

COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS
Number 1427

Konkoly Observatory
Budapest
1978 May 15

THE ORBITAL PERIOD VARIATION OF SZ Psc

The eclipsing and spectroscopic binary SZ Psc (HD 21913) is known to show large period and light curve variations (Jakate et al. 1976). These authors found that the orbital period was decreasing with a period derivative $\dot{P} = - (6.0 \pm 0.5) \cdot 10^{-8}$ days/day.

Further observations made in the fall of the 1976 by Eaton (1977) and in the fall of 1977 by the present authors at Catania and Torino Observatory, show that the period is presently increasing.

In Table 1 we give the observed epochs (t_{obs}) of primary minima and O-C values computed according to the linear relation

$$t_E = \text{JD } 2442308.946 + 3.9658663 \cdot E.$$

The mean period and starting epoch we assumed have been obtained by linear least square analysis of the observed epochs given in Table 1. The epoch from Eaton's observations is largely uncertain since only a limited portion of decreasing primary eclipse was observed. The epoch from Catania and Torino observations was determined as the average between the time of eclipse start and end. The trend of O-C values shows that the non linear elements given by Jakate et al. (1976) (represented by the continuous line in Fig.1) does not fit in with the present observations. It seems that the period variations of SZ Psc may be better represented by a classical sinusoidal curve. The amplitude of the O - C curve is about 0.6 day, which is one of the largest known for eclipsing binaries.

S. CATALANO, A. FRISINA, M. RODONO
Osservatorio Astrofisico Catania

F. SCALTRITI
Osservatorio Astronomico Torino, Italy

References:

- Jakate, S., Bakos, G.A., Fernie, J.D., Heard, J.F. 1976, *Astron. J.* 81, 250
Eaton, J.A. 1977, *I.B.V.S.* 1297
Jensch, A. 1934, *Astron. Nachr.* 252, 393
Gaposchkin, S. 1943, *Harvard Ann.* 113, No. 2
Gaposchkin, S. 1952, *Harvard Ann.* 118, No. 6

t_{obs}	E	O - C	Remarks
25509.3950	-4236	-.1412	Jensch (1934)
25644.2780	-4202	-.0976	Jensch (1934)
25834.5070	-4154	-.2302	Jensch (1934)
25838.5040	-4153	-.1991	Jensch (1934)
25866.4230	-4146	-.0411	Jensch (1934)
26191.5220	-4064	-.1432	Jensch (1934)
26334.3650	-4028	-.0714	Jensch (1934)
27036.3650	-3851	-.0297	Jensch (1934)
27397.3800	-3760	.0915	Jensch (1934)
27421.2320	-3754	.1483	Rugemer(cfr.Jensch 1934)
27421.2530	-3754	.1693	Rugemer(cfr.Jensch 1934)
28000.2550	-3608	.1548	Gaposchkin (1943)
29935.8580	-3120	.4150	Gaposchkin (1952)
35741.8190	-1656	.3477	Jakate et al.(1976)
36114.5740	-1562	.3112	Jakate et al.(1976)
42308.7671	0	-.1789	Jakate et al.(1976)
43117.7800	204	-.2027	From Eaton(cfr.IBVS 1297, 1977)
43498.5020	300	-.2039	present paper

