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# Pushing Higgs Effective Theory to its Limits

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An effective theory of the Higgs sector allows us to analyze kinematic distributions in addition to inclusive rates. But the precision of Higgs measurements at the LHC cannot guarantee a clear hierarchy of scales, casting doubt on the validity of the effective model. We analyze how well dimension-6 operators describe LHC observables in comparison to the full theory. As benchmarks we consider a singlet extension of the Higgs sector, a two-Higgs-doublet model, new top partners, and a vector triplet, focussing on parameter ranges where the LHC will be sensitive. We discuss which Higgs observables are correctly described by the dimension-6 approximation, where it breaks down, and whether this presents a problem for LHC analyses.

## Summary

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