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SBND in 10 minutes

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SBND is the Short Baseline Near Detector, which is a 112 ton liquid argon time projection chamber (TPC) that will be located 110m from the target of the Fermilab Booster Neutrino Beam. SBND, together with MicroBooNE and ICARUS-T600 detectors at 470m and 600m, respectively, make up the Fermilab Short Baseline Program (SBN).

SBN will search for new physics in the neutrino sector by testing the sterile neutrino hypothesis in the 1 eV^2 mass-squared region with unrivaled sensitivity. SBND will measure the un-oscillated beam flavor composition to enable precision searches for neutrino oscillations via both electron neutrino appearance and muon neutrino disappearance in the far detectors. With a data sample of millions of neutrino interactions (both electron and muon neutrinos), SBND will also perform detailed studies of the physics of neutrino-argon interactions, even in rare channels. In addition, SBND plays an important role in an on-going R&D effort within neutrino physics to develop the LArTPC technology toward many-kiloton-scale detectors for next generation long-baseline neutrino oscillation experiments

The SBND detector is currently under construction; this talk will give an overview of the current experimental efforts and future outlook, putting this in the context of the current neutrino landscape.

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