

Light Flavour Production in the ALICE Experiment

Thursday, 4 December 2014 10:45 (45 minutes)

The ALICE Experiment at CERN has excellent capabilities for the measurement of light-flavour hadrons, thanks to its extensive particle identification and the very good tracking. In this talk, after briefly reviewing the most relevant features of the ALICE detector, we will summarise results on identified light-flavour hadron production. The measurements cover a large number of hadron species (from pions to multi-strange baryons and light nuclei) and extend over a very large transverse momentum region (from ~ 100 MeV/c to ~ 20 GeV/c, depending on the species). The measurements in pp collisions at $\sqrt{s} = 900$ GeV, 2.76 TeV and 7 TeV provide important constraints for QCD-inspired Monte Carlo models and serve as a baseline for measurements in nuclear collisions. The results in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV allow the measurement of the expansion properties of the fireball, the study of parton energy loss in the hot QCD medium and of the hadronization mechanisms (such as recombination or statistical hadronization). Finally, the measurements in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV play a crucial role, as they allow investigation of the effects of ordinary nuclear matter and bridge pp and Pb-Pb results in terms of multiplicity of produced particles.

Primary author: Dr FLORIS, Michele (CERN)

Presenter: Dr FLORIS, Michele (CERN)

Session Classification: Plenary Session