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Type: **Parallel session talk**

t-channel single-top production: the contribution of non-factorisable corrections

Tuesday 22 August 2023 09:10 (20 minutes)

Duration” 15’+5’

A large fraction of the top quarks produced at the LHC emerges from electroweak interactions, via the so-called t-channel single-top production.

Predictions for this process can be used, for instance, to constrain the CKM matrix element, and probe possible anomalous couplings in the tWb vertex. QCD corrections to t-channel single-top production are known up to NNLO in the factorisable approximation, namely neglecting the crosstalk between different quark lines.

In this contribution we report on the recent calculation of QCD non-factorisable corrections to t-channel single-top production and stress the importance of these corrections in the light of increasing the accuracy of theoretical predictions for this process. We present results for the total cross section and for selected observables relevant to proton-proton collisions at the LHC and the FCC.

Collaboration / Activity

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