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Recent cross-section results from MicroBooNE

Wednesday, October 1, 2025 9:30 AM (20 minutes)

MicroBooNE is a Liquid Argon Time Projection Chamber, able to image neutrino interactions with excellent spatial and timing resolution, enabling the identification of complex final states resulting from neutrino-nucleus interactions. As a result, MicroBooNE has produced a variety of neutrino cross-section measurements on argon, spanning almost four orders of magnitude and across all major interaction modes - pionless, neutral and charged pion production, neutral current interactions as well as rare final states including strange mesons and baryons such as Λ, η and K. This talk will present MicroBooNE's recent measurements, including the latest ν_μCC results without any pions in the final state, measurements of NC and CC pi0 production on argon as well as our first results of kaon production in argon. This talk will showcase our unique sensitivity to probing neutrino interaction models at both the nucleon and nuclear levels.

Neutrino Properties

Neutrino Cross-Section Studies

Neutrino Telescopes & Multi-messenger

N/A

Neutrino Theory & Cosmology

N/A

Data Science and Detector R&D

N/A

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