International Journal of Quantum Technologies ISSN: 3068-9090

PRIME OPEN ACCESS

Volume 2, Issue 1

Research Article

Date of Submission: 01 Feb, 2026
Date of Acceptance: 05 Mar, 2026
Date of Publication: 12 Mar, 2026

CST. Gravity. Antigravity. Non-Reactive Accelerated Movement

V. F. Chibisov[1*] and I.V. Chibisov[2]

[1]Independent Researchers, Novosibirsk, Russia

[2]Independent Researchers, Moscow, Russia

***Corresponding Author:** V. F. Chibisov, Independent Researchers, Novosibirsk, Russia.

Citation: Chibisov, V. F., Chibisov, I.V. (2026). CST. Gravity. Antigravity. Non-Reactive Accelerated Movement. *Int J Quantum Technol,* 2(1), 01-09.

Annotation
This article is devoted to the presentation of the consequences of the models of the Corpuscular-Simple Theory (CST), revealing the phenomena of gravity, antigravity, and non-reactive accelerated movement [1].

Keywords: Quantum Physical Environment, Dipole-Dipole Force Lines, Simple Preons, Force Line Coat, Gravity, Mass of Bodies, Gravity Strengthening and Weakening Models, Non-Reactive Movement

Introduction

In modern physics, a number of unsolved problems have accumulated related to the structure of matter and models of fundamental interactions:

- mutual transformation of quarks and leptons in β-decay reactions;
- formation of charge of elementary particles;
- Dark matter;
- the nature of Dark Energy;
- experimental detection of gravitons;
- the scheme of exchange interaction, through the "exchange" of different bosons between particles, raises many questions.

Physicists have already developed a need and understanding of the necessity of forming a THEORY OF EVERYTHING that would unite all four types of fundamental interactions and explain the mechanism of formation of all fundamental particles.

A certain consensus has already emerged among a large number of physicists that in order to construct such a theory, it is necessary to return to the concept of the physical environment (ether), from which all matter was formed, and through which all types of fundamental interactions are carried out.

Two Models of The Physical Environment

In modern physics, the model (theory) of the physical vacuum (PVT) is proposed as a model of the physical environment. The fundamental quantum numbers of this vacuum—momentum, angular momentum, electric charge, etc.—are equal to zero. At the same time, the physical vacuum can reproduce various quantum fields, including electric and magnetic fields, which is confirmed by the presence of the parameters εo and μo. Gravity in the PVT is explained by the presence of a quantum gravitational field, the theory of which has not yet been developed.

It should be noted that 130 years ago, the Lorenz ether theory (LET) already existed, with similar properties—a stationary ether and the presence of E- and H-components in the ether. A significant difference between LET and PVT is the inclusion of Zöllner's electrogravitics in LET, and the quantum nature of PVT, which was unknown at the time of LET's development [2-4].

Preons

One of the problematic issues in modern physics is the experimentally established fact of the mutual conversion of quarks and leptons into each other in beta-decay reactions. In the 1970s, preon theory emerged, according to which all quarks and leptons consist of single proto-particles – preons. String theory, which appeared in the late 1980s, pushed preon theories into the background. However, in the late 1990s, the first crisis in string theory began to emerge, and preon theories were revived. In 1997, the Preon Trinity theory appeared. In total, more than a dozen different preon theories (hypotheses) currently exist. To avoid confusion, preons are given different names in different theories, for example: subquarks, rishons, helons, ribbons, etc [5].

Corpuscular-Simple Theory

The corpuscular-simple theory (CST) in its content unites the theory of the physical vacuum and the Preon theory of the structure of material matter into a single theory of the formation and evolution of the Universe, and can be considered as a variant of the theory of everything [6].

Basic CST Models

Quadrupole quantum of stationary space-time (physical vacuum, ether) is two connected elementary vortices of Planck size, cyclically generating each other with an elementary tick of time.

We will call these spacetime quanta corpuscles. In a more modern interpretation, such corpuscles can be identified with the simplest version of strings (string theory), as will be discussed below. The main and only property of such corpuscular spacetime is its ability to form E- and H-dipole-dipole chains:

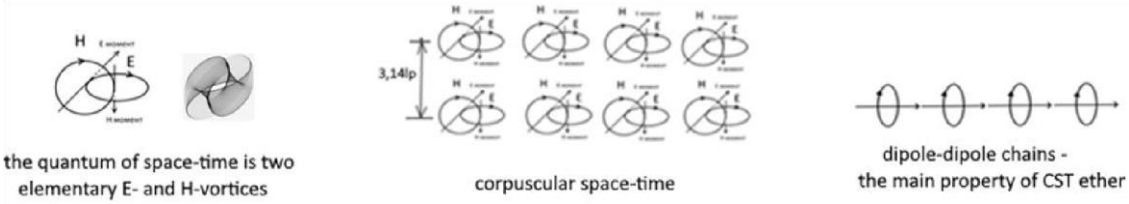

Figure 1: Model of Corpuscular Space.

