis of the photoelectric observations collected by Blanco et al. (1968), but with a great deal of prudence (FitzGerald, 1973). Eggen (1963) notes a variability in the radial velocity, too. However, HD 59059-HD 60107 differences have been constant during my ob-

Table I

Hel. J.D. 2440000 +	$\Delta V$	$\sigma$	Hel. J.D. 2440000 +	$\Delta V$	$\sigma$
5000.451	- 0.185	0.002	5044.318	- 0.188	0.002
.455	- 0.186	0.001	.329	- 0.189	0.007
.460	- 0.188	0.003	.341	- 0.195	0.003
.480	- 0.186	0.005	.358	- 0.189	0.004
.495	- 0.187	0.002	.369	- 0.192	0.003
.529	- 0.186	0.005			
.541	- 0.185	0.003	5045.278	- 0.199	0.002
.571	- 0.184	0.003	.285	- 0.199	0.001
.576	- 0.180	0.001	.295	- 0.194	0.005
5044.277	- 0.195	0.003	.309	- 0.199	0.002
.286	- 0.190	0.005	.315	- 0.200	0.005
.300	- 0.184	0.004	.341	- 0.195	0.004

V observations of HD 58050.  $\Delta V$  are in the sense HD 59059 minus HD 58050

Table II

Hel. J.D. 2440000 +	$\Delta B$	$\sigma$	
5000.482	- 0.060	0.002	B observations of HD 58050. $\Delta B$ are in the sense HD 59059 minus HD 58050.
.513	- 0.060	0.001	
.531	- 0.062	0.003	
.540	- 0.062	0.002	
5045.328	- 0.073	0.005	

Table III

Hel. J.D. 2440000 +	$\Delta V$	$\sigma$	Hel. J.D. 2440000 +	$\Delta V$	$\sigma$
5000.468	+ 0.972	0.001	5044.335	+ 0.957	0.005
.514	+ 0.959	0.005	.353	+ 0.959	0.001
.555	+ 0.959	0.006			
			5045.291	+ 0.960	0.003
5044.285	+ 0.964	0.004	.304	+ 0.958	0.002
.299	+ 0.966	0.004	.321	+ 0.966	0.004
.314	+ 0.953	0.004	.342	+ 0.964	0.004

V observations of HD 60107.  $\Delta V$  are in the sense HD 59059 minus HD 60107.

servations, as Table III shows: FitzGerald's hypothesis about incorrect data seems to be plausible. Anyhow, further measures are desirable.

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