

# DISCRETE 2014: Fourth Symposium on Prospects in the Physics of Discrete Symmetries



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## The NOvA long-baseline neutrino oscillation experiment

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The recently completed NuMI Off-Axis Nu<sub>e</sub> Appearance (NOvA) long-baseline neutrino oscillation experiment, will use an upgraded NuMI neutrino source at Fermilab in conjunction with a 300-ton near-detector and a 14-kton far-detector to explore the neutrino sector. NOvA uses a fully active, finely segmented detector design that offers superb event identification capability, allowing precision measurements of electron (anti-)neutrino appearance and muon (anti-)neutrino disappearance. Through these NOvA will provide constraints on  $\theta_{13}$ ,  $\theta_{23}$ , the atmospheric mass splitting, the neutrino mass hierarchy, and the CP-violating phase. This talk reviews NOvA's uniquely broad physics scope, including sensitivity updates, presents some early measures of the detector performance and discusses the experiment's construction and operation timeline.

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