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Variability types and light elements for several suspected variable stars

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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 13172	GSC 2690-01618	20 35 51.87, +32 57 14.4	RS	11.86	12.46	V	27.8	2457940.6	max		Comm. 1	13172lc.jpg	NSV13172ch.jpg	13172dat.txt
2	NSV 13183	GSC 3962-01672	20 36 23.48, +59 08 58.5	EB	13.86	14.06	V	19.641	2457936.867	min		Comm. 2	13183lc.jpg	NSV13183ch.jpg	13183dat.txt
3	NSV 13270	HV 1185	20 44 32.55, +32 19 57.0	EA	14.92	15.95	V	1.90719	2457490.067	min		Comm. 3	13270lc.jpg	NSV13270ch.jpg	13270dat.txt
4	NSV 13279	S 9081	20 44 54.99, +33 27 57.1	EA	14.29	15.46	V	0.807665	2457852.090	min		Comm. 4	13279lc.jpg	NSV13279ch.jpg	13279dat.txt
5	NSV 13310	HV 1190	20 48 03.36, +33 05 02.1	M	13.4	<16.6	V	353.	2458002	max		Comm. 5	13310lc.jpg	NSV13310ch.jpg	13310dat.txt
6	NSV 13341	SVS 1410	20 50 01.16, +32 07 51.3	EA	14.65	15.57	V	2.47767	2458347.875	min		Comm. 6	13341lc.jpg	NSV13341ch.jpg	13341dat.txt
7	NSV 13362	S 9099	20 51 29.87, +33 50 07.3	SRA:	14.4	17.0 :	V	273.	2458288	max		Comm. 7	13362lc.jpg	NSV13362ch.jpg	13362dat.txt
8	NSV 13374	S 9101	20 51 54.42, +34 04 17.0	EA	15.63	16.2	V	3.5047	2458291.928	min		Comm. 8	13374lc.jpg	NSV13374ch.jpg	13374dat.txt
9	NSV 13520	S 10083	21 05 07.58, +45 33 45.8	EB	14.87	16.47	V	0.96730	2457511.084	min		Comm. 9	13520lc.jpg	NSV13520ch.jpg	13520dat.txt
10		USNO-A2.0 1275-14697464	21 06 00.09, +41 25 31.5	M	14.9	<18.	V	417. :	2458298	max		Comm. 10	A1275lc.jpg	A1275ch.jpg	A1275dat.txt
11	NSV 13547	S 9104	21 06 57.55, +39 12 20.9	EA	15.83	16.45	V	4.1517	2457980.881	min		Comm. 11	13547lc.jpg	NSV13547ch.jpg	13547dat.txt
12	NSV 13589	GSC 3169-00498	21 11 11.22, +37 52 18.7	M	12.6	<14.9	V	359.	2457559	max			13589lc.jpg	NSV13589ch.jpg	13589dat.txt
13	NSV 13652	S 9124	21 18 39.27, +39 08 44.2	EW	15.66	16.16	V	0.379017	2458431.781	min		Comm. 13	13652lc.jpg	NSV13652ch.jpg	13652dat.txt
14	NSV 13655	HV 6118	21 19 28.63, +23 21 06.2	RRC	14.48	15.02	V	0.320841	2457954.821	max		Comm. 14	13655lc.jpg	NSV13655ch.jpg	13655dat.txt
15	NSV 13775	GSC 2196-00414	21 32 32.50, +27 44 44.1	RVA	11.67	11.95	V	163.65	2457909.0	min		Comm. 15	13775lc.jpg	NSV13775ch.jpg	13775dat.txt

Comments:

1. X-ray source 1WGA J2035.8+3257.

2. Min II = 13.98 V. The star was included in the ASAS-SN Catalog of Variable Stars II (Jayasinghe et al. 2018) with a type ROT and period of $9^{d}.8185186$.

3. The star was suspected by Leavitt (1906) without published finding chart. It recovered by me using the ASAS-SNphotometric data. Min II = 15.02 V, D = 0.10 P.

4. Min II = 14.45 V, D = 0.20 P.

5. The star was suspected by Leavitt (1906) without published finding chart. It recovered by us using the ASAS-SNphotometric data.

6. Min II = 14.74 V, D = 0.12 P.

7. Mira type and Min <17.0 V are not excluded. I measured minimal brightness using DSS images of the STScI Archive: V = 17.0 on the Quick-V Northern plate (1983-08-12), B = 18.4 on the POSS-II blue plate (1989-07-01), R = 15.7 on the POSS-II red plate (1992-06-29).

8. Min II = 15.8 V, D = 0.04 P.

9. Min II = 15.08 V.

10. Neighbor of NSV 13535. Variability of this star was discovered by me using DSS images of the STScI Archive. For example, R = 15.0 on the POSS-I red plate (1954-07-05) and R = 18.0 on the POSS-II red plate (1991-07-09).

11. Min II = 15.96 V, D = 0.08: P.

13. Min II = 16.14 V.

14. The star was suspected by Shapley and Hughes (1934) without published finding chart. It was found, upon my request, by the late Dr. M. Hazen in Harvard Observatory's logbooks. M – m = 0.30 P.

15. The star was suspected by Shapley and Hughes (1934) without published finding chart. It was found, upon my request, by the late Dr. M. Hazen thanks to the author's marks on Harvard Observatory's photographic plates. The star was included in the ASAS-SN Catalog of Variable Stars II (Jayasinghe et al. 2018) with a type SR and period of $81^{d}.9892624$.

Remarks:

In the current paper, I continue to announce the preparation of the new electronic version of the New Suspected Variables Catalogue. While working on compiling of the Name-List No. 82 for Version 5.1 of GCVS (Samus et al. 2017), I determined types, light elements and improved coordinates for 1 new variable star and 14 more stars from the NSV catalogue (Kukarkin et al. 1982) to transfer them to the General Catalogue of Variable Stars. The study of the variables was made using the publicly available electronic archive of CCD observations of the Sky Patrol All-Sky Automated Survey for Supernovae (ASAS-SN) project (Shappee et al. 2014, Kochanek et al. 2017). I measured brightness of large part of the Mira variables using Digitized Sky Survey images (B, V, R bands) of the Space Telescope Science Institute Archive (the STScI Digitized Sky Survey). To find periods, I applied the WinEfk software provided by Dr. V.P. Goranskij and the on-line lightcurve analysis tool of Dr. K.V. Sokolovsky.

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