



High Energy Physics - Theory

# Inflation with improved D3-brane potential and the fine tunings associated with the model

Amna Ali, Atri Deshamukhya, Sudhakar Panda, M. Sami

(Submitted on 7 Oct 2010)

We investigate brane-antibrane inflation in a warped deformed conifold background that includes contributions to the potential arising from imaginary anti-self-dual (IASD) fluxes including the term with irrational scaling dimension discovered recently. We find that the model can give rise to required number of e-foldings; observational constraint on COBE normalization is easily satisfied and low value of the tensor to scalar ratio of perturbations is achieved. We observe that these corrections to the effective potential help in relaxing the severe fine tunings associated with the earlier analysis.

Comments: 7 pages, e figures

Subjects: **High Energy Physics - Theory (hep-th)**; Cosmology and Extragalactic Astrophysics (astro-ph.CO); General Relativity and Quantum Cosmology (gr-qc); High Energy Physics - Phenomenology (hep-ph)

Cite as: [arXiv:1010.1407v1](https://arxiv.org/abs/1010.1407v1) [hep-th]

## Submission history

From: Mohammad Sami [[view email](#)]

[v1] Thu, 7 Oct 2010 12:05:07 GMT (156kb)

[Which authors of this paper are endorsers?](#)

## Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

hep-th

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1010](#)

Change to browse by:

[astro-ph](#)

[astro-ph.CO](#)

[gr-qc](#)

[hep-ph](#)

## References & Citations

- [SLAC-SPIRES HEP](#)  
([refers to](#) | [cited by](#))
- [NASA ADS](#)

Bookmark([what is this?](#))

