

New UV-type Variable Star USNO-A2.0 1350-05226717

[T. Kryachko](#)^{#1}, [A. Samokhvalov](#)^{#2}, [D. Denisenko](#)^{#3}, [B. Satovskiy](#)^{#1}

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

#2. Surgut, Russia;

#3. Space Research Institute (IKI), Moscow, Russia.

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(E-mail for contact: bredfild@mail.ru, sav@surgut.ru, denis@hea.iki.rssi.ru, bs25@mail.ru)

Star Name:	USNO-A2.0 1350-05226717
Coordinates (J2000):	05 02 30.00, +45 10 43.4
Variability type:	UV+BY:; Limits, System: 13.78 - 16.55 (R);
Period:	1.04098 d; Epoch(max): JD 2454702.3812

Remarks:

During observations of the field of the soft gamma repeater SGR 0501+4516, we discovered a new UV-type variable star, probably also with BY Dra variability. Our observations were carried out at the Astrotel-Caucasus observatory with a 300-mm Ritchey-Chretien telescope, equipped with an unfiltered Apogee Alta U9000 CCD camera.

In total, 661 images with 5-minute exposures were obtained on JD 2454702 - 2454827. For basic reduction for dark current, flat fields and bias, we used MaxIm DL software. For search for variables and photometry, we applied VaST software by Sokolovsky and Lebedev (2005). The comparison star is USNO-B1.0 1351-0128409 (05:02:03.24, +45:06:16.1 (J2000), R1 = 14.13, R2 = 14.16). Unfiltered magnitudes were calibrated using this comparison star, assuming $R_{comp} = 14.145$.

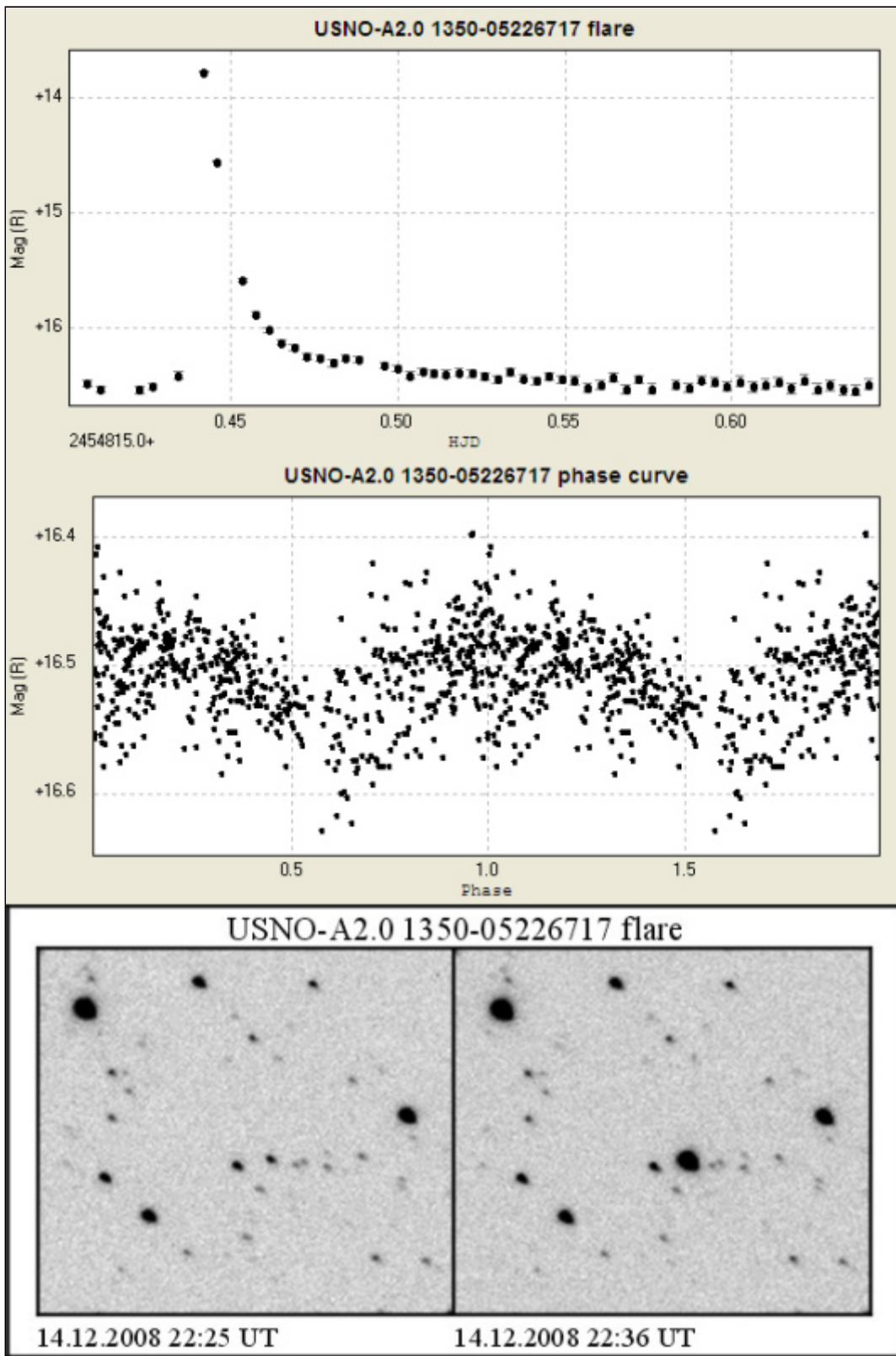
A single UV-type flare was detected on HJD 2454815.44 (see the light curve). The variability of the BY Dra type with the period 1.04098 d is also possible, see the phase curve displaying only observations outside the flare. For search for periods, we used Peranso software (www.peranso.com).

