

Abstract Submitted
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Neutrino-Nucleus Neutral Current Elastic Interactions in Mini-BooNE DENIS PEREVALOV, University of Alabama, MINIBOONE COLLABORATION — MiniBooNE is an experiment operated at Fermilab looking for neutrino oscillations at $\Delta m^2 \sim 1eV^2$. MiniBooNE uses a neutrino beam produced from 8 GeV protons from the Fermilab Booster incident on a Be target. The Cerenkov detector located 541m from the target is a 12m diameter sphere filled with mineral oil and instrumented with 1280 inner and 240 veto PMTs. Neutral current elastic scattering (NCEL) is one of the most important interactions in MiniBooNE. To date we have recorded about 50000 NCEL interactions in neutrino mode, which represents the biggest sample of such interactions in the world. These data may be used for nuclear model testing. The MiniBooNE NCEL cross-section has been measured and will be presented, as well as the measurement of nuclear model parameters, such as the axial vector mass (M_A) and the strange quark contribution to the nucleon spin (Δs).

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