

Propulsion Systems PNN (Non-Newtonian Propulsion)

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Premise

As the facts incontrovertibly demonstrate, rocket astronautics has been unable to place permanent outposts on the Moon since the time of Apollo 11 or more than half a century ago.

I don't know if you realize that today with Project Artemis NASA is trying to redo what it did over 50 years ago! The tragic failure and scrapping of the Space Shuttle (14 dead astronauts) in about 30 years of launches has in fact taught nothing to those who are about to waste more time with the inevitably failing project for rocket chemical propulsion.

The fact that they have been bringing robots to Mars for decades demonstrates that they cannot bring humans nor the enormous quantity of materials that could ensure the existence of a permanent and precautionary human outpost from the inevitable unforeseen events, not only on Mars but also on the Moon which is much closer.

The only solution that can change this catastrophic state of affairs in current astronautics is PNN, propulsion without reaction mass ejection. PNN is electromagnetic and NOT based on the highly polluting chemistry of the fuels that propel rockets.

Our demonstrative PNN prototypes want precisely to show that it is possible to change the paradigm in the real and not the fake because it is impossible conquest of space.

To give a trivial example, the propulsion of rockets is like a car that has to carry the road on which to move. While the PNN must not transport anything since through the Lorentz force at 432 Mhz applied to the open circuits it recoils on the **VACUUM which is not a vacuum because it has NOT zero dielectric constant and magnetic permeability.**

In practice it is an invisible "physical means" that can be used as an object on which to recoil by applying precise physical relationships.

And then any unbeliever can see our PNN experiments at our experimental sites of our association ASPS (Space Propulsion Development Association) if you are reluctant to change your mind.

For those familiar with the field, Tsiolkovsky's formula limits the possibilities of chemical propulsion of rockets in placing human outposts on other celestial bodies both in flight times and above all in costs.

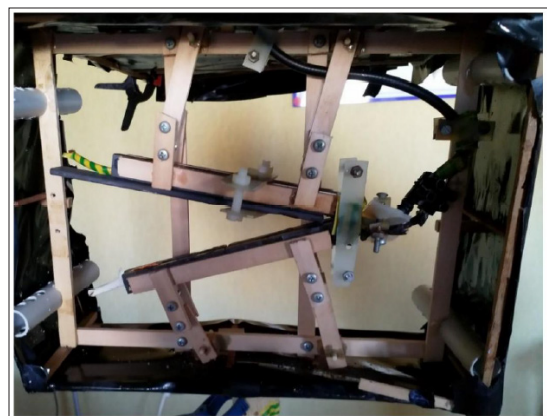
So, the only thing we can now change in Tsiolkovsky's formula is the ratio of the aircraft masses. The rocket must be built in such a way that this relationship has a given meaning, otherwise it will simply not achieve its goal. Something can be done by adding some ingenious solutions to the design, but in general this will have little effect on the result: the chemistry of the fuel and the gravity of celestial bodies cannot be changed... From: "The Cruelty of Tsiolkovsky's Formula"

Introduction

The Project

The PNN thruster is an invention (Patented) of Emidio Laureti ASPS CEO who claims to violate the principle of action and reaction with a device that uses frequencies in the UHF band. In that publication F432 device operates with frequencies around 432 Mhz on a ballistic pendulum and subsequently on a shielded and milligram-sensitive Kern balance [1].

The scale used www.asps.it/kerup3.png is illustrated in point 7 of this writing and many other details can be found in volumes 40, 41, 42 of Nova Astronautica from 2020 to 2022. Nova Astronautica ISSN: 0393-1005 is the 'Official Body of the ASPS.



The PNN F432 prototype shown for the first time in public at a Road Show on October 31st 2020 www.asps.it/PNN488.mp4

General Equipment

Total equipment necessary both for tests with PNN Prototypes, with "Pendolino", with ballistic pendulum and with test on electronic balance with arms screen

Italab "Archimede" linear amplifier with 600 watt and 432 MHz output, ICOM IC-910H Pre-amplifier, Circulator M: UIYCC53356A, 400T450NF, Wattmeters in UHF, Vector Impedance Antenna Analyzer KVE520A Vhf/Uhf VU, the Kern Scale electronic and shielded, several types of Coax Cables. Dynamometer Carpo, Ara 18 proximity Inductors, Variable magnetic field detectors.

