

A Monte Carlo Study of Intermittency in Pb-Pb Collisions at 2.76 TeV

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\begin{abstract}

Study of fluctuations is one of the signatures to extract the information on the underlying particle production mechanism in the Heavy ion collision experiments. To explain unexpectedly large fluctuations in high multiplicity event large local fluctuations in high multiplicity event reported by JACEE Collaboration, A. Bialas and R. Peschanski used the concept of factorial moments successfully [1]. The concept was borrowed from the intermittency studies in the turbulence of liquids. The methodology of intermittency studies in the heavy ion collision scenario has been widely studied and many a varied results are reported [2]. In the recent publication [3] NA49 experiment, based on the intermittency studies of the data reported the observation of onset of deconfinement at SPS energies. Further as per the present information from the RHIC and LHC, QGP is observed to have liquid-like behaviour hinting at the hydrodynamical evolution of the system. In this scenario when String Melting(SM) AMPT Model is found to be more near to the real data points, we relook at the intermittency studies of the AMPT model (SM and Default Model(DM)) for Pb-Pb system at centre of mass energy of 2.76 TeV. We will report on the behaviour of the vertical factorial moments of charged particles in the one dimensional η -space in the low momentum transverse momentum windows. Further the values of the intermittency index in these windows will be reported for both the models. Inputs from the model based studies can further be utilized for fine tuning of the models.

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