

No-scale inflation inspired from string theory compactifications

We propose the generic no-scale inflation inspired from string theory compactifications. We consider the renormalizable superpotential of inflaton field φ in general and the Kähler potentials with φ , as well as one, two, and three Kähler moduli. We study the spectral index and tensor-to-scalar ratio in details, and find the viable parameter spaces which are consistent with the Planck and BICEP/Keck experimental data on the cosmic microwave background (CMB). Also, we study the formation of primordial black hole (PBH) dark matter and the generation of scalar induced secondary gravitational waves (SIGWs) in the two-moduli no-scale inflation models by adding an exponential term into the Kähler potential.

Primary author(s) : WU, Lina (Xi'an Technological University)

Presenter(s) : WU, Lina (Xi'an Technological University)