Optical Fiber with video camera, Tectronics oscilloscope and probes suitable for intercepting UHF frequencies, Electric and Magnetic field detectors, MD500 U amplifier for the alkaline battery prototype lithium radio-control operated with Baofeng as pre-amplifier.

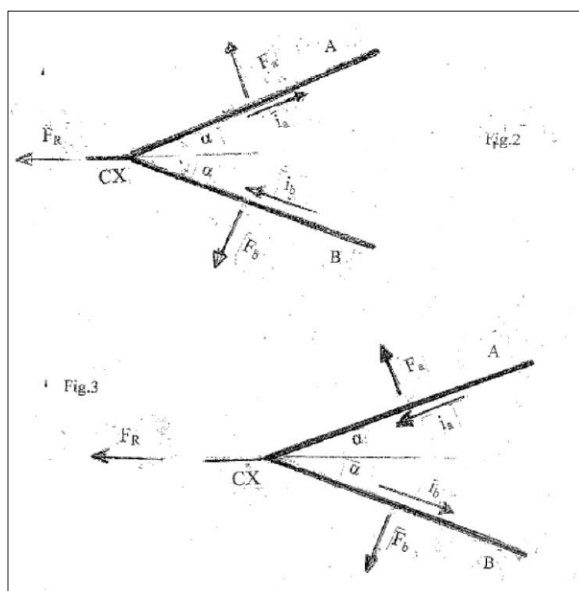
Proof of existence of Lorentz forces for open circuits

The PNN derives its existence from forces of magnetic origin between open loops called V-dipole arms

The whole PNN is based on this elementary theoretical observation of a V-folded dipole in which the two arms interact with each other tending to widen the angle 2α as in Figure 2 and Figure 3

Everything is more accurately defined in Nova Astronautica Vol.40 2020 and following as well as in

<https://neolegesmotus.com/2020/11/02/field-self-interaction-electromagneticthrustor/>



<http://www.asps.it/impnn2.png>

In practice, the validity of PNN is based on theory rather than experimentation

The thrust is determined by the **vector resultant** of two force vectors F_a and F_b . The base of the PNN is in fact the **ELEMENTARY Lorentz forces** that are possible even in **open circuits** if **one has the enormous patience to verify it experimentally in an accurate way**

As others have said the question arises "why didn't they notice sooner?" despite even Maxwell saying illo tempore UNHEARD that the forces between open circuits have not been studied? [2-5]

Maxwell explicitly says on page 163 Vol.2 of his Treatise: **....NO EXPERIMENTS ON THE MUTUAL ACTION OF UNCLOSED CIRCUITS HAVE BEEN MADE....**

And I must add that in his day it was practically impossible to experiment with open circuits like the V-dipole. For years I have followed this reflection of Maxwell experimentally [2, 4]

WHY I REPEAT: DIDN'T THEY NOTICE IT BEFORE? But because the mass of self-styled physicists and scientists are educated to NEVER get out of line.... of the already done of those who preceded them.

And those who preceded them never studied Lorentz forces between open circuits due to various and profound experimental difficulties

It seems that their greatest desire of the non-students of the Lorentz forces between open circuits is to write mafeicentometric (mathematics self-styled physics) and mathematize only LIMITED AND PARTIAL EXPERIMENTAL STUDIES EASY TO CARRY OUT as are the Lorentz forces applied only to closed circuits....

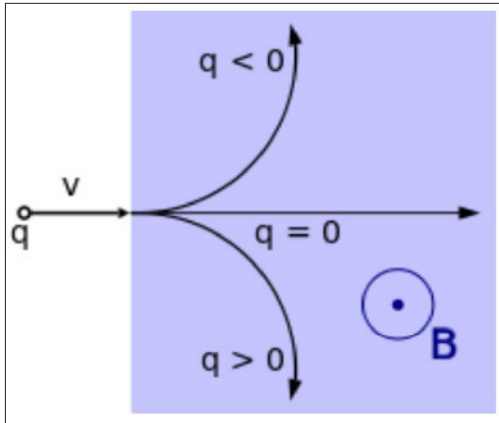
So, I found myself experimentally forced TO DO what hasn't been done since about 150 years ago (also as mentioned due to intrinsic experimental difficulties) starting from the elementary theoretical basis of the aforementioned figure <http://www.asps.it/impnn2.png> a which NOBODY HAS THINK OF AS AN INTERACTION GENERATING ELECTRODYNAMIC FORCES!

