

Cosmological Chameleons, String Theory and the Swampland

Tuesday, 25 June 2024 15:30 (15 minutes)

We propose a scenario that might result in a transient phase of cosmological acceleration on asymptotic corners of string theory moduli space. In a cosmological version of the chameleon mechanism, a steep potential is stabilized by a non-zero density of heavy states. This can also be realized by balancing effects of light and heavy towers. We show that in both cases, which end once states are diluted by the cosmological expansion, it is not possible to obtain more than $O(1)$ e-folds without transplankian values for the fields. We propose possible string embeddings and discuss the issues they might have.

Presenter: RUIZ, Ignacio

Session Classification: Parallel session