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NEW LIGHT ELEMENTS FOR THE ECLIPSING BINARY XZ CMi

Five new photoelectric minima were obtained of the short-period eclipsing variable XZ CMi during the year 1976 at the Observatory of Sierra Nevada (Granada, Spain).

Times of minimum were evaluated taking on account the existence of a small asymmetry in the light curve (Breinhorst et al.). Observed values show considerable O-C's against the elements published in the "General Catalogue of Variable Stars" (I) or by Wilson (II), positive or negative respectively.

$$\text{min} = \text{J.D. } 2428877.100 + 0^{\text{d}}.5788090 \cdot E \quad (\text{I})$$

$$\text{min} = \text{J.D. } 2437375.7710 + 0^{\text{d}}.57881062 \cdot E \quad (\text{II})$$

New elements were derived using our observations with linear fitting by least-squares to all available minima. As a result, a slightly shorter period was calculated and new elements are given by,

$$\text{min} = \text{J.D. } 2442444.4017 + 0^{\text{d}}.57880845 \cdot E \quad (\text{III})$$

O-C's corresponding to the above mentioned elements (I), (II) and (III), with the observed minimum times are the following:

Minima	O-C(I)	O-C(II)	O-C(III)
p 2442444.4014	+0 ^d .018	-0 ^d .0142	-0 ^d .0003
p 2442462.3443	+0 ^d .018	-0 ^d .0144	-0 ^d .0005
p 2442463.501	+0 ^d .017	-0 ^d .015	-0 ^d .001
s 2442497.362	+0 ^d .018	-0 ^d .015	-0 ^d .001
s 2442868.380	+0 ^d .019	-0 ^d .014	+0 ^d .001

(p, indicate primary minimum and s, secondary)

The plot of computed residuals from linear ephemeris for all available minima, suggests the existence of a small period change as indicated, with weaker evidences, by Wilson.

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References:

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Wilson, R.E.: *Astron. J.* 71, 32 (1966).