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## Development of heavy-flavour flow-harmonics in high-energy nuclear collisions

*Wednesday, 16 May 2018 10:00 (20 minutes)*

We employ the POWLANG transport setup, developed over the last few years, to provide new predictions for several heavy-flavour observables in relativistic heavy-ion collisions from RHIC to LHC center-of-mass energies. In particular, we focus on the development of the flow-harmonics  $v_2$  and  $v_3$  arising from the initial geometric asymmetry in the initial conditions and its associated event-by-event fluctuations. Within the same transport framework, for the sake of consistency, we also compare the nuclear modification factor of the  $p_T$  spectra of charm and beauty quarks, heavy hadrons and their decay electrons. We compare our findings to the most recent data from the experimental collaborations. We also study in detail the contribution to the flow harmonics from the quarks decoupling from the fireball during the various stages of its evolution: although not directly accessible to the experiments, this information can shed light on the major sources of the final measured effect. We also display preliminary results obtained with event-shape engineering, selecting events with different eccentricities within the same centrality class or vice versa.

### Content type

Theory

### Collaboration

### Centralised submission by Collaboration

Presenter name already specified

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