See what Marrucci of the University of Naples says in Nova Astronautica...:

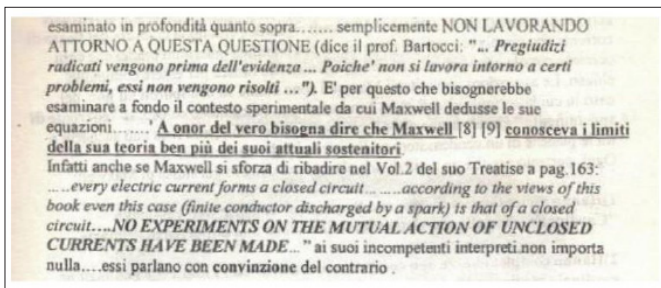
"The fact that the Lorentz force may violate Newton's 3rd law (in its traditional formulation) is well known, any well-trained physicist knows.

The reason, as Fabri also writes in the short paper, he provided me (Nova Astronautica n.171 Vol.42 2022 pag.24) the existence of a non-zero net resultant on the V-shaped dipole seems to me correct and plausible.....

If we observe the Lorentz force for closed circuits, it is practically applied to all commonly used tools: drills, dishwashers, electric motors of all types. All accumulated by a single feature: the forces of electric motors are generated by closed loops. The fact that it also applies in this situation in open circuits such as the motion of a charge or set of charges moving in a magnetic field orthogonal to the velocity of the charge implies and demonstrates that the Lorentz force also applies to open circuits AS IT IS JUST A SINGLE CHARGE or a section of circuit (Antenna). https://it.wikipedia.org/wiki/Forza_di_Lorentz



Synthetically in magnitude for an open circuit section, the Lorentz force assumes the elementary quantification $\mathbf{I} \cdot \mathbf{L} \cdot \mathbf{B}$ where \mathbf{I} is the current, L the circuit section where the magnetic field \mathbf{B} affects. Basically, the elementary definition of the Lorentz force it does not depend on whether the charge is also in oscillating motion, at any one frequency. Historically, the fact that it is applicable in interaction has been greatly overlooked of two open circuits at a certain frequency because there are physical limits greatly limit the quantitative effects such as the phase shifts between magnetic fields and currents. Thus, the forces between open circuits have never been studied despite Maxwell's having done so mentioned in his Treatise Vol.2 page. 163. We reported this event in Nova Astronautics already in 2000 also because it is very difficult to make measurements of this type in open circuits where high-frequency alternating current flows because the arms of the dipole they get very short... I want to underline that at 1 Mhz the wavelength must be 300 meters ... while the PNN works around 432 MHz just to shorten the circuit. But the shortening leads to short arms of the V dipole (about 17 cm) and to forces WEAK electrodynamics.



Da Nova Astronautica n.84 Vol. 20 2000 page 7

Summarizing these are the main PROBLEMS IN THE INTERACTIONS BETWEEN CIRCUITS OPEN

- a) The length of a circuit depends on its frequency and is basically an antenna subject to maladaptation or to the circulation of low currents. But the higher the frequency the shorter the circuit must be and therefore the factor "l" of the length of the circuit (and therefore the overall strength) is reduced which, on the other hand, does not happen at low frequencies at 50 Hz. For example, coils of wires for single-phase induction electric motors ARE EVEN HUNDREDS OF METERS LONG.
- b) At high frequencies in the interaction of two open circuits there is the risk of a phase shift between the magnetic field emitted by a circuit section and the current on another circuit section given that the wires are generally spaced apart and as

in the dipole a V NOT AT SAME DISTANCE

- c) At high frequencies the system becomes an antenna and the em field has radiation lobes or irregularities in that area that interests us: the NEAR area where most of the thrust takes effect
- d) The almost total absence of instrumentation to make certain measurements very close to emitting and receiving circuit IN ORDER TO VERIFY THE POSSIBLE MATHEMATICAL FORMULAS. In practice, an effect similar to that of quantum origin occurs: the presence of probes receiving the signals disturbs the experiment, i.e., magnetic fields and high-frequency alternating currents.
- e) Unfortunately, the total absence of instrumentation for measurements in the near area leads to the indefinability of the real values of magnetic fields and currents with which to make the calculations, but only to ultra-approximate formulations and empirical support procedures which, if done well, can BECOME THE ONLY PROCEDURES USEFUL FOR EXPERIMENTATION

Test Setup (Pendoline) or measurement (by Laser) of the force of Lorentz through movement of one of the two mobile arms of a ballistic pendulum.

