

**«There is a Single theory, that governs the whole world,  
and everything else is a continuum of determinism  
of the ontological paradigms of a Single theory»**

**What, after all, is the «Grand Unification Theory?»**

## **1. Concept of presentation of the idea**

I fully and completely support those scientists of world renown and importance who propose to find a common rhetoric of scientific dialogue. In the language of the generally accessible concept of the essence of things and events. A unified scientific approach and designation of physical properties. Purpose and format of interaction of natural phenomena, formations and changes. 3a. Before presenting my explanations, I would like to draw your attention to the following nuances, which do not give me the freedom to explain. For a clear expression of their thoughts, since they simply shout in the literature in the explanations of different scientists, in different ways, ambiguous both in content and in form. That's why I would like to present them in my own way and, to interpret them as applied, is unambiguously clear in my explanations.

For a logical reasoning of my observations, dogmas and postulates, with your permission, I will build my theoretical chain of fundamental forces of interaction. No matter how they fit into the theory of the Standard Model, String theory, M-theory, Loop quantum gravity or the Anthropic principle, I hope the universe will not suffer from this. It will be so convenient for me to explain my point of view, the highest reader of my scientific work. First, I would suggest changing all test, fiscal equipment, detectors, sensors and instruments necessary to detect properties, interactions between elementary particles. Which determine their masses, weights, spins, discreteness, turbulence, impulsive, particle-wave, radiation forms of motion, rest, annihilation during a collision and their attendant effects.

It would be good to test them on high-resolution equipment, and always with a color frequency value, all images are received and modulated in four-dimensional format. As for impulsivity, particle-wave effect, properties of motion of elementary particles, especially quantum, photon, electron, alpha, beta, gamma rays. To fix, analyze and study their properties, on the equipment of two-dimensional, black and white, gave and does not give a complete picture of their properties, taking into account their speed of movement and the period of existence.

Previous readings should be reviewed and verified.

My main required clarifications, for a clear presentation of the essence of my explanation, is the attachment of concrete rhetorical clarity to my research, for mutual contact and mutual understanding with readers.

First, I would like to present my research on the platform of the physical state of Vacuum. Where rests, or rather, dynamically represents the whole universe, dark matter, etheric matter, naturally and energy, its invariance and their substance. I interpret the physical state of the vacuum as "Discrete-impulsive physical state of the spherical globalization of the vacuum", in short, as "DIFSSGV". Source of ultra-high amount of movement frequency, at the level of the Planck dimension. With the property of universal spherical centrifugal gravitation over all scalar radial vectors of spherical space-time. Discrete impulsiveness of the expanding vacuum, confirmed by black stripes of fine structure. Where the discontinuity of stretching is clearly expressed. Also, the tendency of gravitation of any energy, heat radiation of a positive temperature, in contrast to the absolute temperature of a vacuum. Ultrahigh frequency, centrifugal force of gravity, stretches along the radial vectors of spherical space-time.

Next, my proposal is the definition of the main leitmotif, in comparison of "DIFSSGV" with the first spark of the universe, energy.

If, "DIFSSGV" is taken as the leading transmission of the quantitative moment of motion to the entire multitude of forms of matter, then the energy will manifest itself as a driven structure that has taken the amount of the moment of gravitation and its transfer for further transformation into

all kinds of structures and systemic matters. As a result, it has adopted the unique property of transforming an ultra-high amount of frequency of motion, and reformatting into the invariance of all kinds of diversity, systemic particles and matters. In this connection, I propose to combine gravity, strong nuclear and weak fundamental forces of interaction, together - "DIFSSGV". Add the thermodynamic force of interaction to their common family. In fact, the principle of interaction, "DIFSSGV" in turn, at the beginning enters into interactions, using the spherical centrifugal force of gravity. After the formation of the boson shell, it comes into conflict with the violation of symmetry, isothermal state at a specific spherical, space-time point. Where the isothermal, isobaric potential difference appears, in a given boson shell, in comparison with its constant absolute temperature, - 273.5 degrees.

Further, based on the foregoing, energy-intensive particles, protons, neutrons, photons, quanta, electrons and other elementary particles, carriers of weak and gravitational interactions of matter, are not able to move independently, to possess some amount of motion. The weight of the material world, especially elementary particles, are in motion, transformation, interaction, invariant reformatting, development, annihilation due to the dynamic stretching, spherical-centrifugal gravitational state ("DIFSSGV") of the vacuum.

The next important postulate is the problem of the preservation of each energy, thermal manifestation, from the endless stretching of the absolute zero vacuum. "DIFSSGV" simultaneously solves this problem, with the formation of a spherical boson shell. In addition to the conservation of energy and thermal radiation, boson shells, with a high frequency "DIFSSGV", vary, stretch and contract. Frequency, exposes the internal energy to quantitatively increase and condense, form and interact, with positive and negative analogous, physical structures.

Further, I propose to unite all particles and sub particles participating in weak and strong nuclear interactions into two different groups, with different amounts of frequency of motion. In this case, the amount of frequency is an important factor in determining the value of the interaction, as strong and weak. Frequency increases with the interference of the wavelength of the frequency of each energy shell, with a wavelength already more massive, enveloping them in a common shell, a boson.

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## **2. In general relativity, I would add three more Postulates**

1. "Principle of Requirement" - "Objectively necessary amount of time" for the formation of energetic matter, therefore, its further preservation, as a systemic particle or subparticle, readiness for interaction, invariance and reincarnation.
2. The "principle of formation" of all elementary particles, micro and macroworlds, become such, after the appearance in the boson shell, as energetic static-plasma formations. After the objectively necessary amount of time, being under the high-frequency fluctuating and alternating voltage of the shell, having condensed, they are transformed into particles with a specific mass, a specific charge, spin and polar value.
3. "Evolutionary Principle" "The Principle of Natural Selection" by Charles Darwin [1], can give an adequate answer to Heisenberg's Theory of "Uncertainty" in that part of his postulates that "DIFSSGV" simultaneously applies a specific frequency of momentum to all elementary particles, and their environment. With the transfer of impulsivity to them for corpuscular, wave, linear, spiral-like effect, specific quantitative and geometric curvature of

movement. This moment of momentum transfer can be designated as the arrival of the moment of interaction, by all operators of the world matrix forces of interaction, unison.

4. Inertia - potential specific gravity

Force-scalar vector of specific gravity

Mass at rest - carrier shells, potential specific gravity

Mass in motion – the superposition of the specific gravity carrier shell, according to the scalar vector function.

5. The discrete-impulsive physical state of the spherical globalization of the vacuum (DIFSSGV) is the only, non-alternative unitary factor of the principle of origin, formation, movement, interaction of various constructions of physical matter, events, space - time curvatures.
- It is a total controlling, correcting, integrating and unifying factor of the unity of diversity
  - Is the general organizer and performer of the dynamic, communication environment and means of communication, all kinds of movement, interaction of private and system energy formations, galactic, solar, planetary structures of macrosystems.
  - Is the organizer and executor of the origin of the simplest, all-necessary forms of physical phenomena and elementary particles, and the construction of their substantial and structural physical formation to the perfection of the biological formation, with an infinite periodicity of improvement.

Under the sensory regulator of supersymmetry and the synchronizer of the moments of motion, it is possible to determine the superposition of each particle involved in the system interaction. For this, it is necessary to accurately determine the value of the frequency "DIFSSGV" and the physical parameters of the particles, at the time of their interaction in the superposition field. The value of the "DIFSSGV" Frequency is a physical constant, and at any point in space-time it manifests itself unambiguously, which is the starting moment of motion for all particles and matter, in the period of a specific value of the total absolute time.

The First Principle fully answers the question: - Why exactly so many particles? Because each particle possesses a certain amount of energy, which before interactions was in a plasma aggregate state. The principle of their manifestation and preservation until a specific time of physical interaction requires the initial placement of the energy formation in the boson shell (spherical space-time), where their preservation, reincarnation must be ensured. At the same time, the following Principle does not allow the conservation of energy at rest. Environment, "DIFSSGV", as the main operator of the origin and formation of energy education. Continuing his work as an operator, transfer the frequency of motion to the spherical plane of the boson, to the shell of the energy formation. Under the influence of a discrete frequency, the spherical shell of the boson is stretched under the stress of the universal centrifugal, spherical gravitation. The value of the diameter of the shell increases proportionally, over the entire plane of the shell, until the moment of a discrete pause, known as a fine structure [2]. At the moment of the appearance of a fine structure, the value of the shell diameter decreases proportionally. Isobaric and isothermal rest inside the boson is violated. Energy is periodically disturbed and periodically condensed. Compaction occurs inside the boson, spin and polarization of single-sign condensed and non-condensed particles appear, concentrating in two polar positions, in the center (condensed) and under the spherical shell of the boson (not condensed). Particles concentrated under the boson shell (which did not have time to condense) migrate between the outer (negative) and inner (positive) boson, in the rhythm of the "DIFSSGV" frequency, in a spiral motion. Migrating particles, colliding with an absolute zero outside the shell, become denser and take on a unipolar value, constant electromagnetism. 1-th Principle requires the proportionality of the "Objectively-necessary amount of space-time" for the formation of a certain amount of the pair "Proton-Electron". The amount of a pair in one boson shell or Atom is directly proportional to the density of the aggregate medium of origin and formation of these pairs.

The Second Principle gives an answer to the following question: - Why do such particles occur as they are?

This is required by the Principle of the regularity of the conservation and selection of matter and events, from a trivial form and content, to a complex form and content, from simple primitiveness to complex perfection.

Answering the question: - "Where did these interactions come from," I would explain as follows:

- The material world has occurred since the appearance of thermal radiation at a specific point, space-time, its surrounding, negative environment of absolute zero. The interaction of negative energy, in the form of physical fluctuations, begins to function simultaneously, at the moment of the formation of positive energy. This is one of the world's first forces of interaction. In this case, the second part of the interaction is "DIFSSGV". The appeared energy particles receive from the negative force of the universal spherical, centrifugal gravitation and the positive force of the universal attraction in the space-time, where the energy particle is at rest. Having found itself between two identical gravitational forces, the boson shell of an energetic particle takes a fluctuation equal to the momentum of the frequency "DIFSSGV". Which leads to the curvature, (Space-time) [3] and entry into interaction, step by step, space-time delimitation [4] of the fundamental forces of interaction. To regulate the physical state of each elementary unit with its environment, a worldwide system of diversity coexistence.

"DIFSSGV", which set in motion the boson shell of an energetic particle, initiates the rotational motion of the particles. Positively, and negatively charged particles, formed as consumers of discrete energy, take over the "DIFSSGV" attached to it, its characteristic frequency and momentum.

This is the property that the "DIFSSGV" gives to the energy structures and particles.

"DIFSSGV" and universal gravitation are that dark matter, which, at one time, was not properly studied by scientists.

The motion of the charged elementary particles of the atom in the Standard Theory, the planets in the solar system, the sun in the galactic system, is regulated by the dipole, component function, spherical centrifugal universal gravity (SCUG).

As established by experimental confirmation, different-valued charged particles are attracted at a critical distance of convergence. Interference of electromagnetic waves occurs on the interaction line. The integration of the potential electromagnetic energies, two different particle charges, reaches the maximum critical temperature value.

The total value of the temperature is equally distributed among the moving masses of energy particles. If the compacted specific weights of the charges of the attracting masses (the contents of the carrier shell) are equal,  $\gamma_1 = \gamma_2$ , then it is most likely that they will collide.

