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Recent MicroBooNE cross-section results: inclusive channels and pion production

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One of the main physics goals of the MicroBooNE experiment at Fermilab is to perform high-statistics measurements of neutrino-argon interaction cross sections. These measurements will be essential for future neutrino oscillation experiments, including the Short-Baseline Neutrino program and the Deep Underground Neutrino Experiment (DUNE), to achieve an unprecedented level of precision. Inclusive cross-section data provide an important overall benchmark for the interaction modeling needed for these future efforts, and exclusive measurements of neutrino-induced pion production provide insight into the dominant reaction mode at the neutrino energies relevant for DUNE. In this talk, we present some of the latest neutrino-argon cross-section measurements in MicroBooNE, including new results for charged-current inclusive neutrino cross sections and pion-containing final states.

In-person participation

Yes

Primary author:HEN, Or (MIT)Presenter:HEN, Or (MIT)Session Classification:Neutrino Physics

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