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## One-loop computations from the Electroweak Chiral Lagrangian with a light Higgs

Recently, a new boson has been discovered at LHC which, so far, fits the properties of the SM Higgs boson. This would make the SM unitary. However, the SM is not the more general low-energy dynamics for the minimal electroweak symmetry breaking sector with three Goldstone bosons and one light scalar.

By using the more general low energy effective Lagrangian for these four particles and their scattering amplitudes, we study different processes at one-loop precision, identifying the counterterms needed to cancel the divergences. Our aim is using the unitarization methods over a partial wave decomposition of these one-loop computations, both to make phenomenological prediction which can be tested at LHC run II and to discuss the limitations of the one-loop computations. The studied processes are the elastic scattering amplitude for both the longitudinal components of the gauge bosons  $V=W, Z$  and the  $\varphi\varphi \rightarrow \varphi\varphi$ , as well as the inelastic  $VV \rightarrow \varphi\varphi$ . Furthermore, we have studied the scattering processes  $\gamma\gamma \rightarrow W_L^+ W_L^-$  and  $\gamma\gamma \rightarrow Z Z$ .

### Summary

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