

The New UV-type Variable Star USNO-B1.0 1243-0454679

[T. Kryachko](#)^{#1}, [A. Samokhvalov](#)^{#2}, [B. Satovskiy](#)^{#1}

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

#2. Surgut, Russia

Received: 1.12.2009; accepted: 22.12.2009

(E-mail for contact: bredfld@mail.ru, sav@surgut.ru, bs25@mail.ru)

Star Name:	USNO-B1.0 1243-0454679, 2MASS 21035477+3418505
Coordinates (J2000):	21 03 54.77, +34 18 50.5
Variability type:	UV; Limits, System: 16.09 - 19.25 (R);
Period:	Epoch(max): JD

Remarks:

During observations of a field in Cygnus, we discovered a new UV-type variable star. 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 without filters. In total, 787 images with 5-minute exposures were obtained on JD 2455012 - 2455132.

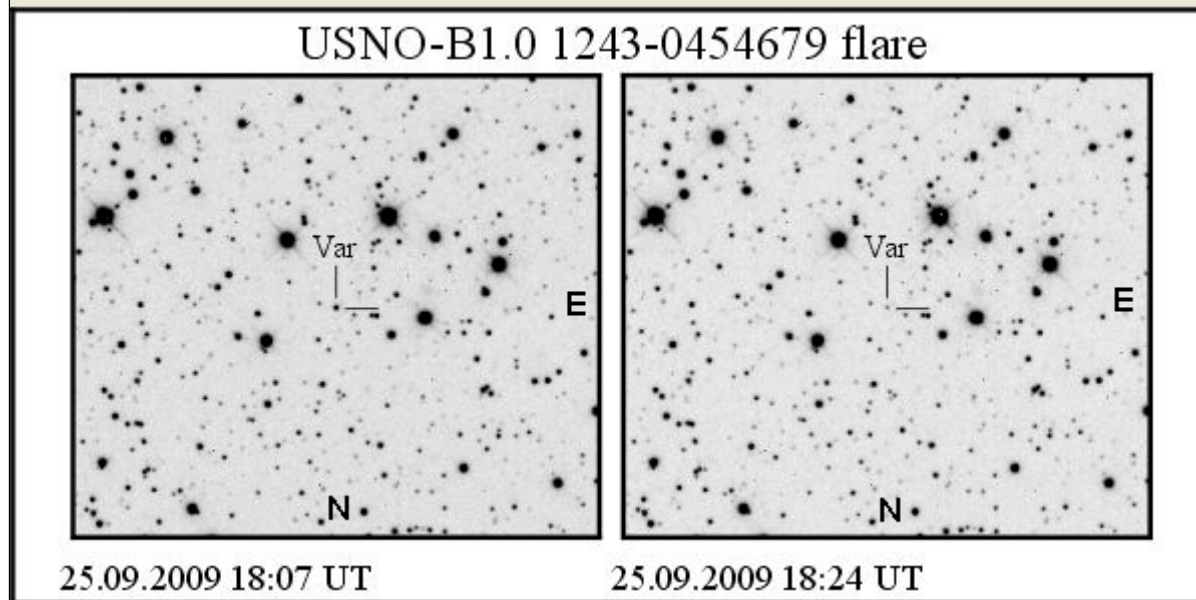
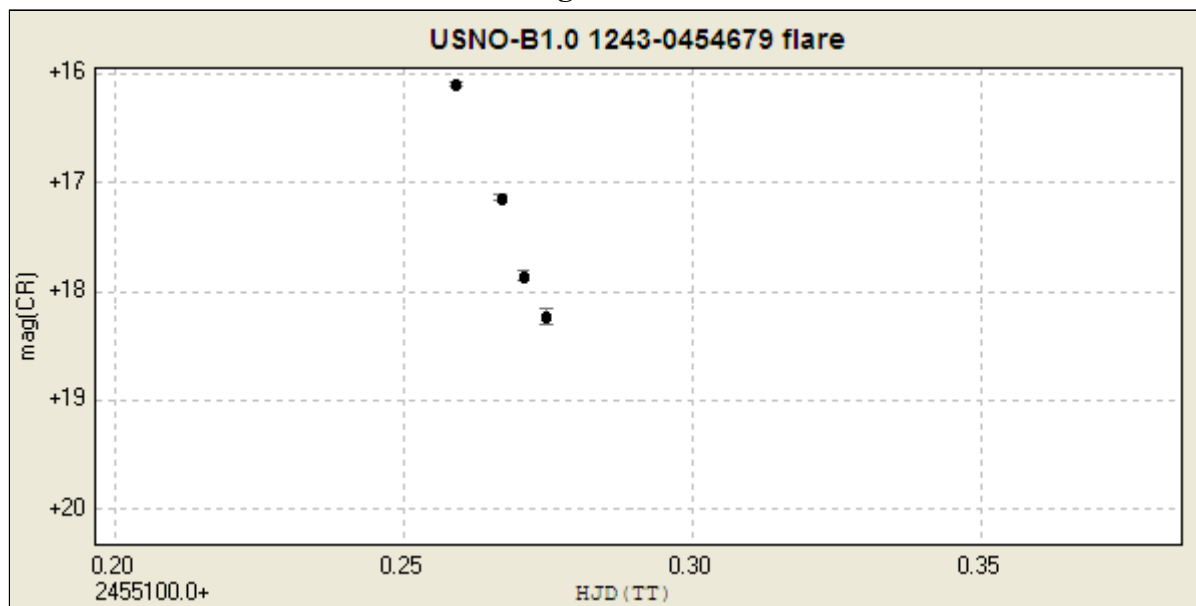
For basic reduction for dark current, flat fields and bias, we used IRAF routines. For photometry of the new variable star, we applied VaST software by Sokolovsky and Lebedev (2005). The comparison star was USNO-A2.0 1200-16826852 = USNO-B1.0 1238-0476997 (21:01:34.73 +33:49:47.9, J2000, 2MASS). Unfiltered magnitudes were calibrated using the comparison star, assuming $R_{comp} = 13.665$.

