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**NuMI Flux Predictions for NOvA and MINERvA** LEONIDAS ALIAGA SOPLIN, Fermilab, NOVA COLLABORATION, MINERVA COLLABORATION — The determination of the neutrino flux in any conventional neutrino beam presents a challenge for the current and future short and long baseline neutrino experiments. The uncertainties associated with the production and attenuation of the hadrons in the beamline materials along with those associated with the beam optics have a big effect in the knowledge of the flux. For experiments like MINERvA and NOvA, understanding the flux is crucial since it enters directly into every neutrino-nucleus cross-section measurement. The majority of this work involves predicting the neutrino flux using dedicated hadron production measurements from hadron-nucleus collisions. The predictions at the MINERvA and NOvA near detectors are presented as well as the results of incorporating in-situ MINERvA data that can provide additional constraints. These results have been fully implemented in MINERvA and they are currently use for its cross-section analysis. The implementation for NoVA is underway. The procedure and conclusions of this work will have a big impact on future hadron production experiments and on determining the flux for the upcoming DUNE experiment.

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