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Measurement of Neutrino Flux In The DUNE Near Detector

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The Deep Underground Neutrino Experiment (DUNE) is the next generation neutrino oscillation experiment designed to measure neutrinos' mass ordering and CP violation. The near detector (ND), located at Fermilab, will provide crucial constraints on the systematic uncertainties to the oscillation measurements. This talk focuses on the measurement of neutrino flux in the DUNE near detector, including both the absolute flux and the relative flux (energy shape). Leptonic processes with well known cross-sections such as neutrino-electron elastic scattering and inverse-muon-decay provide precise measurement of the absolute neutrino flux. The relative flux can be measured by the Low-Nu method using neutrino and antineutrino data with small hadronic energy.

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