

New Algol-type Eclipsing Binary in Auriga

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Star Name:	USNO-A2.0 1350-06316386, USNO-B1.0 1416-0177942		
Coordinates (J2000):	05 58 05.42, +51 36 41.1		
Variability type:	EA;	Limits, System:	15.85 - 16.45 (R);
Period:	0.7625 d;	Epoch(other):	JD 2454850.757

Remarks:

A new Algol-type variable star was discovered by me during observations of comet C/2006 OF2. Rapid fading of the star was detected by blinking images obtained on January 21, 2009.

The observations were conducted over 25 nights from January 22 to March 17, 2009 using the remotely controlled Maksutov-Newtonian telescope (D = 356 mm, F = 1330 mm) of the Tzec Maun Observatory (New Mexico, USA) equipped with an unfiltered SBIG ST-10XME CCD camera. The zero point of our instrumental magnitude scale was calibrated assuming R = 15.68 for USNO-B1.0 1416-0177969 (05:58:11.35, +51:36: 20.1, J2000.0). We use the R magnitude to calibrate our unfiltered photometry because the ST-10XME CCD camera chip is red-sensitive and reaches maximum quantum efficiency at around 625 nm.

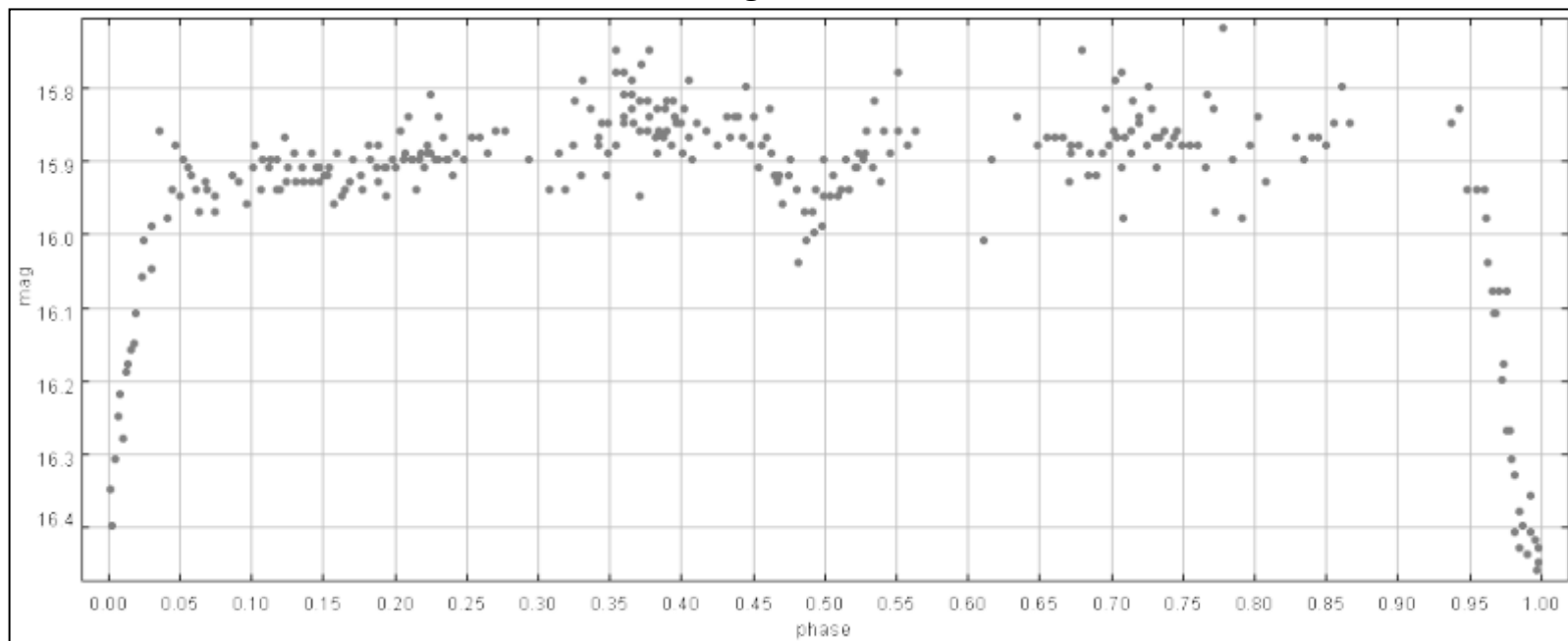
Min II = 16.0 (R).

