

Seminario, Terça 16/05/2023 14:00h

Local: Auditório: Méson Pi - DRCC

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Title: The Short Baseline Neutrino Detector at Fermilab, Status and Plans

The Short Baseline Neutrino Detector (SBND) is a particle physics experiment located at the Fermi National Accelerator Laboratory in Batavia, Illinois, U.S.A. SBND has been built to study the behavior of neutrinos, neutral fundamental particles that are difficult to detect. SBND is a Liquid Argon Time Projection Chamber (LArTPC) that can detect ionization electrons and scintillating light from neutrino interactions with the Liquid Argon and will begin taking data later this year. The Booster Neutrino Beam (BNB) provides the neutrinos to a set of three experiments SBND, MicroBooNE and ICARUS. An introduction to the BNB neutrino beam and the SBND detector will be presented along with a review of the SBND physics program. Particular emphasis will be placed on the SBND detector's data acquisition and trigger systems and how they are driven by the physics program and the BNB beam.