Contribution ID: **762** Type: **Talk**

Neutral Current Pi0 Rate Measurement with the MicroBooNE Detector

Tuesday, 28 July 2020 18:15 (15 minutes)

The talk presents the first measurement of Neutral Current (NC) π^0 production on argon in a sub-GeV neutrino beam with the MicroBooNE liquid argon time projection chamber (LArTPC) detector. The analysis qualifies data to Monte Carlo agreement in several reconstructed kinematic variables, and investigates contributions from coherent and non-coherent NC π^0 production processes independently. Those are the dominant contributing backgrounds to MicroBooNE's search for low-energy excess single-photon events, for two separate exclusive final state samples. A data-driven determination of the NC π^0 rate and coherent fraction is critical for constraining backgrounds to MicroBooNE's single-photon search.

I read the instructions

Secondary track (number)

12

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