Contribution ID: **109** Type: **Poster + flash-talk**

Intermittency analysis of charged particles generated in Xe-Xe˜collisions at $\sqrt{s_{NN}}$ = 5.44 TeV using AMPT Model

Monday 1 August 2022 18:10 (10 minutes)

The Multiplicity fluctuations are sensitive to QCD phase transition and to the presence of of critical point in QCD phase diagram. At critical point a system undergoing phase transition is characterized by large fluctuations in the observables. Fluctuation study is thus one of the important techniques to explore phases of the QCD matter and to search for the critical end point of hadron-quark or quark-hadron phase boundary. Scaling of the observables from heavy ion collision experiments may reveal a many of the properties of the system created, as it expands from quark-gluon plasma phase to hadronic phase. The study of scaling behaviour of the normalized factorial moments (F_q) of multiplicity fluctuations with the number of bins (M) in the phase space is one of such observables. Using scaling exponent obtained from the normalized factorial moments of the number of charged hadrons in the two dimensional (η, ϕ) phase space, the system created in these collisions can be characterized quantitatively. Here we will present observations and results from the analysis performed for charged particle multiplicity distributions obtained from Xe-Xe collisions at $\sqrt{s_{NN}} = 5.44$ TeV with the string melting mode of the AMPT model. Observations, results on the behaviour of the normalized factorial moments and the dependence of the scaling exponent on the transverse momentum bin width will be presented.

On behalf of collaboration?

Attending in-person?

Yes

Subfield

HEP experiment

Preferred track

High-temperature QCD

Authors: Dr GUPTA, Ramni (University of Jammu); BANOO, Zarina (University of Jammu (IN))

Presenter: Dr GUPTA, Ramni (University of Jammu)

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