



SDI Review Form 1.6

Journal Name:	Physical Science International Journal
Manuscript Number:	Ms_PSIJ_29209
Title of the Manuscript:	Ion cyclotron (IC) oscillations excited by nonlinear waves propagating in collision-free auroral ionosphere
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 <i>(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)</i>
Compulsory REVISION comments	<p>Generally:</p> <p>(1)-The paper is well written but it needs some corrections. For readers it is difficult to follow the huge amount of different data without simulating results or experimental results.</p> <p>(2)-Autors should check the references: Kintner ..., Boardsen ..., Schunk, - they are not mentioned in ref. list at the end of the manuscript. There are also some references which are not included in the text (Ergun.... 1998a, Chaston..., Mursula..., Woods...,) – check.</p> <p>(3) -Page 5: last paragraph: Autors should include: - “Stochastic methods are widely used also in different fields of physics such as is shown in references:</p> <p>- Matko Vojko, Đonlagić Dali. Sensor for high-air-humidity measurement. <i>IEEE trans. instrum. meas.</i>, apr. 1996, 45, no. 2, p. 561-563. [JCR, WoS]</p> <p>- Matko Vojko, Đonlagić Dali, Koprivnikar Jože. On the use of quartz crystal capacitive dependence for measurement of 0-1 ml volumes. <i>Sensors and actuators. A, Physical</i>, 1994, a42, no. 1/3, p. 465-</p>	<p>Replies:</p> <p>(1) Thanks! Yes, I totally agree to the comment that, without access in advance to related studies either in simulations or experiments, it is not easy to digest this extensive but intensive study. It contains studies at least for two papers. I hope to introduce the main results in one paper only so as to give readers a consistent view on the integrated research with an innovative approach to the linear IC waves driven by nonlinear waves.</p> <p>(2) Thanks! All these references are checked and updated, wherever necessary, in both the body of the contexts and the ref. list at the end of the manuscript.</p> <p>(3) Thanks! The sentence is added at the beginning of the last paragraph. All the suggested references cited on Page 5. This is a very important advice to give readers a complete view on the stochastic approach.</p>



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	<p>471. [JCR, WoS]</p> <p>- Bonfig, K. W. Das Direkte Digitale Messverfahren als Grundlage einfacher und dennoch genauer und storsicherer Sensoren. <i>Sensors</i> 1988, 3, p. 103-108.</p> <p>Authors should include the above references in the paragraph on page 5.</p> <p>(4)-In Figures 6, 7, 8, and 9 are missing units at x an y axis.</p> <p>(5)-Authors should emphasis more clearly what are the main advantages of the proposed method in the conclusion.</p>	<p>(4) Explanation: The units in these Figures are not missing along both x and y axes, but the parameters are defined dimensionless. This was described in the previous pages, like Page 12 following Equation (35), Page 16 in the last paragraph, and Page 17 in the first paragraph.</p> <p>(5) Thanks! At the end of paper, a new individual section after Discussion section is added as the Conclusion section. In this section, I emphasized clearly the main advantages of the proposed method: Macroscopically, the electric field is stochastic, maintained by the dynamical processes of the propagation of solitons unaffected by the local behaviour of the ions; microscopically, within any tiny temporal intervals when a specific space-charge electric field appears in space with a lifetime ions are residing in this “externally” constant field. In that sense, we are solving a simpler Boltzmann equation analytically, rather than a more complicated Boltzmann-Vlasov equation which requires numerical approaches. This point was discussed in details on Page 11.</p>
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		