

Prediction of particle production in pp collisions at MPD/NICA

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The possibilities of the Multi-Purpose Detector (MPD) to register data from small systems like proton - proton collisions are studied with Monte Carlo simulations of proton - proton inelastic interactions at the energy range of NICA. Particle generators based on different models are compared. The production of protons, pions and kaons from pp collisions is studied through their mean multiplicity, rapidity spectra and particle ratios as function of the collision energy. The production of Lambda hyperons is also estimated through Monte Carlo simulations based on EPOS 1.99 and its reconstruction in TPC and TOF. The comparison with recent data from NA61/SHINE experiment is presented.

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