



Contribution ID: 503

Type: **Parallel Talk**

## Unidentified and identified hadron production in Pb-Pb collisions at the LHC with ALICE

*Thursday, July 6, 2017 5:00 PM (15 minutes)*

In this talk, the centrality dependence of the  $p_T$  spectra of unidentified charged hadrons as well as of charged pions, kaons, (anti)protons and resonances in Pb-Pb collisions at the unprecedented energy of  $\sqrt{s_{NN}} = 5.02$  are presented. The  $p_T$ -integrated particle yields are compared to predictions from thermal-statistical models and the evolution of the proton to pion, kaon to pion and resonance to non-resonance particle ratios as a function of collision energy and centrality are discussed. Hydrodynamic and recombination models are tested against the measured spectral shapes at low and intermediate transverse momenta.

The measurement of a comprehensive set of resonances with lifetimes in a wide range of 1-46 fm/c is suitable for a systematic study of the role of re-scattering and regeneration in the hadronic phase. The study of the energy dependence of the resonance to non-resonance particle ratio addresses the question whether the picture of the dominance of re-scattering effects over regeneration still holds at the higher energy, where the density and the volume of the system are expected to be larger.

Finally, the nuclear modification factor for the different particle species, which are found to be identical within the respective systematic uncertainties for transverse momenta above 8 GeV/c, will be shown.

### Experimental Collaboration

ALICE

**Author:** COLLABORATION, ALICE

**Presenter:** OTWINOWSKI, Jacek Tomasz (Polish Academy of Sciences (PL))

**Session Classification:** Heavy ion physics

**Track Classification:** Heavy Ion Physics