

COMMISSION 27 OF THE I. A. U.  
INFORMATION BULLETIN ON VARIABLE STARS

Number 2083

Konkoly Observatory  
Budapest  
1982 February 8  
HU ISSN 0374-0676

TWO (O-C) RESIDUALS OF W URSAE MAJORIS SYSTEM

The well known short period ( $0^d.333\ 63808$ ) eclipsing variable, W Ursae Majoris (BD+56<sup>o</sup>1400) was observed with a photoelectric photometer attached to the 48 cm Cassegrain telescope at the Ege University Observatory, Izmir. The observations were carried out on January 16-17, 1982 on two nights of excellent sky conditions, which are rare for this time of the year. The first night complete light curve and the second night the primary minimum were obtained. On both nights the (BD+56<sup>o</sup>1399, 8<sup>m</sup>.5) star was monitored as a comparison star with EMI 9781 A as a detector.

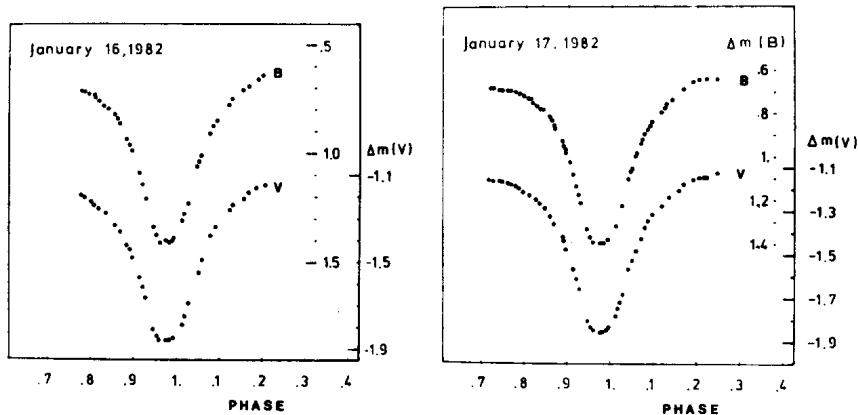


Fig.1: Two primary minima of W UMA obtained on 16-17 Jan., 1982

The star is well known for the variation of its orbital period and there are observational evidences for the oscillatory variations within the (O-C) residuals. Also there are some other indications of the second oscillatory variations superimposed on the (O-C) residuals.

We shall present a discussion somewhere else on these oscillatory variations of the (O-C) residuals.

Our (O-C) values are,

$$(O-C)_1 = -0.0005 = -7^m.27 \text{ (January 16, 1982)} - (O-C)_{II} = 0.0053 = 7^m.63$$

$$(O-C)_2 = -0.0045 = -6^m.48 \text{ (January 17, 1982)} \quad -$$

for which,

$$\text{Hel Min I} = \text{JD } 243\,7986.9742 + 0.33363808.E$$

was adopted. On the other hand our accurate observed time of primary minimum are:

$$\text{JD}_1 = 244\,4986.3624; \quad \text{JD}_{II} = 244\,4986.5290$$

$$\text{JD}_2 = 244\,4987.3639$$

#### Acknowledgements

We would like to express our gratitude to Mr. E.Küçüktaka and to Mr. O. Tümer for their help.

E. HAMZAOĞLU, V. KESKIN and T. EKER

Ege University  
Department of Astronomy  
Bornova-Izmir  
Turkey

#### References:

- Mikolajewska, J. and Mikolajewski, M., 1980, IBVS No.1812.  
Rucinski, S.M., Gondhalekar, P., Pringle, J.E. and Whelan, J.A.J.,  
1980, IBVS No. 1844.