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Five Years of MicroBooNE and Beyond in Ten Minutes

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MicroBooNE is a neutrino experiment based at Fermilab that utilizes a liquid argon time projection chamber (LArTPC) located on-axis in the Booster Neutrino Beam (BNB). It has been collecting data since October 2015 and is now the longest-running LArTPC detector to date with more than half a million neutrino interactions recorded. One of the experiment's main goals is a search for the excess of electron-neutrino-like events seen by the MiniBooNE experiment, located near MicroBooNE in the BNB. I will describe the status of our searches for electron-like and photon-like signals within the MicroBooNE detector that could explain the MiniBooNE anomaly. In addition, MicroBooNE is pursing a broad and rich research program including detector physics, neutrino-argon interaction cross sections, and technical development efforts. This work will provide an important foundation for future LArTPC experiments such as DUNE. I will highlight exciting recent results and provide an outlook on future efforts.

Summary

Fermilab report number

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