Contribution ID: **1057** Type: **Parallel session talk**

Status of Measuring Cross Sections of Hadrons on Argon with ProtoDUNE-SP

Thursday 18 July 2024 18:00 (15 minutes)

ProtoDUNE-SP was a large-scale prototype of the single phase DUNE far detector which took test beam data in Fall 2018. The beam consisted of positive pions, kaons, muons, and protons, and this data is being used to measure the various hadron-Ar interaction cross sections. Uncertainties in these interaction cross sections are a significant systematic uncertainty in long baseline neutrino oscillation analyses. These measurements will provide important constraints for the nuclear ground state, final state interaction, and secondary interaction models of argon-based neutrino-oscillation and proton-decay experiments such as DUNE. This talk will report the results of the cross-section measurements of pions, protons and kaons that interact inelastically with argon.

Alternate track

1. Strong Interactions and Hadron Physics

I read the instructions above

Yes

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Session Classification: Neutrino Physics

Track Classification: 02. Neutrino Physics