Phenomenology 2025 Symposium



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Renormalization Group Evolution and Phenomenology of Dimension-8 SMEFT

Tuesday 20 May 2025 15:30 (15 minutes)

Recent SMEFT studies emphasize the consistent inclusion of $\frac{1}{\Lambda^4}$ terms in SMEFT predictions. In this presentation, we explore SMEFT up to $\frac{1}{\Lambda^4}$, incorporating renormalization group evolution (RGE) effects from the running of SMEFT Wilson coefficients (WCs), including dimension-8 contributions. We discuss the current status of dimension-8 renormalization and recent advancements in RGE computations for SMEFT WCs. Additionally, we examine the phenomenological implications of WC running in both a bottom-up framework and a model-specific top-down approach. Finally, we present future collider projections that account for dimension-8 corrections.

Mini Symposia (Invited Talks Only)

Plenary (Invited talks only)

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Track Classification: Electroweak, Higgs, and Top Quark Physics