

Suppression of fermionic operators in the HEFT

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The low-energy effective field theory for electroweak interactions -the so called Higgs Effective Field Theory (HEFT)- is studied in this talk. It embeds the Standard Model as a particular limit and parametrizes new physics deviations. We discuss some experimental resonant diboson searches and four-fermion operators analyses that seem to push the new physics scale well over the TeV. On the other hand, the more precise oblique parameter determinations allow new physics resonances in the few TeV range. This apparent contradiction is easily solved by postulating a Lagrangian of the Standard Model extension that only couples directly the new physics sector to the bosonic degrees of freedom of the Standard Model but not to the SM fermions.

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