



Contribution ID: 47

Type: **not specified**

An electron neutrino event selection procedure in the Short-Baseline Near Detector

Monday 8 April 2019 15:15 (15 minutes)

The Short Baseline Neutrino (SBN) programme at Fermilab consists of three Liquid Argon Time Projection Chambers (LArTPCs) on the Booster Neutrino Beam. The key goal of the SBN programme is to perform the most sensitive search to date for sterile neutrinos in the eV-mass scale through appearance and disappearance oscillation channels. In order to achieve the sensitivities capable to the SBN programme, sophisticated reconstruction algorithms are being developed to identify the flavour and energy of neutrino events. An electron neutrino event selection procedure is being developed to evaluate the proposed sensitivities for electron neutrino appearance and cross-section measurement in the closest detector, at 110 m from the neutrino source, the Short Baseline Near Detector (SBND). The current effectiveness of the selection process will be presented.

Presenter: BARKER, Dominic (University of Sheffield)

Session Classification: Parallel stream 1