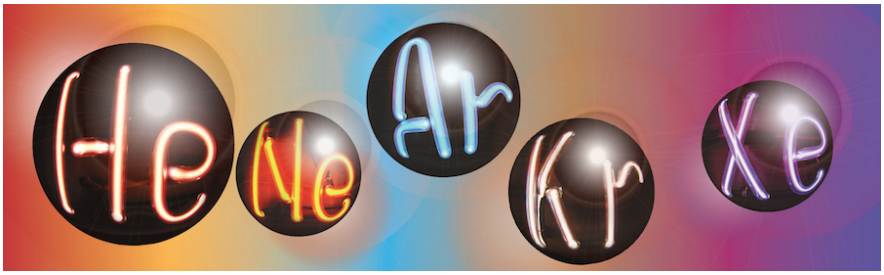

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Update and Progress of the X-ARAPUCAs in SBND

The Short-Baseline Near Detector (SBND) is a liquid-argon time-projection chamber (LArTPC) for detecting neutrinos from Fermilab's Booster Neutrino Beam. Located 110 m downstream of the beam target, SBND collects both ionization electrons and scintillation photons from particle interactions within the detector volume. The photon detection system (PDS) consists of both PMTs and X-ARAPUCAs, with the latter a novel technology that provides large-area, cost-effective coverage with single-photoelectron resolution at cryogenic temperatures. SBND utilizes two types of X-ARAPUCAs: one sensitive to vacuum ultraviolet (VUV) scintillation light and one sensitive to visible light from light reflected off TPB-coated reflective foils. SBND is the only experiment currently testing the X-ARAPUCA technology in a neutrino beam over several years and will provide critical information for deployment in future detectors such as DUNE. This talk will cover the calibration and early performance of X-ARAPUCAs in SBND.

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