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First Results from the DUNE 35-ton Prototype using Cosmics

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The 35-ton prototype for the Deep Underground Neutrino Experiment (DUNE) Far Detector is a single-phase liquid argon time projection chamber (LAr-TPC) integrated detector that will take cosmics data for a two month run beginning in February 2016. The 35-ton prototype will characterize DUNE's Far Detector technology performance and provide a sample of real data for DUNE reconstruction algorithms. The 35-ton prototype has two drift volumes of lengths 2.23 m and 0.23 m on either side of its anode plane assembly (APA) and makes use of wire planes with wrapped wires and a photon detection system (PDS) utilizing photon detection panels read out by silicon photomultipliers (SiPMs). Data from the 35-ton LAr detector are expected to provide rich information on scintillation light and charged particle tracks. We present a preliminary analysis of cosmics data taken with the 35-ton detector with a focus on stopping muons.

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