

Study of hadronization through the measurement of light-flavour particle production in different colliding systems with ALICE

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Studies of the production of light-flavour hadrons in different collision systems are of prominent importance to investigate the hadronisation process. In the recent past, the ALICE Collaboration has presented results from pp, p-A and A-A collisions, exploiting its detector's excellent tracking and PID capabilities down to low transverse momentum. Pions, kaons, protons and (multi-)strange hadrons have been measured at different energies. The results revealed unexpected features which are quantitatively similar across colliding systems if the charged particle multiplicity generated in the collision is used as a reference.

New results on strange particle production as a function of the charged particle multiplicity for pp collisions at $\sqrt{s} = 5$ TeV will be presented. The multiplicity progression of particle yields will therefore be tested at a different center-of-mass energy, the lowest at the LHC for which the collected statistics allow a multiplicity-differential analysis. These new results have the potential for solidifying or discarding the present understanding of the strange quark hadronisation process, accessing lower multiplicities and increasing precision in the datapoints. New measurements will be discussed along with the large set of previous ALICE results, data from lower energy experiments, and state-of-the-art phenomenological models.

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Secondary track (number)

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