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Electron Neutrino Appearance in NOvA

The NOvA experiment is a long baseline neutrino experiment designed to measure the appearance of electron neutrinos in the Fermilab NuMI muon neutrino beam. The experiment has two segmented liquid scintillator detectors located 14 mrad off the beam axis, with a Near Detector located at Fermilab, and a Far Detector 810 km away. NOvA will measure the 13 neutrino mixing angle and it will have excellent sensitivity to the neutrino mass hierarchy and CP violation angle. I present the steps of the electron neutrino appearance analysis, including the techniques to use the spectra observed in the near detector to predict the far detector spectra, and show the experiment's sensitivity using the latest reconstruction and PID algorithms.

Primary author: Mr KAFKA, Gareth (Harvard University)

Presenter: Mr KAFKA, Gareth (Harvard University)