Contribution ID: **83** Type: **Poster**

Long-baseline neutrino oscillation results from NOvA in neutrino and antineutrino modes

NOvA is a long-baseline neutrino experiment primarily studying neutrino oscillations in the NuMI beam from Fermi National Laboratory, USA. It consists of two functionally identical, finely granulated detectors which are separated by 809 km and situated 14.6 mrad off the NuMI beam axis. By measuring the transition probabilities P($\nu_\mu \to \nu_e$) and P($\nu_\mu \to \nu_\mu$), along with their anti-neutrino equivalents, NOvA is able to probe the following parameters: Δm^2_{32}, the mixing angle θ_{23}, the CP violating phase δ_{CP} and the neutrino mass hierarchy.

In this poster the latest NOvA 3-flavor oscillation results will be discussed. This analysis builds on previous results, with a new simulation, updated reconstruction algorithms, and roughly 50% more neutrino data. Intermediate steps in the analysis such as signal and background predictions and NOvA's future projected sensitivities will also be presented.

Mini-abstract

Sensitivities, parameter fits and event counts for NOvA's 3-Flavor neutrino oscillation results

Experiment/Collaboration

NOvA

Primary authors: WARBURTON, Karl (Iowa State University); KOLUPAEVA, Liudmila

Presenters: WARBURTON, Karl (Iowa State University); KOLUPAEVA, Liudmila

Session Classification: Poster session 4