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THE BRIGHT ECLIPSING BINARY HD 208496

HD 208496 = HR 8369 (spectral type F3V) is a bright eclipsing binary which has received little attention up to now. It is not listed in the General Catalogue of Variable Stars though the 1982 edition of the Bright Stars mentions it as a suspected eclipsing binary.

Manfroid and Renson (1983) used it as a comparison for the CP star HD 208217 in a photometric observing run in September 1981 with the ESO 50 cm Danish Telescope. From 15 points they derived a possible period of 0.73 day and a range of more than 0.2 magn. in $u, v, \&$ and y .

More observations were obtained in July 1984 at the ESO 1m telescope. The star was caught twice in a descending phase and was then followed to a minimum. Unfortunately only a few points were taken in the ascending phases.

Analysis by the Stellingwerf method and examination of the phase diagram gives a frequency of:

$$f = 0.683038 \pm n (0.000965) \text{ d}^{-1} \quad n = 0, 1, 2, 3.$$

The error on f being about 0.000005 d^{-1}

The y lightcurve corresponding to $f = 0.683038 \text{ d}^{-1}$
($P = 1.464047 \text{ d}$) is presented in Fig. 1.

The colors show only small variations, within the observational errors. Although the phase coverage is less than uniform, we suspect an asymmetry in the shape of the secondary minimum. Clearly additional data are needed in order to confirm it.

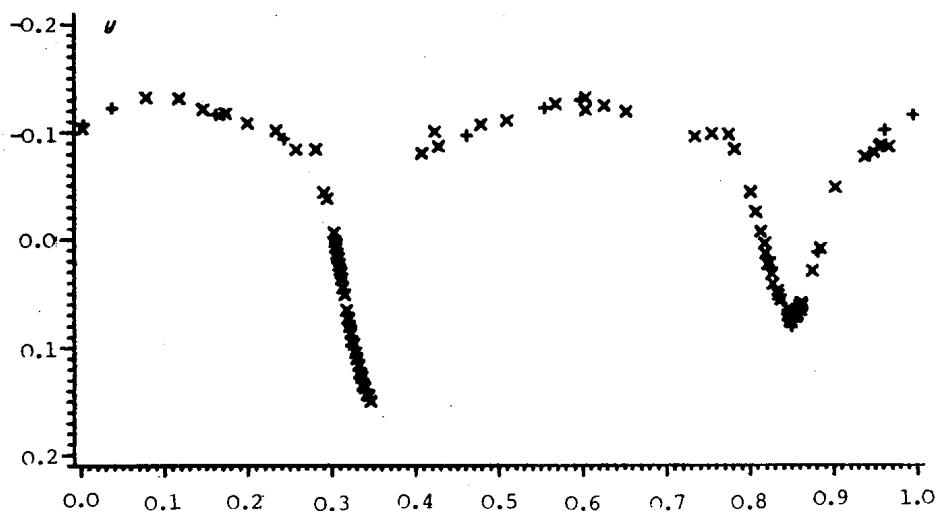


Figure 1

Phase diagram for HD 208496 in y . (+ September 1981;
 x July 1984). The period is 1.464047 d.

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Reference:

Manfroid, J. and Renson, P., 1983, IAU Inform. Bull. Var. Stars, No. 2311.