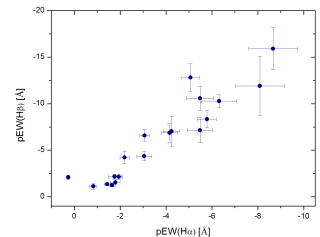
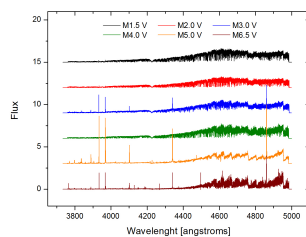
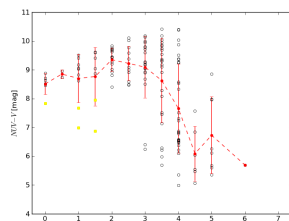
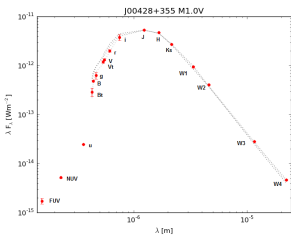


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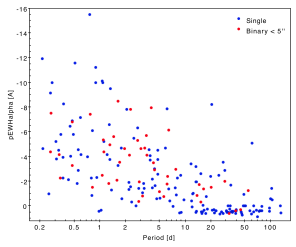
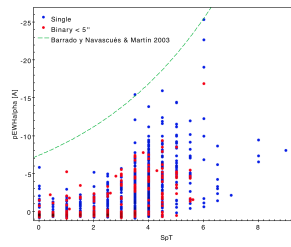
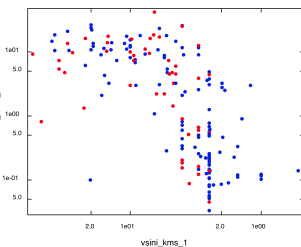
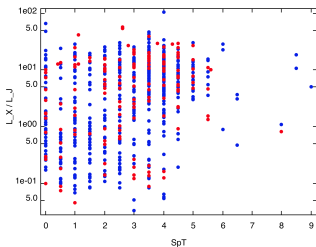
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We are compiling the most comprehensive database of M dwarfs ever built, CARMENCITA, the **CARMENES Cool dwarf Information and daTa Archive**, which will be the CARMENES 'input catalogue'. In addition to the science preparation with low- and high-resolution spectrographs and lucky imagers (see the other posters at Cool Stars 18), we compile a huge pile of public data on over 2100 M dwarfs, and analyze 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 H α pseudo-equivalent widths. As described, there are many interdependences between all these data.



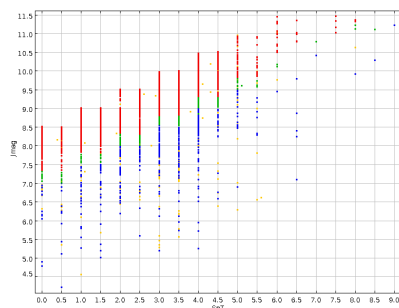
Photometry. Holgado compiled photometric data from GALEX, SDSS, Tycho-2, UCAC4, CMC14, 2MASS and WISE archives for constructing cleaned spectral energy distributions of 158 CARMENCITA stars (left panel: SED of FF And) and studying colour-colour relations of 361 bright, late-type, single M dwarfs that surpasses previous works. He also quantified the ultraviolet-excess emission and identified active early M dwarfs (right panel: NUV-V vs. spectral type).

High-resolution spectroscopy. Martínez-Rodríguez downloaded 128 UVES spectra of 61 CARMENCITA stars in eight channels (left panel: BLU437) and measured pseudo-equivalent widths of H α - η , Ca II H&K, Na I D1&2 and He I D3. He measured pEW(H α) of 27 M dwarfs for the first time and studied its relation to other lines in emission (right panel: pEW(H β) vs. pEW(H α)). He also measured vsini of 24 stars (7 new) and identified wrong values published in the literature.



X-ray emission. González-Álvarez added new X-ray count-rate and hardness-ratio data of 188 M dwarfs to CARMENCITA. She calculated X-ray fluxes and luminosity ratios L_x/L_j for 770 stars in total and investigated its variation with spectral type (left panel) and rotational velocity (right panel). She corroborated with a large sample that close binaries (red dots) are more active than single stars and that X-ray saturation starts at vsini \approx 5 km/s.

Rotation and activity. Hidalgo ransacked dozens of publications and compiled photometric periods for 217 CARMENCITA stars, rotational velocities for 420, pEW (H α)s for 1766, and membership in young moving groups for 44. He studied the relation between spectral type, H α activity (left panel), close multiplicity, periods (right panel) and vsini, from where he identified three stars with inclination angles $i = 79.3$ to 81.6 deg: DT Vir AB, BD-21 1074 A and FF And.



CARMENCITA: the CARMENES input catalogue. Our list contains the \sim 2100 brightest M dwarfs for its spectral type observable from Calar Alto (left), and dozens of astrophysical parameters for each of them (astrometry, photometry, spectroscopy, multiplicity, activity...; right). During the 600 clear nights of guaranteed time, we will observe the 300 brightest, least active, latest, single M dwarfs in CARMENCITA. See the XI SEA talks by Amado and Alonso-Floriano and the posters by Cortés-Contreras and Montes for details.



Karmn | Comp | Flags | SS | Name | GJ | SpT | RA_J2000 | DE_J2000 | muRA_masa-1 | muDE_masa-1 | Vr_kms-1 | pL_mas | d_pc | U_kms-1 | V_kms-1 | W_kms-1 | FUV_mag | NUV_mag | u_mag | BT_mag | B_mag | g_mag | VT_mag | V_mag | Ra_mag | r_mag | i_mag | z_mag | IN_mag | J_mag | H_mag | Ks_mag | W1_mag | W2_mag | W3_mag | W4_mag | Multiplicity | WideWDS | Widerho_arcsec | WideCompanionName | WideCompanionSpT | WideCompanionDeltaMag | WideCompanionDeltaBand | WideCompanionFeH | CloseWDS | Closerho_arcsec | CloseCompanionName | CloseCompanionSpT | CloseCompanionDeltaMag | CloseCompanionDeltaBand | pEW(Halpha_A) | IRX | CRTs-1 | HR1 | HR2 | vsini_kms-1 | P_d | Flare | MovingGroup | TIOS | CaH2 | VO1 | PC1 | PC2... | zeta | MV_mag | Teff_K | logg | R_Rsol | L_Lsol | M_Msol | Age_Ga | LoRes_spectrum | HiRes_spectrum | LoRes_image | HiRes_image | RV | Planet | Origin | Class | Sptrum

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