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HR 5492: A NON-RADIAL PULSATING DELTA SCUTI STAR ?

HR 5492 is a F2IV star which was classified as a Delta Scuti star by Percy (1973) on the ground of five hours of photoelectric observations. We observed the star for three nights in the spring of 1978 with the 1 m reflector of the Merate Observatory. The comparison star was HD 130173 and the check stars were HD 129226 and HD 129865. The results are represented in the Figure, where each point is the mean of about nine individual observations (comparison minus variable) and the bars represent two standard deviations.

These data were then analysed to search multiple periodicity with the Vanicek method (1971). From this analysis two sinusoidal components were found unambiguously. Their periods are $P_1 = 0^d.0825$ and $P_2 = 0^d.0837$ and the semi-amplitudes are $A_1 = 0^m.014 \pm 0.003$ and $A_2 = 0^m.013 \pm 0.003$, respectively. The synthesized light curve, which was computed with this solution, is represented with the full line in the Figure.

The ratio between the two periods is $P_1/P_2 = 0.986$. Such value would suggest that non-radial pulsational modes are working in this star, as no low-order radial modes in a Delta Scuti star would agree with the above ratio (Petersen et al., 1972). A similar ratio was found by Shobbrook and Stobie (1974) for 1 Mon.

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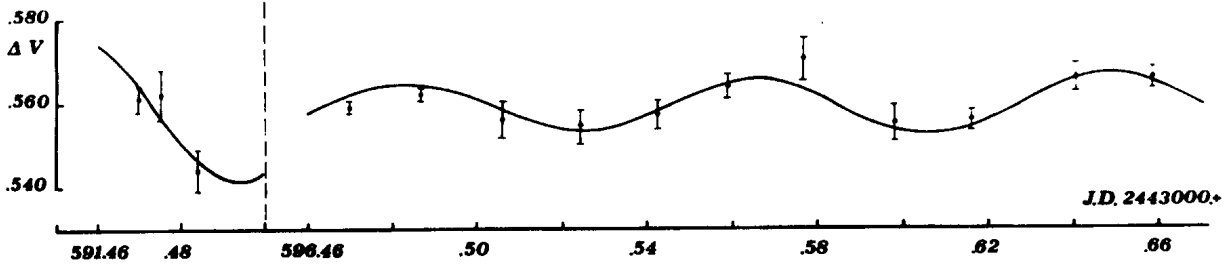
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Δ V
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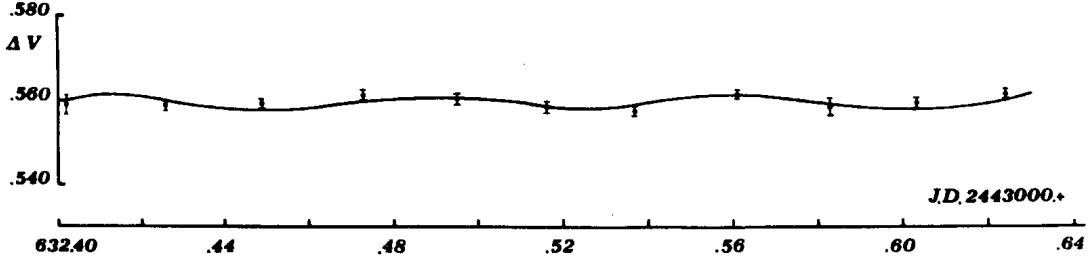
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