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Latest oscillation results from the NOvA experiment

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The NuMI Off-axis ν_e Appearance (NOvA) experiment is a two-detector, long-baseline neutrino oscillation experiment which addresses some of the main open questions in the neutrino sector through precision measurements of neutrino and antineutrino oscillations. NOvA uses the upgraded NuMI neutrino beam at the Fermi National Accelerator Laboratory and a highly active, finely segmented 14-kton far detector at Ash River, Minnesota. This highly granular design provides an outstanding event identification capacity, which allows for precision measurements of the oscillation parameters in both the appearance and disappearance of neutrinos and antineutrinos. In particular, NOvA will produce leading constraints on θ_{13} , θ_{23} , $|\Delta m_{\text{atm}}^2|$, the neutrino mass hierarchy and the CP-violation phase. In this talk, I will report on the latest oscillation results from NOvA, including muon neutrino disappearance, electron neutrino appearance as well as searches for sterile neutrinos using the neutral current spectrum.

Experimental Collaboration

NOvA

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