

COMMISSION 27 OF THE I. A. U.
 INFORMATION BULLETIN ON VARIABLE STARS
 NUMBER 274

Konkoly Observatory
 Budapest
 1968 May 21

PHOTOELECTRIC OBSERVATIONS
 OF YZ CANIS MINORIS

During the second part of the YZ CMi international patrol, planned for 1968 by the working group on flare stars, we carried out observations of this star with a 91 cm Cassegrain-telescope at our stellar station in Serra La Nave (Catania). Our photometer was equipped with an EMI 6256 A unrefrigerated photomultiplier and BG 12(1mm) + GG13(2mm) filters ($\lambda_{\text{equ}} = 4300 \text{ \AA}$).

From February 21 to March 7 we collected about 17 hours of observations in three nights. The photoelectric coverage is summarized in Tab.I and the characteristics of the four observed flares in Tab.II. The flare light curves are drawn in the figures. The coverage times include the sky light measurements, which lasted about 30 seconds and were made every 15-20 minutes.

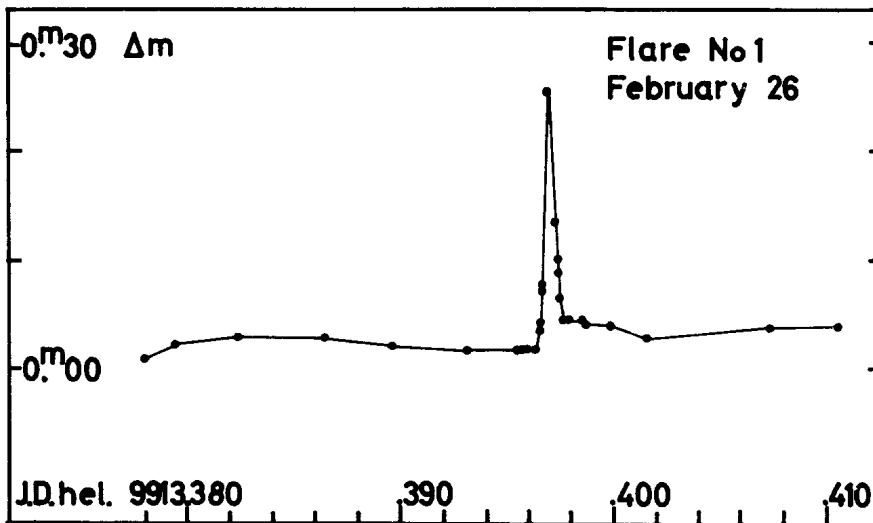
TAB.I - Photoelectric coverage.

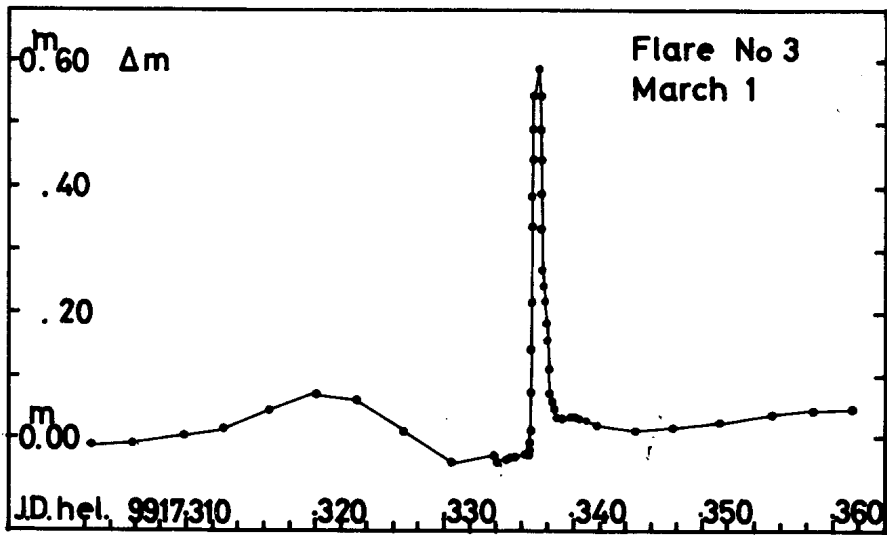
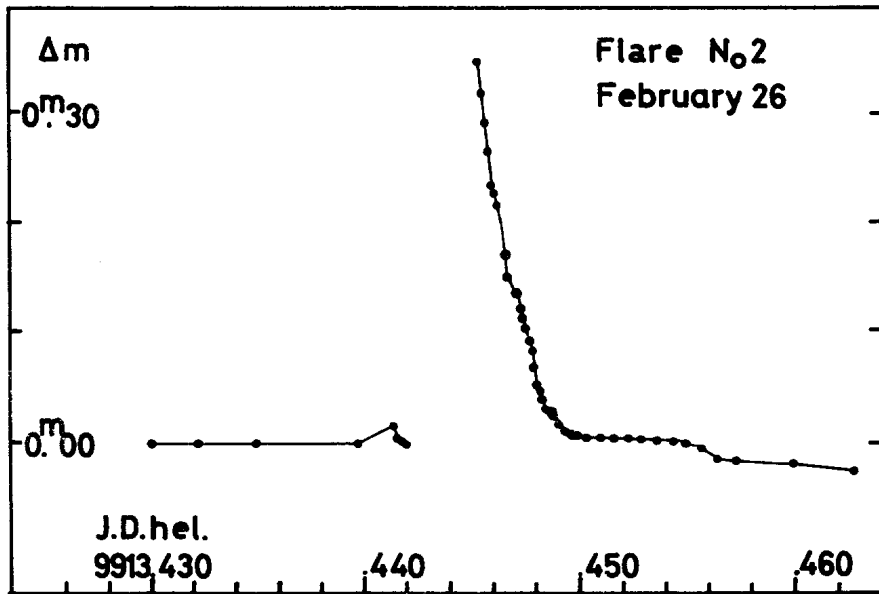
Day	U T	Total
February 26/27	20 ^h 01 ^m - 21 ^h 47 ^m	
	21 52 - 22 31	
	22 35 - 01 21	4 ^h 11 ^m
March 1/2	18 28 - 00 56	6 28
" 3/4	18 25 - 00 51	6 28

