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THE NEW PERIOD OF AD Boo

The eclipsing system AD Boo (BD +25^o2800) was observed photoelectrically with the 60 cm telescope at Peking Astronomical Observatory from April to June in 1981.

A total of 1518 photoelectric B,V observations were made on 14 nights. The star used as a comparison was BD +25^o2803 and BD +25^o2801 was used as a check star.

Four times of primary minimum were determined. The secondary minimum was also observed four times.

The times of minima have been calculated by Kwee and van Woerden's method. Table I lists the times of minimum light.

Table I

Minima of the light curve of AD Boo in yellow band

JD Hel.	m.e.	rem.
2444000+		
701.0941	0.0003	II
704.1985	0.0005	I
730.0570	0.0005	II
731.0935	0.0005	I
736.2642	0.0004	II
766.2627	0.0003	I

All the observations for AD Boo were corrected for differential extinctions. Figure 1 gives the V light curve of the binary.

The observations show that

- (1) the system is Algol type,
- (2) its period given by earlier observers is wrong, the period is about 2.0688112 days, twice of that given by them,
- (3) the primary and secondary minima are 0.64 mag and 0.40 mag in yellow,

0.68 mag and 0.37 mag in blue, respectively, in these light curves.

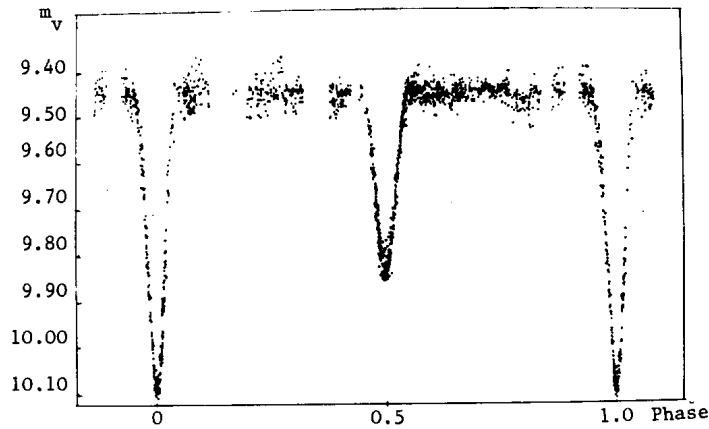


Figure 1

V light curve of AD Boo

From Van Buren's (1974) and our epochs the new ephemeris was found:

$$\text{JD Hel. Min I} = 2444704.1985 + 2^d.0688112 \cdot E$$

$$\pm 0.0004 \quad \pm 0.0000002$$

An analysis of these light curves is in progress.

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Reference:

Van Buren, D., 1974, J. Amer. Assoc. Var. Star Observ., 3, No. 1,6-10