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PHOTOELECTRIC PHOTOMETRY OF THE DELTA SCUTI STAR HD 4818

HD 4818 has been observed in November 1978 at the Merate Observatory in the framework of the photoelectric researches on Delta Scuti stars (Guerrero et al., 1979). This star has been found variable by Bhatnagar (1973) with period equal to $0^d.1360$ and light amplitude of $0^m.025 \pm 0.01$.

We observed HD 4818 for three nights in V light: comparison and check stars were HD 4881 and HD 6028, respectively. The results are represented in the Figure: each point is the mean of about eight individual observations (variable minus comparison) and the bars represent two standard errors.

To search for multiple periodicity, these data were then analysed with the Vanicek method (1971). Two sinusoidal components were found unambiguously: $P_1 = 0^d.0526$ and $P_2 = 0^d.0396$ with the semi-amplitudes: $A_1 = 0^m.0018 \pm 0.0006$ and $A_2 = 0^m.0028 \pm 0.0005$. Though these amplitudes are very small, the statistical significance of these peaks in the spectrum against random noise is of 96% and 99.4%, respectively.

The ratio between the two periods, i.e. $(P_2/P_1) = 0.753$ suggests that radial pulsational modes are working in HD 4818 (Petersen et al., 1972).

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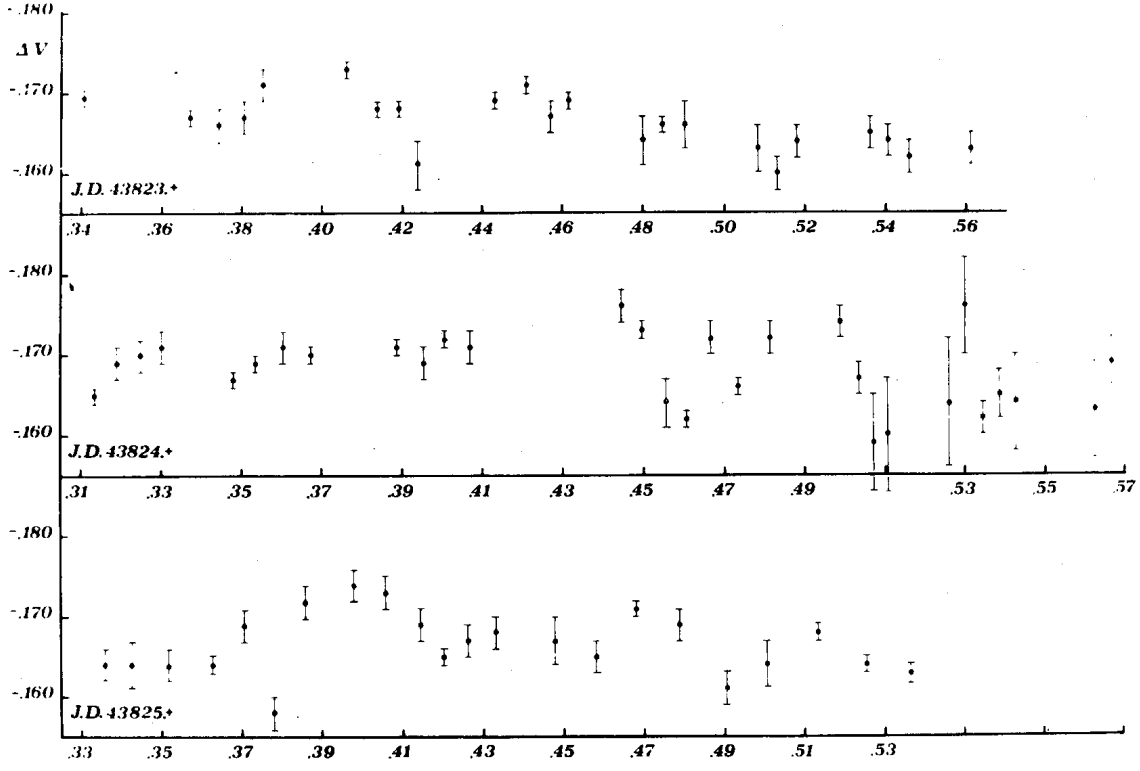
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