

INTERCEPT PARAMETER λ
OF TWO-PION (-KAON) CORRELATION
FUNCTIONS IN THE q -BOSON MODEL:
CHARACTER OF ITS p_T DEPENDENCE

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The observed non-Bose type behavior of the intercept (strength) λ of the two-particle correlation function $C(p, K)$ of identical pions or kaons detected in heavy-ion collisions, can be effectively described using the approach based on the set of q -deformed oscillators and the q -Bose gas picture. For the intercept λ , connected with the deformation parameter q , the model predicts a fully specified dependence of λ on pair mean momentum \mathbf{K} . The intercepts λ_π and λ_K for pions and kaons, differing noticeably at small \mathbf{K} , should merge at \mathbf{K} large enough, i.e., in the range $|\mathbf{K}| \geq 800$ MeV/ c , where the effect of resonance decays is negligible. By fixing q appropriately, we confront the predicted dependence $\lambda_\pi = \lambda_\pi(\mathbf{K})$ with the recent results from STAR/RHIC for $\pi^- \pi^-$ and $\pi^+ \pi^+$ pairs, and find a nice agreement. Using the same q , we also predict the behavior of λ for kaons.