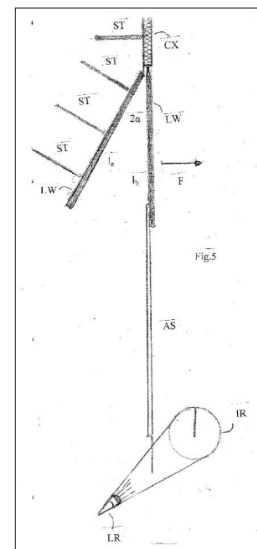
Before examining the details of an F432-class thruster shown at a public road show on October 31, 2020 <https://neolegesmotus.com/2020/11/02/field-self-interaction-electromagneticthruster/>

The following should be examined BEFORE in the Pendolino tests.

OR THE DIRECT Experimental VERIFICATION of the existence of LORENTZ FORCES FOR OPEN CIRCUITS

We reiterate that unfortunately instruments fully suitable for PNN do not exist and therefore often it is necessary to necessarily adapt to the existing

Example: the instrumental measurement of the magnetic field in a mm^3 between the V of the dipoles does not exist since nobody has thought of this. After all, historically the magnetic field has been deduced from the current and the unit of measurement of the current from a measure of the force So, we will measure only forces (on the pendulum) and input powers from the wattmeter given that the attenuation is also random if the SWR are very dependent on the circuit and the setup and that, as far as possible, the power supply must be protected with a circulator to avoid the destruction.



The test on ballistic pensulum was deflection of the balance was measured using a laser

This test must be done or better advised before the construction of each PNN thrust system. The test measures the displacement of an index placed at the end of a small vertical rod attached to a dipole arm. The antenna and the cage were in air at 1 bar ambient pressure.

Lorentz force for open circuits on 2 arms of V shaped dipole
 With Frequency: 432 + - 2 Mhz Power tra i 250 e i 600 watts

The main problem of the thrust caused by the Lorentz force for open circuits is that in addition to the power it depends on the impedance of the PNN device which in turn depends on the positioning of the ferrites suitable for lowering the impedance.
 Note: **There are thousands of ways to position the ferrites**



Pendulum: V-shaped FLEXIBLE dipole arm about 14.5 cm long
SETUP: 2 cylindrical ferrites clamped on fixed arm (mass - braid)

1 ferrite on swing arm (middle)

Angle at feed point about 30 degrees + - 5 degrees, SWR less than 3

Z= approximately between 30 and 60 ohms
 these values are with impedance matching by ferrites positioned a sliding along the arms. Used values of SWR, Z, R and X of the V device (inverted) for some frequencies where you get push on the vertical arm assessable by moving the index finger irradiated by the laser

| SWR | Z | R | X | MHz |
|------|------|------|------|--------|
| 2.55 | 33.9 | 24.1 | 23.2 | 432 |
| 1.84 | 36.7 | 32.2 | 17.9 | 430.08 |
| 3.2 | 36.3 | 21.7 | 29.1 | 433 |
| 1.68 | 55 | 48.5 | 26 | 430.08 |
| 2.75 | 82 | 50.1 | 56.8 | 432.67 |

Force measurement with Carpo dynamometer

By changing even just 1 of these next 4 parameters you get a total change of the repulsion forces between the two dipole arms

The parameters are:

- # alpha angle at the dipole vertex generally between 26 degrees < alpha < 34 degrees,
- # length D of the arms 14 cm < D < 19 cm
- # Size and dislocation of the ferrites along the arms of the dipole whose composition characteristics we unfortunately did not know exactly for frequencies around 432 Mhz. But in general, with the commercially available ring ferrites shown in the figure, acceptable results are obtained
- # Impedance and SWR

The thrusts for the aforementioned dipole with a force of milligrams within the first 5 seconds measured by a "Carpo" dynamometer



Spinda PGN with Wrist Dynamometer

Initial thrust values on Carpo dynamometer
 3 mg < push < 8 mg +- 1 milligram
 deduced from the movement of an about 80 cm long rod at the end of the vertical arm. Thrust measured with a "Carpo" dynamometer on the centre of gravity of the dipole arm perpendicular to the ground

