

New Variable Stars in Gemini

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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 1125-05174952	07 30 28.99, +26 42 54.9	EW	16.91	17.61	V	0.3036	2454854.2345	min		Comm. 1	01_PC-V.png	01_ch.jpg	01_data.txt
2		USNO-A2.0 1125-05192050	07 31 56.37, +25 54 56.7	BY:	13.49	13.61	V	0.6966	2454874.4605	max		Comm. 2	02_PC-V.png	02_ch.jpg	02_data.txt
3		USNO-A2.0 1125-05193444	07 32 03.64, +26 33 44.7	EW	15.57	15.96	V	0.3358	2454853.2908	min		Comm. 3	03_PC-V.png	03_ch.jpg	03_data.txt
4		USNO-A2.0 1125-05210989	07 33 35.46, +26 11 26.5	EB	15.24	15.94	V	0.4239	2454877.3754	min		Comm. 4	04_PC-V.png	04_ch.jpg	04_data.txt
5		USNO-A2.0 1125-05212129	07 33 41.61, +25 55 43.4	EW	14.18	14.36	V	0.2874	2454853.5219	min		Comm. 5	05_PC-V.png	05_ch.jpg	05_data.txt
6		USNO-A2.0 1125-05215140	07 33 57.43, +26 26 51.2	BCEP:	13.31	13.39	V	0.2113	2454874.2702	max		Comm. 6	06_PC-V.png	06_ch.jpg	06_data.txt
7		USNO-A2.0 1125-05216835	07 34 06.20, +25 55 58.7	RRAB	15.12	16.01	V	0.5735	2454853.4483	max		Comm. 7	07_PC-V.png	07_ch.jpg	07_data.txt
8		USNO-A2.0 1125-05218178	07 34 12.97, +25 59 00.3	EB	15.71	16.59	V	0.4032	2454853.4698	min		Comm. 8	08_PC-V.png	08_ch.jpg	08_data.txt
9		USNO-A2.0 1125-05222935	07 34 38.65, +26 11 22.4	EW	16.67	17.34	V	0.3349	2454877.4286	min		Comm. 9	09_PC-V.png	09_ch.jpg	09_data.txt

Comments:

1. We observed four primary minima: HJD 2454846.3376, 2454853.3219, 2454854.2345, 2454874.2748. Min II = 17.42.

2. J-H = 0.532, H-K = 0.114 (2MASS).

3. We observed seven primary minima: HJD 2454784.4373, 2454833.4750, 2454846.5762, 2454853.2908, 2454860.3434, 2454874.4450, 2454877.4721. Min II = 15.94.

4. Six observed primary minima: HJD 2454831.5944, 2454846.4311, 2454854.4841, 2454860.4197, 2454874.4069, 2454877.3754. Min II = 15.74.

5. Ten observed primary minima: HJD 2454785.4200, 2454813.5790, 2454846.3368, 2454853.5219, 2454854.3857, 2454860.4152, 2454874.2122, 2454874.4985, 2454876.2260, 2454877.3740. Min II = 14.32 (V).

6. We observed four maxima: HJD 2454846.3823, 2454853.3507, 2454854.4179, 2454874.2702. $J-H = 0.175$, $H-K = 0.069$ (2MASS).

7. Four observed maxima: HJD 2454846.5657, 2454853.4483, 2454860.3318, 2454876.3929;

8. We observed three primary minima: HJD 2454813.5592, 2454853.4698, 2454874.4338. $\text{Min II} = 16.43$.

9. One observed primary minimum: HJD 2454877.4286. $\text{Min II} = 17.15$.

Remarks:

During observations of a field in Gemini, we discovered 9 new variable stars. Our observations were carried out at the Astrotel-Caucasus observatory using the 300-mm Ritchey-Chretien telescope, equipped with an Apogee Alta U9000 CCD camera and a V filter. A total of 1669 images with 2-minute exposures were obtained on JD 2454742 - 2454877. For basic reductions for dark current, flat fields, and bias, we used MaxIm DL software. For search and photometry of new variable stars, we applied VaST software by Sokolovsky and Lebedev (2005). The comparison star was GSC 01915-00271 (07:32:13.91, +26:10:10.3, J2000; $V = 12.83$ from FON Astrogaphic Catalogue, Kislyuk et al. 1999). The 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).

References:

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