

Variability of TYC 2760 00635 1

[A. V. Khruslov](#)
Russia, Tula

Received: 24.09.2008; accepted: 24.11.2008
(E-mail for contact: khruslov@bk.ru)

Star Name:	TYC 2760 00635 1, GSC 2760-00635, NSVS 6222336, NSVS 9025123, 1RXS J232138.5+344259		
Coordinates (J2000):	23 21 38.80, +34 42 51.8		
Variability type:	EA/RS;	Limits, System:	11.7 - 12.2 (R);
Period:	4.243 d;	Epoch(min):	JD 2451445.84

Remarks:

The variability of TYC 2760 00635 1 was reported by Damerdji et al. (2007). The star's type was not determined. The possible period, $P=3.7648$ d, was accompanied with a comment: "Bad sampling, period probably wrong". Later Bernhard and Lloyd (2008) investigated the star using the ROTSE-I/NSVS data (Wozniak et al. 2004). The variable was identified with an X-ray source 1RXS J232138.5+344259 and classified as a likely RS CVn star without eclipses, its period being 2.12082 days. A big scattering on the phased light curve suggests that eclipses, not revealed by the authors, can exist in the NSVS data.

I reinvestigated the star using the same ROTSE-I/NSVS data. The observations were analyzed using the period-search software developed by Dr. V.P. Goranskij for Windows environment. In fact, TYC 2760 00635 1 is an eclipsing variable, EA subtype, with a period of 4.243 days. A distortion wave characteristic of RS CVn stars overlaps the eclipsing light curve. $\text{MinII} = 11.95$, $D = 0.17P$.

References:

- Bernhard, K., Lloyd, C., 2008, OEJV, 89
Damerdji, Y., Klotz, A., Boër, M., 2007, Astron. J., 133, 1470
Wozniak, P.R., Vestrand, W.T., Akerlof, C.W., et al., 2004, Astron. J., 127, 2436

Light Curve

TYC 2760 00635 1
EA/RS P=4^d.243

