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PHOTOELECTRIC OBSERVATIONS OF THE FLARE STAR YZ CMi

The results of photoelectric observations of the flare star YZ CMi, made through a standard B filter with the 22" reflector of the Uttar Pradesh State Observatory, Naini Tal are given. During 22.8 hours of monitoring spread over eight nights, during the period 27 December 1970 - 24 February 1971, 3 major flares were recorded. The details are given in Table I. Excluding one observation, all others were made during the clear dark moon-periods.

The light curves of the observed flares are presented in Fig. 1-3. The preliminary results showing the flare characteristics viz. time of flare maximum, duration before and after maximum, relative errors of observations, integrated intensities and air masses are drawn out, following the notations proposed by OSKANIAN (IBVS No. 488) are given in Table II.

We would like to mention that a few flarelike effects that appear on the tracings have been left over at this stage, pending verification.

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Table I

## Coverage of YZ CMi

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

U. T. of Coverage in hours and minutes

Date 1970.

27 Dec.

19 <sup>h</sup> 55 <sup>m</sup> -56 <sup>m</sup> ,	20 01-15,	20 19-23,	20 24-31,	20 34-41,
20 43-50,	20 52-2100,	21 02-6,	21 09-15,	21 17-20,
21 20-26,	21 27-38,	21 39-42,	21 43-47,	21 48-51,
22 04-12,				

1971

17 Jan.

16 47-53,	16 54-57,	17 11-18,	17 19-25,	17 26-33,
17 34-36,	18 46-57,	18 58-19 04,	19 09-16,	19 19-30,
19 31-35,	19 36-47,	19 48-54,	20 28-44,	20 53-21 07,
21 22-15,				

29 Jan.

14 31-32,	14 35-39,	14 40-41,	14 49-53,	14 54-15 06,
15 07-10,	15 11-15,	15 17-21,	15 25-43,	15 44-53,
15 54-16 01,	16 08-12,	16 13-16,	16 20-30,	16 32-33,
17 16-17,	17 19-26,	17 33-42,	17 43-53,	17 54-18 01,
18 05-20,	18 21-22,	18 27-37,	18 40-53,	19 01-13,
19 14-20,	19 27-35,	19 37-53,	19 54-20 05,	20 06-22,
20 27-39,	20 41-47,	20 48-53,	20 54-21 00,	21 05-17,
21 20-21 23,				

30 Jan.

14 44-51,	14 54-55,	14 56-59,	15 02-04,	15 05-07,
15 08-12,	15 19-25,	15 26-34,	15 35-41,	15 42-58,
15 59-16 04,				

31 Jan.

14 31-40,	14 44-15 02,	15 03-14,	15 17-32,	15 34-43,
15 44-45,	15 52-16 08,	16 08-15,	16 16-24,	16 25-29,
16 34-43,	16 44-52,	16 53-58,	17 48-18 04,	18 05-09,
18 13-24,	18 25-41,	18 42-51,	18 52-19 04,	19 05-07,
19 09-16,	19 18-32,	19 33-47,	19 49-50,	19 53-20 11,
20 12-17,	20 19-31,	20 33-41,	20 46-58,	20 59-21 08,
21 18-25,	21 28-31,			

Table I (Cont.)

2	Feb.	14 17-20, 15 05-13,	14 31-34, 15 14-26,	14 39-44, 15 27-33,	14 45-57, 15 34-40.	14 58-15 04,
23	Feb.	16 33-35, 17 43-18 01, 18 59-19 11,	16 36-42, 18 03-22, 19 13-29,	17 09-10, 18 24-41, 19 30-38,	17 11-23, 18 48-49, 19 39-46,	17 25-41, 18 50-58, 19 51-56.
24	Feb.	14 17-18, 14 53-15 01, 15 37-40, 16 30-39, 17 28-33, 17 56-18 02, 18 57-19 09, 20 21-32,	14 20-37, 15 02-05, 15 41-48, 16 39-46, 17 34-42, 18 04-20, 19 29-36, 20 33-36,	14 39-41, 15 06-20, 15 49-16 10, 16 48-56, 17 43-45, 18 21-36, 19 39-49, 20 37-38.	14 46-47, 15 22-32, 16 11-12, 16 57-17 07, 17 47-49, 18 38-44, 19 50-20 08, 20 10-20,	14 49-52, 15 33-36, 16 13-28, 17 09-27, 17 51-55, 18 45-55, 20 10-20,

Table II

Flares of YZ CMi  
Observed at Uttar Pradesh State Observatory, Naini Tal  
27 December 1970 - 24 February 1971

Date	UT <sub>max</sub>	Duration of flare before and after maximum		$\frac{X_{fm}}{X_s}$	$\frac{\sigma}{X_s}$	P	F(z)
		t <sub>b</sub>	t <sub>a</sub>				
Minutes							
1970							
27 Dec.	20 <sup>h</sup> 08 <sup>m</sup> 52 <sup>s</sup>	1.33	50.11	2.24	0.026	8.30	1.11
1971							
29 Jan.	15 <sup>h</sup> 35 <sup>m</sup> 30 <sup>s</sup>	0.38	12.75	0.51	0.040	1.78	1.33
24 Feb.	19 31 21	0.35	2.35	0.45	0.013	0.31	1.71

YZ CM1 FLARES

