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Falsification of SMEFT through Higgs measurements

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From the embedding of the Standard Model Effective Field Theory (SMEFT) in the more general Higgs Effective Field Theory (HEFT), we expose correlations among the coefficients of the latter that, if found to be violated in future data, would lead to the experimental falsification of the SMEFT framework. These are derived from the necessary symmetric point of HEFT

and analiticity of the SMEFT Lagrangian

that allows the construction of the SMEFT expansion, as laid out by other groups, and properties at that point of the Higgs-flare function $\mathcal{F}(h)$ coupling Goldstone and Higgs bosons.

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