

COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS
Number 3103

Konkoly Observatory
Budapest
21 October 1987
HU ISSN 0374 - 0676

FLARE STAR OBSERVATIONS IN THE PLEIADES-REGION

Between 1975 and 1985 more than 300 multiexposure survey plates were obtained in the mountain station of the Konkoly Observatory. The exposures were taken on Kodak 103a0 type plates through UG2 filter using our 60/90 cm Schmidt telescope. The observations were made by the chain exposure method. Each plate contains 6 successive images for every star with a 10 minute exposition time. The plates were checked by a Zeiss Blinkcomparator and the image series of the flare events were measured by a Cuffey Iris Astrophotometer (Kelemen, 1986). The accuracy of the photometric measurements are rather poor due to the well known difficulties of the ground based ultraviolet photographic observations. Because of the relative high error level my list contains only those flare events where the measured U amplitude exceeds one magnitude.

The celestial coordinates of the flare stars which are brighter than 18 magnitude in their quiet state, were also measured. The coordinate measurements were carried out with an Ascorecord measuring device. The accuracy of the measured coordinates is:

in right ascension ± 0.53 s

in declination ± 1.4 "

Table I. contains the measured data.

Table I

No.	(1) R.A. (1900)	(2) D.	(3) U _{min}	(4) U _{ampl.}	(5) J.D. 244...	(6) Remark
1	—	—	17.5	2.5	2776	(A)
2	3 44 45	24 59 02	>18	>3.1	2776	(465)
3	3 39 54	23 33 41	18	3.4	3428	(225)
4	3 39 21	24 47 40	>18	>2.6	3428	(193)
5	3 43 49	24 48 26	18	2.8	3429	(429)
6	3 45 30	24 04 06	16.5	2	3429	—
7	3 39 37	22 14 39	>18	>3.2	3452	(208)
8	3 33 33	23 10 23	17.6	3.7	3452	(13)
9	3 45 46	23 53 07	>18	>2.1	3454	(502)
10	—	—	>18	>1.8	3454	(B)
11	3 46 59	22 09 58	17.7	2.3	3455	(532)
12	—	—	17.8	2.6	3455	(C)
13	3 40 17	25 40 23	17.8	3.1	3455	(240)
14	—	—	>18	>2.1	3455	(D)
15	—	—	>18	>2.1	3455	(D)
16	3 47 41	23 44 23	17	2.1	3455	—
17	3 41 06	23 51	>18	>4	3455	—
18	3 38 18	23 33 44	>18	>1.2	3455	—
19	3 32 35	23 14 52	>18	>2.4	3455	—
20	3 32 35	23 14 52	>18	>1.6	3455	—
21	3 40 28	23 43 40	>18	>1.6	3455	—
22	3 43 42	24 01	18	2.8	3455	—
23	3 43 42	24 01	18	1.9	3455	—
24	3 45 22	22 00 58	>18	>2.2	3455	—
25	3 41 60	22 20 46	>18	>1.4	3455	(332)
26	—	—	17.5	1.9	3455	(E)
27	—	—	>18	>3.9	3484	(F)
28	3 36 53	24 22 33	>18	>5	3484	—
29	3 43 42	24 01	17	2.4	3484	—
30	3 43 42	24 01	17	2.4	3484	—
31	3 43 42	24 01	15.7	5	3484	—
32	—	—	>18	>2.6	3488	(G)
33	3 40 59	25 09 45	>18	>2.2	3488	—
34	3 43 42	24 01	>18	>2.9	3488	—
35	3 47 25	22 22 26	>18	>3	3488	(540)
36	3 41 43	23 59 35	>18	>3.2	3488	(312)
37	3 41 43	23 59 35	>18	>2.1	3488	(312)
38	3 45 13	23 38 09	17.6	2.9	3488	—
39	3 37 13	24 22 31	16.7	2.8	3488	—
40	3 37 13	24 22 31	16.7	2.1	3488	—
41	3 38 00	24 07	17.6	3.4	3488	—
42	3 47 32	22 39 16	>18	>1.7	3489	—
43	3 47 32	22 39 16	>18	>1.5	3489	—
44	3 37 03	23 15 23	17.5	4.4	3489	(87)
45	3 41 46	25 12 54	17	2	3836	—
46	—	—	>18	>2.6	4113	(H)
47	3 32 34	23 31 29	17.7	2.4	4118	—
48	3 45 02	21 53 53	17.8	3.4	4118	(484)
49	3 45 02	21 53 53	17.8	3.1	4118	(484)
50	3 42 45	24 14 58	>18	>1.7	4118	(384)

Table I (cont.)

