

# Electroweak corrections from Sudakov logarithms in the SMEFT

*Saturday 20 July 2024 17:54 (18 minutes)*

Accurate predictions for Standard Model and Beyond the Standard Model phenomena are fundamental to collider experiments. In this context, electroweak corrections, enhanced by Sudakov logarithms, emerge as the dominant higher-order effect at the TeV scale and beyond. We computed Sudakov EW corrections in the high-energy limit for the dimension-6 SMEFT operators that maximally grow with energy. In this talk, I will explore the phenomenology for the illustrative process of top quark pair production at the LHC incorporating these new operators. In particular, I will present the impact of EW corrections on the tails of differential distributions, and address the limitations of applying a simple  $k$ -factor approach in accurately representing the underlying physics.

## Alternate track

1. Beyond the Standard Model

## I read the instructions above

Yes

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**Session Classification:** Top Quark and Electroweak Physics

**Track Classification:** 04. Top Quark and Electroweak Physics