



Contribution ID: 693

Type: **Parallel Talk**

ProtoDUNE Physics and Results

Thursday, 7 July 2022 15:00 (15 minutes)

The ProtoDUNE single phase detector (ProtoDUNE-SP) is a prototype liquid argon time projection chamber (LArTPC) for the first far detector module of the Deep Underground Neutrino Experiment (DUNE). ProtoDUNE-SP is installed at the CERN Neutrino Platform. Between October 10 and November 11, 2018, ProtoDUNE-SP recorded approximately 4 million events in a beam that delivers charged pions, kaons, protons, muons and electrons with momenta in the range 0.3 GeV/c to 7 GeV/c. After the beam runs ended, ProtoDUNE-SP continued to collect cosmic ray and calibration data until July, 2020. In this talk, we will review the results from analyzing the beam and cosmic ray data, including detector calibration, hadron-argon cross section measurements and seasonal variation of cosmic ray muon rate.

In-person participation

Yes

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