Rencontres de Moriond EW 2012



ID de Contribution: 37

Type: YSF (Young Scientists Forum)

Coherent Neutrino Scattering with Cryogenic Semiconductor Detectors

dimanche 4 mars 2012 19:51 (5 minutes)

Coherent neutrino scattering (CNS) is an unmeasured, well-predicted standard model process observable via low-energy nuclear recoils. The latest generation of dark matter detectors is now achieving the recoil energy thresholds and fiducial masses needed to detect CNS for the first time. We discuss an optimization of cryogenic phonon-mediated semiconductor detectors for measuring CNS from reactor neutrinos, intense electron capture neutrino sources, and decay-at-rest neutrino sources. These configurations are able to place new neutral current constraints on sterile neutrinos, non-standard neutrino interactions, and other exotic physics.

Auteur principal: M. ANDERSON, Adam (Massachusetts Institute of Technology)

Orateur: M. ANDERSON, Adam (Massachusetts Institute of Technology)

Classification de Session: YSF1

Classification de thématique: Experiment