

Estimation of non-femtoscopic effects in p+p and p+A collisions at RHIC energies using PYTHIA and HIJING generators

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The spatial extents of particle emission source in high-energy collisions can be measured using two-particle femtoscopic correlations. In collisions with small multiplicities, such as proton-proton collisions, correlation functions can be distorted by non-femtoscopic effects, for example correlations caused by energy-momentum conservation laws, jets and mini-jets. To estimate these effects, a simulation of p+p collisions at $\sqrt{s}=200$ and 510 GeV using PYTHIA and HIJING generators and p+Au collisions at $\sqrt{s_{NN}}=200$ GeV using HIJING were performed. In this talk, we will present charged pion and kaon correlation functions obtained from the Monte Carlo generators and their comparison to the experimental data.

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