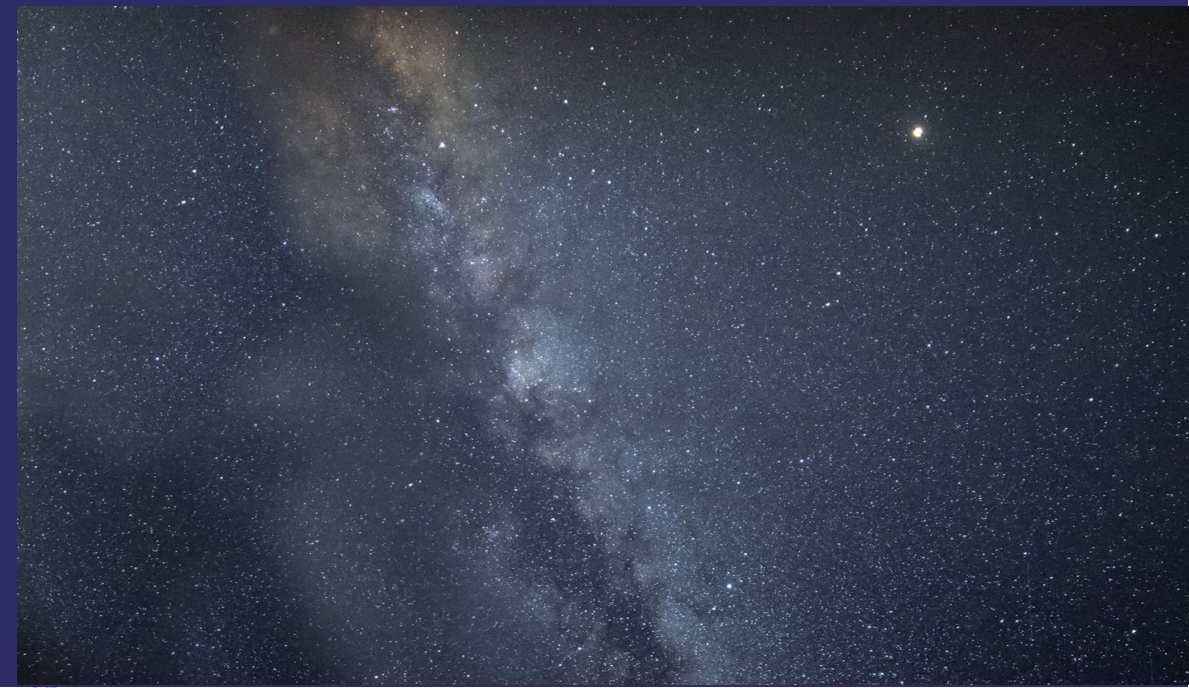


A single theory is not a theory of everything. These are general equations for electromagnetic fields (Maxwell) and equations for gravitational fields. From these equations follows the induction of mass fields, similar to the induction of the magnetic fields of Maxwell's equations. These are the general equations of relativistic dynamics of the Special Theory of Relativity and quantum relativistic dynamics in a single mathematical truth. Bohr's postulate, the uncertainty principle in quantum fields and the Einstein equivalence principle are all axioms of space-matter. In such axioms and equations of dynamics, the unified equations of the General Theory of Relativity and quantum gravity follow. The unified technology of the unified theory calculates the displacement of the perihelion of Mercury, the deviation of the rays of light by the Sun, the hidden masses of the galaxy and the rotation of space-matter itself around the source of gravity. In the same technology, proton and electron charges are calculated. New particles and conditions for plasma structuring in a controlled thermonuclear reaction are predicted.



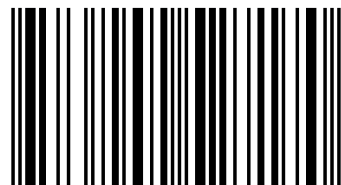
Vladimir Alexandrovich Pastushenko 1951 year of birth. Graduated from Lviv National University. Speciality - lecturer in Physics and Mathematics. Now a pensioner.

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Vladimir Pastushenko

Super Quasars

Uniform Theory



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Table of Contents:

Chapters

1. Introduction	3
2. Space-time is a special case of the space of matter	6
3. General equations of electromagnetic (Maxwell) and gravit mass field	12
4. Representation of the main equations in dynamic space matter	17
5. General equations of the General Theory of Relativity and quantum gravity	22
6. Features of forms of dynamic space matter	43
7. Universe	54

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1. Introduction.

The modern physics rests against a set of problems, facts which are beyond its theoretical representations. Theoretical models and fundamental representations are in many respects contradictory.

If (+) proton charge (p^+), in kvarkovy ($p = uud$) models it is represented the sum:

$q_p = \left(u = +\frac{2}{3}\right) + \left(u = +\frac{2}{3}\right) + \left(d = -\frac{1}{3}\right) = (+1)$, fractional charges of quarks, just the same (+) charge (e^+) has no positron, quarks. Such model and representation (+) a charge does not correspond to reality. This fundamental contradiction, has no decisions in theories.

Charging interaction, with an unresolved problem of model (+) a charge of a proton and a positron, belongs to electromagnetic interaction. It means that the interacting particles exchange bezmassovy electromagnetic (γ) - quantum (photon). It is valid for interactions (e^-) electrons, (μ) muons, (π, K, \dots) mezon. But (p^+) a proton, in charging interaction with (e^-) an electron, does not exchange with it electromagnetic (γ) - quantum. Nobody, saw radiations anywhere and never (p^+) a proton electromagnetic (γ) - quantum, a photon. Such is reality. Similarly exchange Z-boson in electroweak interaction ($e - \nu_e$) leptons and a quark - glyuonny in Strong Interactions of the Standard Theory. The principle of exchange interaction is represented in Feynman's charts:

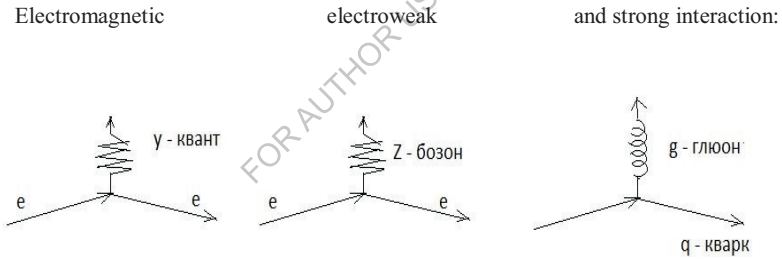


Fig. of 1 chart of Feynman

It is Standard model of the specified interactions, with the corresponding representations, type: $(e\psi\gamma^\mu\psi)A_\mu$. But upon, the proton does not radiate a photon, and the neutrino ($\nu_e \sim 13 eV$) does not radiate Z-a boson ($\sim 90 GeV$) in exchange electroweak interaction. (L. I. Sarycheva, MSU-2007g. FVE and ECh):

Такие кванты были впервые обнаружены в 1983 г. на *Sp̄p̄S*-коллайдере (ЦЕРН) коллективом под руководством Карла Руббиа. Это заряженные бозоны — W^\pm с массой $m_{W^\pm} = 80 \text{ ГэВ}/c^2$ и нейтральный бозон — Z^0 с массой $m_{Z^0} = 90 \text{ ГэВ}/c^2$. Константа взаимодействия α в этом случае выражается через константу Ферми:

$$\alpha_w = \frac{G_F}{\hbar c \left(\frac{\hbar}{m_p c}\right)^2} = 1,02 \cdot 10^{-5}.$$

На диаграмме Фейнмана (рис. 2а) показана реакция взаимодействия

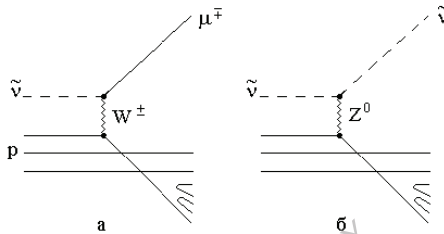


Рис. 2: Диаграммы Фейнмана для реакций: а — с заряженным и б — с нейтральным токами.

антинейтрино с протоном, осуществляемая путем обмена W^\pm -бозоном. Такая реакция называется реакцией с *заряженным током*. Обмен нейтральным Z^0 -бозоном (рис. 2б) называется реакцией с *нейтральным током*.

From where undertake where as well as why Z and W bosons disappear ($\sim 90 \text{ GeV}$) in disintegrations free, out of any fields of a neutron? There are no answers.

Even in classical physics there are contradictions in the theory. In the well-known formula of Newton, gravity: $F = G \frac{Mm}{r^2}$ two masses (M) and (m), at distance (r) between their centers. The formula (theory) tells nothing about distances ($r < R_0 + r_0$), where R_0 and r_0 radiuses of spheres of this masses. But if in a diametrical opening of the sphere of R_0 to throw r_0 then on Newton's formula, at ($r \rightarrow 0$), force $F \rightarrow \infty$, , strives for infinity. But it contradicts experience. Newton's formula is valid only for ($r > R_0 + r_0$), what in the formula nothing is told about. We speak about theoretical models, often and densely not perfect. But laws of dynamics of matter are perfect, and in them there are no contradictions. Then where they?

The second moment in classical physics of the same Newton, his 2nd law: $F = ma$ where ($a \neq 0$) acceleration. It is well-known that the body the weight (m), falling on the planet weight (M), has the speed ($v = v_0 + at$) of which there is no limit. ($a = g = G \frac{M}{r^2}$) There is an acceleration of gravity. It is the mathematical truth of classical physics. In practice, according to the Theory of Relativity, speed cannot exceed velocity of light. Einstein saw this problem. Therefore the General Theory of Relativity was created. Without going deep into a

question now, we will note only what General Theory of Relativity Einstein has too ($g_{ik} = const$), conditions ($\sqrt{g_{ii}} = 1$) in which the theory is valid. The speech about the fixed condition of gravitational potential. In variation ($g_{ik} \neq const$) (quantum) gravitational fields, General Theory of Relativity Einstein invalid. In other words, there is no theory of quantum gravitational fields. But their existence follows from mathematical conditions ($g_{ik} \neq const$) and nothing more. There is no theory. There are also no theories of black holes, dark matter, dark energy. There are no answers to questions: from where undertake and where the same black holes that at them disappear inside and why the cores of galaxies ... blows up. There are no answers on these, and many other questions. (L. I. Sarycheva, MSU-2007g. FVE and ECh):

не объяснено:

- соответствие между кварками и лептонами;
- количество поколений фундаментальных частиц;
- истинное происхождение масс частиц или механизм спонтанного нарушения симметрии;
- почему эти симметрии калибровочные, а другие — нет (например, симметрия, соответствующая барионному заряду).

The fundamental fact is the fact that there is no matter out of space and there is no space without matter. Space matter this same.

The main property of matter, the movement, is represented dynamic space matter. It follows from properties of Euclidean axiomatics.

2. Space-time is a special case of the space of matter

Straight lines of a dynamic ($\varphi \neq const$) bunch, do not cross an initial straight line ($AC \rightarrow \infty$) on infinity (fig. 1), that is parallel.

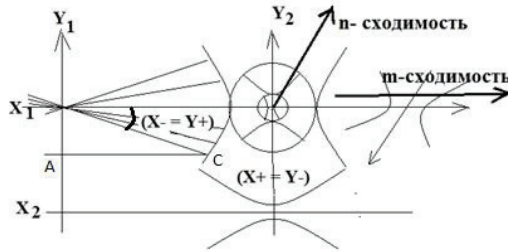


Fig. 2.1. Dynamic space matter.

Infinity cannot be stopped. Therefore the dynamic space matter of a bunch of parallel straight lines, exists always. Orthogonal bunches of direct lines trajectories, have own external ($X+$), ($Y+$) fields. They form Indivisible Areas of Localization ($X+$) ($Y+$). At the same time the Euclidean space with a nonzero and dynamic corner ($\varphi \neq const$) of parallelism in each (X, Y, Z) axis, loses meaning.

Such dynamic ($\varphi \neq const$) space matter has the geometrical facts as the axioms which are not demanding proofs.

Axioms of dynamic space matter

1. The nonzero, dynamic corner of parallelism ($\varphi \neq 0$) $\neq const$, a bunch of parallel straight lines, defines orthogonal fields ($X-$) \perp ($Y-$) of parallel lines - trajectories as isotropic properties, space matter.

2. The zero corner of parallelism ($\varphi = 0$), gives "length without width" with zero or nonzero Y_0 - sphere point radius "not having parts" in Euclidean axiomatics.

3. The bunch of parallel straight lines with a zero corner of parallelism ($\varphi = 0$), "equally located to all the points", gives a set of straight lines in one "without width" to the Euclidean straight line.

4. Internal ($X-$), ($Y-$) and external ($X+$), ($Y+$) fields of lines trajectories of the nonzero $X_0 \neq 0$ or $Y_0 \neq 0$ material sphere point, form Indivisible Area of Localization $HOI(X\pm)$ or $HOI(Y\pm)$ dynamic space matter.

5. In unified fields ($X- = Y+$), ($Y- = X+$) orthogonal ($X-$) \perp ($Y-$) trajectory lines there are no two identical spherical points and trajectory lines.

6. The sequence of Indivisible Areas of Localization ($X\pm$), ($Y\pm$), ($X\pm$)... , on radius $X_0 \neq 0$ or $Y_0 \neq 0$ spheres points on one line trajectory gives n convergence, and on various trajectories m convergence.

7. To each Indivisible Area of Localization of space matter there corresponds unit of all its Criteria of Evolution – $K\mathfrak{E}$, in uniform, $(X-=Y+)(Y-=X+)$ space matter on $m-n$ convergence,

$$HQI = K\mathfrak{E}(X-=Y+)K\mathfrak{E}(Y-=X+)=1, \quad HQI = K\mathfrak{E}(m)K\mathfrak{E}(n)=1,$$

in system of numbers of units, equal by analogy.

8. Fixing of a corner $(\varphi \neq 0) = const$ or $(\varphi = 0)$ bunch of direct parallel lines, spaces matters, gives the 5th postulate of Euclid and an axiom of parallelism.

Any point of the fixed lines trajectories, is presented by local basic vectors of Rimanovy space:

$$e_i = \frac{\partial X}{\partial x^i} i + \frac{\partial Y}{\partial x^i} j + \frac{\partial Z}{\partial x^i} k, \quad e^i = \frac{\partial x^i}{\partial X} i + \frac{\partial x^i}{\partial Y} j + \frac{\partial x^i}{\partial Z} k,$$

with a fundamental tensor $e_i(x^n) * e_k(x^n) = g_{ik}(x^n)$ and topology $(x^n = X, Y, Z)$ in Euclidean space. That is, Riemannian space, this fixed $(\varphi \neq 0) = const$ condition of dynamic $(\varphi \neq const)$

space matter. $(K = -\frac{Y^2}{Y_o} = \frac{(+Y)(-Y)}{Y_o})$ (Smirnov t.1, page 186) Riemannian space, the space of

geometry of Lobachevsky (The mathematical encyclopedia, page) is a special case of negative curvature. There are nine distinctive signs of geometry of Lobachevsky from Euclid's (fig. 2) geometry. (Mathematical encyclopedia, t.5, page 440-442).

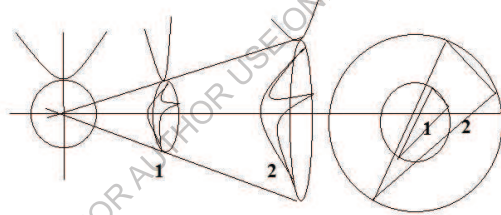


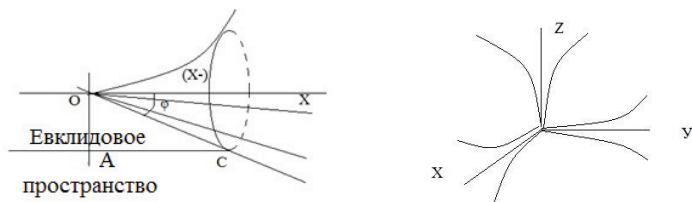
Fig. 2.2 Isotropic dynamics.