If the compacted specific weights of the attracting masses are different,  $\gamma_1 > \gamma_2$ , then the spherical centrifugal universal gravity will separate and pull apart the mass with the smallest compacted specific weight ( $\gamma_2$ ), with an order of magnitude exaggerated, electromagnetic charge of the mass, and carry it along the scalar vector function, in the following, space - time direction. In all planetary, orbital systems, the principle of natural selection and separation from the collision of two or more masses, at the time of their strong nuclear or electromagnetic attraction, is strictly observed.

From two interacting, attracting masses with different specific weights and charges, the charged mass that entered the interaction, located with the lowest compacted specific weight, and with an excessively exaggerated electromagnetic charge is selected. Which, at the moment of attraction, is located with the same compacted specific gravity, but, after the interaction, has become excessively exaggerated, an order of magnitude larger, electromagnetic or strong nuclear charge mass.

### **3. Participation of gravity at ultra-small scales**

A. Einstein in general relativity [5] changed the view of gravity. According to the general theory of relativity, our Universe consists of 3 spatial dimensions + 1 time dimension. Together, these dimensions form a four-dimensional continuum known as the fabric of space-time. Objects that have mass produce a curvature in the fabric of space-time. This curvature of spacetime is responsible for gravity.

The geometric theory of gravitation, which develops the special theory of relativity (STR) [6], proposed by Albert Einstein in 1915-1916. This theory postulates that gravitational and inertial forces are of the same nature.

From this it follows that gravitational effects are caused not by the force interaction of bodies and fields in space-time, but by the deformation of space-time itself, which is associated, in particular, with the presence of a mass of energy.

Inertial forces are characteristic of macroparticles, where the mass energy is not much higher than its centrifugal force or is at the same level. The rotational speed and mass density of linear motion are also a definite factor in the inertial moment.

In the general environment of propagation, the frequency of "DIFSSGV" can differ from the spontaneous frequency of elementary particles of the atom. If the frequencies of the boson shells, the groups of shells inside each other, overlap and amplify, then interference occurs, for the implementation of strong nuclear interactions. If they do not coincide, then there is a violation of the symmetry of the synchrony of interaction, carriers of weak nuclear forces are included in the interaction process. When it is necessary to completely restore supersymmetry, strong and weak interactions are supported by the forces of the field of electromagnetic interactions.

Gravity [7] is a scalar vector of spherical centrifugal universal gravitation, in comparison with the inertial moment, they really coincide with single-valued, interfering vectors of centrifugal force, with a reinforcing or opposite effect of centrifugal thrust. Spherical centrifugal gravity manifests itself with a frequency equal to the frequency of "DIFSSGV" and applies as much effort as is required to complete the strong and weak forces of interaction. (The principle of spontaneous boson intrusions into each other) That's why I propose to combine them into one single one.

1. First, one must realize and accept the postulate, which has been verified both theoretically and experimentally, stating the fact that for the origin of something, it is necessary to define somewhere supersymmetric space-time, as a virtual environment of origin, conservation and transformation of a specific promising substance.
2. Secondly, this environment should acquire a specific and unitary structure of the physical state, for the adoption, education, development, preservation and reincarnation of a promising substance that has an objectively necessary need for existence, in an environment of diversity.
3. Thirdly, the environment itself, as Space-time, should be defined as a nutritional continuum of a dynamic-physical state. In this case, as a discrete-impulsive physical state of the expanding space-time.
4. Fourthly, the virtual environment must be ready, as a positive value, to interact with a negative surrounding physical state, thermodynamic charge, discrete impulsivity of absolute zero.
5. Fifthly, the virtual environment should be provided with a closed adiabatic space, in case of emergency, external physical intervention, to maintain the stability of physical interactions and scalar formation of the content and structure of the substance. Within the framework of the theory of Thermodynamics [8], inside the adiabatic [9] structure. With a variable value of Entropy [10].
6. Sixth, the virtual environment, like a pupa or a boson, is superimposed on the saddle of a virtual tensor field [11], where a physical, kinetic, exponentially discrete fluctuation occurs on the adiabatic system, its spherical gravitational plane. With further continuation of requirements, theory of the phenomena of transfer of potential bodies, kinetic energy of electromagnetic processes. Associated with the passage of fast particles through matter, on the gravitational line of the plane of the fundamental forces of interaction. It also includes

the theory of transfer processes [12] in a quantum medium and the kinetics of phase transitions [13].

7. Seventh, kinetic energy in space-time, in an adiabatic medium, acquires an energy mass, which is brought to a critical density in an objectively necessary amount of time. A value that is inversely proportional to the entropy value of the system. Density is determined by the value of the electric charge and the size of the mass. All these parameters of particles are regulated and regulated by supersymmetry before the inflationary value appears.
8. Eighth, the elementary particles of the atom, as structural phase phenomena, and the atom itself, are reproduced by the standard dimension and the distinctive mass equivalence of the value, in the triple dimension in the isolated adiabatic Space-time and with the achievement of the conditioned density. Outside, vacuum environment.
9. Ninth, the Physical state of the expansion of the vacuum is presented: a) as discrete-impulsive; b) expansion in scalar tensor and radial centrifugal scalar vectors of spherical space-time; c) characteristic of spherical, centrifugal universal gravitation.
10. Tenthly, according to the conditions specified in clause, displacement, collision, convergence of galactic and other parent formations such as black holes, quasars, multiverse are excluded due to the absence of other non-systemic world forces of interaction in space. Due to the impact on scalar, linear vector expansion of systemic micro, macroparticles of universes, or vacuum of space. Collision of solar systems moving along a specific space-time receding curvature, in contrast to the stationary Milky Way galaxy, is also not possible. The sun and the solar system undergo expansion under the conditions of point, adequately and directly proportional to the expansion of the spherical, geometric 4-dimensional value of its own static Space-time system.
11. - Quantization of elementary particles is caused by scalar gravitational waves
  - the fundamental forces of interaction between elementary particles are carried out by scalar gravitational waves
  - scalar gravitational waves are caused by spherical, centrifugal universal gravity
  - DIFSSGV (discrete-impulsive physical state of spherical globalization of vacuum) is a generative property of the super-frequency structure of spherical, centrifugal, universal gravity

#### 4. rhetorical concepts

- "Universe" [14] - this means that our Galaxy and all Galaxies are taken together as a materialized structure of the vacuum of the Cosmos, the Multiverse.

- "Space" [15] - means a vacuum that has neither beginning nor end + all Galaxies + Quasars + Black holes and other undefined material contents of our entire environment, the continuum of dark matter space.

- "Big Bang" [16] - as one of the versions of the origin, a particular supposed Universe. Many scientists built their scientific dogma and explanations of the world of creation after the fact, as a consequence of the "Big Bang". The Standard Model, the Models of the String Theory, Loop quantum gravity were tied to the General Theory of Relativity, where events unfolded in a medium chaotically moving away from the shock wave, elementary particles, photons, relict thermal radiation, waves, beams and rays. Where in the vacuum, Strings, Branes and other basic fundamental motivations have appeared to explain the origin of the world.

"Big Bang", according to the theory, was born from an atom of matter, with infinitely high temperature and density. Opponents of the version think that this is impossible because infinite density assumes that chaos is close to zero, which does not happen at infinite temperatures. The conclusions of the scientists are that the laws of physics in the singularity do not work. In addition, a substance or a specific atom, like all charged energy formations, is formed and evolves, isothermal and isobaric, inside an adiabatic system, inside a boson. Otherwise, any energetic



manifestation without a protective boson shell is doomed to be pulled apart by the discrete-impulsive physical state of the spherical globalization of the vacuum (DIFSSGV). If, indeed, the "Big Bang" took place in the vacuum of the Cosmos. And, without this boson shell, a previously prepared protective environment, the formation of any energy is absurd. For the same reason, the entropy value changes inside the adiabatic system, isothermal and isobaric inflation matures spontaneously, then quantum migration, the intervention of the supersymmetry regulator, the correlation of quantum gravity plus, a couple of dozen physical constants, the Standard Model of elementary particles begins to work. Atom is ready to build the universe and serve humanity. "DIFSSGV" has the nature of a high physical frequency, commensurate with the frequency of a photon of a quantum. With the compaction of matter, an increase in its density, the frequency of DIFSSGW changes in inverse proportion on a finite element. In a state of singularity, an infinite increase in density suspends the frequency value and increases the wavelength of DIFSSGW, while an infinite increase in temperature leads to an increase in frequency and a reduction in the wavelength of DIFSSGW. The change in the density and temperature of an atom or a specific substance, preceding the "Big Bang", is the fruit of the physical state of the DIFSSGV, which cannot be simultaneously in the mode of two phase, physical, opposite states.

I would replace the concept of "Big Bang" with the Dipole matrix - "discrete-impulsive physical nature of vacuum" and "Boson structure of space-time" on the saddle of the tensor matrix, which exist infinitely, without an indefinite beginning and end, at the same time. Having put on at the same time, in the space-time dual structure of supersymmetry and, on the border of the spherical plane of gravity, in which the interactions of the world matrix physical forces will take place. Where the nutrient environment will be organized, the thermodynamic adiabatic matrix of cold and heat, the interaction of absolute zero and positive energy. "And in the beginning there was a word" - and this word is "Movement", that is, "Universal, spherical centrifugal gravitation" occurring at every point (inside the boson space-time structure) of Vacuum.

I propose to start my justification without the "Big Bang" from scratch, where there is only an empty Vacuum, silence and you and me. Let's conditionally call our theme as- "Pulsusdeus" (The pulse of God). It will be cold, absolute zero - (-273, 15), later we will warm up when the pulse, heat radiation, energy appears. Explosions are canceled, the world of creation begins.

- "Galaxy" [17] is a local space stationary, electrostatic, production, independent, self-regulating system unit that generates a matrix of the material world in the shell of DIFSSGV.

- "Black Hole" [18] - Future Galaxy

- The age of creation of the material world, - 13.7-14.00 billion years refers to the age of only our galaxy

- "Sun" [19] - a derivative of the Milky Way Galaxy, which, moving away along the arm, moves from the center to the distance, as a local, independent, systemic unit of the galactic physical, industrial structure, being at a distance of absence of the galactic force of interaction, existing as an independent, autonomous, self-regulating space local, planetary system, in the shell "DIFSSGV".

- "Light" [20] - (ray, beam, photon, quantum, thermal radiation) - potential energy, thermal content of an elementary boson, spherical discrete-impulsive wave structure.

- "Quark" [21] - a derivative of the atomic nucleus, a compound energetic particle of a proton, neutron, electron, positron, photon, an elementary charged content of a gauge boson, a quantum structure that completes a particle in the orbital spaces of an atom of all levels.

- "Proton" [22] is an energy generating adiabatic matrix in the nucleus, a stimulator of a group of quarks, gluons, muons, pions, carriers of nuclear forces between nucleon bosons inside the nucleus, electron bosons, a source of variable electromagnetic interaction.

