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Beyond the Standard Model Searches with the Short Baseline Near Detector (SBND)

Tuesday, 2 August 2022 17:36 (18 minutes)

SBND is a 112-ton liquid argon time projection chamber located on the Booster Neutrino Beam at Fermi National Accelerator Laboratory, and is the near detector of the Short-Baseline Neutrino program. The primary goals of SBND are to provide flux constraints for sterile neutrino searches, conduct world-leading neutrino cross section measurements on argon, and perform beyond the Standard Model (BSM) physics searches with its high-precision particle identification capabilities. In this talk, I will discuss SBND's prospects and tools for detecting a variety of BSM phenomena produced in a neutrino beam, such as sub-GeV dark matter, dark neutrinos, millicharged particles, and others.

Attendance type

In-person presentation

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