

COMMISSION 27 OF THE I. A. U.
 INFORMATION BULLETIN ON VARIABLE STARS
 Number 2698

Konkoly Observatory
 Budapest
 27 March 1985
 HU ISSN 0374 - 0676

THE SYMBIOTIC STAR Z ANDROMEDAE: UBV PHOTOMETRY DURING 1974 - 1984

Z And is one of the best known symbiotic stars. Its light curve is an alternation from the periods of enhanced activity ($\Delta m_{pg} \approx 2^m - 4^m$) to relative quietness ($\Delta m_{pg} < 1^m$) (Mayall, 1969; Mattei, 1978).

UBV photometry of Z And has been resumed at the Crimean Astrophysical Observatory since 1981 (Belyakina, 1970).

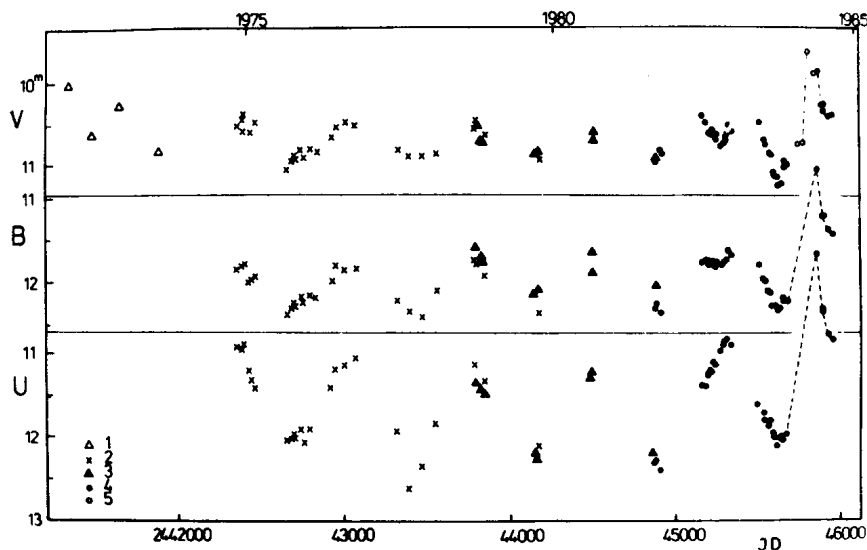


Figure 1

This variable was in quiet state from 1974 till 1984. The results of Meinunger's (1981) (x), Yudin's (1982) (\blacktriangle) and our (\bullet) UBV measurements carried out in this period are presented in Figure 1. Some visual brightness estimations of this star are also demonstrated here (Δ, o) (Mattei, 1978, 1984; Morgan, 1984). The V, B, U light curves show simultaneous fluctuations with the quasi-period equal to 700^d and their amplitudes are close to 0.5^m , 0.6^m and 1.3^m , respectively.

The observations of Z And being scanty do not permit us to make a detailed analysis of these light curves. But the shapes of the U and V light curves in the 1975 minimum and the 1982 maximum are obviously different. It can be explained within the framework of a binary model where the red component shows small variations. The IR photometry confirmed this hypothesis (Yudin, 1982).

The 1983 minimum in the V light curve is deeper and the corresponding U light curve is shallower than the preceding ones. It might be caused by the appearance of the 1984 outburst (Mattei, 1984).

T.S. BELYAKINA

Crimean Astrophysical Observatory
334413 Nauchny, Crimea, USSR

References:

- Belyakina, T.S., 1970, *Izv. Krimsk. Astrophys. Obs.*, 41-42, 275.
Mattei, J.A., 1978, *J. Royal. Astron. Soc. Canada*, 72, 61.
Mattei, J.A., 1984, *IAU Circ.*, No.3932.
Mayall, M.W., 1969, *J. Royal. Astron. Soc. Canada*, 63, 321.
Meinunger, L., 1981, *MVS*, 9, H.3, 67.
Yudin, B.F., 1982, *Dissertation*.