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UV Psc - A SHORT PERIOD RS CVn STAR

UV Psc has been listed by Hall (1976) in Table 3 (the Short-Period Group) of his paper on the RS CVn binaries. The inclusion comes from the discussion of Oliver (1974) who argued in favour of a subgiant companion to the primary G2V star. Oliver's light curve was itself incomplete outside the minima, while Carr's light curve (private communication cited by Oliver), though showing a greater coverage outside of the minima, appears to be incomplete around the primary minimum.

Light curves of the system in B and V colours were obtained at the Kottamia station of Helwan Observatory (Egypt) during the first two weeks of November 1977. The desert location of the observatory offers special advantages for high-grade photometry. The main comparison star was BD+6° 197. The stars BD+6° 195, BD+6° 191 were used for occasional checks.

The photometer and associated equipment used in this work have been described by Mikhail (1968) and Awadallah (1975).

The reduction procedure follows along the lines discussed by Hardie (1962), and has been extensively automated allowing the digitization measurement, computer data processing and graphical output systems of the University of Manchester Regional Computer Centre to be made use of.

Preliminary results are shown in the diagrams below.

The essential asymmetry of the out-of-eclipse portions is obvious, though it is not yet certain whether this corresponds strictly to a "wave" in the sense discussed by Hall (1976). The asymmetry can also be seen to be more pronounced in the B than the V light curve. A similar asymmetry in the same sense is indicated in Carr's light curve, though it is not obvious in the

observations of Oliver.

Further observations of the system are planned for January 1978 to confirm the reality of the asymmetry and other features.

The author would like to make special mention of the help and cooperation of the staff of Helwan Observatory during this program.

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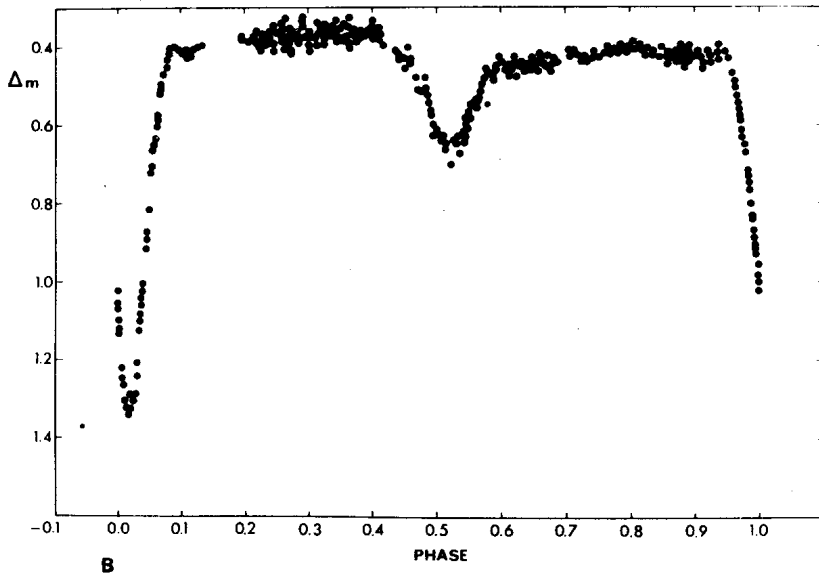


Fig.1.

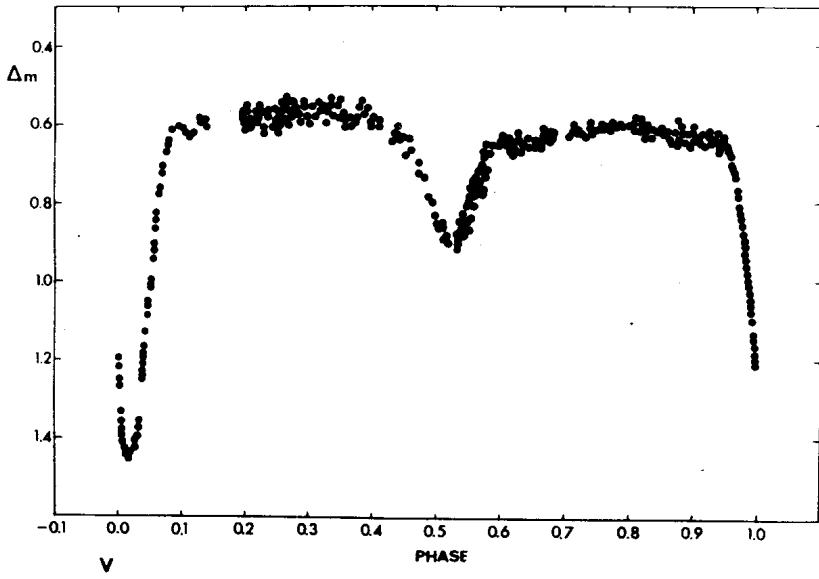


Fig.2.

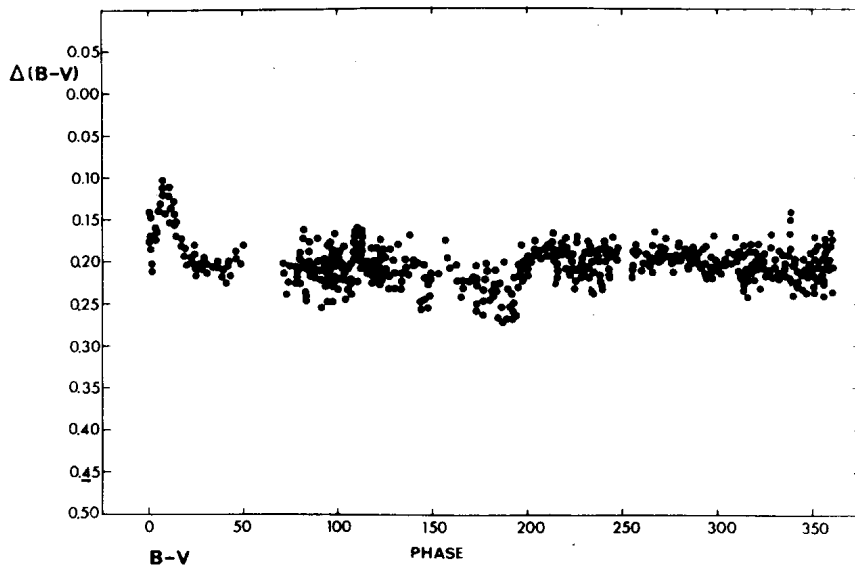


Fig. 3.