

## A PERIOD CHANGE IN UU CANIS MAJORIS

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Recent visual observations of the eclipsing binary UU CMa indicate a major change of period. Some past studies of this star resulted in eclipse elements by Soloviev (1943),

$$\text{JD}(\text{min}) = 2427860.14 + 2.166541 \text{ E} \quad (\text{A})$$

Zessewitsch (1954),

$$\text{JD}(\text{min}) = 2427860.155 + 2.166527 \text{ E} \quad (\text{B})$$

and Kukarkin *et al.* (1976),

$$\text{JD}(\text{min}) = 2442109.354 + 2.1665191 \text{ E} \quad (\text{C})$$

In February, 1976, AAVSO observers C. Hesseltine and G. Samolyk found that eclipses were not occurring at the time predicted by any of the above elements. Further observations by Samolyk, and Wedemayer yielded data clearly defining an ascending branch of an eclipse on JD 2442843 and an equally well defined descending branch of the eclipse of JD 2442845. Individual observations were reduced to phase, a composite light curve was formed from each observer's data and heliocentric times of minimum, reduced to the earlier date, were determined. Individual observers' data were treated separately throughout. Additional eclipse observations by G. Samolyk on JD 2442856 were interrupted by weather. The descending branch is well defined, but the ascending branch is very short.

Minima available to the writers were compared with elements from Kukarkin *et al.* (1976).

<u>J.D. hel.</u> 2,400,000+	<u>E</u> Eqns. C,D	<u>O - C</u> Eqn. C	<u>O - C</u> Eqn. D	<u>Observer</u>
27860.155	-6577	-0 <sup>d</sup> .003	-	Zessewitsch
29318.236	-5904	+0.011	-	S. Syczyrbak
41279.569	- 383	-0.008	-	K. Locher
41996.705	- 52	+0.010	-0 <sup>d</sup> .010	K. Locher
42059.509	- 23	-0.015	-0.017	K. Locher
42109.362	0	+0.008	+0.020	H. Peter
42109.409:	0	+0.055:	+0.067:	K. Locher
42843.584	+ 339	-0.220	-0.001	G. Wedemayer
42843.585	+ 339	-0.219	0.000	G. Samolyk
42856.582:	+ 345	-0.221:	+0.001:	G. Samolyk

The O-C diagram resulting from comparison with Kukarkin *et al.* (1976) is shown in Figure 1. Only minima observed during recent years are included. If the elements upon which this diagram is based are correct, then UU CMa may have undergone a major change of period since JD 2442100.

We derive provisional heliocentric elements using the three reliable minima observed in 1973-74 and the two observed in 1976.

$$\text{JD}(\text{min}) = 2442109.342 + 2.16591 \text{ E} \quad (\text{D})$$

Because the data do not reliably indicate the epoch of the

period change, further revision of these elements will probably be required when new data are available.

The writers would like to receive new or unpublished minima of this star.

#### REFERENCES

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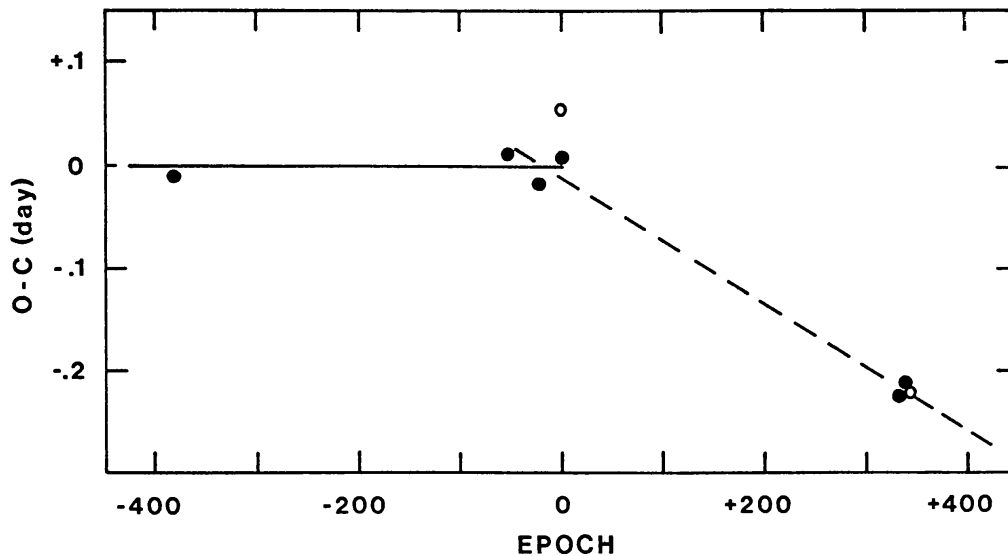


Figure 1. The O-C diagram (observed less computed times of minima) for UU CMa, showing activity over a relatively short duration of four years, illustrates the unusually large change of period that has occurred. The epoch and O-C are determined from prediction elements given in the General Catalog of Variable Stars, Third Supplement. The open circles indicate O-C values with uncertainties.