



Contribution ID: 34

Type: Long talk (20 mins)

Improved Antenna Subtraction at NNLO

Thursday, December 15, 2022 5:50 PM (30 minutes)

The antenna subtraction method has been successfully applied to a wide range of next-to-next-to-leading order in α_s (NNLO) processes relevant for the Large Hadron Collider. We summarise how the antenna subtraction method works at NLO and NNLO and identify the current drawbacks in the scheme. In particular, the tree-level four-particle antennae, X_4^0 , extracted from known colour-ordered matrix elements do not have consistent patterns in unresolved singular structure. We show that it is possible to construct similar antennae with more uniform features directly out of the unresolved limits required. It is hoped that the application of these improved Antennae will be more straightforward and efficient, such that the antenna subtraction scheme is less process-dependent. Finally, we match the integration of the antennae over the unresolved phase space to the previous incarnation, serving as an independent check on our results.

Type of presentation

20 minute talk

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Session Classification: Full Length Talks