

Abstract Submitted  
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**Multiplicity Dependence of Xi Production in pp, pPb and PbPb at CMS**<sup>1</sup> HONG NI, Vanderbilt Univ, KONG TU, WEI LI, Rice Univ, JULIA VELKOVSKA, Vanderbilt Univ, CMS COLLABORATION — Identified strange and multi-strange particle production has long been considered as an important probe of thermalization and chemical equilibration of the strongly interacting system created in relativistic heavy ion collision. Recently, observations of long-range two-particle correlations in high-multiplicity pp and pPb collisions opened new opportunities for exploring QCD dynamics in small collision systems. These results pose the fundamental question of how small a system can exhibit thermalized behavior. Important parameters that could be varied in these studies are the mass of the particles, their baryon number, and their strangeness content. Multi-strange baryons provide unique probes to test baryon/meson dynamics and strangeness equilibration. The transverse momentum spectra of  $\Xi^-$  and  $\Xi^+$  at mid-rapidity are studied over a wide range of multiplicity in pp, pPb and PbPb systems using the CMS detector at LHC. The results are compared to the production of other strange mesons and baryons to study the baryon/meson differences and strangeness equilibration as a function of the multiplicity of final-state particles in different collision systems.

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