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PHOTOELECTRIC OBSERVATIONS OF ER VULPECULAE

The peculiar eclipsing binary ER Vul was discovered spectroscopically by Northcott and Bakos (1956). The photoelectric observations made by Northcott and Bakos (1967) revealed its light variation. When the star was included in the list of short period group of the RS CVn binaries by Hall (1976) it called more attention. The light curve variations were discussed by Al-Naimiy(1978), Hrivnak (1982) and Kadouri (1981). The H and K emissions of singly ionised calcium were observed by Bond (1970).

The system ER Vul was observed at Ege University Observatory from 1981 to 1985. The observations were made with the 48 cm Cassegrain reflector, which was equipped with an unrefrigerated EMI 9781 A photomultiplier with B and V filters of the standard UBV system. BD+27^o3946 was used as the comparison star.

Table I
 The times of minima of ER Vul.

Hel J.D.	O-C	E	Colour
244 0000+			
5900.3536	+0. ^d 0028	8191	b
.3522	.0014	8191	v
5901.4043	.0064	8192.5	b
.4036	.0057	8192.5	v
5902.4481	.0030	8194	b
.4468	.0017	8194	v
5933.5126	.0023	8238.5	b
.5119	.0016	8238.5	v
5939.4465	.0024	8247	b
.4472	.0031	8247	v
6004.3776	.0108	8340	b
.3808	.0140	8340	v
6235.4368	.0008	8671	b
.4406	.0046	8671	v
6241.3738	.0040	8679.5	b
.3712	.0014	8679.5	v
6248.3577	.0070	8689.5	b
.3513	+0.0006	8689.5	v
6256.3774	-.0014	8701	b
.3806	+0.0018	8701	v

The times of minima derived from the observations of last two years are given in Table I. The O - C residuals are the differences between observed and predicted times of minima according to the ephemeris:

$$\text{Min I} = \text{JD Hel. } 2440\ 182.2621 + 0^{\text{d}}.69809409.E .$$

The star will be monitored again in the coming months and the light curves will be presented and discussed elsewhere.

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