



SDI Review Form 1.6

Journal Name:	Physical Science International Journal
Manuscript Number:	2015_PSIJ_17812
Title of the Manuscript:	The thermodynamics of a gravitating vacuum
Type of the Article	Review Paper

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>1-Equation 1 is classical and an effective cosmological constant was discussed largely in literature through different contexts mainly through quantum gravity, e.g. Rev. Mod. Phys. 61, 1-23 (1989); EJTP 7 (2005) 27-46; Commun. Theor. Phys. 57 (2012) 607-610; PLB619, 26-29 (2005); arXiv: 1412.2350...</p> <p>2-equation 3 is related to g_3 and not g_4, why? explanation is required.</p> <p>3-the conjecture used after equation (2.3) which leads to equation (2.4) is not based on any physical observation.</p> <p>4-equations (4.5) and (5.2) (linear expansion) does not agree with observations.</p> <p>5-the paper seems without conclusions</p>	<ol style="list-style-type: none"> 1. We have added some more references in the text 2. We have mentioned in our revised text that for idea the spacelike 3D-proper volume is requested, not the 4D- spacetime volume. 3. After (2.3) we have added the explanation that according to the cosmological principle also vacuum energy and vacuum pressure can only be functions of the general world time t or $R(t)$, respectively. 4. We have added the comment after (4.5) that this linear expansion is the result for a pure vacuum dominated universe with an $1/R^2$ expansion 5. We have added a conclusion at the end of chapter 5.
Optional/General comments		