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YSF: Higgs pair production in SMEFT at full NLO QCD: an investigation of truncation effects

Wednesday 9 November 2022 15:35 (12 minutes)

We present results for Higgs boson pair production in gluon fusion
at NLO (2-loop) QCD including operators in the Standard Model Effective Field Theory (SMEFT) framework. Contributions from subsets of higher order terms in $\frac{1}{\Lambda^2}$,
such as squared dimension-6 operators at cross section level and double operator insertions at amplitude level, are used as a proxy
for the study of truncation effects of the SMEFT expansion. The different truncation options are contrasted to the non-linear Higgs Effective Field Theory (HEFT) framework for selected phenomenological examples.

Type of talk

Theory

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