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Production of (multi-)strange particles in jets and the underlying event in pp collisions at $\sqrt{s} = 13$ TeV with ALICE at the LH

Summary

The p_{T} dependence of the baryon-to-meson yield ratio in hadronic and nuclear collisions is sensitive to the collective expansion of the system, the partonic recombination into hadrons, the jet fragmentation and hadronization.
In the region $2 < p_{\mathrm{T}} < 6$ GeV/c, this ratio for inclusive yields is significantly enhanced at high multiplicity in small collision systems, such as pp and p–Pb collisions, relative to that at lower multiplicity. However, the origin of the enhancement still remains an open question.

In this contribution, we explore the connection between the baryon-to-meson ratio enhancement and jet production via the measurement of the p_{T}-differential spectrum of strange and multi-strange particles ($\mathrm{K}^0_{\mathrm{S}}$, Λ and Ξ) in pp collisions at $\sqrt{s} = 13$ TeV, both inclusively and within energetic jets. The results set new constraints on the particle production mechanisms in jets and provide new insight into the understanding of the origin of flow-like correlations observed in small systems.

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