

NA61/SHINE proton-carbon hadron production measurements for neutrino oscillation experiments

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Hadron production measurements are crucial for helping long-baseline neutrino oscillation experiments constrain their beam flux uncertainties and improve oscillation measurements. The proton-carbon reaction is of particular importance, as it serves as the primary neutrino-creating reaction for the T2K and NOvA experiments. The NA61/SHINE experiment has made hadron production measurements for 31 GeV/c, 60 GeV/c, and 120 GeV/c protons on carbon targets. This talk will present recent analysis results of 120 GeV/c protons on a carbon target, which is the reaction foreseen to create the neutrino beam for DUNE. More thin and replica target measurements are planned at NA61/SHINE after CERN's Long Shutdown 2.

Attendance type

In-person presentation

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