XVI Incontri di Fisica delle Alte Energie



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Strangeness production in pp, p-Pb and Pb-Pb collisions at the LHC energies measured with ALICE

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The study of single and multi-strange particle production plays an important role in the investigation of the hot and dense QCD matter created in ultra-relativistic nucleus-nucleus collisions. In the central barrel of the ALICE detector, K0s, Λ , Ξ and Ω can be reconstructed from their weak decay topology. The measured yields and ratios (Λ /K0s and hyperon-to-pion) will be presented for the three colliding systems (pp, p-Pb and Pb-Pb collisions), and compared as a function of multiplicity. It will be shown that the production of these particles follows a similar trend as a function of multiplicity in all three systems. Moreover, comparison of strange particle production in pp collisions at two different energies ($\sqrt{s} = 7$ TeV and 13 TeV) will be used to demonstrate that the observed trend in multiplicity is also energy independent.

Primary author: COLELLA, Domenico (INFN Bari)

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