

The SuperCDMS Experiment Overview

Thursday, May 12, 2022 4:40 PM (20 minutes)

The SuperCDMS SNOLAB experiment, which will search for dark matter particles with masses ≤ 10 GeV, is currently under construction 2 km underground in SNOLAB, Canada. The 24 detector payload contains cryogenic germanium and silicon detectors that allow the detection of sub-keV energy depositions from dark matter particle interactions. Two different types of detector designs are employed, denoted as the High Voltage detectors (HV) and the interleaved Z-dependent Ionization and Phonon detector (iZIP). HV detectors have a low threshold and excellent energy resolution, while iZIP detectors discriminate between electron and nuclear recoils, which is necessary for understanding backgrounds. The SuperCDMS experiment, its status, and the projected sensitivity will be discussed in this talk.

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