In such a quantum space-time, four types of objects can be formed:

• fluctuations - random alignment of electric or magnetic moments of corpuscles into closed E- or H-dipole-dipole chains of vortices of VIRTUAL PHOTONS (without momentum).

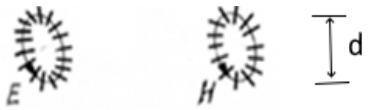

Figure 2: Model of E- and H-Virtual Photons (VP).

• Electromagnetic Radiation (EMR) Vortices, consisting of similar closed E- and H-dipole-dipole chains (vortices), but possessing an electrodynamic impulse that leads to the generation of each subsequent vortex at the center of the previous vortex, offset by half the diameter, which ensures the propagation of vortices at the speed of light. All vortices and their corpuscles remain stationary relative to the ether. The speed of formation of dipole-dipole chains of EMR vortices in this case should be 1.57 times the speed of light.

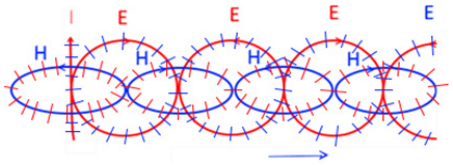

Figure 3: Electromagnetic Radiation (EMR).

• In a free physical vacuum (ether), the E- and H-moments of corpuscles have arbitrary directions. When charges or magnetic moments are introduced into the physical vacuum (ether), the process of polarization of the physical vacuum (ether) begins—a change in the orientation of the corpuscle moments and the alignment of lines of force (LF) from E- or H-dipole-dipole chains.

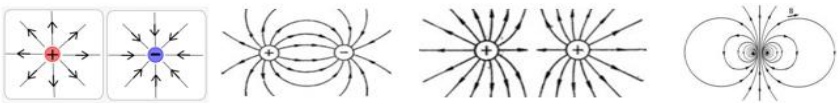

Figure 4: Lines of Force of Electric Charges and Magnetic Dipole.

• The formation diagram of Preons-Simples – the material matter of the Universe. According to the CST, the model of preon-simple formation is the stretching of the electric vortex of a virtual photon into a spiral vortex by a short-term powerful magnetic field (SPMF), followed by its folding into a donut-shaped vortex, similar to the Zeldovich anapole [7].

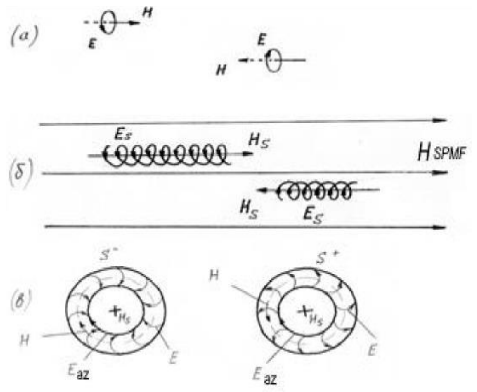

Figure 5: Model of Formation of Preons-Simples.

Simples differ from Zeldovich anapoles by the presence of an azimuthal electric vortex, which gives them a magnetic moment and electric charge.

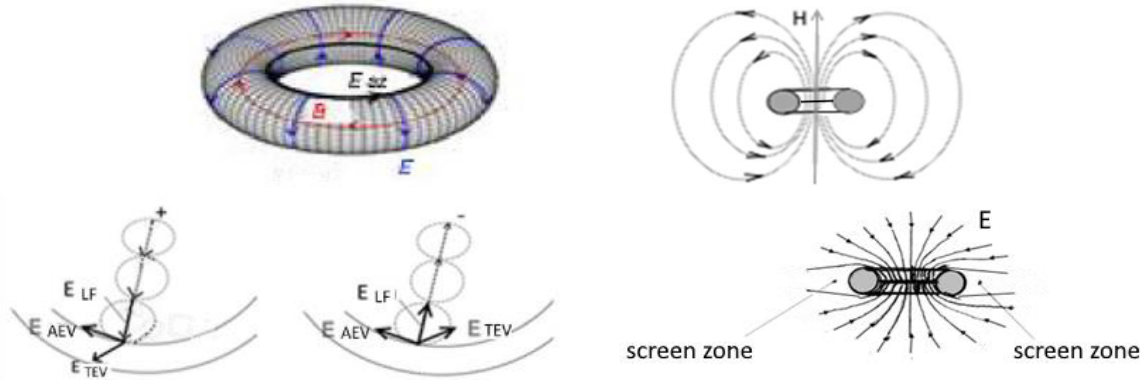

Figure 6: Formation of Force Lines of Charges and Magnetic Fields of Preons-Simples.

