

Multihadron production in hadronic and nuclear collisions

The energy-dependence of charged particle mean multiplicity and pseudorapidity density at midrapidity measured in nucleus-nucleus and (anti)proton-proton collisions are studied in the entire available energy range. The study is performed using a model, which considers the multiparticle production process according to the dissipating energy of the participants and their types, namely a combination of the constituent quark picture together with Landau relativistic hydrodynamics. The model reveals interrelations between the variables under study measured in nucleus-nucleus and nucleon-nucleon collisions. Measurements in nuclear reactions are shown to be well reproduced by the measurements in pp/pbarp interactions up to RHIC energies. Heavy-ion measurements at the LHC are discussed.

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