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A NEW FORECAST FOR HS HERCULIS

The first attempt to determine an apsidal period, U , for HS Herculis was undertaken by Hall and Hubbard (1971). From a preliminary analysis of observed primary minima, they have computed $U=15.5$ years. But, soon after this communication, Martynov (1971) emphasized that the apsidal period established by Hall and Hubbard is too short.

By using his determination, $\omega = 116^\circ$ for the longitude of periastron and taking into consideration the spectroscopic value, $\omega = 37^\circ$ (see Cesco and Sahade, 1944), Martynov has determined $U = 110$ years.

Lastly, Scarfe and Barlow (1974) are of opinion that the available photometric data do not put in evidence any effect of apsidal motion "and another interpretation of the variation in times of minima is required".

Now, in Figure 1 we display all O-C differences, which are referring to the linear ephemeris

$$\text{Min. hel. I} = \text{JD}2440146.6008 + 1.6374333 E.$$

It is easy to see that the corresponding O-C diagrams for primary and

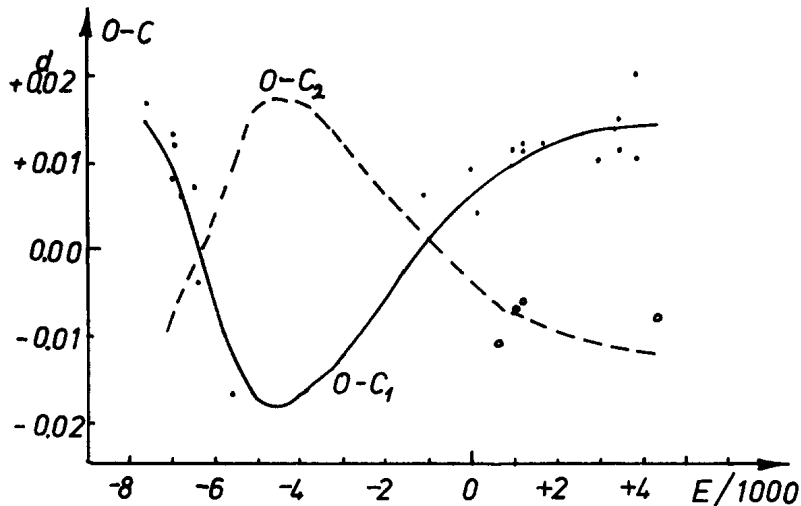


Figure 1

secondary minima (see Fig. 1) are very likely to be caused by a veritable apsidal motion, but the length of the apsidal period is difficult to be determined.

Having in view the above presented remarks, we consider that in the spring of the current year some observers, by performing photoelectric observations, could contribute to an apsidal period determination. That is why we ask for a cooperation in observing the binary system HS Herculis.

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