The sum $0^\circ < (\Sigma\alpha) < 180^\circ$ of corners of a triangle, unlike their Euclidean projection $(\Sigma\alpha) = 180^\circ$ to the plane is one of signs of geometry of Lobachevsky. Equal triangles, with equal corners in tops, in a bunch of parallel direct lines projections of space matter, are similar triangles in Euclidean space. Equal triangles of space matter lie in the surfaces of spheres, equal in Lobachevsky's space, but with various radiuses of Euclidean spheres. In dynamic $(\varphi \neq const)$ space matter, these Euclidean spheres of various radiuses, are one **sphere of non-stationary Euclidean space** which is not in Euclidean axiomatics. The Riemannian space at the same time, has dynamic topology $(x^n = XYZ \neq const)$ that is not present $(x^n = XYZ = const)$ in Euclidean stationary space. Evklidovaya axiomatics has own unsoluble contradictions. For example:

1. The set of points in one "to the point which does not have parts", gives a point again. It is a point or their set determined by elements and their interrelation?
2. The set of lines in one "length without width", gives the line again. It is the line or their set defined similarly?

The axiomatics does not give answers to such questions of Evklidovaya. If in times B.C., these axioms of all arranged, for measurements of the areas, volumes ..., then in modern researches such axioms just do not work.

For example, under the terms of parallelism in the plane, the straight line OH, does not cross an initial straight line the $AC \rightarrow \infty$, on infinity.



Rice 2.3. Dynamic bunch of parallel straight lines.

But within dynamic (infinity it is impossible to stop) a corner ($\varphi \neq \text{const}$) parallelism, a bunch of straight lines the EXPERT on infinity does not cross a straight line too. This real (X-), along an axis (X), space of a dynamic bunch of straight lines which we do not see in Euclidean space. Exactly here new fundamental idea of dynamic space of a bunch of parallel straight lines is entered. Such dynamic space (X-) of parallel lines - trajectories, nullifies Euclidean space on limit corners of parallelism φ (X-) in each axis (XYZ). In 2-dimensional space, the zero corner of parallelism ($\varphi=0$) for (X-) and (Y-) of lines, gives Euclidean straight lines. In a limit case of a zero corner of parallelism ($\varphi = 0$) in each axis, the dynamic space matter passes into Euclidean space as a special case.

These are profound and basic changes of the technology of theoretical researches which form our ideas of the world around. As we see, in Euclidean representation of space, we see not everything. These problems are solved in dynamic space matter on $m-n$ convergence of spheres points, on their $(X-) \perp (Y-)$ trajectories in uniform $(X+ = Y-)$, $(X- = Y+)$ space matter in the plane (fig. 1.1; 1.4).

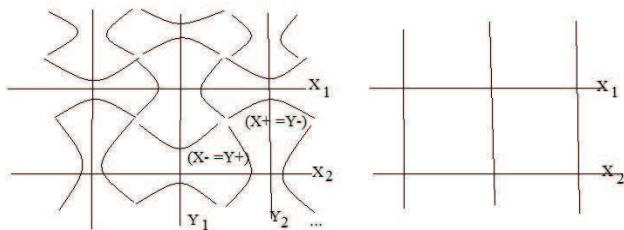


Fig 2.4. dynamic and Euclidean space.

Fixing in time of a dynamic corner of parallelism, gives to Evklidovuyu space time axiomatics. These $(\varphi \neq 0) = \text{const}$ and $(\varphi = 0)$ special cases of Euclidean axiomatics, dynamic

($\varphi \neq const$) space matter, are the cornerstone of all modern theories. In other words, the technology of modern theories does not give us understanding of space invisible to us.

The dynamic space is a form of matter therefore such non-Euclidean geometrical properties of space, correspond to physical properties of matter. Proceeding from the specified axioms of dynamic space matter, postulates of physical properties of matter as non-Euclidean geometrical properties take place.

POSTULATES

1. Accepting the fact of the dynamic sphere($R(X^-)_{j \rightarrow \infty}^{i \rightarrow 0}$) as the field of the Universe, in this field the system of coordinates OJ_{ji} (of convergence of quanta $(X \pm)(Y \mp)(X \pm), \dots$ dynamic space matter is allocated.
2. In such field of the Universe mass trajectories $(Y^-) = (e_j^- \dots e^- \dots \gamma_i^-)$ and $(X^-) = (p_j^+ \dots p^+ \dots v_i^+)$ substances, and geometrical properties of antimatter take place, give structural Forms of substance, in the form of model of products of annihilation proton $(X \pm = p^+) = (Y^- = \gamma_0^+)(X^+ = v_e^-)(Y^- = \gamma_0^+)$, and electron $(Y \pm = e^-) = (X^- = v_e^-)(Y^+ = \gamma^+)(X^- = v_e^-)$, for (OJ_1) of level of indivisible quanta $(p^+, e^-, \nu_\mu^+, \gamma_0^-, v_e^-, \gamma^+)$, in uniform $(X^- = Y^+), (X^+ = Y^-)$ space matter.
3. In mass fields, $(Y^- = X^+)$ change of curvature $p(X^+)$ of the field of gravitation, changes the periods (T) of dynamics of quantum trajectories $(Y^-) = (e_j^- \dots e^- \dots \gamma_i^-)$ on which measure time course ($t = N * T$). The speech about uniform spatially $(X^+ = Y^-)$ a temporary continuum.
4. Proceeding from $HOJ = K \mathcal{E}(m) K \mathcal{E}(n) = 1$, not euclidean dynamic space matter, in system of coordinates $OJ_{ji}(m)$ of convergence, $R_{ji}(n)$ singularity objects which do not prove in other Areas of Localization OJ_{j+1} or OJ_{i+1} indivisible quanta $(X \pm)(Y \mp)(X \pm), \dots$ space matter take place $R_{ji}(n)$. Such objects of singularity (invisible), in $OJ_{ji}(m)$ system of coordinates, there can be a set.
 - a. $R_{ji}(n)$ singularity objects in mass fields $HOJ = m(p_j)m(v_i) = 1$ or $HOJ = m(e_j)m(\gamma_i) = 1, \quad j=1,2,3 \dots, i=1,2,3 \dots$, include OJ_1 the level of indivisible quanta $(p^+, e^-, \nu_\mu^+, \gamma_0^-, v_e^-, \gamma^+)$, our atoms,
 - b. in OJ_1 - the level of indivisible quanta $(p^+, e^-, \nu_\mu^+, \gamma_0^-, v_e^-, \gamma^+)$, atoms and molecules known to us, we do not see quanta $OJ_0, OJ_{-1}, OJ_{-2} \dots$ physical vacuum, or quanta OJ_2, OJ_3, OJ_4, \dots , levels of a cores of stars, galaxies ..., but we can see curvature of trajectories $(Y^- = \gamma)$ of photons $p(X^+)$ in the field of gravitation for example, star coress.
5. Dynamics uniform, $(X^- = Y^+), (X^+ = Y^-)$ space matter and it $(X \pm), (Y \mp)$, quanta on (X^-) or (Y^-) trajectories, is fixed in physical vacuum, quanta invisible to us $OJ_0, OJ_{-1}, OJ_{-2}, \dots, \dots$ space matter levels, in the allocated directions (XYZ) of Euclidean space - time ($t=N*T$). The Criterion of Evolution (CE), are formed in space $(K^{\pm N} T^{\mp N})$ speeds for ($N=1$), in the form of $HOJ = W_j v_i = 1$, singularity objects $R_{ji}(n)$, or $e_i e_k = g_{ik}(x^n)$ fundamental tensor.
6. In such $(Y = K^{\pm N})(X = T^{\mp N})$ in the second quadrant $(Y = K^{\pm N})(X = T^{\mp N})$ multidimensional space of speeds, can be allocated to system of coordinates of all Criteria of Evolution

(CE) $K^{+N} T^{-N}$: speed ($W=K^{+1}T^{-1}$), acceleration ($b=K^{+1}T^{-2}$), potential ($\Pi = \frac{K^2}{T^2} = W^2$), weight ($m = \Pi K$) or a charge ($q = \Pi K$), density (ρ) of charging $q(X- = Y+)$ or mass $m(Y- = X+)$ fields in a look: ($\rho = \frac{m}{K^3} = \frac{1}{T^2} = \nu^2$), etc. Their dynamics ($R(X-)_{j \rightarrow \infty}^{i \rightarrow 0}$) in the field of the Universe, with $OJ_{ji}(m)$ system of coordinates, with (λ) the wavelength and (T) the period of dynamics of quanta ($X\pm$), ($Y\mp$) ... , spaces matters, has an appearance:

a. $\lambda(X-)_{j \rightarrow \infty}^{i \rightarrow 0} * \rho(X-)_{j \rightarrow 0}^{i \rightarrow \infty} = b_{ji}(X-)$, acceleration $b(X- = Y+) = \frac{F}{q}$,

$\lambda(Y-)_{j \rightarrow 0}^{i \rightarrow \infty} * \rho(Y-)_{j \rightarrow \infty}^{i \rightarrow 0} = b_{ji}(Y-)$, acceleration $b(Y- = X+) = \frac{F}{m}$

b. The course of time is defined ($t = N * T$) by dynamics of the periods (T) proceeding from relative ($j - i$) density ($\rho = \frac{1}{T_{ji}}$) as relative period of

dynamics $T = \frac{1}{\sqrt{\rho}}$, quanta ($X\pm$), ($Y\mp$), with various (λ) wavelength. In

$\lambda(X-)^i \rightarrow 0$, physical vacuum, with $T_i(X-) = \frac{1}{\sqrt{\rho_i(X-) \rightarrow \infty}} \rightarrow 0$ dynamics

periods in $HOJ = t \frac{1}{T} = 1$, our (OJ_1 - level) time $t \rightarrow 0$, is slowed down to zero

concerning $OJ_i(X-)$ the level of physical vacuum. To the contrary, at the

movement on infinity $\lambda(X-)_j \rightarrow \infty$ of the field of the Universe, our time (t)

with the periods of dynamics of physical vacuum

$T_j(X-) = \frac{1}{\sqrt{\rho_j(X-) \rightarrow 0}} \rightarrow \infty$, will infinitely last long ($t = N * T \rightarrow \infty$).

In other words, moving deep into $\lambda(X-)^i \rightarrow 0$, physical vacuum from (OJ_1) of level of our atoms and molecules, we rest against "a firm bottom" $\rho_i(X-) \rightarrow \infty$, with delay of time of our dynamics to zero ($t \rightarrow 0$). On the contrary, to move to an infinite distance $\lambda(X-)_j \rightarrow \infty$, fields of the Universe, we will be ($t = N * T \rightarrow \infty$) infinitely long. Here, designation $(X-)_{j \rightarrow \infty}^{i \rightarrow 0}$, means ($\lambda(X-)^i \rightarrow 0$), и ($\lambda(X-)_j \rightarrow \infty$).

7. Let's decide on the mass of indivisible quanta of OJ_1 -of level, protons $p(X\pm)$ and $e(Y\mp)$ electrons known to us. In fact it is various masses with ($X+$) the field SI-GI, Strong and Gravitational Interaction and mass ($Y-$) trajectories ($Y- = e$), in uniform gravit ($X+ = Y-$) the mass field. In other words there is $m_x(p_j \dots v_i)$ masses and $m_y(e \dots \gamma_i)$ the mass $R_{ji}(n)$ of objects in $OJ_{ji}(m)$ system of coordinates. Various masses, for example a proton and an electron, is in uniform gravit ($X+ = Y-$) mass, electro ($Y+=X-$) magnetic fields of interaction, without any exchange of photons in charging interaction of a proton and electron. The proton cannot radiate or absorb a photon, as in a case with an electron.
8. Urgent there are movements of the Structural Forms (SF) of our OJ_1 -level of atoms and molecules, along $OJ_{ji}(m)$ system of coordinates. Passing to other ($X-$) and ($Y-$) of a trajectory, other OJ_j or OJ_i of Physical Vacuum, we change own periods of dynamics, and also own time of dynamics is equal, moving in the Universe.

2.1. Uniform Criteria of Evolution of space matter.

All Criteria of Evolution of dynamic space matter, are created

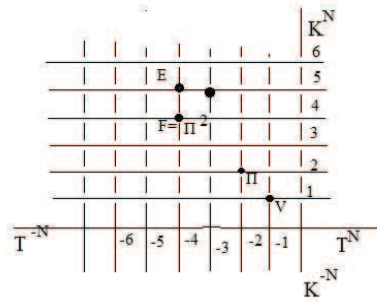


Fig. 2.5. Criteria of Evolution in space time.

in multidimensional on (m-n) convergence, space - time, as in multidimensional space of speeds: $W^N=K^+N T^{-N}$. Here for (N=1), $V = K^+ 1 T^{-1}$ speed, ($W^2=Π$ potential, ($Π^2= F$) force ..., 2- quadrant. Their projection on coordinate (To) or the temporary (T) space time is given: the $ΠK=q(Y += X -)$ charge in electro ($Y += X -$) magnetic fields, or the mass $ΠK=m(X += Y -)$ in gravit ($X += Y -$) mass fields, energy of ($E=Π^2K$), impulse ($p=Π^2T$), action ($ħ=Π^2KT$), etc., uniform space - matter $HOJI=(X += Y -) (Y += X -) =I$. Any equation comes down to these Criteria of Evolution in $W^N=K^+N T^{-N}$ space-time.

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3. General equations of electromagnetic (Maxwell) and gravit mass field.

3.1. Electromagnetic (Maxwell) and gravit mass field.

In uniform ($X + = Y-$) ($Y + = X-$) = 1, space - matter, remove Maxwell's equations¹ for electro

($Y + = X-$) magnetic field. In a space angle $\varphi_X(X-) \neq 0$ of parallelism there is isotropic tension of a stream A_n a component (Smirnov, t.2, page 234). A full stream of a whirlwind through a secant a surface $S_1(X-)$ in a look:

$$\iint_{S_1} rot_n A dS_1 = \iint \frac{\partial(A_n / \cos \varphi_X)}{\partial T} dL_1 dT + \iint_{S_1} A_n dS_1$$

A_n component corresponds to a bunch ($X-$) of parallel trajectories. It is a tangent along the closed curve L_2 in a surface S_2 where $S_2 \perp S_1$ and $L_2 \perp L_1$. Similarly, the ratio follows:

$$\int_{L_2} A_n dL_2 = \iint_{S_2} rot_m \frac{A_n}{\cos \varphi_X} dS_2$$

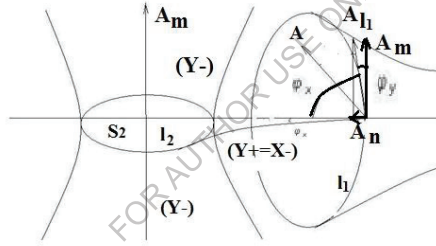


Fig. 3.1. electromagnetic ($Y + = X-$) and gravitmassovy ($X + = Y-$) fields.

