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NEW FLARE STARS IN THE PLEIADES OBSERVED AT ASIAGO
 FROM SEPTEMBER 1969 TO FEBRUARY 1970

The systematic searching of flare stars in the Pleiades which is still carried out at the Astrophysical Observatory of Asiago, has brought, in the fall and winter 1969-70, to the discovery of twenty-one flares and sixteen new flare stars. One-hundred and sixty plates (Kodak 103a-0 or 0a-0, without filter), each with five successive exposures of five to eight minutes, covering a total time of observation of 93^h43^m, have been taken with the 67-90-215cm Schmidt telescope of Asiago. In Table I the flares are numbered from 32 to 52. Flares 1-13 have been published in a precedent paper by Rosino (Asiago Co. 189, 1966) and flares 14-31 in a paper by Rosino and Pigatto (Asiago Co. 231, 1969). Circumstances of the flares and identification charts will be reported in a forthcoming paper (Mem.Soc.Astr.Ital. Vol. XLI, No.4). The Table I gives coordinates, pg magnitudes at maximum and normal minimum, date of the flare and Catalogue number of the corresponding star when available. Most of the flare stars have an infrared (Kodak IN hypersens. + RG5) magnitude from 1.5 to 2.5 brighter than the blue.

It must be observed that, while the majority of the flare stars in the Pleiades, including those with large amplitude, have a time of decline not longer than 20-40 minutes or even less, we have found two stars (No.22 of the precedent list, corresponding to H 138) and No.48 of Table I which have shown flares having a time of decline of several hours. We report here the circumstances of the flare No.48, observed on Dec.2, 1969:

<u>Flare No.48</u>	UT 19 ^h 41 ^m	13.3 pg	20 ^h 42 ^m	14.7	21 ^h 44 ^m	15.35
	49	13.5	50	14.8	57	15.45
	57	13.7	58	15.0	22 05	15.6
	20 05	14.0	21 12	15.1	13	15.6
	13	14.0	20	15.1	21	15.6
	26	14.3	28	15.2	29	15.6
	34	14.6	36	15.3	45	15.9
					53	15.9

The star is very weak in blue (m_{pg} 19) and even in infrared.

TABLE I - New Flares in the Pleiades Field observed at Asiago in 1969-70.

N	1900.0 RA	D.	Magnitudes (pg)	Date (1969-70)	Ident.
32	3h36 ^m 5"	+22° 37'9	13.3-18: ?	Sep 11	
33	40 54	24 54.3	16.8-17.5	" 15	
34	43 3	24 35.7	15.5-19:	" 16	
35	35 4	22 01.6	14.2-17.2	" 21	
36	46 54	25 00.9	16.6-19:	Oct 4	
37	50 15	25 12.1	15.7-(18	" 10	
38	39 16	22 44.2	15.7-18:	" 12	
39	41 42	24 09.1	16.1-19:	" 14	
40	41 2	22 56.6	15.3-16.5	" 15	
41	43 45	24 00.8	14.3-15.7	" 16	HII 2411
42	34 10	24 05.4	15.5-18:	" 17	
43	34 34	24 49.3	15.1-19:	" 17	Haro 102
44	44 00	25 05.8	13.2-14.7	" 19	" 108
45	43 19	23 45.5	13.7-16.5?	" 19	
46	49 42	22 30.8	14.8-16.1	" 21	
47	39 52	25 33.0	14.9-17.0	Dec 1	
48	42 15	26 1.8	13.3-19:	" 2	
49	41 08	23 18.4	14.8-16.4	" 29	HII 1286 Haro 16
50	45 56	23 45.1	13.3-18.5:	Jan 1	
51	43 45	24 00.8	14.5-15.5	Feb 3	HII 2411
52	31 58	22 22.3	14.5-(17.5	" 3	

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