

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

Number 2676

Konkoly Observatory
Budapest
1 March 1985
HU ISSN 0374 - 0676

IMPROVED PERIOD FOR THE CATAclySMIC VARIABLE V795 Her=PG 1711+336:
IS IT AN OUTSTANDING OBJECT?

Periodic light variations of the star PG 1711+336 were noticed by Mironov et al. (1983a, b). An identification chart, photoelectric magnitudes of 13 nearby stars and the position of the object in the (B-V, U-B) diagram were given in the first paper (1983a). The colour temperature of PG 1711+336=V795 Her was shown to be 20000°K. In the second paper (1983b) the position of the object in the (B-V, W-B) colour diagram was shown.

The photometry of V795 Her during the 1968-85 years has revealed long-term variability from 12^m.5 to 13^m.2 in B and short-periodic light variations with the amplitude 0^m.3 and the period P=0^d.11583.

Monitoring of the variable was continued in 1984. Now we obtained 38 individual points in U, 75 in W, 213 in B, 116 in V and 59 in R (Julian Dates 2445442-2445959). Tables of observations will be given elsewhere.

An analysis of all observational points, obtained for V795 Her from 1983, allows us to improve the period of the optical light variations, which turns out to be two minutes shorter than given previously. The improved ephemeris is as follows:

$$\text{JD Min. hel.} = 2445527.295 + 0^{\text{d}}.114488 \cdot E$$

The light curve in B plotted with this ephemeris is shown in Figure 1.

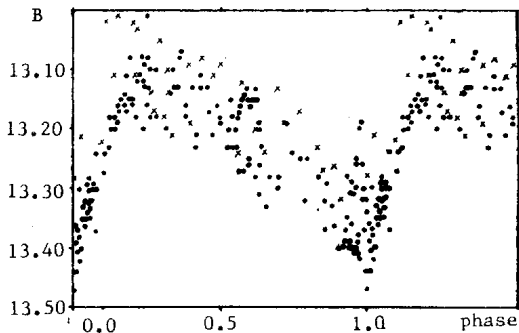


Figure 1: The B light curve of V795 Her. Notation: (.)-observations obtained with the 48 cm reflector at the Tian-Shan High-Altitude (3000m) Observatory of SSAI in Alma-Ata; (x)-observations obtained with the 60 cm Zeiss reflector at the SSAI Crimean laboratory (the altitude 600 m).

The minimum appears to be highly asymmetric ; egress is steeper than ingress. The out-of-eclipse magnitude, as well as a shape of the light curve, slightly change from cycle to cycle due to intrinsic variability. This leads to a significant scatter of the individual points in the light curve. Moreover, there are slight variations of (B-V) colour with the phase; near the maximum light, $B-V = -0.^m08$, and in a half-cycle, $B-V = -0.^m02$.

If the period determined is really the case, and not twice longer, then the variable falls into the gap in a histogram which describes distribution of cataclysmic variables vs. the period. If so, V795 Her can be a unique object. We recommend that more attention be paid to this star by observers, especially by spectroscopists. A radial-velocity curve for the star is highly needed in order to prove the value of the orbital period. A detailed investigation of physical parameters of V795 Her would help to interpret the nature of an observational "gap" in the distribution of cataclysmic variables.

A.V. BAIDAK
 N.A. LIPUNOVA
 S.Yu. SHUGAROV
 Sternberg State Astronomical
 Institute(SSAI), 13, Universitetskij
 Prospect, Moscow, 119899, USSR
 V.G. MOSHKALEV
 I.M. VOLKOV
 Tian-Shan High-Altitude Observatory
 of the Sternberg Astronomical Institute.

References:

- Mironov, A.V., Moshkalev, V.G., Shugarov, S.Yu., 1983a : Astr.Tsirk. No.1279,
 6 (in Russian).
 Mironov, A.V., Moshkalev, V.G., Shugarov, S.Yu., 1983b : I.B.V.S., No.2438.