



Charged kaon femtoscopy with Lévy sources in $\sqrt{s_{NN}} = 200$ GeV Au+Au collisions at PHENIX

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Two-particle Bose-Einstein quantum-statistical correlations of charged kaons were measured at $\sqrt{s_{NN}} = 200$ GeV collision energy by the PHENIX experiment. Encouraged by previous results, a Lévy-shaped particle emitting source was assumed and the parametrizations of the measured correlation functions were performed accordingly. The shape of these functions is characterized by the Lévy exponent α while the width of the distribution is described by Lévy scale R . Taking into account for the core-halo picture of the source, the λ intercept parameter can be introduced. These three parameters and their combinations were investigated as the function of transverse mass and the results were compared to previous measurements of pion-pion correlations measured by the PHENIX experiment. The comparison could shed light on the origin of the Lévy distribution in two-particle correlations and the possibly physical interpretation of its parameters.

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