



Contribution ID: 96

Type: **Invited Talk**

Probing the QGP with heavy quarks in ALICE at the LHC

Heavy quarks (charm and beauty) are regarded as ideal probes of the hot and dense deconfined QCD medium, the Quark-Gluon Plasma (QGP), formed in ultra-relativistic heavy-ion collisions at the LHC. They are produced in hard scattering processes in the early stages of a heavy-ion collision.

In addition, their characteristic flavour is conserved throughout the evolution of the medium formed in these collisions. Therefore, heavy-quark measurements can give insight into the mechanisms of in-medium energy loss, propagation and hadronisation. The ALICE experiment is designed to study the QGP produced in ultra-relativistic heavy-ion collisions at the LHC. The detector, composed of central barrel ($|\eta| < 0.9$) detectors as well as the muon spectrometer at forward rapidity ($-4 < \eta < -2.5$), is well suited to study heavy-quark production, exploiting various experimental techniques. This talk will review recent results obtained in heavy-quark measurements by the ALICE Collaboration in heavy-ion collisions at LHC energies.

Primary author: BUTHELEZI, zinhle (iThemba LABS)

Presenter: BUTHELEZI, zinhle (iThemba LABS)