

Postdoctoral position in Experimental Astroparticle Physics at CIEMAT

Experimental Astroparticle Physics with AMS and CTA

The María de Maeztu Unit of excellence for the research in particle, astroparticle physics and observational cosmology of CIEMAT (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas) announces the opening call of a two-year post-doctoral position to work in the AMS-02 and CTA projects. The official call can be found [at http://cfp.ciemat.es/postdoc](http://cfp.ciemat.es/postdoc).

CIEMAT experimental astroparticle physics program includes the participation in the world leading cosmic and gamma ray experiments AMS-02 and CTA.

The Alpha Magnetic Spectrometer (AMS-02) is a high-energy particle physics detector operating on the International Space Station (ISS) since 19 May 2011. AMS-02 has operated continuously for more than 6 years on the ISS and has collected 10^{11} events. The experiment is planned to continue collecting science data until 2024. The goal of the experiment is to carry out precise measurements of cosmic rays in the energy range from 1 GeV/n to 1 TeV/n. Accurate studies of the fluxes of individual components of cosmic rays are achieved thanks to the excellent particle identification and energy resolution of the detector.

The Cerenkov Telescope Array (CTA) is the next generation ground-based observatory of gamma rays, which is now under construction at the Roque de los Muchachos Observatory in La Palma, Spain, and is expected to begin its operations in 2021. CTA will extend the study of the electromagnetic radiation in the energy range from 30 GeV to 300 TeV with unprecedented sensitivity, which will allow both the detailed study of known objects and the eventual discovery of entirely new phenomena.

CIEMAT has a strong participation in AMS and CTA. The goal of this contract is to help and reinforce the experimental astroparticle physics program at CIEMAT, with special emphasis on the fundamental physics topics addressed by both experiments and the synergies between cosmic ray observations from space and the early science targets in CTA.

The candidate is expected to participate actively in the AMS-02 and CTA projects, including detector calibration and operation, data analysis and modeling. The results of this research should be communicated in international conferences and published in reference journals.

For more information on the research project or any question regarding the application, please contact:

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The CIEMAT Particle Physics Unit of Excellence 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.