Cornell University Library

We gratefully acknowledge support from the Simons Foundation and member institutions

arXiv.org > astro-ph > arXiv:1107.2642

Search or Article-id

(Help | Advanced search)

All papers   Go!

Astrophysics > Cosmology and Extragalactic Astrophysics

Inflation and primordial non-Gaussianities of "generalized Galileons"

Xian Gao, Daniele A. Steer

(Submitted on 13 Jul 2011 (v1), last revised 22 Dec 2011 (this version, v3))

We set up cosmological perturbation theory and study the cosmological implications of the so-called ``generalized Galileon'' developed in \cite {Deffayet:2011gz,horndeski}. This is the most general scalar field theory whose Lagrangian contains derivatives up to second order while keeping second order equations of motion, and contains as sub-cases k-inflation, G-inflation and many other models. We calculate the power spectrum of the primordial curvature perturbation, finding a modification of the usual consistency relation of the tensor-to-scalar ratio in k-inflation or perfect fluid models. Finally we also calculate the bispectrum, which contains no new shapes beyond those of k-inflation.

Submission history

From: Xian Gao [view email]
[v1] Wed, 13 Jul 2011 19:42:53 GMT (26kb)
[v2] Mon, 18 Jul 2011 17:00:34 GMT (27kb)
[v3] Thu, 22 Dec 2011 21:53:09 GMT (31kb)

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.