

# Femtoscopic measurements of strange hadrons in Au+Au collisions at the STAR experiment

The STAR Collaboration

Relativistic heavy-ion collisions can study properties of nuclear matter in high-energy experiments like the STAR experiment. Femtoscopy, which relies on information carried by the particles produced in the collisions, is one of methods to learn about the bulk matter. By studying the quantum statistical effects and final state interactions between two particles, one can study spatial and temporal extents of particle emitting source. For the case of kaons, the correlation functions are sensitive to the early stage of the collision evolution and provide different information about particle-emitting sources compared to pions.

Information on the final state interactions amongst the particles under study can also be extracted from the measurement. Especially, in the case of strange particle correlations, one could investigate hyperon-nucleon interactions which is little known.

This talk will present the femtoscopic measurements of strange particle with charged and neutral kaons as well as  $\Xi$  hyperons correlations in Au+Au collisions at the BES program and top RHIC energy. The results will be compared with the theoretical predictions.