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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 expected 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 an overview of the latest neutrino-argon cross section measurements in MicroBooNE. Particular emphasis is given to recent studies of charged-current interactions leading to final states containing zero pions and one or more protons.

Collaboration name

MicroBooNE

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