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**A NEW RAPIDLY OSCILLATING Ap STAR
IN THE NORTHERN HEMISPHERE**

We monitored the star HD 176232 (HR 7167; 10 Aqr), classified as an F0p, photometrically for a total of ~ 29 hours over a period of 8 days during July 1988. We detected a low amplitude light variation with a period of approximately 11.5 minutes. This is equivalent, within the errors, of the period detected in July 1987 (Heller and Kramer 1988) and confirms the suspected variability. There are also indications that other frequencies may be present.

We obtained high speed photometric observations of HD 176232 using the one-meter telescope and single channel photometer of the Mount Laguna Observatory (MLO), jointly operated by San Diego State University and the University of Illinois. A series of continuous 20-second integrations were taken through a Johnson *B* filter and 40 arc sec diaphragm; interrupted only for occasional sky measurements and recentering at irregular intervals. The equipment and reduction of the data are described in Heller and Kramer (1988). We computed the amplitude spectrum using Deeming's (1975) algorithm along with the time saving schemes of Kurtz (1985), and O'Donoghue and Warner (1982). All amplitudes reported are semi-amplitudes.

Figure 1 shows an amplitude spectrum of the combined one-meter data. A peak rising above the noise level at approximately 1.45 mHz dominates the periodogram with an amplitude of 0.42 mmag. An excess of power at nearby frequencies can be seen in the figure and may indicate the presence of other variations in HD 176232.

We are currently reducing an additional ~ 90 hours of photometric data taken with the 61-cm telescope at MLO in June and July 1988. The full data set spans some 60 days. Unfortunately, because of the smaller mirror diameter of the 61-cm telescope, the scintillation noise is significantly larger than with the 1-meter.

We feel there is strong evidence for rapid light variation in HD 176232. While the presence of other frequencies are suggestive by the preliminary investigation, a full analysis of the entire data set is necessary before this can be stated with confidence. Further analysis of the data is currently in progress.

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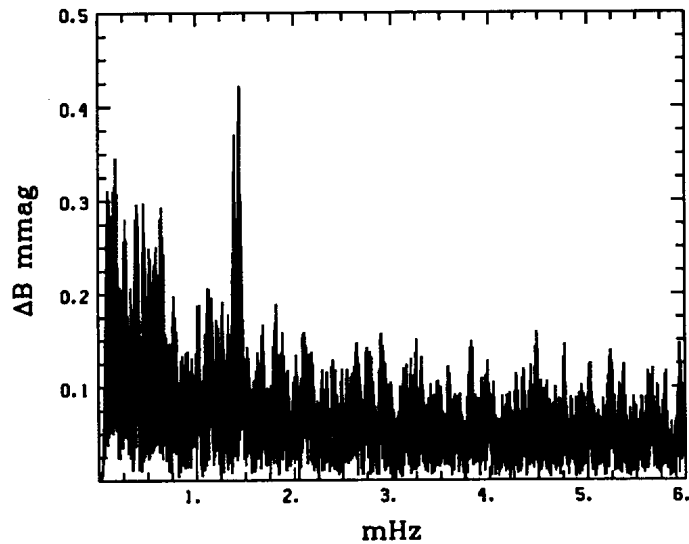


Figure 1: An amplitude spectrum of data taken between JD2447351 and JD2447359 for HD 176232. The highest peak is at 1.45 mHz (11.5 min) and has a semi-amplitude of 0.42 mmag.

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