

Rare Meson Production Cross-Sections with MicroBooNE

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MicroBooNE is an 85-tonne active mass liquid argon time projection chamber (LArTPC) neutrino detector exposed to the Booster Neutrino Beamline (BNB) at Fermilab. One of the key physics goals is the precise measurement of neutrino interactions on argon in the 1 GeV energy regime. The study of heavier mesons in neutrino interactions will help to improve the background estimates for future nucleon decay searches in experiments such as DUNE, and it will allow the development of techniques to enhance the particle identification capabilities of a LArTPC. In this poster, we will present the first ever cross-section measurements of charged current muon neutrino-induced heavy meson production (kaon production and eta production) on argon at MicroBooNE.

Working Group

WG 2: Neutrino Scattering Physics

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