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Transverse Momentum Distributions of Identified Particles in p–Pb collisions at sqrt(s_NN) = 5.02 TeV

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Recent measurements of di-hadron correlations in p–Pb collisions at sqrt(s_NN) = 5.02 TeV revealed a double-ridge pattern, reminiscent of the one observed in Pb–Pb collisions.
This raises the question of the possible existence of collective effects in high multiplicity p–Pb collisions. Further insight into the observed phenomena can be gained by studying the evolution of spectral shapes with the particle mass and particle ratios as a function of charged-particle density.
Transverse momentum (pT) distributions of hadrons have been measured at midrapidity (0. < yCMS < 0.5). Particles are reconstructed with the central barrel detectors
over a wide transverse momentum range (0 GeV/c up to 6 GeV/c) and different identification techniques are used. Primary charged particles (pi±,K±, p and ¯p) are identified by their specific energy loss (dE/dx) and time-of-flight. Weakly decaying
particles (K0s, Lambda and antiLambda) are identified by their characteristic decay topology.
Particle-production yields, spectral shapes and particle ratios are measured in several multiplicity classes and are compared with results obtained in Pb–Pb collisions at
sqrt(s_NN) = 2.76 TeV at the LHC.

Primary author: ANIELSKI, Jonas (Westfaelische Wilhelms-Universitaet Muenster (DE))

Presenter: ANIELSKI, Jonas (Westfaelische Wilhelms-Universitaet Muenster (DE))

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