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New Variable Stars in the Field of the Globular Cluster NGC5466

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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 1125-06868417	14 03 45.00, +28 27 02.1	RRAB	17.93	19.1		0.5103	2455309.349	Max		Comm. 1	01_PC-R.png	01_chart.jpg	01_data.txt
2		USNO-A2.0 1125-06870029	14 04 10.53, +28 19 38.4	EB	13.91	14.01		1.5360	2455229.5148	Min		Comm. 2	02_PC-R.png	02_chart.jpg	02_data.txt
3		USNO-A2.0 1125-06870487	14 04 17.98, +28 24 03.1	EW	12.81	12.87		0.36812	2455301.3754	Min		Comm. 3	03_PC-R.png	03_chart.jpg	03_data.txt
4		USNO-A2.0 1125-06878557	14 06 02.94, +28 11 41.6	EA	15.37	16.03		0.85646	2455309.358	Min		Comm. 4	04_PC-R.png	04_chart.jpg	04_data.txt
5		USNO-A2.0 1125-06880585	14 06 33.12, +28 30 25.4	RRAB	15.39	16.51		0.57743	2455257.4136	Max		Comm. 5	05_PC-R.png	05_chart.jpg	05_data.txt

Comments:

1. Maximum: HJD(TT) 2455309.349 ± 0.001.

2. $Min_{II} = 13^m.98$:.

3. Primary minimum: HJD(TT) 2455301.3754 ± 0.0006. $Min_{II} = 12^m.87$.

4. Primary minimum: HJD(TT) 2455309.358 ± 0.001. $Min_{II} = 15^m.80$.

5. Maximum: HJD(TT) 2455257.4136 ± 0.0007.

Remarks:

During observations of the field of the globular cluster NGC 5466, we discovered five new variable stars. Our observations were carried out at the Astrotel-Caucasus observatory using the 300-mm Ritchey-Chretien telescope, equipped with an unfiltered Apogee Alta U9000 CCD camera. A total of 442 images with 5-minute exposures were obtained on JD 2455229–2455349. For basic reductions for dark current, flat fields, bias, and for removing cosmic rays hits we used IRAF routines. For search and photometry of new variable stars, we applied VaST software by Sokolovsky and Lebedev (2005). The comparison star was USNO-A2.0 1125-06876791 = USNO-B1.0 1183-0234090 ($\alpha=14^h05^m40^s.57$, $\delta=+28°23'\,40''.3$, J2000; 2MASS), $R_1 = 14^m.27$, $R_2 = 14^m.07$ (USNO-B1.0). Unfiltered magnitudes were calibrated using the comparison star, assuming $R_{comp} = 14^m.17$. All times in the Table and comments are expressed in the

Terrestrial Time in accordance with IAU recommendations (resolution B1 XXIII IAU GA). The coordinates of the variable stars in the table were drawn from the 2MASS catalogue (Skrutskie et al. 2006). For search for periods and epochs of extrema, we use Peranso software.

References:

Skrutskie, M.F., Cutri, R.M., Stiening, R., et al., 2006, AJ, 131, 1163
Sokolovsky, K., Lebedev, A., 2005, in 12th Young Scientists' Conference on Astronomy and Space Physics, Kyiv, Ukraine, April 1923, 2005, eds.: Simon, A.; Golovin, A., p.79