

Light Elements for 30 Mira Type Variables from the NSV Catalog

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#	Name	Other	Coord (J2000)	Type	Max	Min	System	Period	Epoch (JD)	type	Sp	Comment	L.Curve	Find.Chart	Data
1	NSV 08155	HV 9005	17 05 40.02, -51 43 18.9	M	11.8	<15.0	V	183	2454952	max	Me	Comm. 1	8155lc.jpg	8155ch.jpg	ASAS 170540-5143.3
2	NSV 08173	BV 1688	17 05 27.38, -24 56 58.7	M	11.1	<14.4	V	350	2454692	max		Comm. 2	8173lc.jpg	8173ch.jpg	ASAS 170527-2457.0
3	NSV 08174	HV 3929	17 05 18.29, -15 36 40.9	M	11.4	<14.9	V	333	2454153	max		Comm. 3	8174lc.jpg	8174ch.jpg	ASAS 170518-1536.7
4	NSV 08182	HV 9014	17 06 17.59, -26 32 23.3	M	13.1	<14.2	V	199	2454630	max		Comm. 4	8182lc.jpg	8182ch.jpg	ASAS 170618-2632.4
5	NSV 08201	HV 3933	17 07 14.86, -26 11 41.4	M:	12.3	<14.7	V	124.3	2454755	max		Comm. 5	8201lc.jpg	8201ch.jpg	ASAS 170715-2611.7
6	NSV 08207	HV 9019	17 07 35.86, -23 22 40.0	M	12.8	<14.8	V	285	2454286	max		Comm. 6	8207lc.jpg	8207ch.jpg	ASAS 170736-2322.7
7	NSV 08225	HV 3939	17 08 46.46, -27 53 14.5	M	12.1	<14.4	V	222	2454738	max		Comm. 7	8225lc.jpg	8225ch.jpg	ASAS 170846-2753.2
8	NSV 08229	HV 9021	17 10 05.20, -53 47 04.5	M	13.0	<14.5	V	253	2455076	max		Comm. 8	8229lc.jpg	8229ch.jpg	ASAS 171005-5347.1
9	NSV 08234	HV 3940	17 09 23.58, -23 03 06.8	M	11.5	<15.2	V	275	2453854	max		Comm. 9	8234lc.jpg	8234ch.jpg	ASAS 170924-2303.1
10	NSV 08248	HV 9023	17 11 11.00, -57 49 28.8	M	13.1	<14.9	V	414	2454643	max		Comm. 10	8248lc.jpg	8248ch.jpg	ASAS 171111-5749.5
11	NSV 08272	HV 9027	17 12 47.61, -47 39 13.7	M	11.7	<14.0	V	470	2454536	max		Comm. 11	8272lc.jpg	8272ch.jpg	ASAS 171248-4739.2
12	NSV 08284	HV 9028	17 13 13.61, -47 38 29.4	M	12.2	<14.2	V	478	2454595	max		Comm. 12	8284lc.jpg	8284ch.jpg	ASAS 171314-4738.5
13	NSV 08400	SVS 430	17 15 10.16, -15 17 49.2	M	12.1	15.0	V	325	2454552	max		Comm. 13	8400lc.jpg	8400ch.jpg	ASAS 171510-1517.8
14	NSV 08448	BV 964	17 17 14.67, -29 15 38.9	M	12.8	<14.6	V	224	2454952	max		Comm. 14	8448lc.jpg	8448ch.jpg	ASAS 171715-2915.6
15	NSV 08455	BV 1697	17 17 36.82, -25 49 41.2	M	13.6	<15.0	V	236	2454373	max		Comm. 15	8455lc.jpg	8455ch.jpg	ASAS 171737-2549.7
16	NSV 08492	IRAS 17159-1457	17 18 50.27, -15 00 41.3	M	12.6	<14.8	V	213	2454920	max		Comm. 16	8492lc.jpg	8492ch.jpg	ASAS 171850-1500.7
17	NSV 08506	HV 9039	17 21 17.21, -63 26 05.2	M	13.1	<14.6	V	184	2454880	max		Comm. 17	8506lc.jpg	8506ch.jpg	ASAS 172117-6326.1
18	NSV 08517	HV 9040	17 21 01.02, -51 48 53.7	M	13.0	<14.5	V	232	2454394	max		Comm. 18	8517lc.jpg	8517ch.jpg	ASAS 172101-5148.9
19	NSV 08524	HV 3956	17 20 12.23, -23 05 10.0	M	13.3	<14.6	V	359	2454611	max		Comm. 19	8524lc.jpg	8524ch.jpg	ASAS 172012-2305.2
20	NSV 08545	SVS 444	17 21 15.16, -14 38 03.0	M	12.4	<14.7	V	222	2455060	max		Comm. 20	8545lc.jpg	8545ch.jpg	ASAS 172115-1438.0
21	NSV 08547	SVS 445	17 21 22.51, -16 00 16.1	M	12.2	<15.1	V	317	2454698	max		Comm. 21	8547lc.jpg	8547ch.jpg	ASAS 172123-1600.3
22	NSV 08576	HV 9053	17 24 19.37, -53 08 59.1	M	11.7	<14.4	V	176	2455082	max		Comm. 22	8576lc.jpg	8576ch.jpg	ASAS 172419-5309.0

