



Poster session 3 – Wednesday 6 July

P3.028 The LArIAT experiment

I Nutini

Gran Sasso Science Institute (INFN), Italy

on behalf of LArIAT collaboration

The Liquid Argon In A Testbeam (LArIAT) experiment is a 0.26 ton active mass Liquid Argon Time Projection Chamber (LArTPC) located at the Fermilab Test Beam Facility. The LArIAT experiment is exposed to a tertiary beam of comprised of mostly pions along with a mix of muons, protons, kaons, and electrons in the range ~ 200 MeV to 2 GeV. The beamline is instrumented with detectors that aid in identification and selection of particle species and momenta in order to characterize the response of the LArTPC to known incoming particles, which will be used to tune simulations and reconstruction algorithms for future LArTPC experiments. The first charged pion reaction cross section measurement ever made on argon will be presented here. This analysis uses data collected during LArIAT's initial run (Run-I); updates and extensions to the analysis using additional data from Run-II will also be discussed.