In a space angle $\varphi_X(X-) \neq 0$ of parallelism the condition is satisfied

$$\iint_{S_2} rot_m \frac{A_n}{\cos \varphi_X} dS_2 + \iint \frac{\partial A_n}{\partial T} dL_2 dT = 0 = \iint_{S_2} A_m(X-) dS_2$$

In general there is a system of the equations of dynamics ($X - = Y +$) of the field.

$$\iint_{S_1} rot_n A dS_1 = \iint \frac{\partial(A_n / \cos \varphi_X)}{\partial T} dL_1 dT + \iint_{S_1} A_n dS_1$$

$$\iint_{S_2} rot_m \frac{A_n}{\cos \varphi_X} dS_2 = - \iint \frac{\partial A_n}{\partial T} dL_2 dT \quad \text{and} \quad \iint_{S_2} A_m dS_2 = 0$$

In Euclidean $\varphi_Y = 0$ axiomatics, accepting tension of a stream vector a component as tension of electric field $A_n / \cos \varphi_X = E(Y+)$ and an inductive projection for a nonzero corner $\varphi_X \neq 0$ as induction of magnetic $B(X-)$ field, we have

$$\iint_{S_1} \text{rot}_X B(X-) dS_1 = \iint \frac{\partial E(Y+)}{\partial T} dL_1 dT + \iint_{S_1} E(Y+) dS_1$$

$$\iint_{S_2} \text{rot}_Y E(Y+) dS_2 = - \iint \frac{\partial B(X-)}{\partial T} dL_2 dT, \text{ in conditions } \iint_{S_2} A_m dS_2 = 0 = \oint_{L_2} B(X-) dL_2.$$

Maxwell's equations.

$$c * \text{rot}_X B(X-) = \text{rot}_X H(X-) = \varepsilon_1 \frac{\partial E(Y+)}{\partial T} + \lambda E(Y+);$$

$$\text{rot}_X E(Y+) = -\mu_1 \frac{\partial H(X-)}{\partial T} = -\frac{\partial B(X-)}{\partial T};$$

Induction of vortex magnetic field $B(X-)$ arises in variation electric $E(Y+)$ field and vice versa.

For L_2 the ratio which is not closed there are ratios $\int_{L_2} A_n dL_2 = \iint_{S_2} A_m dS_2 \neq 0$ a component.

In the conditions of orthogonality $A_n \perp A_m$ the vector component A , in nonzero, dynamic ($\varphi_X \neq \text{const}$) and ($\varphi_Y \neq \text{const}$) corners of parallelism $A \cos \varphi_Y \perp (A_n = A_m \cos \varphi_X)$, is dynamics ($A_m \cos \varphi_X = A_n$) components along a contour L_2 in a surface S_2 .

Both ratios are presented in the full form.

$$\int_{L_2} A_m \cos \varphi_X dL_2 = \iint_{S_2} \frac{\partial(A_m(X+)*\cos \varphi_X)}{\partial T} dL_2 dT + \iint_{S_2} A_m dS_2$$

The zero stream through S_1 a whirlwind surface ($\text{rot}_n A_m$) out of a space angle ($\varphi_Y \neq \text{const}$) of parallelism corresponds to conditions

$$\iint_{S_1} \text{rot}_n A_m dS_1 + \iint \frac{\partial A_m}{\partial T} dL_1 dT = 0 = \iint_{S_1} A_n(Y-) dS_1$$

In general the system of the equations of dynamics ($Y- = X+$) of the field is presented in the form:

$$\iint_{S_2} \text{rot}_m A_m(Y-) dS_2 = \iint_{S_2} \frac{\partial(A_m(X+)*\cos \varphi_X)}{\partial T} dL_2 dT + \iint_{S_2} A_m dS_2$$

$$\iint_{S_1} \text{rot}_n A_m(X+) dS_1 = - \iint \frac{\partial A_m(Y-)}{\partial T} dL_1 dT, \quad \iint_{S_1} A_n(Y-) dS_1 = 0$$

Entering tension $G(X+)$ of the field of Strong (Gravitational) Interaction and induction of the mass field by analogy $M(Y-)$, we will receive similarly:

$$\iint_{S_2} \text{rot}_m M(Y-) dS_2 = \iint \frac{\partial G(X+)}{\partial T} dL_2 dT + \iint_{S_2} G(X+) dS_2$$

$$\iint_{S_1} \text{rot}_n G(X+) dS_1 = - \iint \frac{\partial M(Y-)}{\partial T} dL_1 dT, \text{ at } \iint_{S_1} A_n(Y-) dS_1 = 0 = \oint_{L_1} M(Y-) dL_1.$$

Such equations correspond gravit (X+ = Y-) to mass fields,

$$\begin{aligned} \text{rot}_Y M(Y-) &= \text{rot}_Y N(Y-) = \varepsilon_2 * \frac{\partial G(X+)}{\partial T} + \lambda * G(X+) \\ M(Y-) &= \mu_2 * N(Y-); \quad \text{rot}_Y G(X+) = -\mu_2 * \frac{\partial N(Y-)}{\partial T} = -\frac{\partial M(Y-)}{\partial T}; \end{aligned}$$

by analogy with Maxwell's equations for electro (Y+ = X-) magnetic fields. Here the uniform mathematical truth of such fields in uniform, dynamic space matter is presented.

Thus, turns $\text{rot}_Y B(X-) = E'(Y+)$ and $\text{rot}_X M(Y-) = G'(X+)$ trajectories, give dynamics $E'(Y+)$ and $G'(X+)$ power electric (Y+) and gravitational (X+) water, respectively. And turns (Y+) of fields around (X-) trajectories and (X+) fields around (Y-) trajectories, give: dynamics $\text{rot}_X E(Y+) \rightarrow B'(X-)$, and dynamics $\text{rot}_Y G(X+) \rightarrow M'(Y-)$ of mass trajectories.

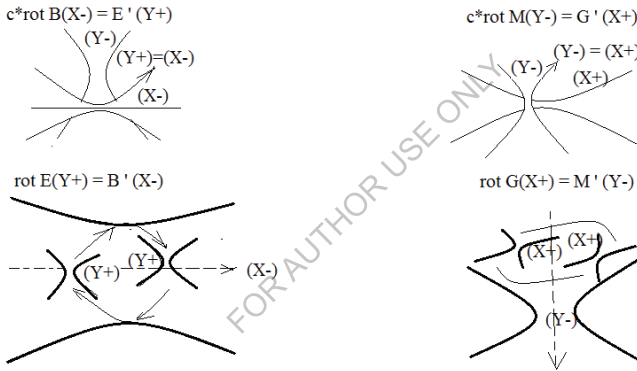


Fig. 3.2. Uniform fields of space matter

Turns around axes (z1 z2 z3) of a diagonal matrix (Korn, page 449)

$$\begin{vmatrix} z1 & 0 & 0 \\ 0 & z2 & 0 \\ 0 & 0 & z3 \end{vmatrix} = 1, \text{ as Euclidean } z1 \perp z2 \perp z3 \text{ of axes}$$

in fields uniform (X-) = (Y+), (Y-) = (X+) spaces matters, are represented by the corresponding minors of a matrix of a condition of dynamic space matter.

$$\begin{aligned} & \begin{vmatrix} z1 & a_{12}(Y+) & a_{13}(X+) \\ a_{21}(X-) & z2 & a_{23}(Y\pm) \\ a_{31}(Y-) & a_{32}(X\mp) & z3 \end{vmatrix} = \\ & =_{z1} \begin{vmatrix} z2 & a_{23}(Y\pm) \\ a_{32}(X\mp) & z3 \end{vmatrix} +_{z2} \begin{vmatrix} z1 & a_{13}(X+) \\ a_{31}(Y-) & z3 \end{vmatrix} +_{z3} \begin{vmatrix} z1 & a_{12}(Y+) \\ a_{21}(X-) & z2 \end{vmatrix}; \end{aligned}$$

in corresponding charging ($Y+=X-$) and mass ($X+=Y-$) trajectories. First composed there is a structural form ($X\pm$) and ($Y\pm$) quanta in (z_1) the direction, the second electro ($Y+=X-$) magnetic fields with the equations of dynamics of Maxwell.

$$c * rot_x B(X-) = \varepsilon_1 \frac{\partial E(Y+)}{\partial T} + \lambda_1 E(Y+); \quad c * rot_y E(Y+) = -\mu_1 \frac{\partial B(X-)}{\partial T}.$$

Also gravit ($X+=Y-$) mass fields, with the corresponding equations of dynamics

$$c * rot_y M(Y-) = -\varepsilon_2 \frac{\partial G(X+)}{\partial T} + \lambda_2 G(X+), \quad c * rot_x G(X+) = -\mu_2 \frac{\partial M(Y-)}{\partial T},$$

in the fixed $z_1 \perp (X-) \perp (Y-)$ space matter. For single masses $m_x = 1$, or $m_y = 1$ Indivisible quanta of (HOЛ=1), with a charge $q = (m_0 = 1) * \left(\alpha = \frac{1}{137}\right) * (G = 6,67 * 10^{-8}) = 4,8 * 10^{-10}$. Here $a_{ij} = \cos\varphi$ cosines of limit corners of parallelism

$$\cos(\varphi_{(Y-)\max}) = \frac{1}{137.036} \quad \text{and} \quad \cos(\varphi_{(X-)\max}) = \sqrt{G},$$

Where $G = 6.67 * 10^{-8}$, gravitational constant.

3.2. Scalar bosons.

Action of quantum $\hbar = \Delta p \Delta \lambda = F \Delta t \Delta \lambda$, it is impossible to record in space $\Delta \lambda$ or in time Δt . It is connected with a nonzero ($\varphi \neq const$) corner of parallelism ($X-$) or ($Y-$) a trajectory ($X\pm$) or ($Y\pm$) quantum of space matter. There is only a certain probability of action. Transformations of relativistic dynamics wave ψ - functions of the quantum field with a probability density ($|\psi|^2$) interactions ($X+$) in the field of (fig. 3), correspond Globally Invariant $\psi(X) = e^{-ia} \bar{\psi}(X)$, $a = const$ Lorentz's group. These transformations correspond to turns in S circle plane, and relativistic - to the invariant equation of Dirac.

$$i\gamma_\mu \frac{\partial \psi(X)}{\partial x_\mu} - m\psi(X) = 0, \quad \text{and} \quad \left[i\gamma_\mu \frac{\partial \bar{\psi}(X)}{\partial x_\mu} - m\bar{\psi}(X) \right] = 0.$$

Such invariancy gives conservation laws in the equations of the movement. For transformations of relativistic dynamics in the hyperbolic movement,

$$\psi(X) = e^{a(X)} \bar{\psi}(X), \quad ch(aX) = \frac{1}{2}(e^{aX} + e^{-aX}) \cong e^{aX}, \quad a(X) \neq const,$$

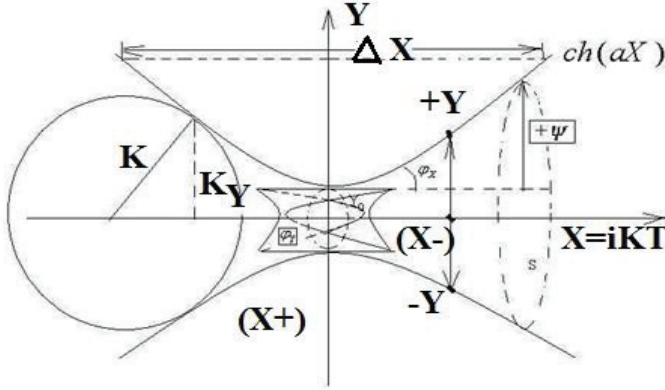


Fig 3.3. Quantum $(X \pm)$ of dynamic space-matter.

Additional component appears in the equation of Dirak.

$$\left[i\gamma_{\mu} \frac{\partial \psi(X)}{\partial x_{\mu}} - m \overline{\psi(X)} \right] + i\gamma_{\mu} \frac{\partial a(X)}{\partial x_{\mu}} \overline{\psi(X)} = 0$$

Invariance of preservation laws is broken. The calibration fields are imposed for their preservation. They compensate additional component in equation.

$$A_{\mu}(X) = \bar{A}_{\mu}(X) + i \frac{\partial a(X)}{\partial x_{\mu}}, \quad i\gamma_{\mu} \left[\frac{\partial}{\partial x_{\mu}} + iA_{\mu}(X) \right] \psi(X) - m\psi(X) = 0.$$

Now, substituting the value in such equation $\psi(X) = e^{a(X)} \overline{\psi(X)}$, $a(X) \neq const$, of wave function, we will obtain invariant equation of relativistic dynamics.

$$i\gamma_{\mu} \frac{\partial \psi}{\partial x_{\mu}} - \gamma_{\mu} A_{\mu}(X) \psi - m\psi = i\gamma_{\mu} \frac{\partial \overline{\psi}}{\partial x_{\mu}} + i\gamma_{\mu} \frac{\partial a(X)}{\partial x_{\mu}} \overline{\psi} - \gamma_{\mu} \bar{A}_{\mu}(X) \overline{\psi} - i\gamma_{\mu} \frac{\partial a(X)}{\partial x_{\mu}} \overline{\psi} - m \overline{\psi} = 0,$$

$$i\gamma_{\mu} \frac{\partial \overline{\psi}}{\partial x_{\mu}} - \gamma_{\mu} \bar{A}_{\mu}(X) \overline{\psi} - m \overline{\psi} = 0, \quad \text{or} \quad i\gamma_{\mu} \left[\frac{\partial}{\partial x_{\mu}} + i \bar{A}_{\mu}(X) \right] \overline{\psi} - m \overline{\psi} = 0$$

This equation is invariant to original equation

$$i\gamma_{\mu} \left[\frac{\partial}{\partial x_{\mu}} + iA_{\mu}(X) \right] \psi(X) - m\psi(X) = 0,$$

In conditions $A_{\mu}(X) = \bar{A}_{\mu}(X)$, $A_{\mu}(X) = \bar{A}_{\mu}(X) + i \frac{\partial a(X)}{\partial x_{\mu}}$. Presence of scalar boson

$(\sqrt{(+a)(-a)} = ia(\Delta X) \neq 0) = const$, in the limits of calibration $(\Delta X) \neq 0$ field (picture. 4).

Thus, scalar bosons in calibration fields are produced artificially, to address deficiencies of Theory of Relativity in quantum fields.

4. Representation of the main equations in dynamic space matter.

(X-) and (Y-) of a trajectory are represented by space of speeds of $v(X)$ of complex space of Euclidean axiomatics of points and lines. Speeds: $iv(X) * \sin\varphi = v * \sqrt{(+\sin\varphi)(-\sin\varphi)}$, or $v(X) = v * (\cos\varphi + i \sin\varphi) = v * e^{i\varphi}$. Here $(\varphi = \omega z t)$, parallelism corner. In the conditions of the Local Invariancy (LI), for

$$HOI = \text{ch}\left(\frac{X}{Y_0}\right)(X+) \cos(\varphi)(X-) = 1, \quad \varphi \neq 90^\circ,$$

at $\varphi=0$, $\cos(\varphi)=1$, we have: $\text{ch}\left(\frac{X}{Y_0}\right)=1$, $\text{ch}\left(\frac{X=0}{Y_0}\right)=1$, or $\text{ch}\left(\frac{X}{Y_0 \rightarrow \infty}\right)=1$, the Euclidean sphere (∞) of radius. Relativistic dynamics in Lorentz's group, with turns in the fixed plane (YZ) of a circle upon transition from 2 to a point 3 lines (X-) of a trajectory Local Invariancy under the terms, is followed by transformations of the hyperbolic movement $\text{ch}\left(\frac{X}{Y_0}\right)(X+)$ fields of quantum $(X\pm)$, in this case.

