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The Short Baseline Neutrino Detector at Fermilab

Friday, 7 July 2017 12:00 (15 minutes)

SBND (Short-Baseline Near Detector) is a 112 ton liquid argon TPC neutrino detector under construction on the Fermilab Booster Neutrino Beam. Together with MicroBooNE and ICARUS-T600, SBND will search for shortbaseline neutrino oscillations in the 1 eV^2 mass range. SBND will also perform detailed studies of the physics of neutrino-argon interactions, thanks to a data sample of millions of electron and muon neutrino interactions. Finally SBND plays an important role in the on-going R&D effort to develop the LArTPC technology, testing several technologies that can be used in a future kiloton-scale neutrino detectors for a long-baseline experiment. We will discuss the detector design, its current status, and the physics program.

Experimental Collaboration

SBND

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