

Accidentally light scalars from large representations

mercredi 25 octobre 2023 14:00 (20 minutes)

In models with spontaneous symmetry breaking by scalar fields in large group representations, we observe that some of the scalar masses can be loop-suppressed with respect to the naive expectation from symmetry selection rules. We present minimal models – the SU(2) five-plet and SU(3) ten-plet – with such accidentally light scalars, featuring compact tree-level flat directions lifted by radiative corrections. We sketch some potential applications, from stable relics and slow roll in cosmology, to hierarchy and fine-tuning problems in particle physics.

Auteurs principaux: BRUEMMER, Felix (LUPM Montpellier); FERRANTE, Giacomo (LUPM); FRIGERIO, Michele (CNRS/UMR5221); HAMBYE, Thomas Hambye (Service de Physique Theorique, Universite Libre de Bruxelles)

Orateur: FERRANTE, Giacomo (LUPM)

Classification de Session: Beyond the Standard Model

Classification de thématique: BSM