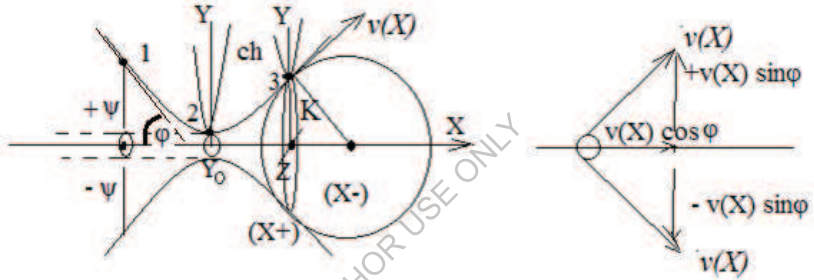


Fig. 4.1 Uniform representation of dynamics

For $(\pm\psi)$ wave $(\psi=Y-Y_0)$ functions, $(i\psi = \sqrt{(+\psi)(-\psi)})$, we will receive the $i\psi = i\psi$ transformations $i\psi e^{ax} e^{i\omega t} = i\psi e^{ax+i\omega t}$, for $(X\pm)$. Space of speeds of the line - a trajectory $(X-) = v(X) = v(\cos\varphi + i \sin\varphi)$, in extremals of transformations at $(t=0)$ or $(ax = \frac{X}{Y_0} = 0)$, give to H-a zero corner of parallelism $(\varphi = ax + i\omega t = 0)$, that is Euclidean an axis (X).

In extremals, from ratios $\frac{ve(Y-)}{c(Y-)} = \cos\varphi(Y-) = \alpha = \frac{1}{137}(Y\pm)$, similarly $\cos\varphi(X-) = \sqrt{G}$, $(X\pm)$ quantum, limit (φ_{MAX}) corners.

The equation of variable asymptotes of a hyperbola $YX=1$, $y=y'x$, $c(y' \neq \text{const})$ gives $(y' \neq 0)$, the equations: $y=y'x$. Such equations have solutions of the equation of Dirac, with the specified way of introduction of calibration fields and scalar bosons. Hyperboles $HOI = K\mathcal{C}(X- = Y+)K\mathcal{C}(Y- = X+) = 1$, variable asymptotes, or $HOI = K\mathcal{C}(m)K\mathcal{C}(n) = 1$, in axioms of dynamic space matter.

For $(X\pm)$ quantum of dynamic space matter, the loudspeaker of the quantum $(X+)$ field of interaction, it is characterized in Euclidean space time K_Y by a curvature radius projection

$$K = \frac{Y^2}{Y_0} \text{ (Smirnov, t.1, p. 186) the fixed sphere, a tangent in a space angle of parallelism}$$

$\varphi_X(X-)$ of a trajectory in this case. This K_Y projection of radius K , is function of the equations of dynamics.

$$Y = K_Y = \frac{Y_0}{2} \left(e^{\frac{X}{Y_0}} + e^{-\frac{X}{Y_0}} \right), \quad \frac{1}{2} \left(e^{\frac{X}{Y_0}} + e^{-\frac{X}{Y_0}} \right) = ch \frac{X}{Y_0} \approx \exp\left(\frac{X}{Y_0}\right), \quad Y_0 > 0, \quad X = 0, \quad Y = Y_0,$$

$$1 + (Y')^2 = \left(\frac{Y}{Y_0}\right)^2, \quad Y'' = \frac{Y}{Y_0^2}, \quad K = \frac{(\pm Y)^2}{Y_0}, \quad Y = K_Y = K \cos \varphi_X(X-) \approx K \exp\left(i \frac{X}{Y_0}\right),$$

where K - the radius of curvature ($X-$) of a trajectory ($X\pm$). At the same time ψ - function characterizes only dynamics $\pm \psi_X = \pm |Y - Y_0|$, $Y_0 \rightarrow 0$, $\pm \psi = \pm Y$, the quantum ($X+$) field of interaction or ($X-$) a trajectory in limits $\varphi_X(X-) \neq const$, a parallelism corner. Conditions $\varphi_X = 0^0$ give $Y = Y_0$, $\psi = 0$. Such function is called wave function of a condition of dynamic Criteria of Evolution of quantum ($X\pm$) as uncertainty of equally parallel lines on ($X-$) a trajectory. Analogies for ($Y\pm$) space matter quantum. On the one hand the projection

$K = \frac{(\pm Y)^2}{Y_0}$ - the radius of curvature ($X-$) of a trajectory of quantum ($X\pm$) of dynamic space matter in a look: $K_Y = Y = Y_0 ch \frac{X}{Y_0}$, is the solution of the differential equation of dynamics of the valid argument of X ,

$$Y'' - \left(\frac{1}{Y_0^2}\right)Y = 0, \quad \frac{Y}{Y_0} = ch \frac{X}{Y_0} \approx \exp\left(\frac{X}{Y_0}\right).$$

On the other hand the projection $Y = K_Y = K \cos a_X(X-)$ of the fixed single ($K=1$) - radiuses of curvature ($X-$) of a trajectory of quantum ($X\pm$) is the solution of the equation of dynamics of already imaginary argument,

$$Y'' + \left(\frac{1}{Y_0^2}\right)Y = 0, \quad Y = K \cos a_X = \frac{K}{2} \left(e^{\frac{iX}{Y_0}} + e^{-\frac{iX}{Y_0}} \right) \approx K \exp\left(i \frac{X}{Y_0}\right).$$

Accepting entry conditions of a zero corner of parallelism $\varphi_X = 0^0$, in Euclidean space the ratio takes place $Y = K \cos 0^0 = K = Y_0$. Any fixed nonzero value of a corner of parallelism ($\varphi_X \neq 0^0$) = $const$, in Euclidean axiomatics $\sqrt{(+X)(-X)} = iX$, in the presence, of the principle of uncertainty of a dynamic ($Y = Y-$) trajectory, gives its fixed state in the form of function of a complex argument,

$$(K_Y - Y_0) = \psi_X(K, T) = \psi_X(K) \exp\left(i \frac{X}{Y_0}\right) \quad \text{for} \quad Y_0 = const.$$

In the conditions of physical Criteria of Evolution of quantum ($X\pm$) of dynamic space matter, the equation, for the fixed ($X = Y_0$) sphere takes place,

$$\frac{X}{Y_0} = \frac{2m(E - V)}{\hbar^2} = 1, \quad \psi_X(K, T) = \psi_X(K) \exp\left(\frac{iET}{\hbar}\right) \quad \text{and} \quad \frac{\hbar^2}{2m} = (E - V),$$

It is about wave function of the one-dimensional Schrödinger equation (BKF, p. 270), as about the mathematical truth in axioms of dynamic space matter.

$$-\frac{\hbar^2}{2m} \frac{\partial^2}{\partial X^2} \psi_x(X, T) = (E - V) \psi_x(X, T).$$

The same ratios of wave function $\psi_y(K, T)$ in the Schrödinger equation, have quanta $(Y \pm)$ of dynamic space matter, already within a dynamic corner of parallelism $\varphi_y(Y -)$ of a trajectory, with quantum electric $(Y +)$ field of interaction,

$$\pm \psi_y(K, T) = \pm |X - X_0|.$$

Thus, dynamics of Criteria of Evolution $(X \pm)$ and $(Y \pm)$ quanta of dynamic space matter, in the conditions of their infinitesimal dynamic spheres points $X_0 \rightarrow 0$ and $Y_0 \rightarrow 0$, comes down to dynamics of their wave functions $\psi_x(K, T)$ and $\psi_y(K, T)$. The physical sense of such wave functions satisfying to the Schrödinger equations comes down to boundaries to an extreme condition of the fixed Criteria of Evolution $(X +)$ and $(Y +)$ fields of interaction of quanta $(X \pm)$ and $(Y \pm)$ dynamic space matter, within their own dynamic corners of parallelism $\varphi_x(X -)$ and $\varphi_y(Y -)$ trajectories.

At infinitesimal radiuses of spheres points $Y_0 \rightarrow 0$ in this case, projections of turns γ in temporary space of wave function,

$$\psi_x = (Y = K_y) - (Y_0 \rightarrow 0), \quad HOI = \omega(X - = Y +) T(X + = Y -) = 1,$$

in the fixed circle x^0 , with the adjoining hyperbole of the fixed asymptote, correspond to Lorentz's group (V. Paulie, p. 99, 105), in a look,

$$\begin{aligned} \bar{X}_1 &= X_1 \cos \gamma + X_4 \sin \gamma & \bar{X}_1 &= X_1 ch \varphi + X_4 sh \varphi \\ \bar{X}_4 &= -X_1 \sin \gamma + X_4 \cos \gamma & \bar{X}_4 &= -X_1 sh \varphi + X_4 ch \varphi \end{aligned}$$

In the course of dynamics of a corner of parallelism $\alpha_x(X -)$ of a trajectory of quantum $(X \pm)$ of dynamic space matter (fig. 2), the tangent point of intersection to $(X -)$ a trajectory with the Euclidean axis X , is displaced along this axis. At the same time covariant dynamics of wave function in Lorentz's group remains, at shift along $(X = X -)$ a trajectory of group of Poincare.

In the conditions of dynamics of wave function $\pm \psi_x = \pm |Y - Y_0|$, quantum $(X \pm)$

$$1 + (Y')^2 = \left(\frac{Y}{Y_0}\right)^2, \quad 1 = \left(\frac{Y}{Y_0}\right)^2 - (Y')^2, \quad (Y = K_y) \approx \psi \quad \text{for } Y_0 = const,$$

in technology of dynamic axioms facts the Indivisible Area of Localization of quantum $(X \pm)$ of dynamic space matter takes place,

$$HOI = i \left(\psi' + \frac{\psi}{Y_0} \right) (X + = Y -) i \left(\psi' - \frac{\psi}{Y_0} \right) (X - = Y +) = 1.$$

For the closed system of coordinates, a space angle of parallelism $\varphi_x(X -)$ of trajectories of quantum $(X \pm)$ of space matter of quantum, in Euclidean axiomatics of a zero corner of parallelism $\varphi_x(X -) = 0^0$, all Criteria of Evolution of such corner of parallelism are equal to zero too. In this case ratios of such Criteria of Evolution take place,

$$i \left(\psi' - \frac{\psi}{Y_0} \right) = 0, \quad \psi' = \frac{\psi}{Y_0}, \quad \text{or} \quad \frac{\partial \psi}{\partial T} = \frac{\psi}{Y_0}.$$

In the conditions of the principle of uncertainty $i\psi = \sqrt{(+\psi)(-\psi)}$ of temporary $(X- = icT)$ space, it CPT is symmetry where $i\omega = \frac{i}{T}$ defines C - a charge, and $(\pm\psi_X = \pm|Y - Y_0|)$, spatial P - symmetry, on $(X-)$ a quantum space matter quantum trajectory $(X\pm)$, there are their ratios as the mathematical truth of dynamic axioms. For Euclidean axiomatics of a zero corner of parallelism $\varphi_X(X-) = 0^0$, in a look,

$$\frac{i}{T} = \frac{H}{\hbar}, \quad \frac{\partial}{\partial T} = \frac{H}{i\hbar}, \quad i\hbar \frac{\partial \psi}{\partial T} = H\psi, \quad \frac{\partial n}{\partial T} = \frac{1}{i\hbar}(nH - Hn),$$

mathematical truth of the Schrödinger equations and Heisenberg (P. Dirac, page 83-88). Here their rather deep physical meaning is not discussed.

Transition state of Criteria of Evolution of quanta $(X\pm)$ or $(Y\pm)$ dynamic space matter, within their own dynamic corners of parallelism $\varphi_X(X-)$ or $\varphi_Y(Y-)$ trajectories, corresponds to matrixes of an initial and final state, operators of the birth and destruction of their Criteria of Evolution, with their invariable extremals in Global Invariancy. At the same time transition state in operators of coordinate and temporary space in the closed system of zero corners of parallelism $(\varphi = 0)$, in Euclidean axiomatics, corresponds to operator representation of the equations of dynamics of wave function

$$H = \left(\frac{\hbar^2}{2m} \right) \frac{\partial^2}{\partial K^2}, \quad E = i\hbar \frac{\partial}{\partial T}, \quad (E - H)\psi = 0.$$

The Hamiltonian H corresponds to Einstein's equation in pulse representation

$$\frac{E}{c} = W, \quad \frac{H}{c} = \sqrt{p_K^2 + m^2 c^2}, \quad \text{equations} \quad (E - H)\psi = 0.$$

The square root of a Hamiltonian $\frac{H}{c}$, undertakes in algebra of quaternions in the strict mathematical truth (Korn, p. 449).

$$b_{K=1,2,3}^2 = 1, \quad b_4^2 = 1, \quad b_K b_4 - b_4 b_K = 0, \\ \frac{H}{c} = \sqrt{p_K^2 + m^2 c^2} = \sqrt{(b_K p_K + b_4 mc)(b_K p_K + b_4 mc)} = (b_K p_K + b_4 mc).$$

The equation of dynamics of wave function takes a form of the equation of Dirac,

$$(E - H)\psi = 0, \quad \left(W - \frac{H}{c} \right) \psi = 0, \quad (W - b_K p_K - b_4 mc)\psi = 0, \\ \left(i\hbar \left(\frac{\partial}{c \partial T} - b_K \frac{\partial}{\partial X_K} \right) - b_4 mc \right) \psi = 0,$$

Where b_K, b_4 Dirac's matrixes (P. Dirac, p. 77), as mathematical truth of algebra of quaternions of the fixed sphere, in space $\varphi_X(X-)$ angles of parallelism or $\varphi_Y(Y-)$

trajectories, with the principle of uncertainty in each Euclidean axis of the sphere on these trajectories.

The speech about the uniform mathematical truth of technology of dynamic axioms, quanta of Indivisible Areas of Localization of dynamic space matter, and the mathematical truth of quantum theories in technology of Euclidean axiomatics of space time.

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5. General equations of the General Theory of Relativity and quantum gravity.

It is impossible to determine properties ($X-$) or ($Y-$) trajectories of quanta of HOJI ($X\pm$), ($Y\pm$) space matter, by one straight line, in a dynamic bunch of parallel straight lines. This physical principle of uncertainty $\hbar = \Delta p \Delta \lambda = F \Delta t \Delta \lambda$, the line trajectory in space - time ($\Delta \lambda, \Delta t$) as the experiment fact, is an axiom of dynamic space matter. It is impossible at the same time, to synchronize relativistic dynamics in the uniformly accelerated [$b^2 = const$] circular or hyperbolic movement.

$$Y^2 \pm (icT)^2 = [a^2 = \frac{c^4}{b^2} = const] = (\Delta \bar{Y}^2 \pm (ic\bar{T})^2 \neq const) = (\bar{Y}^2 \pm (ic\Delta \bar{T})^2 \neq const)$$

Here, transformations of relativistic dynamics of the circular ($-$) or hyperbolic ($+$) movement in the classical Theory of Relativity of Einstein are invalid. In the conditions of variable acceleration [$b^2 \neq const$], such transformations of relativistic dynamics are invalid too.

$$Y^2 \pm (icT)^2 = [a^2 \neq const] = \bar{Y}^2 \pm (ic\bar{T})^2.$$

In both cases, in quantum fields, the classical Special Theory of Relativity (STR) of Einstein is invalid. Transformations of relativistic dynamics of the circular ($+$) or hyperbolic ($-$) uniformly accelerated ($a^2 = const$) movement,

$$Y^2 \pm (icT)^2 = \left(a^2 = \frac{c^4}{b^2} = const \right) = \bar{Y}^2 \pm (ic\bar{T})^2,$$

give Lorentz's transformations of classical relativistic dynamics.

