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Using the PPFX package for the DUNE Experiment

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PPFX for the Deep Underground Neutrino Experiment (DUNE) is a project that aims to improve the prediction of DUNE's flux and the estimation of hadron production uncertainties using hadron production data. Currently, the DUNE flux relies on GEANT4 based physics model which large uncertainties from hadronic interactions in the beamline. We used PPFX, a package developed by the MINERvA experiment at Fermilab to add improved hadronic interaction data to the GEANT4 based flux prediction. We use PPFX to study the predicted flux uncertainties for several candidate beamline designs. In this talk, I will discuss the process of applying the PPFX package to DUNE's flux and the resulting flux uncertainties.

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