Measurements of Λ - $\bar{\Lambda}$ and Ξ - $\bar{\Xi}$ correlations in Au+Au collisions at $\sqrt{s_{\rm NN}}=200~{\rm GeV}$ at RHIC-STAR experiment

University of Tsukuba,

Moe Isshiki (for the STAR Collaboration)

The interaction between hyperon-hyperon (YY) is not well understood theoretically and experimentally. The YY interaction is important to understand the equation of state of neutron star interior as well as to search for exotic hadrons. In high-energy heavy-ion collisions, a large number of particles including (multi-)strangeness are produced, which allows us to study those interactions via femtoscopic measurements with better precision. In STAR, the correlation functions of identical pairs like Λ - Λ and Ξ - Ξ have been recently measured. On the other hand, the non-identical pair correlation of hyperons has not been measured yet in Au+Au collisions. The correlations of non-identical particle pairs at low relative momentum are affected by strong interaction and Coulomb interaction (in the case of Ξ - Ξ) without quantum statistical effect. It is of great interest to study the interactions between particles and anti-particles. In this talk, the status of measurements of Λ - Λ and Ξ - Ξ correlation functions in Au+Au collisions at $\sqrt{s_{\rm NN}}=200$ GeV at RHIC-STAR will be reported.