Table 1.

a) Uniform mathematical truth STR and QTR

Special Theory of Relativity (STR).	Quantum Theory of Relativity (QTR).
<p>Classical representation:</p> $Y^2 \pm (icT)^2 = \left(a^2 = \frac{c^4}{b^2} = const \right) = \bar{Y}^2 \pm (ic\bar{T})^2$ <p>Circular ($+$) or hyperbolic ($-$) uniformly accelerated movement.</p> <p>1). $\bar{X} = a_{11}X + a_{12}Y$, $Y = icT$, $T = \frac{Y}{ic}$,</p> $\bar{X} = a_{11}X + a_{12} \frac{Y}{ic}$ $\frac{\bar{Y}}{ic} = a_{21}X + a_{22} \frac{Y}{ic}$ $\bar{Y} = a_{21}X + a_{22}Y, \quad \bar{Y} = ic\bar{T},$	<p>The special Theory of Relativity is invalid under conditions:</p> <p>1). not the uniformly accelerated ($a^2 \neq const$) movement.</p> <p>2). Owing to the principle of uncertainty $\Delta Y = c\Delta T$, impossibility of fixing of points in space - time, do Lorentz's transformations hopeless.</p> <p>3) Wave function of quantum is brought to an initial state by input of the calibration field, in the absence of relativistic dynamics, in the process of its dynamics, that is in the absence of quantum relativistic dynamics. Relativistic dynamics in parallelism coal $\alpha(X-)$ space quantum trajectories - matters. Instead of X,Y, projections $K_y K_x$, dynamic radius To, the dynamic sphere, a tangent to a surface of a dynamic space angle $\alpha^0(X-) \neq const$, parallelism are</p>

$$2). \quad \bar{X} = a_{11}X + \frac{a_{12}}{ic}Y, \quad a_{11} = b_{11}, \quad \frac{a_{12}}{ic} = ib_{12},$$

$$\bar{Y} = a_{21}icX + a_{22}Y$$

$$a_{21}ic = ib_{21}, \quad a_{22} = b_{22}, \quad a_{22} = b_{22}.$$

$$3). \quad \bar{X} = b_{11}X + ib_{12}Y, \quad \delta_{KT} = 1 \text{ для } K = T,$$

$$\bar{Y} = ib_{21}X + b_{22}Y,$$

$$b_{11}^2 - b_{12}^2 = 1 = b_{22}^2 - b_{21}^2$$

conditions of orthogonality vector component. In Globally Invariant conditions of the sphere

$$b_{11} = b = b_{22}, \quad b_{12}^2 = b_{21}^2 (\pm b_{12})^2 = (\mp b_{21})^2$$

$$b_{12} = -\frac{a_{12}}{c}, \quad b_{21} = a_{21}c, \quad b_{12} + b_{21} = 0, \text{ take place:}$$

$$a_{21}c = \frac{a_{12}}{c}, \text{ or for: } c = \frac{\Delta Y}{\Delta T}, \quad \frac{a_{21}\Delta Y}{\Delta T} = \frac{a_{12}\Delta T}{\Delta Y}.$$

4). Further two cases take place.

a). Conditions ($a_{21} = 0 = a_{12}$), nullify projections $\Delta Y = ic\Delta T$, dynamk spatially ($c = \Delta Y / \Delta T$) temporary a component of the quantum of a photon, and give GI - Global and Invariant conditions.

b). The reality is that the photon which synchronizes relativistic dynamics has the volume ($a_{21} \neq 0$) \neq ($a_{12} \neq 0$) in space - time. Such reality corresponds to reality of the principle of uncertainty: $\Delta Y = 0 = (+Y) + (-Y)$. It is about - Local Invariance in volume

$$(a_{21} \neq 0) \neq (a_{12} \neq 0).$$

5). Paulie (p. 14): "... it was assumed ...

$$\chi \sqrt{1 - \frac{W^2}{c^2}}, \text{ or Smirnov (t.3, p. 195): "... we$$

will put ... ($b_{12} = ab$) = $-b_{21}$...". That is, there is no initial reason of such provisions. But already from these provisions, for the unknown reason, according to Smirnov, the mathematical truth follows:

$$\bar{X} = bX + iabY$$

$$\bar{Y} = -iabX + bY,$$

$$b^2 - a^2b^2 = 1 = -a^2b^2 + b^2, \quad b^2(1 - a^2) = 1,$$

$$b = \frac{1}{\sqrt{1 - a^2}}$$

considered $K_Y, K_X, \alpha^0(X^-) \neq const$. The speech about the material sphere with a nonzero minimum radius $Y_0 = 1 = ch0$, and wave function $\psi = K_Y - Y_0$.

$$Y = K_Y, \quad X = K_X$$

$$\bar{K}_Y = a_{11}K_Y + a_{12}K_X$$

1). $\bar{K}_X = a_{21}K_Y + a_{22}K_X$, where $K_X = cT, T = \frac{K_X}{c}$, time is entered.

$$\bar{K}_Y = a_{11}K_Y + \frac{a_{12}}{c}K_X$$

$$2). \quad \frac{\bar{K}_X}{c} = a_{21}K_Y + \frac{a_{22}}{c}K_X, \text{ or}$$

$$\bar{K}_Y = a_{11}K_Y + \frac{a_{12}}{c}K_X$$

$$\bar{K}_X = a_{21}cK_Y + a_{22}K_X.$$

A). In external GI - it is global - Invariant conditions,

components $\cos \gamma = \sqrt{(+a_{11})(-a_{11})} = ia_{11}$ give the principle of uncertainty, with a certain density of probability $|\psi|^2$ in an experiment, and a matrix of transformations:

$$\bar{K}_Y = ia_{11}K_Y + \left(\frac{a_{12}}{c} = b_{12}\right)K_X$$

$$3). \quad \bar{K}_X = (a_{21}c = b_{21})K_Y + ia_{22}K_X$$

For parallelism corners $\alpha^0(X^-) = 0$, in GI, such that

$$4). \quad a_{11} = \cos(\alpha^0 = 0^0) = 1 = b \quad (b = 1)K_Y = K_Y$$

$$a_{22} = \cos(\alpha^0 = 0^0) = 1 = b \quad (b = 1)K_X = K_X$$

conditions take place

$$5). \quad \frac{a_{12}}{(c=1)} = b = a_{21}(c=1) \quad b_{12} = b = b_{21}$$

period ($T = 1$).

In Globally - Invariant conditions $ia_{11} = ia = ia_{22}$, the matrix has an appearance

$$6). \quad \bar{K}_Y = ia_{11}K_Y + b_{12}K_X, \quad \bar{K}_Y = iabK_Y + bK_X,$$

$$\bar{K}_X = b_{21}K_Y + ia_{22}K_X, \quad \bar{K}_X = bK_Y + iabK_X,$$

$$\bar{K}_Y = iabK_Y + bK_X$$

$$\bar{K}_X = bK_Y + iabK_X$$

The same GI a representation form $K_Y = \psi = Y - Y_0$, takes place in any multiple $T \leq \Delta T$, timepoint.

$$\bar{X} = \frac{X + iaY}{\sqrt{1 - a^2}}, \quad \bar{Y} = \frac{Y - iaX}{\sqrt{1 - a^2}}$$

6). Substituting reference values $Y = icT$
 $\bar{Y} = ic\bar{T}$, we will receive:

$$\bar{X} = \frac{X + iaY}{\sqrt{1 - a^2}}, \quad ic\bar{T} = \frac{icT - iaX}{\sqrt{1 - a^2}},$$

$$\bar{T} = \frac{T - \frac{a}{c}X}{\sqrt{1 - a^2}}, \quad a = \frac{W}{c} = \cos \alpha^0,$$

Lorentz's transformations in classical relativistic dynamics

$$\bar{X} = \frac{X - WT}{\sqrt{1 - W^2/c^2}}, \quad \bar{T} = \frac{T - \frac{W}{c^2}X}{\sqrt{1 - W^2/c^2}},$$

$$\bar{W} = \frac{V + W}{1 + VW/c^2}.$$

transition QTR in STR.

The mathematical truth of transition of the Quantum Theory of Relativity to transformations of the Special Theory of Relativity takes place.

For zero corners of parallelism in Euclidean axiomatics, with speeds smaller velocity of light $W_Y < c$, limit cases of transition of quantum relativistic dynamics vector a component take place

$$a_{22} = (\cos(\alpha^0 = 0) = 1) = a_{11}, \quad a_{22} = 1, \quad a_{11} = 1$$

$$Y = WT,$$

$$(\bar{K}_Y = \bar{Y}) = \frac{(a_{11} = 1)(K_Y = Y) \pm WT}{\sqrt{1 - W^2(X - Y)/c^2}},$$

$$\bar{Y} = \frac{Y \pm WT}{\sqrt{1 - W^2/c^2}}, \quad \bar{T} = \frac{K_Y/c + (a_{22} = 1)T}{\sqrt{1 - W^2(X - Y)/c^2}},$$

$$K_Y = K(\cos \alpha^0 = \frac{W}{c}), \quad \bar{T} = \frac{T \pm KW/c^2}{\sqrt{1 - W^2/c^2}},$$

in Lorentz's transformations classical relativistic dynamics.

7). In the conditions of orthogonality $\delta_{KT} = 1$ $K = T$, takes place $-a^2b^2 + b^2 = 1 = b^2 - a^2b^2$,

$$b^2(1 - a^2) = 1, \quad b = \frac{1}{\sqrt{1 - a^2}}.$$

matrix multiplier with conditions: $ia_{11} = ia = ia_{22}$ or $a_{11} = a = a_{22}$.

B). (LI) already in - Locally - Invariant conditions, relativistic dynamics $a_{11} \neq a_{22}$, with external GI conditions, takes place:

$$\bar{K}_Y = b(a_{11}K_Y + K_X)$$

8) $\bar{K}_X = b(K_Y + a_{22}K_X)$, where: from $K_Y = \psi + Y_0$

$$K_X = c(T = \frac{X}{c} = \frac{\hbar}{E}), \text{ follows } A_K = b(a_{11}Y_0 + K_X).$$

It is also the moment of truth of relativistic dynamics of quantum of space matter which is presented in modern

theories by the calibration A_K field.

$$\psi = \psi_0 \exp(\text{arg} \neq \text{const}) + A_K$$

9). Under the terms $a_{22} = \frac{K_X}{cT} = \frac{W}{c} = a = a_{11}$,

GI - loudspeakers $a = a_{22} = a_{11}$

$b = \frac{1}{\sqrt{1 - a^2}} = \frac{1}{\sqrt{1 - W^2/c^2}}$, the matrix of transformations takes a form:

$$\bar{K}_Y = \frac{a_{11}K_Y + cT}{\sqrt{1 - a_{22}^2}}, \quad \bar{K}_X = \frac{a_{11}K_X + cT}{\sqrt{1 - W^2/c^2}},$$

$$c\bar{T} = \frac{K_Y + a_{22}cT}{\sqrt{1 - a_{22}^2}}, \quad \bar{T} = \frac{K_Y/c + a_{22}T}{\sqrt{1 - W^2/c^2}},$$

$$\bar{W}_Y = \frac{\bar{K}_Y}{\bar{T}} = \frac{a_{11}K_Y + cT}{K_Y/c + a_{22}T}, \quad \bar{W}_X = \frac{a_{11}W_Y + c}{a_{22} + W_Y/c},$$

Local Invariance (LI) in conditions $(a_{22} \neq a_{11}) \neq 1$,

$$\text{in extremals when: } a_{11} = \frac{W}{c} = \alpha = \frac{1}{137.036}$$

$$W = \alpha c; \quad \alpha = \frac{q^2}{\hbar c}$$

10). Speed limits $W_Y = c$, in conditions $a_{22} = a_{11} \neq 1$,

$$\text{give } \bar{W}_Y = \frac{c(a_{11} + 1)}{(a_{22} + 1)} = c, \text{ invariable velocity of light}$$

	$\overline{W}_Y = c = W_Y$, in any system of coordinates.
--	--

Such Quantum Theory of Relativity is impossible in Euclidean axiomatics, with a zero corner of parallelism. In both cases, the Special and Quantum Theory of Relativity ($W = Nc$) in superlight space of speeds ($V = \alpha^{-1}c$) of physical vacuum, velocity of light remains invariable. Both theories do not contradict superlight space of speeds of physical vacuum.

$$\overline{W}_Y = \frac{c+Nc}{1+c*Nc/c^2} = c, \quad \overline{W}_Y = \frac{a_{11}Nc+c}{a_{22}+Nc/c} = c, \text{ для } a_{11} = a_{22} = 1.$$

6. General equations of the General Theory of Relativity and quantum gravity.

6.1 General Theory of Relativity in the dynamic space of matter.

The theory is characterized by tensor of Einstein (G. Korn, T. Korn), it is a math truth of difference of relativistic dynamics of two (1) and (2) points of Rimanov's space, as fixed ($g_{ik} = const$), state of dynamic ($g_{ik} \neq const$), space-matter. (Smirnov V.I. 1974. b.2).

$$R - \frac{1}{2}R_1 a_{ji} = \frac{1}{2}grad(U), \text{ or } R_{ji} - \frac{1}{2}Rg_{ji} = kT_{ji}, \quad (g_{ji} = const).$$

In this case the matrix of transformations in single units of measure

$$\begin{aligned} R_1 &= a_{11}Y_1 + 0 \\ R_Y &= 0 + a_{YY}Y_Y, \quad a_{11} = a_{YY} = \sqrt{G}, \quad R^2 = a_{YY}^2 Y_Y^2 = GY_Y^2, \end{aligned}$$

$$\text{Gives classical Newton's low } Y_Y^2 = \frac{m^2}{\Pi^2}, \quad R^2 = G \frac{m^2}{\Pi^2}, \quad \text{or } F = G \frac{Mm}{R^2},$$

For relativistic dynamics:

$$c^2 T^2 - X^2 = \frac{c_Y^2}{b_Y^2}, \quad b_Y = \frac{F_Y}{M_Y}, \quad c_Y^4 = F_Y, \quad c^2 T^2 - X^2 = \frac{M_Y^2}{F_Y}, \quad F_Y = \frac{M_Y^2}{c^2 T^2 (1 - W_X^2 / c^2)},$$

$$c^2 T^2 = R^2 = \frac{R_0^2}{(\cos^2 \varphi_X = G)}, \quad F_Y = G \frac{Mm}{R^2 (1 - W_X^2 / c^2)},$$

It is relativistic view of Newton's law for mass (Y-) trajectories,

$$W^2 = \frac{2GM}{R_3}, \quad F_Y = G \frac{Mm}{R^2 (1 - 2GM/R_3 c^2)},$$

It is particular case of General Theory of Relativity.

It is significant, that gravitational constant ($a_{11} = a_{YY} = \sqrt{G}$), is math truth of maximum ($a_{11} = a_{YY} = \cos \varphi_{MAX} = \sqrt{G}$), angle of parallelism, it is absent ($k=8\pi G$) in General Theory of Relativity of Einstein. The second moment is that, there are strict conditions of fixation of potentials ($g_{ji} = const$), with adjustment of them to Euclidean space ($g_{ii} = 1$). Introduction of coefficient in equation (λ) that is changing energy

$$R_{ji} - \frac{1}{2}Rg_{ji} - \frac{1}{2}\lambda g_{ji} = kT_{ji}$$

of vacuum, does not change conditions of its fixation. In dynamic space-matter on (m) – convergence of energy level of vacuum, equation has a view:

$$R_{ji} - \frac{1}{2}Rg_{ji}(x^m \neq const) = kT_{ji}.$$

It is a single model of dynamic vacuum of The Universe and “latent” induction mass (similar to magnetic) fields of dynamic core of galaxies. In every level presence of variable $(g_{ji} \neq const)$ field, with uncertainty principle, only points on quantum gravity without theory itself. Outside these limits other laws take place.

