

COMMISSION 27 OF THE I. A. U.  
 INFORMATION BULLETIN ON VARIABLE STARS  
 Number 1537

Konkoly Observatory  
 Budapest  
 1979 January 25

EH Lib - STAR WITH BLAZHKO EFFECT

In 1974 through 1978 over 700 photoelectric observations of the supershortperiodic cepheid EH Lib were obtained in BV colours at the Astronomical Observatory, Odessa University. The moments of maxima for 1974-1976 have been published in IBVS No.1310,1977. Six moments of maxima determined in 1978 are as follows:

Table 1

Max.J.D.hel	*	E	O-C
2443695.4285	B	116010	-0.0029
695.4303	V	116010	-0.0011
696.4051	B	116021	+0.0010
696.4008	V	116021	-0.0032
698.3454	B	116043	-0.0037
698.3456	V	116043	-0.0035

Epochs and deviations have been calculated with the elements given in the third supplement to the General Catalogue of Variable Stars, 1969:

$$\text{Max.J.D.hel.} = 2433438.6073 + 0.^d088413276 \cdot E.$$

We could determine stellar magnitudes of the variable in all the 28 light maxima. These data are given in Table 2.

Table 2

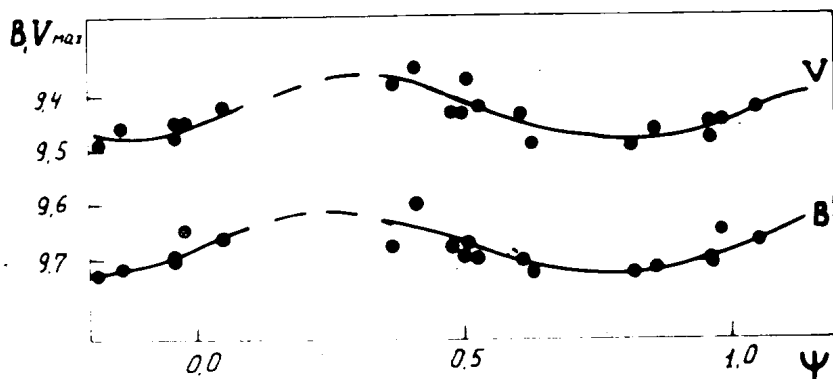
Max.J.D.hel.	B <sub>max</sub>	V <sub>max</sub>	ψ
2442162.5181	9.72	9.46	0.86
2182.4134	9.70	9.42	0.53
2541.4588	9.65	9.45	0.98
2544.3758	9.73	9.49	0.63
2544.4653	9.70	9.48	0.96
2577.4438	9.60	9.35	0.41
2871.5070	9.67	9.37	0.51
2871.5932	9.73	9.49	0.82
2872.4772	9.67	9.42	0.05
2872.5658	9.68	9.38	0.37
2874.5107	9.68	9.43	0.48
3695.4291	9.71	9.45	0.96
3696.4000	9.70	9.43	0.50
3598.3457	9.70	9.43	0.61

Light variations in maxima amount to  $0^m.13-0^m.14$  that is to one order more than the errors of observations. Suppose these variations are caused by the Blazhko-effect, then we find the formula below

$$M = 2442162.556 + 0^d.273778 \cdot E$$

with the help of which phases  $\psi$  given in the last column of Table 2 have been calculated.

Figure 1



The graphs of light variations in maxima are illustrated in Figure 1.

V.G. KARETNIKOV  
 Yu.A. MEDVEDEV  
 Astronomical Observatory  
 of the Odessa University  
 U.S.S.R.