

images, so they haven't been included in the group of secondary standards because of low accuracy of their V and R magnitudes.

### Results

The light curve of RT Ser obtained from 1983 to 1993 in B, V, R color bands is displayed in Figure 4. Light variations with typical time of ten years are present in these bands. The whole amplitudes are 0.94, 0.89, 1.13 mag in B, V, R bands, respectively. The B-V, V-R color-indexes vary in a range of 0.5 mag and their mean values are 0.90, 2.78 respectively.

To display the whole picture of development of the outburst of RT Ser, three groups of observations are plotted in Figure 5. Line - Harvard photographic observations published by Payne-Gaposchkin and Gaposchkin (1938), circle - Gissar photographic observations, reduced to the B band, triangles - television observations in the B band. The complex light

curve demonstrate the brightness decline at a mean rate of 0.06 mag per year during last 70 years. The brightness variations of a few tenths of the stellar magnitude are probably present with characteristic time of decades of days.

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## PHOTOMETRIC STUDY OF TY CRA

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**ABSTRACT.** The UBVR photometric data of TY CrA have been compiled mostly unpublished. The new period and epoch have been derived:  $\text{Min I} = \text{JD } 2442954.301 + 2.888782 \cdot E$ . The errors are about 2 units in the last digit. At the first time the V light curve have been solved. The elements are:  $r_1 = r_2 = 0.13$ ,  $L_1 =$

$0.92$ ,  $i = 81.7^\circ$ . The light curve has no phase effect. No color variation have been seen. There is some depression near phase 0.5. If it is real, the relative surface brightness evaluation leads to conclusion that the secondary may be a F0 star with  $2 M_\odot$ .

**Key words:** Stars: Binaries: Eclipsing.