"Stellar magnetism" International Conference Proceedings, 1992, 173-180.

OBSERVATIONS OF THE RAPID QUASI-PERIODIC OSCILLATIONS IN AM HERCULIS

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ABSTRACT. *High-speed photometry of AM Her with a time resolution of 0.3 s display presence of quasi-periodic oscillations with periods ranging from 4 s to 120 s and a coherence time of 5-20 minutes. Pulse profiles of the oscillations with the 4-18 s periods show the typical feature: a wider minimum as compared with maximum. Over two hundred power spectra were analyzed. The distribution of the number of oscillation occurrences observed as dependent on the frequency makes us suggest that the oscillations observed in AM Her may be similar to 1-3 s oscillations in some other polars. In contradistinction to other polars, the oscillations in AM Her take place at lower frequencies (approximately thirty times). Significant values of oscillation periods (tens of seconds) make us choose for their explanation a model of magnetic flux tube oscillations rather than oscillating shock model.*