

The NOvA Experiment

The NOvA experiment is designed to search for oscillations of muon neutrinos to electron neutrinos by comparing measurements of the NuMI beam composition in two detectors, a near detector at Fermilab and a far detector 810 kilometers away. These neutrino oscillations occur because the flavor eigenstates are rotated with respect to the mass eigenstates. By observing muon to electron neutrino transitions, we measure the parameter θ_{13} . Additionally, NOvA can begin to study the mass ordering and search for the effects of the CP violating phase. NOvA is particularly well suited to the study of the mass ordering due to the large amount of earth between the neutrino source and the detector. In this poster, I will review the status of the experiment including updates on the construction as well as recent data from the NOvA Near Detector Prototype.

Primary author: LIU, Ji (College of William and Mary)

Presenter: LIU, Ji (College of William and Mary)