

Towards measurements of nuclear effects in MicroBooNE

One of the primary challenges in current and future precision neutrino oscillation measurements is understanding nuclear effects in neutrino-nucleus interactions. Current models are known to be deficient in a number of areas, leading to relatively large uncertainties which will become limiting soon. MicroBooNE is a liquid argon TPC in the booster neutrino beam at Fermilab, which has the ability to measure proton emission from neutrino interactions down to lower proton energies than most tracking scintillator detectors due to its finer position resolution. This poster presents a selection of CC0pi events with at least one final state proton, which can be used to constrain nuclear models and parameters in order to reduce interaction modelling uncertainties in oscillation analyses, particularly for SBN and DUNE.

Authorship annotation

On behalf of the the MicroBooNE collaboration

Session and Location

Wednesday Session, Poster Wall #103 (Auditorium Gallery Left)

Poster included in proceedings:

yes

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Track Classification: Poster (participating in poster prize competition)