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## Status of the Short-Baseline Near Detector at Fermilab

*Friday, 8 July 2022 10:00 (15 minutes)*

The Short-Baseline Near Detector (SBND) will be one of three liquid Argon Time Projection Chamber (LArTPC) neutrino detectors positioned along the axis of the Booster Neutrino Beam (BNB) at Fermilab, as part of the Short-Baseline Neutrino (SBN) Program. The detector is currently in the construction phase and is anticipated to begin operation in the first half of 2023. SBND is characterised by superb imaging capabilities and will record over a million neutrino interactions per year. Thanks to its unique combination of measurement resolution and statistics, SBND will carry out a rich program of neutrino interaction measurements and novel searches for physics beyond the Standard Model (BSM). It will enable the potential of the overall SBN sterile neutrino program by performing a precise characterisation of the unoscillated event rate, and by constraining BNB flux and neutrino-Argon cross-section systematic uncertainties. In this talk, the physics reach, current status, and future prospects of SBND are discussed

### In-person participation

Yes

**Primary authors:** ANDREOPOULOS, Costas (University of Liverpool and STFC/RAL); Dr PANDEY, Vishvas (University of Florida); JONES, Rhiannon (University of Sheffield)

**Presenter:** JONES, Rhiannon (University of Sheffield)

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