



Contribution ID: 78

Type: **not specified**

## A map of First-Order Electroweak Phase Transitions in the SMEFT

*Tuesday, 22 October 2024 14:00 (15 minutes)*

In this talk, we present a map of first-order electroweak phase transitions within the Standard Model Effective Field Theory (SMEFT), using modern dimensionally reduced effective field theory methods with careful attention to scale hierarchies and power-counting techniques. While previous works have focused on a few specific cases, we comprehensively map all possible scenarios, uncovering new mechanisms beyond those previously identified. By also performing a global likelihood scan, we identify parameter regions consistent with experimental and theoretical constraints and a first-order transition.

### Summary

**Primary authors:** CAMARGO-MOLINA, Eliel (Uppsala University); LÖFGREN, Johan (U); ENBERG, Rikard (Uppsala University)

**Presenter:** CAMARGO-MOLINA, Eliel (Uppsala University)

**Session Classification:** Session 07