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A COMPARISON SEQUENCE TO THE FLARE STAR EV LACERTAE

Establishment of photoelectric comparison sequences to a number of flare stars may be valuable for a quick determination of magnitudes of these stars made in the course of visual, photographic or photoelectric flare monitoring. On the other hand, the need exists to study possible slow (secondary) light variations of flare stars. The sequence to the star YZ CMi has been recently given (ref.1) and now we have obtained one for the star EV Lac. Magnitudes and colours of both flare stars have been determined as well and these may serve as initial points in the studies of secondary variations.

The present observations were made at the Crimean Astrophysical Observatory on two nights. The 70 cm reflector equipped with an E.M.I. 6256 photomultiplier and conventional UBV filters was used. Twelve stars in the cluster IC 4665 and five in Selected Areas SA 18 and SA 66 served as the standards for transformation of colour systems and extinction determinations. Magnitudes and colours of these stars were taken from papers of Johnson (ref.2) and Priser (ref.3). The resulting accuracy of observation was about ± 0.015 for V magnitudes and (B-V) colours and ± 0.03 for (U-B) colours. No systematic differences were found in observations between two nights.

Table I			
Star	V	(B-V)	(U-B)
BD +43°4299	9.21	+1.17	+1.00
+43°4302	8.45	+0.46	-0.03
+43°4303	9.92	+1.40	+1.31
+43°4304	10.79	+0.24	-0.21
EV Lac	10.25	+1.58	+1.06
Optical companion, a few seconds of arc to the west of EV Lac			
(Hel.Ph.Cat.+43°22 ^b 45 ^m No 115)	12.00	+0.74	+0.21
EV Lac + opt.companion	10.05	+1.37	+0.75

Table I contains the mean data of two nights (July 7-8 and 8-9). The V magnitude and (B-V) colour for EV Lac differ considerably from previous measurements of Mumford (ref.4) but if we compare his data with those contained in the last line of Table I it seems highly likely that he measured the total light of EV Lac and its optical companion.

REFERENCES

- 1) A.D.Andrews, I.B.V.S. No.342 (1969)
- 2) H.L.Johnson, Astrophys.Journ., 119, 181 (1954)
- 3) J.B.Priser, Publ.Astron.Soc.of Pacific, 78, 474 (1966).
- 4) G.S.Mumford, Astron.Journ., 61, 213 (1956).

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