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## Multiplicity dependent $\pi$ , k, p production in pp collisions at 13.6 TeV using ALICE TPC and TOF detectors

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In nucleus-nucleus collisions at LHC energies, a deconfined state of matter, the quark-gluon plasma (QGP), is formed. Generally, proton-proton (pp) collisions are used as a reference to study their fundamental properties. However, at the highest energy reached in LHC Run 2, pp collisions at high multiplicity seemed to exhibit signatures of collective phenomena similar to those observed in heavy-ion collisions. The study of the multiplicity-dependent light-flavour particle yields in high-multiplicity pp collisions confronted with those of pions shows a gap between small to large systems, at intermediate multiplicities. LHC Run 3 high luminosity pp collisions represent an essential bridge to reach multiplicities similar to those in peripheral nucleus-nucleus collisions. This contribution will discuss the first new results on  $\pi$ , k, and p production measured with ALICE in Run 3 pp collisions at  $\sqrt{s} = 13.6$  TeV. They have been obtained within the newly developed ALICE analysis framework (online and offline system) for Run 3. Particle ratios as a function of multiplicity will also be shown.

### Category

Experiment

### Collaboration (if applicable)

ALICE

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