

Four New Variable Stars in Ursa Major

[S. A. Veselkov](#)^{#1}, [E. G. Lapukhin](#)^{#1}, [S. V. Antipin](#)^{#2,3}, [N. N. Samus](#)^{#3,2}

#1. Siberian State Aerospace University, Krasnoyarsk, Russia;

#2. Sternberg Astronomical Institute, Lomonosov Moscow State University, Moscow, Russia;

#3. Institute of Astronomy, Russian Academy of Sciences, Moscow, Russia

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(E-mail for contact: slovoktk@mail.ru)

#	Name	Other	Coord (J2000)	Type	Max	Min	System	Period	Epoch (JD)	t _{type}	Sp	Comment	L.Curve	Find.Chart	Data
1		USNO-A2.0 1425-07871865	12 53 12.08, +52 58 01.8	EW	15.12	15.31		0.30718	2455651.5368	min		Comm. 1	1425-7871865_800.png	1425-7871865_chart.png	7871865.txt
2		USNO-A2.0 1425-07888584	13 00 25.68, +53 03 30.0	EW	14.19	14.55		0.28045	2455626.3653	min		Comm. 2	1425-7888584_800.png	1425-7888584_chart.png	7888584.txt
3		USNO-A2.0 1425-07889549	13 00 51.53, +53 59 56.7	EW	14.86	15.34		0.30393	2455651.2283	min		Comm. 3	1425-7889549_800.png	1425-7889549_chart.png	7889549.txt
4		USNO-A2.0 1425-07892145	13 01 59.49, +54 04 58.1	EA	12.35	<12.56		0.96781	2455660.3608	min		Comm. 4	1425-7892145_800.png	1425-7892145_chart.png	7892145.txt

Comments:

1. MinII = 15.31.

2. MinII = 14.51.

3. MinII = 15.23. Slight O'Connell effect.

4. MinII = 12.50. The NSVS data confirm EA-type variability of the star. The star in the NSVS database: [ID2672492](#) and [ID5052816](#).

Remarks:

From March 05 till April 25, 2011, we obtained unfiltered CCD observations of a field in Ursa Major. Our observations were performed in the city of Krasnoyarsk with a Hamilton telescope (D = 400 mm, F = 915 mm) equipped with an FLI ML9000 CCD chip (3056x3056 pixels, pixel size 12 μ m). The magnitudes were referred to red magnitudes of comparison stars from the USNO-A2.0 catalog (Monet et al. 1998). The limiting magnitude of these data is about 16^m, due to light pollution in a large city and transparency problems. MaxImDL software was used for photometry.

We have started using these observations for search for new variable stars. Four new eclipsing variable stars could be discovered and studied. Our search for variable stars made use of the C-Munipack package. To search for periods, we applied [WinEfk software](#) provided by V.P. Goranskij.

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References:

Monet, D., Bird, A., Canzian, B., et al., 1998, USNO-A2.0, A Catalog of Astrometric Standards (U.S. Naval Observatory, Washington, DC), Centre de Donnees Astronomiques de Strasbourg, I/252