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FLARES OF YZ CMi

The star YZ CMi (dm4.5e) was observed photoelectrically on a total of eight nights in the period Oct.-Dec.1972 and the record of the effective coverage appears in Table I,during which three flares were detected.

The details of the characteristics of the flares and the disc areas involved in the flare events are given in Table II. The techniques and the procedures adopted are the same as employed earlier by us (Kapoor and Sinhal, 1973).

The flares have light curves (Figs.1-3) more or less analogous to the Type II flares of Oskanyan (1969).

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References:

- Kapoor, R.C. and Sinhal, S.D.: 1973, I.B.V.S.(submitted).
Oskanyan, V.S.: 1969, Non-periodic Phenomena in Variable Stars
(Ed.L.Detre, Academic Press, Budapest), 131.

TABLE I

EFFECTIVE COVERAGE OF YZ CMi

(Times are rounded to the nearest minute of U.T.)

Date 1972		$19^{\text{h}}11^{\text{m}}-34^{\text{s}}$	$19^{\text{h}}35^{\text{m}}-58^{\text{s}}$	$20^{\text{h}}00^{\text{m}}-28^{\text{s}}$
30 Oct.		19 11 -34 ,	19 35 -58 ,	20 00 -28 ;
		20 30 -32 ,	20 34 -43 ,	20 44 -21 11;
		21 12 -14 ,	21 16 -44 ,	21 15 -22 17;
		22 20 -46 ,	22 47 -23 09 ,	23 10 -47.
2 Nov.		19 53 -20 09 ,	20 17 -27 ,	20 32 -21 00;
		21 02 -59 ,	22 00 -47 ,	22 50 -23 38.
6 Nov.		19 38 -20 00 ,	20 05 -17 ,	20 25 -41 ;
		20 52 -21 14 ,	21 34 -46 ,	21 48 -22 04;
		22 06 -13 ,	23 25 -44 ,	
8 Nov.		19 00 -22 ,	19 28 -40 ,	20 01 -06;
		20 07 -13 ,	20 24 -43 ,	22 08 -26.
13 Nov.		19 07 -17 ,	20 07 -16 ,	21 50 -22 43;
		22 46 -23 50 .		
4 Dec.		17 55 -58 ,	18 01 -24 ,	18 37 -44;
		18 46 -50 ,	18 53 -19 06 ,	19 07 -14;
		19 22 -49 ,	19 58 -20 20 ,	20 22 -50;
		20 52 -21 01 ,	21 25 -37 ,	21 46 -51;
		21 52 -57 ,	22 40 -46 ,	23 01 -16;
		23 22 -41 .		
6 Dec.		17 14 -47 ,	17 49 -18 04 ,	18 06 -13;
		18 15 -19 ,	18 20 -26 ,	18 42 -19 25.
11 Dec.		16 08 -09 ,	16 11 -22 ,	16 24 -17 45;
		17 57 -19 31 ,	19 37 -20 53 ,	20 55 -23 48.

(Total Coverage: $26^{\text{h}}26^{\text{m}}$ spread over 8 nights)

TABLE II

CHARACTERISTICS OF THE FLARES ON YZ CMi

(dM4.5e; V=+11.20; B-V=+1.61)

Date	UT _{max}	Flare Duration			P _{min}	F _z	Energy	Excess
1972		before max.	after max.	$\frac{x_{\text{fm+s}}}{x_s}$	$\frac{\Delta m_B}{X_S}$	relea-	sed at	during
		t _b	t _a	\dot{x}_s		flare	the event	
6 Nov.	$20^{\text{h}}33^{\text{m}}48^{\text{s}}$	2.30^{m}	3.80^{m}	1.98	0.74	0.027	1.41	1.47
4 Dec.	18 14 32	0.55	3.75	1.75	0.61	0.060	0.66	1.66
11 Dec.	23 30 53	0.70	12.90	1.90	0.70	0.017	2.49	1.37
								10^{29} erg/sec
								10^{30} ergs

6 Nov. $20^{\text{h}}33^{\text{m}}48^{\text{s}}$ 2.30^m 3.80^m 1.98 0.74 0.027 1.41 1.47 2.15 9.20
 4 Dec. 18 14 32 0.55 3.75 1.75 0.61 0.060 0.66 1.66 1.91 4.30
 11 Dec. 23 30 53 0.70 12.90 1.90 0.70 0.017 2.49 1.37 2.07 16.24

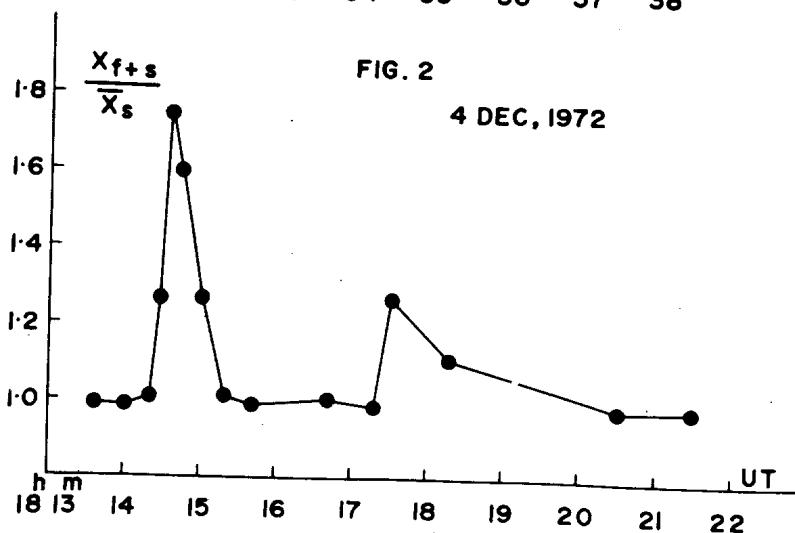
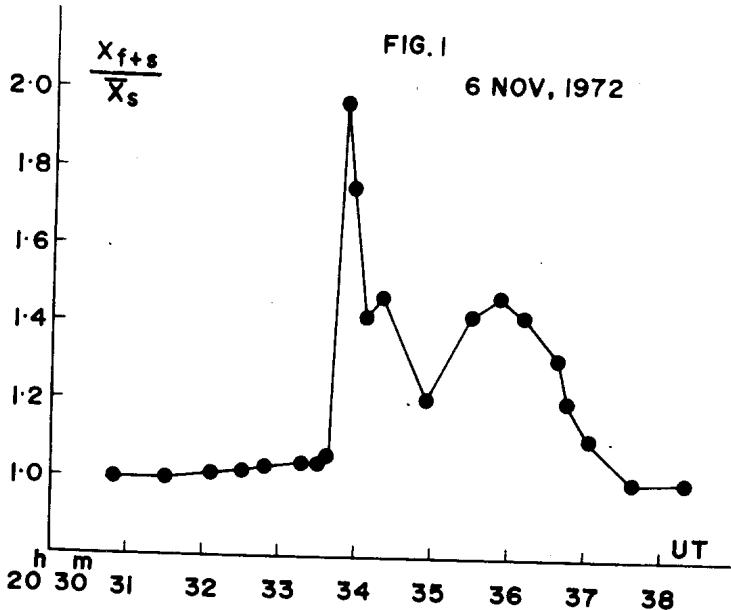


FIG. 3

II DEC, 1972

