Contribution ID: **40** Type: **not specified**

Multiplicity dependence of light flavour hadrons in small systems with the ALICE experiment

Saturday 17 September 2016 18:00 (20 minutes)

Measurements obtained in high-multiplicity proton-proton (pp) and proton-lead (p–Pb) collisions at the Large Hadron Collider have exhibited features that are similar to what was observed in lead-lead (Pb–Pb) collisions, where they are usually interpreted as signs of collective behaviour.
These observations warrant a comprehensive study of the production of identified particles which are important probes to investigate the dynamics of the small systems.
Thanks to the excellent particle identification performance of the ALICE detector the measurement of identified particles is possible over a wide range of transverse momentum (p_{T}).
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We report on the p_{T} distributions of π, K, p, K^0_s, K^*, ϕ, Λ, Ξ and Ω measured as a function of charged-particle multiplicity in pp collisions at $\sqrt{s} = 7$ TeV.
Special attention will be given to particle ratios and comparisons to the Monte Carlo models.
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In order to discuss the similarities between the different collision systems, the results obtained in p–Pb and Pb–Pb collisions will also be reviewed.

Summary

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Session Classification: Saturday afternoon