

SMEFT at the LHC?

Wednesday, September 24, 2025 9:30 AM (30 minutes)

It is argued that the SMEFT cannot be used to derive constraints on weakly-coupled heavy new particles from LHC data. Depending on the UV-complete model, the bounds derived using the SMEFT implementation can be considerably stronger or much weaker than the true constraints on the model. This is true even for an “SMEFT-friendly” scenario without $2 \rightarrow 1$ resonance production. Combinatorial issues arising from the very large number of free parameters of the SMEFT are also briefly discussed.

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Session Classification: Plenary 9

Track Classification: Plenary