Inversion of stellar fundamental parameters from Espadons and Narval high-resolution spectra

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Résumé

We present a PCA-based inversion tool for retrieving stellar fundamental parameters from high-resolution Espadons and Narval spectra. PCA allows for a significant reduction of dimensionality and the definition of a specific metric for the search of nearest neighbour(s) between an observed spectrum and a set of observed spectra taken from the Elodie stellar library. Effective temperature, surface gravity, metallicity and projected rotational velocity are derived. First tests were done from the sole information coming from the analysis of a spectral band centered around the Mg I b-triplet and with spectra from FGK stars.

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