

## B AND V PHOTOELECTRIC OBSERVATIONS OF THE CONTACT BINARY XY Leo

XY Leo is a short period contact binary with multiple CaII H and K emission lines and strong X-ray emission (Hrivnak et al., 1984; Vilhu and Rucinski, 1983). The O–C diagram has a sine-like shape, but sudden changes of period of XY Leo were observed three times (Gehlich et al., 1972). These phenomena were explained successfully by BY Dra type activity of the other pair of stars in the system (Barden, 1987). The variations in the light curves of the binary were detected as usually for all W-systems.

Our observations of XY Leo were carried out on three nights: 28, 29 and 30 November 1990). The four channel WBVR photometer attached to the 48-cm reflector was used (Kornilov and Krylov, 1990). The observations were made at High Altitude Alma-Ata Observatory of Sternberg Astronomical Institute. BD +28°2036 served as the comparison star. The mean error of magnitudes range from 0<sup>m</sup>01 to 0<sup>m</sup>03 in each filter. These values are due to small ratio of signal to noise ( $\sim 3$ ) for stars of such brightness. V and B light curves of XY Leo are presented in Figure 1. Phases are calculated by the ephemeris from Krzesinski et al. (1990):

$$\text{MinI} = \text{J.D.}_{\text{hel}} 2447612.34748 + 0^{\text{d}}2841034 \times E$$

The observations allowed us to determine the times of one primary and two secondary minima by graphical method separately for each colour. Table I contains the moments of minima, type of minima and O–C values as calculated from the same ephemeris.

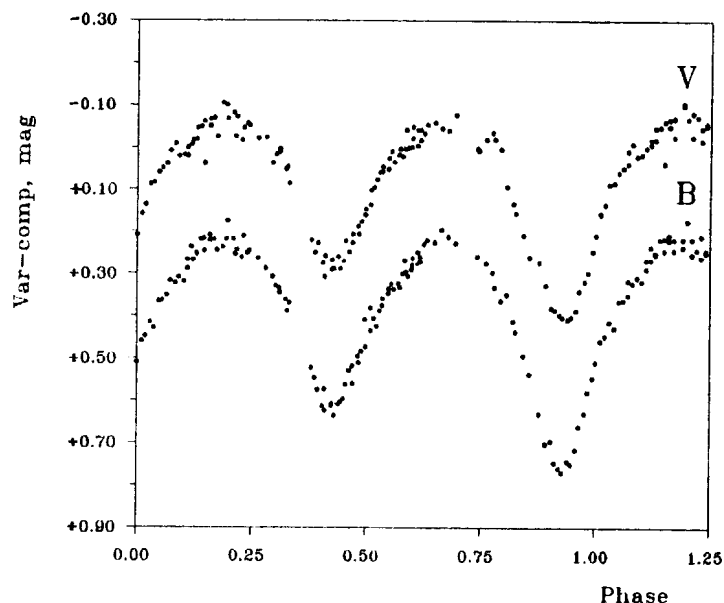


Figure 1

Table I

$JD_{hel}$ 2448000+	Min	Filter	O–C
224.4477:	II	V	–0.0194
224.4470:	II	B	–0.0201
225.4393	I	V	–0.0222
225.4399	I	B	–0.0216
226.4348	II	V	–0.0210
226.4351	II	B	–0.0207

L. T. MARKOVA  
 Laboratory of Astrophotometry  
 and Stellar Atmospheres

G. V. ZHUKOV  
 Department of Astronomy  
 Kazan University  
 Lenina 18, 420008 Kazan  
 Russia  
 E-mail: gera@astro.kazan.su

References:

- Barden, S. C., 1987, *Astrophys. J.*, **317**, 333  
 Gehlich, U. K., Pross, J., Wehmeyer, R., 1972, *Astron. Astrophys.*, **18**, 477  
 Hrivnak, B. J., Milone, E. F., Hill, G., Fisher, W. A., 1984, *Ap. J.*, **285**, 683  
 Kornilov, V. G., Krylov, A. V., 1990, *Soviet Astronomy*, **67**, 173  
 Krzesinski, J., Kuczawska, E., Kurpinska-Winiarska, M., 1990, *IBVS*, No. 3458  
 Vilhu, O., Rucinski, S. M., 1983, *Astron. Astrophys.*, **127**, 5