The Centre for Particle Physics at University of Alberta invites applications for one postdoctoral research associate position in experimental particle physics supported by the Canadian Particle Astrophysics Research Center (CPARC: https://cparc.ca/) in strong collaboration with SNOLAB experimental program. *University of Alberta is an active founding member of CPARC to ensure the highest level of international excellence, such that the international community will rally around a next generation experiment bringing funding and expertise to bear on these Canadian initiatives.* This position 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 with knowledge and experience working in an interdisciplinary and multicultural team. 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 position is for two years and based at the University of Alberta, with occasional travel to the experimental site: SNOLAB (http://www.snolab.ca/).
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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Application materials will be accepted until the position is filled.

All qualified candidates are encouraged to apply. We thank all applicants for their time and effort but only those selected for an interview will be contacted. Applicants may be considered for future vacancies. The University of Alberta offers appointments on the basis of merit. We are committed to the principle of equity in employment. We welcome diversity and encourage applications from all qualified women and men, including persons with disabilities, members of visible minorities and Aboriginal persons.