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Bose–Einstein correlations of charged pions in Au+Au collisions at $\sqrt{s_{NN}}$ = 3 GeV from UrQMD

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The method of correlation femtoscopy makes it possible to estimate the parameters of the particle-emitting region (radius of emission region, R, and correlation strength, λ). Measurement of femtoscopic radius dependence on transverse momentum of particle pairs, k_T , is an important tool for studying the dynamics of the emission process [1].

This work is devoted to the study of momentum correlations of identical pions produced in Au+Au collisions at $\sqrt{s_{NN}}$ = 3 GeV using the UrQMD (Ultrarelativistic Quantum Molecular Dynamics) model [2, 3]. Threedimensional femtoscopic analysis was performed as a function of k_T , rapidity and collision centrality. Physical implications will be discussed.

References:

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