Contribution ID: **51** Type: **not specified**

Energy and multiplicity dependence of identified charged particle production in pp collisions

Thursday 14 December 2017 11:40 (15 minutes)

In recent years, the ALICE experiment has collected data in proton-proton collisions at various centre-of-mass energies. In addition to providing a baseline for heavy-ion collisions, these data provide information on the particle production in high energy collisions through the study of energy dependence of various observables. With large statistics data samples collected in pp at $\sqrt{s}$ = 7 and 13 TeV, it is possible to investigate the multiplicity dependence of observables. Hence one can test the behaviour of observables related to possible quark-gluon plasma formation in high multiplicity pp collisions.

We report on the energy dependence of identified particles (such as $\pi^{\pm}$, $K^{\pm}$, p, $\bar{p}$, light nuclei and anti-nuclei) production in pp collisions. The multiplicity dependence is studied for pp collisions at 7 TeV and 13 TeV. The data are compared with available QCD inspired models.

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Session Classification: WG5: High Multiplicities