



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>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. 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>The basic relation (2.1) (page 10) is written incorrectly.</p>	
Minor REVISION comments	<p>1)Page 4, PROBLEM, point 2., please write: are these "dimensionless parameters" "calculable in principle" or are they uncalculable... 2) page 5: please explain the physical significance of all symbols appearing in the formula which defines alpha (for example of epsilon_0, etc); 3)Please write 1), 2),...instead of 1), 2),....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. 5) P.13, line 3 from below: write (see (2.1)) instead of (see (5.1)). 6) P.14, 3.2: the notations $sF_s(\psi-2)$, etc. seem to be wrong; maybe $sF(\psi-2)$ would be better; 7) P.15, 3): delete the sign following "Then"; 8) please number each formula which appears in the sequel; 9)P.15: please correct the relation $v(\psi)=c_0$ multiplied by $v(\psi)$ and $sF_s(\psi)$; 10) P. 16, the last line, missing "t" in "the</p>	



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	<p>normalized..." 11) P. 17 : write correctly "...is a real number". 12) p. 19: "...consists in the following". 13) Please use "justify" for alignment in all pages; 14) P. 22: Please write "Hilbert says" instead of "Gilbert says"; 15) P.24: "...the formula (3.5) of (or "for") the golden ratio..." ; 16) P. 25, line 5, the same expression is repeating. 17) P. 31, line 2 from below: "...for the Black Hole $\{2 < \psi < \infty\}$..." is wrong. Please correct this assertion.</p>	
<p><u>Optional/General</u> comments</p>	<p>The second referee of this paper should be a specialist in numerical physics.</p>	

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