

Details of Systematic Uncertainties at NOvA

Friday, 2 November 2018 16:35 (25 minutes)

I will present the details of the systematic uncertainties at NOvA for the latest measurements of both (anti)neutrino electron appearance and muon disappearance, as well as the systematic uncertainties associated with recent cross section results. NOvA is a long-baseline neutrino experiment which utilizes two basically fully active, finely segmented, liquid scintillator detectors: a Near Detector located at Fermilab, IL, and a Far Detector located in Ash River, MI, and situated roughly 14 mrad off Fermilab's NuMI beam. Using this narrow-band beam of mostly muon neutrinos we study the oscillation of these neutrinos over the 810 km baseline, which can be interpreted to give insights into the neutrino mass ordering, CP violation in the neutrino sector, and the flavor content of the third neutrino mass eigenstate, as well as tests of the three-neutrino paradigm. Using the high statistics neutrino sample in the Near Detector we can also make precision cross section measurements.

Primary author: Dr SUTER, Louise (Fermi National Accelerator Laboratory)

Presenter: Dr SUTER, Louise (Fermi National Accelerator Laboratory)

Session Classification: Systematics and Analysis technique Parallel