

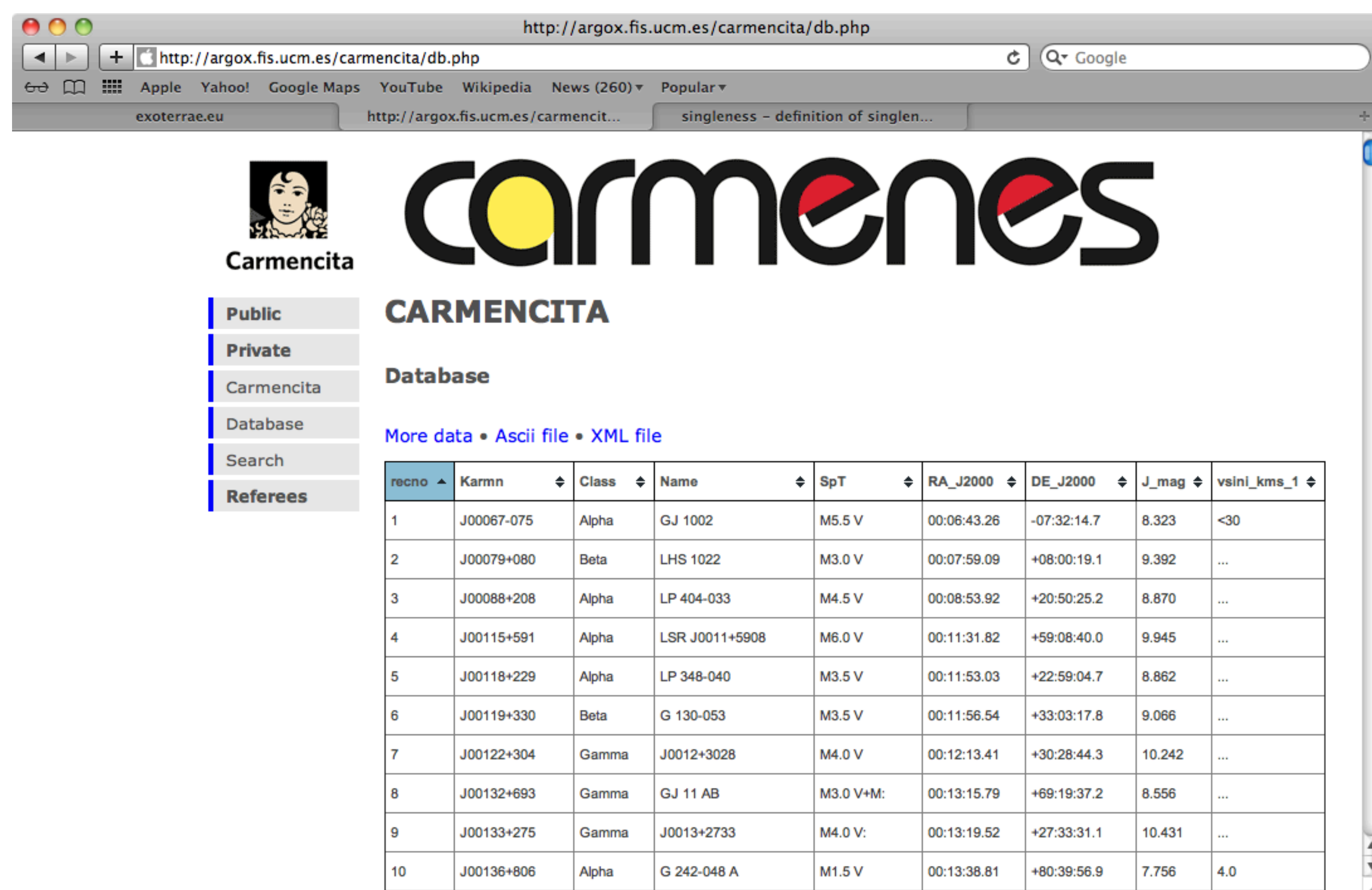
III: CARMENCITA , the input catalogue

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Abstract. CARMENES, the new near-infrared/optical high-resolution spectrograph for the 3.5 m Calar Alto Telescope, is expected to see its first light in early 2014. Before that, we must have chosen carefully the 300 M dwarfs to which CARMENES will look for terrestrial exoplanets with the radial-velocity method under guaranteed time. CARMENCITA, the *CARMENES Cool dwarf Information and daTa Archive*, our "input catalogue", will be the most comprehensive database of M dwarfs ever built. It contains dozens of parameters measured by us or compiled from the literature for over 1300 bright M dwarfs in the solar neighbourhood.



