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CPARC

Canadian Particle Astrophysics Research Centre

Postdoctoral Positions on DEAP-3600 and DarkSide-20k

April 12, 2018

The Department of Physics at Carleton University has immediate openings for postdoctoral researchers in experimental particle astrophysics focusing on the dark matter search with the DEAP-3600 experiment at SNOLAB (see deap3600.ca) and on development of future argon dark matter detectors, including DarkSide-20k (see darkside.lngs.infn.it). The positions will be based at Carleton University in Ottawa and may involve travel to the SNOLAB facility in Sudbury (www.snolab.ca), the LNGS underground laboratory in Italy (www.lngs.infn.it) or the site of an underground argon extraction facility in Colorado, USA. Successful candidates will join the Carleton astroparticle physics research and technical team, described at physics.carleton.ca/apex.

Candidates should have a PhD or equivalent degree in experimental particle astrophysics, nuclear or particle physics, or in closely related fields. DEAP-3600 has been collecting data at SNOLAB since 2016, and has requirements for contributions to detector calibration, data analysis and detector operation. DarkSide-20k is currently under development, the Carleton group's responsibilities include development of high purity gas analysis and transportation systems for an underground argon extraction plant, and production and testing of some detector components. Carleton is also developing a facility for R&D towards future noble liquid detectors, which will afford opportunity to contribute to prototype detector development and SiPM development and testing. Successful candidates' responsibilities will include detailed data analysis of the DEAP-3600 dark matter dataset, development and qualification of components of the DarkSide-20k TPC and detector systems, development, operation and analysis of prototype noble liquid detectors, and simulations toward a future 300-tonne argon dark matter experiment. Candidates should highlight relevant skills and experience in their application. The initial appointments will be for two years with possibility of renewal. Salary range is \$52,000-\$58,000, commensurate with qualifications and experience.

Applicants should include a detailed CV, a brief statement of research interests, and arrange to have at least three letters of reference forwarded to:

Prof. Mark Boulay
DEAP Project Director
c/o Joseph Snider
joe.snider@snolab.ca

Applications will be accepted until the positions are filled. Carleton University invites all qualified candidates to apply; however Canadian citizens and permanent residents will be given priority. Carleton University is committed to employment equity and diversity in the workplace and strongly encourages all qualified women, visible minorities, aboriginal people, persons with disabilities, and persons of any sexual orientation or gender identity to apply. As a postdoc at Carleton, you would be represented by the Public Service Alliance of Canada and entitled to membership in PSAC Local 77000.