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Nested soft-collinear subtractions in NNLO QCD computations

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Abstract: Currently important progress is being made in next-to-next-to-leading order (NNLO) QCD calculations. As a result, many processes at hadron colliders have been computed to NNLO QCD precision. Despite these developments, the search for the optimal subtraction scheme that allows us to handle IR and collinear singularities in an efficient and general way is still ongoing. In this talk I will introduce the nested soft-collinear subtraction scheme that possesses many desired features; for example, it is analytic, fully local and highly modular. I will further describe an application of this scheme to deep inelastic scattering that, together with the description of color singlet production and decay, completes the set of building blocks that are required for the application of this scheme to arbitrary processes at hadron colliders.

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