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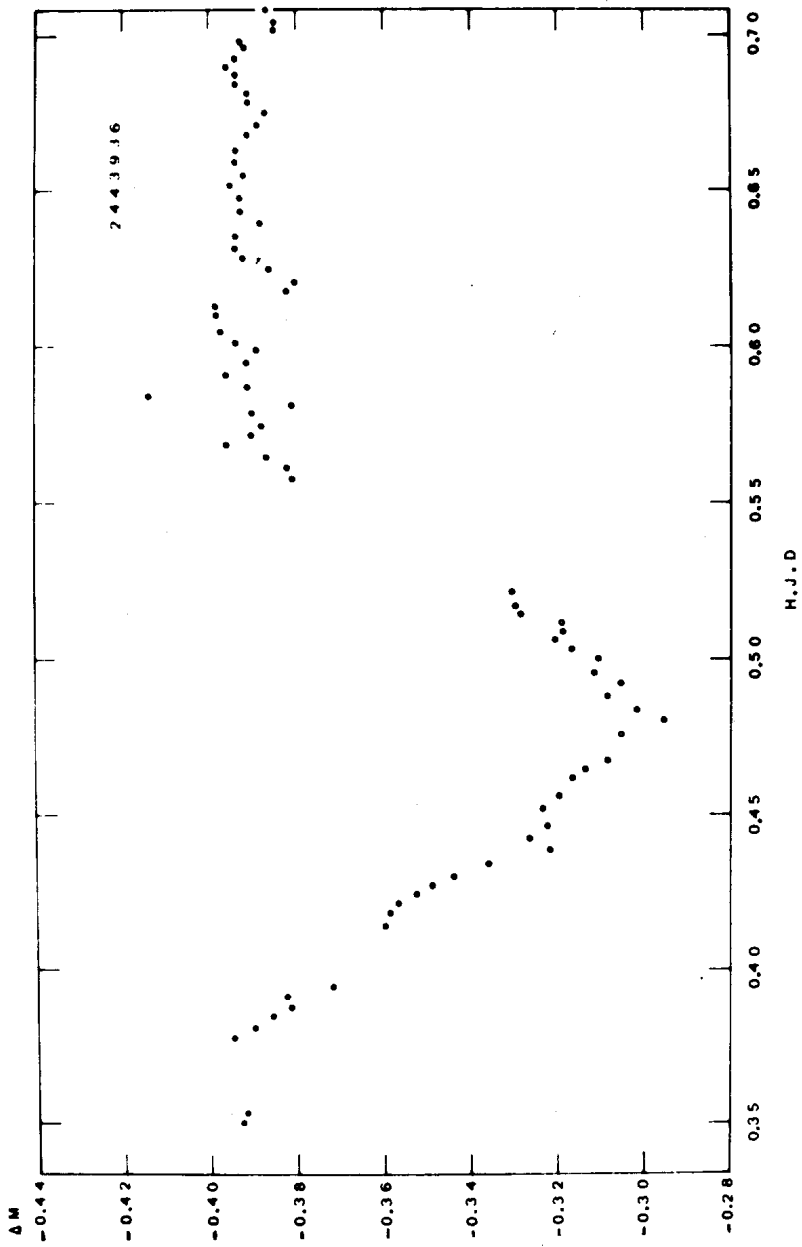
PHOTOELECTRIC PHOTOMETRY OF 65 UMa (HR 4560)