- "Neutron" [23] - Boson adiabatic shell with energetic spontaneous quarks, pions of strong scalar thermodynamic interaction

- "Electron" [24] - Dense negatively charged, energy structure, formed from the energy accumulation under the boson shell of the proton, Electrons are charged with electromagnetic clouds, orbitals around the atomic nucleus. Electrons with the same principal quantum number n

form a quantum space, similar in dimensionality to electron clouds. The electron, as a condensed electric charge, is a source of constant electromagnetism, a strong scalar vector interaction, an ionizer of the interorbital space of an atom, a stimulator of pion-muon interaction, a generator on the Space-Time periphery of an atom, an electromagnetic, screened field of energy condensate, between the energy system of the atomic nucleus and the external "DIFSSG »Vacuum. Two-vector scalar fluctuation of the boson shell of an atom, elementary particles of Baryons, mesons and hyperons, pumps the electron orbital shell, with quantum costs. The quantum numbers of the electron dynamically change under the interaction "DIFSSGV, spherical centrifugal universal gravitation, discretely changes the orbital direction and level of motion of the electron around the nucleus of the atom. The stable state of the nucleus, adequate to the state of rest of the atom, depends on the geometry, direction, quantum number and position of the electron in the orbital cloud. The state of rest is synchronized and provided with a directly proportional ratio of the number of electrons to the number of protons. Violation of proportionality leads to a violation of the supersymmetry of the energy balance of the atom, leads to a change in charge to positive or negative and is called the corresponding ion.

- "Positron" [25] - Boson adiabatic shell with excess quark energy of weak scalar interaction of the generating screen energy absorber at interorbital electronic levels.

- "Boson" [26] - a derivative of the Space-Time Supersymmetry, spherical centrifugal universal gravitation, a carrier of discrete frequency, a utilizer of energy, heat radiation, a spherical adiabatic plane of gravitational interaction of energy matrices of forces. Fluctuating spherical circle, environment of origin and storage of energy, heat sources.

- "Tensor field" [27] - virtual, dual matrix Space-time, four-dimensional scalar-vector field of formation of "Boson curvature" - the derivative of the dual pair "Space-time Supersymmetry".

- "Vacuum" [28] - not charged discretely - impulsive physical state of spherical globalization of vacuum (DIFSSGV). An expanding infinite fluctuation, a carrier of a quantum, thermal radiation, each positive energy formation, at the border of interaction with absolute zero, over -273.15 degrees. A catalyst for the transfer of fluctuations to boson structures of energy invariance, thermal radiation, elementary particles, the interaction of fundamental forces of physical matrices. Forming dipole matrices, dual matrices "Space-time Supersymmetry", "Tensor fields", "generating energy and thermal radiation", "galactic generating systems", "independent, autonomous solar planetary and orbital systems", new forms of micro and "macro invariance".

- "Oscillation" [29], - the oscillation of Leptons and Quarks, quanta, photons, energy units or thermal radiation is caused not by the particles themselves, but by stimulation by the environment of DIFSSGV, which is a physical constant

- "Neutrino oscillations" [30] - structural associations, the formation of elementary particles, physical and chemical elements, substances, by stimulating the DIFSSGV, initiating the mechanism of interaction of fundamental forces.

- "Spin" [31] - discreteness of the angular momentum of the electromagnetic voltage of energy units. The moment of impulse of each energy unit coincides with the resonance period of a single unifying energy system of the atom. The value of parity and oddity varies within the framework of multilevel boson contents, the amount of which is determined by the numerical change in the discrete-impulsive frequency of the physical spherical state of the space-time envelope level of each boson.

- "Supersymmetry" [32] is a part of an even pair of a dual matrix, "Supersymmetry and Space-Time", a system that forms a regulator of atomic and world equilibrium within the framework of the universal forces of interaction.

- "Gravity" [33] - not charged, spherical centrifugal universal gravitation within the dipole matrix, with a simultaneous manifestation in a discrete-impulsive physical state of the spherical globalization of vacuum, a stimulator of the moment of curvature of Space-time. Gravitational waves - this is the spherical centrifugal universal gravity.



- "Dark matter" [34] - fluctuating bosons of the properties of absolute zero, (-273, 15 degrees)
  - "World forces of interaction" [35] - discrete-impulsive physical state of spherical globalization of vacuum, thermodynamic, electromagnetic and strong nuclear interactions. (strong nuclear interaction, weak nuclear interaction, electromagnetic interaction, in fact, all physical interactions occur within the framework of the pair matrix of high-frequency manifestation "DIFSSGV", stimulating doubling, tripling of the fluctuation of the combined boson shells.)
  - "Unified unifying force" [36] - not charged discretely - impulsive physical state of spherical globalization of Vacuum (DIFSSGV), (in a dual matrix with spherical centrifugal universal gravitation)
  - "Lights, rays of light and a beam of light" - what is the difference between their nature? (we take as light-discrete-impulsive spherical wave propagation; beam - focused light; beam of light - focused rays)
  - "The nature of light" - all the same, how should we state the nature of the propagation of the above forms of light: - by a discrete effect, a corpuscular-wave effect or a discrete-impulsive and corpuscular-wave effect? (taken as a discrete-impulsive spherical wave effect)
- If the speed of Light is a physical constant equal to 300,000 km / s and the constancy of the speed of light in the vacuum of space, regardless of any movement of the light source and its observer, so what provides: - the constancy of the speed value, - the infinity of the continuation of the movement of light, - how the same of the three types of physical effect, light spreads? (taken as carried away by the discrete-impulsive spherical-wave physical state of globalization of the expansion of Vacuum at a speed of 300,000 km / s, without losing the energy value of light, photon, within the framework of the law of conservation of energy)
- if "light" (in three physical hypostases), during propagation, is attracted or deviated from giant celestial bodies, like permanently distributed light, then the problem arises of observing and determining the location of its source in space and its belonging to a specific source, as a specific a star, constellation or galaxy, not to mention the accuracy of determining the physical structure of the spectrum source, after interacting with giant celestial bodies.
  - or taken as changes in the direction of the focused beam or beam beams through diffraction. And a photon, light and thermal radiation cannot be attracted, since their radiation is forced by a discrete-impulsive spherical-wave physical state of the globalization of Vacuum.
  - the spread of "Light" (in three physical phases) is explained by the final perception of the observer, regardless of even the "presence", "absence" of the observer, who, being present, will simultaneously witness light and thermal radiation at each point of the spherical environment of the source of Light or thermal radiation. This evidence means that the light from the source is pulled apart by the "DIFSSGV" discretely spherical and will not be able to deflect along the geometric sides of the vacuum.
  - "Neutrino" [37], - is presented by scientists as a carrier of a weak force of interaction, in fact it is an uncharged body of dark energy of the Cosmos, like "DIFSSGV", simulating the formation of a Boson doll with an energy filling and organization of the interaction of fundamental physical forces.
  - "Quantum" [38], - Subelementary energy particle, excited energy mass, as a composite inflationary emergence of the mass of elementary particles, positive thermodynamic structure of an even pair of dipole matrix, interacting with negative spherical centrifugal universal gravity, gravity, dipole structure of the DIFSSGV.
  - "Atom" [39] - Material structure of constant value of dimension, differing in invariance in physical density, simulator of dipole parity, pairing of elementary particles, converter of heat and cold, negative and positive values of charges, quantum and gravity. The paradigm of manifestation of world forces of interaction, scalar invariant environment. Converter of chemical elements from the invariants of the hydrogen atom. Source, carrier, channel of vacuum energy. Brick of the universe of the universe. Rationally constructed system structure, with a generating core, a source of energy. With a protective structure around the nucleus, as a multilevel orbital, electronic

environment, against discrete-impulsive asymmetric and over-abundant dispersal of the nuclear energy. Preserving the decay of the atomic structure by universal gravitation, the physical state of the vacuum. Which is characteristic of the protective mechanism of the sun with its protective planetary system. With a generating core that produces energy quanta. The nuclear property of the assembly of leptons and quarks, to maintain the optimal amount of nuclear charge and protective orbital levels of negative values. With a mobile structure to provide compensation for energy inflation, discharge of the surrounding, orbital environment of the core. Having a pulling apart discrete-impulsive physical state, a negative charged vacuum environment, while observing the principle of stimulating events in the vacuum space. If events take place in a material environment, then interatomic interactions occur with monovalent isotopes of variable value. In the material environment, atomic nuclei are formed with densification in gauge bosons, two or more protons. The subsequent doubled, tripled ... generation with a high, in excess of the Planck frequency, leads to a spontaneous loss of alpha, beta, gamma radiation. Spherical centrifugal, universal gravitation with attractive initiation of a discrete-impulsive state of the environment, ends with a continuing absorbing result. With an increase in the density of an atom of chemical elements, the probability of an increase in radioactivity changes proportionally. This allows you to preserve the optimal value of the charge of the atomic nucleus, the mass number of the atom, the balance of the average static energy state of rest of the given atomic structure. Preserving the structure of the atom of a specific chemical element without destroying the radioactive structure of the atom.

- "Antimatter" [40] - Antimatter is not stably formed in nature, their detection in the space of the galaxy and in the entire vacuum is not possible for the simple reason that they are the costs of the physical properties of matter and charged particles, from the moment of their origin, interaction and up to their invariance. As a result, they appear to the observer as the second projection of the reverse hemisphere, the same supersymmetric ball of a charged particle, already with a negative value of charge, spin and direction. They, as the second projection of the same charged particle, from the point of view of the observer, can enter into other interactions or turn out to be utilized, like the quanta of elementary particles.

Periodically, substances are quantized by spherical centrifugal gravity, quanta interact with fermions, annihilation occurs, plasma transformations are condensed, and remote and partially cooled energy invariance is pulled apart by DIFSSGV. "Antimatter", the same substances with changed signs of charge, quantum value and spin, as condensed particles and acquired a constant electromagnetic charge, allows them to copulate into cometary, asteroid, planetary cosmic structures. The constancy of the expansion of the Universe is not a favorable condition for the movement or accumulation of macro space systems, galaxies, quasars. They have a lot of vector freedom, exclusively from homogeneous, monovalent particles, elements, cosmic non-systemic formations. The concentration of energetic elementary particles, atoms in chemical, biological elements, molecular structures, can occur only in a stationary, compacted material environment, where DIFSSGV pulls the invariance of hydrogen from the magma of the core of planetary systems, and drags through the entire thickness of the compacted space object, to its border with the vacuum of outer space.

Having created artificial physical conditions by analogy with the space vacuum, with the discrete-impulsive nature of the expansion of space-time, with the speed of a photon, one can synthesize an atom with a specific atomic number and charge, mass and valence.

## 5. Atom

Continuing the topic, I'll start with the characteristics of the Atom. I persistently postulate the Unified Theory of Nature as the Theory of the origin and functioning of nature within the framework of a dynamic, driven effect, dual tandem "Space-Temporal Supersymmetry", under the factor of the leading property "Discrete-impulsive physical state of spherical globalization of vacuum". It is important and especially to designate the role of "Spherical-centrifugal universal gravitation" [41], as a systemic structure of "DIFSSGV". I conventionally call this theory

"Pulsusdeus" or "DIFSSGV", as a negative pair, in tandem, with its compound theory "Quantum gravity".

Starting with the origin of the first hydrogen atoms in a vacuum and continuing with the creation of their invariants in a dense material environment, "Pulsusdeus", penetrating through the unlimited layers of the material environment, galactic, solar and planetary structures, organic and inorganic bodies, protective shells molecules and atoms and their elementary particles, transmits to them high-frequency impulses of motion, through the carriers of the world forces of interaction. Eliminating energy inflation, pulls away excess, spontaneous quantum energy, which violates the balance of the energy system of the atom, on the conflict line, area, border of the gravitational field, fundamental matrix forces of interaction.

