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# Two-loop amplitudes for $tW$ production at Hardron colliders

*Monday, 22 August 2022 17:00 (20 minutes)*

We present the analytical results of the two-loop amplitudes for hadronic tW production, focusing on the leading color and light fermion-loop contributions. The calculation of the two-loop integrals is performed using the method of canonical differential equations. The results have been expressed in terms of multiple polylogarithms and checked by comparing the infra-red divergences with the predictions from anomalous dimensions. Combined with the one-loop squared amplitudes we have obtained previously, we obtain the hard function relevant for a NNLO Monte Carlo calculation.

## Summary

**Primary author:** Dr 王, 烨凡

**Presenter:** Dr 王, 烨凡

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