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Studies of white dwarf stars from Gaia and the Virtual Observatory

F. Jiménez-Esteban[1], A. Rebassa-Mansergas[2,3], S. Torres[2,3] R. Murillo-Ojeda[1] P. Cruz[1] and E. Solano[1]

[1] Centro de Astrobiología (CAB), CSIC-INTA, Camino Bajo del Castillo s/n, E-28692, Villanueva de la Cañada, Madrid, Spain.
[2] Departament de Física, Universitat Politècnica de Catalunya, c/Esteve Terrades 5, 08860 Castelldefels, Spain
[3] Institut d'Estudis Espacials de Catalunya, Ed. Nexus-201, c/Gran Capità 2-4, 08034 Barcelona, Spain

Abstract

The Gaia mission has revolutionized our knowledge in many fields of Astronomy. Since the beginning, Gaia and the Virtual Observatory have demonstrated to be a pairing of great value. Our group has extensively exploited this pairing for the study of white dwarf (WD) stellar evolution. We have been the first to publish a catalogue of white dwarf stars from Gaia-DR2, and the first to exploit Gaia-DR3 BP/RP spectra to characterize the WD population in the solar neighbourhood. With the aim of artificial intelligence techniques and a thorough and robust population synthesis code, we have studied the Galactic WD population. We have also studied some peculiar white dwarfs. Here, we review the studies we have done so far and the main results obtained.

My poster in zenodo.org can be found here