The inherent property of "DIFSSGV" (Pulsusdeus), gives atoms a standard, supersymmetric configuration, dimension, mass and density, due to the compaction of cloudy electron orbital spaces. The density of the mass, other physical indicators, such as molar, molecular weight, change. Calculated and dimensional expressions, they state the fact of a similar dimension of the mass of atoms of all chemical elements existing in nature. They differ in the values of the orbital density of atoms. Thus, the mass of one mole of a substance (molar mass) is equal to the mass of one particle of a substance, atom or molecule, expressed in a. e. m. and multiplied by NA.

Molar mass is the mass of one mole of individual atoms of this element, that is, the mass of atoms of a substance, taken in an amount equal to Avogadro's number. In this case, the molar mass of the element, expressed in g/mol, numerically coincides with the molecular mass - the mass of the atom of the element, expressed in a. e. m. (atomic mass unit). However, it is necessary to clearly represent the difference between molar mass and molecular mass, realizing that they are equal only numerically and differ in dimension, in this case, in their total density due to the densification of electron orbitals, between cloud spaces.

In simple terms, the volume of one mole of a substance (simple substance, chemical compound or mixture) at a given temperature and pressure; the value resulting from dividing the molar mass  $M$  of a substance by its density  $\rho$ : thus,  $V_m = M / \rho$ . Molar volume characterizes the packing density of molecules in a given substance. With the same mass, due to the difference in density, the weight value changes. The law of conservation of the dimension of the atom, with a change in physical density and weight, is the basis for the origin of a large range and system of periodicity of chemical elemental invariance.

Bosons are particles that not only transfer interactions between other particles, so any attraction or repulsion between particles occurs due to the fact that they exchange or copulate with bosons. If we refer to the veracity of the value of the spin of elementary particles and bosons, then gravity, as a carrier of the force of spherical universal gravitation, transfers the high-frequency fluctuation to the boson shell, organizes interactions between the energy charges of particles, through the fluctuation of their bosons, their outer shell, an elastic shell, where they are stored from pull away and receive energy from "Pulsusdeus" - DIFSSGV.

The Higgs boson was the last particle discovered in the Standard Model. Scientists have determined that the Higgs Boson has zero spin, electric charge, and color charge. General relativity postulates that electric charges must necessarily have an even or fractional spin. Bosons ensure the safety of charges and organize the transfer of fluctuating energy of motion to them through their shell. This is an integral principle of the existence of boson structures. Other uses for Boson structures do not physically exist. His discovery helped to confirm the mechanism of how fundamental particles acquire mass. The fundamental particles in the Standard Model are quarks, leptons and bosons as particles that carry the fluctuating force. There are several types of bosons. So, for example, the well-known photon, as a quantum inside a boson fluctuating shell, is a carrier of electromagnetic interaction. Gluon, as a fluctuating common shell of two or more leptons, with their bosons - strong interaction, and W- and Z-bosons, with particles that have taken over fluctuation from gravitational spherical universal gravitation, weak interaction, unite and transmit the fluctuation further.

## 6. Elementary Boson Particles

According to modern concepts, bosons should not have an inert mass, they are carriers of an energy charge, in a vacuum they are under voltage DIFSSGV and take over fluctuations to their spherical shell. W- and Z-bosons, as well as intended for protection and transfer of fluctuating interaction, cannot have an inert mass. In principle, physical fields and bosons are not structural matter, but are a virtual spherical-geometric area, participating as a space-time, dimensional curvature for the interaction of physical world forces in them.

## 7. the discovery of the Higgs boson

The Higgs boson [42] was discovered on space-time conditions close to the conditions of the Cosmic vacuum. A boson, a spherical space-time formation, a shell or a spherical field, where an energy particle appears naturally in a vacuum. The Higgs boson is placed in the center of the tensor. The shell itself is a dynamic structure. The spherical Boson itself and its spherical shell adopt dynamism, through the dynamic environment of the vacuum environment, of the discrete-impulsive physical state of the spherical globalization of the vacuum (DIFSSGV).

As a result of such an origin, on a tensor field, in space-time, the Boson receives and gives the originating energy charge, later to the particle, mass, scalar motion, polar meaning and, most importantly, safety from decay.

There is another theory, which states that every event, every particle, substance, elements are derivatives of the previous derivative, in the system of the periodicity of their origin, development and annihilation. Both in the smallest and largest scales. Monovalent derivatives with general physical values, masses and charges coalesce on a larger scale. They are held together, condensed, annihilated with the help of fundamental forces of interaction.

So, take two protons and accelerate to about the speed of light. At some point in time, they are pushed head-on. Protons from such an impact begin to disintegrate into secondary particles. Rather, this event is similar to a spontaneous violation of the superposition of protons. Apparently, ordinary quantization took place, photons should have appeared in boson shells. If they did not appear, then the event environment was not prepared properly. The quanta have burned out and dissolved. During this process, they tried to fix the Higgs boson. I don't know how this story ended, the fact that bosons are real structures is a fact.

Complicating the experiment is the fact that the existence of the boson can be confirmed only indirectly. The period of existence of the Higgs boson is critically negligible, as well as the distance between the points of origin and disappearance. It is impossible to measure this period of time and distance. The Higgs boson does not disappear without a trace and its short-term presence is proven due to the "decay products". It is impossible to examine the property of the Higgs Boson or other elementary particles in a private way, separately from the dynamic structure of the Atom. Where all interactions are strictly regulated and enter into relationships, copulate and annihilate, strictly within the framework of the regulator of supersymmetry and quantum-gravitational spherical centrifugal gravitational interaction. Individually, all quarks and leptons are aimless energy charges in the boson shell, awaiting the verdict of the physical paradigm of their hour.

The boson (its contents, the charged particle) that scientists observed at CERN seems to have decayed in two different ways.

In one scenario, a 126.6 GeV particle decays into two photons.

In another case, a 123.5 GeV particle decays into four leptons.

## 8. The principled approach of general relativity

In the period from 1915 to 1916, A. Einstein published his greatest work, the most successful theory of gravity, which became the foundation for cosmology, used to this day, including by the International Astronomical Union - the general theory of relativity (GTR). Within the framework

of this theory, A. Einstein derived an equation that connects the curvature of space-time with matter, the substance that fills the curved region under consideration. Like most theoretical physicists, the great scientist strove to reduce his equation to the simplest possible form, which, in fact, he succeeded in doing.

While working on general relativity, A. Einstein noticed one drawback - according to his equations, the Universe must either expand or contract, which contradicted astronomical observations and ideas about the Universe of that time. For this reason, he introduced an additional factor, a dimensionless constant, whose task was to resist the forces of gravity, gravity, that is, to act in the opposite direction. Thus, A. Einstein was able to obtain a solution for a static and unchanging universe. The value of the cosmological constant, otherwise the Lambda term (due to the designation of the constant by the Greek letter Lambda), was assumed to be scanty enough not to notice its manifestation in nature.

Scientists divide physical constants into two main groups - dimensional and dimensionless constants. The numerical values of the dimensional constants depend on the choice of units of measurement. The numerical values of the dimensionless constants do not depend on systems of units and must be determined purely mathematically within the framework of a unified theory. Among the dimensional physical constants, one should distinguish constants that do not form dimensionless combinations with each other, their maximum number is equal to the number of basic units of measurement - these are actually fundamental physical constants (speed of light, Planck's constant [43], etc.). All other dimensional physical constants are reduced to combinations of dimensionless constants and fundamental dimensional constants. From the point of view of fundamental constants, the evolution of the physical picture of the world is a transition from physics without fundamental constants (classical physics) to physics with fundamental constants (modern physics). At the same time, classical physics [44] retains its significance as the limiting case of modern physics, when the characteristic parameters of the studied phenomena are far from fundamental constants.

The cosmological constant was introduced by Einstein in order for the equations to admit a spatially homogeneous static solution. After constructing the theory of Friedman's evolving cosmological model [45] and obtaining the observations confirming it, the absence of such a solution in the original Einstein equations is not considered as a defect of the theory.

Until 1997, there were no reliable indications of the difference between the cosmological constant from zero, so it was considered in the general theory of relativity as an optional quantity, the presence of which depends on the author's aesthetic preferences. In any case, its value (less than  $10^{-29} \text{ g / cm}^3$ ) makes it possible to neglect the effects associated with its presence, up to the scale of galaxy clusters, that is, in almost any considered region, except for cosmology.

In 1998, two groups of astronomers studying supernovae almost simultaneously announced the discovery of the acceleration of the expansion of the Universe, a nonzero positive cosmological constant. To date, this theory has been well supported by observations. The quantity  $\Lambda$  corresponds to a vacuum energy density of  $5.98 \cdot 10^{-10} \text{ J / m}^3$ .

The term  $\Lambda_{qab}$  can be included in the energy-momentum tensor and considered as the energy-momentum tensor of vacuum. This term is invariant with respect to transformations of the local Lorentz group, which corresponds to the principle of Lorentz invariance [46] of the vacuum in quantum field theory. On the other hand,  $\Lambda_{qab}$  can be considered as the energy-momentum tensor of some static cosmological scalar field.

According to many physicists dealing with quantum gravity, the small value of the cosmological constant is difficult to agree with the predictions of quantum physics, called the "problem of the cosmological constant." The thing is that physicists have a question: why is the cosmological constant so small or even equal to 0.

In 1922, the outstanding Soviet physicist Alexander Friedmann published his scientific work, which described the existence of three options, each of which does not provide for a stationary universe:

- $\Lambda < 0$  - in this case, only the forces of attraction take place. For this reason, at some point, the universe will begin to shrink.

- $\Lambda > 0$  - the Universe is gradually expanding, while the speed of the expansion itself increases.
- $\Lambda = 0$  - the evolution of the Universe depends on the initial value of the density of matter. This also implies three options for the development of events: deceleration of expansion and subsequent conversion into compression, monotonic expansion with a meager decrease in speed, or even infinite.

One way or another, at first Friedman's cosmological model was criticized by A. Einstein, since in the case of an evolving Universe, the cosmological constant could be removed from the equations of general relativity without consequences. Several years later, in 1927, the Belgian astronomer Georges Lemaitre [47], observing galaxies of various distances, determined that the Universe was expanding. Even later, in 1929, the American astrophysicist Edwin Hubble [48] formulated his eponymous law describing the expansion of the Universe, which he could also determine from the redshift in the spectrum of galaxies. As a result of the above-mentioned discoveries, A. Einstein was forced to accept Friedmann's model of the Universe. Since that time, the Lambda term [49] was not taken into account in the equations of general relativity on the scale of cosmology, and in other areas did not make a noticeable contribution to the equations, and therefore was introduced only in connection with the aesthetic views of the scientists themselves.

A. Friedman, explaining three options that do not provide for a stationary Universe, was close to the fact that the characteristic of the Lambda term was interpreted by him as a linear physical event, on a static plane of space-time, relative to, between the static zero value of the coordinate system and its negative, positive distant endless meanings.

A. Einstein, in his theory of general relativity, derived an equation that connects the curvature of space-time with matter, the substance that fills the curved region under consideration. Considering the geometry of elementary particles, atom, macro-system space objects, all of them are invariance of each other in their spherical space-time appearance. The supersymmetric geometry of the exterior, acquired by them, develops in 4-dimensional space-time of vacuum. The fourth, time-value, is not static, but discrete, even-meaningfully divisible and produced, by its nature. Space is three-dimensional, it is an indivisible part of the vacuum. Each point of the vacuum can be taken as cubic, with equal sides and spherical, with equal radii, geometric space. For the formation of a supersymmetric boson ball in a vacuum, it is required: a reference point, a three-dimensional space on a tensor saddle, a discrete-time counting of the dynamism of a vacuum, spherical centrifugal gravitation in equal steps of removal. And so, we define the reference point in vacuum, localize around the point symmetrically, spherical space-time, place the zero mark of the tensor field on the point and turn on the equal frequency of time. Let us formulate the task as follows: - Launch the "Discrete-impulsive state of spherical globalization of vacuum" on the spherical space-time shell of the boson.

