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Towards a general nested soft-collinear subtraction method for NNLO calculations

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One of the main obstacles to the calculation of next-to-next-to-leading order (NNLO) corrections in QCD is the presence of infrared singularities. Together with Raoul Röntschi, Kirill Melnikov and other collaborators, I am developing a more general approach to the nested soft-collinear subtraction method to address this problem for the production of an arbitrary final state at hadron colliders. In this presentation, I will discuss results for the process $P + P \rightarrow V + n$ gluons at NNLO, demonstrating the analytic cancellation of poles and presenting finite remainders of integrated subtraction terms, and will outline how the method can be completely generalized.

Collaboration / Activity

None

Primary author: TAGLIABUE, Davide Maria (Università degli Studi di Milano - Statale)**Co-authors:** Dr SIGNORILE-SIGNORILE, Chiara (Institute for Theoretical Particle Physics, Karlsruhe Institute of Technology); Prof. MELNIKOV, Kirill (Institute for Theoretical Particle Physics, Karlsruhe Institute of Technology); Prof. RÖNTSCH, Raoul (Università degli Studi di Milano - Statale)**Presenter:** TAGLIABUE, Davide Maria (Università degli Studi di Milano - Statale)**Session Classification:** T06 QCD and Hadronic Physics**Track Classification:** QCD and Hadronic Physics