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PHOTOELECTRIC OBSERVATIONS OF THE FLARE STAR AD Leo

Continuous photoelectric monitoring of the flare star AD Leo has been carried out at the Stephanion Astronomical Station ($\lambda = -22^{\circ}49'44''$, $\phi = +37^{\circ}45'15''$) during the period of cooperative optical observations of this star proposed by the IAU Working Group on Flare Stars i.e. January 27-February 9, 1973 (Chugainov, 1972) using the 30-inch Cassegrain reflector of the Department of Geodetic Astronomy University of Thessaloniki. Observations have been made with a Johnson dual channel photoelectric photometer in the B color of the international UBV system. The telescope and photometer will be described elsewhere. Here we mention only that the transformation of our instrumental ubv system to the international UBV system is given by the following equations:

$$\begin{aligned} V &= v_o + 0.039(b-v)_o + 1.560, \\ (B-V) &= 0.737 + 1.033(b-v)_o, \\ (U-B) &= -1.365 + 1.007(u-b)_o. \end{aligned}$$

The monitoring intervals in UT as well as the total monitoring time for each night are given in Table 1. Any interruption of more than one minute has been noted.

TABLE 1

Date	Monitoring intervals (UT)	Total Monitoring time
1973 Feb. 6-7	20 ^h 56 ^m -21 ^h 13 ^m , 2114-2121, 2127-2200, 2203-2225, 2228-2258, 2304-2333, 2335-0005, 0007-0101, 0104-0133.	4 ^h 11 ^m
7-8	2102-2130, 2133-2159, 2204-2234, 2237-2314, 2317-2337, 2343-0033, 0035-0110.	3 ^h 46 ^m
	Total	7 ^h 57 ^m

During the 7.95 hours of monitoring time no flare was observed. It should be noted that the standard deviation of random noise fluctuation $\sigma(\text{mag}) = 2.5\{\log(I_o + \sigma)/I_o\}$ (Andrews et al., 1969) was equal to $\sigma = 0.01$ during all the monitoring time.

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References:
 Andrews, A.D., Chugainov, P.F., Gershberg, R.E. and Oskanian, V.S.: 1969, Comm. 27 IAU, IBVS No. 326.
 Chugainov, P.F.: 1972, Comm. 27 IAU, IBVS No. 744.