



# Undergraduate Research Assistant

Research Division  
Fall 2026 term

**Posting Date: May 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 September – December term. The majority will be directly supported by SNOLAB and a couple will be funded by research grants through a partner university.

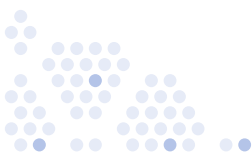
The SNOLAB positions aim at developing new techniques to expand the capabilities of the facility. The grant-funded positions are geared toward furthering specific experiments, with the work involving hardware improvement, data analysis, monte-carlo simulation and detectors shifts.

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](http://www.snolab.ca)



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## 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](mailto:studenthiring@snolab.ca). Use the link in the email to upload a **single PDF** containing:

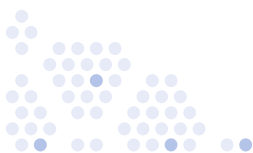
- Cover letter
- Resume
- Unofficial transcript

**We will accept only one application per applicant** (applying again will overwrite the previous application). If you have questions/concerns, please address them to [studentjobs@snolab.ca](mailto:studentjobs@snolab.ca).

The review of applications will start on June 1st. SNOLAB thanks all applicants for their interest.

### Closing Date

**May 31<sup>st</sup>, 2026**



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## 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. The student will also be involved with characterizing a new fast neutron detector underground.

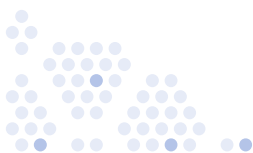
**Low background laboratory (LBL):** The Low Background Lab research assistant will be engaged with the operation and analysis of data from the high purity germanium (HPGe) detectors, radon emanation system, alpha detectors, neutron detectors, seismic/vibration sensors and other scientific instruments 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. We are looking for two candidates interested in an eight-month work term, however, candidates available for a four-month work term will also be considered.

**Coincidence Gamma Counting for low-background assays:** We are developing a proposal for improved sensitivity in gamma counting. This project will use coincidences between gammas in decay cascades for assays with extremely low backgrounds. The project will use Monte Carlo computer simulation techniques with some analysis of data from existing detectors. The majority of the work will be done on surface with some underground shifts.

**The scintillator QA and operations:** 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 detector will be refilled with a repurified scintillator. This process will require a QA testing campaign, and the successful candidate will take part in that QA program 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.

**SNOLAB Cleanliness Program:** SNOLAB Cleanliness Program aims to monitor and improve cleanroom standards. The successful candidate will help in the ongoing quality control program of the SNOLAB cleanroom environment and will be involved with the current cleanliness projects. The student will be based at SNOLAB, spending a large fraction of their time in the underground and surface cleanroom laboratory.

**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



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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. We are also improving the so-called lucas cells by developing our own zinc-sulfide coating for the scintillation part to ensure the lowest possible internal background rates. The successful candidate will be part of the assay group and learn the current systems.

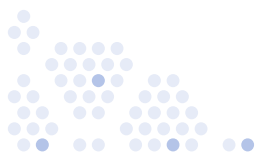
**SNO+ electronic cleaning and maintenance:**

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.

**PICO:** [PICO](#) operates dark matter search detectors using C3F8 which form superheated bubbles when it interacts with dark matter and/or various background particles. The project consists of the PICO-40 experiment which is currently operating and the PICO-500 experiment which is under construction. The successful candidate would be expected to take detector shifts on PICO-40, analyze data, calibrate, and help in the general operation of the detector. The candidate would also help with the construction and assembly of the PICO-500 detector as needed. The PICO group is looking for a candidate available for a four-month or eight-month work term.

**DEAP-3600:** DEAP-3600 is a dark matter detector using liquid argon as a target material. It has been taking data between Fall 2016 and Winter 2020, reaching [excellent sensitivity to WIMP-nucleon elastic scattering](#). During that time, some unexpected alpha backgrounds have been identified. The detector has been modified to mitigate them allowing the detector to reach its maximum sensitivity. It also serves as a test bed for newly developed techniques aiming at making argon detectors the most sensitive in the world for high-mass WIMP dark matter.

**NuDoubt++:** The NuDoubt++ experiment is a next-generation detector for the study of two-neutrino and neutrinoless positive double weak decays ( $2\beta^+/\text{EC}\beta^+$ ). The experiment is based on a novel detector concept combining hybrid and opaque scintillators with an innovative light read-out technique. The selected candidate will assist with material assays and procurement, as well as simulations of external backgrounds relevant to the future underground deployment of the experiment at SNOLAB. The position offers hands-on experience at the intersection of rare-event searches, detector development, and low-background techniques. Ideal candidates will have an interest in experimental particle or nuclear physics and analytical or computational skills.



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