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UBV PHOTOMETRY FOR BD +37° 2356

The variable star BD +37° 2356, classified as W UMa type variable star by Zhukov (1982), was observed in March and May 1984 using UBV photometer attached to the 91 cm reflector at McDonald Observatory. Same comparison star (HD 113 730 = BD +37° 2360) with Zhukov's was used and about 300 observations in U, B and V bands were taken for the program star.

Six moments of minima were determined, their JD(hel) are as follows:

2 445 769.7314 (II), 2 445 770.6919 (I), 2 445 770.8840 (II),
2 445 773.7655 (I), 2 445 773.9575 (II), 2 445 841.7710 (I)

The new epoch of the primary minimum and the orbital period are:

$$JD(hel) = 2\,445\,841.7710\ (\pm 0.0003) + 0^d.384\,2105\ (\pm 0.000\,0001)E$$

The new period is a little longer than $0^d.38416$ given by Zhukov.

The light curve of V magnitude is shown in Figure 1. The eclipse depths at primary and secondary minima are almost equal. $V_{max} = 10^m.228\ (\pm 0^m.008)$, $V_{min} = 10^m.689\ (\pm 0^m.008)$. The colour indexes, shown in Figure 2 and Figure 3,

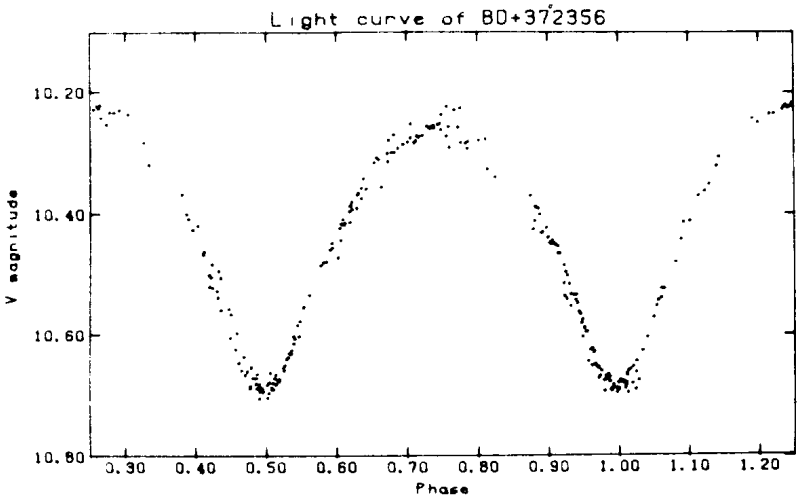

Figure 1

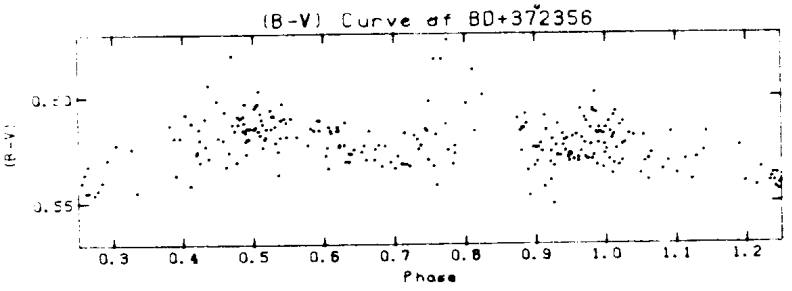

Figure 2

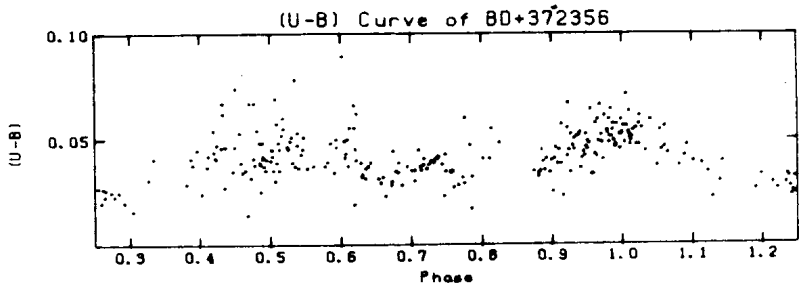

Figure 3

vary lightly with phase. The average colour indexes are:

$$(\overline{B-V}) = 0^{m}.578 \quad , \quad (\overline{U-B}) = 0^{m}.045 \quad .$$

LIU XUEFU and TAN HUISONG

McDonald Observatory
The University of Texas
(visiting scholars from China)

Reference:

Zhukov, G.V. 1982, Inf. Bull. Var. Stars, No. 2191.