All of the aforementioned objects (VP, EMR, LF, and PREONS-SIMPLES) are formed in the physical vacuum (ether) electrodynamically, by changing the orientation of the E- and H-dipole moments of stationary corpuscles without moving them or imparting kinetic energy to them. This means that all of these objects are formed COLD. This is the fundamental difference between the presented CST models and similar gas- and hydrodynamic models of particles and their interactions in various versions of etherodynamic theories.

Simple Models of Neutrino, Quark, And Relic Neutron

In the work the models of formation in simple plasma of three types of neutrinos, u- and d-quarks, and relic neutrons of increased mass are presented in detail (see Figure 7,8,9) [6].

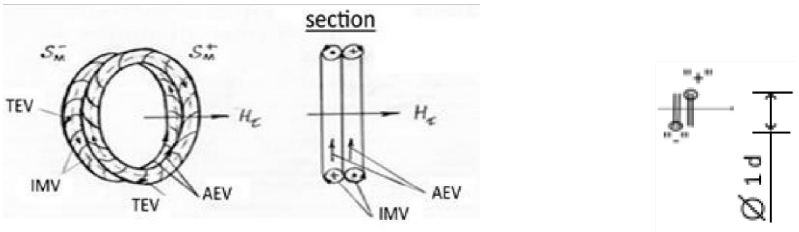

Figure 7: Simple Models of Mu-, Tau-,And Electron-Neutrinos.

Figure 8: Simple Models of U- And D-Quarks.

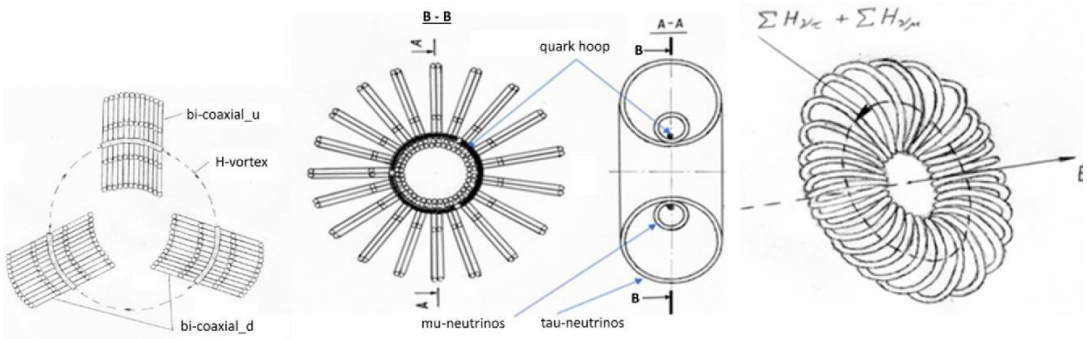

Figure 9: Model of Formation of Relic Neutron.

As shown in this paper, protons and electrons are formed in the next stage through the decay of free relic neutrons (75%), or through the synthesis of heavier nuclei of elements using Gamow's scheme involving relic neutrons (25%). We would like to note a certain correlation between the simple nucleon model we presented and the modern quark nucleon model and its visualization in the HERA experiment (Figure 10).

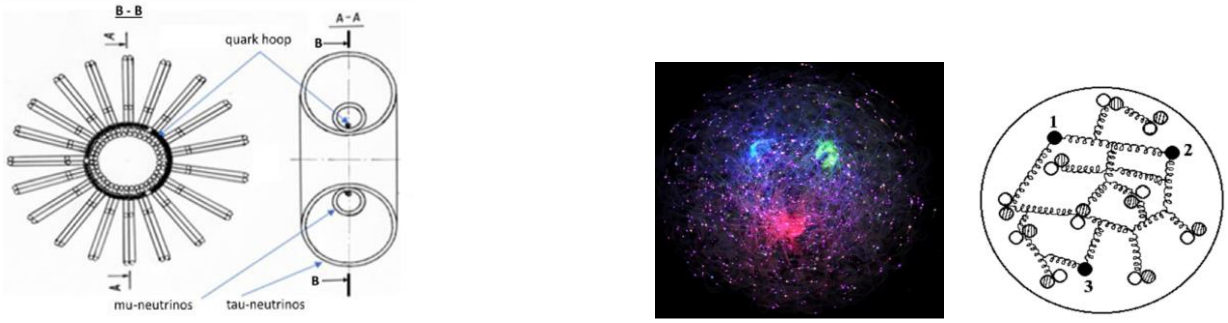

Figure 10: Simple and Quark Models of Nucleons.

