

## *BVI<sub>c</sub>* CCD Observations of V2455 Cyg, a High-amplitude $\delta$ Scuti Variable.

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8001 magnitude measurements in the *B*, *V*, and *I<sub>c</sub>* filters were acquired for the high-amplitude  $\delta$  Scuti variable V2455 Cyg. The observations and light curves are presented.

Variability of V2455 Cyg was suspected by Yoss et al. (1991). Piquard (2001), using Tycho data (Høg et al., 2000), decided that it was an SX Phe variable star with a period of 0<sup>d</sup>.094206, but Wils et al. (2003) showed that it was a high-amplitude  $\delta$  Sct (HADS) star.

We performed CCD observations of V2455 Cyg during nine nights in September, 2008 and July, 2009 (the JD range 2454728–2455042) at the Mount Maidanak Observatory (Uzbekistan) with the 60-cm telescope using a SBIG ST- 402ME camera, 765×510 pixels, with a pixel size of 9 microns. The *BVI<sub>c</sub>*-band filters of the Kron–Cousins photometric system (Cousins, 1976) were used. Description of the observing data reduction technique can be found in Berdnikov et al. (2020). We obtained a total of 8001 differential magnitude measurements, resulting in 2669 *B*, 2673 *V*, and 2659 *I<sub>c</sub>* data points with photometric errors close to 0.01 mag. BD+46°3328 was the comparison star: *B* = 9<sup>m</sup>.604, *V* = 9<sup>m</sup>.617, and *I<sub>c</sub>* = 9<sup>m</sup>.699 (Reed and Niemczak, 2000; in their paper they give *V* – *R<sub>c</sub>* = 0<sup>m</sup>.041, we accepted *V* – *I<sub>c</sub>* = 0<sup>m</sup>.082).

Observations are available in a text file in the html version of the paper (Table 1). The light curves, constructed with the elements:

$$\text{Max HJD} = 2458016.23705 + 0^{\text{d}}.094206044 \cdot E, \quad (1)$$

obtained by Ostadnezhad et al. (2020), are displayed in Fig. 1.

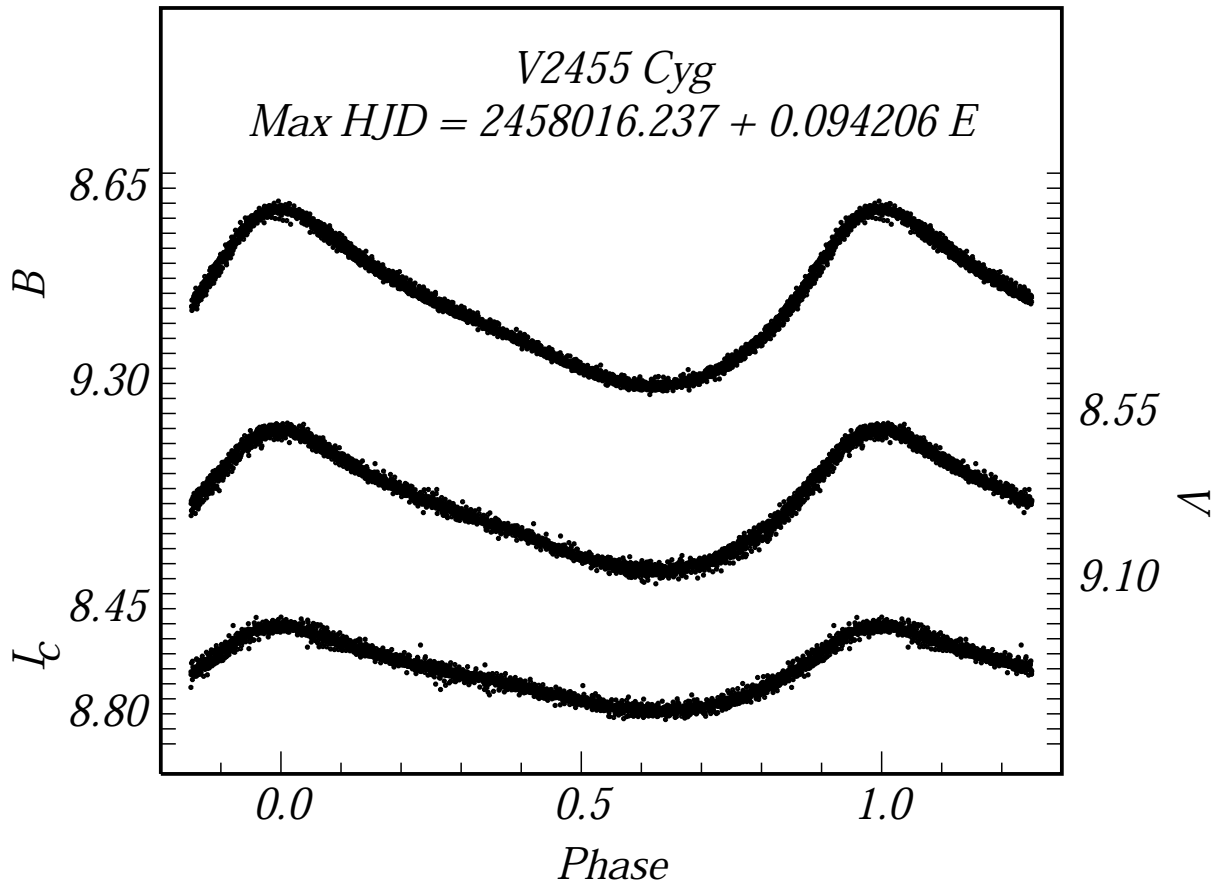
Our observations were used to create the template light curves of V2455 Cyg that are shown in Fig. 2 and presented in the html version of the paper as Table 2, which lists the *B*, *V*, and *I<sub>c</sub>*-band magnitudes for phases from 0 to 0.995 with a step of 0.005.

