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HIGH SPEED PHOTOMETRY OF HO139-68

We have obtained high speed photometric observations of the optical counterpart of the AM Her star HO139-68 (*IAUC 3649, 3658*). 10-sec integrations in "white light" were made with the UCT photometer and an RCA 8644 (S20-response) on the 0.75m reflector at the Sutherland site of the South African Astronomical Observatory.

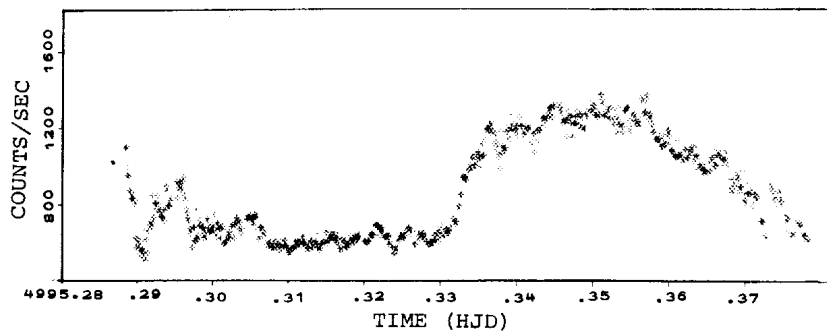


Figure 1 Light curve of HO139-68 on January 24, 1982. For heliocentric Julian Day add 2440 000.

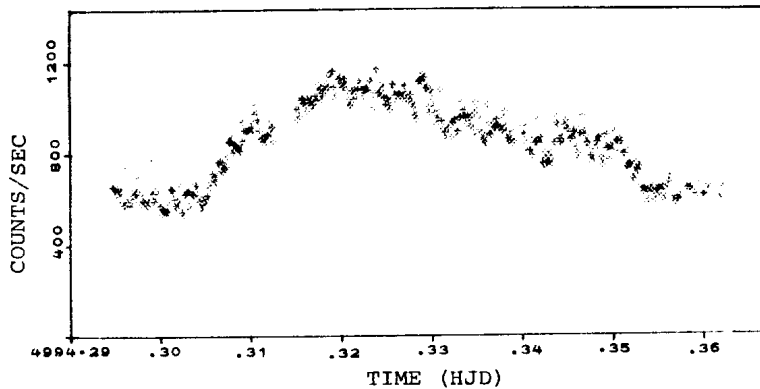


Figure 2 Light curve of HO139-68 on January 25, 1982.

The light curves, corrected for atmospheric extinction, are shown in Figures 1 and 2. The abrupt rise in light, following a period of relative quiescence, is similar to that seen in VV Pup (Warner and Nather, *M.N.R.A.S.* 186, 305, 1972), which supports the AM Her classification. Flickering on a timescale of minutes is present throughout the orbital cycle. Power spectra show no significant coherent rapid oscillations.

The observations are not sufficiently extensive to determine the orbital period unambiguously. Combining the light curves of Figures 1 and 2, orbital periods of 105.5 mins or 113.6 mins (± 0.5 mins) are possible. From a brief observation made in poor observing conditions on 23 January, the latter period is favoured.

M. S. CROPPER
 Department of Astronomy
 University of Cape Town