Interaction of Force Lines

Unidirectional force lines from two sources whose directions coincide reconnect when they meet at opposite poles. This occurs with force lines of two opposite charges (an electric dipole) and with force lines emanating from two opposite magnetic poles (a magnetic dipole).

Figure 11: Reconnection of Dipole Force Lines.

Oppositely directed lines of force repel each other when they meet at the same poles. This is typical for lines of force of two like charges.

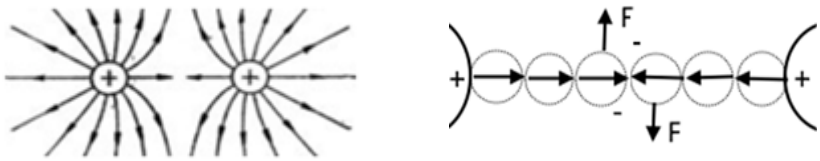

Figure 12: Repulsion of Lines of Force of Like Charges.

Parallel lines of force of electric charges, aligned in the same direction, also repel each other through the like poles of the elementary moments of adjacent corpuscles that form the lines of force. This leads to a decrease in the density of the lines of force with increasing distance from the source, inversely proportional to the increase in the area of the sphere at a given distance, i.e., inversely proportional to the square of the distance, which correspondingly reduces the strength of interaction with the lines of force of other sources.

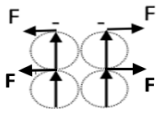

Figure 13: Repulsion of Unidirectional Parallel Lines of Force.

The reader of this article may perceive an error in the right-hand side of Figure 12: the nearest corpuscle is shown with the positive pole of its electric moment facing the positively charged body. The fact is that, in reality, the simples (of which the bodies are composed) do not possess charges as such, but rather have a right- or left-handed conjugation of toroidal and azimuthal electric vortices on the surface of the simples. It is this topological conjugation and interaction of these vortices that generates the direction of the third electric moment orthogonal to the surface of the simple, which determines the orientation of the nearest corpuscle of spacetime (see Figure 6), and subsequently of the remaining corpuscles of the force line. Our instruments measure the sign of the electric pole at the end of the force line, and we consider this measured sign to be the sign of the body's electric charge.

A more complex question is the mechanism of repulsion between the like electric and magnetic poles of the corresponding moments of corpuscles. After all, in CST is no finer ether2 between the corpuscles and their moments (as in other ether theories). We have already schematically answered this question in the definition of the space-time quantum and in Figure 1. The above description of a quadrupole spacetime quantum as two coupled elementary vortices is only a convenient MODEL. In reality, space-time quanta (corpuscles) are constantly vibrating elementary quanta of the primordial matter (strings), within which an endless cyclic vibration process occurs (as in tuning forks), conveniently modeled as the continuous mutual generation of two coupled elementary vortices with two elementary dipole moments. We will use this model to construct all the consequences of our theory. The detailed mechanism of string interaction is developed in String Theory and is not discussed in detail here. We plan to devote a separate article to this issue.

Please note that in force lines (FL), each corpuscle undergoes a constant cyclical alternation of one dipole moment (electric) for another (magnetic) and vice versa, which determines the virtual nature of these moments and the force lines formed from them. The pulsating nature of the regeneration of all moments of FL corpuscles imparts a pulsed nature to the interaction of FLs with each other. Thus, electromagnetic interaction, which in modern physics is represented as the exchange of virtual photons, in the CST is replaced by the interaction of force lines with attractive and repulsive impulses.

It should be noted that electromagnetic radiation (EMR) vortices also represent dipole-dipole chains of corpuscles twisted into coupled E- and H-vortices. If EMR vortices are considered a type of matter in modern physics that carries energy, then the lines of force of electric and magnetic fields should also be considered material. This is demonstrated, in particular, by the fact that residual magnetization of spacetime has been preserved in the voids—remnants of the chains of force lines of the relic magnetic field, which possess energy and deflect gamma quanta emitted by the blazar as these gamma quanta pass through the void [8].

