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Dynamics and the Distance Conjecture

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A cornerstone of the Swampland program is the Swampland Distance Conjecture (SDC), which postulates the appearance of (exponentially) light towers of states when approaching infinite distance points in moduli space. As such, the conjecture is formulated for adiabatic field displacements, corresponding to trajectories along a geodesic. However, realistic cosmological applications involve time-dependent field configurations and non-geodesic trajectories. In this talk, we will take some small steps towards a generalisation of the SDC to a dynamical setting.

To do so, we will study the cosmology of general, one-modulus asymptotic limits in String Theory, including the flux scalar potential for both the saxion and axion components. Borrowing tools from the theory of dynamical systems, we will be able to make some general statements about these asymptotic trajectories and their relation to the SDC.

Link to publication (if applicable)

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