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Astrophysics and BSM Physics Capabilities and Results from MicroBooNE

Tuesday, February 23, 2021 6:10 PM (20 minutes)

MicroBooNE is an 85-ton active mass liquid argon time projection chamber (LArTPC) at Fermilab. Its excellent calorimetry and resolution, along with its exposure to two neutrino beamlines make it a powerful detector not just for neutrino physics, but also for Beyond the Standard Model (BSM) physics and astrophysics. The experiment has competitive sensitivity to Heavy Neutral Leptons arising in the leptonic decay modes of kaons, and also to light scalars that can be produced in association with pions. In addition, MicroBooNE serves as a platform for prototyping searches for rare events in the future Deep Underground Neutrino Experiment (DUNE). This talk will explore the capabilities of LArTPCs for BSM physics and astrophysics and highlight some recent results from MicroBooNE.

Collaboration name

MicroBooNE

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Session Classification: Sterile Neutrinos and New Physics

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