



Contribution ID: 55

Type: Oral

Heavy flavor production and suppression in ultra-relativistic heavy ion collisions

Tuesday, 1 September 2015 12:00 (30 minutes)

High-energy collisions of heavy nuclei produce a high-density, color-deconfined state of strongly interacting matter called Quark-Gluon Plasma (QGP). Heavy-flavor hadrons, containing charm and beauty, are important probes to study the characteristics and the evolution of the QGP. Heavy quarks, in fact, are produced dominantly through hard partonic scattering processes in the earliest stage of the hadronic collisions and thus they experience the whole history of the medium. RHIC at the Brookhaven National Laboratory and the LHC at CERN have provided large statistics and high quality data from nucleus-nucleus collisions, which allow precise investigations of the production of heavy quarks and their interaction with the QGP. The variety and the precision of the available measurements of the nuclear modification factor, the elliptic flow and correlations with hadrons, suggest first constraints to theoretical models. An overview of the existing results and of the current understanding of the heavy-flavor physics in heavy-ion collisions will be given.

Primary author: MASCIOCCHI, Silvia (Gesellschaft für Schwerionenforschung mbH)

Presenter: MASCIOCCHI, Silvia (Gesellschaft für Schwerionenforschung mbH)

Session Classification: Plenary IV