23	NSV 08595	HV 8722	17 24 26.39, -17 23 31.3	M	13.2	<14.8	V	246	2455122	max		Comm. 23	8595lc.jpg	8595ch.jpg	ASAS 172426-1723.5
24	NSV 08635	SVS 450	17 25 01.19, -17 09 30.2	M	10.9	<14.8	V	403	2455010	max		Comm. 24	8635lc.jpg	8635ch.jpg	ASAS 172501-1709.5
25	NSV 08807	HV 9059	17 30 14.80, -57 45 51.2	M	12.3	<13.5	V	341	2454908	max		Comm. 25	8807lc.jpg	8807ch.jpg	ASAS 173015-5745.9
26	NSV 08836	HV 9061	17 30 15.83, -51 01 20.2	M	11.6	<14.5	V	349	2454976	max		Comm. 26	8836lc.jpg	8836ch.jpg	ASAS 173016-5101.3
27	NSV 08904	HV 9064	17 31 07.67, -50 16 21.9	M	12.4	<14.2	V	203	2455128	max		Comm. 27	8904lc.jpg	8904ch.jpg	ASAS 173108-5016.4
28	NSV 08972	HV 9066	17 31 57.42, -53 59 02.4	M	11.4	<13.9	V	218	2455082	max		Comm. 28	8972lc.jpg	8972ch.jpg	ASAS 173157-5359.0
29	NSV 08986	HV 9067	17 31 48.07, -51 20 35.0	M	13.2	<15.0	V	220	2455116	max		Comm. 29	8986lc.jpg	8986ch.jpg	ASAS 173148-5120.6
30	NSV 09008	HV 8734	17 30 47.88, -15 18 02.2	M	12.3	<14.8	V	197	2454955	max		Comm. 30	9008lc.jpg	9008ch.jpg	ASAS 173048-1518.0

Comments:

- HV 9005 was discovered by Luyten (1935) and found, upon our request, by D. Williams on Harvard plates. A finding chart for this variable has never been published.
- BV 1688 was discovered by Strohmeier and Knigge (1975).
- HV 3929 was discovered by Woods (1926).
- HV 9014 was discovered by Luyten (1937). No finding chart was available for this variable. Terzan and Ounnas (1988) discovered NSV 20914 (R = 14.3-16.7). We now identify NSV 8182 and NSV 20914.
- HV 3933 was discovered by Woods (1926) and, independently, by Strohmeier and Knigge (1975). The star was also discovered in the ASAS-3 survey and enters their variable-star catalog as a MISC-type star but with a wrong period (61.5d). R = 14.3 on the USNO Archive image of 1990-07-21.
- HV 9019 was discovered by Luyten (1937). No finding chart was available for this variable. We recovered the variable using US Naval Observatory Images. R = 16.0 on the DSS2 image of 1992-07-28.
- HV 3939 was discovered by Woods (1926). Terzan and Ounnas (1988) discovered NSV 20971 (R = 13.5-14.9). As a result of the more accurate determination of coordinates for HV 3939, we now identify NSV 08225 and NSV 20971.
- HV 9021 was discovered by Luyten (1935). No finding chart was available for this variable. We recovered the variable using US Naval Observatory Images. R = 15.0 on the DSS2 image of 1998-06-18.
- HV 3940 was discovered by Woods (1926) and, independently, by Strohmeier and Knigge (1975).
- HV 9023 was discovered by Luyten (1935), independently discovered by Hoffmeister (1963) and by Christiansen et al. (2008), but with a wrong period (175d). R = 14.3 on the DSS2 image of 1993-04-01.
- HV 9027 was discovered by Luyten (1935). No finding chart was available for this variable. We recovered the variable using US Naval Observatory Images. R = 15.5 on the DSS2 image of 1997-03-31.
- HV 9028 was discovered by Luyten (1935). No finding chart was available for this variable. We recovered the variable using US Naval Observatory Images. R = 16.0 on the DSS2 image of 1997-04-28.
- SVS 430 was discovered by Shajn (1934).

