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UBVR PHOTOMETRY OF THE FAINT ECLIPSING BINARY
HS PERSEI

The eclipsing binary HS Per (= S3892; $m = 13.0-15.9$ pg) was discovered to be a variable by Götz (1956). The period of the system was uncertain. The star is of A0II-III type (Halbedel, 1984). It is a probable member of the Perseus spiral arm (Zakirov, 1990).

HS Per was observed with the 60 cm telescope during 1988/90 on Mt. Maidanak in the South of Uzbekistan. As a comparison the star BD +56°369 ($V = 9^m867$; $U-B = +0^m04$; $B-V = 0^m482$; $V-R = 0^m512$) was chosen (denoted with s in Figure 1). The control star ($V = 10^m849$; $U-B = -0^m295$; $B-V = 0^m070$; $V-R = 0^m088$) is shown in Figure 1 as star c. 184 measurements in U, 399 in B, 402 in V, 379 in R were carried out. According to our estimation the probable error of a single observation of HS Per is 0^m015 in V; for $U-B = 0^m020$; for $B-V = 0^m015$ and for $V-R = 0^m025$ at the maximum. They are about twice more at the primary minimum.

The results of our observations are presented in Figure 2 as light and color curves. We have calculated the following ephemeris, using both our and Götz's data of the minima too.

$$\text{Min I} = \text{JDH } 2447448.267 + 2^d836782 \times E$$

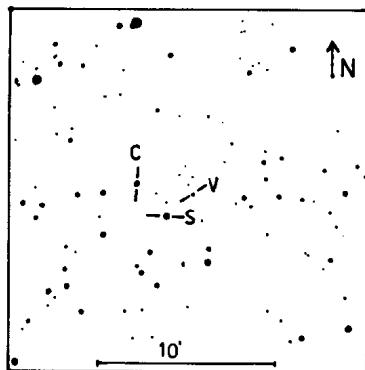


Figure 1. Finding chart of HS Persei

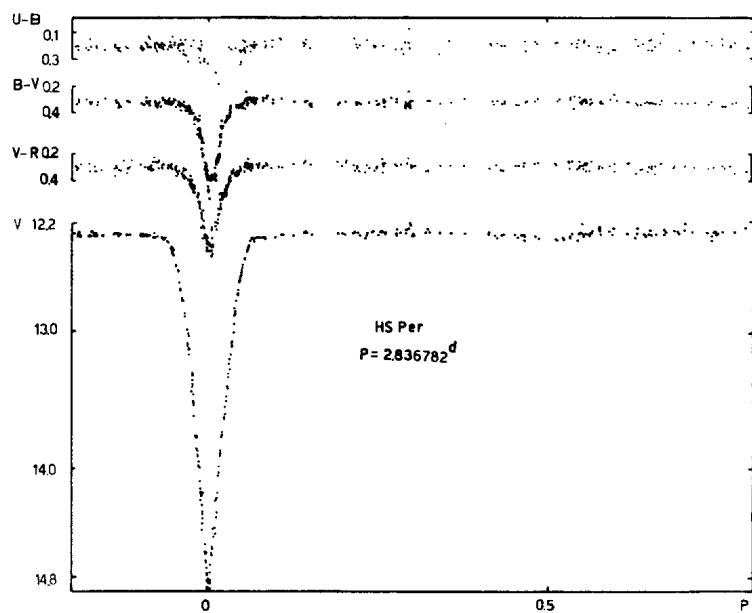


Figure 2. Light and colour curves of HS Per

The photometric characteristics are given in Table I.

Table I.

	V	U-B	B-V	V-R
Max	12.28	0.18	0.32	0.28
MinI	14.88	0.35	0.87	0.93
MinII	12.32	0.18	0.30	0.23

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References:

- Götz, W.: 1956, *VSS* 2, N5.
 Halbedel, E.M.: 1984, *IBVS*, No. 2550.
 Zakirov, M.M.: 1990, *Kinematika Fiz. Nebesn. Tel.*, T6, N3, 18.