



Contribution ID: 5

Type: **Poster + flash-talk**

## **Intermittency analysis of charged hadrons generated in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV and 5.02 TeV using PYTHIA8 / Angantyr**

*Tuesday 2 August 2022 12:40 (5 minutes)*

The search for the QCD critical point (CP), and the study of quark-hadron phase transition (and vice-versa), at finite baryon density and high temperature, is the main task in contemporary relativistic heavy-ion collision experiments. Fluctuation analysis with global and local measures is the basic tool to achieve this goal. Local density fluctuations are directly related to the critical behaviour in QCD. These fluctuations in the phase space are expected to scale according to universal power-law in the vicinity of critical-point. A search for such power-law fluctuations within the frame-work of the intermittency method is ongoing to locate the critical point of the strongly interacting matter. This method is used to probe the behaviour of these fluctuations through the measurement of normalized factorial moments (NFMs) in  $(\eta, \phi)$  phase space. Observations and results from the intermittency analysis performed for generated charged hadrons in Pb+Pb collisions, at two different energies, using PYTHIA8/Angantyr for centrality as well as transverse momentum bin width dependence will be presented. We also made a comparison with published EPOS3 results at 2.76TeV.

### **Preferred track**

Collectivity & Multiple Scattering

### **Subfield**

HEP theory

### **Attending in-person?**

No

### **On behalf of collaboration?**

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**Session Classification:** Flash Talks

**Track Classification:** Collectivity and multiple-scattering