

CARMENES. IV. Preliminary low-resolution spectroscopic characterisation

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Abstract

Our project consists in the characterisation of M dwarfs to define the input catalogue of CARMENES, a next-generation instrument to be built for the 3.5 m telescope at Calar Alto. We have used the CAFOS spectrograph at the 2.2 m Calar Alto telescope for observing over 300 stars from our initial sample with a spectral resolution $R \sim 1500$. We have performed a spectral-type classification of the targets by comparing their acquired spectra with those of spectral-type standard stars observed during the same observing runs, and using spectral indices well calibrated for M dwarfs, such as TiO5, CaH2 and CaH3. We have also derived chromospheric activity indicators (e.g. $H\alpha$). Our final goal will be to choose the best candidates to be observed with this future exoplanet hunter and prepare the CARMENCITA (CARMENES Cool star Information and daTa Archive) database.

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