

Quark Matter 2019 - the XXVIIIth International Conference on Ultra-relativistic Nucleus-Nucleus Collisions



Contribution ID: 241

Type: **Poster Presentation**

Production of pions, kaons and protons in p–Pb collisions at $\sqrt{s_{NN}}=8.16$ TeV with ALICE at LHC

Monday 4 November 2019 17:40 (20 minutes)

At the end of 2016 the ALICE experiment at the LHC collected data from p–Pb collisions at $\sqrt{s_{NN}}=8.16$ TeV. These data represent an important chance to test the emergence of possible initial state effects, by comparing the transverse momentum distributions of identified light hadrons extracted in this dataset to those previously measured in pp and Pb–Pb collisions, in a wide transverse momentum range.

In this poster, we present the results of non single diffractive as well as multiplicity-dependent transverse momentum spectra, p_T -integrated yield ratios and $\langle p_T \rangle$ for identified π , K and p, in p–Pb collisions at $\sqrt{s_{NN}}=8.16$ TeV. The measurement is performed thanks to the excellent particle-identification capabilities of the ALICE ITS (Inner Tracking System), TPC (Time Projection Chamber) and TOF (Time Of Flight) detectors.

These results will be compared to those obtained with colliding systems of various sizes and at different energies as well as to the predictions of the available Monte Carlo event generators and hydrodynamic models.

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Session Classification: Poster Session

Track Classification: Small systems