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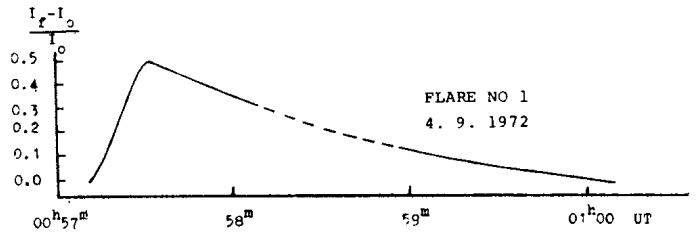
CONTINUOUS PHOTOELECTRIC MONITORING OF EV Lac DURING THE INTERNATIONAL PATROL, SEPTEMBER 1-15, 1972

The flare star EV Lac has been monitored with the 30 cm Cassegrain reflector at the Oslo Solar Observatory of the Institute of Theoretical Astrophysics, University of Oslo. ($\lambda=-0^h43^m02^s$, $\phi=+60^\circ12'30"$, h=585 m). The observations were carried out in the international B-band with a 1P21 photomultiplier from RCA. The telescope and photometer system are described by Sivertsen (Ref.1).

During the 21.7 hours of monitoring 2 flares were observed. Detailed coverage is given in Table 1. Physical characteristics of the observed flares are given in Table 2, the quantities being presented according to proposals of Andrews et. al. (Ref.2.).

Due to the rapidly changing observing conditions we have found it necessary to prescibe a letter to each monitoring interval describing the standard fluctuations. (a), (b), and (c) refers to observing periods with $\frac{\sigma}{I_o} \leq 0.15$, $0.15 < \frac{\sigma}{I_o} \leq 0.20$, $0.20 < \frac{\sigma}{I_o} \leq 0.25$, respectively. Observations with $\frac{\sigma}{I_o} > 0.25$ are rejected.

The figures present the smoothed light curves.



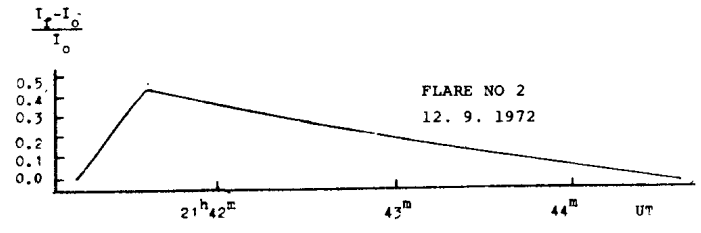


TABLE 1

MONITORING INTERVALS

Date 1972 Sept.	Monitoring intervals UT	Total Monitoring Time
3-4	22^h07^m-22^h28^m(b), 2232-2250 b, 2255-2308 (b), 2328-2345 (b), 2352-0010 (a), 0015-0053 (b), 0056-0215 (a), 0217-0225 (c), 0230-0245 (c).	3^h47^m
4	2028-2034 (b), 2120-2139 (c), 2147-2151 (a), 2200-2246 (a), 2254-2303 (a), 2321-2327 (a), 2332-2336 (b).	1 34
6	0000-0005 (b), 0012-0025 (a), 0029-0050 (c), 0057-0115 (a), 0121-0135 (b), 0140-0224 (b), 0229-0234 (c).	2 00
7	0031-0036 (c), 0038-0055 (b), 0109-0112 (b), 0114-0117 (b), 0120-0138 (b).	0 46
8-9	2000-2012 (b), 2014-2050 (b), 2100-2109 (a), 2116-2141 (a), 2147-2156 (a), 2158-2210 (a), 2215-2241 (a), 2244-2254 (a), 2256-0045 (a), 0108-0130 (a), 0134-0213 (a), 0215-0227 (a), 0235-0246 (b).	5 32
11	1948-2023 (a), 2031-2057 (a), 2104-2121 (b).	1 18
12-13	1952-2011 (c), 2014-2027 (b), 2032-2210 (b), 2236-0033 (b), 0033-0117 (c), 0120-0132 (c), 0149-0232 (c).	5 46
14	2211-2223 (c), 2230-2319 (c).	1 01
	Total	21^h44^m

TABLE 2

OBSERVED FLARES

Flare No	Date 1972 Sept	Max UT	$\frac{I_f-I_o}{I_o}$	Δm_B mag	t_b min	t_a min	P_B min	σ_B mag	Air mass
1	4	$00^h57^m.5$	0.50	0.44	0.33	2.66	0.57	0.09	1.19
2	12	21 41.5	0.41	0.35	0.37	3.00	0.60	0.14	1.04

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References:

1. Sivertsen, S.: Institute of Theoretical Astrophysics, Blindern, Oslo.Report No. 34, 1972.

2. Andrews, A.D., Chugainov, P.F., Gershberg, R.E., and Oskanian, V,S.:Comm.27 IAU,I.B.V.S.No. 326.1969.