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Atmospheric parameters and rotational velocities for a sample of Galactic B-type supergiants

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ABSTRACT

High-resolution optical spectra of 57 Galactic B-type supergiant stars have been analysed to determine their rotational and macroturbulent velocities. In addition, their atmospheric parameters (effective temperature, surface gravity and microturbulent velocity) and surface nitrogen abundances have been estimated using a non-local thermodynamic equilibrium grid of model atmospheres. Comparisons of the projected rotational velocities have been made with the predictions of stellar evolutionary models and in general good agreement was found. However, for a small number of targets, their observed rotational velocities were significantly larger than