

## New Variable Stars in Andromeda

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#	Name	Other	Coord (J2000)	Type	Max	Min	System	Period	Epoch (JD)	type	Sp	Comment	L.Curve	Find.Chart	Data
1		USNO-A2.0 1275-01170417	01 57 39.91, +43 55 03.7	EW	16.89	17.55		0.28133	2454712.3808	min		<a href="#">Comm. 1</a>	<a href="#">01.png</a>	<a href="#">01ch.jpg</a>	<a href="#">01.txt</a>
2		USNO-A2.0 1275-01172215	01 57 51.11, +44 02 14.7	EW	17.12	17.68		0.30903	2454776.5584	min		<a href="#">Comm. 2</a>	<a href="#">02.png</a>	<a href="#">02ch.jpg</a>	<a href="#">02.txt</a>
3		USNO-A2.0 1275-01173229	01 57 57.20, +44 27 50.9	EW	16.32	16.78		0.35291	2454773.3070	min		<a href="#">Comm. 3</a>	<a href="#">03.png</a>	<a href="#">03ch.jpg</a>	<a href="#">03.txt</a>
4		GSC 2828-01238, USNO-A2.0 1275-01176895	01 58 18.23, +43 59 27.0	EB	14.35	14.81		0.71681	2454713.3508	min		<a href="#">Comm. 4</a>	<a href="#">04.png</a>	<a href="#">04ch.jpg</a>	<a href="#">04.txt</a>
5		GSC 2828-01525, USNO-A2.0 1275-01181962	01 58 47.77, +44 33 04.8	EB	14.55	14.80		0.43141	2454775.5306	min		<a href="#">Comm. 5</a>	<a href="#">05.png</a>	<a href="#">05ch.jpg</a>	<a href="#">05.txt</a>
6		USNO-A2.0 1275-01187061	01 59 17.89, +44 07 57.8	EW	15.62	16.10		0.31092	2454711.3850	min		<a href="#">Comm. 6</a>	<a href="#">06.png</a>	<a href="#">06ch.jpg</a>	<a href="#">06.txt</a>
7		USNO-A2.0 1275-01198603	02 00 24.69, +44 22 56.5	EW	16.05	16.20		0.34708	2454712.2955	min		<a href="#">Comm. 7</a>	<a href="#">07.png</a>	<a href="#">07ch.jpg</a>	<a href="#">07.txt</a>
8		GSC 2841-01199, USNO-A2.0 1275-01209831	02 01 29.99, +44 29 14.9	EA	13.91	14.26		0.88508	2454713.4729	min		<a href="#">Comm. 8</a>	<a href="#">08.png</a>	<a href="#">08ch.jpg</a>	<a href="#">08.txt</a>
9		USNO-A2.0 1275-01215772	02 02 03.61, +43 54 35.2	EW	16.03	16.42		0.33479	2454713.3474	min		<a href="#">Comm. 9</a>	<a href="#">09.png</a>	<a href="#">09ch.jpg</a>	<a href="#">09.txt</a>
10		USNO-A2.0 1275-01217132	02 02 11.35, +44 19 49.6	DSCT	16.67	16.85		0.13805	2454712.3354	max		<a href="#">Comm. 10</a>	<a href="#">10.png</a>	<a href="#">10ch.jpg</a>	<a href="#">10.txt</a>
11		GSC 2841-00086, USNO-A2.0 1275-01226897	02 03 08.40, +44 10 23.4	EW	13.98	14.07		0.39177	2454774.3713	min		<a href="#">Comm. 11</a>	<a href="#">11.png</a>	<a href="#">11ch.jpg</a>	<a href="#">11.txt</a>
12		GSC 2841-02117, USNO-A2.0 1275-01230138	02 03 27.78, +44 14 51.0	EW	12.17	12.30		0.32978	2454775.5870	min		<a href="#">Comm. 12</a>	<a href="#">12.png</a>	<a href="#">12ch.jpg</a>	<a href="#">12.txt</a>

### Comments:

1. We observed six primary minima: HJD 2454712.3808, 2454713.5038, 2454774.2700, 2454774.5549, 2454776.2386, 2454776.5200. Min II = 17.36.

2. We observed four primary minima: HJD 2454712.2847, 2454713.5099, 2454776.2531, 2454776.5584. Min II = 17.52.

3. We observed five primary minima: HJD 2454713.3051, 2454714.3669, 2454773.3070, 2454776.4822, 2454778.5956. Min II = 16.72.

4. We observed three primary minima: HJD 2454713.3508, 2454774.2818, 2454778.5807. Min II = 14.57. O'Connell effect.

5. We observed eight primary minima: HJD 2454712.5449, 2454713.4036, 2454714.2727, 2454773.3661, 2454774.2335, 2454775.5306, 2454776.3988, 2454778.5484. Min II = 14.70.

6. We observed eight primary minima: HJD 2454711.3850, 2454712.3173, 2454713.2485, 2454713.5593, 2454773.2580, 2454774.1900, 2454776.3647, 2454778.5448. Min II = 15.99.

7. We observed three primary minima: HJD 2454712.2955, 2454713.3350, 2454714.3863. Min II = 16.17.

8. Two observed primary minima: HJD 2454713.4729, 2454776.3105. Min II = 14.23. O'Connell effect.

9. We observed five primary minima: HJD 2454712.3390, 2454713.3474, 2454773.2665, 2454774.2794, 2454776.2840. Min II = 16.38.

10. We observed five maxima: HJD 2454712.3354, 2454713.3037, 2454713.4459, 2454714.4115, 2454773.2268.

11. We observed five primary minima: HJD 2454713.2543, 2454773.2084, 2454774.3713, 2454775.5435, 2454776.3241. Min II = 14.06.

12. Two observed primary minima: HJD 2454712.2646, 2454775.5870. Min II = 12.25. This low-amplitude variable was also observed by ROTSE-I/NSVS (NSVS 3971176, Wozniak et al. 2004). The NSVS data are not in agreement with our period. The period of 0.3272 days looks suitable both for our and NSVS observations, but the phased light curve for our data plotted using this period looks much worse than for  $P = 0.32978$  days.

### Remarks:

During observations of the field of the cataclysmic variable star OT J020025.4+441019 (Kryachko et al. 2008), we discovered 12 new variable stars. Our observations were carried out at the Astrotel-Caucasus observatory using a 80-mm ED-refractor, equipped with an unfiltered SBIG ST-2000XM CCD camera. In total, 564 images with 5-minute exposures were obtained on JD 2454711 - 2454778. Besides, 215 images with 2-minute exposures were obtained on JD 2454713. For basic reductions for dark current, flat fields, and bias, we used the MaxIm DL software. For search and photometry of new variable stars, we applied the VaST software by Sokolovsky and Lebedev (2005). The comparison star was USNO-B1.0 1341-0037983 (01:58:00.19, +44:07:33.5, (J2000), R1 = 13.64, R2 = 13.61). Our unfiltered magnitudes were calibrated assuming  $R_{comp} = 13.625$  for the comparison star. Coordinates of the variable stars in the table were drawn from the 2MASS catalogue. Our observations were analyzed using the Peranso software ([www.peranso.com](http://www.peranso.com)).

### References:

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