

New Eclipsing Variable Stars in Canis Minor

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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 0975-05108198	07 26 03.29, +08 36 46.6	EW	15.21	15.38		0.4667	2454882.4161	min		Comm. 1	01_PC-R.png	01_ch.jpg	01_data.txt
2		USNO-A2.0 0975-05113221	07 26 18.15, +08 37 59.2	EW	15.77	16.18		0.3436	2454882.3974	min		Comm. 2	02_PC-R.png	02_ch.jpg	02_data.txt
3		USNO-A2.0 0975-05126874	07 26 59.31, +08 38 41.3	EW	15.55	15.75		0.5468	2454882.3067	min		Comm. 3	03_PC-R.png	03_ch.jpg	03_data.txt
4		USNO-A2.0 0975-05141285	07 27 43.78, +08 18 03.5	EA	16.50	17.30		0.8409	2454882.3525	min		Comm. 4	04_PC-R.png	04_ch.jpg	04_data.txt
5		USNO-A2.0 0975-05167078	07 29 02.66, +08 19 40.2	EW	15.13	15.31		0.2435	2454895.3562	min		Comm. 5	05_PC-R.png	05_ch.jpg	05_data.txt

Comments:

1. We observed two primary minima: HJD 2454882.4161, 2454889.4128.
2. We observed three primary minima: HJD 2454881.3678, 2454882.3974, 2454889.2702. Min II = 16.15.
3. We observed one primary minimum: HJD 2454882.3067.
4. We observed one primary minimum: HJD 2454882.3525. Min II = 17.12.
5. We observed three primary minima: HJD 2454882.4455, 2454889.2666, 2454895.3562. Min II = 15.29.

Remarks:

During observations of a field in Canis Minor, we discovered 5 new eclipsing variable stars. Our observations were carried out at Astrotel-Caucasus observatory using 80-mm f/6 ED refractor, equipped with an unfiltered SBIG ST-2000XM CCD camera. A total of 216 images with 5-minute exposures were obtained on JD 2454881 - 2454895. For basic reduction for dark current and flat fields, we used IRAF routines. For search and photometry of new variable stars we applied VaST software by Sokolovsky and Lebedev (2005). The comparison star is USNO-B1.0 0981-0175696 (07:28:58.25, +08:09:12.1, J2000; R1 = 13.31, R2 = 13.23). Unfiltered magnitudes were calibrated using the comparison star, assuming Rcomp = 13.27. Coordinates of the variable stars in the table were drawn from the 2MASS catalogue (Cutri et al, 2003). For search for periods and epochs of primary minima we use Peranso software (www.peranso.com).

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References:

Cutri, R.M., Skrutskie, M.F., van Dyk, S., et al., 2003, 2MASS All Sky Catalog of Point Sources, Centre de Donnees Astronomiques de Strasbourg, II/246

Sokolovsky, K., Lebedev, A., 2005, in 12th Young Scientists' Conference on Astronomy and Space Physics, Kyiv, Ukraine, April 19-23, 2005, eds.: Simon, A.; Golovin, A., p.79