PS: Leonov V.S.'s quadrupole ether lacks a mechanism for regenerating quanton moments. All four poles of Leonov V.S.'s ether quanton are constantly present (+, -, N, S), which eliminates the pulsating nature of the force lines constructed from such quantons. This is the fundamental difference between the quadrupole ether and Leonov's ether [9].

Gravity of Neutral Bodies

Neutral bodies contain equal numbers of positive and negative simples, which can be conventionally distributed into quasi-dipoles with a corresponding force line topology. Then, all neutral bodies can be represented as a core of simples and a coat of dipole electric and magnetic force lines:

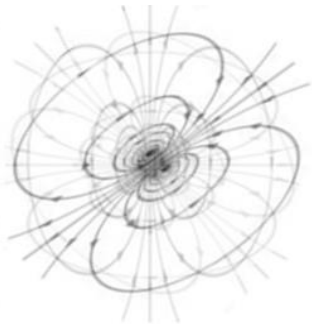

Figure 14: Coat of Force Lines of Neutral Bodies.

The reconnection of dipole-dipole electric or magnetic dipole-dipole chains of the FL coats of two material objects generates impulses of attraction and repulsion between these objects. However, spacetime quanta do not contain any gravitational dipoles or monopoles. As early as 150 years ago, the German physicist Johann Zöllner proposed that, due to the difference in the topology of attractive and repulsive force lines, attractive force lines are slightly shorter than repulsive force lines, and, accordingly, attractive forces are slightly stronger than repulsive forces, which explains the gravitational attraction of neutral bodies according to Zöllner [4].

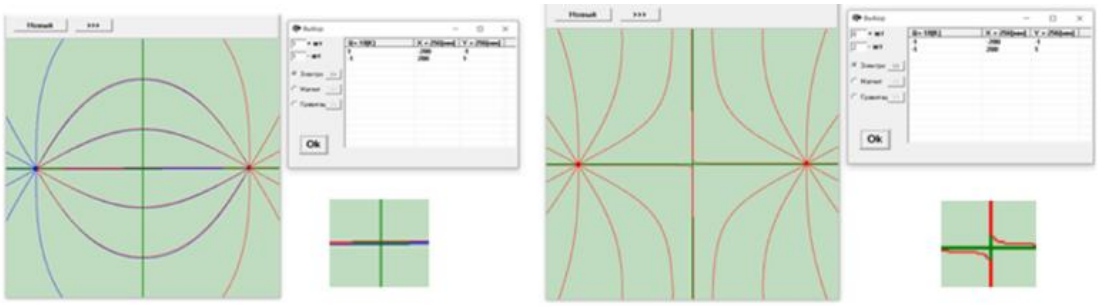

Figure 15: Difference in Topology and Total Length of Attractive and Repulsive Lines of Force.

According to calculations by V.M. Petrov, the difference between the forces of attraction and repulsion is 10-37 relative units. Such a small difference between the forces of attraction and repulsion, according to V.M. Petrov, cannot be measured by any electromagnetic methods [10].

Taking into account this difference between the forces of attraction and repulsion, and their pulsed nature (which was discussed above), it becomes possible to formulate a physical model of graviton in the form of a quasiparticle, which represents the difference between the impulses of attraction and the impulses of repulsion of the lines of force of electric charges and magnetic moments of neutral bodies.

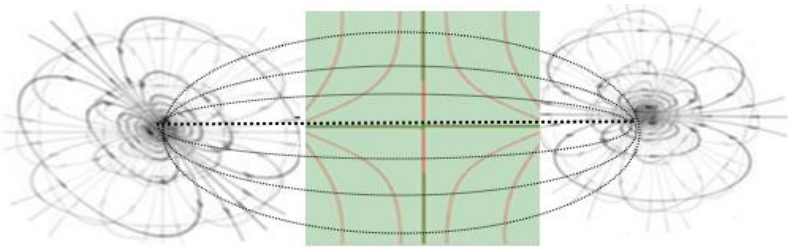

Figure 16: Model of Gravitational Interaction of Neutral Bodies.

Mass of Neutral Bodies

In this case, the mass of a neutral body is the ability of material bodies composed of simples to generate a set of force lines formed by changing the orientation of the electric and magnetic dipole moments of quadrupole quanta of spacetime. The more positive and negative simples in the structure of neutral bodies, the more force lines such a body has, and the higher its gravitational potential.

This definition and model of mass formation are fully consistent with the conclusion that electromagnetic radiation photons are massless. We know that a beam of light is deflected in strong gravitational fields. According to electrogravitics, this occurs due to the interaction of the dipole moments of the EMR vortices with the FL-coat of gravitational objects. We also know that the energy of the dipole moments of electromagnetic radiation vortices is entirely spent on generating the next electromagnetic radiation vortex and is not expended on alignment external force lines from the vortices. The absence of such external force lines in electromagnetic radiation vortices indicates that photons are massless. In other words, they can be attracted toward gravitating bodies by their dipole moments, but they cannot attract these bodies or be attracted to each other.

