

XVth Quark Confinement and the Hadron Spectrum



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Accommodating scalar resonances in the HEFT

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Loss of unitarity in an effective field theory is often cured by the appearance of dynamical resonances, revealing the presence of new degrees of freedom. These resonances may manifest themselves when suitable unitarization techniques are implemented in the effective theory, which in the scalar-isoscalar channel require making use of the coupled-channel formalism. Conversely, experimental detection of a resonance may provide interesting information on the couplings and constants of the relevant effective theory. By applying a systematical procedure we shall try to confront the effective theory with the absence or presence of resonances at the LHC in the vector boson fusion channel.

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