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## Resonances in unitarized HEFT at the LHC

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Higgs Effective Field Theory (HEFT) can be used to study vector-boson elastic scattering at the high energies relevant for the LHC. For most of the parameter space, the scattering is strongly interacting, with the minimal Standard Model being a remarkable exception. From its one-loop treatment complemented with dispersion relations and the Equivalence Theorem, we derive two different unitarization methods which produce analytical amplitudes corresponding to different approximate solutions to the dispersion relations: the Inverse Amplitude method (IAM) and the N/D method. The partial waves obtained can show poles in the second Riemann sheet whose natural interpretation is that of dynamical resonances with masses and widths a function of the starting HEFT parameters. We compare the different unitarizations and we find that they are qualitatively, and in many cases quantitatively, very similar. However, for different reason it is more interesting to use one of the two methods depending on the particular channel for  $WW$ ,  $ZZ$ ,  $WZ$ ,  $Zh$ ,  $Wh$  or  $hh$  scattering. Here we briefly describe the possible I and J channels for these reactions and give the unitarization method of choice in each case. The amplitudes obtained provide realistic resonant and nonresonant cross sections to be compared with and to be used for a proper interpretation of the LHC data

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