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OPTICAL BEHAVIOUR OF THE POLAR AM Her IN 1988

Using the sequence for comparison stars given by Hudec and Meinunger (1977) we measured the star on 55 blue-sensitive (ORWO-ZU21+GG13+BG12), 33 photovisual (ORWO-RP1+GG14) and 41 uv-sensitive (ORWO-ZU21+UG2) plates from 40 nights taken with the 50/70/172 cm Schmidt camera of Sonneberg Observatory covering the time interval between 14 February and 7 November 1988. The individual observations will be published in MVS, Sonneberg.

The annual light curves in B, V and U are given in Figure 1, where all observations show the star to be in the high state caused by X-ray heating. The annual mean brightness amounts to  $B = 13^m.38$ ,  $V = 13^m.34$  and  $U = 12^m.34$ . The mean value in B is brighter than in the previous year (Götz, 1987).

From 29 nights we obtained 36 B-V colour indices, and 37 U-B colour indices. The B-V colour indices complete the colour-magnitude diagram

$m_B$ -(B-V) given by Götz (1984) and are in agreement with the behaviour shown there. The colour-magnitude diagram  $m_B$ -(U-B) is given in Figure 2. It is similar to that given by Götz (1986) but with higher mean B-brightness without any colour index change. In both cases, the U-B colour indices become larger with increasing brightness.

The two-colour diagram (U-B)-(B-V) of the series 1988 is shown in Figure 3. There the B-V colour indices become larger with decreasing U-B. This behaviour also confirms the result obtained from observations of the series 1986 given by Götz.

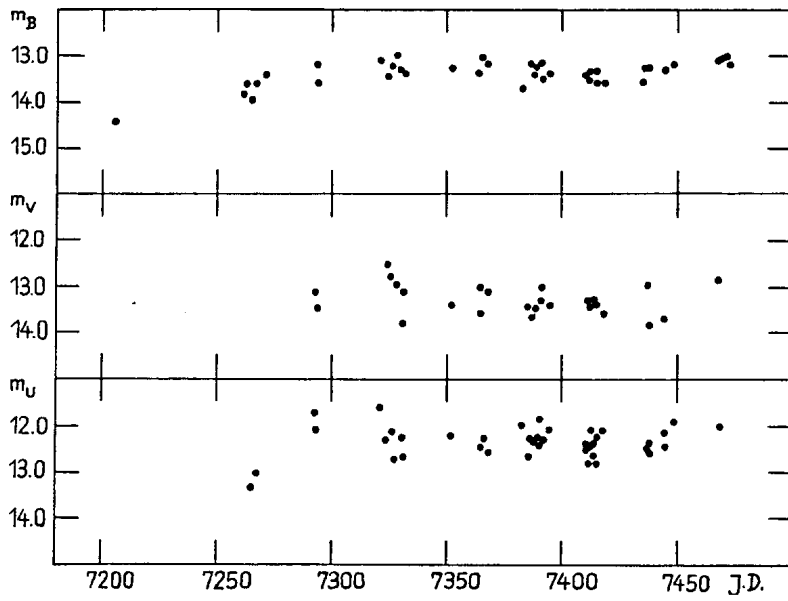


Figure 1

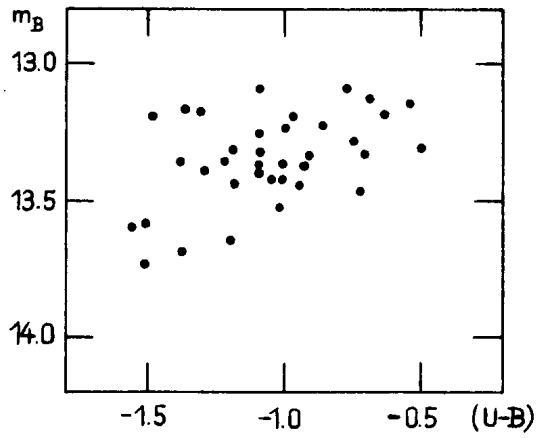


Figure 2

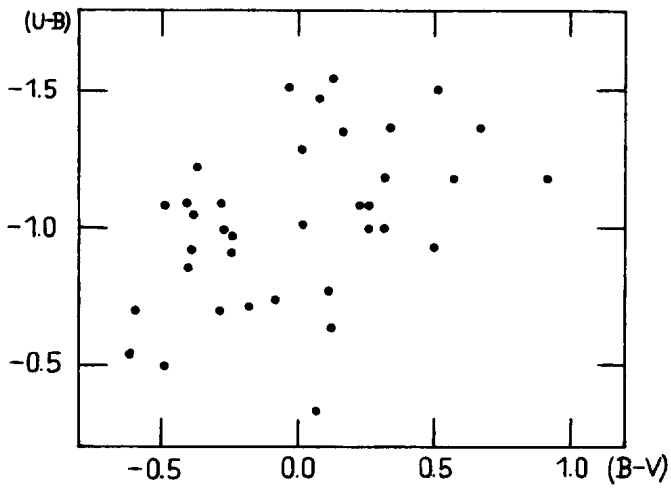


Figure 3

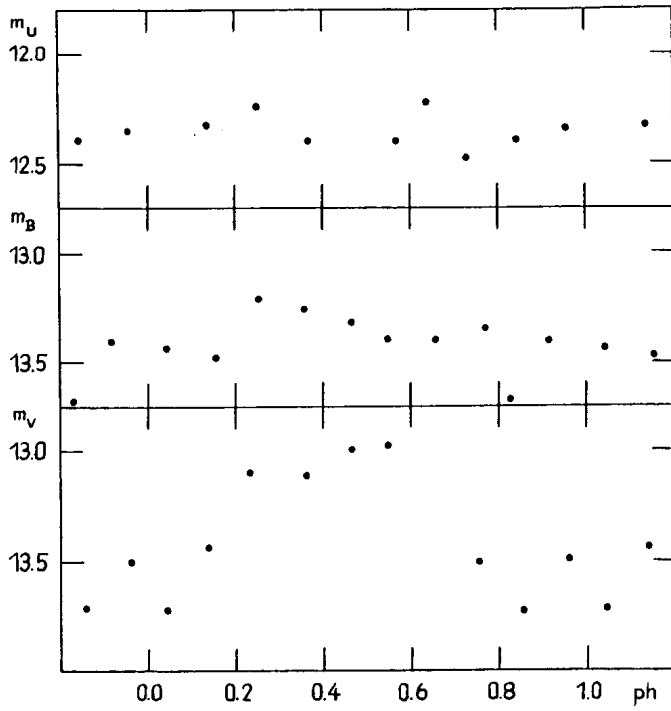


Figure 4

In order to study the influence of occultation light changes on the overall light curves, all observations were reduced to one common epoch by means of the improved orbital elements published by Götzt (1984). As it is shown in Figure 4, where the mean magnitudes in B, V and U are plotted against the phases, periodic variations can only be seen in the V range.

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