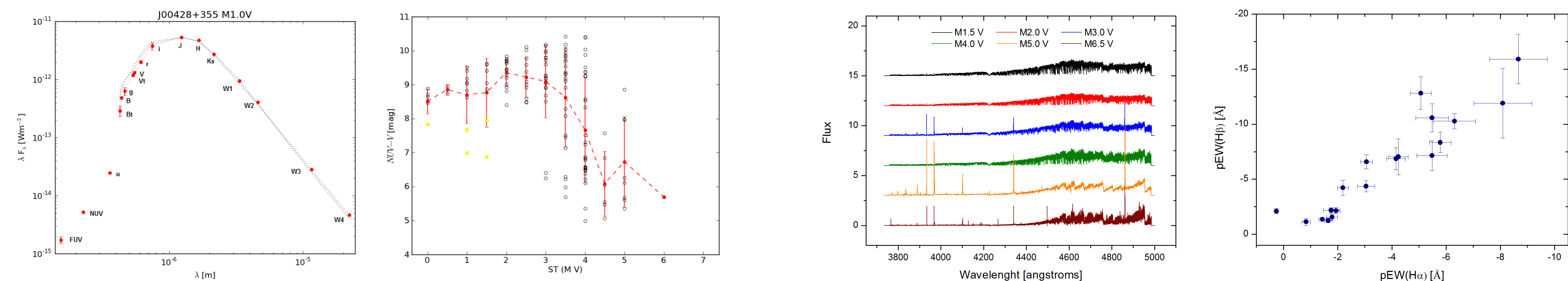


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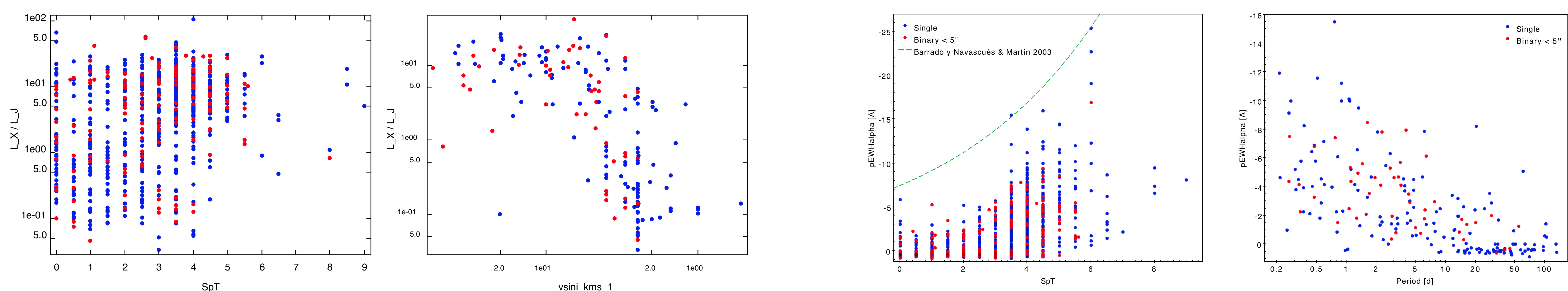
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We are compiling the most comprehensive database of M dwarfs ever built, CARMENCITA, the **CARMENES Cool dwarf Information and daTa Archive**, which will be the CARMENES 'input catalogue'. In addition to the science preparation with low- and high-resolution 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 $\alpha$  pseudo-equivalent widths. As described, there are many interdependences between all these data.



