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THE 1986 LIGHT CURVES OF UV PISCIIUM

Based on photographic observations, the light curve of UV Psc was first published by Huth (1959). Hall (1976), included the system in the short-period group of RS CVn-type binaries. The spectroscopic record of UV Psc is due to Popper (1969) and the system is listed as a double-line binary with emission from both components present in the H and K lines of Ca II. The photoelectric observations of the system were made by several investigators. According to his light curve analysis Sadik (1979) stated that the irregularities in the light curve were caused by a locally hotter (rather than cooler) region.

Two-colour photoelectric observations of UV Psc were carried out from November 10 to November 20, 1986 at the Ege University Observatory with the 48 cm Cassegrain telescope equipped with an EMI 9781A photomultiplier. B and V filters of the standard UBV system were utilized to secure the observations. BD +6° 191 and BD +6° 197 were used as comparison and check stars, respectively. The differential magnitudes in the sense variable minus comparison were corrected for atmospheric extinction and the times of the individual observations were reduced to the Sun's centre. The phases of the individual observations were calculated with the new light elements given by Ibanoglu(1987) as,

$$\text{Min I} = \text{J.D. Hel. } 2444\ 932.2985 + 0.\overset{\text{d}}{86104771}\text{E.}$$

+2                      +11

In Figure 1, B and V light curves of UV Psc obtained in the observing season of 1986 are presented. A continuous light variation due to the wave-like distortion can be easily recognized, except for the phase interval 0.065-0.225 for the blue light. The wave minimum seems to be located just at the secondary minimum of the light curve. As in the light curves of all other RS CVn type binaries, the location of the minimum of the wavelike distortion is shifted towards the decreasing orbital phases in the case of UV Psc, with a period of roughly 1.5-2.0 years.

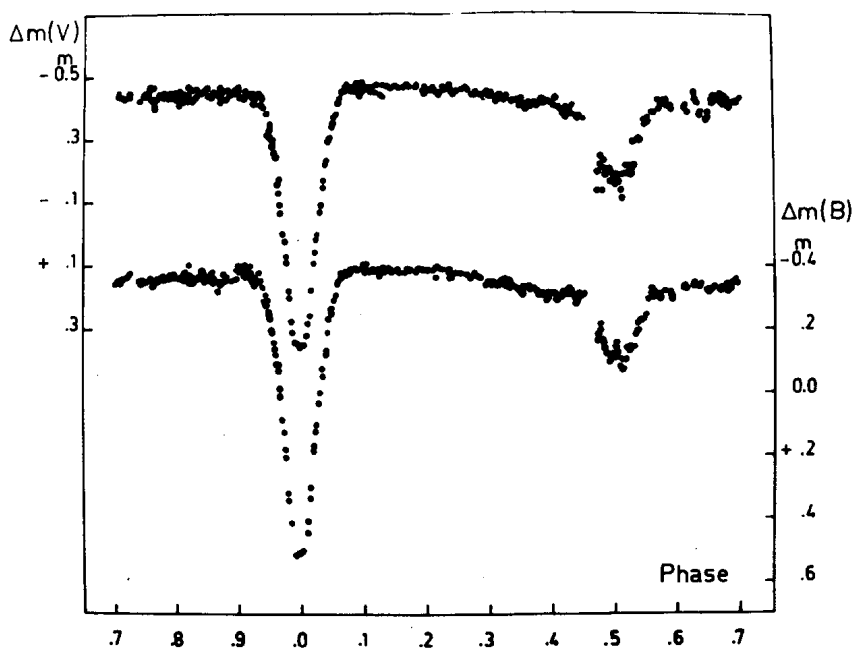


Figure 1: B and V light curves of UV Psc obtained in 1986.

The light curves of the system obtained in 1986 can be considered quiet if the fluctuations between the phase interval 0.475–0.525 are ignored. For the observing season of 1982, however, the light curves of the system in both colours proved to be considerably fluctuating (Ibanoglu, 1987).

The observations of the system will be carried out in the coming observing season.

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