

Evanescent schemes and prescriptions

Tuesday 3 June 2025 12:00 (15 minutes)

In Effective Field Theories, evanescent operators are introduced to compensate for the breakdown of four-dimensional Dirac identities (e.g. Fierz Identities) when used in combination with dimensional regularization.

In this talk, we provide an alternative approach where contributions of evanescent operators are viewed as corrections to $d=4$ Dirac relations. This new perspective not only simplifies computations but provides a clearer understanding of the treatment of these evanescent contributions in the context of NLO change of operator bases. Furthermore, we propose a novel method for treating the effects of evanescent operators, which allows for the elimination of evanescent-to-physical mixing contributions in NLO ADMs computations. (Arxiv: 2208.10513, 2211.01379, 2306.16449 , 2401.16904)

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