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BSM searches in LAr using MeV-scale reconstruction

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Liquid argon time projection chambers (LArTPCs) can resolve features over a wide range of energies and length scales. Existing reconstruction and analyses focus on higher-energy topologies, like tracks and showers from neutrino interactions. Numerous additional benefits are gained by extending reconstruction capabilities below 100 MeV. The Low-Energy Physics in Neutrino LArTPCs (LEPLAr) Snowmass Working Group aims to explore the benefits and address the many challenges of reconstructing such low-energy features. In this talk, we briefly highlight several interesting BSM models that can be probed by large LArTPCs, searches for which rely either partially or entirely on the ability to resolve energy depositions of ˜1 MeV or less.

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