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Computing cross-sections beyond NLO accuracy with Local Unitarity

Monday 28 November 2022 16:00 (15 minutes)

Local Unitarity provides an order-by-order representation of perturbative cross-sections that realises at the local level the cancellation of final-state collinear and soft singularities predicted by the KLN theorem. The representation is obtained by manipulating the real and virtual interference diagrams contributing to transition probabilities using general local identities. As a consequence, the Local Unitarity representation can be directly integrated using Monte Carlo methods and without the need of infrared counter-terms. I will present first results from this new approach with examples up to N3LO accuracy. I will conclude by giving an outlook on future generalisations of the method applicable to hadronic collisions.

Declaration

I certify that I have checked that I am authorised to submit the abstract with the listed co-authors with their current affiliations

Change of Speaker

I understand that change of speaker is allowed provided that no participant gives more than one talk. Otherwise, we will ask the speaker to choose between one or the other abstract to be presented.

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