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Loop Blow-Up Inflation: a novel way to inflate with the Kähler moduli

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

The topic of this talk will be a new inflationary model called 'Loop Blow-Up Inflation', first presented in 2403.04831. This model is based on string loop corrections to the scalar potential of 'Kähler moduli inflation' , which originally featured only non-perturbative contributions. The perturbative effects become dominant over the non-perturbative ones as soon as the inflaton is displaced from its post-inflationary minimum. This gives rise to a new form of inflationary potential with an inverse-power law behaviour. Slow-roll inflation can happen with control over the effective theory. This talk will focus mostly on the post-inflationary history predicted for different brane set-ups that realize the Standard Model. The predictions for the spectral index, the tensor-to-scalar ratio, and dark radiation are in good agreement with CMB data.

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Session Classification: Parallel session