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SPECTRUM VARIABILITY OF HD 147010

HD 147010 is an Ap Si star embedded in a reflection nebulosity in upper Scorpius. In the course of investigating the spectral peculiarities of Ap stars associated with nebulosities we found that HD 147010 shows spectrum variability. The most drastic changes are exhibited by the lines of Cr II. Figure 1 shows the density tracings of three of our blue plates in the region around 4000 Å. These spectra were obtained with the one meter telescope at Kavalur Observatory at a dispersion of 22 Å/mm.

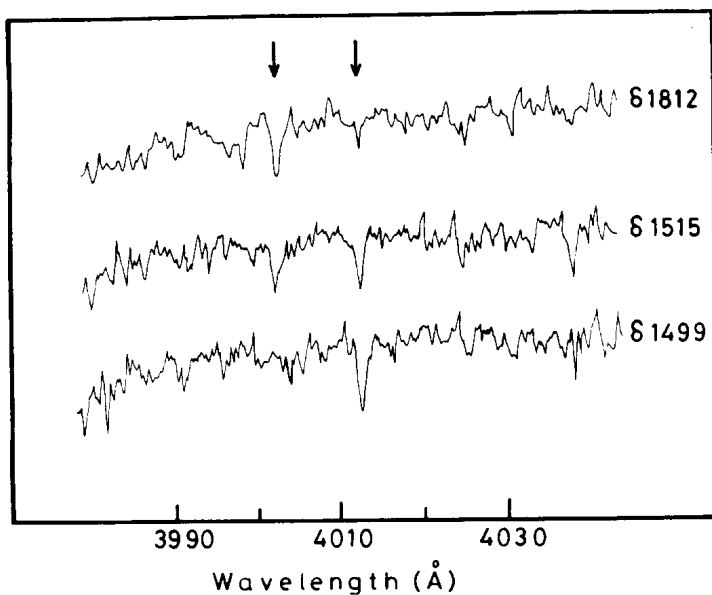


Figure 1

The line at 4012.5 is mainly due to Cr II which shows drastic changes; strong on plate δ 1499, of intermediate strength on δ 1515 and weak on δ 1812. The unidentified line at λ 4002.9 shows variations opposite in phase to that of λ 4012.5.

A comparison of the measured radial velocities of our spectrograms with that given by Abt (1973) does not indicate any variations more than those ascribable to observational errors. We conclude that this star is probably not a spectroscopic binary.

However, the variation in the line intensities is probably periodic. A rough estimate based on the consideration of the rotational velocity of this star together with the variation of the line strengths on our blue spectrograms indicates a period of 5.7 days.

Since most of the spectrum variables also show variations in light, it would be desirable to check the star for variability in light.

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Reference:

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