

Multiplicity dependence of pion, kaon and proton production in pp collisions at $\sqrt{s} = 7$ and 13 TeV

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Measurements of particle production in high-multiplicity pp collisions are crucial for the understanding of the collective-like features observed in small systems and reminiscent of those present in heavy-ion collisions. The ALICE detector, with its excellent tracking and particle identification capabilities, provides unique possibilities for the systematic study of light-flavour hadrons at the LHC. In this work we report on the minimum bias and multiplicity-dependent production of pions, kaons and protons in pp collisions at 7 and 13 TeV. Results include transverse momentum (p_T) spectra, average p_T and yield ratios. These measurements serve as a necessary baseline for the study of the multiplicity-dependent enhancement of multi-strange particle production in small systems.

List of tracks

Freeze-out, hadronisation and statistical models

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