

Performance of photon detectors in ProtoDUNE-SP

Tuesday, July 28, 2020 5:50 PM (15 minutes)

The single-phase liquid argon prototype at CERN (ProtoDUNE-SP) is designed to act as a testbed and prototype for the elements of the first far detector module of DUNE. ProtoDUNE-SP collected data in the H4-VLE beamline at CERN in the autumn of 2018 and accumulated 4M particles (electrons, muons, pion, kaons and protons) ranging from 0.3 to 7 GeV/c and a large number of cosmic ray events since then. ProtoDUNE-SP employs three different photon detector technologies. This talk will present the performance of the photon detectors in ProtoDUNE-SP, including detector calibration, efficiency measurements, attenuation studies, timing resolution, calorimetric energy reconstruction from scintillation light and energy resolution of electrons.

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13

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