



**SDI Review Form 1.6**

**PART 1:**

Journal Name:	<a href="#">Physical Review &amp; Research International</a>
Manuscript Number:	2013_PRRI_3746
Title of the Manuscript:	SOME SALIENT FEATURES OF NONLINEAR WAVE PROPAGATION IN ROTATING PLASMAS

**General guideline for Peer Review process is available in this link:**

**(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)**

- This form has total 9 parts. Kindly note that you should use all the parts of this review form.



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**PART 2: Review Comments**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (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>Compulsory</b> REVISION comments	<p>Reviewer Comments: <b>Manuscript 2013_PRRI_3746</b></p> <p><b>Title:</b> SOME SALIENT FEATURES OF NONLINEAR WAVE PROPAGATION IN ROTATING PLASMAS <b>Authors:</b> G.C DAS</p> <p>The author presents a study of the salient features of ion-acoustic wave such as solitary waves, double layers, shock waves and sin-hyperbolic waves in rotating plasma under the influences of Coriolis. The author has used the pseudopotential method to derive Sagdeev like-wave equation. The effects of the Coriolis interaction or different angles of rotation on</p>	<p>1. Title of the paper has been changed now as : <b>Study on nonlinear ion-acoustic solitary waves in a slow rotating plasma.</b> ( This has been done with due respect to first Reviewer comments)</p> <p>The Reviewer is correct in saying all about the studies on nonlinear plasma waves under the action of Coriolis force</p>



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<p>the wave mode are investigated numerically.</p> <p>There are several issues that should be addressed before recommendation for publication:</p> <ol style="list-style-type: none"><li>1. Can author explain the applications of their results precisely?</li><li>2. The author writes the results in few lines without any physical meaning or explanation, so physical discussion should be made.</li><li>3. The authors are requested to improve the manuscript according to all issues prior publication in Journal of Physical Review &amp; Research</li></ol>	
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	International.	
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	<p>There are several issues that should be addressed before recommendation for publication:</p> <ol style="list-style-type: none"> <li>1. Can author explain the applications of their results precisely?</li> <li>2. The author writes the results in few lines without any physical meaning or explanation, so physical discussion should be made.</li> <li>3. The authors are requested to improve the manuscript according to all issues prior publication in Journal of Physical Review &amp; Research International.</li> </ol>	<p>1. It is purely theoretical work based on the earlier works made by many well known researchers. We have cited their works with proper references. Among all we cited some pioneer research works which are received merit in this field e.g. their works are executed in slow rotating stars [by Chandrasekhar(1953), Lehnert(1954,1954)], Hide(1954). Whereas the influence of Coriolis force have shown many new salient features in linear wave propagation generated in an ideal model of plasma (By Das &amp; Uberoi(1970), Bajas and Tandon(19660)). Latter such model of plasma (i.e. under the action of Coriolis force in isolation) had been extended to the dynamical bahaviours of nonlinear waves in plasma dynamics. All works result with conclusions saying that the rotation, however small in magnitude, have the important role in nonlinear wave phenomena and with out its proper inclusion the observations, especially in astropasmas, will not give full satisfactory observations rather it will be having erroneous. Further, very recently Das and Chakraborty(2011) have studied the effect of Coriolis force on nonlinear waves in plasma environments over the Moon. They have shown the effect of slow rotation (caused the effect of Coriolis force in isolation) on the formation of sheath over the Moon's</p>
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		<p>surface, and causeway highlights effectiveness of Coriolis force in the formation of nebulous : clustering of dust atmosphere within the sheath. They further have shown the effect of rotation, Mach number and other parameters as well. These papers are cited as appropriate models with typical data input for numerical estimation and has the merit in literature. They further claimed that this plasma model under the action of slow rotation could be applied in plasma atmospheres of an asteroid in asteroid belts and hope to get many unknown observation which are yet to be known and thus creates an uneven competition between theory and the satellite observations.</p> <p>3. The results are now in full explanation that too in details. The present study is though purely theoretical works but it is parallel to earlier models taken by many researchers. Our work is to know the nonlinear wave phenomena in rotating plasmas (In fact we are the leading workers in this direction) and finds the interaction of Coriolis force in isolation. The changes of input plasma parameters will not change the conclusions on the results rather it will give schematic variation. The study the existences of solitons of different kinds introduces by the rotation and many other</p>
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		<p>results have shown with the variation of different pulse introduces through the ordering effect of <math>\Phi</math> expansion. It is also indicates that with the effect of higher and higher effect might lead to find the sheath characteristics in plasmas, wherein rotation affects the formation of nebulons (this are discussed elsewhere by solving the Sagdeev potential equation numerically by Rungge-Kutta method (Das &amp; Chakraborty(2011).</p> <p>The manuscript has been written with due respect to Reviewer's comments and that too with scientific English</p> <p>I hope the revised manuscript is now suitable for its publication in the journal.</p>
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<b><u>Minor</u> REVISION comments</b>		
<b><u>Optional/General</u> comments</b>		