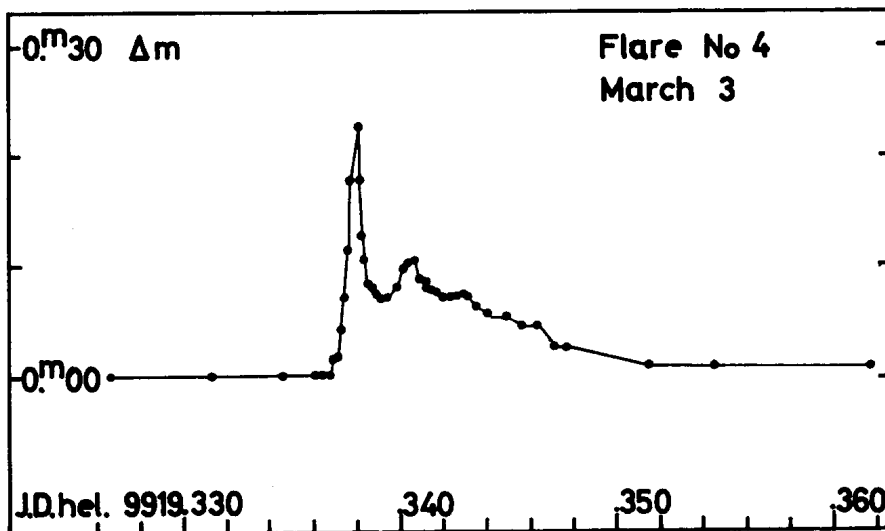
We notice that during the first night of our observations we made two measurements of a comparison star because we were interested also in long period variations at minimum. During the second of these measurements, made from 22^h31^m to 22^h35^m (TU), a second flare happened and we could observe only part of the decay branch. The time of maximum given for this flare has been deduced by a rough extrapolation.

TAB.II - Observed flares.

No	Date of the maximum			Δm (max)	Rise time (minutes)		Total dur. (minutes)	
	U	T	JD _{hel}		d	d'	D	D'
1	Feb. 26	21 ^h 26 ^m .1	913.3972	0 ^m .24	0 ^m .9	0 ^m .3	7 ^m .2	0 ^m .8
2	"	22 33.4	913.4440	-	-	-	-	-
3	Mar. 1	19 59.9	917.3371	0 ^m .62	1.4	0.6	?	1.7
4	Mar. 3	20 01.3	919.3380	0 ^m .23	1.4	0.9	23.3	11.4







As far as it concerns the total duration (D) of the flare No.3, the uncertainty is due to its very slow decay after a first relatively rapid decrease. In order to avoid this difficulty we have introduced (1) the parameters d' (time rise) and D' (total duration) both referred to that part of the flare, for which we have

$$\Delta m \geq 20 \% (\Delta m)_{\max}$$

Some more details will be published in the "Memorie della Societa Astronomica Italiana".

Catania Astrophysical Observatory
May 10, 1968.

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Reference:

- (1) S.Cristaldi, M.Narbone, M.Rodonò, Mem.Soc.Astr.Ital., 1968 (in press).