

Strangeness Enhancement in Small Collision Systems at ALICE: Role of Hard and Soft Processes

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One of the first proposed signatures of QGP formation in heavy-ion collisions is the enhanced production of strange hadrons compared to non-strange ones.

Recent measurements in high-multiplicity proton-proton (pp) and proton-lead (p-Pb) collisions have exhibited features reminiscent of those observed in lead-lead (Pb-Pb) collisions. Among others, the observed enhancement of strange particles as a function of multiplicity, whose origin is still not well understood. In order to probe the underlying mechanisms behind this phenomenon, we differentiate between strange hadrons originating from jets and those arising from soft processes. This is attained by using angular correlations between high transverse momentum charged particles and strange hadrons for K_S^0 , Ξ , and ϕ in pp collisions at $\sqrt{s} = 13$ TeV and p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV.

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