We plan to use our data to study the behavior of pulsating period of V2455 Cyg.

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**Figure 1.**  $BVI_c$  observations of V2455 Cyg (Table 1) phased with elements (1).

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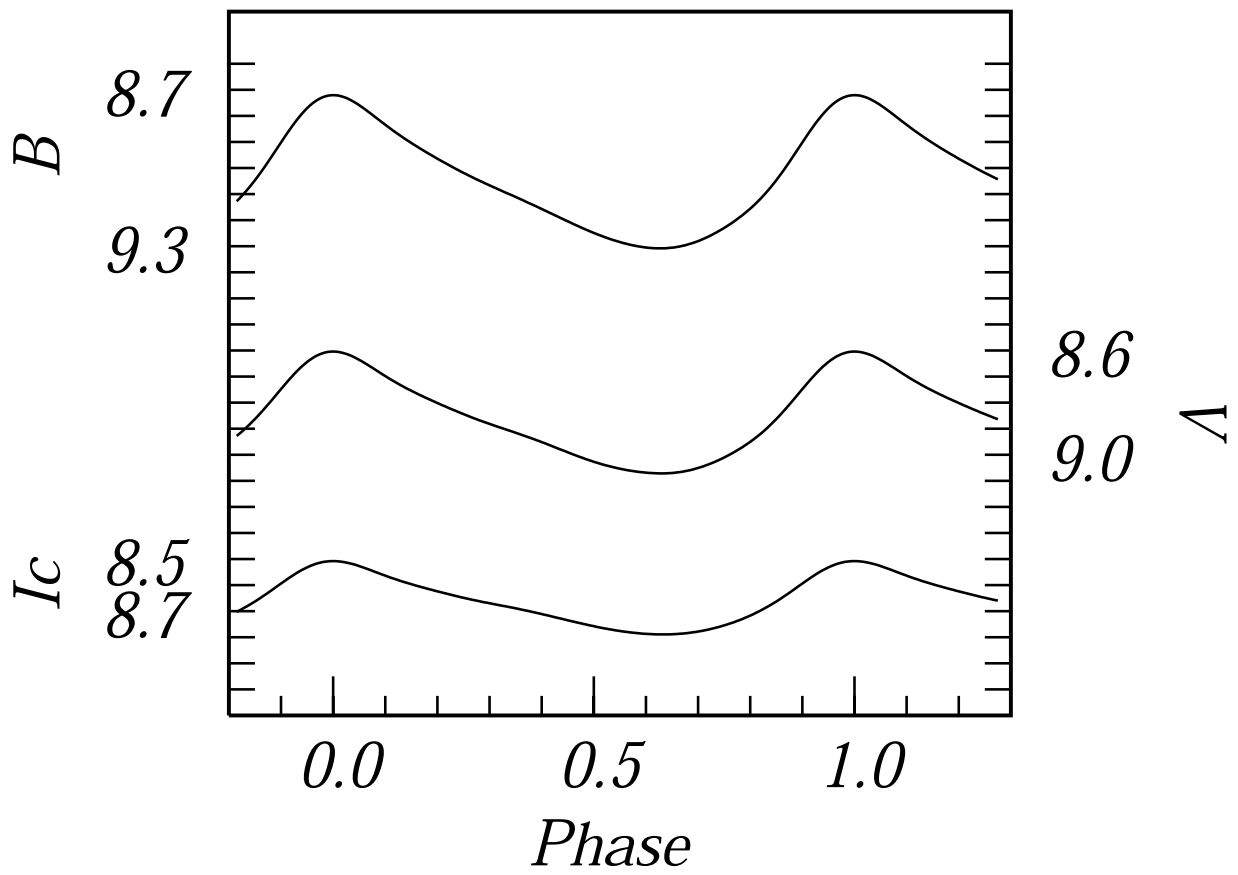
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**Figure 2.** Template light curves of V2455 Cyg in the  $B$ ,  $V$ , and  $I_c$  filters.