No.	(1) R.A. (1900)	(2) D.	(3) U _{min}	(4) U _{ampl.}	(5) J.D. 244...	(6) Remark
51	3 40 37	21 54 44	18	2.3	4118	(253)
52	3 43 42	24 01	17.7	3.1	4143	-
53	3 39 11	23 22 09	16.6	2.4	4143	(176)
54	3 38 29	23 29 24	17.1	1.6	4172	-
55	3 34 56	24 22 24	17.8	2	4172	-
56	3 39 15	23 06 17	18	2	4172	(181)
57	3 34 40	23 26 06	>18	>1.4	4172	-
58	3 39 29	24 26 24	>18	>2	4172	(198)
59	3 40 33	23 41 16	18	2.5	4172	-
60	3 42 44	24 18 50	>18	>2.7	4172	(382)
61	3 42.8	24 19	>18	>1.9	4172	(346)
62	—	—	>18	>3.2	4172	(I)
63	3 35 17	23 46 43	>18	>3.3	4172	(37)
64	3 41 47	24 10 31	>18	>2.2	4172	(319)
65	3 41 29	24 32 04	16.7	3.4	4172	(292)
66	3 41 29	24 32 04	16.7	1.7	4172	(292)
67	—	—	>18	2.2	4172	(J)
68	—	—	>18	>1.4	4172	(K)
69	—	—	>18	>2.4	4172	(K)
70	—	—	>18	>3	4172	(L)
71	3 38 00	24 07	16.4	3.5	4172	-
72	3 38 00	24 07	16.4	1.9	4172	-
73	3 49 33	22 43 40	18	1.5	4172	-
74	3 49 33	22 43 40	18	5.4	4172	-
75	3 37 43	22 48 58	17.1	2.4	4172	-
76	3 37 43	22 48 58	17.1	1.1	4172	-
77	—	—	>18	>2.7	4172	(M)
78	—	—	>18	>2.7	4172	(N)
79	3 37 13	25 18 40	16.6	3.6	4173	-
80	3 38 00	24 07	17	1.9	4173	-
81	3 37	23 12	>18	>1.7	4173	-
82	—	—	16.2	2.9	4173	(O)
83	—	—	>18	>2.9	4173	(P)
84	3 43 42	24 01	17.4	2.2	4173	-
85	3 45 13	23 38 09	17.6	3	4173	-
86	3 43 42	24 01	>18	>3.8	4173	-
87	3 45 50	23 10 40	>18	>2.9	4173	-
88	3 45 48	23 59 05	>18	>3.4	4173	-
89	3 45 13	23 38 09	17.6	2.2	4173	-
90	3 43 38	23 42 19	>18	>4	4173	-
91	3 43 38	23 42 19	>18	>2.5	4173	-
92	3 37 55	22 57 21	>18	>3.2	4173	-
93	3 37 55	22 57 21	>18	>1.8	4173	-
94	3 45 52	23 53 48	>18	>2.5	4173	(504)
95	3 41 06	23 51	16.4	1.7	4173	-
96	3 45 13	23 38 09	17.6	2.8	4173	-
97	3 38 49	24 07 05	18	3.5	5354	-
98	—	—	>18	>3	5354	(Q)
99	3 44 43	21 40 58	>18	>3.7	5354	-
100	3 37 03	25 12 27	>18	>3.3	5354	-
101	3 37 03	25 12 27	>18	>2	5354	-

