

Fourth-order gravity as the inflationary model revisited

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(Submitted on 28 Jan 2010 (v1), last revised 12 Feb 2010 (this version, v3))

We revisit the simplest (fourth-order or quadratically generated) modified gravity model in four space-time dimensions. It is equivalent to the certain quintessence model via a Legendre-Weyl transform. By using the quintessence scalar potential we compute the (CMB) observables of inflation associated with curvature perturbations (namely, the scalar and tensor spectral indices, and the tensor-to-scalar ratio) by using the most recent WMAP5 experimental bound. Our results include the next-to-leading terms with respect to the inverse number of e-foldings.

Comments: 11 pages, 1 figure, 1 table, LaTeX; minor improvements, references added

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

Cite as: [arXiv:1001.5118v3](https://arxiv.org/abs/1001.5118v3) [hep-th]

Submission history

From: Sergei V. Ketov [[view email](#)]

[\[v1\]](#) Thu, 28 Jan 2010 07:52:28 GMT (57kb)

[\[v2\]](#) Wed, 10 Feb 2010 04:44:55 GMT (57kb)

[\[v3\]](#) Fri, 12 Feb 2010 01:35:42 GMT (57kb)

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