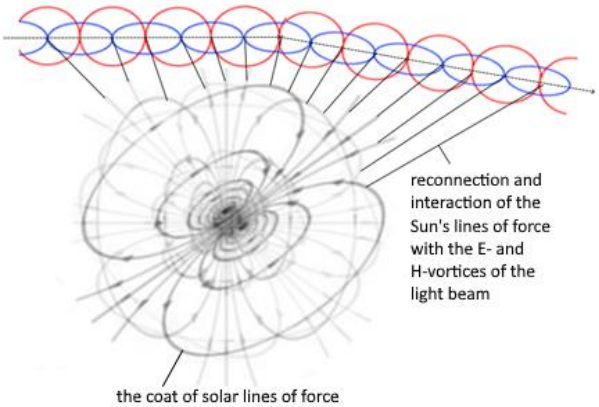

Figure 17: Deflection of a Light Beam in A Strong Gravitational Field.

Casimir Effect - Enhancement of Gravitational Interaction

The proposed model of gravitational interaction provides a new explanation for the well-known Casimir effect. This effect is caused by the uneven filling of nucleons with simple particles.

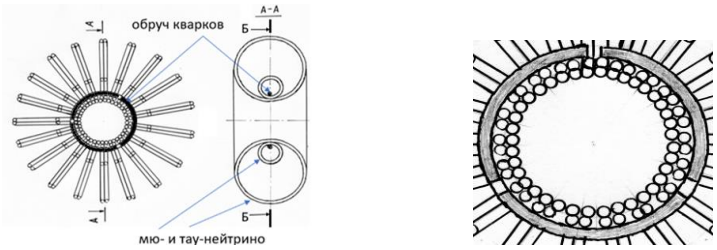

Figure 18: Increased Density of Simples in the Central Part of Nucleons.

As we see, in the central region of the nucleons, the simples are pressed tightly together. Consequently, in this part of space (the ether), there are no free channels for the lines of force to pass, and they are forced to bend and bypass this region, i.e., increase in length. In spherical bodies, the lines of force encounter the maximum number of nucleons along their path. As a result, they will bend (lengthen) to the maximum extent, and thus exert a smaller force when reconnecting with the SLs of other objects. Conversely, if two bodies are flattened and positioned parallel to each other, their SLs will encounter fewer nucleons along their path, bend less, and the interaction force will increase (the static Casimir effect).

Scheme of Weakening of Gravitational Interaction

Above, we presented a model for increasing an object's gravitational potential. To do this, we need to straighten the channels of the objects' force lines as much as possible. But this model could theoretically also be used to weaken the gravitational potential. To do this, we need to "cut off" (screen) all the force lines extending outward from the object. How can this be accomplished? We need to create an object in the form of a Zeldovich anapole, i.e., a simple without an azimuthal electric vortex that generates an external magnetic moment and an external charge of the simple with the force lines of the corresponding fields. As is well known, in a Zeldovich anapole, all fields are closed inside the anapole, and it has no external force lines (FL), hence its name. According to our model of massless particles lacking FL, the anapole will not be subject to gravitational interaction.

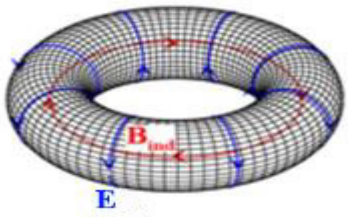

Figure 19: Anapol Without Azimuthal Electric Vortex and Without FL.

Unfortunately, it is impossible to create an anapole in its pure form (consisting only of internal magnetic and toroidal electric vortices). However, in a report at the XXVIII Russian Conference on Cold Transmutation of Nuclei of Chemical Elements and Ball Lightning, a design for an experiment to create ball lightning in the form of a quasi-simple, very similar to Zeldovich's anapole, was proposed. The following scheme was given there: passing a strong current pulse (lightning) through a conducting spiral (a wet vine) will lead to the "burning" of the spiral conductor and its transformation into a plasma spiral, which, under the influence of the internal magnetic moment of the spiral, will curl up into a torus - a luminous donut of ball lightning (a quasi-simple of coupled electric and magnetic vortices with plasma movement on the surface of the torus). The observed dynamics of the movement of ball lightning confirms their antigravity properties [11].

