Contribution ID: **632**   Type: **Parallel Talk**

Hadronic resonances, strange and multi-strange particle production in Xe-Xe and Pb-Pb collisions with ALICE at the LHC

Tuesday, 15 May 2018 16:40 (20 minutes)

The measurement of strange and resonance particle production in relativistic heavy ions collisions is of great interest to investigate the properties of the hadronic matter under extreme conditions. The enhanced production of strange and multi-strange hadrons with respect to non-strange ones was
historically considered as one of the signatures of the formation of a partonic phase during the evolution of the system created in such collisions. Moreover, hadronic resonances are used to study the energy dependence of the hadronic interactions and jet quenching, giving us the possibility to constrain the lifetime of the hadronic phase.

In this talk, we present a comprehensive set of measurements on hadronic resonance, strange and multi-strange particle production in collisions of Xe-Xe and Pb-Pb at the center-of-mass energies of $\sqrt{s_{\mathrm{NN}}} = 5.44$ and 5.02 TeV, respectively, measured by the ALICE experiment at the LHC.
Transverse momentum spectra, integrated yields, mean transverse momenta and particle ratios are presented as a function of centrality for K_S^0, Λ, Ξ^-, $\bar{\Xi}^+$, $Omega^-$, $\bar{\Omega}^+$, $\rho(770)^0$, $K*(892)^0$, $\phi(1020)$, $\Sigma(1385)^{\pm}$, $\Lambda(1520)$ and $\Xi(1530)^0$. Measurements of the nuclear modification factors are also shown for resonances. Our results are discussed and compared to statistical hadronisation models calculations and with predictions of QCD inspired event generators. Additionally, comparisons with lower energy measurements, including an improved re-analysis of the 2.76 TeV sample for the strangeness sector, are also presented.

Content type

Experiment

Collaboration

ALICE

Centralised submission by Collaboration

Presenter name already specified

Primary author: ALICE COLLABORATION

Presenter: SILVA DE ALBUQUERQUE, Danilo (University of Campinas UNICAMP (BR))

Session Classification: Thermodynamics and hadron chemistry

Track Classification: Thermodynamics and hadron chemistry