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Soft gluon resummation for the associated production of a top quark pair with a W or Z boson at the LHC

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The measurements of associated production of a massive gauge boson with a top-antitop quark pair at the LHC provide an important test of the Standard Model, in particular of the top quark couplings.

To increase the precision of the theoretical predictions beyond NLO, a class of logarithmic corrections can be taken into account with the help of resummation methods.

In this talk results for soft gluon resummation at fixed invariant mass for $pp \rightarrow t\bar{t}Z/W$ will be presented.

The resummed results are matched to the NLO predictions and include terms beyond next-to-leading logarithmic accuracy.

Numerical predictions for the total inclusive cross sections and the invariant mass distributions at the LHC will be discussed, together with estimates of their theoretical errors .

Experimental Collaboration

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