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Fully-differential predictions for top pair-production and decay at high precision

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We present state-of-the-art, high-precision predictions for top-quark pair production in the di-lepton channel at the LHC.

Our results are based on the narrow-width approximation and include approximate NNLO corrections in the production subprocess, exact NNLO corrections in the decay sub-process as well as exact NLO-production/NLO-decay interferences.

We will briefly outline the structure of this new calculation and discuss the importance of the corrections beyond NLO.

A comparison of these improved predictions to ATLAS and CMS fiducial-region measurements will also be shown.

Experimental Collaboration

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