



Contribution ID: 636

Type: **Poster**

Light flavor jets in strongly coupled plasma

Tuesday, 29 September 2015 16:30 (2 hours)

We present the first, and so far only, fully strongly coupled prediction for jet suppression at LHC and show that our result is in qualitative agreement with preliminary CMS and published ATLAS data. Along with the famous AdS/CFT results for the bulk properties of quark-gluon plasma, for example the $1/4\pi$ viscosity to entropy density ratio, and the recent next-to-leading order strong-coupling heavy flavor energy loss calculations, we claim that strong coupling provides a coherent, self-consistent model for the dynamics of the sQGP created in heavy ion collisions.

In our investigations into strong coupling light flavor energy loss, we found that the results are extremely sensitive to the initial conditions of the string in AdS space. We thus refine our calculation by creating a hybrid strong/weak model in which the initial conditions for the AdS/CFT equations of motion are constrained by early time pQCD jet physics.

On behalf of collaboration:

NONE

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Session Classification: Poster Session

Track Classification: Jets and High p_T Hadrons