

Can we see from jet quenching that quark-gluon plasma becomes more perturbative at LHC than at RHIC

Friday, May 27, 2011 6:50 PM (20 minutes)

We study the nuclear modification factor R_{AA} at RHIC and LHC energies. We account for the radiative and collisional energy losses. Both the contributions are calculated with running α_s accounting for fluctuations of the jet path lengths. The effect of the thermal suppression of α_s is investigated. Comparison of the theoretical results with the experimental data obtained at RHIC and in the ALICE experiment at LHC demonstrates that the experimental R_{AA} may be described in pQCD with the entropy extracted from the multiplicity data. However for LHC the thermal suppression of α_s should be stronger. This fact demonstrates that at LHC the quark-gluon plasma becomes more perturbative.

Primary author: ZAKHAROV, Bronislav (Landau Institute)

Presenter: ZAKHAROV, Bronislav (Landau Institute)

Session Classification: Jets

Track Classification: Jets