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Reducing Neutrino Flux Uncertainties Using Hadron Production Measurements at NA61/SHINE KYLE ALLISON, University of Colorado Boulder, NA61/SHINE COLLABORATION COLLABORATION — Neutrino flux uncertainties are frequently a leading systematic uncertainty in current day measurements of neutrino oscillation parameters at long-baseline experiments. These uncertainties can be constrained by hadron production measurements performed by the NA61/SHINE experiment at CERN's Super Proton Synchrotron. NA61/SHINE analyzes the interactions of charged hadrons with materials relevant to long-baseline experiments to measure the differential cross sections of particles that contribute to neutrino flux. Measurements with thin and replica targets have also been taken by NA61/SHINE, and more measurements are planned for the upcoming years.

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