



Undergraduate Research Assistant

Research Division
Summer 2026 term

Posting Date: Jan 15th, 2026

About Us

SNOLAB is an international facility for world-class underground physics research. It has an expanding program in astroparticle physics and underground science. Located in an air-conditioned cleanroom 2 km underground in the Vale Creighton Mine near Sudbury Ontario, with a suite of surface facilities and laboratories, SNOLAB is currently preparing for the next generation of experiments focusing on neutrino studies and the search for galactic dark matter. SNOLAB partners with several Canadian and foreign universities.

The Positions

Multiple positions are available at SNOLAB for the May – August term. The majority will be directly supported by SNOLAB and a couple will be funded by research grants through a partner university.

The SNOLAB positions aim at developing new techniques to expand the capabilities of the facility. The grant-funded positions are geared toward furthering specific experiments, with the work involving hardware improvement, data analysis, monte-carlo simulation and detectors shifts.

The list of opened positions (at the time of the posting) can be found at the end of this document. Other SNOLAB experiments may hire additional people as resources become available.

These are full-time positions.

SNOLAB is committed to equity in employment and encourage applications from all qualified applicants, including women, Indigenous persons, members of visible minorities and persons with disabilities. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents. SNOLAB will provide support in its recruitment processes to applicants with disabilities, including accommodation that considers an applicant's accessibility needs.

Further information about SNOLAB may be found at www.snolab.ca



📍 Creighton Mine #9, 1039 Regional Road 24, Lively, ON P3Y1N2

📞 705.692.7000 🌐 www.snolab.ca

University of Alberta | Carleton University | Laurentian University | Université de Montréal | Queen's University

Criteria

Education:

Applicants must be 18 years or older, registered in post-secondary studies at an accredited institution or apprenticeship program, recent graduate (having graduated in the last 3-6 months) or individual returning to full-time or part-time studies in the next academic term.

Experience:

Owing to the broad range of topics, many profiles are sought after, including physics, chemistry, and engineering. Experience in basic data analysis, including data formatting, statistics, and computer programming will be an asset. Hands-on skills are also valued. Candidates should be comfortable working in a team environment where frequent and open communication is encouraged and expected as part of the culture. Any additional experience working in a laboratory environment, especially a cleanroom environment, is an asset.

Salary

Salary will be determined by education and qualifications within a 20-25 \$/hr range. These positions are subject to availability of funding. To meet operational needs, shift work may be required.

To Apply (to SNOLAB directly)

To apply, please go to <https://forms.cloud.microsoft/r/K4WTXX9sFQ>. This link will open a Microsoft Form. Upon submission, you will receive an email from studenthiring@snolab.ca. Use the link in the email to upload a **single PDF** containing:

- Cover letter
- Resume
- Unofficial transcript

We will accept only one application per applicant (applying again will overwrite the previous application). If you have any questions, please address them to studentjobs@snolab.ca.

The posting will remain open until the position is filled, but review of applications will start on Feb 1st. SNOLAB thanks all applicants for their interest.

Closing Date

February 1st, 2026



📍 Creighton Mine #9, 1039 Regional Road 24, Lively, ON P3Y1N2

📞 705.692.7000 🌐 www.snolab.ca

List of opened positions

RadioActive isotope Measurement Program at SNOLAB (RAMPS): The half-life from long-lived radioactive isotopes can provide fundamental information necessary for a variety of fields of physics (rare-event searches, nuclear physics, geochronology etc.). The goal of the RAMPS pilot project is to perform novel measurements of long-lived isotopes using (or enhancing) existing SNOLAB detectors. The successful candidate would be responsible for aiding in the measurement of new isotopes, analyzing data from the pilot project measurements, and developing new, SiPM (Silicon Photomultiplier) based, detectors to enhance future measurements.

SuperCDMS: The SuperCDMS (CryogenicDark Matter Search) experiment will focus on the detection of low-mass (<10 GeV/c²) dark matter particles. The experiment utilizes 6 silicon and 18 germanium cryogenic calorimeters arranged in 4 detector towers. Commissioning of the experiment has started and will continue throughout the remainder of 2026. The successful student will be involved with these operations which will include hardware installation, detector operation, data-taking shifts and analysis.

Low background laboratory: The Low Background Lab student will be engaged with the operation and analysis of data from the high purity germanium (HPGe) detectors, radon emanation system, alpha detectors, neutron detectors, seismic/vibration sensors and other scientific instruments used within the SNOLAB material assay and screening program. In addition, characterization of the response of the detectors via Monte Carlo simulations will be performed and data will be input into the radiopurity.org database as required.

The scintillator QA and lab cleanliness: The QA program for SNO+ was established to control the purity of the scintillator by testing its optical properties, e.g., UV-Vis transparency can be affected by contaminants by showing an increase in absorption. The purification plant went through an upgrade of the main distillation process. To confirm the efficiency of the process, a QA testing campaign will be required, and the successful candidate will take part in that QA program during commissioning and operations of the purification plant. The successful candidate will also help in improving the monitoring tools for quality control of the SNOLAB cleanroom environment.

SNO+ Te Project: As part of the search for neutrinoless double beta decay with SNO+, two ultra-clean process plants have been constructed in the underground environment at SNOLAB. The first is a purification plant, while the second is a synthesis plant, also known as the TeDiol Plant, where the Tellurium-Butanediol complex is synthesized. The successful candidate will contribute to the final commissioning steps at the plant in preparation for the first test synthesis. They will also participate in developing a campaign to study both the properties and characteristics of the complex, as well as the final scintillator cocktail.

SNO+ Assay program: SNO+ utilizes a variety of assay systems to look for radon in the detector components, both in liquid and gas form. This is crucial for understanding the backgrounds in detail and therefore enabling the best possible physics outcomes. There are efforts to develop trapping capabilities and a new assay system utilizing scavengers. The successful candidate will be part of the assay group and learn the current systems. In addition, they will work on further developing the new systems for the experiment.



📍 Creighton Mine #9, 1039 Regional Road 24, Lively, ON P3Y1N2

📞 705.692.7000 🌐 www.snolab.ca

SNO+ electronic cleaning and maintenance:

SNO+ electronics can be influenced by copper creep which causes electronic boards to fail. This process has been observed for some time and cleaning the boards can correct the situation. All 500 boards need to undergo the process, which analytical work utilizing the XRF system will continue to characterize the problem. In addition, the detector operations and monitoring will require additional automation and quality insurance by adding graphs and to the monitoring website.

Chemistry Research Assistant: Radon emanation measurement is a critical step in the selection of material for very low background detectors. Radon is concentrated and then measured in small vials called Lucas cells, where the alpha decays will create scintillation light. The student will focus on ZnS(Ag) purification techniques as part of radon Lucas cell development work. The successful candidate will work independently with SNOLAB Scientists under the Research Division. They will also provide support to other Chemistry related tasks to experiments as required.



📍 Creighton Mine #9, 1039 Regional Road 24, Lively, ON P3Y1N2

📞 705.692.7000 🌐 www.snolab.ca

University of Alberta | Carleton University | Laurentian University | Université de Montréal | Queen's University