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Intermittency study of charged particles generated in EPOS3 at $\sqrt{s_{NN}}$= 5.02 TeV

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 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. In practical work, with limited statistics, it is almost always necessary to perform averages over more than a single phase-space cell. In intermittency analysis, phase space volume is divided into non-overlapping cells within a single rapidity interval. This method is used to probe the behaviour of multiplcity fluctuations through the measurement of Normalized Factorial Moments (NFMs) in (η, ϕ) phase space. NFMs have essential properties of Poisson-noise suppression and sensitivity to high density fluctuations. Observations and results from the intermittency analysis performed for generated charged hadrons in pPb collisions using EPOS3 for transverse momentum bin width dependence will be presented.

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