## 9. We take into account A. Friedman's model

- $\Lambda > 0$  - The vacuum expands discretely, the stepwise discreteness is interrupted, a dark structure appears, which is explained as an interruption of the expansion. In this case, the speed of the expansion itself stops.
- $\Lambda < 0$  - in this case, there is an adequate, stepwise return to the previous potential geometric state. For this reason, the Vacuum will begin to contract.
- $\Lambda = 0$  - Means that there is only 3-dimensional space, the 4th dimension is time, there is no. Agreeing with Edwin Hubble, we observe the correspondence of his law describing the expansion of the Universe, which he could also determine from the redshift in the spectrum of galaxies and the appearance of a dark structure indicates the discreteness of expansion and contraction.

The greatest contribution to science is made by the cosmological constant in the field of quantum physics and cosmology. Thus, on the basis of Friedman's cosmological model, a modern model of the Universe was formed, called the Lambda-CDM [50], where the cosmological constant is an integral part of the theoretical structure and describes the properties of dark energy.

Scientists A. Friedman and E. Hubble made significant contributions to science. The exact value of the cosmological constant as density -  $g/cm^3$ , I would change to the frequency of motion, as a number  $pd = 9.5 \cdot 10^{-14}$  Hz, and the impulse would leave as -  $\pi = 1.06 \cdot 10^{-27}$  kg·m / s, conditional until clarification. And I would remove the rhetorical question - "the problem of the cosmological constant." It consists in the fact that it is time to present the value of the Lambda term theoretically, using quantum physics.

In view of the lack of charge, the cosmological constant introduce confusion obtained in theoretical studies. "DIFSSGV" explains the effect of the scattering of galaxies in such a way that the cosmological constant as "Discrete-Impulsive Physical State of Spherical Globalization of Vacuum" manifests itself as a fluctuation of spherical space-time on a tensor field. Spherical centrifugal universal gravitation, which gives fluctuation to the spherical shell of spherical space-time, boson formations, moves away from the center of the ball formation, like scalar radial centrifugal vectors. This is the principle of the DIFSSGV requirement. I would, using the example of the speed of a photon, as a constant speed, at any point in vacuum space, regardless of the geographic location of the source, carried away by "DIFSSGV", while observing the constancy of the speed and frequency of acceleration, would determine the frequency of "DIFSSGV"  $pd = 9.5 \cdot 10^{-14}$  Hz, and the pulse is  $\pi = 1.06 \cdot 10^{-27}$  kg·m / s. With a speed of 300,000 km / s. The principle of preserving the physical value of "DIFSSGV", as a constant, ensures the space-time staticity of galactic, solar and other macrosystems from linear runaway, attraction or distance. One of the most important issues in macrosystems, to apply to the equation of the cosmological constant, three more values, such as: density, mass and mass temperature. These parameters for interaction with "DIFSSGV" can be the following physical stimulators: the specific gravity of the energy potential, according to the ratio of the mass of a particle or a space object, variable and static electromagnetic moment of impulse, physical principles of systemic origin and dependence.

## 10. The private history of relativity

I was born, raised and became a citizen in a family professing secular social dogma, an engineer and a doctor. All my life I have studied and am studying history as a roadmap of an intelligent civilization, the history of world religion, science and culture of the peoples of the world. All the time I was wondering what kind of environment I live in, what kind of environment it is, who created it for us, who improves it, cleans up and establishes order in it. So that we live in the purity of our environment, our thoughts, pure physical condition and ecological space of time. I study the history of the universe, the history of an intelligent civilization, in order to learn more about how we appeared and why we appeared. This is natural, or a cancerous accident: - Here, it happened, they say. What to do, bear with me.

The world's religious teachings say that "God created the world in six working days, and us in his own image and likeness." It was a sinful thing, once in my youth, it seemed that scientists predicted, discovered, calculated the time of origin, existence of fundamental universal elementary physical particles and their values, including the theory of the "Big Bang", based on those six working days (space time), which was required for the creation of "Heaven, earth and the material world" for us.

Since no one saw "God", I was tormented by questions, what did they mean: - His physical image, or, as an ideal, visual example for imitation, "His" way of existence, as the Creator, the builder of the universe.

I think that the atom can be compared as a prototype of our environment, the entire contents of the Vacuum with the multiverse (the totality of all existing galaxies and all material components of our environment). Some of the scientists have calculated that the nucleus of the Atom is 10,000th of the total mass of the Atom. Indeed, the expansion of the scale of the Multiverse, which is directly proportional to the expansion of the infinite scale of the space of Vacuum, is measured by inconceivable values. Conventionally, we can consider the dimensional ratio of the



proportionality of the Multiverse to the infinite dimensions of the space of Vacuum, rather, as directly proportional and with a geometric progression, of the expanding space of Vacuum, due to the lack of limiting boundaries. As one of the physicists compared the structure of the Atom: "If the mass of an Atom is similar to the size of a football stadium, then the Atom Nucleus is a cherry in the center of the stadium." Roughly, it can be assumed that, "If, the space of Vacuum is comparatively like the planet Earth, then the Multiverse, this shattered cherry stone in the center of the planet Earth."

I could not understand the global meaning of the existence of "God", but I saw and cognized Him gradually as the Creator, the builder of the universe. I think that the overwhelming majority of those who read my explanations will agree with me in this context. Indeed, no matter how we call "Him", nor represent and perceive, because someone or something has become (about) to engage in this craft. We, as "His" or "His" derivatives, should know and be grateful for everything that happens to us, and know what can happen for our correct or incorrect cognition.

## **11. Spacetime Supersymmetry**

1. When I began my search, as an observer, as is customary in the scientific community, to refer to his point of view, I noticed that the necessary principle of Supersymmetry is present in the peacekeeping process. All local procedures of creation need coexistence, under the control of Supersymmetry. As expected, the result of the materialization of her theoretical activity, on the basis of the universal forces of interaction, acquire a symmetric four-dimensional (XYZT) form of a rational, objectively necessary form of existence, both in appearance and in the construction of content. Moreover, in spatial projections (XYZ), the obligatory expression of Supersymmetry is also observed. And the time (T), set aside for creation and the further existence of this brick of the universe, is strictly regulated and constantly stable, as a part of the dual matrix Space-time, as a fundamental component of the General Theory of Relativity (GR), for the principle of private and general comparison of things and events.

It should be taken into account that time, as a dual pair of space, is the defining moment of the geometry of curvature. Its role, in determining and modulating the mass, density and properties of matter or a specific event, is measured by the objectively necessary amount of time required for their relevance and the need for the environment for placement, solely in form, and in content as the highest perfection, for further presence, development, physical interaction with the environment.

The continuity and omnipresence of Supersymmetry has always amazed me, as the Higher Consciousness that controls, controls and improves, both the non-organic world of elementary particles and the organic world of fauna, flora and intelligent-conscious, intellectual origin, derivatives of the noosphere. Which, naturally controls, changes and improves, including the environment of its origin and existence, moreover, in advance, to its natural origin. It ensures the continuous periodicity of the existence of these species and families, the finiteness of the building blocks, the costs that ensure the periodic nature of their definition and perfection, and all this holds together like a link, into a single chain of the universe.

If you think deeply, after all, our life, as the numerical value of our existence, is comparable to the life of quarks, on the scale of Cosmic space-time. And we are somewhat similar to the principle of their existence. We appear in the human family, they are in the family of the atom, we support the continuity of the preservation of the family, they ensure the continuous safety of the atom, the family is the focus of society, the nucleus is the focus of the atomic family, our society is the focus of the state, the invariance of the atom constitutes the periodic system of chemical elements, is the focus of the molecular organic, non-organic family, solar and planetary systems, continue to participate in the construction of the universe. Where we are forced to live and exist, this is a well-timed, prepared environment for our habitation, for the periodic continuation of the once laid foundation, the construction of the material and intellectual world.

It seems to me that no one will dispute the fact that we are derivatives of the peacekeeping system of the universe, macro and microcosms. A person with his anthropology and intellectual sphere of activity is somewhat reminiscent of the structure of an atom. The human stomach as an energy generator frequency-periodically, takes food and generates energy for the intellectual and physical activity of a person. Energy food, wrapped in a leather sheath, for sterility of metabolic actions, and conservation of energy. The brain triggers and regulates the metabolic system, through nerve strings scattered throughout all the cells and organs of the body (somewhat reminiscent of string theory), gives command impulses from nerve cells, control parts of the brain (like from branes), which are responsible for the work of internal organs and keep they are monitored, correct and reprogram the general metabolism, signal the need to consume a quantum of water, carbohydrates, fats, proteins. The atom, too, as a carrier of energy, from the beginning receives a high-frequency impulse, onto its shell, from the DIFSSGV, the dynamic state moves through the electronic orbital levels to the nucleus, penetrates into its interior, then, the nucleus receives a high-frequency motion and transfers the executive frequency of a certain value to particles, establishes the rhythmically folded work of generating energy, transferring it to the final consumer, releases excess energy, quanta, radiation, maintains the periodic system of annihilation and invariance of elementary particles.

Unfortunately, we, unlike the non-intellectual world, endlessly think about our private interests and do in our purely private interests. Slightly relatively conscious people think and do in the interests of their family, more conscious people think and do in the interests of the family within the framework of society, even more conscious people think and do in the interests of the state, for the sake of the interests of society and families, in this society. The most conscious, Prophets, sages, scientists think and do in the interests of each person, for the continuous preservation of the family, society, state and its environment.

As an individual, an autonomously existing systemic complex of personality, each person, as emergence, the owner of the power of the spiritual-bodily dual matrix, is arranged according to the principle of interaction, similar to the dipole matrix of electromagnetism. His material ultimate essence is bound by the continuity of his spirituality and vice versa. The human soul is the intellectual energy that has infiltrated the body. Soul and body, neither are able to exist apart. She is quantized, highlighting her indignation, accepting quanta, inspiration or contempt. She chooses an object for annihilation. It stimulates the generation of new sub [spirit-bodily] family members. Family and society, likewise, interact, with the unity of diversity. In interaction, within the framework of the intellectual-personal dual matrix, and the family-social dual matrix.

Society and the State, too, function continuously within the framework of the social-state dual matrix. The stability of the forces of interaction, within the framework of the dual matrix, is provided by a principle similar to the dipole matrix of electromagnetism. Both electromagnetism and strong nuclear interaction, within the framework of their dipole matrices, are in continuous interaction. Definitely, under the supervision of Gravity and the jurisdiction of Supersymmetry (as a composite pair of the dual matrix). The quantitative decrease of one force is compensated by the dipole principle accumulated by the other force of the pair, similar to the mechanism of the dipole matrix, within the framework of the Supersymmetry regulator.

