Contribution ID: **615** Type: **Poster**

Intermittency and scaling behaviour in high energy heavy ion collisions

Thursday 15 December 2022 14:00 (1 hour)

Nature of transition from the deconfined quark-gluon state to the confined hadron gas and the location of the critical point are among the various properties in heavy ion collisions that are still a matter of investigation. One of the basic characteristics of the critical behaviour of a system undergoing phase transition is that it exhibits fluctuations of all scales. In recent collider experiments the multiplicity of particles produced high enough that it becomes feasible to examine the nature of quark-hadron phase transition using intermittency analysis that relies on high multiplicity events. Scaling properties of factorial moments of spatial patterns of the particles termed as intermittency, used to quantify the value of fluctuations in a system, will be discussed along with observable which help to characterize the system and particle production mechanism. Results from recent phenomenological and experimental investigations will also be presented.

Session

Heavy Ions and QCD

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Session Classification: Poster - 3