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ANOMALOUS BRIGHTENING OF TX Cam NEAR MINIMUM LIGHT

The long-period ( $P = 557.4$  days) M-type Mira variable, TX Cam has been included in a photographic program to monitor the light and spectral variations of several infrared objects. On March 23, 1973 a photograph was obtained which indicated that TX Cam was unusually bright. The observations summarized below were determined from one hour exposures on Kodak 103a-D plates behind a Wratten 12 filter.

U.T. Date	J.D.	TX Cam	Nearby Star
1973	2.440.000+	V	V
14 February	1728.3	15.3	14.8
23 March	1765.2	14.5	14.9
24 March	1766.2	15.5	14.9

The magnitudes were derived from an extrapolation of the UBV sequence determined by Wing *et al.*<sup>1</sup> As a consistency check on the extrapolation, the magnitude of a companion star only eight seconds of arc distance was also determined on each plate. The images of TX Cam and the companion on the plates were well-separated and easily measurable. We estimate the errors of the extrapolated magnitudes to be  $\pm 0.2$ .

Evidently TX Cam brightened by one magnitude sometime between February 14 and March 23. That it was a short-term phenomenon is suggested by the fact that TX Cam returned to  $V = 15.5$  in only twenty-four hours. Such a large and rapid change in the V magnitude, if real, is difficult to explain for a long-period variable. Both the observed magnitudes and the light elements of Kukarkin *et al.*<sup>2</sup> indicate that TX Cam was very close to minimum light in March 1973.

An image-tube spectrogram ( $495 \text{ \AA mm}^{-1}$ ) obtained on April 3, 1973 reveals the spectrum of a normal late-type long-period variable with very strong VO band features indicating a spectral type of M10. A spectrogram at the same dispersion in the 4000 to 5000 A region reveals no evidence of unusual features in the blue and rules out the

presence of a close, unresolved companion with a B magnitude brighter than 17.

Additional observations are needed to confirm this anomalous, short-term brightening of TX Cam near minimum light.

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