

## General Relativity and Quantum Cosmology

# Higher Dimensional Dark Energy Investigation with Variable $\Lambda$ and $G$

Utpal Mukhopadhyay, Partha Pratim Ghosh, Saibal Ray

(Submitted on 4 Jan 2010)

Time variable  $\Lambda$  and  $G$  are studied here under a phenomenological model of  $\Lambda$  through an  $(n+2)$  dimensional analysis. The relation of Zeldovich (1968)  $|\Lambda| = 8\pi G^2 m_p^6 / h^4$  between  $\Lambda$  and  $G$  is employed here, where  $m_p$  is the proton mass and  $h$  is Planck's constant. In the present investigation some key issues of modern cosmology, viz. the age problem, the amount of variation of  $G$  and the nature of expansion of the Universe have been addressed.

Comments: 7 Latex pages with few changes

Subjects: **General Relativity and Quantum Cosmology (gr-qc)**Cite as: **arXiv:1001.0475v1 [gr-qc]**

## Submission history

From: Saibal Ray [[view email](#)]

[v1] Mon, 4 Jan 2010 11:43:03 GMT (16kb)

*[Which authors of this paper are endorsers?](#)*Link back to: [arXiv](#), [form interface](#), [contact](#).

## Download:

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

Current browse context:

gr-qc

[< prev](#) | [next >](#)[new](#) | [recent](#) | [1001](#)

## References & Citations

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

## Bookmark (what is this?)

 [CiteULike logo](#) [Connotea logo](#) [BibSonomy logo](#) [Mendeley logo](#) [Facebook logo](#) [del.icio.us logo](#) [Digg logo](#) [Reddit logo](#)