

DIS2023: XXX International Workshop on Deep-Inelastic Scattering and Related Subjects



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Type: **Parallel talk**

Higher-order corrections for tqZ production

Thursday, 30 March 2023 09:40 (20 minutes)

We present theoretical results for the associated production of a single top quark and a Z boson (tqZ production) at LHC energies. We calculate higher-order corrections from soft-gluon emission for this process. We compute the approximate NNLO (aNNLO) cross section at LHC energies, including uncertainties from scale dependence and from parton distributions. We also calculate the top-quark rapidity distribution. The aNNLO corrections are significant and enhance the NLO cross section, and their inclusion provides a more precise theoretical prediction.

Submitted on behalf of a Collaboration?

No

Participate in poster competition?

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