

New Perspectives 2021



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LArIAT in 10 minutes

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Liquid Argon Time Projection Chambers (LArTPCs) are becoming some of the most used neutrino detectors due to their tracking, particle identification and energy reconstruction capabilities. The Liquid Argon in a Test Beam (LArIAT) experiment was used to measure a known charged particle beam, the detector was located in the Test Beam Facility at Fermilab from 2015 to 2017. Due to the good understanding of a charged beam (pions, muons, electrons, kaons and protons), LArIAT is really useful to understand the response of LArTPCs and to improve reconstruction and particle identification in them. LArIAT studies include cross-section measurements for different charged particles in Liquid Argon, as well as calorimetry for low energy charged particles. The data collected in LArIAT provide a good testing ground to improve future large experiments like Deep Underground Neutrino Experiment (DUNE).

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