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THE DISCOVERY OF A BETA LYRAE VARIABLE IN THE
VISUAL BINARY SYSTEM ADS 14977

In 1948, Hopmann (1948) listed ADS 14977 (SAO 107139=BD+13°4708) as a suspected variable. Its variability was confirmed this fall at the Flagstaff Station with 650 UBV observations obtained with the 1-m Ritchey-Chretien reflector. The appearance of the light curve, the amplitude and frequency of the light variation, the spectral type (A2) indicate that the A component of ADS 14977 is an eclipsing binary of the Beta Lyrae type.

Two primary minima were observed at:

$$T(1) = 244\ 6731.6339$$

$$T(2) = 244\ 7064.6953,$$

which produced the following light elements:

$$T = 244\ 6730.18247 + 0.^d7272018 \cdot E$$

The V observations are plotted in Figure 1. The magnitudes and colours of the system, as a function of phase, are given in Table I. These data include the light of the B component (sep.=3.5 arc seconds). Table II lists the magnitudes and colors of the comparison and check stars.

Table I

Magnitudes and Colors of ADS 14977 Aa x B

Phase	V	B-V	U-B
0.00	7.24	0.16	0.04
0.50	7.12	0.12	0.03
0.75	7.05	0.12	0.04

Table II

Magnitudes and Colors of the Comparison and Check Stars

Star	V	B-V	U-B
Comp. SAO 107132=BD+13°4705	8.65	0.53	-0.04
Check SAO 107134=BD+13°4706	9.68	1.13	0.96

The UBV data and light curve analysis (SIMPLEX) are being prepared for publication. Photoelectric CCD observations have been obtained and are being used to remove the light of the B component in the analysis.

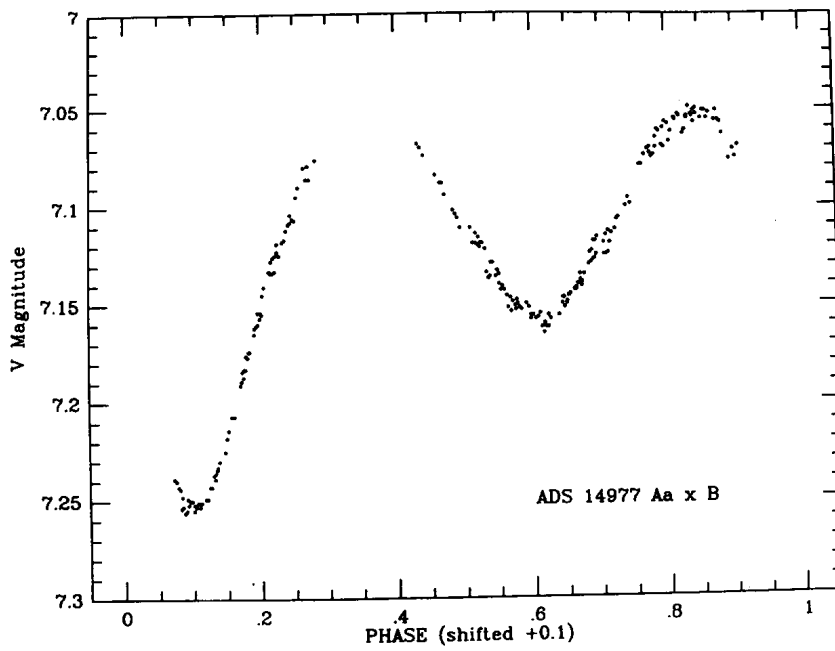


Figure 1

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Reference:

Hopmann, J.: 1948, *Z. Astrophysics*, 24, 263.