



Poster session 2 – Tuesday 5 July

P2.082 NOvA short-baseline electron-neutrino appearance search

S P Kasetti¹, A Aurisano², B Bambah³, J Cooper⁴, T Miao¹, A Sousa² and L Suter⁴

¹FNAL, USA, ²University of Cinnicati, USA, ³University of Hyderabad, India, ⁴ANL, USA

on behalf of NOvA collaboration

Anomalous results from past neutrino experiments have been interpreted as potential evidence for an additional sterile neutrino with a mass on order of 1 eV, but this evidence remains inconclusive. The NOvA Near Detector is a 300 ton almost fully-active fine-grained liquid scintillator detector, that was designed for electron-neutrino identification. The detector is placed along the Fermilab NuMI beam line 1 km from the target and 14.6 mrad off-axis. At this off-axis angle the detector is exposed to a narrow band beam peaked at 2 GeV. Therefore the NOvA Near Detector will see neutrinos with a L/E range that is sensitive to oscillations between active neutrinos and light sterile neutrinos. This poster will present NOvA sensitivity from the joint electron-neutrino appearance and muon-neutrino disappearance analysis search for short-baseline sterile neutrino mixing