

Energy Dependence of Intermittency for Charged Hadrons in Au+Au Collisions from the STAR Experiment at RHIC

Jin Wu (for the STAR Collaboration)

Central China Normal University

One of the main goals of RHIC beam energy scan (BES) program is to search for the signature of the QCD critical point in heavy-ion collisions. Large density fluctuations near the QCD critical point can be probed via the framework of intermittency analysis in relativistic heavy-ion collisions [1, 2]. The energy dependence of the scaling exponent, extracted from the power-law behaviors of scaled factorial moments, could be used to search for the signature of the QCD critical point.

In this talk, we will report the first measurement of intermittency for charged hadrons in Au + Au collisions at $\sqrt{s_{\text{NN}}} = 7.7\text{-}200$ GeV from the STAR experiment in the first phase of BES [3]. Scaled factorial moments for charged hadrons and the energy dependence of the scaling exponent will be present. Furthermore, the preliminary result of intermittency analysis at $\sqrt{s_{\text{NN}}} = 3.0$ GeV from BES phase II will also be reported.

References

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