

Contribution ID: 210

Type: Oral (Non-Student) / Orale (non-étudiant(e))

Status of the SuperCDMS Experiment at SNOLAB

Monday 9 June 2025 14:15 (15 minutes)

The Super Cryogenic Dark Matter Search (SuperCDMS) direct detection experiment focuses on the search for low-mass (< 10 GeV/ c^2) dark matter particles. It is currently being installed 2 km underground at SNO-LAB, Canada. The payload will consist of 24 cryogenic germanium and silicon detectors arranged in four towers with six detectors each. The detectors come in two varieties, called HV and iZIP. The HV detectors are equipped with phonon sensors and are operated at ~100 V to benefit from the signal amplification provided by the Neganov-Trofimov-Luke effect and achieve a lower threshold. The iZIP detectors have both phonon and ionization sensors, which allow them to discriminate between electron and nuclear recoils, thereby considerably reducing the background. Presently, the experiment is scheduled to begin commissioning in mid-2025, followed by the start of the first science run in late 2025. This talk will provide an overview of the experiment and describe its current status.

Keyword-1

dark matter

Keyword-2

SuperCDMS

Keyword-3

Author: REYNOLDS, Tyler (University of Toronto)

Co-author: COLLABORATION, SuperCDMS

Presenter: REYNOLDS, Tyler (University of Toronto)

Session Classification: (PPD) M2-9 Searches for dark matter I | Recherche de la matière noire I (PPD)

Track Classification: Technical Sessions / Sessions techniques: Particle Physics / Physique des particules (PPD)