

Identified hadron production in pp collisions measured with ALICE

The production of identified hadrons in proton-proton collisions is frequently studied as a reference for the investigation of the strongly-interacting medium created in heavy-ion collisions. In addition, measurements in pp and p-Pb collisions as a function of event multiplicity at LHC energies have shown some features reminiscent of those related to collective effects in Pb-Pb collisions. Thanks to its excellent PID capabilities and p_T coverage, the ALICE detector offers a unique opportunity for the measurement of p_T distributions, integrated yields dN/dy and mean transverse momenta $\langle p_T \rangle$ of identified light-flavor hadrons at mid-rapidity over a wide p_T range.

In this contribution, results on π , K, p, K_S^0 , Λ , Ξ , Ω and K^{*0} as a function of multiplicity in pp collisions at $\sqrt{s} = 7$ TeV are presented. The results are compared with those measured in p-Pb and Pb-Pb collisions. A similar evolution of the spectral shape, the p_T -differential particle ratios and the integrated yield ratios with the charged particle multiplicity in both small and large systems is observed. The production rates of strange hadrons are seen to increase more than those of non-strange particles, showing an enhancement pattern with multiplicity which is remarkably similar to the one measured in p-Pb collisions.

In addition, results on the production of light flavour hadrons in pp collisions at $\sqrt{s} = 13$ TeV, the highest centre-of-mass energy ever reached in the laboratory, are also presented and the changes observed as a function of \sqrt{s} are discussed.

I intend to submit my contribution for the proceedings

Yes

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