Model of Antigravity Apparatus

Is it possible to transform this gravitational interaction-reducing design into a corresponding device? Let's examine the cross-section of an anapole, minimize its internal opening, and attempt a kind of "reverse engineering." The figure shows a diagram of spacecraft (SC) similar to an anapole, which could be implemented technically.

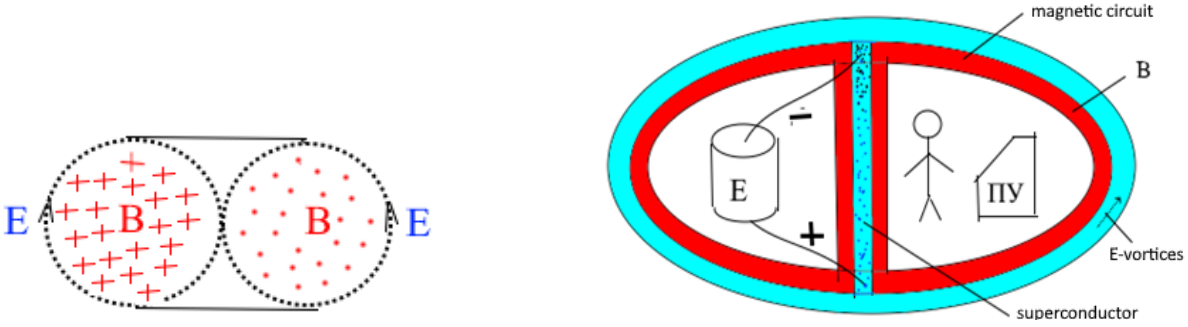

Figure 20: Model of an Antigravity Spacecraft.

In the absence of external SLs, as well as electrical and magnetic moments, such a device will not interact gravitationally or electromagnetically with surrounding objects. Ideally, the gravitational mass of such a device can be considered zero. If even a minimal constant force is applied to such a device, it will accelerate in the direction of the force. The equivalence of the gravitational and inertial masses of such a device requires experimental verification.

Scheme of Reactor-Free Propulsion in Space

Currently, all spacecraft propulsion systems are built using jet propulsion. This design requires a constant flow of propellant, limiting the spacecraft's operational life to the available propellant. Recently, extensive research has been conducted to identify and experimentally test propulsion systems based on non-jet propulsion.

In the previous section, we proposed a design for a spacecraft similar to an anapole, without external lines of force (LF), and thus isolated from gravitational and electromagnetic interactions with both nearby and distant material objects. However, inside the spacecraft, beneath its E-vortex shield, the sheath of force lines from the spacecraft's structural elements will not disappear. If a hole is made in the shield, the force lines will freely extend beyond the spacecraft, reconnect with force lines from distant space objects in the given direction, and create a constant asymmetric gravitational attraction of the spacecraft toward these objects.

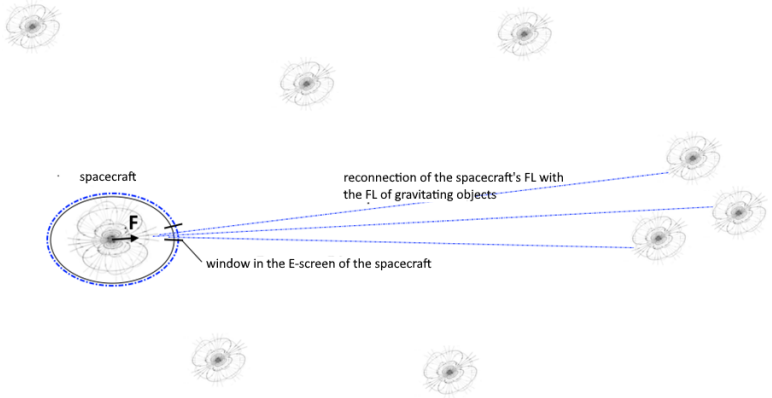

Figure 21: Model of Non-Reactive Spacecraft Thrust.

This combination of an antigravity E-screen and a "focused" gravitational beam LF can be an alternative to the currently used jet propulsion scheme in space.

Creation of An Additional Artificial Field of Force Lines

Zöllner, the founder of electrogravitics, believed that gravity is the difference between the attractive and repulsive impulses of electric charges of neutral bodies. In the quantum CST-theory of spacetime (the physical vacuum, the ether) model, which represents two coupled E- and H-elementary vortices with two H- and E-dipole moments, the latter act on an equal footing and form a sheath of electric and magnetic force lines, both of which participate in the long-range interaction between two objects through the reconnection of their force lines. Thus, from the perspective of the quantum CST-theory of spacetime, to create an additional artificial field of force lines to increase the force acting on our spacecraft, we can use the well-known method of generating powerful magnetic fields using solenoids from classical electrodynamics.

