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HD 27503 = LB 3345, A NEW DELTA SCUTI STAR

In the course of a programme of uvby photometry of faint blue stars, the star LB 3345 (= HD 27503) from the list by Luyten & Anderson (1959) was noted as being a probable variable (Kilkenny 1987). A short series of UBV observations on the night of 1986 December 8/9 is shown in Figure 1 and confirms

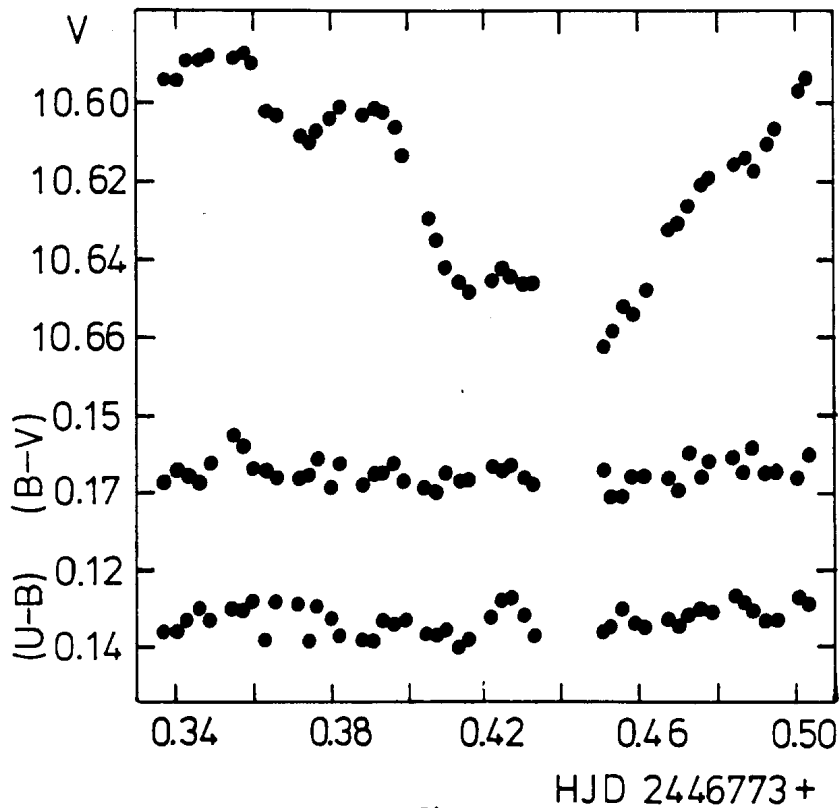


Figure 1

the star to be variable. The timescale and amplitude of the variation suggest a multiperiodic Delta Scuti star (see, for example, Breger 1979). The star has been observed as bright as  $V = 10.54$ , so the total range of light variation exceeds 0.1 mag and Luyten & Anderson (1959) give the photographic magnitude as 12.6, which suggests a larger size still. (There does not appear to be any other nearby star bright enough to have caused a misidentification).

All data in Fig. 1 have been corrected to photometry of the nearby star, HD 27444, for which 16 observations give  $V = 8.824 \pm 0.004(\text{sd})$ ,  $(B-V) = +0.536 \pm 0.004$ ,  $(U-B) = -0.036 \pm 0.004$ .

The Strömngren photometry of LB 3345 (Kilkenny 1987) is consistent with a spectral type  $\sim A2$  and puts the star near the blue edge of the Delta Scuti region of the HR diagram, as outlined by Breger (1979). If LB 3345 is near the main sequence, it has an absolute magnitude  $\sim +1.3$  and thus a distance of  $\sim 0.7$  kpc; at a galactic latitude of  $-38.6^\circ$  the star is then  $\sim 0.45$  kpc from the galactic plane.

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