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Journal Name:	Physical Science International Journal
Manuscript Number:	Ms_PSIJ_34889
Title of the Manuscript:	METASTABLE NON-NUCLEONIC STATES OF NUCLEAR MATTER: PHENOMENOLOGY
Type of the Article	Original Research Paper.

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)
<u>Compulsory</u> REVISION comments	<p>Article Reference: Ms_PSIJ_34889</p> <p>Title: METASTABLE NON-NUCLEONIC STATES OF NUCLEAR MATTER: PHENOMENOLOGY</p> <p>In this paper the authors have shown that the metastable states of the nuclear matter may exist when the nuclear forces are not strong enough to bind a part of the quarks into stable nucleons, which leads to local shake-ups in the nucleonic structure of the nucleus. For these anomalous excited states of the nuclear matter, called inner-shake-up or <i>isu</i>-states, the relaxation of the nuclei is initiated by the weak nuclear interaction. The existence of nuclei with a shaken-up nucleonic structure makes it possible to physically interpret a rather large group of experimental data on the initiation of low energy nuclear reactions (LENRs) and the acceleration of radioactive α- and β-decays in a low-temperature plasma. The possible mechanisms of LENRs implemented in a Rossi E-CAT reactor are discussed. It is also suggested that the metastable <i>isu</i>-states of a different type occur as a result of high-energy collisions of particles, when heavy hadrons (baryons, mesons) are formed in the collisions of protons with characteristic energies higher than 1 TeV. This kind of concept makes it possible to physically interpret the recently recorded anomaly in the angular $+ - 19 e e$ correlations of positron-electron pairs emitted in the</p>	<p>Thank you very much!</p>



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	radioactive decays of excited 820 Be nuclei formed by the interaction between protons with kinetic energy $\sim 1\text{ MeV}$ and 721 Li nuclei. It is this anomaly that can become the basis for introducing a fifth fundamental interaction into physics, in addition to the strong/weak nuclear, electromagnetic, and gravitational interactions. The article is very interesting and is very well written, the references are appropriate.	
<u>Minor</u> REVISION comments	In my opinion, the article can be published after some minor changes in the references section. The references should be as follows: [1], [2], ...	I have introduced the corrections.
<u>Optional/General</u> comments		