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Recent results: Hadron production measurements for neutrino oscillation experiments at NA61/SHINE

Friday, 19 February 2021 11:00 (20 minutes)

Hadron production measurements are crucial for helping long-baseline neutrino oscillation experiments constrain their beam flux uncertainties. These uncertainties represent a leading systematic uncertainty on measured neutrino oscillation parameters. At the NA61/SHINE experiment, interactions of charged hadrons with various materials relevant to neutrino production are recorded and analyzed. NA61/SHINE data has been used to significantly improve the (anti)neutrino flux prediction at the T2K experiment. This talk will present recent analysis results of 60 GeV/c and 120 GeV/c protons on a carbon target, interactions relevant to neutrino production at DUNE. More thin and replica target measurements are forseen at NA61/SHINE after CERN's Long Shutdown 2.

Collaboration name

NA61/SHINE

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