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Heavy Quark azimuthal correlations in proton-proton and nucleus-nucleus collisions.

Tuesday, 20 May 2014 16:30 (2 hours)

I will present very recent results on heavy-quark (and meson) azimuthal correlations in proton-proton and nucleus-nucleus collisions at LHC energies.
We simulate the $c-\bar{c}$ and $b-\bar{b}$ pair initial creation
with a perturbative QCD approach (POWHEG+PYTHIA).
Successively we study the propagation of the heavy quarks in the plasma with the relativistic Langevin equation and, eventually, their hadronization in the medium.
By applying suitable cuts on the transverse momentum of one (or both) quarks of a pair, we show that it is possible to select a specific "region" of the strongly interacting medium (the hot core or the colder rim) and, therefore, to study its properties.

On behalf of collaboration:

None

Primary author: NARDI, Marzia (INFN)

Co-authors: Dr BERAUDO, Andrea (INFN Torino); Dr DE PACE, Arturo (INFN Torino); PRINO, Francesco (Universita e INFN (IT)); MONTENO, Marco (Universita e INFN (IT)); SITTA, Mario (Universita del Piemonte Orientale (IT)); Prof. ALBERICO, Wanda (Univ. Torino)

Presenter: NARDI, Marzia (INFN)

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