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Background strategy in SuperCDMS SNOLAB

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Protection from and rejection of backgrounds are key issues for direct dark matter detection experiments.
The next-generation SuperCDMS SNOLAB experiment will be described, focusing on background strategy and characterization.
The potential of SuperCDMS detectors for achieving very low energy threshold is particularly attractive for searches for WIMPs with masses below 10 GeV/cˆ2.
Thus, the background at energies below a few tens of keV is of particular interest. Surface contamination from plate-out and implantation of radon daughters can give rise to neutron and gamma-ray backgrounds in the region of interest. Ongoing R&D projects to characterize these backgrounds will be discussed.

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Session Classification: R1-5 Low Background Detectors (DIMP/PPD/DNP) | Détecteurs à faibles interférences (DPIM/PPD/DPN)

Track Classification: Particle Physics / Physique des particules (PPD)