CARMENES. Mining public archives for stellar parameters and spectra of M dwarfs with master thesis students

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Abstract

We are compiling the most comprehensive database of M dwarfs ever built, CARMENCITA, the CARMENES Cool dwarf Information and daTa Archive, which will be the CARMENES 'input catalogue'. In addition to the science preparation with low- and high-resolution spectrographs and lucky imagers, we compile a huge pile of public data on over 2200 M dwarfs, and analyse them, mostly using virtual-observatory tools. Here we describe four specific actions carried out by master students. They mine public archives for additional high-resolution spectroscopy (UVES, FEROS and HARPS), multi-band photometry (*FUV-NUV-u-B-g-V-r-R-i-J-H-Ks-W1-W2-W3-W4*), X-ray data (*ROSAT, XMM-Newton* and *Chandra*), and periods, rotational velocities and Hα pseudo-equivalent widths. As described, there are many interdependences between all these data.