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ON THE NEW VARIABLE λ BOOTIS STAR HD 109738

We present new spectroscopic and photometric observations for the λ Bootis star HD 109738. Photometric observations were made during the night of 03/04 May 1995 at CTIO, Chile with the Lowell-telescope. The integration time was 30 seconds in Strömgren b and v. HD 111480 (V=8.3, A3V) was used as a comparison star and proved to be constant within an upper limit of 3 mmag in Strömgren b.

λ Bootis stars are a group of metal poor, Population I, A-type stars. Their evolutionary status is not well known (Paunzen et al. 1995b). HD 109738 was found by Hauck (1986) as a photometric λ Bootis star candidate in the Geneva system. Recent spectroscopic observations with the 1.6 meter telescope at Itajuba, Brazil, confirm the membership of the λ Bootis group.

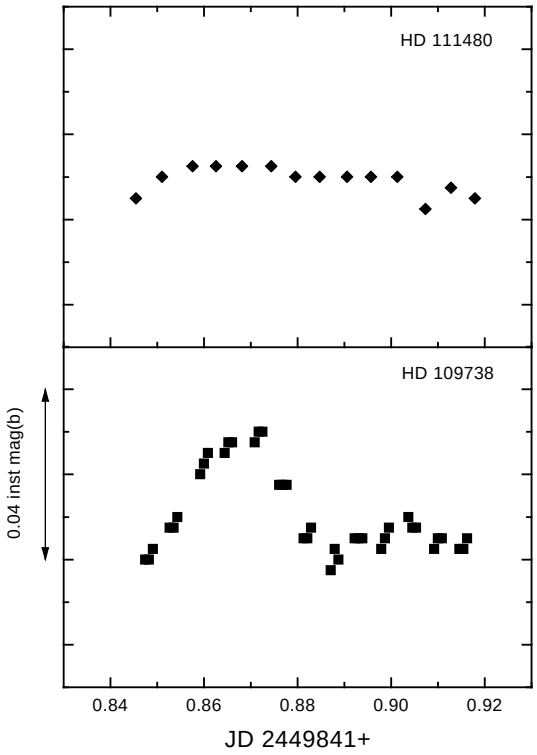

Figure 1. The lightcurve for HD 109738 and HD 111480 in instrumental Strömgren b

The photometric observations were made during a survey to detect variability in a sample of λ Bootis stars (Paunzen et al., 1995a). The aim of this survey is to establish pulsation in these stars. For HD 109738 we found a period of about 47 minutes with an amplitude of 18 mmag in Strömgren b. Since the dataset covers only about 3 hours, the given values are preliminary. From hitherto 25 photometrically investigated λ Bootis stars, 13 proved to be variable (Paunzen et al., 1995b). The observed periods range from 30 minutes to 4 hours.

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