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Electroweak Higgs effective field theory after LHC run 2

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We analyze the electroweak interactions in the framework of the Higgs effective field theory using the available Higgs and electroweak diboson production results from LHC run 2 as well as the electroweak precision data. Assuming universality of the weak current, our study considers 25 possible anomalous couplings. To unveil the nature of the Higgs boson, i.e., isosinglet versus part of $SU(2)_L$ doublet, we explore the correlation effects between observables that are predicted to exist in the linear realization of the electroweak gauge symmetry but not in its nonlinear counterpart. This improves previous studies aimed at investigating the Higgs nature and the origin of the electroweak symmetry breaking.

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