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Dark Matter Search with SuperCDMS

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It is well established by now that about 80% of the mass in the Universe exists in a form other than the baryonic matter that makes up all object we know. However, we do not know yet what this “Dark Matter” consists of. The most discussed solution to this problem is a Weakly Interacting Massive Particle (WIMP). SuperCDMS is an upgrade of the Cryogenic Dark Matter Search experiment using cryogenic detectors based on larger germanium single crystals (~0.6 kg per detector) with a new sensor layout which greatly improves the detector performance. This talk will introduce the new SuperCDMS detectors, discuss status and future of the experiment, and highlight the first results which break new ground in the low WIMP mass range.

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