



Postdoctoral Research Associate in Experimental Astroparticle Physics: DEAP experiment

The Institute of Physics at the National Autonomous University of México (IF-UNAM) invites applications for a two-year position as postdoctoral research associate in Experimental Astroparticle Physics, with a focus on Dark Matter direct detection with the DEAP-3600 experiment.

DEAP-3600 is a direct dark matter search experiment using single phase liquid argon as target material sensitive in the spin-independent sector and located at SNOLAB. The DEAP collaboration is currently taking dark matter data and preparing the next ton-scale experiment, DarkSide-20k with an international global argon collaboration.

The successful candidate will work on the current phase of the experiment, such as data analysis and simulations and is expected to play a leading role in the development of background screening and rejection techniques, and in preparing the next ton-scale experiment, DarkSide-20k. She/he will also take a leading role in the installation and operation of a gamma assay facility in the Comarca Minera, Hidalgo UNESCO global geopark, including training of students and educational activities to the local community. To prepare for this task, training will be provided at the Boulby facility in the UK. Once completed, there will be activities for local schools, support for teachers and open days.

Interested candidates should have a PhD in experimental particle/astroparticle physics with strong skills in detector simulations and data analysis. Experience with detector development, construction, commissioning, or operation is highly desirable, as well as with low background environments. Proficiency with computing programming languages (C++, ROOT, Python) and simulation (GEANT4) are required. The position is based at UNAM Institute of Physics in México city, with regular travel to the underground facilities Boulby in the UK and SNOLAB in Canada.

This position is funded by Research Councils UK (RCUK), under the STFC Global Challenge Research Fund “Materia Oscura: Instrumentation Development to Observe the Invisible”.

Applicants should send a cover letter, a brief statement of research interests, a CV including a list of publications and arrange for three letters of reference to be sent to:

Eric Vázquez Jáuregui

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México city, México

ericvj@fisica.unam.mx

Review of applications will begin February 28th, 2018; however, the position will remain open until filled. The expected starting date is April 1st, 2018. Salary is very competitive, commensurate with experience and qualifications.

The Institute of Physics at UNAM is located in México city. The central University City campus was declared World Heritage Site by UNESCO in 2007. IF-UNAM includes more than 140 faculty members working on diverse topics of Physics.



Postdoctoral Research Associate in Experimental Astroparticle Physics: PICO experiment

The Institute of Physics at the National Autonomous University of México (IF-UNAM) invites applications for a two-year position as postdoctoral research associate in Experimental Astroparticle Physics, with a focus on Dark Matter direct detection with the PICO experiment.

PICO is an international, world-leading experiment in the spin-dependent sector of WIMP searches. Its detection principle is based on superheated liquids in bubble chambers. The PICO collaboration is presently installing the PICO-40L experiment at SNOLAB and is preparing a new generation tonne-scale experiment, PICO-500, with increased active mass and sensitivity.

The successful candidate will work on the current phase of the experiment, such as data analysis/Monte Carlo simulations for PICO-40L and is expected to play a major role in preparing the next ton-scale experiment, PICO-500. She/he will also take a leading role in the installation and operation of a gamma assay facility in the Comarca Minera, Hidalgo UNESCO global geopark, including training of students and educational activities to the local community. To prepare for this task, training will be provided at the Boulby facility in the UK. Once completed, there will be activities for local schools, support for teachers and open days.

Interested candidates should have a PhD in experimental particle/astroparticle physics with strong skills in detector simulations and data analysis. Experience with detector development, construction, commissioning, or operation is highly desirable, as well as with low background environments. Proficiency with computing programming languages (C++, ROOT, Python) and simulation (GEANT4) are required. The position is based at UNAM Institute of Physics in México city, with regular travel to the underground facilities Boulby in the UK and SNOLAB in Canada.

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