

SBND-PRISM: Sampling Multiple Off-Axis Neutrino Fluxes with the Same Detector

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The Short Baseline Near Detector (SBND), a 112-ton liquid argon time projection chamber, is the near detector of the Short Baseline Neutrino program at Fermilab. SBND has the characteristic of being remarkably close (110 m) to the neutrino source and not perfectly aligned with the neutrino beamline, in such a way that the detector is traversed by neutrinos coming from different angles with respect to the beam axis. This is known as the PRISM feature of SBND, which allows sampling of multiple neutrino fluxes using the same SBND detector. SBND-PRISM, which will start taking data in 2023, can be utilized to improve neutrino-oscillation sensitivities and study distinctive neutrino-nucleus interactions and exotic physics signals.

Attendance type

In-person presentation

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