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VARIABILITY OF HD 207739

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Parsons et al. (1983) analyzed IUE spectra of HD 207739 (BD +43°4060) and found a strange composite structure (F8II + B:) with some resemblance to shell and pre-main sequence B stars. As they pointed out, however, it more closely matched the spectra of the eclipsing systems VV Cep and SX Cas. The authors suggested HD 207739 to be an interacting binary, from radial velocity data they expected a period of less than a month.

HD 207739 was observed with a "Schnitzer"-photometer attached to a 25 cm Schmidt-Cassegrain telescope and using filters for B and V. As comparison served HD 208220 ($V = 9^m.49$, $B-V = +0^m.04$), as check star HD 7754. For the latter the following magnitudes were derived: $V = 7^m.06 \pm 0^m.016$ and $B = 8^m.242 \pm 0^m.015$ (SE). Because of the large zenith distances of the observations between JD 2445720 and 840 the check star was used as comparison in view of its much smaller angular distance to HD 207739.

The figure shows the results of the measurements. HD 207739 exhibited small variations between $8^m.59$ and $8^m.39$ in V and $9^m.22$ and $9^m.03$ in B whereas HD 207754

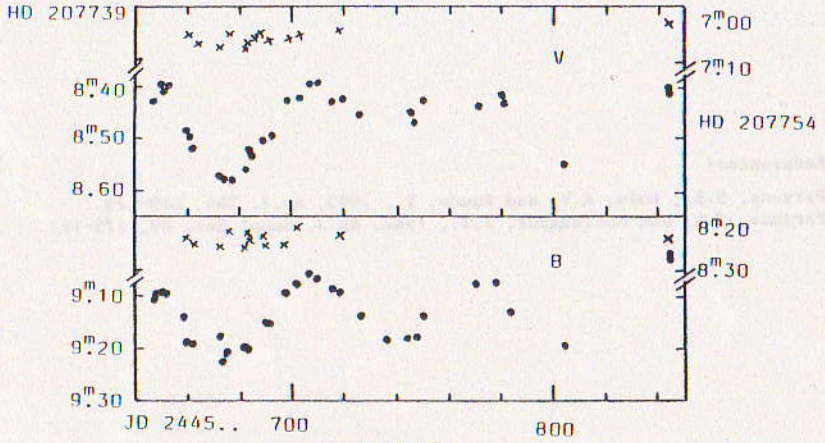

Figure 1

The light curve of HD 207739 (•) in comparison with that of HD 207754 (x)

did not show significant light changes. The light curve of HD 207739 is wave like with smooth maxima and minima. The amplitude varies in V but not in B, periodicity seems possible but cannot be definitely shown by the present observations. If a period exists it should be around 65 days or in view of the different amplitudes in B and V the double of this value, thus much longer than expected by Parsons et al. (1983). The only UBV-magnitudes available in the literature (Parsons and Montemayor, 1982) were obtained on 1980 Aug.29 and 30 and Sep. 1. The authors found no significant variability, the mean values ($V = 8^{m}.59$ and $B-V = +0^{m}.66$) are almost exactly those of the minimum around JD 2445675 in the above figure. Assuming that 9 epochs have elapsed a period of $132^{d}.4$ can be calculated. However, the star needs further observations to ensure periodicity of its light variations.

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