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Two-loop QCD corrections to five-particle amplitudes with one massive leg

I discuss the recent advances in the computation of two-loop scattering amplitudes for five-particle processes with one external massive leg. The latter are crucial ingredients to obtain NNLO QCD predictions for many interesting LHC processes. I present a basis of transcendental functions which enables a fast and stable evaluation of all the planar Feynman integrals, and a workflow based on finite field arithmetic which allows us to compute the amplitudes efficiently. Finally, I present analytic results for several amplitudes of this kind in the leading colour approximation.

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