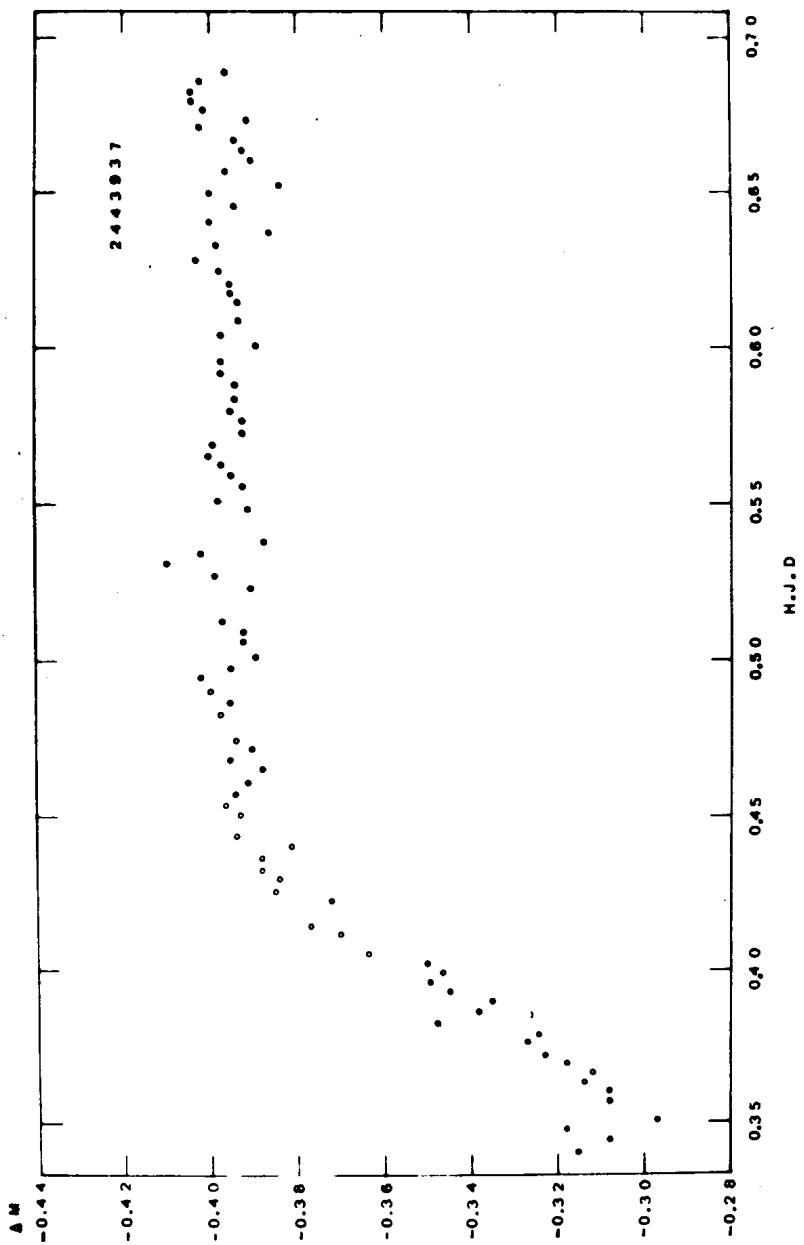
During a series of observations carried out in order to check the constancy of some possible bright comparison stars in selected areas, the brighter component of the visual double star 65 UMa (HR 4560-4561) has been found variable. This star was already pointed as probable variable in the Catalogue of Bright Stars (Hoffleit, 1964) and included in the catalogue of stars suspected in variability (Kukarkin et al., 1951) with the number 101230.

Observations of 65 UMa have been performed during two nights of March (3/4 and 4/5) of the present year at an altitude of 2609 m in the Observatory of Sierra Nevada (Granada, Spain). The observing equipment consisted of a 32 cm Cassegrain telescope, a photoelectric photometer equipped with an unrefrigerated EMI 6256 A photomultiplier and an analogical recorder. Only one filter, close to the B of the Johnson's system was used.

Magnitude differences in the sense star-comparison are given in Figures 1 and 2 for both observing nights. The comparison star was HR 4561 ($6^m.81$; B9), the visual companion of HR 4560 ($6^m.46$; A0) separated $63''.2$ and already checked for constancy by Kurtz (1979). It has been also indicated that the system is a spectroscopic binary (Bečvař, 1964). Moreover, HR 4560 is a triple star itself ($A=7^m.2$, $B=9^m.0$ and $C=8^m.3$) with separations $AB=C=3''.8$ and $A-B=0''.3$. Because of the small separation between A, B and C, they were all measured as a whole and therefore it is not possible for the moment to identify the real variable.

The shape of the observed curves, seems to indicate that the variation of light is due to an eclipsing binary within the above mentioned multiple system of stars HR 4560. The depth of the





eclipses is of $0^m.09$ in the filter used with a duration of around four hours being of partial type. Two minima were observed corresponding to Julian Dates 2443936.48 and 2443937.35 approximately, therefore, a separation of $0^d.87$ between minima can be deduced.

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References:

- Bečvář, A.: Atlas Coeli II. Českoslovenké Akademie Věd. Praha, 1964
Hoffleit, D.: Catalogue of Bright Stars. Yale University Observatory, New Haven, Conn. 1964
Kukarkin, B.V., Parenago, P.P., Efremov, Yu.I. and Kholopov, P.N.: Catalogue of Stars Suspected in Variability, Moscow, 1951
Kurtz, D.W.: Monthly Notices of the Royal Astronomical Society, 186, 567, 1979