



Contribution ID: 19

Type: **not specified**

Extraction of the Inclusive Muon Neutrino Charged Current Cross Section at MicroBooNE using Wiener SVD Unfolding

Monday, March 15, 2021 9:55 AM (10 minutes)

The MicroBooNE detector is a Liquid Argon Time Projection Chamber (LArTPC) located along the Booster Neutrino Beam (BNB) at Fermilab. One of its key physics goals is the measurement of neutrino-Argon interaction cross sections. Due to the detector's fully active volume as well as its capability for high-efficiency event reconstruction, MicroBooNE is well suited to utilize the Wiener-SVD unfolding method to generate nominal neutrino flux-averaged cross section measurements. This approach relies on a minimal set of assumptions to measure the inclusive charged current muon neutrino-Argon cross section as a function of truth kinematic variables. This allows easy comparison with measurements from other experiments and predictions from various models, and enables a new round of cross section measurements for MicroBooNE.

Primary author: COOPER-TROENDLE, London (Yale University)

Presenter: COOPER-TROENDLE, London (Yale University)

Session Classification: Flash Talks