6.2. Uniform representation STR and GTR

The Special Theory of Relativity (STR) is created in space - time. $x^2 - c^2t^2 = \frac{c^4}{b^2} [K^2]$; dimensions $c^4 = \frac{K^4}{T^4} = \left(\Pi = \frac{K^2}{T^2}\right)^2 = (\Pi^2 = F)$ of force, $\left(b = \frac{K}{T^2}\right)^2$ acceleration.

The General Theory of Relativity (GTR) is created in Riemannian space of local basic vectors $e_i(X, Y, Z)$ with dimension $(e_i = \frac{K}{T})$ spaces of speeds. $e_i * e_i = R_{ik}(x^n)$, tensor.

$R_{ik} - \frac{1}{2}Rg_{ik} = kT_{ik}$, a tensor $T_{ik} = \left(\frac{E=\Pi^2K}{P=\Pi^2T}\right)^2$, energy $(E = \Pi^2K)$ - an impulse $(P = \Pi^2T)$ in dimensions $\left(\frac{K^2}{T^2} = \Pi\right)$ of potential.

Both equations STR and GTR are connected by density of matter $(\rho = \frac{\Pi K}{K^3} = \frac{1}{T^2})$, mass fields $m = \Pi K(X+ = Y-)$, or charging $q = \Pi K(Y+ = X-)$, fields in two various points in a look:

$$\rho(x^2 - c^2t^2) = \rho\left(\frac{c^4}{b^2}\right), \quad \text{where}$$

$$\rho_1 x^2 = \left(\frac{x}{T} = e\right)_i \left(\frac{x}{T} = e\right)_k = R_{ik}; \quad c^2 = g_{ik}; \quad \frac{t^2}{T^2} = (\cos 45^\circ)^2 R = \frac{1}{2}R; \quad (R = \frac{v^2}{c^2})$$

relativity coefficient $\rho\left(\frac{c^4}{b^2}\right) = \frac{F}{T^2(F/m)^2} = \frac{F * m^2 = (mc^2)^2}{(F * T = p)^2} = \left(\left(\frac{E}{p}\right)_i \left(\frac{E}{p}\right)_k\right) = T_{ik}$; T_{ik} - energy impulse tensor. Thus, in the strict mathematical truth we receive the equation GTR:

$$R_{ik} - \frac{1}{2}Rg_{ik} = kT_{ik}.$$

Potentials of relativistic dynamics of uniform fields.

Electro $(Y+ = X-)$ Magnetic fields of the equation of Maksvela in uniform Criteria of Evolution.

$$\begin{aligned} c \left[\frac{K}{T}\right]; \quad B(X-) \left[\frac{1}{T}\right] &= \mu_1 \left[\frac{T}{K}\right] * H \left[\frac{K}{T^2}\right]; \quad \varepsilon_1 * E(Y+) \left[\frac{K}{T^2}\right] = D(Y+) \left[\frac{1}{T}\right]; \quad \varepsilon_1 \left[\frac{T}{K}\right]; \quad \lambda \left[\frac{1}{K}\right]; \\ \frac{1}{\sqrt{\mu_1 \varepsilon_1}} &= c; \quad c * \text{rot}_x B(X-) = \text{rot}_x H(X-) = \varepsilon_1 \frac{\partial E(Y+)}{\partial T} + \lambda E(Y+); \quad \text{dimensions} \left[\frac{1}{T^2}\right], \\ \text{rot}_x E(Y+) &= -\mu_1 \frac{\partial H(X-)}{\partial T} = -\frac{\partial B(X-)}{\partial T} \quad \text{dimensions} \left[\frac{1}{T^2}\right], \end{aligned}$$

We multiply equation components: $(x^2 - c^2t^2) = \frac{c^4}{b^2} [K^2]$; Relativistic dynamics

$$x^2 \text{rot}_x H(X-) - c^2 t^2 \text{rot}_x H(X-) = \frac{c^4}{b^2} \varepsilon_1 \frac{\partial E(Y+)}{\partial T} + \frac{c^4}{b^2} \lambda E(Y+);$$

$x^2 \text{rot}_x E(Y+) - c^2 t^2 \text{rot}_x E(Y+) = \frac{c^4}{b^2} \mu_1 \frac{\partial H(X-)}{\partial T}$: We will receive $[K^2] * \left[\frac{1}{T^2}\right] = \left[\frac{1}{T^2}\right] = \Pi$,

Relativistic transformations of potentials электро (Y + = X-) Magnetic field.
 c the subsequent definition of the Criteria of Evolution necessary to us. Similarly further. In
 the equations gravity (X + = Y-) Mass fields in relativistic dynamics look like.

$$c * rot_Y M(Y -) = rot_Y N(Y -) = \varepsilon_2 * \frac{\partial G(X+)}{\partial T} + \lambda * G(X+); \text{ dimensions } \left[\frac{1}{T^2} \right],$$

$$M(Y-) = \mu_2 * N(Y-); \quad rot_Y G(X+) = -\mu_2 * \frac{\partial N(Y-)}{\partial T} = -\frac{\partial M(Y-)}{\partial T}; \text{ dimensions } \left[\frac{1}{T^2} \right],$$

Multiplying by transformations of relativistic dynamics (K²), We will receive relativistic transformations ($\frac{1}{T^2} K^2 = \Pi$) Potentials already gravity(X + = Y-) Mass fields in a kind:

$$x^2 rot_Y M(Y -) - c^2 t^2 rot_Y N(Y -) = \frac{c^4}{b^2} \varepsilon_2 \frac{\partial G(X+)}{\partial T} + \frac{c^4}{b^2} \lambda G(X+)$$

$$x^2 rot_Y G(X +) - c^2 t^2 rot_Y G(X +) = -\frac{c^4}{b^2} \mu_2 \frac{\partial N(Y-)}{\partial T} = -\frac{c^4}{b^2} * \frac{\partial M(Y-)}{\partial T} :$$

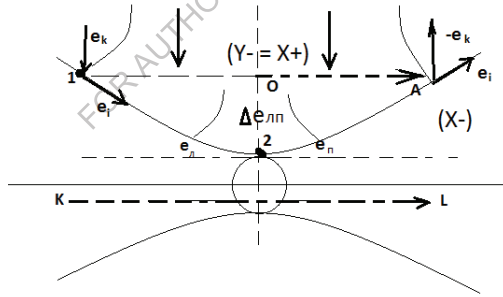
the subsequent definition of the Criteria of Evolution necessary to us.

6.3. Quantum gravitation in the uniform theory

6.2.1 Elements of quantum gravitation.

They follow from the General Theory of the Relativity, тензора Einstein, as mathematical true of a difference of relativistic dynamics in two (1) and (2) points Riemannian spaces, with fundamental tensor $g_{ik}(x^n) = e_i e_k$.

$g_{ik}(1) - g_{ik}(2) \neq 0, \quad e_k e_k = 1, \quad \text{On conditions } e_i(Y-) \perp e_k(X-),$



Picture 7. Space-matter quantum

The point (2) is led by Euclidean to sphere space, where (e_i ⊥ e_k) And (e_i * e_k = 0).

Therefore in a point vicinity (2) we allocate vectors (e_L) And (e_n). Also we take average value $\Delta e_{\pi\pi} = \frac{1}{2}(e_n + e_\pi)$. Accepting (e_n = e_κ) and $\Delta e_{\pi\pi} = \frac{1}{2}(e_n + e_\pi) = \frac{1}{2} e_\kappa \left(\frac{e_n}{e_\kappa} + 1 \right)$,

We will receive: $g_{ik}(1) - g_{ik}(2) \neq 0, \quad g_{ik}(1) - \frac{1}{2} e_i e_\kappa \left(\frac{e_n}{e_\kappa} + 1 \right) (2) = \kappa T_{ik}, \quad \left(\frac{e_n}{e_\kappa} = R \right)$

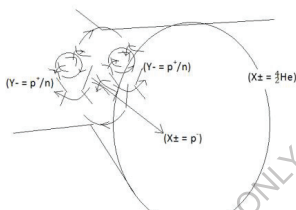
In a full kind the equation of the General Theory of the Relativity:

$$R_{ik} - \frac{1}{2} R g_{ik} - \frac{1}{2} g_{ik} = \kappa T_{ik}$$

Average value of a local basic vector Riemannian spaces (Δe_{mn}), it is defined as an uncertainty principle, but for all length of a wave $KL = \lambda(X +)$ Gravitational field $G(X +) = M(Y-)$ Mass trajectories. This uncertainty in the form of a piece ($OA = r$), As wave function ($r = \psi_Y$) The mass $M(Y-)$ Quantum trajectories ($Y\pm$) In gravity. A field $G(X +)$ Interactions. $\lambda(X +) \equiv 2\psi_Y$ Backs ($X +$)Fields. Projection ($Y-$)Trajectories on a circle plane (πr^2) Gives the probability area $(\psi_Y)^2$ quantum mass trajectories $M(Y-)$, in gravity. $G(X +)$ Interaction field.

These are initial elements quantum gravity. $G(X +) = M(Y-)$ Mass field. They follow from the equation of the General Theory of the Relativity.

PS. Based on models of a spectrum of atoms, model of quantum ($X\pm = \frac{4}{2}He$) of a core of helium is

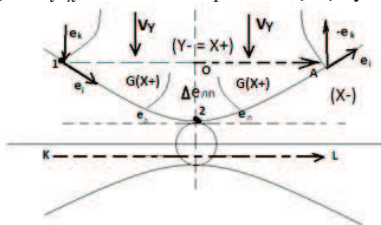


Picture 8. Model of quantum

Structural form of quants ($Y- = p^+/n$) of Strong Interaction of structured by ($X-$) field of antiproton ($X\pm = p^-$) in this case. That is why it is convenient to structure deuterium-tritium plasma in continuous thermonuclear reaction by beams of antiprotons. There are two versions of the models. Either (2_1H)plasma $+(p^-)$ antiprotons of low energies, or (3_1H)plasma $+(p^+)$ protons of high energies.

6.2.2. Quantum gravitation in the uniform theory

Elements quantum гравит ($X + = Y-$) a mass field follow from the General Theory of the Relativity. Speech about a difference relativistic dynamics in two (1) and (2) points риманового spaces, as to mathematical true tensor Einstein. (G. Korn, T. Korn, c.508). Here $g_{ik}(1) - g_{ik}(2) \neq 0$, $e_k e_k = 1$, on conditions $e_i(Y-) \perp e_k(X-)$, Fundamental тензор $g_{ik}(x^n) = e_i e_k$ Riemannian spaces in (x^n) system of coordinates.



Picture 9. Quantum гравит ($X + = Y-$) a mass field.

The principle of equivalence of inert and gravitational weight is physical properties gravity ($X + = Y -$) a mass field. This equality of acceleration $a = v_Y * M(Y -)$ of mass trajectories and acceleration $g = G(X +)$ of a field of gravitation

$v_Y * M(Y -) = a = g = G(X +)$, in space of speeds

$$e_i(X -) = e_i(x^n = X, Y, Z) = v_X \left[\frac{K}{T} \right], \quad e_k(Y -) = e_k(x^n = X, Y, Z) = v_Y \left[\frac{K}{T} \right]$$

of local basic vectors. For example, in "the falling" lift acceleration ($g - a$) = 0 is absent, and the weight $P = m(g - a) = 0$, is equal to zero.

The point (2) is led by Euclidean to sphere space, where $(e_i \perp e_k)$ and $e_i * e_k = 0$. Therefore in a vicinity of a point (2) it is allocated parallel vectors (e_n) and (e_{κ}) and we take average value $\Delta e_{n\kappa} = \frac{1}{2}(e_n + e_{\kappa})$. Accepting $(e_n = e_{\kappa})$ and $g_{ik}(1) - g_{ik}(2) \neq 0$.

$$\Delta e_{n\kappa} = \frac{1}{2}(e_n + e_{\kappa}) = \frac{1}{2}e_{\kappa} \left(\frac{e_n}{e_{\kappa}} + 1 \right), \text{ we will receive:}$$

$$g_{ik}(1)(X+) - g_{ik}(2)(X+) = \kappa T_{ik}(Y -),$$

$$g_{ik}(1) - \frac{1}{2}e_i e_{\kappa} \left(\frac{e_n}{e_{\kappa}} + 1 \right) (2) = \kappa T_{ik}, \quad \left(\frac{e_n}{e_{\kappa}} = R \right).$$

From here the equation of the General Theory of the Relativity in a full kind follows:

$$R_{ik} - \frac{1}{2} R g_{ik} - \frac{1}{2} g_{ik} = \kappa T_{ik}.$$

Average value of a local basic vector Riemannian spaces $(\Delta e_{n\kappa})$, is defined as a principle of uncertainty of mass $(Y -)$ trajectories, but for all length of a wave $KL = \lambda(X +)$ of a gravitational field. Here accelerations $G(X +) = v_Y M(Y -)$ of mass trajectories. This uncertainty in the form of a piece $(2 * OA = 2r)$, as wave function $2\psi_Y(Y -)r = \lambda(X +)$ of a mass $M(Y -)$ trajectory of quantum $(Y \pm)$ in $G(X +)$ the Interaction gravitational field. Here $2\psi_Y$, , backs (\downarrow) of a quantum field $\lambda(X +)$ of gravitation. The projection of a mass $(Y -)$ trajectory of quantum, to a circle plane (πr^2) gives the area of probability $(\psi_Y)^2$ of hit of a mass $M(Y -)$ trajectory of quantum $(Y \pm)$, in a quantum $G(X +)$ gravitational field of Vzaimo $(Y - = X +)$ of action.

These are initial elements quantum $G(X +) = v_Y M(Y -)$ mass gravity fields. They follow from the equation of the General Theory of the Relativity. We will allocate here dimensions of uniform Kriteriv of Evolution of space-matter in a kind. Speed $v_Y \left[\frac{K}{T} \right]$; potential $(\Pi = v_Y^2) \left[\frac{K^2}{T^2} \right]$; acceleration $G(X +) \left[\frac{K}{T^2} \right]$; mass $m = \Pi K(Y - = X +)$ fields and charging $q = \Pi K(X - = Y +)$ fields, their density $\rho \left[\frac{\Pi K}{K^3} \right] = \left[\frac{1}{T^2} \right]$; force $F = \Pi^2$; energy $\mathcal{E} = \Pi^2 K$; an impulse $P = \Pi^2 T$; action $\hbar = \Pi^2 K T$ and so on.

