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Coherent Scattering and the Flavor Physics and Detection of Supernova Neutrinos

Thursday, 31 May 2018 11:20 (35 minutes)

Coherent elastic neutrino-nucleus scattering (CE ν NS) is a neutral-current process in which a neutrino scatters off an entire nucleus, depositing a tiny recoil energy. The process is important in core-collapse supernovae and also presents an opportunity for detection of a burst of core-collapse supernova neutrinos in low-threshold detectors designed for dark matter detection. This talk will discuss the physics of CE ν NS, its importance in core collapse, and prospects for supernova burst detection in low-threshold recoil detectors.

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