

## New Variable Stars in Aquila

[T. Kryachko](#)<sup>#1</sup>, [A. Samokhvalov](#)<sup>#2</sup>, [B. Satovskiy](#)<sup>#1</sup>

#1. Astrotel Observatory, Karachay-Cherkessia, Russia;

#2. Surgut, Russia

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(E-mail for contact: [bredfild@mail.ru](mailto:bredfild@mail.ru), [sav@surgut.ru](mailto:sav@surgut.ru), [bs25@mail.ru](mailto:bs25@mail.ru))

#	Name	Other	Coord (J2000)	Type	Max	Min	System	Period	Epoch (JD)	type	Sp	Comment	L.Curve	Find.Chart	Data
1		USNO-A2.0 0900-18566964	20 29 12.66, +00 30 28.3	EW	15.86	16.53		0.2814	2455391.4159	Min		<a href="#">Comm. 1</a>	<a href="#">01_PC-R.png</a>	<a href="#">01_chart.jpg</a>	<a href="#">01_data.txt</a>
2		USNO-A2.0 0900-18578316	20 29 34.87, +00 05 26.3	RRAB	16.21	17.23		0.5365	2455387.4028	Max		<a href="#">Comm. 2</a>	<a href="#">02_PC-R.png</a>	<a href="#">02_chart.jpg</a>	<a href="#">02_data.txt</a>
3		USNO-A2.0 0825-18355902	20 29 49.40, -00 06 00.2	EW	16.40	17.04		0.2583	2455391.4152	Min		<a href="#">Comm. 3</a>	<a href="#">03_PC-R.png</a>	<a href="#">03_chart.jpg</a>	<a href="#">03_data.txt</a>
4		USNO-A2.0 0900-18620295	20 30 59.43, +00 22 26.2	EW	16.05	16.64		0.3402	2455397.3972	Min		<a href="#">Comm. 4</a>	<a href="#">04_PC-R.png</a>	<a href="#">04_chart.jpg</a>	<a href="#">04_data.txt</a>
5		USNO-A2.0 0900-18625626	20 31 10.35, +00 01 40.5	EW	15.30	15.45		0.2884	2455384.4902	Min		<a href="#">Comm. 5</a>	<a href="#">05_PC-R.png</a>	<a href="#">05_chart.jpg</a>	<a href="#">05_data.txt</a>
6		USNO-A2.0 0825-18390601	20 31 20.88, -00 11 25.3	RRAB	14.57	15.58		0.6053	2455397.3961	Max		<a href="#">Comm. 6</a>	<a href="#">06_PC-R.png</a>	<a href="#">06_chart.jpg</a>	<a href="#">06_data.txt</a>

### Comments:

1. Primary minimum: HJD(TT) 2455391.4159±0.0004. Min<sub>II</sub>=16<sup>m</sup>.40.
2. Maximum: HJD(TT) 2455387.4028±0.0005.
3. Primary minimum: HJD(TT) 2455391.4152±0.0009. Min<sub>II</sub>=16<sup>m</sup>.99.
4. Primary minimum: HJD(TT) 2455397.3972±0.0005. Period 0.4102 d is also possible.
5. Min<sub>II</sub>=15<sup>m</sup>.41.
6. Maximum: HJD(TT) 2455397.3961±0.0006.

### Remarks:

During observations of the field in Aquila, we discovered six 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 106 images with 5-minute exposures were obtained on JD 2455382 - 2455397. For basic reductions for dark current, flat fields, bias, and for removing cosmic-ray 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 0900-18617527 = USNO-B1.0 0904-0528702 ( $\alpha=20^{\text{h}}30^{\text{m}}53^{\text{s}}.81$ ,  $\delta=+00^{\circ}25' 33''.7$  J2000, 2MASS);  $R_1=14^{\text{m}}.24$ ,  $R_2=14^{\text{m}}.44$  (USNO-B1.0). Unfiltered magnitudes were calibrated using the comparison star, assuming  $R_{\text{comp}}=14^{\text{m}}.34$ . 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 ([www.peranso.com](http://www.peranso.com)).

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### **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 19-23, 2005, eds.: Simon, A.; Golovin, A., p.79