Poster session 2 – Tuesday 5 July

P2.086 **SBND: Status of the Fermilab Short-Baseline Near Detector**

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on behalf of SBND collaboration

SBND (Short-Baseline Near Detector) will be a 112 ton liquid argon TPC neutrino detector located 110m from the target of the Fermilab Booster Neutrino Beam. SBND, together with the MicroBooNE and ICARUS-T600 detectors at 470m and 600m, respectively, make up the Fermilab ShortBaseline Neutrino (SBN) Program. SBN will search for new physics in the neutrino sector by testing the sterile neutrino hypothesis in the 1 eV^2 masssquared region with unrivaled sensitivity. SBND will measure the unoscillated 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 manykiloton-scale detectors for next generation long-baseline neutrino oscillation experiments. In this talk, both the physics reach of the SBND experiment and development of the detector will be presented.