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Analysis of Kaon fluctuations from the Beam Energy Scan at RHIC

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We analyze the recent STAR collaboration results on net-kaon fluctuations in the framework of the Hadron Resonance Gas (HRG) model and lattice QCD. In the latter, the kaon contribution is isolated using the Boltzmann approximation [1]. Our purpose is to extract the freeze-out temperature and chemical potential as functions of the collision energy. In our HRG model, we use the complete hadron spectrum from the latest PDG list. These results are compared to the freeze-out parameters obtained from a combined analysis of electric charge and net-proton fluctuations. Predictions for moment ratios of the net-Lambda multiplicity distribution are obtained along the kaon freeze-out line. They can be compared to forthcoming experimental results from RHIC Beam Energy Scan.

[1] J. Noronha-Hostler et al., arxiv: 1607.02527.

Content type

Theory

Collaboration

Centralised submission by Collaboration

Presenter name already specified

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