

COMMISSION 27 OF THE I. A. U.  
 INFORMATION BULLETIN ON VARIABLE STARS  
 Number 2851

Konkoly Observatory  
 Budapest  
 21 January 1986  
 HU ISSN 0374 - 0676

OPTICAL BEHAVIOUR OF THE POLAR AM Her IN 1985

In linking to the sequence of comparison stars given by Hudec and Meinunger (1977) the star was measured on 115 blue-sensitive (ORWO-ZU 21 + GG13 + BG12) and 10 photovisual (ORWO-RP1 + GG14) plates from 42 nights taken with the 50/70/172 cm Schmidt camera of Sonneberg Observatory covering the time interval between 16 February and 5 December 1985. On 29 nights more than one blue plate per night was obtained. The individual observations will be published in MVS, Sonneberg.

In addition, 12 B-V colour indices on 8 nights could be derived. They complete the colour-magnitude diagram ( $m_B - B-V$ ) given by Götz (1984b) and are in agreement with the behaviour shown there. The individual colour indices are listed in Table I.

Table I

J.D. hel. 244....	B	B-V
6175.456	15. <sup>m</sup> 55	0. <sup>m</sup> 52
6175.501	15.25	0.35
6200.408	15.60	0.50
6200.448	15.45	0.40
6327.337	15.47	0.32
6327.358	15.50	0.35
6328.345	15.55	0.35
6328.366	15.55	0.35
6374.238	15.05	0.50
6385.243	15.34	0.39
6386.259	15.45	0.63
6387.282	15.35	0.45

The long-time light curve in B and V (open circles) is given in Figure 1. As in the series of other years (1982, 1983, 1984 - see Götz, 1982, 1984a) two different states of brightness behaviour of AM Her can be seen there. But most of the observations are from the low state which is characterized in 1985 by two long-lasting minima of 55<sup>d</sup> and more than 120<sup>d</sup>, respectively. The observations of the high state which is caused by X-ray heating are start-

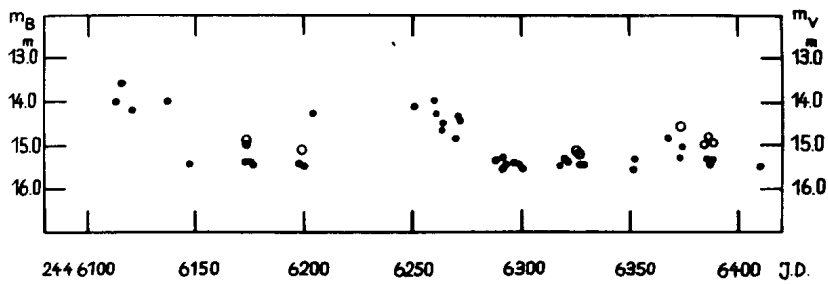


Figure 1

ing from the mean brightness  $\bar{B} \approx 14.7^m$  on the way down to the low state in two cases.

The occultation light changes from the high state observations superimposed on the long-time behaviour of AM Her are in agreement with the improved orbital elements given by Götz (1984b).

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