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Overview of the NOvA experiment

The NOνA experiment, with a baseline of 810 km, samples Fermilab's upgraded NuMI beam with a Near Detector on-site and a Far
Detector (FD) at Ash River, MN, to observe oscillations of muon neutrinos. The
detectors are functionally identical, fully constructed, and currently in the final phase of
commissioning. The 344,064 liquid scintillator-filled cells of the 14
kton FD provide high granularity of a large detector mass and enable
us to reject the 120 kHz cosmic ray muon rate at a factor of 1 in 40 million
events in the ν_e signal region and 1 in 20 million in the ν_μ signal region.
NOνA seeks to determine the neutrino mass hierarchy and shed light on the CP violating phase angle. This poster gives an overview of the detectors, the
upgraded NuMI beam, the current status of the experiment, and current
sensitivities of various aspects of the science goals of NOνA.

WG3: Accelerator Physics (Yes/No)

No

WG2: Neutrino Scattering Physics (Yes/No)

No

WG4: Muon Physics (Yes/No)

No

WG1: Neutrino Oscillation Physics (Yes/No)

Yes

Type of presentation

Poster

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