List of theoretical references relating to the violability of the NON Asps principle of action and reaction

Giorgio Pastore at: www.asps.it/setupdip.html
 Giovanni Tonzig "100 mistakes in physics" "Sometimes it doesn't apply", Sansoni Editore 1991, pp. 205-206 (3)

Elio Fabri at <http://www.sagredo.eu/varie/terzopr-em.pdf>
Lorenzo Marrucci in "Grunting" Nova Astronautica Vol. 42 N.171 2022 pp. 24-25

Operating principle of the PNN

By connecting to this link <https://neolegesmotus.com/2020/10/29/pnn-has-been-disclosed/>

one can understand the operating principles of the PNN hidden for at least 20 years (since 2001) because the ASPS did not have the economic resources to set up a laboratory with the relative apparatus [1]. The topics of the link are also dealt with in more detail in Nova Astronautica of 2020 Vol.40 n.166 available at the National Library of Florence www.asps.it/novafiorenza.html

Tests of F432 on Ballistic Pendulum

The PNN recoils on the vacuum or rather on the physical law (the Lorentz force), which this law has in the vacuum. It should be noted that the vacuum in physics is not an abstract physical entity since it has magnetic permeability and dielectric constant

Reference video clips:

Similar to the one shown at a road show at the Sheraton Hotel in 2005

www.asps.it/qct05_ENG.mp4

Over the years, since 2005, the PNN thrust has been HARDLY increased as in the PNN test on a ballistic pendulum with Asps technician Rinaldo Jobs

<http://www.asps.it/videopnn58.html>

F432 class thruster with thrust recovery on ballistic pendulum in public ROAD SHOW on 31

October 2020 and other video clips

<https://neolegesmotus.com/2020/11/02/field-self-interactionelectromagnetic-thruster/>

Everything was then illustrated on 31 July 2021 in an international video conference organized by the American APEC

<https://www.altpropulsion.com/events/apec-7-31-non-newtonian-em-propulsion-superconductors/>

In 2021 the PNN was patented in Italy.

The PNN relating to the F432BA prototype will be published by December 2022. The EPO

(European Patent Office) has given its approval of the Patent (Nova Astronautica Vol

42 n.171 2022), as we were informed by the Patent Consultancy Company to which we

have delegated ALL the patent operations in Italy and abroad. We publish part of the report already published in Nova Astronautica n.171 Vol.42 on page 1

OGGETTO : Rapporto di Ricerca della PNN approvato dal Patent Office Europeo (EPO) .

Da "Andrea Valente Cioncoloni"

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A "asps@asps.it" asps@asps.it

Cc

Data Fri, 18 Mar 2022 16:55:27 +0000

Oggetto Ricezione rapporto di ricerca domanda di invenzione dal titolo "Sistema di propulsione elettromagnetica ..." n. 102021000015986 - Ns. rif. 1096/INV.IT/RR

Buon pomeriggio,

Le comunichiamo di aver ricevuto il rapporto di ricerca in relazione all'oggetto e, abbiamo il piacere di informarLa, che l'esaminatore dell'EPO (European Patent Office) ha ritenuto essere presenti tutti i requisiti di legge in relazione a tutte le rivendicazioni depositate.

Since 2022, the extension of the patent abroad has been in progress

PNNDRIVE on Shielded Arm Scale

The most important PNN test is on an arm scale indicated in the figure below.

The PNN thruster is powered by lithium batteries and remotely controlled with a remote control.

The preamplifier is the Baofeng is the preamplifier (transceiver adapted to the case) and adapted to be controlled remotely with a remote control

Its amplifier is the 432 Mhz MD500U which theoretically can deliver up to 500 Watt

The amplifier is much lighter than the previous 600 Watt UHF Archimede by Italab. Italab supplied us with both amplifiers.

