

Postdoctoral Position in Experimental Neutrino Physics on EXO

Applications are invited for two postdoctoral positions, available immediately, with the Particle Astrophysics Group at Laurentian University in Sudbury, Canada, to support research efforts on EXO, the Enriched Xenon Observatory. The Particle Astrophysics Group at Laurentian provides a dynamic environment and maintains very strong interactions with researchers at nearby SNOLAB. Laurentian is a founding member of the Canadian Particle Astrophysics Center (CPARC). One of the positions is supported by NSERC, the other is supported by CPARC.

The EXO program searches for neutrino-less double beta decay in ^{136}Xe . EXO-200 is a prototype detector with a source mass of 200 kg of enriched liquid xenon and is currently taking data at the WIPP underground site in New Mexico. EXO-200 has measured the $2\nu\beta\beta$ transition rate with the highest precision of all $2\nu\beta\beta$ nuclei and probed the $0\nu\beta\beta$ transition rate down to an effective neutrino mass close to 100 meV. EXO-200 also informs the design of the 5-tonne nEXO detector, with a planned sensitivity on the effective neutrino mass covering the inverted hierarchy. Laurentian's commitments to EXO include operations; detector development; the mitigation and assessment of trace radionuclides in the xenon and in detector components; calibrations; xenon enrichment; data analysis and simulations.

The successful candidates will take leading roles in one or more of these areas. Demonstrated experience is required in detector development, ultra-low backgrounds and/or data analysis. Experience in data acquisition systems, underground physics, and/or in radiochemistry is an asset. Candidates must hold a recent Ph.D. degree in experimental particle physics, nuclear physics or radiochemistry at the time of appointment.

The initial appointment will be for two years, with possible extension. Applicants should forward a Curriculum Vitæ and a statement of research interests, by email only, and arrange for three reference letters to be sent directly to:

Prof. J. Farine (farine@snolab.ca)
Department of Physics, Laurentian University
935 Ramsey Lake Road, Sudbury Ontario, P3E 2C6 Canada
Tel: +1-705-675-1151 ext 2233

Laurentian University is committed to equity in employment and encourages applications from all qualified applicants including women, aboriginal peoples, members of visible minorities, and persons with disabilities. The review of applications will begin January 8, 2018. Applications will be accepted until the positions are filled.