

# On the high-energy evolution of the jet quenching parameter

*Friday, 3 June 2016 14:30 (20 minutes)*

We present ongoing work concerning the high-energy evolution of the jet quenching parameter (the transport coefficient which characterizes the transverse momentum broadening of an energetic jet propagating through a dense partonic medium, such as the quark-gluon plasma created in the intermediate stages of nucleus-nucleus collisions at the LHC). Within the framework developed in Iancu (2014) [1], which represents a generalization of the JIMWLK evolution equation beyond the eikonal approximation, we calculate the high-energy evolution of the jet quenching parameter in the double logarithmic approximation and thus recover previous results in the literature (notably by Mueller et al (2013) [2]). We furthermore present preliminary results for the respective evolution in a more accurate, single logarithmic, approximation.

[1] Iancu, E., JHEP 1410 (2014) 95 [2] Liou, T., Mueller, A.H. and Wu, B., Nucl.Phys. A916 (2013) 102-125

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**Session Classification:** Talks