

Production of strange particles in jets and the underlying event in pp, p-Pb and Pb-Pb collisions measured with ALICE

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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 $2 < p_T < 6$ 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 (K_S^0 , Λ and Ξ) in pp, p-Pb and Pb-Pb collisions, 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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