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Production of identified and unidentified charged hadrons in Pb-Pb collisions at $\sqrt{s_{\rm NN}} = 5.02$ TeV

Wednesday 8 February 2017 16:50 (20 minutes)

In late 2015, the ALICE collaboration recorded data from Pb-Pb collisions at the unprecedented energy of $\sqrt{s_{\rm NN}} = 5.02$ TeV as well as reference data from pp collisions at the same energy. The $p_{\rm T}$-spectra of unidentified charged hadrons as well as of pions, kaons, protons, Λ, Ξ, Ω, resonances and light (anti-)nuclei are presented.
Hydrodynamic and recombination models are tested against the measured spectral shapes at low and intermediate transverse momenta. A systematic study of strangeness production is of fundamental importance for determining the thermal properties of the medium created in heavy-ion collisions. The $p_{\rm T}$-integrated particle yields are compared to predictions from thermal-statistical models and the evolution of the particle ratios as a function of collision energy and centrality is discussed.
For the study of energy loss mechanisms in the QCD medium at high transverse momenta, the nuclear modification factors $R_{\rm AA}$ are computed and compared with model expectations.

Preferred Track

Collective Dynamics

Collaboration

ALICE

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