reco	Karmn	Class	Name	SpT	RA_J2000	DE_J2000	J_mag	vsini_kms_1
1	J00067-075	Alpha	GJ 1002	M5.5 V	00:06:43.26	-07:32:14.7	8.323	<30
2	J00079+080	Beta	LHS 1022	M3.0 V	00:07:59.09	+08:00:19.1	9.392	...
3	J00088+208	Alpha	LP 404-033	M4.5 V	00:08:53.92	+20:50:25.2	8.870	...
4	J00115+591	Alpha	LSR J0011+5908	M6.0 V	00:11:31.82	+59:08:40.0	9.945	...
5	J00118+229	Alpha	LP 348-040	M3.5 V	00:11:53.03	+22:59:04.7	8.862	...
6	J00119+330	Beta	G 130-053	M3.5 V	00:11:56.54	+33:03:17.8	9.096	...
7	J00122+304	Gamma	J0012+3028	M4.0 V	00:12:13.41	+30:28:44.3	10.242	...
8	J00132+693	Gamma	GJ 11 AB	M3.0 V+M	00:13:15.79	+69:19:37.2	8.556	...
9	J00133+275	Gamma	J0013+2733	M4.0 V	00:13:19.52	+27:33:31.1	10.431	...
10	J00136+806	Alpha	G 242-048 A	M1.5 V	00:13:38.81	+80:39:56.9	7.756	4.0

What are our CARMENES contributions at X SEA?

- I: A radial-velocity survey for terrestrial planets in the habitable zone of M dwarfs (Amado et al.). Instrument and project overview [talk].
 - II: Science case and M-dwarf sample (Morales et al.). Poster focused on our primary science case and the target selection.
 - III: **CARMENCITA, the input catalogue (Caballero et al.). This poster.**
 - IV: Preliminary low-resolution spectroscopic characterisation (Alonso-Floriano et al.). CAFOS spectroscopy of hundreds of potential targets.
 - V: M dwarfs in multiple systems (Cortés-Contreras et al.). Comprehensive study of close and wide binaries with low-mass components.
- See also: *Planet detection and characterisation around low-mass stars: from CARMENES to EChO* (Ribas) [talk].

What is CARMENCITA? It is the input catalogue from where we will choose the best target sample for CARMENES guaranteed time, which will consist of the 300 brightest, latest, single M dwarfs visible from Calar Alto ($\delta > -23$ deg). See Poster II for the selection criteria.

What does CARMENCITA contain (and what will it contain)? A huge amount of information, useful for many disciplines: coordinates, spectral indices, photometry at different bandpasses (*GALEX*, *UCAC3-4*, *2MASS*, *WISE*), parallaxes and spectro-photometric distances, rotational and radial velocities, H α equivalent widths, X-ray count rates and hardness ratios (*ROSAT*, *XMM-Newton*), close and wide multiplicity data, proper motions, Galacocentric space velocities, full references, and much more parameters (about 80 now; over 100 in the near future). We collect the data from the literature or, more recently, get them from our new observations (*CAFOS*, *CAFÉ*, *FastCam*, *FEROS*). The private on-line catalogue, including preparatory science (i.e., hi-res imaging, lo-res and hi-res spectroscopy; see bottom figure), will be eventually public, as a CARMENES legacy. Today, for >1300 stars:

Karmn| Comp| Class| Flags| Name| GJ| SpT| Ref01| RA_J2000| DE_J2000| Ref02| Ra_mag| Ref03| IN_mag| Ref04| J_mag| eJ_mag| H_mag| eH_mag| Ks_mag| eKs_mag| QFlag| Ref05| WideCompanion| WideWDS| Widerho_arcsec| eWiderho_arcsec| Ref06| WideCompanionSpT| WideCompanionJ_mag| WideCompanionFeH| Ref07| CloseMultiplicity| CloseWDS| Closerho_arcsec| eCloserho_arcsec| Ref08| pi_mas| epi_mas| Ref09| d_pc| ed_pc| Ref10| pEWAlpha_A| Ref11| 1RXS| CRT_s-1| eCRT_s-1| HR1| eHR1| HR2| eHR2| Ref12| vsini_kms-1| evsini_kms-1| Ref13| Vr_kms-1| eVr_kms-1| Ref14| TiO5| CaH2| Ref15| OtherActivityIndicators| Flare| Ref16| P_d| Ref17| muRA_masa-1| emuRA_masa-1| muDE_masa-1| emuDE_masa-1| Ref18| MV_mag| Ref19| U_kms-1| eU_kms-1| V_kms-1| eV_kms-1| W_kms-1| eW_kms-1| Ref20| RV| Planet| Ref21| Origin| Notes

What are the CARMENCITA advantages? • Compilation of previous and on-going M-dwarf catalogues and surveys (Ross, Luyten, Gliese, Palomar/MSU, Lépine & Gaidos 2011) with homogeneous selection criteria • Use of the latest data releases (e.g., HIP2 for parallaxes, PPMXL for proper motions) • Careful multiplicity analyses (important for distance, metallicity, kinematics) • On-going work in parallel: massive spectral-type determination (right figure), measurement of *vsini*, H α , H β and *Vr*, multiplicity (SBs, resolved close and wide) • Other studies useful for CARMENCITA: metallicity of M dwarfs in wide systems with FGK primaries; virtual-observatory searches for new, red, high-proper-motion stars; disruption of fragile systems by the Galactic gravitational field...

