

HEFT vs. SMEFT in particular UV models

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Although LHC physics can be parametrized in a general and consistent way using an effective field theory (EFT) framework, two different approaches have been advocated in the literature: the Higgs EFT (HEFT) and the Standard Model EFT (SMEFT). In this talk, I compare the two alternatives in the context of particular models. Specifically, I consider the singlet extension of the Standard Model as well as the 2 Higgs Doublet Model, and perform the matching of these models to the two EFT approaches. I highlight the role of perturbative unitarity in the organization of the EFTs.

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