

MicroBooNE in 10 minutes

Monday, June 26, 2023 9:15 AM (15 minutes)

MicroBooNE is an 85-tonne active volume Liquid Argon Time Projection Chamber (LArTPC) detector situated at Fermilab which receives both an on-axis Booster Neutrino Beam (BNB) and an off-axis beam component from the Neutrinos at the Main Injector (NuMI) beam. MicroBooNE collected data from 2015 until 2021 and acquired the highest statistics sample of neutrino-argon interactions to date. The state of the art capability of the LArTPC is utilized for fundamental physics searches. MicroBooNE's signature analysis is to determine the source of the low-energy excess of electromagnetic activity previously reported by MiniBooNE and LSND. In addition, MicroBooNE's analysis program ranges from a detailed investigation of neutrino-nucleus interactions, to a broad range of BSM physics searches, to detector simulation and event reconstruction developments, which will be useful to the broader short- and long-baseline oscillation programs. In this talk, we will present a brief overview of the current status of MicroBooNE's physics program, a summary of the latest major results, and future prospects.

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Session Classification: Neutrinos: MicroBooNE