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**NEW LIGHT CURVES AND PERIOD
 OF BV ERIDANI**

The eclipsing binary system BV Eri was discovered by Hoffmeister (1933). In 1954 Solov'yov published two minimum times of BV Eri. The system was observed photometrically by Baade and Duerbeck (1979) in 1976 and 1977, in 1983 they reported an analysis of the spectroscopic orbit and the light curves.

The present work was carried out with a single channel photoelectric photometer attached to 35 cm reflecting telescope in BV bands at Yunnan Observatory from October to December 1984. The star SAO 149195 and SAO 149230 was used as the comparison and check star, respectively. From our observations we obtained 598 points in B band and 596 points in V band, in the meantime two primary minimum times and secondary a secondary minimum time was derived, which are listed in the following Table. All observational data have been corrected for atmospheric extinction and reduced to the standard UBV system. The light curves are displayed in Figures 1 and 2.

We have collected all minimum times that we could find and calculated new light elements by means of the least-squares method:

$$\text{Min. I} = \text{JD}(\text{Hel.}) 2443449.7320 + 0^d 5076669 \times E$$

$\pm 66 \qquad \qquad \pm 10$

Table 1

JD(Hel.)	E	(O-C)	Weight	Source
2431052.2700	-24420.5	0.0174	1	Solov'yov
2431180.4900	-24168	0.0515	1	Solov'yov
2439059.4653	-8648	0.0366	1	Bamberg
2439767.5632	-7253	-0.0608	1	Bamberg
2440592.1167	-5629	0.0416	1	Bamberg
2441619.0528	-3606	-0.0324	1	Bamberg
2441620.0431	-3604	-0.0574	1	Bamberg
2442011.9910	-2832	-0.0284	1	Bamberg
2442013.9826	-2828	-0.0674	1	Bamberg
2443449.7207	0	-0.0113	10	Baade et al.
2444892.4762	2842	-0.0451	1	Baade et al.
2446032.2424	5087	0.0089	10	This paper
2446034.2726	5091	0.0084	10	This paper
2446048.2335	5118.5	0.0085	10	This paper

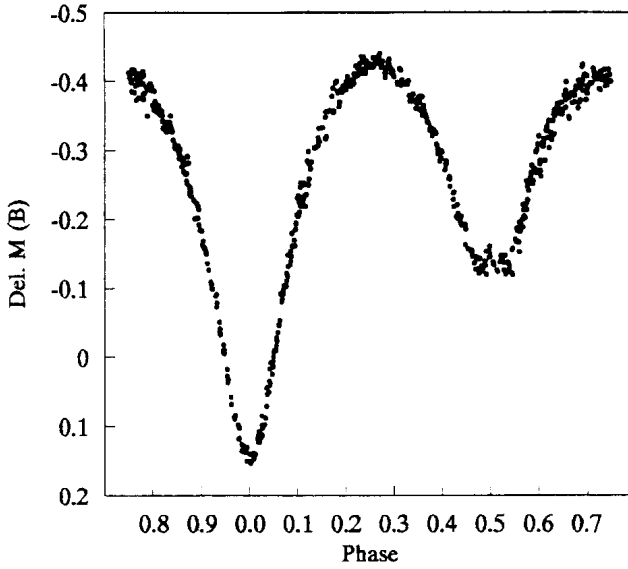


Figure 1. The light curve of BV Eri in B band.

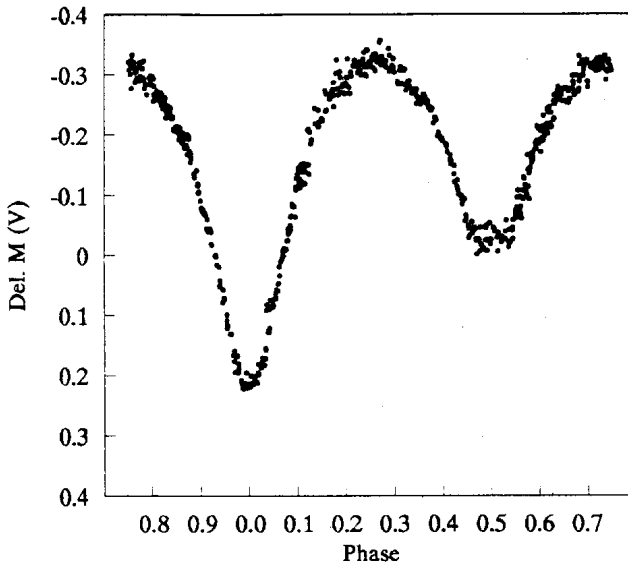


Figure 2. The light curve of BV Eri in V band.

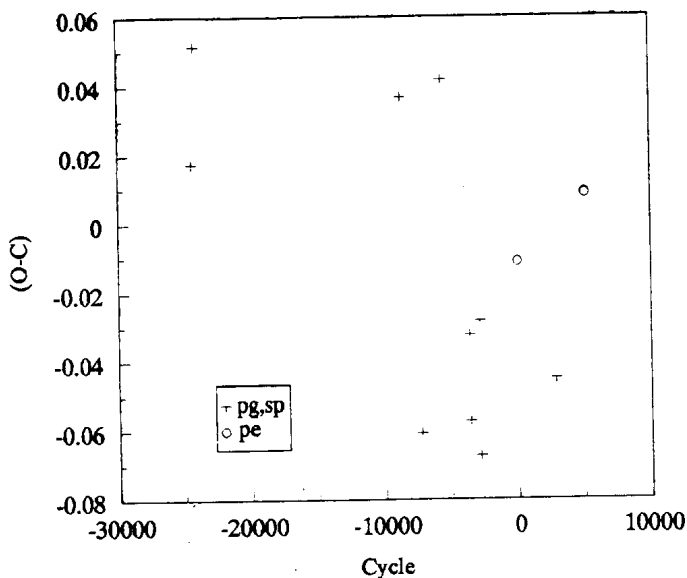


Figure 3. The O-C diagram

In calculation we assigned weight 1 to the photographic and spectroscopic minimum times, weight 10 to the photoelectric minimum times (see Table 1). Using the O-C residuals listed in Table 1 we plotted the O-C diagram (Figure 3) in which the symbol “+” means the photographic and spectroscopic minimum times and the symbol “o” means the photoelectric minimum times. In this O-C diagram the scatter is very high and no systematic trend appears. The light curve analysis using Wilson-Devinney synthesis method will be published elsewhere.

Gu SHENGHONG
 Liu QINGYAO
 Yang YULAN
 Zhang ZHOUSHENG
 Yunnan Observatory
 Academia Sinica
 Kunming
 China

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