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Charged-Current Electron Neutrino measurement with the MicroBooNE detector

Tuesday, 28 July 2020 18:30 (15 minutes)

MicroBooNE is the first phase of Fermilab's Short Baseline Neutrino (SBN) Liquid Argon Time Projection Chamber (LArTPC) programme.
This talk outlays the first characterisation of electron neutrinos in a muon neutrino beam with the LArTPC detector technology. The Booster Neutrino Beam has an energy peaking around 1 GeV and an electron content of approximately 0.5%. The analysis investigates electrons produced in charged-current electron neutrino interactions. The kinematics of the electrons are measured along with comparisons to simulation. Most of the systematic uncertainties are constrained using a data-driven sample of charged-current muon neutrino events. The measurement of electron neutrinos originating from the Booster Neutrino Beam is a crucial component to understand the nature of the observed excess of low energy electromagnetic-like events at MiniBooNE.

I read the instructions

Secondary track (number)

03

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