Let's designate $(\Delta e_{,m} = 2\psi e_{\kappa})$, $T_{ik} = \left(\frac{\mathcal{E}}{P} \right)_i \Delta \left(\frac{\mathcal{E}}{P} \right)_{,m} = \left(\frac{\mathcal{E}}{P} \right)_i 2\psi \left(\frac{\mathcal{E}}{P} \right)_{\kappa} = 2\psi T_{ik}$ in a kind tensor energy $(\mathcal{E}) - (P)$ - an impulse with wave function (ψ) . The equation From here follows:

$$R_{ik} - \frac{1}{2} R e_i \Delta e_{,m} = \kappa \left(\frac{\mathcal{E}}{P} \right)_i \Delta \left(\frac{\mathcal{E}}{P} \right)_{,m} \text{ or } R_{ik}(X+) = 2\psi \left(\frac{1}{2} R e_i e_{\kappa}(X+) + \kappa T_{ik}(Y -) \right) \text{ and}$$

$$R_{ik}(X+) = 2\psi \left(\frac{1}{2} R g_{ik}(X+) + \kappa T_{ik}(Y -) \right).$$

This equation of quantum Gravitational potential with dimension $\left[\frac{K^2}{T^2} \right]$ of potential $(\Pi = v_Y^2)$ and спином (2ψ) . In brackets of this equation, a member of equation of the General Theory of the Relativity in the form of a potential $\Pi(X +)$ field of gravitation. In field theories (Smirnov, т.2, с.361), acceleration of mass $(Y -)$ trajectories $(X +)$ in the field of gravitation of uniform $(Y -) = (X +)$ space-matter is presented divergence a vector field:

$$\text{div}R_{ik}(Y-) \left[\frac{K}{T^2} \right] = G(X+) \left[\frac{K}{T^2} \right], \quad \text{With acceleration } G(X+) \left[\frac{K}{T^2} \right] \text{ and}$$

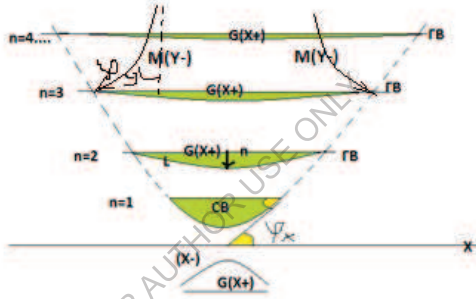
$$G(X+) \left[\frac{K}{T^2} \right] = \text{grad}_l \Pi(X+) \left[\frac{K}{T^2} \right] = \text{grad}_n \Pi(X+) * \cos \varphi_x \left[\frac{K}{T^2} \right].$$

The parity $G(X+) = \text{grad}_l \Pi(X+)$ is equivalent $G_x = \frac{\partial G}{\partial x}$; $G_y = \frac{\partial G}{\partial y}$; $G_z = \frac{\partial G}{\partial z}$ to representation. Here full differential: $G_x dx + G_y dy + G_z dz = d\Pi$. It has integrating multiplier of family of surfaces $\Pi(M) = C_{1,2,3,\dots}$, with a point of M , orthogonal to vector lines of a field of mass $(Y-)$ trajectories $(X+)$ in the field of gravitation. Here $e_i(Y-) \perp e_k(X-)$. The quasipotential field from here follows:

$$t_T(G_x dx + G_y dy + G_z dz) = d\Pi \left[\frac{K^2}{T^2} \right] \text{ and } G(X+) = \frac{1}{t_T} \text{grad}_l \Pi(X+) \left[\frac{K}{T^2} \right].$$

Here $t_T = n$ for a quasipotential field. Time $t = nT$, n -is quantity of the periods T of quantum dynamics. $n = t_T \neq 0$. From here follow by quasipotential surfaces of quantum gravitational fields with the period T and acceleration: $G(X+) = \frac{\psi}{t_T} \text{grad}_l \Pi(X+) \left[\frac{K}{T^2} \right]$.

$$G(X+) \left[\frac{K}{T^2} \right] = \frac{\psi}{t_T} \left(\text{grad}_n (Rg_{ik}) (\cos^2 \varphi_{x_{MAX}} = G) \left[\frac{K}{T^2} \right] + (\text{grad}_l (T_{ik})) \right).$$



Picture 10. Quantum gravitational fields.

This chosen direction of a normal fixed in section $n \perp l$. In dynamical space-matter, it is a question of dynamics $\text{rot}_x G(X+) \left[\frac{K}{T^2} \right]$ of fields on the closed $\text{rot}_x M(Y-)$ trajectories. Here l - a line along quasipotential surfaces Riemannian spaces, with normal $n \perp l$. The limiting corner of parallelism of mass $(Y-)$ trajectories $(X+)$ in the field of gravitation, gives a gravitational constant $(\cos^2 \varphi(X-))_{MAX} = G = 6.67 * 10^{-8}$. Here $t_T = \frac{t}{T} = n$, an order of quasipotential surfaces, and $(\cos \varphi(Y-))_{MAX} = \alpha = \frac{1}{137.036}$.

$$G(X+) \left[\frac{K}{T^2} \right] = \frac{\psi * T}{t} (G * \text{grad}_n Rg_{ik}(X+) + \alpha * \text{grad}_n T_{ik}(Y-)) \left[\frac{K}{T^2} \right].$$

This general equation quantum gravity $(X+ = Y-)$ a mass field already **accelerations** $\left[\frac{K}{T^2} \right]$, and wave ψ - function, and also T - the period of dynamics of quantum $\lambda(X+)$, with a back $(\downarrow\uparrow)$, (2ψ) .

Fields of accelerations, as it is known, it already force fields. And this equation differs from the equation of gravitational **potentials** of the General Theory of the Relativity.

For $n = 1$, (fig. 2) the gravitational field $G(X+) \left[\frac{K}{T^2} \right] = \frac{\psi * T}{\Delta t} G * grad_n(Rg_{ik})(X+) \left[\frac{K}{T^2} \right]$ of a source of gravitation, is $G(X+)$ field SI $(X+)$ - Strong Interaction. Quantum dynamics in time Δt within dynamics period T is represented a parity:

$$G(X+) = \psi * T * G \frac{\partial}{\partial t} grad_n Rg_{ik}(X+)$$

Where $T = \frac{\hbar}{\varepsilon = U^2 \lambda}$, the period quantum dynamics. The formula for accelerations $\left[\frac{K}{T^2} \right]$ SI $(X+)$ of a field of Strong Interaction takes a form:

$$G(X+) \left[\frac{K}{T^2} \right] = \psi \frac{\hbar}{\Pi^2 \lambda} G \frac{\partial}{\partial t} grad_n Rg_{ik}(X+) \left[\frac{K}{T^2} \right], \quad grad_n = \frac{\partial}{\partial Y}.$$

Here $G = 6.67 * 10^{-8}$, $\hbar = \Pi^2 \lambda T$ a stream of quantum energy $\varepsilon = \Pi^2 \lambda = \Delta m c^2$ of a field of inductive weight (Δm) of exchange quantum $(Y- = \frac{p}{n})$ of Strong Interaction, and also $(Y- = 2n)$ nucleons $(p \approx n)$ of a atomic nuclei. The inductive weight $\Delta m(Y- = X+)$ is represented indissoluble quark models $\Delta m(Y-) = u$ and $\Delta m(X+) = d$ quarks. This one $(Y- = X+)$ indissoluble space-matter. Decisions of the equations of quantum fields of Strong Interaction, their presence indissoluble $(Y- = u)(X+ = d)$ quarks models of uniform $(Y- = X+)$ space-matter assumes. These are exchange quantum, inductive mass $(Y- = X+)$ fields mesons. The uniform equations assume presence in a kernel closed (rot_Y) (vortical) in core shells, $(X- = p^+)$ magnetic fields of protons in quanta $(Y- = p/n)$ and vortical (rot_X) mass $(Y-)$ trajectories of exchange quanta мезонов, them quark models. These are fields of Strong Interaction of nucleons of a kernel in them electro $(Y+ = X-)$ magnetic (charging) and gravity $(X+ = Y-)$ mass interaction. In integrated decisions such the equations are available $(C_1, C_2, C_3 \dots)$ various specific energy of communication of nucleons in kernel covers. Various structures of products of disintegration of elementary particles give various generations $(Y- = u)(X+ = d)$ of quarks, as models. Here to quantum $(Y- = p/n)$, $(Y- = 2n)$ Strong Interaction of nucleons $(p \approx n)$ of a core. $(X+ = p)(X+ = p) = 2\psi p = (Y- = p/n)$. This implies $2\psi p = \Delta m(Y-)$, $2\alpha * p = \Delta m(Y-)$. There corresponds the equation:

$$G(X+) = \psi \frac{\hbar \lambda}{\Delta m^2} G \frac{\partial}{\partial t} grad_n Rg_{ik}(X+).$$

Weight $m = p = 938.28 MeV$ of a proton. These $(Y-)$ quanta are connected by inductive weight $\Delta m(Y-) = 2\alpha * p = 13,69 MeV$, exchange quantum meson in quark its models. Here $\alpha = \cos \varphi(Y-)_{MAX} = \frac{1}{137.036}$ with a minimum specific binding $\Delta E_N = 6,85 MeV$ energy nucleons. For the maximum specific energies $\Delta E_N = 8,5 MeV$, there is an exchange quantum of the Strong Interaction $\Delta m(Y-) = 17 MeV$ nucleons of the nucleus.

In uniform $(Y- = X+)$ quantum space-matter of a kernel there are density equations $\left[\frac{1}{T^2} \right]$ mass $(X+ = Y-)$ gravity and $(Y+ = X-)$ electromagnetic water

$$\frac{1}{r} G(X+) = c * rot_x M(Y-) - \varepsilon_2 \frac{\partial G(X+)}{\partial t} \quad \text{and} \quad \frac{1}{r} E(X+) = c * rot_x B(X-) - \varepsilon_2 \frac{\partial E(X+)}{\partial t}.$$

Such equations of quantum fields are considered in each specific case.

In the most general case, dynamics $rot_x M(Y-)$ of inductive mass fields («the latent weights») is caused by dynamics of a source of gravitation.

$$c * rot_x M(Y-) = \frac{1}{r} G(X+) + \varepsilon_2 \frac{\partial G(X+)}{\partial t}.$$

For $n \neq 1$, and $n = 2,3,4 \dots \rightarrow \infty$, we receive quasipotential $G(X+)$ fields of accelerations $G(X+)$ of a quantum gravitational field, as gravitation source $\frac{\psi}{t} G * grad_n \left(\frac{1}{2} Rg_{ik} \right) (X+)$, with limiting $(\cos\varphi(X-)_{MAX} = G)$ - a corner of parallelism of a quantum $G(X+)$ field of Strong Interaction in this case and the period $T = \frac{\lambda}{c}$ of quantum dynamics. Quasipotential $G(X+)$ fields of a quantum gravitational field of accelerations, on distances $(c * t = r)$ look like:

$$G(X+) = \frac{\psi * \lambda}{r} \left(G * grad_n \left(\frac{1}{2} Rg_{ik} \right) (X+) + \alpha * grad_n(T_{ik})(Y-) \right), \quad r \rightarrow \infty.$$

This equation of a quantum gravitational field of **accelerations** $G(X+) = v_Y M(Y-)$ mass trajectories with a principle of equivalence of inert and gravitational weight. It has a basic difference with the equation of gravitational **potentials** of the General Theory of the Relativity.

Component of a gravitational quasipotential $G(X+) = v_Y M(Y-)$, field, tensor energy - an impulse (T_{ik}) concern inductive mass fields in physical vacuum. In brackets we have a gradient of potentials gravity $(X+=Y-)$ a mass field.

$$G * grad_n \left(\frac{1}{2} Rg_{ik} \right) (X+) + \alpha * grad_n(T_{ik})(Y-) = G * \alpha * grad_{\lambda} \frac{1}{2} \Pi(X+=Y-).$$

$$\text{From here follows } G(X+) = \frac{\psi(\lambda=1)}{r} * G * \alpha * grad_{\lambda} \left(\frac{1}{2} \Pi(X+=Y-) \right).$$

The general gravitational potential $\Pi(X+=Y-)$ in a general view, includes also potential of a source of gravitation $\left(\frac{1}{2} Rg_{ik} \right) (X+)$ and quasi potential $(T_{ik})(Y-)$ fields of inductive weights. These are mathematical trues of the uniform equations of uniform $(Y \mp = X \pm)$ space-matter.

Examples.

For angular speed $(\omega = \frac{2\pi r}{T} = \frac{1^r}{t}) \left[\frac{r}{s} \right]$ of inductive mass $M(Y-)$ trajectories in orbits (r) round the Sun in its $G(X+)$ field of gravitation, is вращение this field.

$$rot_y G(X+) = -\mu_2 * \frac{\partial N(Y-)}{\partial t} = -\frac{\partial M(Y-)}{\partial t} \quad \text{or} \quad rot_y G(X+) = \omega M(Y-).$$

For Merkurija, perihelion $r_m = 4,6 * 10^{12} \text{cm}$, at average rate $4,736 * 10^6 \text{cm/c}$ there is a

centrifugal acceleration $a_m = \frac{(v_m)^2}{r_m} = \frac{(4,736 * 10^6)^2}{4,6 * 10^{12}} = 4,876 \text{ cm/s}^2$. The weight of the

Sun $M_s = 2 * 10^{33} g$, and Sun radius $r_0 = 7 * 10^{10} \text{cm}$, create acceleration $G(X+)$ a field of gravitation with $(\psi = 1)$ in a kind.

$$g_m = G(X+) = \frac{1 * (\lambda=1)}{r_m} * G * \frac{M_s}{2r_0} * \alpha, \quad \text{or} \quad g_m = \frac{6.67 * 10^{-8} * 2 * 10^{33}}{2 * 4,6 * 10^{12} * 7 * 10^{10} * 137} = 1,511 \text{ cm/s}^2.$$

From the relation $R_{ik}(X+) = 2\psi \left(\frac{1}{2} Rg_{ik}(X+) + \kappa T_{ik}(Y-) \right)$, analogue parities in space of accelerations, inductive mass $M(Y-)$ trajectories round the Sun of the space-matter on average radius $r_m = 5,8 * 10^{12} \text{cm}$ in a kind follow.

$$a_m(X+) - g_m(X+) = \Delta(Y-) = 4,876 - 1,511 = 3,365 \text{ cm/s}^2.$$

From the equation $(X+ = Y-)$ mass gravity fields $rot_y G(X+) = \omega M(Y-)$, follows $\frac{\Delta(Y-)}{\sqrt{2}} = \frac{2\pi r}{T} M(Y-)$, turn perihelion Merkurija in time (T) . For $100\text{years} = 6.51 * 10^{14} \text{ s}$, this turn of mass $M(Y-)$ trajectories makes $\frac{\Delta(Y-)*6.51*10^{14}}{r_M*2\pi\sqrt{2}} (57,3^0) = 42,5''$.

Similarly, **For the Earth**, on distance of an orbit of the Earth and speed of the Earth $v_3 = 3 * 10^6 \text{ cm/s}$ in an orbit $r_3 = 1.496 * 10^{13} \text{ cm}$, centrifugal acceleration is equal

$$a_3 = \frac{(v_3)^2}{r_3} = \frac{(3 * 10^6)^2}{1.496 * 10^{13}} = 0,6 \text{ cm/s}^2 .$$

Acceleration $G(X+)$ a field of gravitation of the Sun $r_0 = 7 * 10^{10} \text{ cm}$, with weight (M_s) and $(\psi = 1)$, is available

$$g_3 = G(X+) = \frac{1}{r_3} * G * \frac{M_s}{2r_0} * \alpha = \frac{6.67*10^{-8}*2*10^{33}}{2*1.496*10^{13}*7*10^{10}*137} = 0.465 \text{ cm/s}^2 .$$

Similarly $a_3(X+) - g_3(X+) = \Delta(Y-) = 0,6 - 0,465 = 0,135 \text{ cm/s}^2$. From this acceleration of inductive mass $M(Y-)$ trajectories space-matter round the Sun, turn perihelion orbits of the Earth follows, by analogy and makes $\frac{\Delta(Y-)*6.51*10^{14}}{r_3*2\pi} (57,3^0) = 5,8''$.

