

Abstract Submitted
for the APR12 Meeting of
The American Physical Society

The NO ν A Experiment JI LIU, College of William and Mary — The NO ν A 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, NO ν A can begin to study the mass ordering and search for the effects of the CP violating phase δ . NO ν A 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. No other planned experiment can attack this problem. In this talk, I will review the capabilities of the experiment and current status of construction.

Ji Liu
College of William and Mary

Date submitted: 10 Jan 2012

Electronic form version 1.4