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Collectivity of strange hadrons in small and large colliding systems with CMS

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Observation of a long-range, near-side, two-particle correlation (known as the “Ridge”) in high-multiplicity pp and pPb collisions opened up new opportunities of exploring novel QCD dynamics in small collision systems. CMS has excellent capabilities of reconstructing weakly decay strange hadrons such as K_s^0 , Λ and Ξ^- . Studies of strange hadron production and correlations in small colliding systems provide crucial insights to the physical origin of novel collective phenomena. New results of pT spectra and long-range two-particle correlations for charged particles and identified strange hadrons in high-multiplicity pp and pPb collisions are presented. The data at various collision energies for pp and pPb collisions are compared to those obtained in large PbPb colliding systems. A measurement of multi-particle cumulant in pp and pPb is also presented to explore the collective nature of the long-range correlations.

On behalf of collaboration:

CMS

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