

COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS

NUMBER 338

Konkoly Observatory
Budapest
1969 March 29

PHOTOELECTRIC OBSERVATIONS OF UV Cet AND YZ CMi

This is a report on photoelectric observations of the flare stars UV Cet and YZ CMi made as a part of co-operative programmes in the periods of 14-28 October 1968 and 11-25 January 1969.

Simultaneous registrations in the wave-length intervals 3300-3640, 4140-4290 and 5100-5300 Å were obtained with a three-channel photometer at the 70-cm reflector. The data given below refer only to the interval 4140-4290 Å.

The time intervals covered by observations are included in Table I. Brackets denote uncertain observations. The total coverage for UV Cet is equal to 24.2 hours and for YZ CMi to 34.0 hours. Table II contains the flare characteristics according to the proposals given earlier (1). The quantity Δm_{lim} is found by the formula

$$\Delta m_{lim} = -2.5 \log 3 \sigma / I_0$$

and the integrated intensity P by the formula

$$P = \int \frac{I_{0+f} - I_0}{I_0} \cdot dt$$

The light curves of flares (Figs.1,2) have the relative intensities $(I_{0+f} - I_0) / I_0$ as ordinates and Universal Times as abscissae.

P.F. CHUGAINOV
Crimean Astrophysical Observatory

(1) A.D.Andrews, P.F.Chugainov, R.E.Gershberg, V.S.Oskanjan
I.B.V.S. No 326, 1969

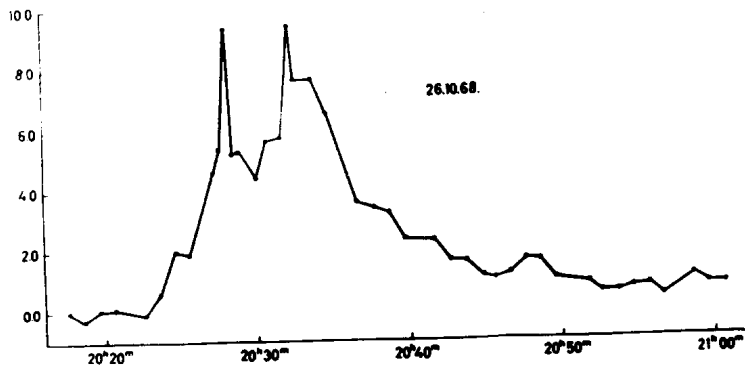
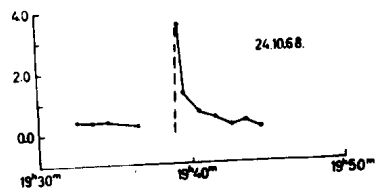


