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Modeling of two-particle femtoscopic correlations at top RHIC energy

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The spatial and temporal characteristics of particle emission source in high-energy collisions can be measured by using two-particle femtoscopic correlations. These correlations arise due to quantum statistics, Coulomb and strong final state interactions. In this talk, we report on the measurement of like-sign meson femtoscopic correlations produced in p+p, d+Au, Au+Au at top RHIC energy using Quantum Molecular Dynamics Model (UrQMD). Three-dimensional correlation functions are constructed using the Bertsch-Pratt parametrization of the two-particle relative momentum. The correlation functions are studied in several transverse momentum ranges. The emitting source radii of charged pions and kaons, R_{out}, R_{side}, R_{long}, are obtained from Gaussian fit to the correlation functions and compared to data from the STAR experiment.

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