



**SDI Review Form 1.6**

Journal Name:	<a href="#">Physical Science International Journal</a>
Manuscript Number:	Ms_PSIJ_57825
Title of the Manuscript:	<b>On a possible logarithmic connection between Einstein's constant and the fine-structure constant, in relation to a zero-energy hypothesis</b>
Type of the Article	

**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:

(<http://www.sciencedomain.org/journal/10/editorial-policy> )



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	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)
<b>Compulsory</b> REVISION comments		
<b>Minor</b> REVISION comments	<p>What I am bothered by is the following comment, i.e. the allegedly notorious zero Energy hypothesis of Pasqual Jordan. i.e. this has the following interpretation by Wikipedia</p> <p><b>Quote, from Zero-energy universe</b></p> <hr/> <p>Due to <a href="#">quantum uncertainty</a>, energy fluctuations such as an <a href="#">electron</a> and its <a href="#">anti-particle</a>, a <a href="#">positron</a>, can arise spontaneously out of vacuum space, but must disappear rapidly. The lower the energy of the bubble, the longer the duration it can exist. A gravitational field has <a href="#">negative energy</a>. Matter has positive energy. The two values cancel out provided the universe is completely <a href="#">flat</a>. In that case, the universe has zero energy and can theoretically last forever</p> <p>End of quote</p> <p>The question which bothered me to no end is the following. Are you, the author having a “completely flat” Universe (Euclidian) Or are you assuming minimum curvature ?</p> <p>The entire reason for this approach by Pasqual Jordan was to ascertain if there could be an almost flat universe that it could Last for an almost enormous, nearly infinite period of time. You need to explicitly work in the relative flatness or lack of , of your Physical model, and to ascertain what is gained by use of a model having fidelity as to the Pasqual Jordan zero energy Idea.</p> <p>What is new which is gained by this effort? What new result is created not done before ? Also, how flat is the geometry of your Physical system</p> <p>NEXT, I ask you to review and include your results as to these two references:</p> <ol style="list-style-type: none"> <li>1. <a href="#">Edward P. Tryon</a>, "Is the Universe a Vacuum Fluctuation?", <i>Nature</i>, vol. 246, p.396–397, 1973.</li> <li>2. <a href="#">Alan Guth</a>, <i>The Inflationary Universe</i>, (ISBN 0-224-04448-6) Appendix A <i>Since the negative energy of a gravitational field is crucial to the notion of a zero-energy universe, it is a subject worth examining carefully. In this appendix I will explain how the properties of gravity can be used to show that the energy of a gravitational field is unambiguously negative. The argument will be described [in the appendix] in the context of Newton's theory of gravity, although the <b>same conclusion can be reached using Einstein's theory of general relativity.</b></i></li> </ol> <p>I ask you to look at these two references and to see if your construction has any connection to These two classic references</p> <p>Finally, as to the fine structure constant, alpha, see if your research result involving fine Structure constant, has any overlap with this reference</p> <p>Bouchendira, Rym; Cladé, Pierre; Guellati-Khélifa, Saïda; Nez, François; Biraben, François (2011). <a href="#">"New determination of the fine-structure constant and test of the quantum electrodynamics"</a> (PDF).</p>	



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	<a href="#">Physical Review Letters</a> (Submitted manuscript). <b>106</b> (8): 080801. <a href="#">arXiv:1012.3627</a> . <a href="#">Bibcode:2011PhRvL.106h0801B</a> . <a href="#">doi:10.1103/PhysRevLett.106.080801</a> . <a href="#">PMID 21405559</a> .	
<b>Optional/General</b> comments		

**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (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)
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

**Reviewer Details**

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