

NA61/SHINE Hadron Production Measurements for Neutrino Oscillation Analyses

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Knowledge of the neutrino flux is necessary to precisely measure neutrino oscillation parameters with accelerator-generated neutrino beams. Hadron production is a dominant source of neutrino flux uncertainty in long-baseline neutrino experiments, such as NOvA, T2K, and DUNE. These uncertainties are reduced by precisely measuring hadron-nucleus interactions in the target materials used to create neutrino beamlines. The NA61/SHINE experiment at CERN provides many hadronic production measurements for this purpose. This poster will discuss these measurements in thin and replica targets that apply to the neutrino oscillation programs at Fermilab and J-PARC.

Poster prize

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