

Lake Louise Winter Institute 2020



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SuperCDMS SNOLAB Experiment

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The SuperCDMS SNOLAB experiment is designed to be a next generation dark matter direct detection experiment, following SuperCDMS Soudan. The experiment is currently under construction. The main science goal is to improve the sensitivity for dark matter particles with masses ≤ 10 GeV by at least one order of magnitude in cross section over current results from the SuperCDMS Soudan experiment. Two types of cryogenic detectors (HV and iZIP), with germanium and silicon as material, are used to measure the ionization and phonon signals from electron and nuclear recoils of the dark matter. In this talk, I will give a general introduction to the SuperCDMS SNOLAB Experiment, including its history and goals, detector apparatus, signal and background models, as well as the latest sensitivity projection studies and construction progress.

Presenter: ZHANG, Enze

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