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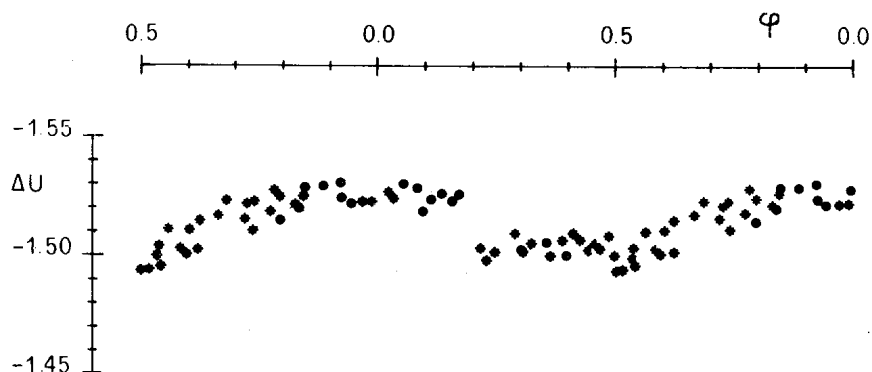
Konkoly Observatory
Budapest
1979 October 23

LIGHT VARIATIONS OF THE Ap STAR HD 164429

The light variability of the B9p-SiSr star HD 164429 = BS 6718 has been ascertained by Winzer (1974) who found a period of $0^d.51747$, one of the shortest known for the Ap stars. The magnitude and colours of HD 164429 in the UBV system, as given by Cowley et al. (1969), are $V = 6.44$, $B-V = -0.06$ and $U-B = -0.17$.

Photoelectric observations of HD 164429 have been carried out at the Catania Astrophysical Observatory in 1978 and 1979 with the 91 cm Cassegrain telescope equipped with an unrefrigerated EMI6256 S photomultiplier feeding a single channel pulse-counter.

The observations have been performed in our natural system ($\lambda_{eq}^U = 3500 \pm 300 \text{ \AA}$, $\lambda_{eq}^B = 4370 \pm 450 \text{ \AA}$, $\lambda_{eq}^V = 5440 \pm 300 \text{ \AA}$) using HD 164898 (AO) as comparison star since it is only 31' far, and four other stars of various spectral types and colours as standards for the reduction to the UBV system. Among these standards we observed the Winzer's comparison star HD 165358 = BS 6753 (A2V).



From the first analysis of our observations the period found by Winzer (1974) is confirmed, since we obtain a slightly improved value of $0^d.517436$. In Fig. 1 the magnitude differences HD 164429 - HD 164898 in the U light are plotted versus the phase computed by the elements:

$$JD_0 \text{ (U light max)} = 2441450.86 \pm 0^d.517436 \cdot E.$$

Dots and crosses refer to the 1978 and 1979 observations, respectively; each point is an average of thirty single measurements. The amplitude and the shape of our light curve are in good agreement with the Winzer's one.

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