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Type: **Parallel Talk**

Testing the system size dependence of hydrodynamical expansion and thermal particle production with identified particle measurements in Xe-Xe and Pb-Pb collisions with ALICE

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In recent data taking campaigns, the ALICE experiment recorded collisions of Xe-Xe as well as Pb-Pb ions at the unprecedented laboratory energies of $\sqrt{s_{NN}} = 5.44$ and 5.02 TeV, respectively. This unique set of data allows to investigate bulk particle production for very different systems at similar multiplicities. In particular, the charged particle multiplicities in Xe-Xe collisions are comparable to high multiplicity proton-proton (pp) and proton-Pb (p-Pb) collisions. We will present new results on transverse momentum (p_T) spectra, integrated yields, and mean transverse momenta of pions, kaons, and protons, as well as of phi-mesons for various centrality classes.

The chemical and kinetic freeze-out parameters are extracted via statistical-thermal and combined blast-wave fits to the data in heavy-ion collisions and are compared to results obtained in pp and p-Pb collisions at similar multiplicities.

The evolution of collectivity from pp and p-Pb collisions to Xe-Xe and Pb-Pb collisions is further substantiated by detailed comparisons to predictions from models which couple initial conditions with hydrodynamic expansion and subsequent hadronic cascade based on parameters calibrated by Bayesian analysis of lower energy data.

Content type

Experiment

Collaboration

ALICE

Centralised submission by Collaboration

Presenter name already specified

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