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# Heavy states and electroweak effective approaches

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The existence of a mass gap between the Standard Model (SM) and possible new states encourages us to use effective field theories. Here we consider the non-linear realization of the electroweak symmetry breaking: the electroweak effective theory (EWET), also known as Higgs effective field theory (HEFT) or electroweak chiral Lagrangian (EWChL). At short distances a resonance Lagrangian which couples the SM states to bosonic and fermionic resonances is assumed. After integrating out the resonances and assuming a well-behaved high-energy behavior, we estimate or constrain most of the bosonic low-energy constants in terms of only resonance masses. Current fits of these low-energy constants allow us to constrain the high-energy resonance masses.

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# **Collaboration / Activity**

Theoretical Physics

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