

One PhD (FPI) fellowship to perform a thesis on Galactic Archaeology, the Gaia mission and cool evolved Carbon stars

Applications are invited for a pre-doctoral contract in observations and theory of carbon stars within the context of the Gaia mission and Galactic chemical evolution at the Universidad de Granada (Spain) in tight collaboration with the Observatoire de la Côte d'Azur (France) or the Institut d'Astrophysique de Paris.

The successful applicant will work with Profs. Carlos Abia, Inmaculada Domínguez (UGR) and Prof. Patrick de Laverny (OCA) or Prof. Nikos Prantzos (IAP) on the analysis and interpretation of the Gaia data of cool AGB carbon stars of different spectral types in the frame work of models of chemical evolution of the Galaxy. Spectral analysis of optical/infrared high resolution spectra to disentangle their chemical composition is planned together with a theoretical interpretation on the basis of the state-of-the-art stellar evolution models in the AGB phase. Experience in data treatment, numerical methods, computer programming and astronomical imaging analysis can be an asset but not mandatory. Applicants must have completed a Master Degree by the start of the fellowship (June-Sept 2023). The appointment will be for four years, within the MCIN project "LAS ESTRELLAS DE MASA BAJA E INTERMEDIA COMO MOTORES DE LA EVOLUCION QUIMICA DE LA GALAXIA, PROGENITORES DE SUPERNOVAS TERMONUCLEARES Y LABORATORIO DE ASTROPARTICULAS III" (reference PID2021-123110NB-I00), which includes de inclusion in the Spanish's Public Health System. The successfully applicant would be enrolled in the Ph.D. Program on Physics and Space Science of the University of Granada. Long stays in the Observatoire de la Côte d'Azur and/or the Institut d'Astrophysique de Paris are expected during the duration of the fellowship. The applicant could obtain a double European Ph.D Degree from both the University of Granada and l'Université de la Côte d'Azur or L'Université de Paris III.

The Dpt. of Física Teórica y del Cosmos at the Universidad de Granada currently has 10 faculty members working on stellar astrophysics, extragalactic astrophysics, and cosmology, 6 post-docs, and 2 Ph.D. students as well as several of undergraduate students. The Group of Stellar Evolution and Nucleosynthesis is formed by 3 faculty members, 3 post-docs and 1 Phd student. More information about the Group can be found at the web page below.

Interested applicants should formalize the application through the web at:

<https://www.aei.gob.es/convocatorias/buscador-convocatorias/ayudas-contratos-predotorales-formacion-doctoresas-2022>

For more information, please contact directly with Dr. Carlos Abia (cabia@ugr.es).