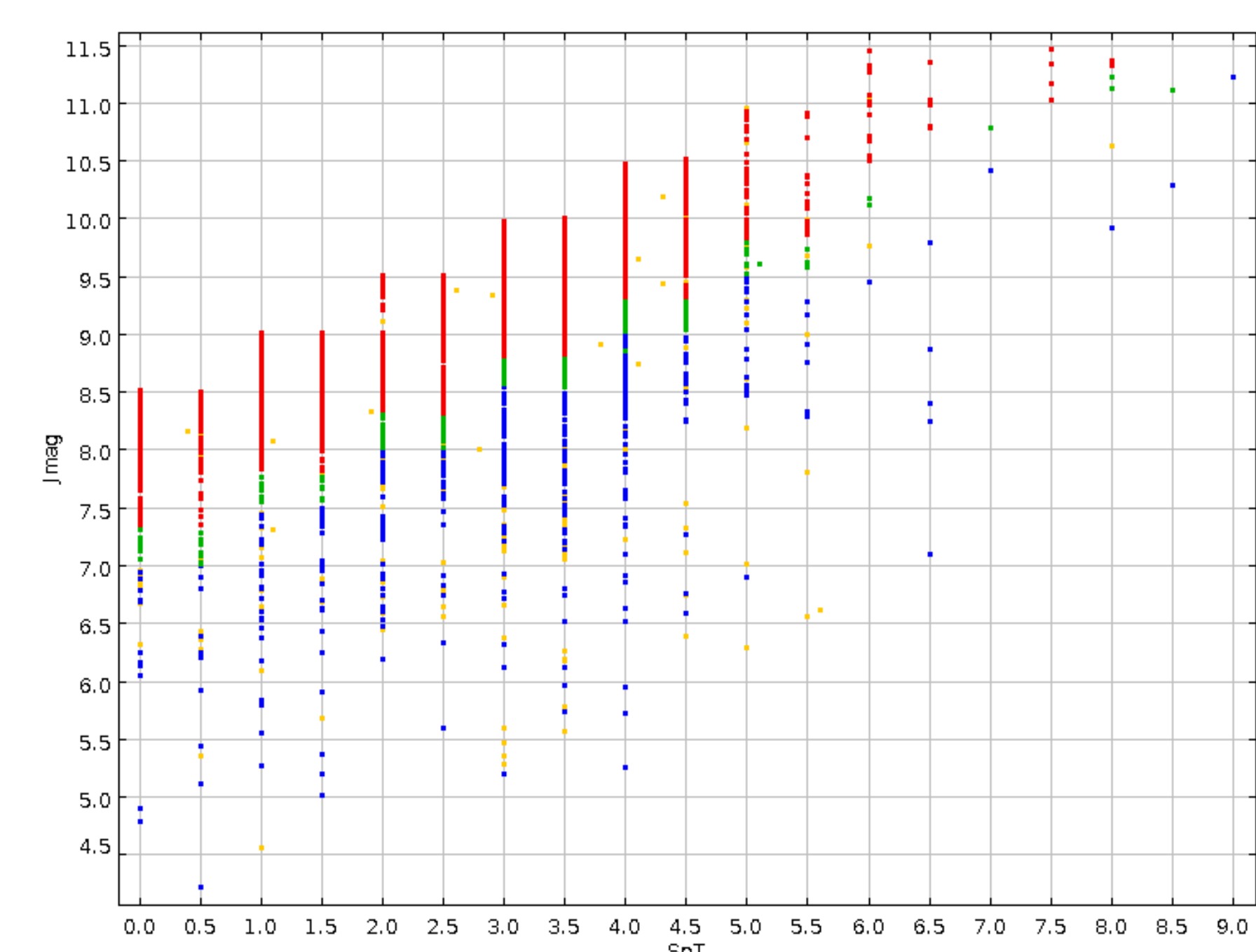
▲ **Photometry.** *Holgado* compiled photometric data from *GALEX, SDSS, Tycho-2, UCAC4, CMC14, 2MASS* and *WISE* archives for constructing cleaned spectral energy distributions of 158 CARMENCITA stars (*left panel: SED of FF And*) and studying colour-colour relations of 361 bright, late-type, single 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 $\alpha$ - $\eta$ , Ca II H&K, Na I D1&2 and He I D3. He measured *pEW(H $\alpha$ )* of 27 M dwarfs for the first time and studied its relation to other lines in emission (*right panel: pEW(H $\beta$ ) vs. pEW(H $\alpha$ )*). 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 $\alpha$ )* for 1766, and membership in young moving groups for 44. He studied the relation between spectral type, H $\alpha$  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 ~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 | pi\_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 | pEWalpha\_A | IRXS | CRT\_s-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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