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Infrared Photon Interactions in SuperCDMS Detectors (G)*

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The Super Cryogenic Dark Matter Search (SuperCDMS) experiment is in the process of incorporating improvements in several aspects, such as experiment location, detectors, and readout electronics. With these improvements, the focus of the new phase of the experiment at SNOLAB will be Weakly Interacting Massive Particles (WIMPs) in the mass range below $\sim 10 \text{ GeV}/c^2$. In order to better understand and monitor the detector behavior in the low-energy range (below a keV) where recoils from such low mass WIMPs would be observed, we are developing a new calibration method based on infrared photons. In my talk, I will be summarizing our most recent tests probing the response of SuperCDMS germanium detectors to interactions with infrared photons and the progress in using this method to monitor detector stability.

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