Contribution ID: **549** Type: **Parallel session talk**

Study of baryon-strangeness and charge-strangeness correlations in Pb-Pb collisions at 5.02 TeV with ALICE

Friday 19 July 2024 11:02 (17 minutes)

The correlations between net-conserved quantities such as net-baryon, net-charge and net-strangeness play a crucial role in the study of QCD phase structure, as they are closely related to the ratios of thermodynamic susceptibilities in lattice QCD (LQCD) calculations. This presentation introduces new results focusing on the correlations between net-kaon and net-proton as well as net-kaon and net-charge in Pb–Pb collisions at 5.02 TeV using data recorded by the ALICE detector. Here, the net-proton and net-kaon serve as proxies for the net-baryon and net-strangeness, respectively. A comparative analysis is presented, drawing connections with corresponding results at lower collision energies from the STAR experiment at RHIC. Theoretical predictions from the hadron resonance gas model, HIJING and EPOS event generators are also compared with experimental results, providing insights into the effects of resonance decays and charge conservation laws.

Alternate track

I read the instructions above

Yes

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