

# Summer Research Jobs



**Laurentian University**  
**Université Laurentienne**

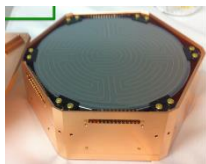
## Particle Astrophysics

Summer research positions are open for undergraduate students in Physics, Computer Science, Chemistry or Engineering. Projects are available on the CUTE and SuperCDMS, DEAP, EXO, HALO, NEWS\_G, PICO, and SNO+ experiments.

Topics include: computer programming for modeling/simulation, statistical data analysis, hardware development and testing, low background radio-assays, material purification, calibration and particle detection techniques.

NSERC USRA's can be held for these jobs  
Deadline: Feb 9<sup>th</sup>

For information contact:  
[tine@snolab.ca](mailto:tine@snolab.ca)  
Deadline: March 1<sup>st</sup>



**CUTE and SuperCDMS** dark matter searches with low temperature detectors.



**NEWS-G** searching for low mass dark matter with gaseous Spheres.



**DEAP-3600** is a second generation experiment that searches for dark matter particle interactions on liquid argon.



**PICO** is searching for dark matter using bubble chambers filled with  $C_3F_8$  and is one of the world-leading experiments in direct dark matter search.



**EXO** is searching for neutrinoless double beta ( $0\nu\beta\beta$ ) decay in  $^{136}\text{Xe}$ . Extensive R&D for the next generation nEXO is underway.



**SNO+** is a multi-purpose neutrino detector, able to study neutrinos from the sun, the earth, reactors and supernovae, and search for  $0\nu\beta\beta$  decay in  $^{130}\text{Te}$  for the first phase.



**HALO** is able to detect neutrinos from galactic core-collapse supernovae, and will help solve many questions in particle and astrophysics.

Dr. Caden, Dr. Farine, Dr. Gorel, Dr. Jillings, Dr. Kraus, Dr. Licciardi,  
Dr. Scroza, Dr. Virtue, Dr. Wichoski