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Recent neutrino cross-section results from MicroBooNE

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MicroBooNE is a liquid argon time projection chamber that operates in the Booster Neutrino Beam at Fermilab. The detector provides high-resolution imaging of neutrino interactions with a low threshold and full angular coverage. Thanks to a high event rate and several years of continuous operation, the MicroBooNE collaboration has obtained the world's largest dataset of neutrino-argon scattering events. A detailed understanding of these interactions, especially the impact of nuclear physics effects, will be critical to the success of future precision neutrino oscillation efforts, particularly the argon-based Deep Underground Neutrino Experiment (DUNE) and the Short-Baseline Neutrino (SBN) program. This talk presents some of the latest neutrino-argon cross section measurements in MicroBooNE: new measurements of the inclusive electron neutrino and muon neutrino cross sections, a new measurement of the eta production cross section, and progress towards a measurement of lambda baryon production in muon antineutrino interactions.

Working group

WG2

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