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Centro de Investigaciones
Energéticas, Medioambientales
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PhD position in Dark Matter direct searches with the Global Argon Dark Matter Collaboration at CIEMAT (N^o 216-PRECIE-PDI24)

The Dark Matter 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 on the **direct detection of dark matter** using liquid argon detectors towards a PhD thesis.

The **4-year PhD contract** is funded by **CIEMAT**. The official call will be announced at <https://www.ciemat.es/predoc>.

The investigation of the **nature of dark matter** is one of the fundamental questions in today's particle physics and cosmology, and the CIEMAT group plays a leading role in two major experiments in this field: **DEAP-3600** at SNOLAB (Canada) and **DarkSide-20k** at the LNGS laboratory (Italy). The DEAP-3600 experiment is currently taking data and is the most sensitive liquid argon detector in operation for the direct detection of weakly interacting massive particles (WIMPs), while DarkSide-20k, the largest dark matter experiment under construction, is expected to push the WIMP search sensitivity to unprecedented levels, where neutrino coherent scattering on argon nuclei will produce an irreducible background.

The CIEMAT Dark Matter group is involved in cutting-edge activities, including data analysis, Monte Carlo simulations, background calculation, and the development of new detection technologies.

This research, aimed at obtaining a PhD degree in Physics, will be carried out under the supervision of CIEMAT members of the Global Argon Dark Matter Collaboration. We are looking for highly motivated candidates who will contribute to both the theoretical and experimental aspects of this research. The selected applicant will work within a dynamic team, engage in collaborative discussions, and participate in the dissemination of research results through presentations and publications in high-impact journals.

For further information or questions regarding the application process, please contact:

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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.