However, many physicists, as well as modern electrodynamic, see a significant difference between electrical and magnetic processes and are unwilling to include the interaction of magnetic fields of material objects in the electrogravitics model. Without dwelling on this disagreement, let's consider a relatively simple method for creating a powerful electric field. This involves vector potential generators (A), which E.I. Yegorov is experimenting with [12].

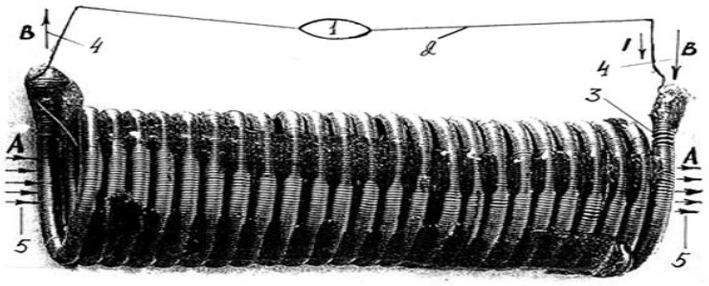

Figure 22: Vector Potential Generator.

From the standpoint of the CST, magnetic force lines are formed within the thin, long coil (solenoid) of the Egorov generator, through which electric current flows. In this design, these magnetic lines are twisted into a large cylindrical spiral. According to all the principles of electrodynamics, electric force lines should be generated within such a magnetic coil, which can and should be verified experimentally. If the result is positive, the letter "A" in the figure 22 should be replaced with the letter "E." Such a generator can then be used to generate additional electric force lines and increase the force acting on our spacecraft.

Conclusion

The article proposes models and schemes of antigravity and non-reactive accelerated motion in space, which require experimental verification.

The fundamental principle of all physical processes and phenomena in the Universe is the structure and parameters of the quadrupole quantum of space-time. Everything else is a consequence of them. A more detailed discussion of the Corpuscular-Simple Theory (CST) and its implications for particle physics, nuclear reactions, astrophysics, and cosmology can be found in [1,6,11,13,14].

References

1. Chibisov, V. F., & Chibisov, I. V. (2025). Corpuscle-Simple Theory of Everything (Physical Models). *International Journal of Quantum Technologies.*
2. Weiglhofer, W. S., & Lakhtakia, A. (Eds.). (2003). *Introduction to complex mediums for optics and electromagnetics* (Vol. 123). SPIE press.
3. H. A. Lorentz "AETHER THEORIES AND AETHER MODELS", (1901-1902).
4. Zöllner, J. K. F. (1861). *Grundzüge einer allgemeinen Photometrie des Himmels.* Mitscher & Röstell.
5. Dugne, J. J., Fredriksson, S., & Hansson, J. (2002). Preon trinity—a schematic model of leptons, quarks and heavy vector bosons. *EPL (Europhysics Letters), 60*(2), 188-194.
6. Chibisov, V., & Chibisov, I. International Journal of Quantum Technologies.
7. Zel'Dovich, I. B. (1958). Electromagnetic interaction with parity violation. *Sov. Phys. JETP, 6*(6), 1184-1186.
8. Neronov, A., & Vovk, I. (2010). Evidence for strong extragalactic magnetic fields from Fermi observations of TeV blazars. *Science, 328*(5974), 73-75.
9. Leonov, V. S. (2010). *Quantum Energetics. Volume 1, Theory of Superunification* (Vol. 745). Cambridge International Science Publishing.
10. Petrov V.M. "Gravity as a Manifestation of Electricity", journal "Engineer" No. 10, 2006.
11. Chibisov VF "Four steps of LENR reaction (multi-electronic reaction model)", PROCEEDINGS of the 28th RUSSIAN CONFERENCE on COLD NUCLEAR TRANSMUTATION of CHEMICAL ELEMENTS and BALL LIGHTNING, p. 156-176, 2024.
12. Egorov E.I. Quantum-geometric gravity. Vector potential of electric and magnetic fields as a systemforming factor of the Multiverse. Omsk: Publishing house of Omsk State University, 2014.
13. Chibisov, V. (2025). Exploration of Mass Defect, Preons, and Relic Neutron. *Explors Astron Astrophys, 1*(1), 1-12.
14. Chibisov, V., Chibisov, I. (2026). Corpuscle-Simple Theory (CST). The Dark Side of Universe (DM and DE). Int J Quantum Technol, 2(1), 01-11.