

Abstract Submitted
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LArIAT Pion Absorption Analysis¹ ANDREW OLIVIER, Louisiana State University, LARIAT COLLABORATION — The Liquid Argon Time Projection Chamber in a Test Beam (LArIAT) experiment at the Fermilab Test Beam Facility exposes a liquid argon time projection chamber (LArTPC) to a test beam to study LArTPC responses to a variety of charged particles. LArIAT completed its first data-taking run in 2015, so efforts are now underway to develop data analysis techniques for identifying charged particle events and studying cross sections in liquid argon. Methods for analyzing the pion absorption and charge exchange cross section in LArIAT will be presented including a likelihood-based particle identification algorithm. Event identification techniques and cross section measurements from LArIAT can be applied directly or further developed to improve precision in DUNE reconstruction and analysis.

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