

SUSY 2024

Theory meets Experiment

Madrid

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Mapping the SMEFT one-loop structure of linear Standard Model extensions

Tuesday 11 June 2024 16:25 (20 minutes)

This talk will present a one-loop UV/IR dictionary providing a mapping between the B-conserving dimension-6 SMEFT and the linear SM extensions. These are exotic multiplets that couple linearly to the SM through renormalisable interactions. Our work leverages recent progress in computational tools which automate the one-loop matching procedure. The utility of our map in assessing the implications of dimension-6 operator measurements on simplified models and vice versa is illustrated with an example model interpretation of a fit to electroweak precision data.

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