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OBSERVATIONS OF EARLY-TYPE ULTRA-SHORT  
PERIOD VARIABLES

Jakate (1979) proposed a new class of early-type ultra-short period variables from observations of four B2V and B3IV stars. Their periods are an hour or less and their light amplitudes between 0.015 and 0.025 magnitudes. Percy (1980) re-observed the only northern member of the group, HR8768, and confirmed it to be variable with a period and amplitude consistent with Jakate's finding. However, the range appears not to be constant, since Percy found only marginal variability on one of the two nights that HR8768 was observed.

It is clearly of great importance to confirm the existence of this new group of variable stars as it may give a new insight to the nature of  $\beta$  Cep variables. For this purpose, we observed the remaining three southern members with the 0.5m reflector of the Sutherland station of the South African Astronomical Observatory. All observations were made through the Johnson B filter. For HR5285 we used the comparison stars HR5294 and HR5249. For HR3467 and HR3582 we used the comparison stars HR3568 and HR3503. The results of five nights of observations are shown in the accompanying figures.

It is clear that in all cases the stars are constant to within a few thousandths of a magnitude over several hours. The reality of this group of variables must be considered doubtful at this stage. However, further observations of HR8768 are clearly required before a definite conclusion can be made.

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References:

- Jakate, S.M. 1979, Astron. J.  
84, 1042.  
Percy, J.R. 1980, IBVS No. 1734.

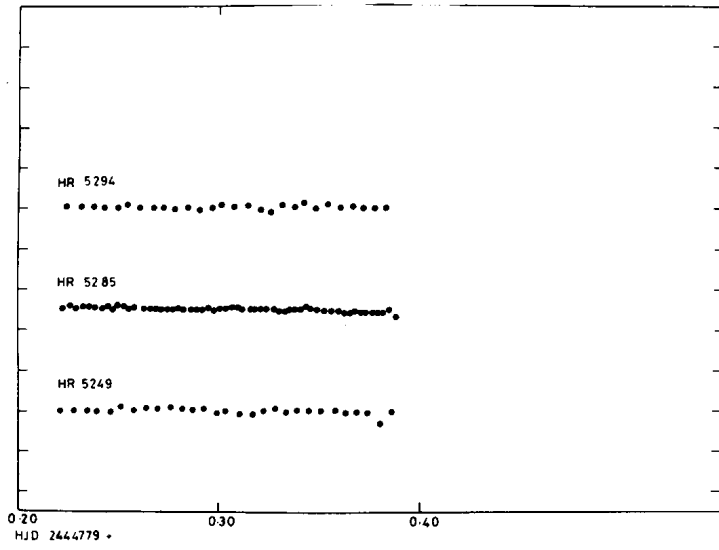


Figure 1

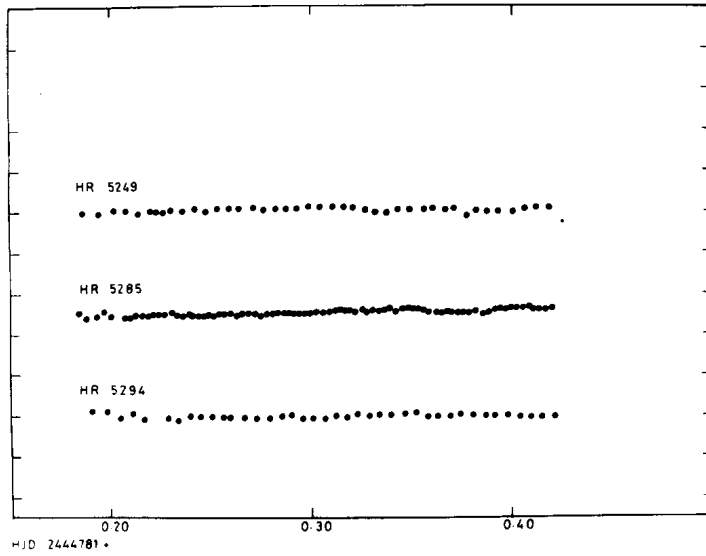


Figure 2

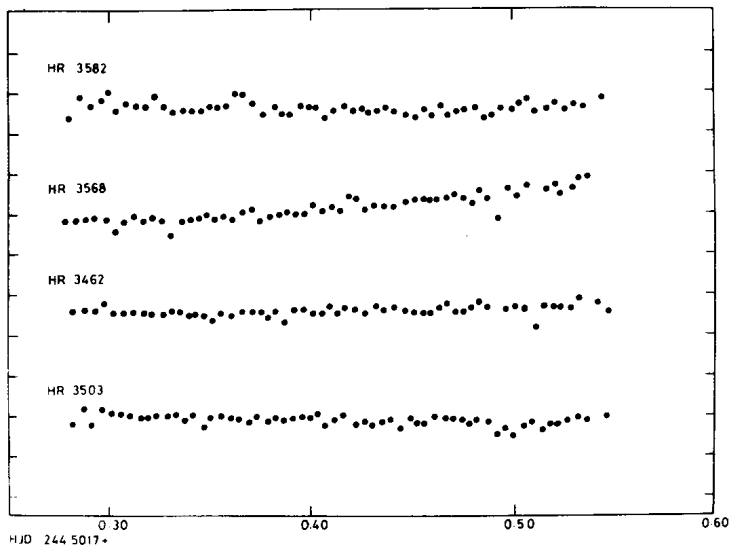
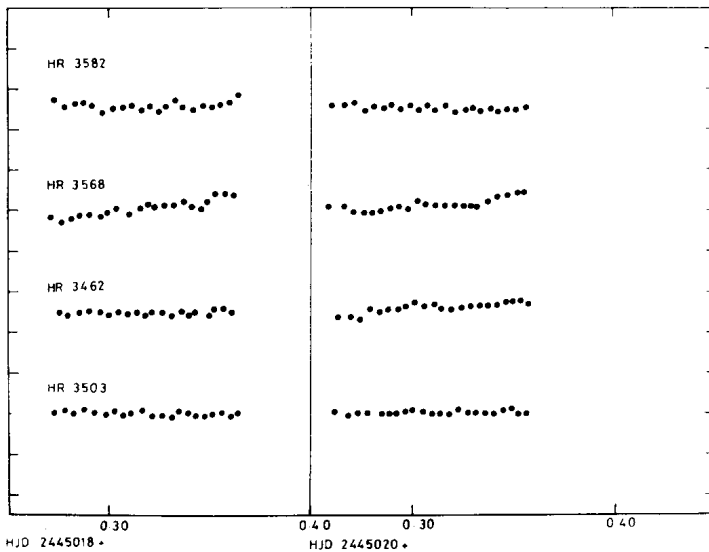


Figure 3



Figs. 1, 2, 3 and 4: Observations of suspected early-type ultra-short period variables. The tick marks are spaced at 0.02 magnitude intervals.