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Strangeness production as a function of charged particle multiplicity in proton-proton collisions

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Recent measurements performed in high-multiplicity proton-proton (pp) and proton-lead (p-Pb) collisions have shown features that are reminiscent of those observed in lead-lead (Pb-Pb) collisions.
These observations warrant a comprehensive measurement of the production of identified particles.

We report on the production of
K^0_S, Λ, $\bar{\Lambda}$, Ξ^-, $\bar{\Xi}^+$, Ω^- and
$\bar{\Omega}^+$ at mid-rapidity measured
as a function of multiplicity in pp collisions at $\sqrt{s}$ = 7 TeV with the ALICE experiment.
Spectral shapes studied both for individual particles and via particle ratios such as (Λ/K^0_S)
as a function of p_T
exhibit an evolution with event multiplicity and the production rates of
hyperons are observed to increase more strongly than those of non-strange hadrons. These phenomena are qualitatively similar to the ones observed in p-Pb and Pb-Pb collisions.

On behalf of collaboration:

ALICE

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