

Net baryon fluctuations from ALICE at the LHC

Wednesday, February 8, 2017 2:00 PM (20 minutes)

Fluctuations of conserved charges are interesting probes of critical phenomena and freeze-out conditions in strongly interacting matter. In this context, experimental results will be presented on event-by-event analysis of net baryon fluctuation measurements in Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV, recorded by the ALICE Collaboration at the CERN LHC. In addition to net-protons, used as a proxy for net-baryons, similar results for net-pions and net-kaons will be presented. The analysis will measure second moments of both net-particle and particle distributions. Furthermore, contributions from participant fluctuations and baryon number conservation will be discussed. Particular emphasis will be placed on the quantitative understanding of the centrality and rapidity width dependence of the obtained results. The data will be compared with recent predictions from the Hadron Resonance Gas model (HRG) and Lattice QCD (LQCD).

Preferred Track

Correlations and Fluctuations

Collaboration

ALICE

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