

## Dynamical quenching weights in an expanding medium

*Tuesday 2 October 2018 17:25 (20 minutes)*

In this work, we extend the re-summation of multiple medium-induced emissions to apply to dynamically expanding media. This is done by recasting the quenching weight as the solution of a rate equation with medium-induced partonic splitting functions that are sensitive to the expansion. We perform the calculations in the framework of Baier-Dokshitzer-Mueller-Peigne-Schiff-Zakharov (BDMPSZ) formalism for multiple soft scatterings with a time-dependent transport coefficient. Furthermore, we discuss the validity of a dynamical scaling law that relates the spectrum in an expanding medium to the equivalent static case with re-scaled medium parameters [1] and test the size of energy loss fluctuations in a realistic medium.

References:

[1] Carlos A. Salgado and Urs Achim Wiedemann “A Dynamical Scaling Law for Jet Tomography”, Phys Rev Lett. 89.092303.

### Summary

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**Session Classification:** Parallel 1