

Performance study of global polarization of lambda hyperons in heavy nuclei collisions at the MPD experiment

Global hyperon polarization is an important observable phenomenon for studying the properties of strongly interacting matter produced in relativistic heavy ion collisions. The magnitude of polarization carries information about the collective response of the medium formed in collisions to the development of large angular momentum and the formation of a strong magnetic field in non-central collisions of heavy nuclei. At NICA collider energies, global polarization has a strong energy dependence and is predicted to increase with decreasing energy, which will allow it to be studied in detail as a function of energy, centrality, and kinematic characteristics. The report will present the results of studying the possibility of measuring the global polarization of lambda hyperons in Bi+Bi collisions at an energy of 9.2 GeV per nucleon pair at the MPD experiment.

Section

Heavy ion collisions at Intermediate and high energies

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