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MC generator HARDPING: nuclear effects in hard interactions of leptons and hadrons with nuclei

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Hadron and lepton production in hard interaction of high-energy particles with nuclei are considered in context of developing of Monte Carlo generator HARDPING (Hard Probe Interaction Generator). Such effects as energy losses and multiple re-scattering initial and produced hadrons and their constituents are taken into account. These effects are implemented in the current version of generator HARDPING. The data on hadron production in lepton-nuclei collisions (HERMES Coll.) and on lepton pair production in proton-nuclei collisions (E866 Coll.) were described with current version of generator HARDPING. Predictions for lepton pair production in pA-collisions at the 120 GeV Fermilab Main Injector and at the LHC at sqrt(s) = 5 TeV are presented.

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