

PhD position in High Energy Astrophysics at CIEMAT ([410-PREAT1-PDI24](#))

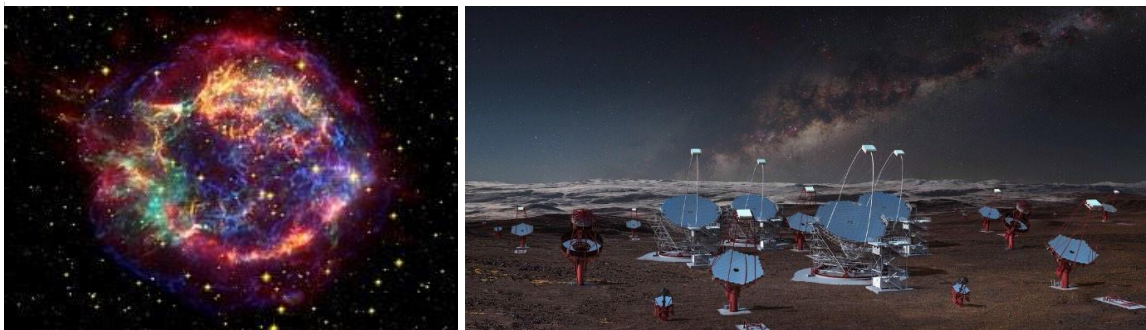
The Cosmic and Gamma Ray Physics research group of the CIEMAT-FP Unit (*Centre for Research in Energy, Environment and Technology* in Madrid, Spain) announces the opening of a **predoctoral position** for outstanding young M.Sc. graduates interested in working in **Astroparticle Physics and High Energy Astrophysics** research activities towards a PhD Thesis. The **official call** is announced at [CIEMAT's web site](#). The **4-year PhD contract** is associated to the funding program Atracción de Talento de la Comunidad de Madrid "César Nombela" with reference number 2023-T1/TEC-29126 and project title **Cosmic Ray Origins: Supernovae and their remnants (CRAYONS)**.

The successful candidate will work on theoretical modelling and numerical simulations of particle acceleration in most powerful sources in our Galaxy contributing towards unravelling the mystery of Galactic PeVatrons. He or she will utilize and further develop the state-of-the-art python based software package RATPaC designed to calculate the particle acceleration and transport in parallel to the simulation of the development of magnetic turbulence and hydrodynamic evolution (using the Pluto code). Planned research activities will be instrumental for shaping observational strategies for the Cherenkov Telescope Array Observatory (CTAO; <https://www.ctao.org/>), the next-generation gamma-ray experiment in which CIEMAT-FP actively participates. We also encourage new ideas and directions that our students may want to pursue.

We seek candidates with a **Master's Degree in Physics at the time of appointment**, an excellent academic record, very good English knowledge and a high motivation towards the field of theoretical and computational high energy astrophysics. We strongly value experience in programming languages such as C++ and python and background in astrophysics.

We offer close supervision and a stimulating international environment, with expected research visits to international institutions, attendance of international schools and conferences with presentation of scientific results.

For more information on the research project or any question regarding the application, please contact: Iurii Sushch (iurii.sushch@ciemat.es)
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The CIEMAT Particle Physics Unit is an affirmative action/equal opportunity employer. Eliminating gender inequalities by promoting equal opportunities for men and women is a core compromise of our group and it is our commitment to establish the necessary actions to close the gender gap.