

Cool stars: spectral library of high-resolution echelle spectra and database of stellar parameters

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Abstract

During the last years our group have undertake several high resolution spectroscopic surveys of nearby FGKM stars with different spectrographs (FOCES, SARG, SOFIN, FIES, HERMES). A large number of stars have been already observed and we have already determined spectral types, rotational velocities as well as radial velocities, Lithium abundance and several chromospheric activity indicators. We are working now in a homogeneous determination of the fundamental stellar parameters (T_{eff} , $\log g$, ξ and $[\text{Fe}/\text{H}]$) and chemical abundances of many elements of all these stars. Some fully reduced spectra in FITS format have been available via ftp and in the Worl Wide Web (Montes et al. 1997, A&AS, 123, 473; Montes et al. 1998, A&AS, 128, 485; and Montes et al. 1999, ApJS, 123, 283) and some particular spectral regions of the echelle spectra are available at VizieR by López-Santiago et al. 2010, A&A, 514, A97. We are now working in made accessible all the spectra of our different surveys in a Virtual Observatory (VO) compliant library and database accessible using a common web interface following the standards of the International Virtual Observatory Alliance (IVOA). The spectral library includes F, G, K and M field stars, from dwarfs to giants. The spectral coverage is from 3800 to 10000 Å, with spectral resolution ranging from 40000 to 80000. The database will provide in addition the stellar parameters determined for these spectra using STEPAR (Tabernero et al. 2012, A&A, 547, A13).

Acknowledgments This work was supported by the Universidad Complutense de Madrid (UCM), the Spanish Ministerio de Economía y Competitividad (MINECO) under grant AYA2011-30147-C03-02, and The Comunidad de Madrid under PRICIT project S2009/ESP-1496 (AstroMadrid).

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