

Muon Neutrino Disappearance at NOvA

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NOvA consists of two highly active, finely segmented, liquid scintillator detectors located 14 mrad off Fermilab's NuMI beam axis, a Near Detector located at Fermilab and a Far Detector located 810 km from the beam target. The NOvA long-baseline neutrino experiment will be sensitive to the muon neutrino disappearance parameters $\sin^2(\theta_{23})$ and Δm^2_{32} , enabling the potential determination of the θ_{23} octant. I will present the progress towards the final instrumentation of the NOvA Near Detector and its importance to utilize the full potential of the NOvA experiment by extrapolating the measured neutrino energy spectrum in the Near Detector to give a prediction of the unoscillated energy spectrum in the Far Detector.

Primary author: Dr SUTER, Louise (Argonne)

Presenter: Dr SUTER, Louise (Argonne)

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