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PHOTOELECTRIC OBSERVATIONS OF MT Her

The variability of this star was discovered by Hoffmeister (1935). Kukarkin et al. (1974) list the star as having an Algol type light curve with light elements: 2441117.417 + 0.4877 1779E, an out-of-eclipse brightness ($\sim$ pg) of 11.8 mag., and F5 spectral type. The ephemeris comes from Pokorný (1973), who listed a number of older times of observed minima in which a number of Warsaw based observers participated, and this was used to calculate phases for the presently reported observations. Among Pokorný's sources is Zonn (1956), whose finding chart and comparison stars were also used in the present work.

Photoelectric observations of MT Her through filters which could directly be related to standard B and V magnitudes were made using the 74 inch reflector at Kottamia (Egypt) over a period of 5 nights between 3 and 10 July, 1981. Zonn's (op.cit.) star c provided the main comparison, while occasional checks were made on his star a. A full description of the observing equipment was given in Murad's (1982) thesis, and it was also referred to in another recent Bulletin (Kadouri, 1981). A new feature of this equipment is that of digital data processing.

The differential B and V light curves (variable-comparison) are shown in the accompanying diagram - the first such photo-

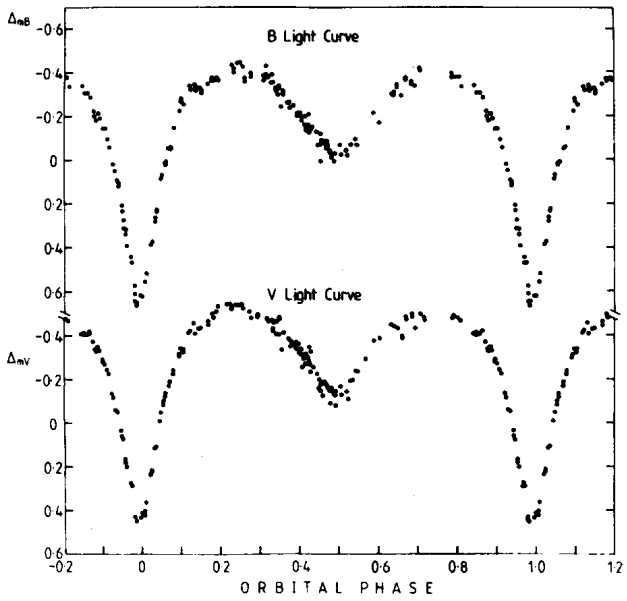

Figure 1

electrically obtained curves, as far as we are aware. They suggest a β-Lyrae type character of the light variation (c.f. Kukarkin et al.'s (op. cit.) designation!), together with some asymmetry about the secondary minimum, which like the primary, appears to occur slightly before prediction. The accompanying diagram comes from data measured from the ratemeter driven chart recorders; the simultaneously acquired but more copious quantity of digital information only repeats the same overall features.

These light curves should be analysed in more detail subsequently.

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