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OBSERVATIONS OF PRIMARY MINIMUM OF UX URSAE MAJORIS

Photoelectric observations of the short-period Algol-type eclipsing variable UX UMa have been obtained on two nights in 1967 and eight nights in 1968 for the purpose of deriving accurate times of primary minimum. The observations were made using the 24-inch reflector of the Lick Observatory and a photometer employing a 1P21 photomultiplier tube refrigerated with dry ice. All observations were made through a blue filter composed of 2 mm Schott GG 13 plus 1 mm Schott BG 12.

The observed times of primary minimum are listed in Table 1, together with the residuals between the observed times and those calculated from the elements derived by Johnson, *et al.* (1954):

$$\text{Minimum} = \text{JD } \odot 2427341.2221 + 0^{\text{d}}.196671379\text{E}.$$

Table 1

Observed Minima of UX Ursae Majoris, 1967-1968

Helioc. JD	O - C (day)	Helioc. JD	O - C (day)
2439000+		2439000+	
528.94283	-0.00463	978.72946	-0.00544
529.92653	-0.00428		
966.73241	-0.00554	244000+	
972.82988	-0.00488	004.88711	-0.00508
975.77969	-0.00514	026.71741	-0.00531
977.74635	-0.00519	028.88097	-0.00513

Comparison of the present residuals with those obtained for earlier observations using the same elements (see Krzeminski and Walker 1963) shows that the period, which apparently increased from 1937 to 1953 and then decreased from 1953 to 1962, has continued to decrease since 1962, but at a slower rate. It appears just possible that the variation in the residuals might be periodic with a period of about 10^4 days. Accurate observations of the times of primary minimum of UX UMa are needed every one or two years so that we may follow and eventually interpret the changes in period.

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References:

- Johnson, H.L., Perkins, B., and Hiltner, W.A. 1954, Ap.J. Suppl., 1, 91 (No. 4).
Krzeminski, W., and Walker, M.F. 1963, Ap.J., 138, 146.

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