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The NOvA Test Beam Program

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NOvA (NuMI Off-Axis ve Appearance) is a long-baseline oscillation neutrino experiment composed by two functional identical detectors, a 300 ton Near Detector and a 14 kton Far Detector separated by 809 km and placed 14 mrad off-axis to the NuMI neutrino beam created at Fermilab. This configuration enables NOvA's rich neutrino physics program, which includes measuring neutrino mixing parameters, determining the neutrino mass hierarchy, and probing CP violation in the leptonic sector. The NOvA Test Beam experiment uses a scaled-down 30 ton Detector to analyze tagged beamline particles. A new tertiary beamline deployed at Fermilab can select and identify electrons, muons, pions, kaons and protons with momentum ranging from 0.3 to 2.0 GeV/c. The Test Beam program data will provide NOvA with a better understanding of the largest systematic uncertainties impacting NOvA's analyses, which include the detector response, calibration, and hadronic energy resolution. In this talk, I will present the status and future plans for the NOvA Test beam program, along with the most recent results.

Are you are a member of the APS Division of Particles and Fields?

No

Primary author: DUENAS, David (University of Cincinnati)

Presenter: DUENAS, David (University of Cincinnati)

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