According to the same principle of the forces of interaction of the dual matrix, within the framework of the existing Constitution and legislation, they are regulated within the framework of the requirements of Supersymmetry, where, a partial decrease in the forces of the State, is compensated within the framework of the forces of the dual principle of interaction, from the energy resources accumulated by the Company. And vice versa, partial decrease of the Society's forces is compensated within the framework of the forces of the dual principle of interaction, from the energy resources accumulated by the State (in any case, in principle it should be so). That which a person creates, with his intellectual, spiritual, dipole physical labor, which have an objectively necessary significance for his family, for society and the State. The aspirations of society and the state, in order to create material, spiritual, educational and other universal values, in the end, should acquire a symmetrical external form and balanced internal content, with the final

result and coordination, of the Regulator of Supersymmetry (constitution). Moreover, their projections (XYZ) in three-dimensional space and (T) the objectively necessary amount of time (childhood, education, adulthood, enlightenment, retirement age) should theoretically be symmetrical and objectively necessary. Otherwise, the violation of the local symmetry of their dual matrix will turn out to be useless and hostile for a person, society and state, and their long-term interaction with the environment.

A non-standard decision of a person, society and state, without taking into account the interests of his environment and environment, in violation of the principle of Supersymmetry, is fraught with serious consequences. And, the State itself exists as an adiabatic structure, an isolated system, with rigid economic, statistical and constitutional permissive, scalar and double-valued vector-throughput, gauge-filtering carriers of international interaction forces (migration, trade, scientific, cultural exchanges, sports and others types of interactions). Where the indicator, internal and external international stability, is the relative change in the value of internal entropy, to the adiabatic system of implementation of constitutional norms and requirements, observance of public order, stability and global interaction between national-ethnic matrices of social groups.

## **12. General relativistic and DIFSSGV**

I realized for myself that quantum mechanics, Newtonian mechanics, Euclidean mechanics or the principles of interaction of the forces of the dual matrix of the intellectual community, obey, function and improve under the supervision of "God", "Supersymmetry", "Higher consciousness", or, as it seems, let's say, the "Supreme Ruler" of Outer Space or the Theory of Everything. Only "He" is capable of total accounting, regulation, control of creation, transformation and perfection, in the interests of infinity, the Unity of Everything, the particular created, in their diverse environment.

Today we have a huge number of scientific discoveries, inventions and predictions that have been proven, implemented or at the stage of confirmation. The Standard Model, String Theory, M-Theory, Anthropic Principle, Loop Quantum Gravity and many other proposals to find a common force for the creation, development, reincarnation and preservation of the continuity, infinity and periodicity of peacemaking, which at the same time would unite them, providing the principle of objective, regular and constructive coexistence.

From those existing scientific facts, postulates and knowledge, it is necessary to find an appropriate method of the explanation approach, for proving, taking into account the fundamental physical constants, numerical values, formulas and experiments confirmed by scientists, which are approved, generally accepted works of the scientific community. (If they are generally accepted and verified facts, by the world scientific community).

Galaxies, solar systems, atoms themselves as local independent, autonomous system-forming units. If, having united them within the framework of a single system of universal forces of interaction, which are invariant derivatives of the periodic system of interaction, of the physical forces of dipole matrices that function under the control of Supersymmetry on the line of discrimination of forces requiring the intervention of Gravity, then we come to the conclusion that the existence of a single common environment is necessary. environment, discrete-impulsive physical nature, with an expanding property that does not limit the freedom of space-time development, for the infinite and periodic development of the material world, where the principles of general relativity and the quantum theory of gravity, space-time supersymmetry, spherical, centrifugal universal gravitation can coexist without conflict in a single structure "DIFSSGV".

Most scientists are interested in the problem of "Combining general relativity and quantum theory into one theory", which can claim to be a complete theory of nature. This is defined as the problem of "quantum gravity".

Every theory has an infinity problem. Infinity, if provided by an infinite continuum of creation, development and reincarnation, if energy is the invariance of the continuity of matter, matter

changing in physical quantity, acquires a different physical, space-time state, enters physical interactions, at the next equivalent level, with the environment space-time. In nature, we have not yet encountered something materially measurable, which has an infinite, irreversible magnitude. The Vacuum of the Cosmos, the continuum of the globalization of the Cosmos, has an infinite value. Infinite is its discrete-impulsive spatio-temporal nature. This is Nature, which has neither beginning nor end. But in both quantum theory and general relativity, we are faced with predictions of physically meaningful quantities that become infinite. General relativity has a problem with infinities, since inside a black hole, not the density of matter, but the strength of the gravitational field, quickly becomes infinite. Indeed, infinity inside a black hole, where we have not yet been, can be intermittent, discrete periodic, due to the change of endless inflationary processes. The infinity of the gravitational field, as a spherical centrifugal universal gravitation, is in demand by the infinity of the continuum, the invariant periodicity of matter. The density of matter is directly proportional to the intensity of the DIFSSGV on the plane of the boson shell of matter. Prior to inflation, the interactions of the fundamental forces of the dipole matrices are turned on. Infinite, isobaric and isothermal variation within a black hole is inversely proportional to its achieved invariance. At the point at which the density becomes finite, it is equivalent to the equations of general relativity. If we ignore the theory of the Big Bang, then the interpretation of scientists about the formation of the density of matter infinite is explained as stopping time, but a more moderate and sane view is that this concept is simply inadequate, since stopping time is absurd, since it also means the termination of the curvature of space, where matter is formed. The problem is that the electric and magnetic fields are of infinite magnitude and their regulation is consistent with the "DIFSSGV" at each tensor point of space-time.

This means that there are an infinite number of variables (even in a finite volume, where there are an infinite number of points, and hence an infinite number of invariant variables). In quantum theory, there are uncontrollable fluctuations in the magnitude of each quantum variable. This is the result of symmetry breaking. An infinite number of uncontrollably fluctuating variables can lead to equations that bounce back and predict infinite numbers when you ask questions about the probability of some event occurring or the magnitude of some force. This is a visual reflection of mathematical calculations, without taking into account real interactions.

Supersymmetry eliminates the inflation of uncontrolled variable fluctuations, where gravity takes an active part (like spherical centrifugal universal gravitation), providing a metric linear, flat, spherical area for dipole, physical forces of interaction.

Gravity, as an executive function of Supersymmetry, is accepted to serve on the border of dipole interaction forces, where uncontrolled spontaneous, variable fluctuations are tamed and everything becomes periodically finite participants. If the infinities of the quotient are a sign of violation of unification, the unified theory will annihilate and integrate them. This will be what we call finite theory, a theory that answers any particular question in terms of meaningful, finite numbers.

Quantum mechanics, according to scientists, has been extremely successful in explaining a wide range of phenomena. This area extends from radiation to the properties of transistors and from particle physics to the action of enzymes and other large molecules that are the building blocks of life. Quantum theory contains within itself some obvious conceptual paradoxes that remain unresolved and require the solution of these problems. If an electron manifests itself as a wave, this indicates that it is impulsive, we divide it discretely into its component parts and will definitely be absorbed. As a particle, with a certain function, it will enter into systemic interactions or will not be in demand. The light behaves in the same way, which carries information about the existence of the material world. The theory only provides statistical predictions for subatomic behavior. But it is not a fact that the real world will always be in a closed isothermal and isobaric space-time. All of this indicates that quantum theory does not tell the full story. Until we establish the reason for the manifestation of the Quantum itself. Quantum theory hides something significant about nature that we need to learn about.

Infinity is mainly inherent in the “discrete-impulsive physical nature of the spherical expansion of Vacuum. Discrete impulsivity is a physical state of globalization of Vacuum (I conventionally call this phenomenon - pulsusdeus - "The Pulse of God"). And everything else is the continuum of the deterministic paradigm of the Unity of all diversity.

### **13. The Cosmological Principle [51]**

In the general system of the considered Space-time gauge systems (STGS), Galaxies, solar systems and atoms, which are in themselves as independent, autonomous and system-forming units, integrating the derivatives of natural phenomena in space-time, the periodic turnover of physical interaction forces generating invariance of energy and equivalence of matter, submatter. In each of them, the vector of energy disturbance is manifested from the center to the periphery.

The problem of the discrete impulsivity of the physical state of spherical globalization of the Cosmological constant Vacuum [52]: a) infinite generation of energy, thermal radiation, b) quantum removal of excessive disturbance in the structure of Supersymmetry, c) to limit the objectively necessary time continuum of the physical state of the metamorphosis of invariance, energy and matter, and d) ensure the periodicity of their endless manifestation in the gravitational field (spherical, centrifugal universal gravitation). The carrier of excess is "Quantum", as a dependent substance. Supersymmetry acts as a seizure regulator. Withdrawal occurs on the metric value of Gravity, on a line, plane, sphere of delimitation of the forces of physical interactions. Supersymmetry can be designated as a self-determining and self-regulating matrix system for preserving the dynamic structure of space-time. Quantum theory will not be able to explain or become a regulator of the gravitational field without the determining participation of Supersymmetry and "DIFSSGV".

Depending on the equivalence of the physical components of the Gauge boson systems, "DIFSSGV" chooses the frequency, intensity and caliber of discrete impulsivity, according to the equivalence of the participants in the interactions.

"DIFSSGV" is presented as a multilevel calibration of Gravitational matrix boundaries. Each elementary particle is in a spherical shell (Boson), which are the keepers and carriers of energy structures, the forces of interaction occur on the line, the plane of gravity, at the time of the integration of the orbital Bosons, by the Supersymmetry regulator. Perturbations of the forces of interaction occur inside the "Orbital Bosons" by discrete pumping of the boson shell. Excessive energy of disturbance is withdrawn simultaneously. Supersymmetry restores the Atomic weight, mass, and numerical value of the balance as a whole. The complex of withdrawal of excess energy occurs at the Moment of the Resonant Period (MRP) [53].

Quantum theory mentions: “In Einstein's general relativity, space and time no longer provide a fixed absolute background. Space is as dynamic as matter, it moves and deforms. As a result, an empty universe can expand or contract, and time is an absolute measurement of the momentum and the dimension of space deformation during the period of discrete expansion and contraction. This moment of fluctuation of space is the unit of absolute time.

"Thermal radiation, energy or quantum are freed from the dependence of the atom, by removing the vacuum of the Cosmos or the Universe by spherical, centrifugal, universal gravitation."

The theory of SRT is based on the principle of relativity, according to which any laws of nature are the same with respect to bodies that are stationary and moving at a constant speed. And from such a seemingly simple thought it follows that the speed of light or heat radiation (300,000 km per second in vacuum) is the same for all bodies and observers. " If the speed of light in a vacuum is a "constant" value, then for terrestrial conditions the value of one second is the value of a unit of absolute time spent by a discrete fluctuation to remove light over a distance of 300,000 km.

The essence of general relativity (GR)

To understand it better, we need to reconcile two facts:

We live in four-dimensional space

Space and time are manifestations of the same entity called "space-time continuum". This is the 4-dimensional space-time with the x, y, z and t axes.

Interestingly, the theory of relativity does not state that bodies change as they move. 3-dimensional objects always remain unchanged, but with 4-dimensional relative motion, with a changing function of time t, their projections can change.

Moreover, we must not forget that bodies are also formed during movement. A conformal transformation of the Euclidean plane or space takes place. Their projections also change. If the space was formed as a supersymmetric matrix, then their projections (at least two out of three) also add up conformally, symmetrically. In the process of movement, the symmetries of the projections change, the supersymmetry is broken, on the line of the metric of gravity, the matrix forces of interaction restore the local structure and with a new one, at least two of the three projections must be symmetric. The entire physical metamorphosis of the final formation is regulated by the objectively necessary amount of time, by the regulator - Supersymmetry, and with the help of the forces of matrix interactions, it is restored by its matrix dipole pair, by gravity. The violation of Supersymmetry also concerns the violation of gravitational distinctive lines, planes, spheres, which deform the general matrix of Supersymmetry and the metric of gravity.

