



Carleton University - Postdoctoral Fellow with the nEXO Experiment

An exciting postdoctoral position is available in the Astroparticle Physics Group at Carleton University (Ottawa, Canada) in collaboration with SNOLAB (Sudbury, Canada) and the Arthur B. McDonald Canadian Astroparticle Physics Research Institute. The successful candidate will join the nEXO Collaboration towards a search for neutrinoless double beta decay ($0\nu\beta\beta$).

The nEXO detector is designed to use a time projection chamber (TPC) filled with 5000 kg of enriched liquid xenon (LXe). Its predecessor, EXO-200 completed operations in 2018 having made the first observation of ^{136}Xe double beta decay and set stringent limits in the $0\nu\beta\beta$ mode. The multiparameter nature of LXe TPCs provides a rich data set with publication of several physics results and an active on-going analysis group. nEXO is building on this technology to probe the full inverted ordering of neutrino masses with potential to discover new physics.

The EXO Carleton group is operating a cryogenic setup and testing silicon photomultipliers that will be used in nEXO. The group also has strong participation in nEXO simulations and analysis of EXO-200 data. The successful candidates will take leading roles in one or more of these areas.

Candidates must hold a recent Ph.D. degree, or obtain one soon, in experimental particle physics or a related field. Demonstrate experience in detector development with interest in both analysis of physics data and instrumentation development. Good communication skills and ease of participating in team work is expected. Experience in data acquisition systems, ultra-low background and/or underground physics is an asset.

This is a full-time postdoctoral position with a one-year contract and an annual salary of \$58,620 plus benefits. The position is renewable on a yearly basis, based on performance and funding. Review of applications will begin in September 2022. Applicants should forward a Curriculum Vitae and a statement of research interests, and arrange for three reference letters to be sent directly to

Dr. Razvan Gornea, Associate Professor (razvan.gornea@carleton.ca)

Department of Physics, Carleton University
Room 2462 Herzberg Laboratories
1125 Colonel By Drive
Ottawa, ON - K1S 5B6
Tel: +1-514-802-4163

Carleton University is committed to employment equity, diversity and inclusion in the workplace and strongly encourages applications from all qualified applicants, including women, Indigenous persons, members of visible minorities, persons of any sexual orientation or gender identity, and persons with disabilities. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents. As a postdoc from Carleton University, you would be represented by the Public Service Alliance of Canada and entitled to membership in PSAC Local 77000. We are committed to providing support to applicants with accessibility needs, if you require accommodation at any stage during the recruitment process, please contact us at the above email address.