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First operation and assessment of SuperCDMS SNOLAB detectors at the CUTE facility

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The next-generation SuperCDMS experiment at the SNOLAB underground laboratory is designed to probe dark matter particles with masses below 10 GeV/c² using highly sensitive silicon and germanium cryogenic detectors. Before the experiment undergoes commissioning, it is essential to test these detectors in an environment with similar conditions to assess their performance, optimize operational parameters, validate calibration techniques, and troubleshoot technical issues. The Cryogenic Underground TEst facility (CUTE) at SNOLAB is a dedicated low-background facility designed for this purpose. This talk will cover aspects of the first testing and characterization of SuperCDMS High Voltage (HV) detectors at CUTE, highlighting initial calibration efforts and key performance results.

Keyword-1

Dark Matter

Keyword-2

SuperCDMS SNOLAB

Keyword-3

CUTE

Author: ZUNIGA REYES, Ariel (University of Toronto)

Presenter: ZUNIGA REYES, Ariel (University of Toronto)

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