Contribution ID: **148** Type: **Poster cross sections**

Measuring the ν_μ CC-0pi cross section on lead at the T2K near detector

A good understanding of neutrino-nucleus interactions is crucial to precisely measure neutrino oscillations parameters. An essential component of the neutrino interaction model concerns how the cross sections scale with mass number (A). Measurements of neutrino interactions on heavy targets, such as lead, can help to better understand A-dependence and validate theoretical models. The goal of this analysis is the measurement of the neutrino-lead charged current cross section without pions in the final state. The analysis is performed using the T2K beam with the peak energy ~0.6 GeV and PiZero Detector (P0D) of the T2K near detector. The P0D is composed of plastic scintillator layers interleaved with brass sheets with passive water regions or lead layers. This analysis utilizes a likelihood fit, applied simultaneously to interactions measured on lead and carbon, to extract a lead cross section. The event selection and results of simulated mock data will be presented.

Session and Location

Wednesday Session, Poster Wall #97 (Auditorium Gallery Left)

Poster included in proceedings:

yes

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Track Classification: Poster (not participating in poster prize competition)