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P1.025 Muon neutrino disappearance at NOvA analysis details

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on behalf of NOvA collaboration

NOvA is a long-baseline neutrino experiment utilizing the recently upgraded NuMI beam at Fermilab. The 14-kton liquid scintillator far detector sits off axis 810 km away in northern Minnesota, and a smaller but functionally identical near detector is sited at the Fermilab site.

Measurements of muon neutrino disappearance in NOvA allow for strong constraints on $\theta_{23}$ and $\Delta m^2_{32}$. NOvA has added data and analysis improvements since the first results published in January 2016. Details of this improved analysis will be presented, including background rejection, simulation, and cut efficiencies.