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A FLARE ON AD LEONIS

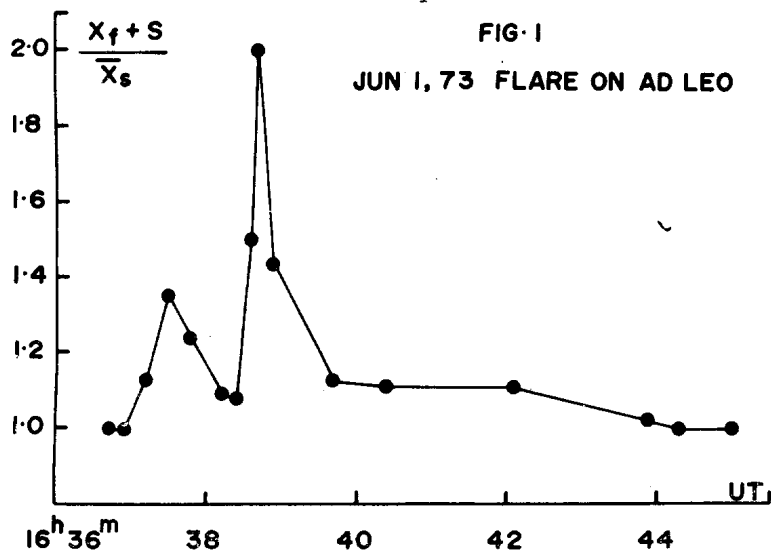
A flare has been recorded on the dMe star AD Leo during an effective photoelectric covering of about 4.3 hours on the nights of June 1 and 3, 1973. Details of observations and findings are contained in Tables I and II respectively. The flare characteristics have been calculated along the lines of Kapoor and Sinval (1972) and Kapoor et al. (1973).

Table I
 Coverage of AD Leo

(56-cm reflector, standard B filter)

Date, 1973(U.T.)	Effective Coverage
June 1	15 ^h 33 ^m - 16 08, <u>16 11 - 42</u> , 16 43 - 17 24, <u>17 26 - 18 32</u> .
June 3	16 42 - 17 12, 17 13 - 17 34 17 38 - 18 15.

- Notes: 1. Times have been rounded off to the nearest minute.
 2. Total Coverage : 4^h20^m.
 3. Flare interval is underlined.
 4. Photomultiplier: 1P21, unrefrigerated; d.c. amplifier; Honeywell Brown Recorder; time constant of the system: 1 sec.



The flare light curve, shown in fig. 1, seems difficult to fit in any of the standard Oskanyan Types. One could regard it as a rapid

succession of two Type I flares.

Table II
Characteristics of Flares of June 1, 1973

UT _{max}	: I : 16 ^h 37 ^m 24 ^s
	II : 16 38 42
Total duration of the flare	: 7.4 min.
$X_{fm} + s/\bar{X}_s$: I : 1.39
	II : 2.11
Δm_B	: I : 0 ^m 36
	:II : 0 ^m 81
σ	: 0.314
Confidence level $3\sigma/\bar{X}_s$: 0.11
P	: 1.31 min
F(z)	: I : 1.91
	II : 1.92
Energies released at flare maxima	: I : 6.39×10^{29} erg sec ⁻¹
	:II : 9.71×10^{29} erg sec ⁻¹
Total emission during the events	: 3.71×10^{31} ergs.
Note: \bar{X}_s is the average steady state intensity deflection minus sky and X_{f+s} that due to flare plus \bar{X}_s minus sky; X_{fm+s} corresponds to flare maximum.	

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