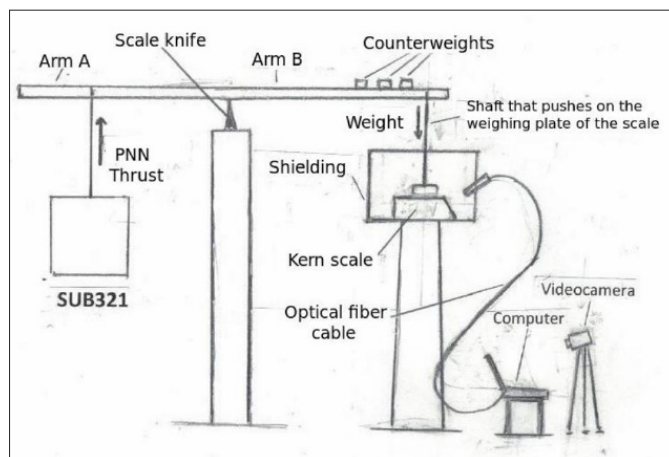


Diagram of the arm scale in which the Kern Scale is mounted. The data is taken with a small optical fiber video camera, transmitted to a computer and stored by a video camera

Under the PNN propeller adapted to power supply with lithium batteries, with Baofeng and MD500U amplifier for tests on the arm scale. The ignition takes place via remote control



Further studies are in progress. Experimental verification cannot currently disregard the setup illustrated by the Kern balance suitably shielded to avoid electromagnetic radiation which can be destructive for electronic detection devices (mainly the balance) and for the human body.

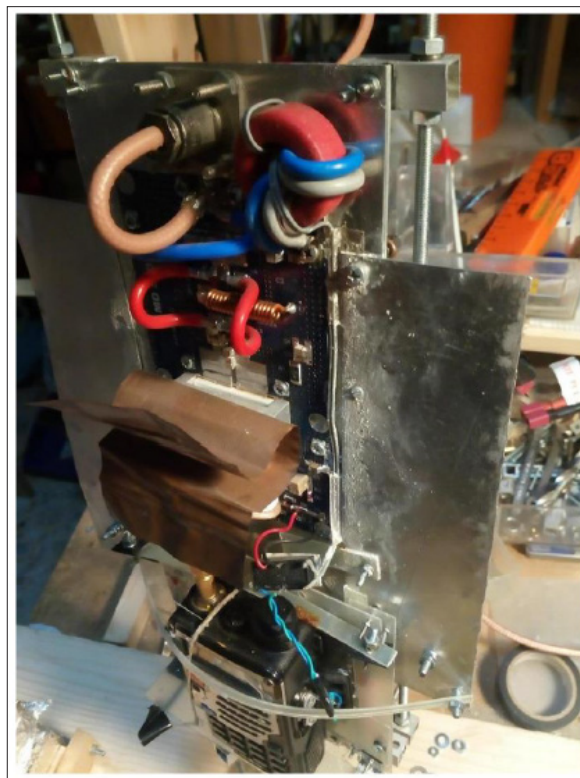
Last prototype F432BA soon FOR SALE

(The acronym BA is in honor of Baciccia and Amundsen [https://www.fila.it/it/diario Creative/giovanni-renzi-e-le-matite-storia-due/](https://www.fila.it/it/diario%20Creative/giovanni-renzi-e-le-matite-storia-due/)) Variable and controllable dipole data push V (not published as it is also an innovation subject to Patent Pending)

$$SWR = 1.83 \quad Z = 25.2 \text{ Ohm} \quad R = 25.2 \text{ Ohm} \quad X = 0 \quad a \quad 4 \quad 32 \text{ Mhz}$$

The prototype will be put up for sale as a DEMONSTRATIVE PROTOTYPE so that third parties independent of us can verify our claims about its innovative performance ... in the sense of changing the III and II law of dynamics.

An example of how the structure and capacity of the cart has progressively improved (MD550U preamplifier and amplifier) It is given by this sequence in the url: www.asps.it/bacicciaship.html



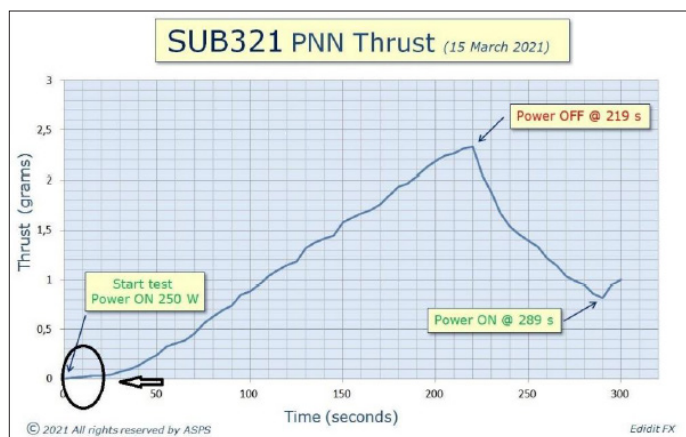
Surprising Effects of PNN

Having said that the PNN recoils on the vacuum through the physical law (the Lorentz force), that this law has in the vacuum we must expect a complete change of the laws governing Newtonian mechanics since Newton did not know the Lorentz force. I would like to point out that the so-called "vacuum" has a dielectric constant e magnetic permeability and therefore it is NOTHING.

