

Electromagnetic Response Studies in the NOvA Test Beam

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The NOvA Experiment is designed to study neutrino oscillations utilizing Fermilab's "Neutrinos from the Main Injector" (NuMI) beam. The experiment features a near detector located at Fermilab and a far detector located in Ash River, Minnesota. The NOvA Test Beam program aims to enhance the physics reach of NOvA by improving understanding of systematic uncertainties associated with the detector technology used in the experiment. Our goal within the Test Beam program is to measure the energy response of the Test Beam detector as a function of incident kinetic energy for electrons. This measurement has the potential to reduce the uncertainties associated with reconstruction of neutrino events in NOvA that have electrons in the final state. This could in turn improve the uncertainties associated with the far detector's ν_e appearance measurement. This would benefit a broad range of physics capability of the experiment.

Working Group

WG 6: Detectors

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