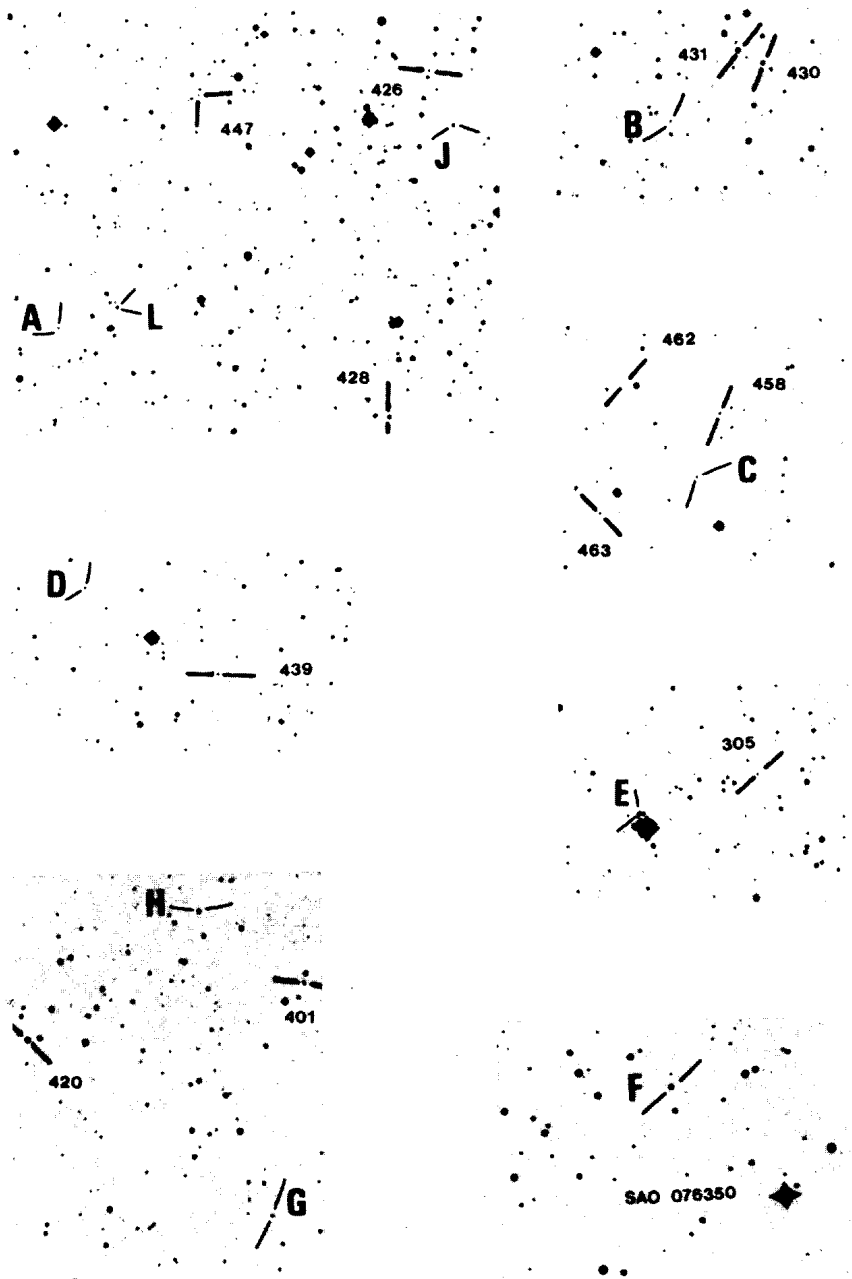


Figure 1

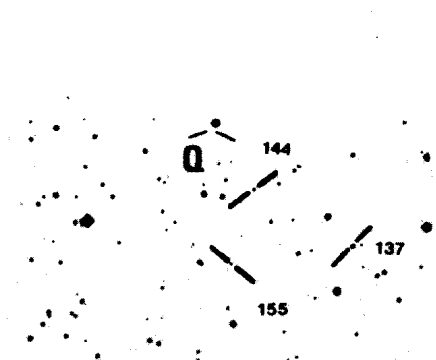
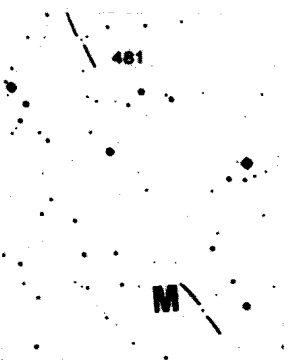
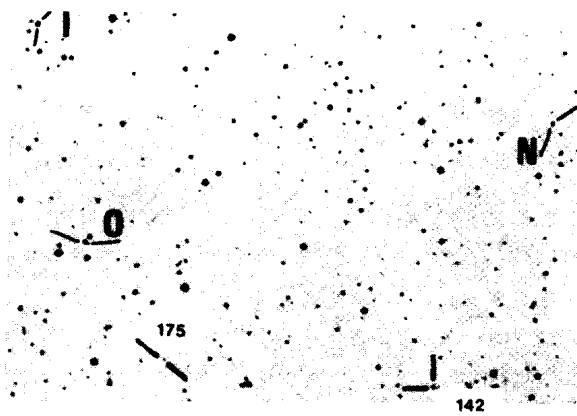


Figure 1 (cont.)

Columns (1) and (2) contain the measured celestial coordinates for the epoch 1900.

Columns (3) and (4) contain the quiet brightness in U band and the measured photographic amplitude.

Column (5) gives the J.D. of the observations.

In the (6) remark column I give the latest Haro numbers (Haro et. al., 1982) if it is possible.

In the cases where the coordinates are missing I give identifications charts. The charts are reproductions of the Haro charts (Haro et. al., 1982) in which the numbered stars represent the known flare stars. The letters standing in the Remark column correspond to those stars in the identifications charts, which are marked with letters.

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