Acknowledgements: We would like to thank S. V. Antipin for helpful discussion.

References:

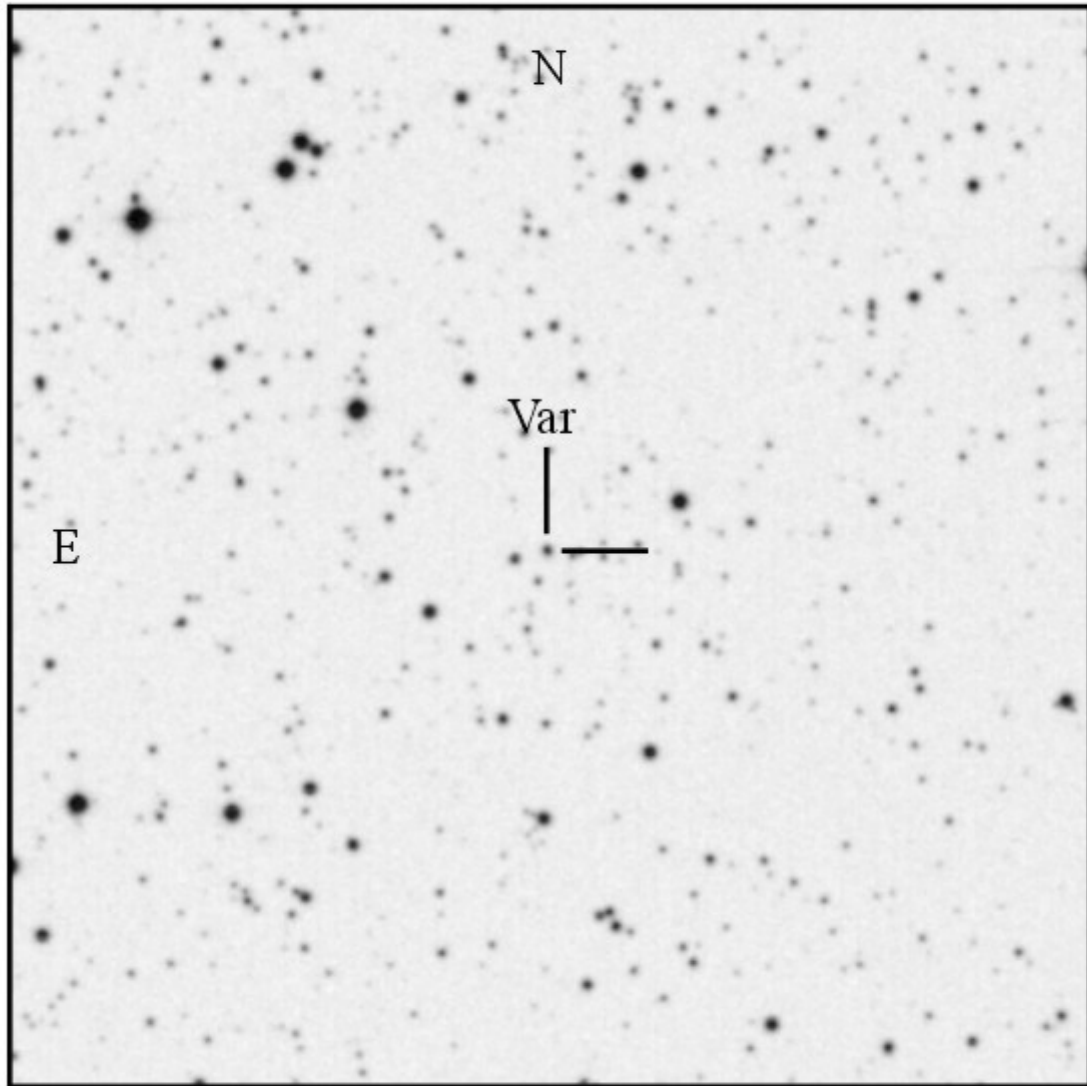
Sokolovsky, K., Lebedev, A., 2005, in 12th Young Scientists' Conference on Astronomy and Space Physics, Kyiv, Ukraine, April 19-23, 2005, eds.: Simon, A.; Golovin, A., p.79.

Light Curve



Finding Chart

USNO-A2.0 1350-05226717



STScI POSS2 Red

8.6'×8.6'

Data Source

1. [usno-a2.0-1350-05226717_data.txt](#)