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Three-flavor Oscillations Results for the NOvA Experiment

Friday, 5 August 2022 14:38 (18 minutes)

NOvA is a long-baseline beam neutrino experiment. It uses the 700 kW NuMI
beam at Fermilab to send muon neutrinos (or muon antineutrinos) to two functionally identical detectors, located 14.6 mrad off the beam axis. The Near Detector is located at Fermilab, and the 14 kton Far Detector is located 810 km away in Ash River, Minnesota. Both the detectors are tracking calorimeters filled with liquid scintillator which can detect and identify muon and electron neutrino interactions with high efficiency. In order to constrain neutrino oscillations parameters, neutrino mass hierarchy, and the CP-violating phase δCP, NOvA measures the electron neutrino and antineutrino appearance rates, as well as the muon neutrino and antineutrino disappearance rates. This talk will present NOvA's latest results combining both neutrino data (13.6×10^20 POT) and antineutrino data (12.5×10^20 POT).

Attendance type

In-person presentation

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