A single flare was detected at 2455100.26 (see the light curve). The infrared colors $J-H=0.627$, $H-K=0.150$ and $J-K=0.777$ (2MASS) are consistent with the spectral type K (Bessell and Brett 1988), typical of UV-type stars. The coordinates of the variable star were drawn from the 2MASS catalogue (Skrutskie et al. 2006).

References:

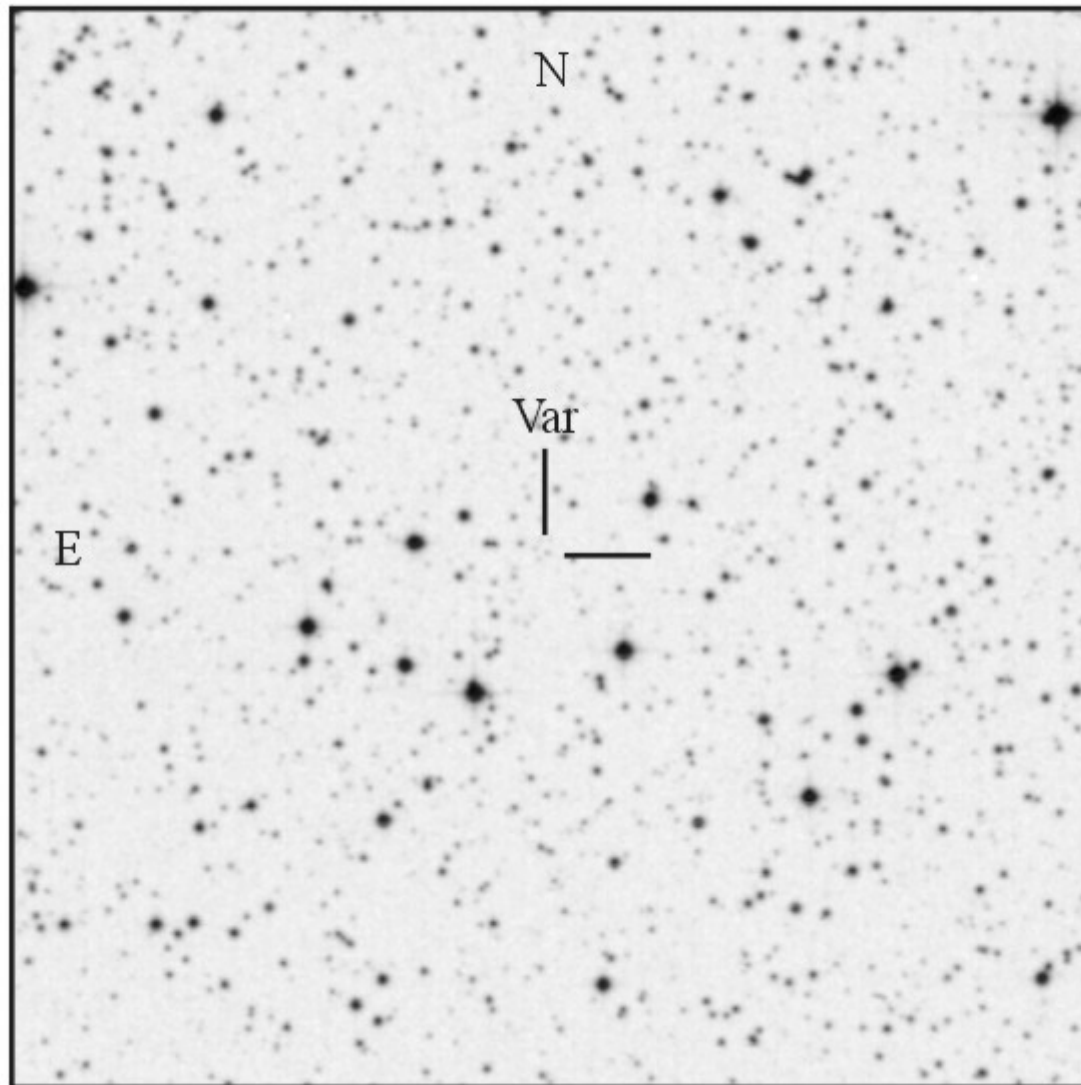
- Sokolovsky, K., Lebedev, A., 2005, in 12th Young Scientists' Conference on Astronomy and Space Physics, Kyiv, Ukraine, April 19-23, 2005, eds.: Simon, A.; Golovin, A., p.79
- Bessell, M.S., Brett, J.M., 1988, PASP, 100, 1134
- Skrutskie, M.F., Cutri, R.M., Stiening, R., et al., 2006, AJ, 131, 1163

Light Curve



Finding Chart

USNO-B1.0 1243-0454679



STScI POSS2 Red

8.6'×8.6'

Data Source

1. [usno-b1.0-1243-0454679_data.txt](#)