Abstract Submitted
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Proton Scattering on Liquid Argon RYAN BOUABID, University of Chicago, LARIAT COLLABORATION[1] — LArIAT (Liquid Argon In A Testbeam) is a liquid argon time projection chamber (LArTPC) positioned in a charged particle beamline whose primary purpose is to study the response of LArTPCs to charged particle interactions. This previously unmeasured experimental data will allow for improvement of Monte Carlo simulations and development of identification techniques, important for future planned LArTPC neutrino experiments. LArIATs beamline is instrumented to allow for the identification of specific particles as well as measurement of those particles' incoming momenta. Among the particles present in the beamline, the analysis presented here focuses on proton-Argon interactions. This study uses particle trajectories and calorimetric information to identify proton-Argon interaction candidates. We present preliminary data results on the measurement of the proton-Argon cross-section.

[1]Liquid Argon In A Test Beam. The work is my analysis made possible through the efforts of LArIAT detector, data, and software.

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