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PHOTOELECTRIC OBSERVATIONS OF AD Leo AND EV Lac
DURING THE 1971 INTERNATIONAL PATROL INTERVALS

As a part of regular flare star observations at Belgrade Astronomical Observatory, AD Leo and EV Lac were monitored during the international cooperative patrols including a NASA X-ray interval. The observations were made with the 65 cm refractor and the Belgrade photoelectric polarimeter.

The time coverage and other data, partly in accordance with Andrews et al. (1969), are given in Table I. The symbols used are as follows: In column σ_m the error of the observation is given according to formula $\log_m(I_0 + \sigma)/I_0$. Here I_0 represents the mean intensity deflection of the undisturbed star and σ is the standard deviation of random noise fluctuation. The quantity Δm_{lim} has been calculated from $\Delta m_{lim} = -2,5 \log(3\sigma/I_0)$.

During 377 minutes of AD Leo patrols no flare activity has been noticed. During 522 minutes of EV Lac monitoring one flare was observed. The characteristics of the flare are given in Table II and the light curve is shown in Figure 1.

In Table II Δt_1 and Δt_2 are durations of the flare before and after maximum. Δm_f has been found from $\Delta m_f = -2,5 \log(I_{0+f}/I_0)$ where I_{0+f} is the intensity deflection of the star at the moment of maximum. The integrated intensity is given in the column P and the air mass in the column X.

Results of the polarimetric analysis of the observed flare will be published later.

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Reference:

Andrews A.D., Chugainov P.F., Gershberg R.E., Oskanian V.S., 1969, IBVS, No.326.

Table I. Monitoring of AD Leo and EV Lac

Date 1971	Coverage U.T.	F	σ_m	Δm_{lim}
<u>AD Leo</u>				
Apr. 14	1940-2027, 2033-2136, 2140-2201	V	0.028	+2.8
16	1900-1917, 1922-2041, 2045-2135	V	0.012	+3.7
18	1905-1925, 1930-1950, 2000-2100	V	0.021	+3.1
<u>EV Lac</u>				
Sep. 18	2138-2158	V	-	-
21	2317-2323, 2422-2540,	V	0.021	+3.1
	2328-2422	B	0.026	+2.8
22	2113-2147, 2200-2252, 2319-2404,	V	0.014	+3.5
	2416-2452, 2503-2513			
23	2111-2220, 2244-2358, 2443-2517	V	0.011	+3.8

Table II. Flare data for EV Lac (Date 1971 Sep.23.)

U.T. of max.F	L_{t1}	L_{t2}	L_{mf}	σ_m	F	X	
21 ^h 13 ^m 50	V	25°	52°	1.22	0.011	11728	1.000

