
Four Stokes parameter spectropolarimetry of the BRITE target alpha Cir

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Abstract

The southern cool magnetic chemically peculiar star alpha Cir is the brightest known rapidly oscillating Ap star. Its pulsational and rotational photometric variation makes it an interesting target for BRITE. Interpretation of the light variability requires detailed information about stellar magnetic field geometry. However, due to weakness of its field and an unfavourable orientation of the rotational axis, alpha Cir is a notoriously difficult target for spectropolarimetry. Here I present preliminary results of the four Stokes parameter monitoring of alpha Cir with the HARPS polarimeter at the ESO 3.6-m telescope. These data enable convincing detection of the magnetic field, allow to trace rotational modulation of the magnetic observables, and make it possible to constrain basic parameters of the magnetic field geometry.

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