



**SDI Review Form 1.6**

Journal Name:	<b><u>Physical Science International Journal</u></b>
Manuscript Number:	<b>Ms_PSIJ_33792</b>
Title of the Manuscript:	<b>"Uncertainty relations" in the group-theoretic scheme of quantum mechanics</b>
Type of the Article	<b>Original Research Article</b>

**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)
<b><u>Compulsory</u></b> REVISION comments	<p><b>Review: Ms_PSIJ_33792</b></p> <p>The paper under consideration discusses both uncertainty relations and the profound relation of non-commutativity and irreversibility via group formulation of quantum mechanics. It is clear and objective: starting from the spinor representation of Schrödinger equation, all the results of the works were obtained by basic group theoretic approach. In particular, by a simple application of Baker-Campbell-Hausdorff (BCH) formula, one finds some similarity between Heisenberg uncertainty relation and the result of the commutator of the Lie algebra of the corresponding Lie group, see Eq. (3.5). Moreover, the BCH formula was also used to explain irreversibility, see Eq. (3.7). Due to its simple and consistent content and because of what has been stated above. My only suggestion is the reading and minor corrections on the style of the text by a native English Speaker</p>	<p>This is right attitude towards the paper, especially on the role of the BCH-formula. Though, it is interesting to note that the approach to irreversibility, developed earlier, was based on the matrix formula from the non-Euclidian superposition principle. The last one is the set of four formulae for pair of non-commutative matrices on group, which contains symmetries with respect of permutation and inversion evidently, opposite to BCH-formula. This formula is used here for simplicity.</p> <p>Concerning of the style, I have to say that I agree with notation, and feel myself out of it.</p>
<b><u>Minor</u></b> REVISION comments		No comments
<b><u>Optional/General</u></b> comments		No comments