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THE PHOTOMETRIC PERIOD OF SZ PICTORIS

In this short note we derive the photometric period of SZ Pictoris = HD 39917, which Andersen et al. (1980) had discovered to be variable and suggested was an RS CVn binary with 'a period of the order of a couple of days'.

First we used a period-finding program similar to that of Lafler and Kinman (1965) to analyze the 16 V magnitudes in Table I of Andersen et al. between JD 2443931.5 and 2443941.6. The result was 2.45d with an uncertainty of a few hundredths of a day.

Then we considered the first two values of V in their table, which were about 700 days earlier, and the last four values, which were about 200 days later. Analysis showed that all 22 V magnitudes would produce a coherent light curve with a period of 2.441d, although we admit that there might have been some ambiguities in phasing together the three groups of data.

The light curve is shown in the figure below. Phases are computed with the ephemeris

$$\text{JD } 2443931.54 + 2.441\text{d } n, \qquad (1)$$

where the initial epoch is a time of minimum light. The amplitude of the light curve from maximum to minimum is about 0.15mag.

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