

Strangeness in Quark Matter 2019



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Strangeness production with respect to high momentum hadrons in p-Pb collisions with ALICE at the LHC

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In order to understand strangeness and resonance production mechanisms, one can study the correlations of hadrons with hidden (e.g. the ϕ meson) and open strangeness (K_S^0 , Λ and $\bar{\Lambda}$) in hard (jet) processes and in soft (bulk) processes. Two-particle jet-like angular correlations with ϕ mesons in p-Pb collisions probe both the jet and the underlying event components of strange particle production. These studies can lead to insights into the observed enhancement in the $\phi(1020)/\pi$ ratio in p-Pb and high multiplicity pp collisions. Furthermore, the jet hadrochemistry is investigated by studying the ratios in the near and away-side jet peaks separately, and the results are compared to previously measured inclusive ϕ/h yield ratios in different collision systems.

In this talk we present new measurements of the ϕ/h ratio in jets as a function of multiplicity using jet-like hadron- $\phi(1020)$ angular correlations in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV. In order to further investigate strangeness production in jet processes, the hadron yields associated with high-momentum K_S^0 mesons and Λ ($\bar{\Lambda}$) baryons are presented. Results will be shown for the near and away-side jet-like yields as a function of the associated particle momentum in pp collisions at $\sqrt{s} = 13$ TeV and as a function of collision multiplicity.

Collaboration name

ALICE Collaboration

Track

Hadronisation and coalescence

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