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

Thursday, 4 June 2020 11:55 (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 Lambda_c baryons.

Collaboration (if applicable)

Track

Heavy Flavor and Quarkonia

Contribution type

Contributed Talk

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