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FLARE STARS IN THE PLEIADES

According to the programme of regular search for flare stars in the Pleiades region at the National Astronomical Observatory Rozhen of the Bulgarian Academy of Sciences, patrol photographic plates have been taken with the 20"/28" Schmidt telescope in U-light (ZU21 with a UG2 filter) and in pg-light (ZU21 without filter) during the period September 1983 - October 1984.

Table I gives some details about the observational material obtained.

Table I

Telescope	Light	Time of exposure	Number of plates	Number of exposures	$t_{\text{eff}}$
20"/28"	U	5 min.	24	140	11 <sup>h</sup> 40 <sup>m</sup>
		10 min.	18	101	16 <sup>h</sup> 50 <sup>m</sup>
	pg	5 min.	12	72	6 <sup>h</sup>

A new flare star and 6 flare events of known flare stars have been discovered. Table II summarizes our results. The successive columns give the following data:

1. Rozhen designation of the Pleiades flare stars according to Tsvetkov et al. (IBVS, No.2338, 1983) have been continued;
2. Hertzsprung number;
- 3.-4. Coordinates for 1900.0;
- 5.-6. Photographic magnitude at minimum and amplitude of the observed flare events in U-light;
7. Date of the flare event (U.T.);
8. Identification of the flare stars by the Catalog and Identification Charts of the Pleiades Flare Stars (Haro et al., Bol. Inst. Tonantzintla, 3, No. 1, 1982).

The identification charts of those new flare stars (R18, R20, R21, R22, R24 - Tsvetkov et al., IBVS, No.2224, 1982; IBVS, No.2338, 1983, and the present paper) which are not included in the Tonantzintla Catalog (Haro et al.,

Table II

Rozhen No.	HII	R.A. 1900	D. 1900	$m_{Umin}$	$\Delta m_U$	Date	Identification
R24		$3^h 39^m 4$	$22^\circ 22'$	20.2	5.3	30.09.1984	
R25	1061	3 40.6	23 48	16.6	2.7	7.09.1984	TC224
R26	1355	3 41.4	23 43	17.3	2.2	7.09.1984	TC262
R9	2411	3 43.7	24 01	16.9	0.7	6.10.1983	TC377
R9	2411	3 43.7	24 01	16.9	2.4	30.09.1984	TC377
R9	2411	3 43.7	24 01	16.9	0.6	1.10.1984	TC377
R27	2602	3 44.3	23 41	18.7	3.2	7.09.1984	TC391

1982) are shown in Figure 1. The scale of the charts corresponds to the scale of the identification charts of Haro et al. (1982). North is at the top, east is to the left.

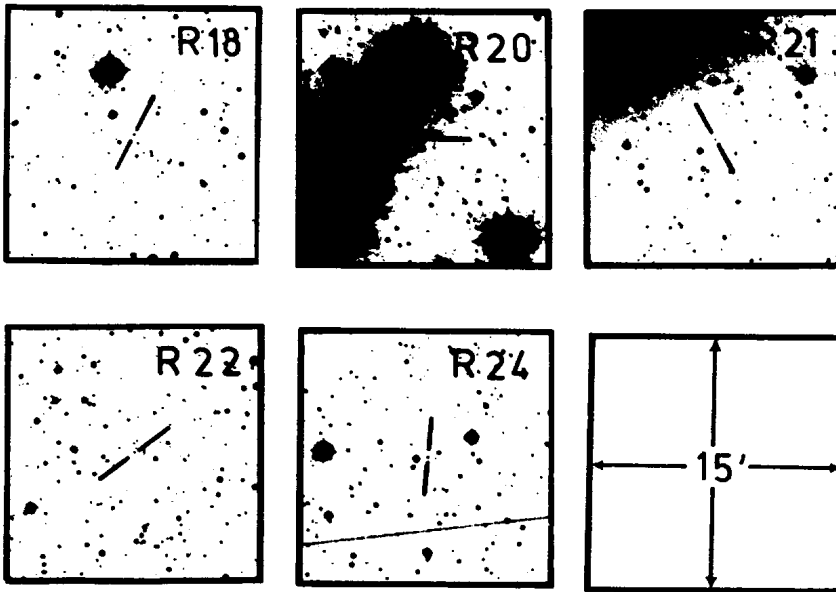


Figure 1

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