

Backgrounds and Shielding for SuperCDMS SNOLAB

Monday, 12 July 2021 14:45 (15 minutes)

SuperCDMS deploys cryogenic germanium and silicon detectors which are sensitive in both the athermal phonon and ionization channels to search for dark matter. In order to observe such a small potential signal, all background sources need to be well understood and then mitigated.

Low-background shielding was designed such that the environmental background is negligible compared to the irreducible background due to cosmogenic activation in the detectors themselves. The overall background budget of the SuperCDMS experiment will be presented, along with the iterative process of design, assay, and fabrication of the now complete shielding system.

Are you are a member of the APS Division of Particles and Fields?

No

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Session Classification: Dark Matter

Track Classification: Dark Matter