The world will look in our absence, the same as it was before our appearance. If we do not try by any means to break the supersymmetry of the development continuum of the world around us, the restoration of which in an adequate meaning, we will not be able to.

With the advent of quantum theory, there are disagreements between those who take this approach to science and those who reject it. Many founders of quantum mechanics, including Albert Einstein [54], Erwin Schrödinger [55] and Louis de Broglie [56], found this approach to physics abhorrent. They were realistic. For them, quantum theory [57], no matter how well it works, was an incomplete theory because it did not provide a picture of reality in the absence of our interaction with it. On the other side were Niels Bohr [58], Werner Heisenberg [59] and many others. Instead of being horrified, they took this new way of approaching science. Quantum mechanics has to be extended to accommodate many other descriptions, depending on who the observer is and where the observation is from.

Of course, the problem of justifying quantum mechanics exists. It is not the last problem in modern physics.

Solving the problem of justifying quantum mechanics either by giving a new meaning to the theory in its de facto form, or by proposing a new theory that makes sense.

#### **14. Consider several different ways to solve the problem**

1. Lead a unifying theory with a substantiation of physical values of the integrating nature of all fundamental forces of interaction. Use the Discrete-impulsive physical state of the spherical globalization of the vacuum as a unitary physical structure for the right to use.
2. Provide a mathematical interpretation of physical phenomena for application to the theory of DIFSSGV.
3. Justification must be confirmed by specific mathematical studies, on specific calculations, where measurements must confirm the descriptions of fundamental reality and correspondence, in relation to all subsequent values.
4. Revise the physical properties of elementary particles of the Standard Model, and other existing models, their formats of hypothetical interaction with the world forces of dipole matrices, supersymmetry, gravity.

#### **15. Theories and principles**

Einstein wrote about this and emphasized: We must distinguish between two kinds of theories. These are theories of principles [60] and constructive theories [61]. The theory of principles establishes the frame of reference that makes it possible to describe nature. By definition, a theory

of principles must be universal: it must be applicable to everything, since it establishes the basic language we use to talk about nature. There cannot be two different theories of principles applicable to different areas of nature. Since the world is one, everything ultimately interacts with all others, and there can only be one language used to describe these interactions. Quantum theory and general relativity are both theories of principles. If so, logic requires them to be combined. Continuing the thoughts of A. Einstein, I agree that yes, a different kind of theories is needed, constructive theories that describe some individual phenomena in terms of specific models or equations. The theory of the electromagnetic field [62] and the theory of the electron are constructive theories. Such theories cannot be established alone; they must be built into the context of the theory of general principles of the state of the atom. But as long as the theory of principles did not appear, there may be phenomena that obey various laws. For example, the electromagnetic field obeys laws different from the laws governing theoretically permissible cosmological dark matter, the amount believed to be vastly greater than the amount of ordinary atomic matter in our universe. Until now, it was known about dark matter, what it is, it is that it is dark. This means that it does not emit light, but absorbs it. This is the first, that the fact, also she, interacts with the electromagnetic field, as the second fact. Therefore, two different theories can coexist side by side. Rather, it is the nature of Vacuum and means that it absorbs light discretely impulsively, along the entire spherical-radial-vector direction, from the center of the spherical sphere, the conventional Boson structure to the periphery. Dark matter infinitely expands, therefore it absorbs light, thermal radiation, positive difference from the absolute temperature, -273.15 degrees of vacuum. Departing endlessly, into the boundless distance.

At the point at which the density becomes infinite, the energy is excessive, without integral, the gravitational field is triggered, the spherical centrifugal universal gravitation, where supersymmetry acts as a regulator, the spherical centrifugal universal gravitation withdraws the accumulated, inflationary, orbital, energy density at a given point in space. Many scientists interpret this behavior as stopping time, according to the principle of the "Big Bang", where density and temperature increased infinitely, which means that the acceleration of energy and temperature, increased density stops, what can happen to it, no one knows. But a more moderate and real view consists in the fact that calculus begins already, in a new time, of the invariant density of matter and events.

It has long been hoped that when gravity is taken into account, Fluctuation and Quantization can be attributed to a common matrix of interaction forces. Quantization occurs in the process of energy inflation, out-of-order spontaneous manifestations of charged elementary particles fluctuating in boson shells. Fluctuations of charged elementary particles in orbital Bosonic structures, during inflation at electronic orbital levels, undergo supersymmetry breaking and are restored by dosed extraction of quanta, on metric, spherical gravitational lines and planes, in the dipole matrices of fundamental interaction forces. The infinities of uncontrolled fluctuations and their controlled quantizations, which put in order the circulation within atomic orbital interactions, are a fact of the unitary, unified theory of the discrete impulsivity of the physical state of the spherical globalization of Vacuum (DIFSSGV). This means what we call finite theory, a theory that answers any question in terms of meaningful, finite numbers.

We must decide: what is the supreme Law? Physical principles or physical structures. Or both of them must be under the dictatorship of a single Law. Physical structures operating on a specific principle must be fundamentally compatible and structurally synchronized for the required interaction.

The law initiates a breeding ground. The environment is formed according to a specific principle. A specific structure is modeled according to a specific principle. The design consists of elementary particles that exist due to the forces of interaction, under the supervision of space-time supersymmetry, DIFSSGV.

All these links of the continuum of a single infinity, are closed in the concept of a general law. Which is present in every link. Virtual Supersymmetry and Space-Time Factor, as a pair of the dual matrix of a single Law, and Discrete Impulsivity is the physical state of spherical globalization



of Vacuum, (DIFSSGV), with its composite structure, spherical centrifugal universal gravitation, are the regulator of the principle of functioning and modulation of the structure of the standard model of elementary particles.

A reasonable question arises whether the forces of interaction can not be manifestations of the only and common for all fundamental forces. They are derivatives of that fundamental catalyst, which can be designated as: "An infinitely scalarly expanding discrete-impulsive physical state of vacuum along all spherical radial vectors." Like, "spherical centrifugal gravity".

Deepening scientific knowledge has led to the need to combine various physical manifestations. James Clerk Maxwell [63] combined electricity and magnetism into one theory in 1867, and later physicists discovered that the electromagnetic field and the field that propagates weak nuclear forces (DIFSSGV, neutrinos), which are responsible for radioactive decay, can be combined. Known in science as, "Electroweak theory" [64], confirmed in experiments over the past thirty years, may be the answer to this question.

There are two fundamental forces of nature that scientists speculate that remain outside of the unification of electromagnetic and weak forces. This is gravity and strong nuclear interaction, which is responsible for the connection of particles with each other, these are the quarks needed to form protons and neutrons that make up atomic nuclei. Discrete-impulsive physical state of spherical globalization of vacuum, unites all kinds of fundamental forces of nature. The physical nature of "DIFSSGV" is a constant value that provides constancy, infinity, equivalence of regulation, origin, development and reincarnation of all physical matters and phenomena that make up nature, and leads to discrete-impulsive motion of fundamental interacting forces, thermodynamic, electromagnetic, strong and weak nuclear physical manifestation.

18. This is a very important problem that requires determining whether or not various particles and forces can be combined into a theory that explains them as a manifestation of a single, fundamental essence.

The real state of nature, explains how to combine gravity with electricity and magnetism, strong and weak nuclear relationships. How they interact, in an environment in which nature is a discrete-impulsive continuum of expansion. If we include quantum physics in the existing picture of the forces of interaction, then we get a unifying theory, much more complex, but unifying. Since gravity does not fit as one of the four fundamental forces of nature, but is united to the general theory, as the metric, spherical area of the moment of curvature of space-time, where the interaction of the universal forces of the dipole matrices takes place. The main role of gravity is as a situational-binding in the structure of "Discrete-impulsivity of the physical state of spherical globalization of Vacuum (DIFSSGV), within the framework of the structural dual matrix of the space-time Supersymmetry controller. If we have to solve the problem of quantum gravity as a reconciliation of general relativity and quantum theory associated with the problem of unification, then let us turn to the fundamental mechanism of nature "DIFSSGV".

## 16. Specifically about DIFSSGV

"DIFSSGV" arises infinitely in Planck time and everywhere on the virtual tensor points of the vacuum. At each tensor point of the vacuum, the nucleation of a boson shell occurs simultaneously. Discrete impulsivity creates isobaric scalar tension, on both sides of the scalar, spherical plane of the boson, the force of thermodynamic interaction. After the appearance on a spherical plane, on both sides of the virtual plane, at the moment of gravitational (SCVT) curvature, electrostatic forces. Formed on both sides, the difference between the isobaric and isothermal values of the potentials. Fluctuation of the spherical boson shell connects around the scalar moment of curvature of the gravitational plane, migrating electrostatic formations, with variable magnetism. A continuum of fluctuations on a scalar field, on both sides of the moment of curvature, a sphere of a boson shell, a closed adiabatic isobaric system, in unison, supersymmetry initiates entropy on the inner region, the process of accumulation and compaction of electrostatic forces. Each moment of physical change of isothermal and isobaric values, inside the boson, leads to the inclusion of the

controller of space-time Supersymmetry, on the plane of gravitational (SCVT) changes. Thermodynamic inflation inside the shell is regulated by Supersymmetry with a change in quantum entropy. A scalar vector unification of electrostatic forces occurs, with the accumulation of dense plasma, positive-energy charges at two positions, in the center and under the boson shell. The progressive structuring of the atom-like unit continues in the resonance mode of odd and even spin elementary particles. The particles are combined by quantization and electromagnetism, driven by DIFSSGV. The inner side of the boson shell continues physical changes in the value of entropy, due to the unifying quantization of particles, under the control of space-time supersymmetry and gravity. Elementary particles appear, from the beginning in the state of plasma structures inside the boson shell, after densification and acquisition of mass, spin and polarity. The central plasma condensation becomes a nucleus, and spectrally condensed quark particles appear under the dome of the boson shell. The migration of spectral densities on both sides of the boson shell leads to cooling, overdensification of individual particles. Superdensity gives them the property of permanent electromagnetism. This is how electrons appear, clothed in their own boson shell. The nucleus, quark particles and an electron, clothed in their own boson shells, penetrating into a three-level boson shell system. The fourth shell, covering all three shells, constitutes the Atom system unit. Generalizing, the multilevel boson structure of elementary particles, the value of entropy changes, with the periodicity of quantum annihilation. It is there that the structuring begins, the system-forming orbital boson structures, the class of elementary particles, carriers of the forces of interaction, their quantization and annihilation. Where, being mutually located in a common shell of each other, hadrons, baryons, leptons, photons, mesons, and as a result, are collected in the common shell of the atom. The atom, having taken place as a unitary system, under the constitutional rule of "DIFSSGV", is served by the principles of space-time supersymmetry and fundamental forces of interaction.

According to a similar principle, Galaxies, black holes, solar systems are formed and, continuing the periodicity of infinity, inorganic, organic, chemical, molecular compounds, with a natural transition to biospheres, neospheres [65].

Today, there are twelve particles and four interactions that are needed to explain everything that happens in the real world. Summarizing all the arguments, I can say that there is a need to supplement the vacant place in the general relativity, "DIFSSGV".

