Review Form 1.6

Journal Name:	**International Astronomy and Astrophysics Research Journal**
Manuscript Number:	**Ms_IAARJ_84443**
Title of the Manuscript:	**A Relation Between Different Physical Parameters of a Planet and Its Consequences**
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:

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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	**CRc1)** As known, the Solar System is chaotic over million- and billion-year timescales, with the orbits of the planets open to long-term variations. One example of this chaos is Earth's axial tilt, which, due to friction raised within Earth's mantle by tidal interactions with the Moon is incomputable from some point between 1.5 and 4.5 billion years from now. This means that the position of a planet along its orbit ultimately becomes impossible to predict with any certainty, but in some cases the orbits themselves may change dramatically. In addition, such chaos manifests most strongly as changes in eccentricity, with some planets' orbits becoming significantly, more or less, elliptical. Eq. 1) is a deterministic equation. How does the author reconcile the validity of his "parent equation" with the Solar chaotic System? **CRc2)** Quantum-like models of gravitational system have recently been proposed in the literature to explore the formation of the solar system structure. In these models, the chaos behaviour of a large number of original nebular particles in a gravitational field can be described in terms of the wave function satisfying formal Schrödinger equation, in which the Planck constant is replaced by a constant on cosmic scale. The author claims that his approach may be used to model the early planets during planetary formation. This sentence is quite unclear to me. The author is invited to enter more in deep in the discussion by explain how the RPP is suffice to avoiding the laws of quantum mechanics and general relativity. **CRc3)** All the equations proposed in this model are purely classical, in the sense that they do not take into account neither of the quantum effects (at the base of models useful to describe planetary orbits) nor of the relativistic effects. In particular, relativistic effects generated by the Sun or by the central star are the most relevant ones and produce evident modifications in the secular dynamics of the inner solar system. The Kozai mechanism, for example, is modified due to the relativistic effects on the argument of the perihelion. In Section 2.1.5 "Limitations of RPP", the author is invited to mention and briefly discuss the limits of his (classical) model which neglects relativistic and quantum effects as well as the stochastic effects deriving from the chaotic dynamics of the solar system.	
Minor REVISION comments	**MRc1)** The work is not well placed in the context of the works in the matter recently appeared in the literature. **MRc2)** The references cited in the manuscript are not exhaustive and the list should be largely completed. **MRc3)** It is suggested to produce a short review-section where the present work is placed and it is well framed.	
Optional/General comments	The work is interesting and clearly written. However, there are some points that need to be clarified (e.g., those mentioned in the above section "*Compulsory REVISION comments*"). Furthermore, the statement that this work has opened new horizons in planetary research needs clarification and should be motivated perhaps with the help of concrete considerations and/or examples. The author is advised to take into account the suggestions expressed in the two sections above. In my opinion, this will help to attract the reader's interest more.	

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PART 2:

	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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

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