

## Detector performance and Data Quality monitoring at the NOvA Experiment

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NOvA is a long-baseline neutrino oscillations experiment designed to precisely measure the neutrino oscillation parameters. We do this by directing a beam of predominantly muon neutrinos from Fermilab towards northern Minnesota to measure the rate of electron-neutrino appearance. The experiment consists of two functionally equivalent detectors each located 14.6 mrad off the central axis of Fermilab's nearly 700 kW NuMI neutrino beam, the world's most intense neutrino beam. Both the Near Detector, located 1 km downstream from the beam source, and the Far Detector, located 810 km away in Ash River, MN, were constructed from plastic extrusions filled with liquid scintillator. With the data measured at the Near Detector being used to accurately determine the expected rate at the Far Detector, it is very important to have automated and accurate monitoring of the data recorded by the detectors so any hardware, data acquisition systems or beam issues arising in the 344k (20k) channels of the Far (Near) detector which could affect quality of the datasets collected for physics analyses are determined. I will present the techniques and detector monitoring systems in various stages of data taking and show the NOvA detectors data taking performance up to the end of recent beam run period.

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

Yes

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