



Contribution ID: 196

Type: Poster

Influence of the medium evolution on heavy quark observables

Thursday, 16 August 2012 16:00 (2 hours)

One of the most promising probes to study deconfined matter created in high energy nuclear collisions is the energy loss of (heavy) quarks. Theoretically however there exist various ambiguities, which still need to be resolved. In this work we investigate the dependence on the medium description of heavy quark energy loss. We find that by only changing the theoretical medium description and keeping the energy loss mechanisms intact one can expect huge discrepancies (up to a factor of 2!) in the very same theoretical approach. The medium descriptions we compare are widely used in the field of heavy ion physics, ranging from elliptic fireball models to hydrodynamics.

Thus, by pinning down the energy loss mechanism with other existing approaches and measurements one can use this effect in order to differentiate between various medium descriptions and limit the parameter range of QGP modeling.

Primary author: Dr VOGEL, Sascha (Frankfurt Institute for Advanced Studies)

Co-authors: VAN HEES, Hendrik (G); AICHELIN, Joerg (Unknown); BLUHM, Marcus; GOSSIAUX, Pol (Subatech); RAPP, Ralf (Texas A&M University)

Presenter: Dr VOGEL, Sascha (Frankfurt Institute for Advanced Studies)

Session Classification: Poster Session Reception

Track Classification: Heavy flavor and quarkonium production