

Spanish and Portuguese Relativity Meeting



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Hubble-induced phase transitions and Higgs Vacuum Stability

Monday 22 July 2024 10:10 (20 minutes)

A Hubble-induced phase transition is a natural spontaneous symmetry breaking mechanism, allowing for explosive particle production in non-oscillatory models of inflation involving non-minimally coupled spectator fields. In this talk, I will discuss the impact of this effect on the evolution and stability of the Standard Model Higgs after inflation and the reheating of the Universe, characterizing its dynamics via 3+1-dimensional classical lattice simulations. Phenomenological aspects like the generation of short-lived topological defects and gravitational waves will also be discussed.

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