Contribution ID: **111** Type: **Poster**

Production and azimuthal anisotropy of beauty decay electrons in Pb–Pb collisions at 2.76 TeV with ALICE

Tuesday 15 May 2018 19:10 (30 minutes)

The study of the interaction of heavy quarks with the constituents of the medium created in heavy-ion collisions provides important information about the characteristics of the Quark-Gluon Plasma (QGP). The production of heavy quarks occurs prior to the formation of the QGP, implying that they experience the entire evolution of the system. To infer the properties of the partonic interactions of charm and beauty quarks in the medium, it is useful to investigate how heavy quarks are influenced by the collective expansion of the system. A sufficiently strong interaction could lead to a themalization of the heavy quarks which then would move along with the flow of the surrounding medium constituents leading to a substantial azimuthal anisotropy in non-central collisions.
The excellent particle-identification capabilities of the ALICE detector allow for an investigation of beauty production via the measurement of beauty-hadron decay electrons. The separation from background electrons is achieved via a statistical separation based on the track impact parameter distribution. This distribution is wider for the beauty decay electrons due to the comparatively larger decay length of their parent hadrons ($c\tau \approx 500\,\mu$m). This poster shows the current status of the measurements of the production and azimuthal anisotropy of beauty electrons in Pb–Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV.

Content type

Experiment

Collaboration

ALICE

Centralised submission by Collaboration

Presenter name already specified

Author: VOLKL, Martin Andreas (Eberhards Karls Universiy Tubingen (DE))

Presenter: VOLKL, Martin Andreas (Eberhards Karls Universiy Tubingen (DE))

Session Classification: Poster Session

Track Classification: Open heavy flavour