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Dark sector searches with the MicroBooNE detector

Tuesday, 18 June 2024 17:30 (2 hours)

The MicroBooNE detector, an 85-tonne active mass liquid argon time projection chamber (LArTPC) at Fermilab, is ideally suited to search for physics beyond the standard model due to its excellent calorimetric, spatial, and energy resolution. This poster will present several recent results using data recorded with Fermilab's NuMI neutrino beam: a first search for dark-trident scattering in a neutrino beam, world-leading limits on heavy neutral lepton production, including the first limits on neutrino-neutral pion final states, and new constraints on Higgs portal scalar models.

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