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Searches for Dark Matter beyond the WIMP with SuperCDMS Technology

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The Super Cryogenic Dark Matter Search (SuperCDMS) is a direct Dark Matter search experiment designed to observe nuclear recoils induced by WIMPs. However, it is also sensitive to Dark Matter particle candidates beyond the standard WIMP paradigm, which could create electron recoil signals in the cryogenic silicon and germanium detectors. The pool of candidates is rich and includes light Dark Photons, light Axions and sub-GeV WIMP-like particles. This talk will give an overview of the respective interaction channels, and will highlight first search results using a new generation SuperCDMS detector with single electron-hole-pair resolution. The talk will also discuss the prospects of searches for Dark Matter beyond the WIMP with the upcoming SuperCDMS SNOLAB experiment.

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