Constants are a prediction and confirmation of the existence of a specific physical meaning, manifested endlessly, by regular periodicity in specific physical interactions. Constants define the properties of particles. Scientists are asking questions about the masses of quarks and leptons, about the magnitude of the forces of interactions. We need suggestions why these numbers have the same magnitude as they have, which are determined through experiments and then assembled into theory. More than twenty such constants, which must be substituted into the fundamental theory, periodically present certain difficulties. Each constant represents a specific fundamental fact, namely: a physical mechanism or bases, the environment of physical interactions, a property of the environment, and so on, many accompanying values that are responsible for the choice of a constant in its observable value.

In the nature of the standard model of particle physics, the values of free constants are chosen by the general physical state of the environment, the physical nature of the derivatives of the particles of the given environment and a specific model of their interaction.

Only a correct unified theory of particles and forces can give an unambiguous answer to this question.

This is "DIFSSGV" - a discrete-impulsive physical state of globalization of the vacuum, which was accepted, to suppose, as dark matter and dark energy.

The available real constants, which must be substituted into the fundamental theory, are an important factor in the structure of chemical elements, molecular compounds, organic and inorganic systems of interaction, fauna and flora, and the need for the origin of air and water. Thanks to the unity of the diversity of world constants, an intellect, a rational man, a conscious man, appeared.

Unfortunately, this number of constants is an objectively necessary amount for the origin of the real world around us and with us. No more and no less quantity, with an ample, naturally necessary quantity. The regulator and setting the impulse, rhythm and rate of their manifestation, preservation of participation in associations, structuring of elementary particles, atoms, molecules, macroworlds and everything that follows, as a continuum of constants, is the infinite, ubiquitous "Discrete-impulsive physical state of the spherical globalization of vacuum".

This theory also postulates that gravitational and inertial forces are of the same nature. If we compare all the available scientific information and all physical constants, including the participation of gravity in the regulation of intra-atomic processes, the phenomenon of quantization of elementary particles, where there is no concept of inertial interaction forces. Bearing in mind the fact that inertial forces are necessary for stabilization in the structural interactions of the participants in the macroworld, which differs in its speeds and displacement, in contrast to the speed of light. Inertial forces also interact under the supervision of the Supersymmetric space-time and the coordinating spherical centrifugal universal gravity of gravity, as a composite structure of "DIFSSGV". We can say with confidence that gravity, as not a material body, but a virtual physical meaning is present on the line, spherical plane of curvature of space, time and density, where the interaction of world matrix physical forces takes place.

Hence it follows that gravitational effects are caused not by the force interaction of bodies and fields in space-time, but at the moment of deformation of space-time itself, as a medium of physical interactions, which is associated, in particular, with the presence of density-energy inflation.

The electromagnetic field on the Maxwell equations is the basis of the theory of unified physics, as it is called, scalar physics [66]. According to T. Verdun [67], this physics differs from classical post-relativistic physics [66] in the following basic provisions:

Scalar physics recognizes the existence of the ether, a propagation medium, for the forces of gravity and electromagnetism. Unlike the classical ether of physics of the 19th century, this ether cannot be described as hydrodynamic, the nature of the ether is not material, and is a "Discrete-impulsive physical state of spherical globalization of vacuum", that is, it has the properties of dynamic expansion and expansion of energy with a positive value relative to absolute zero, over all radial vectors of spherical space-time, in each virtual tensor point in vacuum space, with the speed of light. Or, you can interpret this nature as, "universal spherical centrifugal gravity".

- The propagation medium referred to in this model is a "spherical space-time", which can be viewed as a conglomeration of potentials - including "scalar (electromagnetic) potentials".
- Spherically directed harmonic discrete-impulsive expansion structures form the basis of the vacuum.

• In the environment there is "continuous birth and annihilation of elementary particles, absorption and eruption of quanta". Thus, the scalar potential is composed of this dynamic structure. "

First, there are two types of effects of electromagnetic fields on charged particles: (1) transfer and (2) voltage. There are two types of transfer, or movement. The first type is a simple motion in a straight line, due to the action of the electric field  $E$ . The second type of motion is a swirl, or spiral, denoted in mathematical equations as field  $B$ .

Thus, modern electromagnetic and gravitational theories make three major mistakes:

- They deny the dynamic ether and accept the variant of vector analysis of electromagnetism, not taking into account the possibility of interaction between vector systems and the environment.
- The impossibility of such interaction implies the impossibility of local stress of the environment.
- Therefore, electromagnetism deals mainly with transference as the main type of physical action.

Thus, Einstein not only limited himself to a theory that reduces electromagnetic phenomena to transport and the photoelectric effect, but also gave rise to the latent assumption that experiments on puncturing curved space-time are possible in applied and practical physics. Local space-time, if there is a value of "time" - it definitely leads to curvature. In fact, in the general theory of relativity, "Einstein did not create a theory of unlimited anisotropic [68] space-time, but a special theory of relativity with distant perturbations." Having rejected the ether as a dynamic environment interacting with the observed world, after misinterpreting the results of the Michelson Morley

experiment [69] and limiting ourselves to Heaviside's version of electromagnetism [70]. Einstein discarded two principles that would facilitate the unification of the theories of electromagnetism and gravity: local and controlled curved space-time due to the internal scalar potential of the ether and the nature of Vacuum.

## **17. The theory of distinction [71], as an inversion of the theory of relativity**

The theory of distinction, which considers the frequency-contour structure of matter on the basis of space-time entropy, also proceeds from the distinction of the concept of relativity, which can be called the inversion of Einstein's theory of relativity. The theory of relativity is based on two principles or postulates: "the constancy of the speed of light in a vacuum and its independence from the speed of movement of the light source" together with the principle of relativity, which establishes the equality of all inertial reference frames.

General relativity needs to add two more principles of unification of the nature of fundamental interactions:

- a) Principle of Discrete-Impulsive Physical State of Spherical Globalization of Vacuum, which, within the framework of the Unified Theory of Everything, sets in motion light, thermal radiation, any temperature change, relative to the absolute temperature - 273.15 degrees and gives frequency dynamism to the components of the vacuum.
- b) The principle of ensuring a unitary space-time continuum, with discrete periodicity and duration of geometric constancy of curvature and formation, objectively necessary fundamental forces of interaction, to ensure the unity of diversity.
- c) Principle - providing spherical centrifugal universal gravitation - boson shell for the formation and conservation of energy elementary particles, energy manifestations, thermal radiation, physical interactions, grouping and rearrangement of multilevel, built into each other, boson shells. The first principle means nothing more than the spatial nature of light, independent of the source of light visible and perceived by us. And this fact, in turn, speaks of the primary or initial role of the drive in the movement of light, specifically, by the spatio-temporal structure, as well as the need to distinguish between internal (light source) and external (spatio-temporal DIFSSGV) reference systems of the motion process.

This means that physical reference frames, and hence the concept of relativity, should proceed from the distinction of both visible and invisible space-time structures, and not from the coordinate reference only to the world visible to us in the form of inertial reference frames. Such counting is erroneous when we consider the space-time factor only as a kind of background or screen of ongoing events. In fact, it is the driven, dynamic meaning of discrimination. In this regard, the first principle of the theory of relativity does not contradict its second principle, which is nevertheless called the principle of relativity.

## **18. Consider the spectrum of Physical constants**

- the speed of light, Planck's constant, gravitational constant  $G$ , Boltzmann constant  $k$ , elementary charge  $e$  (or fine structure constant) and cosmological constant ( $\Lambda$  term), electron mass, proton mass, neutron mass, Faraday constant, Universal gas constant, specific ideal gas molar volume, Avogadro number, standard atmospheric pressure, Bohr radius, Hartree energy, Rydberg constant, Bohr magneton, Electron magnetic moment, free electron  $g$ -factor, nuclear magneton, proton magnetic moment, proton gyromagnetic ratio, first radiation constant, second radiation constant, Stefan-Boltzmann constant, Wien constant, standard acceleration of gravity on the Earth's surface, Temperature of the triple point of water, all these physical constants arise within the curvature of space-time of fundamental interactions, under the influence of a single frequency of the discrete-impulsive physical state of the sphere the globalization of the vacuum. The most important thing is that there is a direct and evidence-based confirmation of the value of the DIFSSGV frequency as a physical and leading constant, to all particulars, of the unity of diversity.

And the very definition for the general theory of relativity, meaning the consideration of the "spatio-temporal properties of physical processes", and hence the consideration of a single and movable space-time structure, is directly related to stationary or coordinate inertial reference systems (I.S.O) [72]. In connection with the failure to reveal the fact of the existence of the Discrete-impulsive physical state of the spherical globalization of the vacuum, during the lifetime of A. Einstein, he had to divide the theory of relativity into a special or particular theory of relativity. (proceeding from the consideration of I.S.O).

## **19. The principle of space difference [73]**

**The theory of relativity**, A. Einstein designated with geodesic lines nothing more than the geometric structure of space-time, and not the fact that massive bodies unilaterally affect the geometric properties of space-time, and even more so - not some kind of mass-energy, since the passage of mass from energy, as a designation of a single space-substance, nevertheless means completely different spatial phases, and therefore different concepts.

The spherical structure of space is reflected in the formula of Newton's universal gravitation in the form of the square of the distance and the cube of spherical volume in Kepler's third law [74]. The spirality of the spatial structure is revealed because the square of the distance, like the square of the spatial designation of the sphere, is in the denominator, decreasing in the square.

Maybe it makes sense to finally add to GRT the concept of a single space-time as a continuum of discrete-impulsive expansion of the vacuum, explaining the nature, or the body of the vacuum as a whole, where space-time curvatures and universal forces of interaction occur.

The truth is much simpler.

It proves the presence of phasicity, space of the phenomenon, background or constantly going, in our case, discrete-impulsive state of vacuum. This fact also proves the presence of constant, or non-cutting, spatial energy.

In addition, the second effect of SRT, which says that "events that are simultaneous in one inertial frame of reference, and are not simultaneous with events in another frame, also means that this is the phasing of space, since different energy or frequency spatial states are designated.

Energy or frequency spatial states characterize the inertial frame of reference. Events occurring out of objective necessity, their demand, can differ in one inertial frame of reference, and in another inertial frame of reference. The initial and final frames of reference also differ. Constancy is their local, particular frequency spatial states, with their generalized presence in a single space-time phase.

Spatial phases are related to both separate parts of space and one and the same area of space. After all, physics in the elevator and physics outside can be attributed to one area of space in a large city, and to different spatial parts of the city. Moreover, there is a phase difference between horizontal and vertical vector inertial systems.

It can be added that the concept of phase space is the distinction between the concept of phase space and entropy, as a measure of disorder in a gas-liquid system, as a difference in phase relative to the properties of the medium.

The principle of the law of conservation of energy requires the use of an appropriate security design. Elementary particles, all energetic manifestations occur in the field of the boson shell. It can be said as a local inertial phase system. The very physical procedure of origin and further preservation, energetic manifestation, is the plot of the physical constant environment of origin. The phase states of the variety of elementary particles, fundamental forces of interaction and carriers of these forces, are, the unity of the phase complementarity of the "discrete-impulsive physical state of the spherical globalization of the vacuum of the Cosmos.

Thank you for finding patience, time and interest, and reading my article to the end. If something does not suit you in terms of content, then I am ready to listen to your comments and find mutual understanding with you and build a pleasant scientific dialogue.

Yours faithfully,

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## List of chapters;

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