

Neutrino-induced two-proton knockout in MicroBooNE

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The MicroBooNE detector is the world's longest-running liquid argon time projection chamber (LArTPC) and recently completed operating in the Fermilab Booster Neutrino Beam. One of the primary physics goals of MicroBooNE is to perform detailed studies of neutrino-argon scattering cross sections, which are critical for the success of future neutrino oscillation experiments. At neutrino energies relevant for the Short-Baseline Neutrino Program, the most plentiful event topology involves final states without visible mesons, and containing one or more protons. A low reconstruction threshold enabled by the LArTPC technology has allowed MicroBooNE to pursue various analyses studying neutrino-induced proton production at accelerator energies. This talk presents results from those efforts, including first cross-section measurements from MicroBooNE for exclusive two-proton final states.

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