



Contribution ID: 174

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Event-by-event simulations of jet modification using the MATTER event generator.

Saturday 24 September 2016 16:00 (20 minutes)

The modification of hard jets in the Quark Gluon Plasma (QGP) is studied using the MATTER event generator. Based on the higher twist formalism of energy loss, the MATTER event generator simulates the evolution of highly virtual partons through a medium. These partons sampled from an underlying PYTHIA kernel undergo splitting through a combination of vacuum and medium induced emission. The momentum exchange with the medium is simulated via the jet transport coefficient \hat{q} , which is assumed to scale with the entropy density at a given location in the medium. The entropy density is obtained from a relativistic viscous fluid dynamics simulation (VISH2+1D) in 2+1 space time dimensions. Results for jet and hadron observables are presented using both an independent fragmentation model and using the Texas A&M recombination simulation. This talk will focus on the physics input and simulation details of the MATTER event generator as compared to a variety of test observables.

Summary

Presentation type

Oral

Primary author: KORDELL, Michael (Wayne State University)

Presenter: KORDELL, Michael (Wayne State University)

Session Classification: Parallel Session IV: Simulation of Hard Processes in A+A