



INSTITUTO DE FÍSICA  
DE PARTÍCULAS Y DEL COSMOS

IPARCOS



Preprint Series in Particles and Cosmos Physics

n° IPARCOS-UCM-24-054

# Discerning EFTs through multi-Higgs production

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**October 2024**

Plaza de las Ciencias, 1 28040 Madrid, Spain

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# Abstract

In these proceedings we present the main results of [arXiv:2311.04280 [hep-ph]], where we explore the phenomenological implications of multi-Higgs boson production through longitudinal vector boson scattering within the framework of Effective Field Theories (EFTs). We derive compact expressions for effective tree-level amplitudes involving up to four final-state Higgs bosons. Subsequently, we compute total cross sections for scenarios relevant to the LHC, where we observe that the general Higgs Effective Theory (HEFT) prediction avoids the strong suppression found in the Standard Model Effective Field Theory (SMEFT), typically expected to be several orders of magnitude smaller.

