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A Flux Spectrometer for LBNF/DUNE

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The Long-Baseline Neutrino Facility (LBNF) will include a conventional neutrino beam made by colliding a high energy proton beam with a fixed target, focusing the resulting hadron using a set of magnetic horns and allowing them to decay to neutrinos. As with most conventional neutrino beams, uncertainties on the number of neutrinos in the beam as a function of energy are of order 10%. The Flux Spectrometer is a proposal to measure the LBNF hadron flux after the focusing horns and before the decay volume, substantially reducing uncertainties in the neutrino flux. Recent work on the Spectrometer, including potential locations, possible designs and preliminary simulations, will be presented.

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