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FLARE ACTIVITY OF YZ CMi

The flare star YZ CMi (M_V=11.6, RA=$7^h43^m16^s$ $\delta=3^o37'12''$,1974) was monitored photoelectrically on 21 October 1974, during a period of simultaneous observations with the ANS Satellite. The star was observed through the U filter of the Johnson and Morgan System.The stellar intensity was measured against the sky-back-ground only, without observing any comparison star. During the observing interval 22^h04^m UT to 23^h33^m UT, one flare was recorded with its maximum at UT $23^h20^m28^s$.

The flare light curve (Fig.1) shows that the flare is a rapid succession of two Oskanyan type I flares. It appears that energy has been added at various times during the development and decay of the flare event (Bopp and Moffett 1973).

Flare characteristics were computed using the techniques and procedure as applied earlier (Oskanyan, 1970; Bhatt and Sinvhal,1971) and are given in Table I. The detailed spectral energy distribution during active state is not exactly known and varies from flare to flare (Moffett and Bopp, 1971). In the computations, it has been assumed that the spectral energy distribution in the U-band is the same during a flare event as in the quiescent state.

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References:

1) Bopp, B.W., Moffett, T.J., 1973, Ap.J.,185,239
2) Bhatt, T.R., Sinvhal, S.D.,1971, I.A.U.Colloquium,15,124.
3) Moffett, T.J., and Bopp, B.W.,1971,Ap.J. (Letters) ,168,L117.
4) Oskanyan, V.S.,1970, I.B.V.S. No.488

Table I

Characteristics of flare on YZ CMi (dM 4.5e)

Date 1974	UT max	Flare duration Before max tb	After max ta	$\frac{X_{fm+s}}{\bar{X}_s}$	Δm_u	$\frac{\sigma}{\bar{X}_s}$	P (min)	F(z)	Energy released at flare max 10^{29} ergs/s	Total emiss. during the flare up 10^{30}ergs
Oct. 21	$23^h20^m28^s$	0.5^m	4.2^m	1.54	0.47	0.033	.615	1.15	8.9	2.14

Notes 1) Monitoring interval 22^h04^m UT to 23^h33^m UT.

2) Photomultiplier tube used: EMI 6094S thermoelectrically cooled to -20^oC.