

Systematic Uncertainties of the NOvA Neutrino Oscillation Analysis

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NOvA is a two detector long-baseline neutrino oscillation experiment using Fermilab's 700 kW NuMI muon neutrino beam. It studies the disappearance of muon (anti)neutrinos and the appearance of electron (anti)neutrinos in the beam over a distance of 810 km between the detectors. The observations can be used to constrain neutrino oscillation parameters: θ_{23} , Δm_{32}^2 and δ_{CP} in the standard 3 active neutrinos paradigm. Although statistical uncertainties currently dominate in these measurements, understanding the major sources of systematic uncertainties and their correlations is vital for both the interpretation and precision of the results and also for further improvements of the analysis. This poster presents details of the systematic uncertainties affecting NOvA's neutrino oscillation analysis results and how we evaluate them by generating systematically shifted predictions.

Secondary track (number)

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