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Recent Results and Current Status of SuperCDMS

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SuperCDMS (Cryogenic Dark Matter Search) has been one of the leading direct dark matter search experiments using low-temperature semiconductor detectors. The recoil energy induced by dark matter scattering inside the detector is measured using phonon (lattice vibration) and ionization signals. CDMSlite (low-ionization threshold experiment) within SuperCDMS Soudan has the best dark matter-nucleon scattering cross section limits in the world for low-mass dark matter particles with masses between 2-5GeV/c2. With unique discovery potential for low-mass dark matter and complementary to higher-mass dark matter searches with other experiments, SuperCDMS plays a vital role in the search for dark matter. We are now moving forward with SuperCDMS SNOLAB, a DOE/NSF/CFI funded direct detection dark matter search experiment. In this talk, I will present the recent results from SuperCDMS Soudan as well as an overview and the current status of SuperCDMS SNOLAB.

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