



SDI Review Form 1.6

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| Journal Name: | Physical Science International Journal |
| Manuscript Number: | 2015_PSIJ_18414 |
| Title of the Manuscript: | THE COMPUTATIONAL LIMIT TO QUANTUM DETERMINISM AND THE BLACK HOLE INFORMATION LOSS PARADOX |
| Type of the Article | Original Research 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/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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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) |
|--|---|--|
| <u>Compulsory</u> REVISION comments | The theoretical reasoning of the author(s) is clear. However, it seems to me that an essential point has escaped him. In quantum physics, there is always an interaction between the physical value of the system and the instrument measuring, which leads to crossed terms (entangled terms). When the initial state of the system is represented by a function of state unspecified, the linearity of Schödinger's equation has as a consequence that the final state is represented by a formula which does not contain a cross term. In this case, the reasoning of the author(s) is exact. However, in the quantum theory of measurement, cross terms generally appear when one is interested in the average value of observable pertaining to the unit "system + instrument". These cross terms appear if one adopts the formalism of the Heisenberg's matrix density. It results from it that in the final state of the unit "system + instrument", the needle of the instrument does not have, in each case, a statistical position. In other words, the breakdown of determinism only based on the wave function cannot be defended here as potentially serious. Taking into account these arguments, the author(s) should at least discuss these points. | |
| <u>Minor</u> REVISION comments | | |
| <u>Optional/General</u> comments | | |

Reviewer Details:

| | |
|----------------------------------|---|
| Name: | Anonymous |
| Department, University & Country | University P. & M. Curie, France |