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## Decompactification in the Swampland?

*Tuesday, 20 December 2022 18:10 (10 minutes)*

We study the cosmological evolution of string compactifications where the volume modulus has a non-trivial time dependence. Our main result will be to show how a kinating volume modulus in 4 spacetime dimensions can be uplifted to a classical Kasner solution in 10 d. Within a classical picture, this implies that if the kinetic energy of the rolling scalar were enough to overcome the potential barrier separating the vacuum from the runaway to infinity, there would be a “Big Crunch” of the non-compact dimensions rather than decompactification to 10d, flat spacetime. We conclude with a few comments on how quantum effects would modify this picture, and highlight some differences between dynamical and kinematical statements in the Swampland.

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**Session Classification:** Gong show