



SDI Review Form 1.6

Journal Name:	Physical Science International Journal
Manuscript Number:	Ms_PSIJ_21966
Title of the Manuscript:	The Fine-Structure Constant as the Physical-Mathematical MILLENNIUM PROBLEM
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.

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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. The authors focus on an important problem in physics, and state some interesting results on this subject. The English of the paper is very good.</p> <p>2. Unfortunately, the proofs of these results are not complete. The main problem is the following one: given a real continuous function f on $[a,b]$, with continuous derivative in (a,b), and satisfying $f(a)<f(b)$ (respectively $f(a)>f(b)$), the authors deduce that f is increasing (respectively decreasing) in the interval $[a,b]$. This assertion is not true in general. In order to deduce such a conclusion, the (continuous) derivative of the function f should be not vanishing at any point of the interval. In this case, thanks to Darboux's property applied to f', the derivative f' has constant signature on (a,b), and the desired conclusion follows. It seems that in the case of the functions appearing in the present work, such a property can be proved.</p> <p>3. The basic relation (2.1) (page 10) is written incorrectly.</p>	<p>1. Thank you very much. For me it is pleasant high appreciation of my translation of article from Russian into English (Alexey Stakhov)</p> <p>2. Revised (see the revised manuscript). We have introduced a proof of the correctness of our arguments concerning the derivative (see the revised manuscript.)</p> <p>3. Revised (see the revised manuscript).</p>
Minor REVISION comments	<p>1)Page 4, PROBLEM, point 2., please write: are these "dimensionless parameters" "calculable in principle" or are they uncalculable...</p>	<p>Revised (see the revised manuscript)</p>



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	2) page 5: please explain the physical significance of all symbols appearing in the formula which defines alpha (for example of epsilon_0, etc);	Revised (see the revised manuscript)
	3) Please write 1), 2),...instead of 1), 2),,....	Revised (see the revised manuscript)
	4) Some formulas are stated and use without proof, their proofs appearing in the next pages. The logical way is to prove the formula firstly, and then to apply it.	In some cases, we use some formulas without proof. This is done with the purpose of brevity.
	5) P.13, line 3 from below: write (see (2.1)) instead of (see (5.1)).	Revised (see the revised manuscript)
	6) P.14, 3.2: the notations sFs(psi-2), etc. seem to be wrong; maybe sF(psi-2) would be better;	Revised. We replaced sFs on sF in all the formulas
	7) P.15, 3): delete the sign following "Then";	Revised (see the revised manuscript)
	8) please number each formula which appears in the sequel;	Revised (see the revised manuscript)
	9) P.15: please correct the relation $v(\psi)=c_0$ multiplied by $v(\psi)$ and sFs(psi);	Revised (see the revised manuscript)
	10) P. 16, the last line, missing "t" in "the normalized..."	Revised (see the revised manuscript)
	11) P. 17 : write correctly "...is a real number".	Revised (see the revised manuscript)
	12) p. 19: "...consists in the following".	Revised (see the revised manuscript)
	13) Please use "justify" for alignment in all pages;	We have considered this comment
	14) P. 22: Please write "Hilbert says" instead of "Gilbert says";	Revised (see the revised manuscript)



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	<p>15) P.24: "...the formula (3.5) of (or "for") the golden ratio...";</p> <p>16) P. 25, line 5, the same expression is repeating.</p> <p>17) P. 31, line 2 from below: "...for the Black Hole {$2 < \psi < \infty$}..." is wrong. Please correct this assertion.</p>	<p>Revised (see the revised manuscript)</p> <p>Revised (see the revised manuscript)</p> <p>Revised (see the revised manuscript)</p>
<u>Optional/General</u> comments	<p>The second referee of this paper should be a specialist in numerical physics.</p>	