

Measurement of strange and multi-strange hadron production in high-multiplicity pp collisions at 13 TeV with ALICE

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Measurements of identified particle production as a function of the event multiplicity in proton-proton (pp) and proton-nucleus collisions have recently gained interest for the investigation of particle production mechanisms in small systems and how they relate to those in the larger system created in nucleus-nucleus collisions. In particular, recent results reported by the ALICE Collaboration show a progressive increase of the hyperon-to-pion ratios as a function of charged particle multiplicity at mid-rapidity from pp up to Pb-Pb collisions.

In this work, we present new results on strange and multi-strange hadron production as a function of multiplicity, based on the analysis of a large sample of high-multiplicity triggered events in pp collisions at $\sqrt{s} = 13$ TeV collected by ALICE in 2016.

These measurements extend the previous reach in multiplicity obtained from the analysis of the minimum bias sample, allowing for a wider overlap with the multiplicity range spanned with p-Pb collisions as well as approaching multiplicities present in peripheral Pb-Pb collisions.

Transverse momentum spectra and integrated yields are presented and compared with previous measurements for different collision systems and energies.

List of tracks

Small systems (pA)

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