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Michel electron reconstruction in ProtoDUNE

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The Deep Underground Neutrino Experiment (DUNE) is a leading-edge experiment for neutrino science and proton decay studies. The single-phase liquid argon prototype detector at CERN is a crucial milestone for the DUNE that will inform the construction and operation of the far detector modules. In this talk, I will present the current status of reconstructing Michel electrons from cosmic-ray muons in the ProtoDUNE detector. These Michel electrons are distributed uniformly inside the detector and serve as a natural and powerful sample to study the detector's response for low-energy (tens of MeV) interactions as a function of position. We have developed a selection tool to identify such Michel electrons which could benefit any LArTPC experiment generically.

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