

Upsilon production measurements with ALICE at the LHC

Monday, 4 November 2013 16:20 (20 minutes)

ALICE (A Large Ion Collider Experiment) is designed to study ultra-relativistic heavy-ion collisions, where strongly interacting matter is produced and a phase transition to the Quark Gluon-Plasma (QGP) is expected. Quarkonia resonances are considered to be one of the most promising probes of the deconfined phase, since the heavy quark pairs are produced in the early stages of the collision and their bound states are sensitive to the QGP temperature. Unlike charmonium, regeneration effects at hadronisation are not expected to play a major role on bottomonium production. Cold nuclear matter effects can be distinguished from the hot nuclear matter ones by studying bottomonium production in proton-nucleus collisions, where no deconfined state is expected to be created.

In ALICE, Υ production can be measured in the muon decay channel with the forward muon spectrometer ($2.5 < y_{\text{lab}} < 4$). Recent results in Pb-Pb collisions at $\sqrt{s_{\text{NN}}} = 2.76$ TeV, in p-Pb collisions at $\sqrt{s_{\text{NN}}} = 5.02$ TeV as well as the cross-section measurement in pp collisions at $\sqrt{s} = 7$ TeV will be presented.

Primary author: BOSSU, Francesco (iThemba LABS, Cape Town)

Presenter: BOSSU, Francesco (iThemba LABS, Cape Town)

Session Classification: Heavy Flavor Production and Quarkonia

Track Classification: Heavy Flavor Production and Quarkonia