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Charged Particle Multiplicity Analysis for Cross Section Measurement with the MicroBooNE Detector

Saturday, 6 August 2016 18:00 (2 hours)

MicroBooNE is a Liquid Argon Time Projection Chamber (LArTPC) located in the Booster Neutrino Beam (BNB) at Fermi National Accelerator Laboratory. This poster presents a study on charged particle multiplicity (CPM) analysis based on a small sample of automatically and visually identified neutrino events in the MicroBooNE detector. Initial comparison of multiplicity distributions for data, BNB plus cosmic Monte Carlo (MC), and true MC is presented here. Comparison of multiplicity distributions of uncorrected data and MC show consistency. Multiplicity distributions of corrected scanned and true MC are also in agreement. Fully automated reconstruction will be used to proceed with this analysis with the goal of testing models of neutrino scattering on argon such as those embedded in GENIE and other event generators.

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