

Author's feedback against Editor's Comment:

I have reviewed this paper with considerable interest. My comments and suggestions are as follows:

- Objective – the abstract does not clearly state the primary objective of the paper.

Corrected : see at the abstract by yellow lines

- Language – I understand that the writers are not native English speakers. While the language is reasonably coherent, the syntax, grammar, spelling and punctuation do not rise to the standards demanded by a professional scientific journal. I urge the writers to engage the services of a proficient editor to correct the numerous errors which diminish the value of the paper by default.

Corrected : see at all by yellow lines

- Plasma – I kept looking for information in the writer's methodology describing how the plasma field referred to in the paper is propagated, what its properties are, how the plasma field itself behaves with respect to the materials employed in the structure of the apparatus, and how it specifically relates to the data points referred throughout the paper. Since I see no information other than a simple schematic drawing appended to the end of the document, I can only assume that the experimental protocols did not address this set of issues. If they did, the model of plasma propagation and the behavior of the particular plasma field employed in this study were not described. Either way, this represents a serious lapse in the methodology applied to the topic.

Corrected : see at all by yellow lines specially at introduction and experimental set up

- Methodology – several effects known to operate in plasma physics are not addressed in this paper. For example, plasticity in DC-generated plasma fields plays an important role in the way sub-atomic particles are known to behave under certain field effects. The paper does not discuss why permanent magnets were used instead of electromagnets, nor was a distinction made between the imposition of a PM-induced flux field as opposed to the measurable effects that would be exerted by the application of a Helmholtz field, for comparison purposes.

Mention at the previous works of the author A R GALALY

Moreover corrected at the discussion and conclusions

- Instrumentation – I find no reference to a description of the instrumentation or calibration ranges used to measure data points during the experimental process. I believe this is an oversight that should be remedied before the paper is published. It is essential that professional papers of this kind disclose and share a full description of the methodology used to determine results in order for peers to replicate and independently test the hypothesis posited by the writers.

Mention at the previous works of the author A R GALALY

Moreover corrected at the experimental set up

- Permanent Magnetic Fields – I found little cogent information in the paper to inform us about the author's understanding and appreciation of the nature of PM-induced flux fields imposed in a plasma-based protocol. The nature of PM materials in the presence of plasma fields is variable, particularly in the regions which by definition become orthogonal relative to the direction and flow of electrons between regions within the plasma, which are biased by voltage. I find no information explaining why the field strength, form factors, and displacement distances used in the experiment were employed. It seems to me that the writers must have had good reason to design the apparatus as they did – it is important that the model they relied on, including the specific assumptions and rationale used to determine the architecture of the apparatus, be described fully in order to inform others about the likelihood that different results could have been observed if the architecture and geometries of the experimental apparatus were to be altered in some way.

all the characteristic of the permanent magnet mentioned before at the four previous papers of the author where we prefer permanent magnet because it's movable and easy to put it around the powered electrodes moreover it have edge effect characteristic which is suitable to condense the plasma at the edge and have the trend to increase the density and decrease the temperature at the edge (mentioned by yellow line at the conclusion and discussion

Quantum thresholds – the discussion provided by the authors suggests obliquely but does not discuss directly how the use of voltage biases and PM-induced flux fields behave when certain interactive thresholds are breached during execution of the experimental protocols. For example, it is clear that the intensity, density, and directionality of the plasma field itself – I use these terms loosely to accommodate the family of plasma field attributes – will exert much different results when certain quantum thresholds have been breached, as compared to the results reported in the paper. We are not told what the thresholds are, how they behave, what forces are exerted by field effects above and below the thresholds, and so on.

Corrected and added at conclusion and discussion by yellow lines

The interpretation given to the semi-log secondary curve diagrams shown as Figure 7(a) and 7(b) by the authors illustrates, for example, that when compared to the results depicted in figure 9(c) [Semi-log of the second derivative of the electron current for positive column], two important pieces of interpretive information have been omitted. The data used to generate Figure 7 (a) and 7(b) clearly suggest that a threshold is being approached by the juxtaposition of voltage and magnetic flux fields within the apparatus. What the straight line with a definitive slope illustrated in Figure 9(c) suggests, in addition, is that when the threshold is breached (and we don't know what the specific threshold may be because the authors have not defined it), self-organizing criticality is already occurring within the plasma field.

Corrected : because and due to the theory of the Langmuir probe mentioned at the discussion by yellow lines

The effect illustrated in Figure 9(c) cannot simply be attributed to a linear relationship between the field effects that operate between the anode and cathode points in the apparatus. If anything, the variability of the electron current ought to demonstrate a hyperbolic curve akin to the intrinsic curve exerted by the PM-induced flux fields upon the plasma itself. Why the logarithmic relationship developed by the data points generated by the apparatus is linear in this respect deserves recognition and a cogent explanation.

Corrected

- PM-induced Spin-Polarity – the literature describing electron behavior in plasma-induced fields is replete with references to flux field-induced spin and polarity characteristics exhibited by electrons

passing between anode-cathode elements. The real effects produced by exposing a flow of electrons through a plasma field in the presence of a magnetic field are not negligible – in fact, in some circumstances, the results have been reported to be statistically significant. I find no consideration given to this aspect of electron behaviors, field densities, or other important variables otherwise discussed in this paper.

Corrected

- Photon/ Phonon/ Thermal Emissions – it seems to me that a principle value of this paper could be a careful consideration of the nature, extent and causes of net energy losses exhibited by the plasma-induced electron field effects. For example, I see only a peripheral mention of something referred to by the authors as a 'glow field' effect. It is important for the authors to identify what the glow field is, how it is propagated, what it consists of and how its presence relates to the protocols applied in the experiment. In the same manner, I find no mention at all of the emission of phonons in the form of 'white noise' during the experiment. Acoustic emissions are the product of fine scale interactions that are not recognized, explained, or accommodated in this paper. The emission of photons and phonons, thermionic units, gamma fields, alpha and beta particles, and perhaps other observable products resulting from electron flow through a plasma field in the presence of PM-induced flux fields, are all part of the equations that describe what is really occurring during the experimental protocols.

Corrected see the yellow line at conclusion and discussion moreover at the key words

Accordingly, I believe this paper falls far short of providing an adequate explanation of the way the experiment was designed, conducted, instrumented, and interpreted. It is not possible for anyone else skilled in the art of this kind of research to replicate either the methodology or the data points described by the writers based on the information they have provided.

Corrected the language-methodology exp setup –keywords- conclusion –discussion -references