

The comparison of methods for anisotropic flow measurements with the MPD Experiment at NICA

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The main goal of study the relativistic heavy-ion collisions at energies of accelerator facility NICA (4–11 GeV) is to explore the QCD phase diagram in the region of high net baryon chemical potential and moderate temperatures. The anisotropic collective flow is one of the important observables sensitive to transport properties of strongly interacting matter created in such collisions. The MPD performance for anisotropic flow measurements is studied with Monte-Carlo simulations using collisions of Au+Au and Bi+Bi ions employing several state of the art event generators. Different methods for flow measurements: event plane, scalar product and direct cumulants are used to investigate the contribution of non-flow correlations and flow fluctuations. The reported study was funded by RFBR according to the research project No 18-02-40086

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