



Contribution ID: 748

Type: Oral

How loss of colour coherence affects intra-jet observables

When a hard parton fragments in vacuum, subsequent emissions are angular ordered due to colour coherence. In contrast to this, in a dense coloured medium interactions with the background change the parton's colour and disrupt colour coherence. The phase space for the next emission is then not constrained by angular ordering leading to potentially measurable differences in the distribution of fragments. The effect is not due only to a broader angular distribution of partons, because angular ordering also affects the energy sharing. In this talk I will present the improved treatment of angular ordering in the upcoming release of JEWEL and discuss the effect of loss of angular ordering on different intra-jet observables. I will also quantify related theoretical uncertainties.

Category

Theory

Collaboration (if applicable)

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Track Classification: Jets