Fig. 1

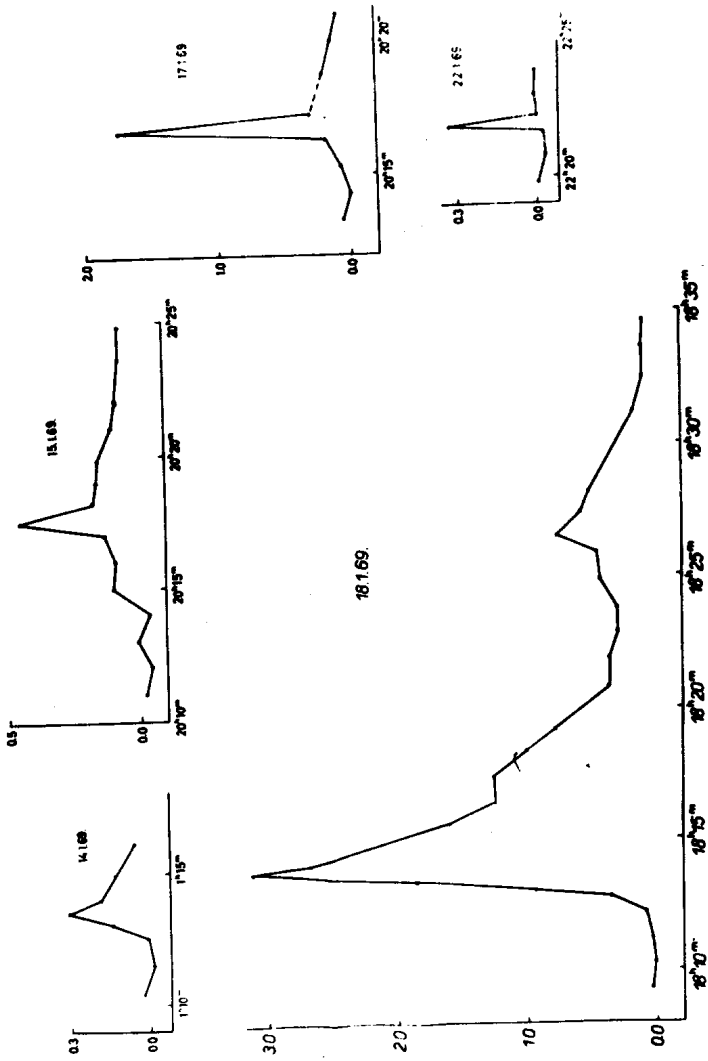


FIG. 2

Table I.

Star	Date	Coverage (UT)
UV Cet	October 22 1968	18 ^h 40 ^m -24 ^h 00 ^m
	23	00 ^h 00 ^m -01 ^h 00 ^m , 18 ^h 40 ^m -24 ^h 00 ^m
	24	00 ^h 00 ^m -00 ^h 29 ^m , 18 ^h 48 ^m -19 ^h 37 ^m , 19 ^h 39 ^m -22 ^h 59 ^m
	25	18 ^h 56 ^m -20 ^h 31 ^m
	26	18 ^h 22 ^m -21 ^h 01 ^m , 21 ^h 23 ^m -22 ^h 14 ^m , 22 ^h 29 ^m -23 ^h 00 ^m
	27	17 ^h 45 ^m -20 ^h 02 ^m
YZ CMi	January 13 1969	22 ^h 20 ^m -23 ^h 45 ^m , 23 ^h 54 ^m -24 ^h 00 ^m
	14	00 ^h 00 ^m -02 ^h 20 ^m
	15	(17 ^h 37 ^m -18 ^h 17 ^m), 18 ^h 17 ^m -19 ^h 39 ^m , 19 ^h 43 ^m -19 ^h 49 ^m , 20 ^h 08 ^m -20 ^h 26 ^m , (20 ^h 26 ^m -21 ^h 13 ^m), 21 ^h 22 ^m -22 ^h 40 ^m , (22 ^h 40 ^m -23 ^h 42 ^m)
	17	19 ^h 29 ^m -20 ^h 19 ^m , 20 ^h 28 ^m -24 ^h 00 ^m
	18	00 ^h 00 ^m -02 ^h 00 ^m , (17 ^h 33 ^m -18 ^h 00 ^m), 18 ^h 00 ^m -18 ^h 43 ^m , 18 ^h 52 ^m -19 ^h 15 ^m , 19 ^h 25 ^m -20 ^h 49 ^m , 20 ^h 53 ^m -22 ^h 05 ^m , (22 ^h 05 ^m -22 ^h 55 ^m), 22 ^h 55 ^m -24 ^h 00 ^m
	19	00 ^h 03 ^m -00 ^h 09 ^m , 21 ^h 28 ^m -22 ^h 26 ^m
	22	17 ^h 10 ^m -23 ^h 07 ^m , (23 ^h 07 ^m -23 ^h 24 ^m), 23 ^h 24 ^m -24 ^h 00 ^m
	23	00 ^h 00 ^m -01 ^h 15 ^m

Table II.

Star	Date and UT of flare maximum	Durations before and after maximum, minutes		Δm	Δm_{lim}	Inte- grated inten- sity minutes	Air mass
		t_b	t_a				
UV Cet	Oct. 24 19 ^h 39 ^m 2	?	5	1.63	0.68	3.6	2.43
	Oct. 26 20 ^h 28 ^m 0	5.4	33	2.54	0.52	90.2	2.20
YZ CMi	Jan. 14 01 ^h 13 ^m 5	1.0	2	0.28	0.15	0.40	1.98
	Jan. 15 20 ^h 17 ^m 5	(3.5)	7	0.40	0.20	1.20	1.42
	Jan. 17 20 ^h 16 ^m 6	0.4	4	1.07	0.17	1.44	1.40
	Jan. 18 18 ^h 13 ^m 8	1.6	21	1.53	0.26	15.2	1.99
	Jan. 22 22 ^h 21 ^m 9	0.3	0.4	0.31	0.18	0.10	1.37