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Double Higgs production via VBF NLO in SMEFT

Wednesday 19 March 2025 16:00 (30 minutes)

The process of double Higgs boson production via vector boson fusion (VBF), although strongly suppressed compared to the gluon fusion channel, remains an important area of study. Not only can it provide valuable insights into the EW sector and the mechanism of EWSB, but it is also highly sensitive to BSM physics. In this talk, we explore the impact of dimension-6 and dimension-8 SMEFT operators on VBF double Higgs production. We estimate and present the maximal effects, taking into account available constraints on SMEFT Wilson coefficients from fits to experimental data, perturbative unitarity constraints and the validity of the EFT expansion.

Track/session

Parallel Theory track

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