

10th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions



Contribution ID: 279

Type: **Oral Presentation**

A comprehensive description of open-heavy flavour observables in heavy-ion collisions within a transport approach

Thursday, June 4, 2020 11:55 AM (20 minutes)

We present recent developments of the POWLANG transport model for the study of heavy-flavour (HF) production in heavy-ion collisions. In particular we focus on the results of recent/ongoing work concerning:

1. Event-shape engineering studies of D-meson distributions;
2. Full 3+1 transport simulations validated against soft-particle production data. The realistic 3+1 hydrodynamic background allows us to study the HF directed flow v_1 and the HF decay muons at forward rapidity, so far neglected in most theoretical calculations. ;
3. Medium-induced changes in the HF hadronization, accounting for 4-momentum conservation, space-momentum correlations and modification in the HF-hadrochemistry, this motivated by the experimental data on the production of D_s meson and Λ_c baryons.

Collaboration (if applicable)

Track

Heavy Flavor and Quarkonia

Contribution type

Contributed Talk

Authors: BERAUDO, Andrea (INFN, sezione di Torino (IT)); PRINO, Francesco (Universita e INFN Torino (IT)); MONTENO, Marco (INFN Torino (IT)); Dr NARDI, Marzia (INFN); Dr DE PACE, Arturo (INFN)

Presenter: BERAUDO, Andrea (INFN, sezione di Torino (IT))

Session Classification: Parallel

Track Classification: Heavy Flavor and Quarkonia