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## Current Results from the NOvA Experiment

*Tuesday, 4 July 2023 16:10 (25 minutes)*

NOvA is a long-baseline neutrino oscillation experiment which observes the intense NuMI beam of mostly  $\nu_\mu$  (or  $\bar{\nu}_\mu$ ) using two functionally identical detectors: the  $\sim 1$ kt Near Detector (ND) 100m underground and 1km from the NuMI target at Fermilab, and the 14kt Far Detector (FD) 810km away on the surface at Ash River Falls in northern Minnesota. Both detectors are composed of liquid scintillator filled PVC cells, allowing calorimetry with a long radiation length to provide good resolution of both  $\nu_\mu$  and  $\nu_e$  CC interactions and tagging of NC showers. The FD is located near the first  $\theta_{23}$  oscillation minimum, allowing the study of  $\theta_{13}$  via  $\nu_e$  appearance, and has sensitivity to the neutrino mass ordering and CP-violating  $\delta$  due to matter effects along the long trip to Minnesota. Results from an exposure of  $13.6 \times 10^{20}$  protons on target (POT) of neutrino data combined with  $12.5 \times 10^{20}$  pot anti-neutrino data will be presented, along with highlights from highlights from NOvA's non-oscillation physics program.

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