

8th RED LHC workshop



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Standard Model Extensions and matching to SMEFT/HEFT

Although Effective Field Theories (EFTs) can be used to describe physics up to a given energy scale, the question of what lies beneath the EFT subsides, and eventually, a connection between the UltraViolet (UV) Theory and the EFT becomes necessary. In the last decade, the description of the electroweak sector has been addressed by two EFTs: the Standard Model Effective Field Theory (SMEFT) and the Higgs Effective Field Theory (HEFT). I will discuss the procedure of matching a UV theory to both EFTs in the context of decoupling and non-decoupling effects, as well as the importance of choosing specific parameters to describe the EFT.

Based on 2311.16897 and 2305.07689

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