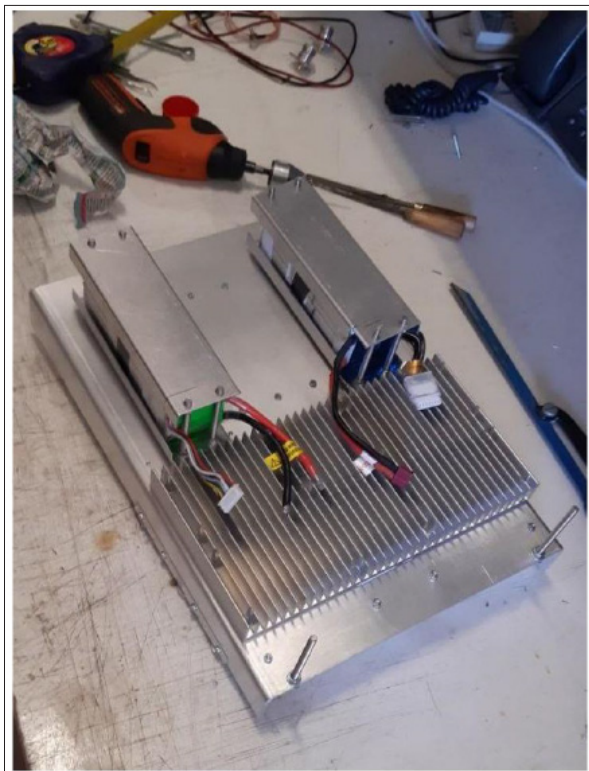
As Newton's 3 laws of motion are interconnected so too are the laws of motion defined by the PNN

So far, we have defined both the violation of the principle of action and reaction, which THE INCREDIBLE AND SURPRISING CHANGE OF THE II Law of dynamics represented by the graph below and which an incredulous must observe experimentally to have confirmation. Below is the law of motion for a SUB321 class PNN prototype.

You need to attend PNN tests to change Mental Paradigm



The first "cart" of a PNN battery-powered prototype under improvement



The second "cart" under construction in 2022 at the Electronic Lab of ASPS member Piero Chiavaroli



NOTE: Anyone who purchases this F432BA prototype will also have access to our National and Foreign patent concessions

Conclusion

Whatever theoretical considerations can be made on the PNN of the ASPS illustrated here, the conclusion is always that one must see its experimental demonstrability in order to be convinced of it.

For over half a century rocketry has not been able to place a permanent base even on the moon due to the intrinsic difficulties of having to carry the mass to be expelled in order to move. PNN without reaction mass ejection is the only way for the stars, given

that space cannot be colonized (read industrialized) by expelling reaction mass. Rocketry, as mentioned, is similar to a machine that has to carry the road on which to move.

Therefore, the loss of reaction mass is the primary impediment preventing the missiles to have a permanent human base even on the nearest celestial body: the Moon (not to mention Mars). And the facts prove it since they have passed more than 50 years since the Apollo 11 moon landing, without forgetting the steps intermediate steps that NASA intended to make to return permanently to the Moon are miserably failed.

References

1. Laureti E (2020) "Violation of the Principle of Action and Reaction Nova Astronautica 40: 6-16.
2. Laureti E (2000) Ad hoc hypothesis at the basis of Maxwell's equations. Nova Astronautica 20: 3-9.
3. Tonzig G (1991) "100 Physics Errors" "Sometimes it doesn't apply". Sansoni Editore: 205-206.
4. Maxwell JC (1954) "A treatise on Electricity and Magnetism" V2, Dover, New York. <https://www.aproged.pt/biblioteca/MaxwellIII.pdf>
5. Bresciani C (2000) On Unknown Electrodynamics. Nova Astronautica 20: 83.

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