POSTDOCTORAL POSITION IN PICO AND DEAP-3600 EXPERIMENTS  
Astroparticle Physics

The Centre for Particle Physics at University of Alberta invites applications for one postdoctoral research fellowship in experimental particle physics supported by the Canadian Particle Astrophysics Research Center (CPARC) in strong collaboration with SNOLAB experimental program. This fellowship is part of the PICO and the DEAP dark matter projects, which are leading a highly competitive campaign to directly detect and characterize dark matter.

The PICO collaboration is presently installing an upgraded 40L experiment at SNOLAB. We are also developing a new detector, PICO500, with substantially increased active mass and sensitivity. The successful candidate is expected to play a major role in the commissioning and science run of PICO-40L and the development of PICO500. Our group will focus on the development of an online purification system.

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 with over 3 tonnes of liquid argon. DEAP-3600, along with the rest of the international argon dark matter collaborations recently formed the Global Argon Dark Matter Collaboration. We are actively involved in the development of DarkSide-20T in Gran Sasso and also planning a larger 300T detector in the future.

A PhD. in experimental particle astrophysics, high-energy physics, or a closely related field is necessary. The work will be focussed in a broad range of experimental activities from the development, construction and commissioning of low-background experiments to data analysis and physics publication. Candidates with relevant experimental skills and interest in experience in high purity gas system, liquid noble cryogenics, low background techniques, data acquisition and data analysis will be given strongest consideration. Experience with detector development, construction, commissioning, or operation is highly desirable and proficiency with computing programming languages (C++, ROOT, Python) and simulation (GEANT4) is valuable.

The fellowship is based at the University of Alberta, with occasional travel to the experimental site: SNOLAB (http://www.snolab.ca/).

To Apply:
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:

Marie-Cécile Piro (mariecci@ualberta.ca)  
Assistant professor, CPARC: https://www.cparc.ca/people/CPARC_faculty.php  
Centre for Particle Physics Department of Physics CCIS 4-183  
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Closing date:  
Application materials will be accepted until the position is filled.

We thank all applicants for their interest; however, only those individuals selected for an interview will be contacted.

The University of Alberta is committed to an equitable, diverse, and inclusive workforce. We welcome applications from all qualified persons. We encourage women; First Nations, Métis and Inuit; members of visible minority groups; persons with disabilities; persons of any sexual orientation or gender identity and expression; and all those who may contribute to the further diversification of ideas and the University to apply.