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NEW LIGHT ELEMENTS AND TIMES OF MINIMUM FOR AO CAMELOPARDALIS

AO Camelopardalis (BD+52°0826) is a W-Ursae Majoris type system which was discovered by Hoffmeister (1966). Milone et al., (1982) conducted a brief period study which was the first detailed work done on this system. They obtained four times of minimum and a set of light elements.

This star was observed on four nights during the winter of 1984 using the 42-cm reflector of the Morgan-Monroe Station of the Goethe Link Observatory. The photometer employs a 1P21 photomultiplier tube cooled with dry ice, and Johnson B and V filters. Differential measurements were made using BD+52°0835 as a comparison star and BD+52°0822 as a check against any variability in the comparison star.

The Hertzprung method was used to determine times of minimum light from the observations in each filter. These results were averaged and are presented in Table I.

TABLE I

HJD	Min.	(O-C)
2445732.6076	II	-0.0002
2445738.5463	II	0.0000
2445745.6402	I	0.0006
2445752.5676	I	-0.0004

The residuals presented here were formed from a new set of light elements which were derived from a linear least squares fit to these observations. The new elements indicate a possible period change from the period determined by Milone, and are:

$$\text{Min. I} = 2445745.6396 + 0. \overset{d}{329921} \text{E.}$$

± 2 ± 7

Complete light curves were obtained in both colors and the curves of normal points are shown in Figure 1.

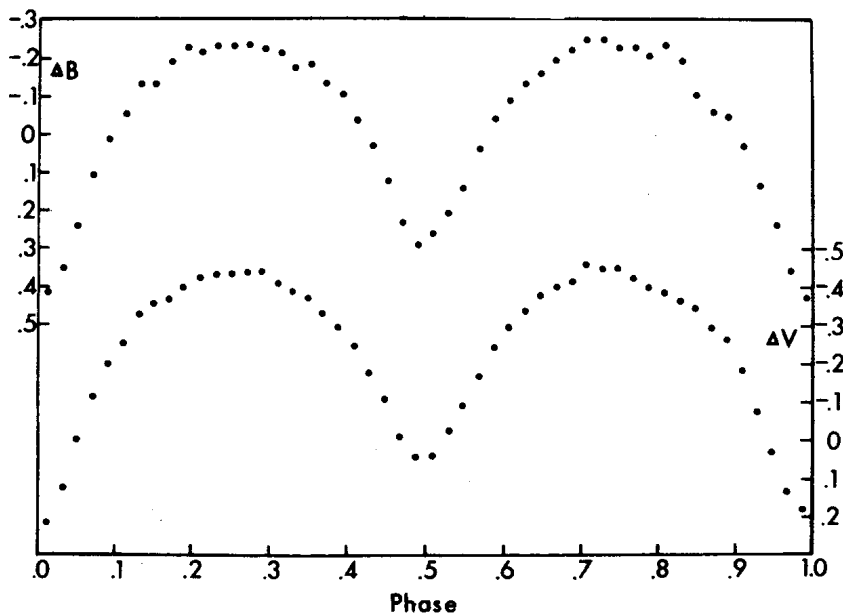


Figure 1

A complete analysis of this system, including a period study and the application of the Wilson-Devinney method of solution to this system will be published elsewhere. The authors would like to express their appreciation to Mr. Danny R. Faulkner and Dr. Stuart L. Mufson for their assistance on this project.

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