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Feynman integrals and special functions for Hjj production in NNLO QCD

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Availability of NNLO QCD predictions for scattering processes such as Vjj and Hjj production is essential for the ongoing physics program at the LHC. A crucial missing ingredient is the Feynman integrals contributing to double virtual corrections. In this talk we present the complete set for the relevant two-loop five-point integrals with one external mass and the associated basis of special functions.
Employing the method of canonical differential equations and the properties of logarithmic iterated integrals, we construct the basis that will greatly facilitate the calculation of needed two-loop scattering amplitudes, and is amenable for immediate phenomenological applications.

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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