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NOVAE IN M 31 DISCOVERED AND OBSERVED AT ASIAGO FROM 1963 TO 1970

Since 1953 a survey for novae in the galaxy M 31 has been carried out with the 122 cm telescope of the Asiago Astrophysical Observatory. Magnitudes, positions and light-curves of 46 novae discovered by the writer from 1953 to 1963 have been published some years ago in the Annales d'Astrophysique 27, 5, 1964. The present communication reports a list of other 44 novae found at Asiago from 1963 to 1970. Two of the objects may be recurrent novae having had two different maxima in the course of a few years.

The following Table I gives: Asiago serial number; approximate X and Y coordinates, measured from the centre along the two axes of M 31 (the X axis having the direction NE-SW, positive towards NE); date of discovery; observed maximum (pg); estimated maximum; epoch; velocity of decline (the average rate, in magnitudes per day, employed by the nova to drop two magnitudes below maximum). Some of the novae have been independently discovered by Börngen (A.N. 291, 19, 1969) and by Sharov and Alknis (Astr.Circ. No.507, 514, 560; 1969). References are given in the Notes to Table I.

Observations and light curves of the new novae, identification charts and discussion will be reported in a forthcoming paper.

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Notes to Table I:

1.- Nova 48 coincides with Nova 79. Very rapid decline. Recurrent nova?
2.- Börngen N.8.
3.- Börngen N.9.
4.- Börngen N.10.
5.- Börngen N.12.
6.- Börngen N.14.
7.- Börngen N.15.
8.- Coincides with N.81.Foreground U Gem variable or recurrent nova ?
9.- Börngen N.18.
10.- Börngen N.20.
11.- Börngen N.22.
12.- Börngen N.25.
13.- See Note 1.
14.- Sharov N.1.
15.- See Note 8.
16.- Sharov N.6.
17.- Sharov N.7.

TABLE I - Novae in M 31 discovered at Asiago from 1963 to 1970.

Nova	X	Y	Date of discovery	Obs. Max. (pg)	Est. Max.	Epoch	Rate of decline	
47	+ 9'.8	+ 3'.8	1963 Sep 14	17.2	15.0	Sep 10		
48	- 4.7	+ 7.1	" 17	17.8	17.8	" 15		1
49	-27.0	- 6.1	Oct 17	16.5	16.35	Oct 7	0m09	2
50	+ 7.6	- 0.4	" 23	16.95	16.8	" 21		3
51	-10.2	+ 1.6	Dec 11	16.3	16.3	Dec 12		4
52	+ 2.0	- 0.7	1964 Jan 4	16.25	16.25	Jan 4	.125	
53	- 5.8	- 2.9	" 4	16.95	16.95	" 6	.04	
54	+ 1.3	- 0.7	Aug 7	16.4	16.25	Aug 6	.044	
55	+ 3.8	- 5.1	" 13	17.3	17.3	" 7	.04	
56	+ 1.1	- 0.1	Oct 7	17.1	-	-		5
57	- 0.1	+ 1.5	Nov 6	14.95	14.95	Nov 7	.22	6
58	+ 1.5	+ 0.9	Dec 13	16.6:	16.5	Dec 15	.15	
59	- 4.8	+ 2.0	" 24	17.3	17.3	Nov 2		
60	- 0.5	+ 0.4	" 24	17:	16.4:	Dec 13:	.13:	
61	+15.2	- 1.7	" 31	16.7	16.7	" 31		
62	+ 5.8	- 2.5	1965 Jun 28	17.25	17.0:	Jun 26		7
63	+ 8.3	- 1.9	Sep 5	17.7	17.7	Sep 5	.07	
64	+ 7.4	- 2.1	Dec 22	15.3	15.3	Dec 26		
65	+ 1.7	- 1.8	1966 Jan 2	17.3	17.3	Jan 1		
66	-11.0	-11.4	Aug 12	16.4	16.4	Aug 12		8
67	- 4.7	- 1.0	Sep 7	16.2	16.2	Sep 11		9
68	- 0.2	- 7.9	" 8	17.05	17.05	" 8		
69	- 6.2	+ 2.4	" 10	17.1	17.1	" 10		10
70	+ 1.6	- 2.1	Nov 8	17.0	17.0	Nov 8	.07	
71	+ 0.3	+ 5.5	" 8	17.6	17.6	" 18		
72	+ 2.6	- 1.4	1967 Jan 5	17.1	17.1	Jan 5		
73	-12.4	- 2.0	Aug 11	17.8	-	-		11
74	+ 6.6	+ 2.7	Oct 26	17.4	17.3	Oct 24	.04	12
75	+ 1.7	- 0.1	Dec 21	16.8	16.8	Dec 21	.08	
76	+ 1.5	+ 2.8	Dec 28	16.1	16.1	Dec 27	.11	
77	- 6.2	+ 0.5	1968 Jan 2	15.9	15.9	Jan 2	.12	
78	+ 1.8	- 2.9	" 21	16.9	16.9	" 21	.08	
79	- 4.7	+ 7.1	Sep 25	17.25	17.1	Sep 24?		13
80	- 2.2	+ 5.0	Oct 23	17.4	17.4	Oct 23		14
81	-11.0	-11.4	" 25	17.7	17.7	" 25		15
82	- 2.9	- 0.1	Nov 21	17.9	17.9	Nov 21	.04	
83	- 3.1	- 0.5	Dec 19	17.35	17.0:	Dec 24		
84	- 3.5	+ 5.6	1969 Jan 19	17.0	17.0	Jan 21		
85	- 2.7	- 0.4	Sep 11	15.7	15.7	Sep 16	.12	16
86	- 2.1	+ 1.0	Oct 13	17.3	17.3	Oct 15		
87	+15.0	+ 5.0	Nov 10	17.0	16.7	Nov 14		17
88	-15.4	- 7.5	1970 Jan 3	17.5	17.5	Jan 2?		
89	+ 1.4	+ 0.8	Oct 10	16.8	16.8	Oct 10		
90	- 1.9	- 2.4	Oct 29	16.9	16.9	Oct 26		