

String Swampland Conjectures and Implications for Particle Phenomenology and de Sitter Cosmology

Thursday, 18 November 2021 10:00 (1 hour)

The string swampland conjectures are a list of criteria a low energy effective field theory (EFT) must satisfy to be UV completed in quantum gravity (QG). These conjectures are based on examples from string theory constructions. If an EFT does not respect these conditions it cannot be constructed from a string compactification. These criteria can be used in a bottom-up approach as a model selection principle or as constraints on an EFT parameter space. In this talk, we review some conjectures (including weak gravity conjecture, dS conjecture, trans-Planckian censorship conjecture, adS conjecture, distance conjecture, the Festina Lente bound) and study their implications for particle phenomenology and de Sitter cosmology.

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