Conference on Science at the Sanford Underground Research Facility

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Diffuse Supernova Neutrino Background Search

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Core-collapse supernovae produce neutrinos across all flavors in the range of a few tens of MeV. The integrated flux of these neutrinos forms the diffuse supernova neutrino background (DSNB) or supernova relic neutrinos (SRNs). Their flux, flavor composition, and energy spectrum provide insights into supernova dynamics and star formation. This talk gives a short summary of recent DSNB searches at KamLAND, SK, and SK-Gd.

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