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CUTE Status and Plans

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There is strong astrophysical and cosmological evidence for a new kind of matter known as dark matter, which does not interact via the electromagnetic or strong forces. The SuperCDMS experiment searches for dark matter particle candidates using cryogenic germanium and silicon detectors. The next generation of SuperCDMS is scheduled to start operating at SNOLAB in 2020. Before this facility is ready, the Cryogenic Underground TEst Facility (CUTE) will come online to test SuperCDMS detectors underground at SNOLAB, providing a low-background, low cosmogenic activation environment. The facility will have the capacity to hold up to six of the standard SuperCDMS detectors. The CUTE cryostat has a faster turnaround time to test detectors in an efficient manner and allows the study of detector performance well before the main experiment is ready. Given the low background of the facility as well as the expected threshold of the new detectors, the CUTE facility will have an opportunity to search for low-mass dark matter with the new SuperCDMS detectors. When SuperCDMS comes online, CUTE will be used to perform detailed characterizations of the detectors and test new R&D detectors. This talk will present the CUTE facility and discuss the status underground at SNOLAB.

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Session Classification: M2-3 Particles deep underground (PPD) | Particules profondément sous terre (PPD)

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