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FLARES OF AC +8°142 - 393.

In the course of our programme of photoelectrical monitoring of a number of dM, dMe and UV Ceti type stars we observed the star AC +8°142 - 393, Gliese 735 (1), spectral type dM2e. Nothing about the flare activity of this star was known.

Our photoelectric observations were made in the system similar to B with the 64-cm meniscus telescope of the Crimean Astrophysical Observatory. The dates and UT of coverage are given in Table 1. Table 2 contains the following characteristics of flares; moment of maxima (UT); duration of flares before and after maximum, t_b and t_a (in minutes); amplitude of flare Δm_B in stellar magnitudes; the limiting amplitude of a flare Δm_{lim} which could be detected; integrated intensities P (in minutes); and the air masses $M(z)$. The detailed description of the manner in which these characteristics should be obtained was given earlier (2). The light curves of flares in relative intensities are given on the figures. The total coverage was 30^h06^m.

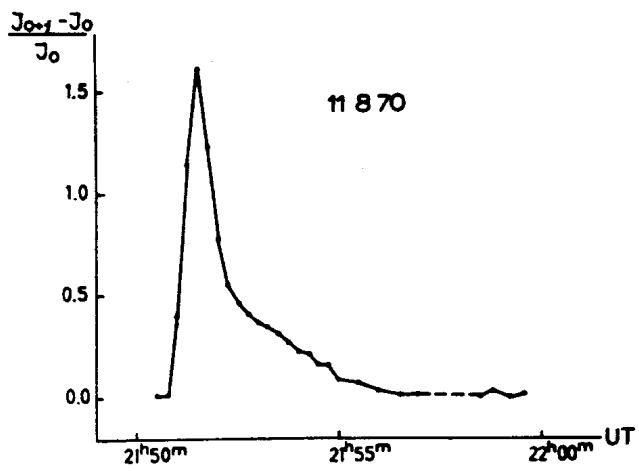
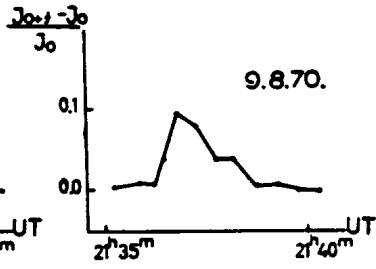
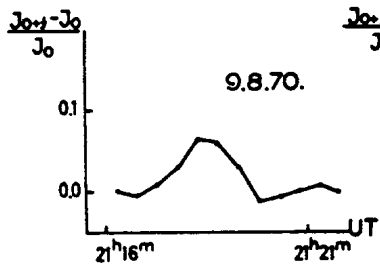
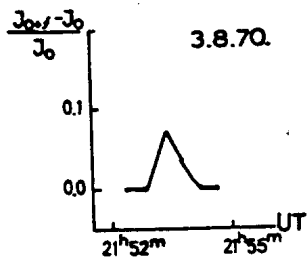
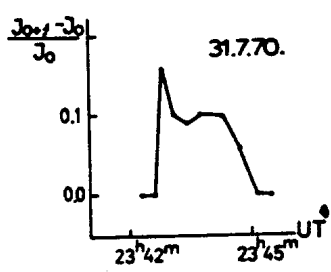


Table 1

Date, 1970	Coverage U.T.
31 July	21 ^h 35 ^m -21 ^h 39 ^m ; 21 ^h 43 ^m -22 ^h 05 ^m ; 22 ^h 07 ^m -22 ^h 25 ^m ; 22 27 -22 57 ; 23 15 -23 36 ; 23 38 -24 00 ;
1 August	00 02 -00 25 ;
3 August	21 47 -22 10 ; 22 11 -23 36 ; 23 37 -23 57 ; 23 59 -24 22 ;
4 August	00 25 -00 37 ; 21 12 -21 22 ; 21 23 -21 44 ; 21 45 -22 09 ; 22 10 -22 32 ; 22 33 -23 46 ;
6 August	21 10 -21 45 ; 21 52 -23 35 ; 23 48 -23 56 ;
7 August	21 11 -22 06 ; 22 07 -23 05 ; 23 07 -23 40 ;
8 August	21 24 -22 20 ; 22 21 -22 32 ; 22 40 -23 40 ;
9 August	19 07 -19 25 ; 19 27 -20 09 ; 20 11 -20 33 ; 20 34 -22 30 ; 22 35 -22 51 ; 22 52 -23 19 ; 23 26 -23 35 ;
10 August	20 15 -20 43 ; 20 46 -21 24 ; 21 25 -21 47 ; 21 53 -22 13 ; 22 15 -22 28 ; 22 29 -22 50 ; 22 55 -23 09 ; 23 10 -23 27 ;
11 August	18 44 -19 08 ; 19 12 -19 36 ; 19 37 -20 02 ; 20 04 -20 31 ; 20 32 -21 09 ; 21 11 -22 00 ; 22 09 -22 29 ; 23 05 -23 20 ;
13 August	19 32 -19 54 ; 19 55 -20 02 ; 20 04 -20 24 ; 20 25 -20 36 ; 20 57 -21 18 ; 21 19 -21 46 ;
20 August	18 16 -18 21 ; 18 22 -18 44 ; 18 45 -19 06 ; 19 07 -19 33 ; 19 35 -19 58 ; 20 00 -21 00 ; 21 01 -21 23 ;
22 August	18 25 -18 47 ; 19 59 -20 04 ; 20 06 -20 35 ; 20 37 -21 09 ; 21 11 -21 35 .

Table 2.

Date and UT of flare maximum	t_b	t_a	Δm_B	Δm_{lim}	P	M(z)
31 July 23 ^h 42 ^m 8	0 ^m 2	2 ^m 4	0 ^m 15	0 ^m 05	0.11	2.0
3 Aug. 21 53.3	0.5	0.9	0.07	0.02	0.05	1.4
9 Aug. 21 18.4	1.3	1.3	0.06	0.04	0.09	1.4
9 Aug. 21 36.7	0.5	2.0	0.10	0.04	0.13	1.4
11 Aug. 21 51.5	0.7	5.0	1.00	0.03	2.18	1.5

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References

- (1) W.Gliese, Veröffentlichungen des Astronomischen Rechen - Institut in Heidelberg
- (2) A.D.Andrews, P.F.Chugainov, R.E.Gershberg, V.S.Oskanjan; IBVS No.326, 1969.