14. BV 964 was discovered by Knigge and Bauerfeind (1967), but their published right ascension was wrong by +12 s. Terzan and Ounnas (1988) discovered NSV 21300. We now identify NSV 08448 and NSV 21300. $R = 16.5$ on the DSS2 image of 1992-07-21.
15. BV 1697 was discovered by Strohmeier and Knigge (1975) and, independently, by Terzan and Ounnas (1988). $R = 16.4$ on the DSS2 image of 1992-07-28.
16. NSV 08492 was discovered by Oosterhoff (1936). $R = 15.7$ on the DSS2 image of 1988-07-15.
17. HV 9039 was discovered by Luyten (1933). No finding chart was available for this variable. We recovered the variable using US Naval Observatory Images. $R = 14.2$ on the DSS2 image of 1995-08-25.
18. HV 9040 was discovered by Luyten (1935). No finding chart was available for this variable. We recovered the variable using US Naval Observatory Images. $R = 15.2$ on the DSS2 image of 1992-08-01.
19. HV 3956 was discovered by Woods (1926) and found, upon our request, by the late Dr. M. Hazen in Harvard Observatory's logbooks. No finding chart was earlier published for this variable. $R = 16.9$ on the DSS2 image of 1997-04-30. A twice shorter period is possible.
20. SVS 444 was discovered by Shajn (1934). $R = 14.9$ on the DSS2 image of 1988-07-15.
21. SVS 445 was discovered by Shajn (1934).
22. HV 9053 was discovered by Luyten (1935). No finding chart was available for this variable. We recovered the variable using US Naval Observatory Images. This star was discovered in the ASAS-3 survey and enters their variable-star catalog as a MIRA-type star but with a wrong period (357.7d).
23. HV 8722 was discovered by Luyten (1937). No finding chart was available for this variable. We recovered the variable using US Naval Observatory Images. $R = 17.4$ on the DSS2 image of 1988-07-15 and $R = 12.2$ on the DSS2 image of 1992-04-09.
24. SVS 450 was discovered by Shajn (1934), but published right ascension was wrong by +1 min.
25. HV 9059 was discovered by Luyten (1934). No finding chart was available for this variable. We recovered the variable using US Naval Observatory Images. $R = 15.0$ on the DSS2 image of 1991-09-01.
26. HV 9061 was discovered by Luyten (1936) and found, upon our request, by D. Williams on Harvard plates.
27. HV 9064 was discovered by Luyten (1936) and found, upon our request, by D. Williams on Harvard plates. This star was also discovered in the ASAS-3 survey and enters their variable-star catalog as a MISC/SR-type star but with a wrong period (116.9d). $R = 15.0$ on the DSS2 image of 1985-05-23.
28. HV 9066 was discovered by Luyten (1935). No finding chart was available for this variable. We recovered the variable using US Naval Observatory Images. $R = 14.0$ on the ESO image of 1985-05-26.
29. HV 9067 was discovered by Luyten (1936). No finding chart was available for this variable. We recovered the variable using US Naval Observatory Images. $R = 14.0$ on the ESO image of 1985-05-23.
30. HV 8734 was discovered by Luyten (1937). This star was found, upon our request, by D. Williams on Harvard plates.

Remarks:

In our work aimed at improvement of the coordinates of variable stars in the NSV catalog (Samus et al. 2007-2012), we checked a number of poorly studied variables and found light elements and types for 30 of them. We were able to study the variables thanks to the publicly available electronic archives of CCD observations of the ASAS-3 project (Pojmanski 2002) and to images of the US Naval Observatory Image and Catalog Archive.

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