Contribution ID: **89**   Type: **Parallel session talk**

Cosmological Bouncing solutions in non perturbative String Theory

Thursday, 27 June 2024 17:30 (15 minutes)

This presentation delves into recent developments in string cosmology, specifically focusing on the refinement of the Hohm-Zwiebach approach through an Hamiltonian reformulation. A general criterion is established to have $\mathcal{O}(d, d)$
invariant actions to all orders in α'
connecting
T-duality related perturbative solutions of string cosmology equations. Assuming a timely approach to the perturbative string vacuum with zero curvature and string coupling, our solutions demonstrate dilaton stabilization at later times. The result converges dynamically towards a matter-dominated FLRW cosmology or a De-Sitter-like inflationary phase, dependent on the initial conditions and the characteristics of the dilation potential. As a remarkable feature, for the same class of initial conditions, this scenario also provides a mechanism to wash out (arbitrarly large) anisotropic initial conditions.
This work explores Hamiltonian reformulations, non-perturbative effects, and the emergence of late time attractors in string cosmology.
The presentation will be based on arXiv:2308.16076

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Session Classification: Parallel session