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IMPROVED PERIOD FOR V986 OPHIUCHI

HD 165174 was found by C. R. Lynds (1) to be a variable star of the Beta CMa-type, and was afterwards named V986 Oph. From his rather scanty material the discoverer derived a possible period of 0<sup>d</sup>.2890, by far the longest known for variables of this type at that time. Both this exceptional period-length and the large scatter of the individual observations around the mean lightcurve computed with it, called for a check of the proposed value. The star was therefore put on his Boyden program by the present writer. The exceptionally bad weather over South Africa this year and the limited telescope time available cut the intended seven hours runs down to four runs of only 1/2 to 3 hours. They were all made by J. Eksteen, member of the staff. The reductions were made by the author; the results are shown in Figure 1, where the abscissae give local sidereal time, (geographical longitude of Bloemfontein = 1<sup>h</sup>45<sup>m</sup>E), and the ordinates the differences  $m_y(\text{var}) - m_y(\text{comp. star} = \text{HD 164577})$ .

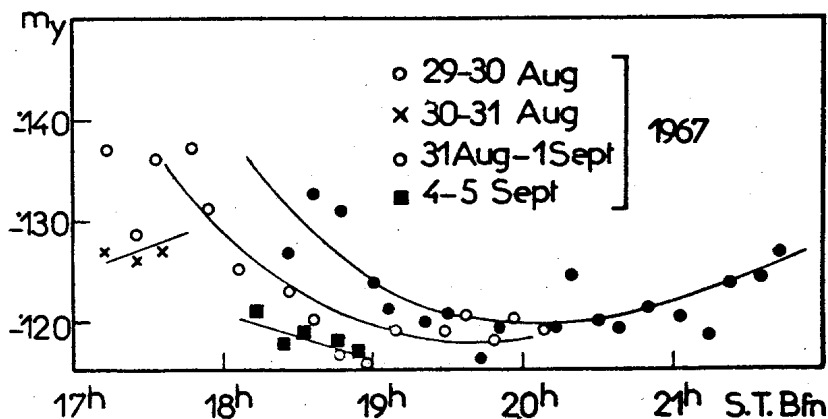


Fig. 1

If these fragments of light curves do show anything, it is that a period near seven hours is almost certain but that  $7 \times P < 2^d 0$  instead of reaching the  $2^d 023$  -mark set by Lynds' period.

With this information in mind Lynds' observations were examined again and it was found that

$$P = 0.^d 28465$$

was the period that best fitted the fragmentary lightcurves, allowance being made for night to night changes in the mean brightness of the variable. This is what Figure 2 shows.

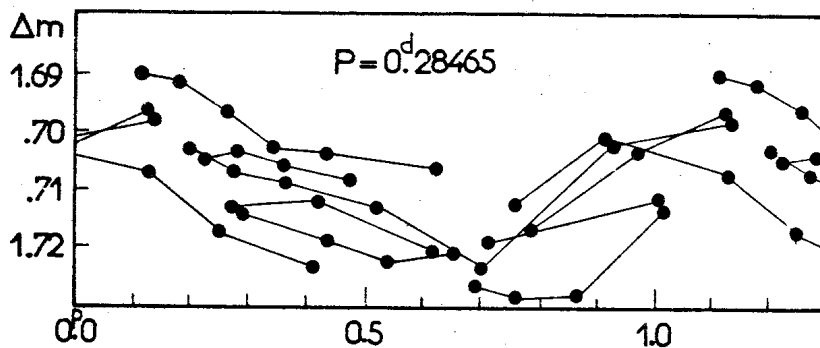


Fig. 2

It may be added that the slightly adjusted value

$$P = 0.^d 284653$$

has the further advantage of bridging correctly the 9-years gap between Lynds' observations and ours. The precision of this determination however should not be overestimated; the uncertainty on the value we propose rests on the fifth decimal.

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