The coordinates were taken from the USNO-B1.0 catalog (Monet et al. 2003).

Acknowledgments: This research is based on data collected with the Tzec Maun Observatory, operated by the Tzec Maun Foundation. Special thanks are due to Ron Wodaski (director of the observatory) and Donna Brown-Wodaski (director of the Tzec Maun Foundation). Our photometry was made using the online program "Photometrica", developed by Geir Klingenberg. The author is grateful to Dr. V.P. Goranskij for providing his period analysis software. Many thanks are due to K. V. Sokolovsky for comprehensive help in preparation of this paper. This research has made use of the Aladin interactive sky atlas, operated at CDS, Strasbourg, France.

References:

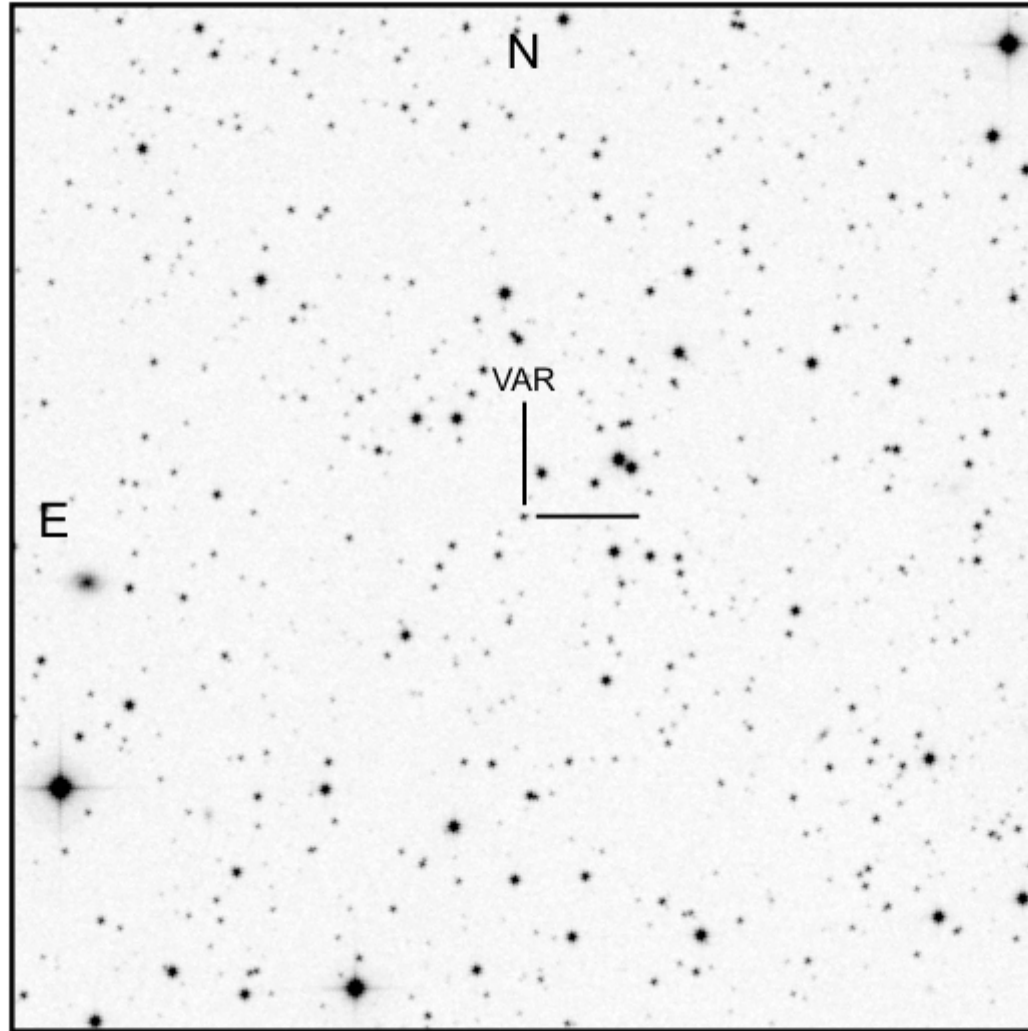
Light Curve



Phased light curve of the new eclipsing variable star.

Finding Chart

USNO-B1.0 1416-0177942



POSSII Red

13' x 13'

Data Source

1. [usnob1.0_14160177942.txt](#)