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CUTE - A Cryogenic Underground TEst facility at SNOLAB

The excellent energy resolution and low threshold of cryogenic detectors have brought them to the forefront of the search for low-mass WIMPs (Weakly Interacting Massive Particles). The next generation of large cryogenic detectors for dark matter search promises further improvements in sensitivity, yet it is difficult and in some cases impossible to test and fully characterize these detectors in an unshielded environment. Therefore the Queen's SuperCDMS team is installing a well shielded Cryogenic Underground detector TEst facility (CUTE) at SNOLAB to support detector testing and characterization for SuperCDMS and future cryogenic rare event search experiments. Significant effort is put into achieving a very low background environment which may open the door for early science results with the first set of SuperCDMS detectors during the time the main experimental apparatus is being installed.

This poster discusses some of the challenges and solutions implemented in the design of this facility as well as the status and schedule for the start of operations underground at SNOLAB.

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