

Strangeness production in Pb-Pb collisions at LHC energies with ALICE

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The results on the production of strange and multi-strange hadrons (K_0^S , Λ , Ξ and Ω) measured with ALICE in Pb-Pb collisions at the top LHC energy of $\sqrt{s_{NN}} = 5.02 \text{ TeV}$ are reported.

Thanks to its excellent tracking and particle identification capabilities, ALICE is able to measure weakly decaying particles through the topological reconstruction of the identified hadronic decay products. Results are presented as a function of centrality and include transverse momentum spectra measured at central rapidity, p_T -dependent Λ/K_0^S ratios and integrated yields. A systematic study of strangeness production is of fundamental importance for determining the thermal properties of the system created in ultrarelativistic heavy ion collisions. In order to study strangeness enhancement, the yields of studied particles are normalised to the corresponding measurement of pion production in the various centrality classes. The results are compared to measurements performed at lower energies, as well as to different systems and to predictions from statistical hadronization models.

List of tracks

Strangeness production at low baryon densities

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