Queen's University invites applications for a

**Postdoctoral position**
for the SuperCDMS experiment

The SuperCDMS Collaboration has pioneered the use of low temperature phonon-mediated detectors to detect the rare scattering of WIMPs on nuclei and distinguish them from backgrounds. The upcoming SuperCDMS SNOLAB project will construct a new experimental apparatus in SNOLAB starting 2019. The SuperCDMS SNOLAB experiment will improve the present sensitivity for dark matter WIMPs by two orders of magnitude.

In the meantime, a cryogenic test facility (CUTE) is currently under commissioning underground at SNOLAB, in the vicinity of the SuperCDMS allocated space. It is primarily designed to test the performance of the SuperCDMS cryogenic detectors. As a facility, it will also be accessible to scientists developing innovative cryogenic detectors for rare events search like dark matter or double-beta decay.

The CUTE/SuperCDMS SNOLAB group is supporting both CUTE and SuperCDMS installation, commissioning, and science phases.

The postdoctoral researcher will be actively involved in commissioning the new Cryogenic Underground TeSt facility at SNOLAB, in a first stage focused on testing detectors for the SuperCDMS SNOLAB experiment. The postdoctoral researcher will expand the ongoing effort in the GEANT4 simulations in terms of neutron and gamma background to any material surrounding the detectors to better understand and estimate the radioactive background budget of the experimental apparatus. Simulation results will be then compared to the first commissioning data. The successful candidate will also have the opportunity to make contributions to the installation of SuperCDMS SNOLAB which will include analysis of data acquired from the different facilities.

The position is based at SNOLAB and will include supervisory and mentorship opportunities. Shift work underground at the SNOLAB facility (6800-foot depth) is expected. This position is funded through the NSERC for a two-year term.

Candidates must hold or be near completion of a PhD in experimental physics at the time of recruitment. The candidate should have a background in astroparticle-, particle- or nuclear physics. Experience with cryogenic detectors and dilution refrigerators as well as in low background methods and data analysis is an advantage.

For further information please contact Silvia Scorza (E-Mail: silvia.scorza@snolab.ca).

Interested scientists should send their applications (including a CV, list of publications and a statement of research interest) and arrange for three recommendation letters to be sent to Julie McDonald at jmm27@queensu.ca

**Review of applications will begin June 10th, 2019 and continue until the position is filled.**

*The University invites applications from all qualified candidates. Queen's is committed to employment equity and diversity in the workplace and welcomes applications from women, visible minorities, Aboriginal peoples, persons with disabilities, and persons of any sexual orientation or gender identity.*