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Type: 20 minutes talk

EW Sudakov logarithms and their implementation in OpenLoops

Friday, 17 December 2021 13:30 (30 minutes)

In the energy range above the electroweak (EW) scale the leading contributions coming from EW radiative corrections have a logarithmic nature: they can be both double (DL) or single (SL) logs and they are generally known as Sudakov logarithms. These terms increase with energy and they can provide corrections of order 10% or larger for scales of 1 TeV and beyond; therefore, it is crucial to take them properly into account for precise studies and predictions.

For processes which are not mass-suppressed at high energies, these corrections are universal and factorize, i.e. they can be associated with external lines. In this talk I will explain how in my research project I am working to implement such corrections in the OpenLoops framework, starting from a tree amplitude and generating the corresponding one with double pseudo-counterterms insertions which can account for the Sudakov factors.

Could you please give the most relevant category for your talk?

Phenomenology

Will you be pre-recording your talk?

No

Would you be interested in receiving feedback on your presentation?

Yes

Are you happy for your talk to be recorded?

Yes

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Session Classification: Full-length talks