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Jets and Jet-like Correlations at RHIC

Wednesday, 10 August 2011 16:30 (30 minutes)

I will present an overview of recent results on jets and
jet-like correlation measurements from the Relativistic Heavy-Ion Collider (RHIC) at Brookhaven National Laboratory.

Jets are produced in the initial hard scatterings of an event and can therefore be exploited as probes of the hot and dense medium produced in heavy-ion collisions. Previous RHIC results indicate that this medium, the Quark Gluon Plasma (QGP), is strongly coupled, with partonic degrees of freedom. High pT colored partons passing through the sQGP therefore believed to suffer energy loss via induced gluon radiation and elastic collisions, before exiting the medium and fragmenting in vacuum. Jet
reconstruction and high pT correlation studies allow us to investigate how the partons interact with the medium and how the medium responds to the partons moving through it. By comparing measurements from p-p and d-Au to those in Au-Au collisions at sqrt(s) = 200 GeV we aim to disentangle cold nuclear matter effects from those of the hot and dense sQGP.

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