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SBND in 10 minutes

Monday, 10 June 2019 15:00 (15 minutes)

The Short-Baseline Near Detector (SBND) will be a 112 ton liquid argon time projection chamber devoted to researching neutrino oscillations. Located 110 m downstream from the Booster Neutrino Beam (BNB) target, SBND will be the near detector of the three-detector Short Baseline Neutrino (SBN) program at Fermilab. The SBN program will probe neutrino oscillations at the $\sim 1\text{eV}^2$ scale, addressing tensions pointing to the possible existence of sterile neutrinos. SBND will see the un-oscillated content of the BNB and as such its role is to constraint uncertainties in the oscillation analysis. Due to its size and proximity to the neutrino beam source, SBND will have a rich cross-section measurement program where just a few months of data will yield a record number of $\nu-$Ar interactions. It is also a testbed for R&D of new technology for DUNE. I will summarize the physics program of SBND and the current status of its construction.

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