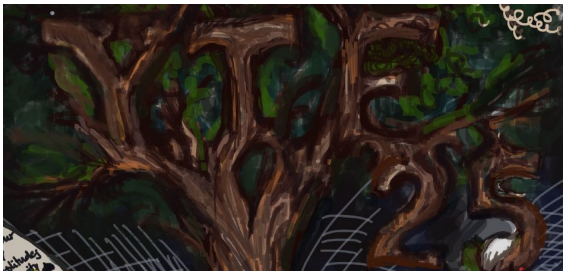

Contribution ID: **63** Type: **not specified**

A Bayesian analysis of axion-saxion quintessence

Thursday 18 December 2025 15:50 (30 minutes)

Motivated by recent results of DESI suggesting that a dynamical dark energy may render a better fit to experimental data in comparison to the Λ-CDM with a cosmological constant, we consider a two-field 4D effective model of quintessence. Inspired by string compactifications with a complex modulus, we study the system consisting of two real scalar fields kinetically coupled, giving rise to a curved target-space metric. We analyse the effect of the kinetic coupling in the existence of a new stable attractor giving rise to dark energy solutions, reproducing the dynamical system analysis previously performed by Cicoli et al for an exponential potential. We extend their study by considering polynomial corrections to the potential and by performing a Bayesian analysis to study the fit of the model to data in comparison with the standard cosmological model.

Authors: RAMOS HAMUD, Mario (University of Cambridge); Prof. QUEVEDO, Fernando (University of Cambridge/NYU Abu Dhabi); Prof. VAZQUEZ, J. Alberto (UNAM); Dr GARCIA-ARROYO, Gabriela (UNAM)

Presenter: RAMOS HAMUD, Mario (University of Cambridge)

Session Classification: Down the Dark Hole