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Measuring the muon flux of neutrino beams with a novel Cherenkov detector PETER MADIGAN, University of Colorado Boulder, DUNE/LBNF COLLABORATION — Beam-based neutrino experiments rely heavily on accurate estimates of the neutrino flux through multi-kiloton detectors, however these estimates rely heavily on Monte-Carlo models of hadronic interactions. In order to ground flux estimates in physical data, the by-product muon beam can be observed using modest detectors. Measurements of the muon flux can be used in conjunction with hadronic models to improve predictions of neutrino fluxes. This talk will introduce the efforts to measure the muon spectrum and divergence of the NuMI beam at Fermilab using a prototype gas Cherenkov detector system being developed for the future LBNF.

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