For Venus, under the same scheme of calculation, turn perihelion Venus $r_b = 1.08 * 10^{13} \text{ cm}$, and speeds $v_b = 3,5 * 10^6 \text{ cm/s}$, centrifugal acceleration of Venus in an orbit makes

$$a_b = \frac{(v_b)^2}{r_b} = \frac{(3,5 * 10^6)^2}{1.08 * 10^{13}} = 1,134 \text{ cm/s}^2 .$$

Similarly, the acceleration $G(X+)$ of the solar gravitational field in the orbit of Venus is.

$$g_b = G(X+) = \frac{1}{r_b} * G * \frac{M_s}{2r_0} * \alpha = \frac{6.67*10^{-8}*2*10^{33}}{2*1.08*10^{13}*7*10^{10}*137} = 0.644 \text{ cm/s}^2 .$$

Accelerations of inductive mass $M(Y-)$ trajectories of space-matter round the Sun,

$$a_b(X+) - g_b(X+) = \Delta(Y-) = 1,134 - 0,644 = 0,49 \text{ cm/s}^2 .$$

From here turn perihelion Venus follows: $\frac{\Delta(Y-)*6.51*10^{14}}{r_3*\pi} (57,3^0) = 9,4''$ seconds for 100 years.

Such design values are close to observable values. Essentially that from Einstein's formula for displacement перигелия Merkurija,

$$\delta\varphi \approx \frac{6\pi GM}{c^2 A(1-\varepsilon^2)} = 42,98'', \text{ for } 100 \text{ years,}$$

$$c^2 A(1-\varepsilon^2) * \delta\varphi \approx 6\pi GM, \quad (c^2 A - c^2 A\varepsilon^2)\delta\varphi \approx 6\pi GM.$$

It is not visible the reasons of such displacement, except as space curvatures from the equation General Theory of Relativity.

Actually, it is a question of presence of inductive mass $M(Y-)$ fields of space-matter, and their rotation round the Sun, as the reasons, according to dynamics equations.

For the same reasons, we will consider movement of the Sun round the Galaxy kernel. The initial data. Speed of the Sun in the Galaxy $v_s = 2,3 * 10^7 \text{ cm/s}$, weight of a cores of the Galaxy $M_c = 4,3$ millions M_s , $M_c = 4,3 * 10^6 * 2 * 10^{33} \text{ g}$, distance to the centre of the Galaxy $8,5 \text{ кпк}$ or $r = 2,6 * 10^{22} \text{ cm}$. Centrifugal acceleration of the Sun in a galactic orbit:

$$a_s = \frac{(v_s)^2}{r} = \frac{(2,3 \cdot 10^7)^2 = 5,29 \cdot 10^{14}}{2,6 \cdot 10^{22}} = 2 \cdot 10^{-8} \text{ cm/s}^2 .$$

Using this technology of calculation, we will estimate core radius of our Galaxy r_a . In exactly this formula of calculation we will receive (r_a) core radius of our Galaxy $g_s = G(X +)$.

$$a_s = G(X +) = \frac{1}{r} * G * \alpha * \frac{M_c}{2r_c}, \quad \text{whence}$$

$$r_c = \frac{1}{r} * G * \alpha * \frac{M_a}{2a_s} = \frac{6,67 \cdot 10^{-8} * 4,3 \cdot 10^6 * 2 \cdot 10^{33}}{2 * 137 * 2,6 \cdot 10^{22} * 2 \cdot 10^{-8}} = 4 * 10^{15} \text{ cm} \approx 267 \text{ a. e.},$$

1a. e. = $r = 1,496 * 10^{13} \text{ cm}$ or $1 \text{ пк} = 3 * 10^{18} \text{ cm}$, , then $r_a \approx 1,3 * 10^{-3} \text{ пк}$. Such radius in our Galaxy corresponds to a gradient of all mass fields of a source of gravitation,

$$G(X +) = \frac{\psi(\lambda=1)}{r} * G * \alpha * \text{grad}_\lambda \left(\frac{1}{2} \Pi(X+ = Y-) \right), \quad \text{with radius } r_c \approx 1,3 * 10^{-3} \text{ pc}.$$

Limits of the measured radius $r_{0c} \approx 10^{-4} \text{ pc}$ Their parity gives a parity of their weights.

$$\frac{r_{0c}}{r_c} * 100\% = \frac{10^{-4}}{1,3 \cdot 10^{-3}} * 100\% = 7,69 \%$$

It means that the weight of a kernel of the Galaxy makes 7,69 % the latent mass $M(Y-)$ fields.

The parameters of the moon. It is well known that in the position of the moon between the sun and the earth, according to Newton's law, the sun attracts the moon 2.2 times stronger than the earth. For $M_s = 2 * 10^{33} \text{ g}$, $m_E = 5,97 * 10^{27} \text{ g}$, $r_E = 6,371 * 10^8 \text{ cm}$, $m_M = 7,36 * 10^{25} \text{ g}$, $r_M = 3,844 * 10^{10} \text{ cm}$, $G = 6,67 * 10^{-8}$, $\alpha = 1/137$,

$$(\Delta A = 1,496 * 10^{13} - r_M = 1,49215 * 10^{13} \text{ cm}),$$

$$F_1 = \frac{GM_s m_M}{(\Delta A)^2} = \frac{6,67 * 10^{-8} * 2 * 10^{33} * 7,36 * 10^{25}}{(1,49215 * 10^{13})^2} = 4,41 * 10^{25},$$

$$F_2 = \frac{Gm_E m_M}{(r_M)^2} = \frac{6,67 * 10^{-8} * 5,97 * 10^{27} * 7,36 * 10^{25}}{(3,844 * 10^{10})^2} = 1,98 * 10^{25}, \quad (F_1/F_2 = 2,2).$$

The difference in forces $(F_1 - F_2) = (\Delta F) = (4,41 - 1,98) * 10^{25} = 2,43 * 10^{25}$, is compensated by the gravity of the ("hidden") mass fields of space around the Earth, with acceleration: $g_E(X +) = \frac{\pi}{r_M} * G * \frac{M_E}{r_E} * \alpha = \frac{3,14 * \sqrt{2} * 6,67 * 10^{-8} * 5,97 * 10^{27}}{137 * 3,844 * 10^{10} * 6,371 * 10^8} = 0,372 \text{ cm/s}^2$.

The gravitational force of the mass field corresponds within the limits of measurement accuracy.

$$(\Delta F) = m_M * g_E(X +) = 7,36 * 10^{25} * 0,372 = 2,74 * 10^{25}.$$

Thus, decisions of the equations of quantum gravitational fields yield results within the measured.

Deviation of photons in the gravitational field of the Sun. The photon "falls" in the gravitational field of the Sun with acceleration: $g(X +) = \frac{2GM_s}{R_s^2}$. During the passage of the diameter of the Sun $t = \frac{2R_s}{c}$, along the tangent to the sphere of the Sun, the vertical speed of "fall" is: $v = g * t$. Photon deflection angle, for $R_s = 6,963 * 10^{10} \text{ cm}$, defined as:

$$\varphi = \text{arc sin} \frac{v}{c}, \text{ or } \frac{v}{c} = \frac{2GM_s}{R_s^2} * \frac{2R_s}{c} * \frac{1}{c} = \frac{4 * 6,67 * 10^{-8} * 2 * 10^{33}}{6,963 * 10^{10} * (3 * 10^{10})^2} = 8,515 * 10^{-6},$$

$$\varphi = \text{arc sin}(8,515 * 10^{-6}) = 0,000488^0 = 1,75'' \text{ of arc.}$$

This angle corresponds to the calculations of the General Theory of Relativity of Einstein.

2. Representation of model of the mechanism of Higgs in dynamic space matter.

Such mechanism gives a higgsovy boson in gravit $(X+= Y-)$ mass fields and bosons (W^\pm, Z^0) Electro $(Y+)= (X-)$ weak interaction. A mechanism essence just the same, as at scalar bosons of the invariant equation of Dirac.

$$i\gamma_\mu \frac{\partial \psi}{\partial x_\mu} - m\psi(X) = 0, \text{ and } i\gamma_\mu \frac{\partial \bar{\psi}}{\partial x_\mu} - m\bar{\psi}(X) = 0, \text{ for } \psi(X) = e^{-i\alpha} \bar{\psi}(X), \text{ transformations}$$

$$\text{and } i\gamma_\mu \left[\frac{\partial}{\partial x_\mu} + iA_\mu(X) \right] \psi(X) - m\psi(X) = 0,$$

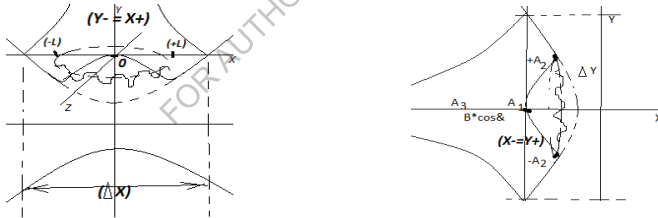
in conditions $A_\mu(X) = \bar{A}_\mu(X), \quad A_\mu(X) = \bar{A}_\mu(X) + i \frac{\partial a(X)}{\partial x_\mu},$ existence of a scalar boson

$(\sqrt{(+a)(-a)} = ia (\Delta X \neq 0) = const,$ within calibration $(\Delta X \neq 0)$ fields. This scalar boson $ia(\Delta X \neq 0) = const,$ it is entered into the calibration field artificially, for elimination of shortcomings relativistic dynamics of the Theory of Relativity in quantum fields. Already in it, artificially created scalar field, at Spontaneous Violation of Symmetry the model of the mechanism of Higgs is represented.

Let's consider the principles of such mechanism.

a) In gravit $(X+= Y-)$ mass fields. Potential energy of the skalarny field is represented:

$$U(X) = -kx^2 + ax^4, \text{ has extremals in points } U'(X) = 0 \text{ or } (x_0 = 0) \text{ and } x_{1,2} = \pm \sqrt{\frac{k}{2a}} = \pm L.$$



Picture 11. A scalar boson with Higgs's mechanism.

The turn (ZX) of the plane with points $(\pm L)$ around an axis (Y) , is carried out with small fluctuations in points $(\pm L)$ of balance. With turn: $= 2\pi(f = \frac{1}{T})$, around an axis (Y) , it is harmonious fluctuations of the pruzhny environment: $(F = kx) = (F = m\omega^2 x)$ which "generates weight" $(k \equiv m\omega^2)$, (m) analogy of the oscillations of a "scalar" medium and mass. Carrying out replacement of variables at turn around an axis (Y) , we will receive: $L + x = \phi, \quad x = \phi - L$ and $(Z = \vartheta)$. Energy transformation

$$U(x, z) = -k(x^2 + z^2) + a(x^2 + z^2)^2,$$

after groups, it is represented invariant energy

$$U(\phi, \vartheta) = \tilde{k} * \phi^2 + 0 * \vartheta + \tilde{U}(\phi, \vartheta),$$

under the terms of the nonzero mass ($\tilde{k} \equiv m\omega^2$), a scalar boson and a goldstounovsky boson of zero weight. Thus the scalar boson $ia(\Delta X) = const$ of the calibration field ($\Delta X \neq 0$) finds weight. This is a scalar boson technology, as in the Dirac equation and a simple analogy of the oscillations of a "scalar" medium and mass.

b) in electro ($Y+ = e =$)($X- = \nu$) magnetic interaction of leptons, in uniform ($Y+ = X-$) space matter, just the same mechanism of Higs of an identification of fields in the conditions of local Invariancy scalar Higgs boson, with calibration fields in each point of an equilibrium state ($A1 = +L$), ($A2 = -L$), ($A3$) ($Y+$) of the scalar field and $B(X-)$ weeding.

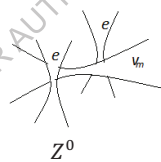
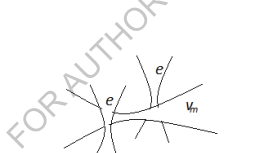
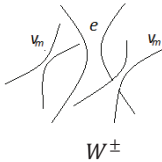
Mixing of this calibration field in uniform electro $Y+ = -X$) magnetic field in a look:

$$\sqrt{(+A_2)(-A_2)} = iA_2, \text{ bosons } W^\pm = \frac{1}{2}(A_1 + iA_2) \text{ и } Z^0(A_3, B, \cos\theta)$$

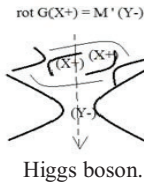
electro ($Y+ = e =$)($X- = \nu$) weak interaction which find masses: and $m_z = \frac{m_W}{\cos\theta}$ goldstounovsky boson like a massless photon. Here, emergence of mass fields ($Y- = X+$) bosons (W^\pm), (Z^0) of electroweak interaction in electro magnetic ($Y+ = e =$)($X- = \nu$) the field, is a limit of Euclidean axiomatics.

In a dynamic space-matter, both theories of both electroweak interaction and the Higgs boson are presented in a unified way in ideas similar to the idea of Spontaneous Symmetry Breaking and the Higgs mechanism, but without a "scalar" environment.

Electroweak interaction.



Higgs boson.



Picture 12. Electroweak interaction and Higgs boson.

$$\begin{aligned} (Y+ = e^\pm) + 2(X- = \nu_\mu) & \quad (X+ = \nu_\mu) + 2(Y- = e) & \quad (X+ = p^+) + (X+ = p^-) = (Y-) \\ \frac{\sqrt{m_e m_{\nu_\mu} * 2\alpha}}{g} = 81.3 GeV, & \quad \frac{\sqrt{exp1 * (2m_e) m_{\nu_\mu} * \alpha}}{g} = 94.8 GeV, & \quad \frac{2p}{2\alpha} (1 - 2\alpha) = 126,7 GeV \end{aligned}$$

Here is an analogy of the same oscillations in the extremals of the Spontaneous Symmetry Breaking, with the same mass fields. But mass fields are not born in a scalar field perturbed by vibrations. Mass fields are induced together with electromagnetic dynamics, in accordance with the unified equations of dynamics. Here, the field interaction constants are determined by the limiting angles of parallelism. It is impossible to imagine in the Euclidean axiomatics of the zero angle of parallelism.

7. Spectrum of undivided quanta of space-matter.

To indivisible Areas of Localization of quanta $(X\pm)$, $(Y\pm)$ dynamic space matter stable quanta of space matter correspond. In both cases it is about the reality **facts**. The stable $(Y\pm=e)$ electron, radiates a stable $(Y\pm=\gamma)$ photon $(X\pm=p)$, and $(X\pm=v_\mu)$, $(X\pm=v_e)$ the neutrino interacts with stable a proton and . In uniform $(X-=Y+)$, $(X+=Y-)$ space matter they form the first (OL_1) Area of Localization of indivisible quanta on their $m-n$ convergence (fig).

Similarly everything $(OL_2), (OL_3) \dots (OL_j)$ Areas of Localization.

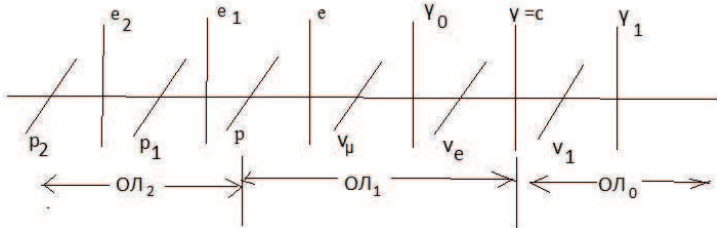


fig. 3.1. Indivisible quanta of space matter.

For preservation of continuity uniform $(X-=Y+)$, $(X+=Y-)$ spaces matters $(Y\pm=\gamma_0)$ the photon similar $(Y\pm=\gamma)$ to a photon is entered. It corresponds to analogy of a muonic $(X\pm=v_\mu)$ and electronic $(X\pm=v_e)$ neutrino. At the same time, and neutrinos (v_μ) , (v_e) and photons (γ_0) , (γ) , can disperse as well as a proton, or an electron, to speeds (γ_1) , $(\gamma_2 \dots)$, on the same transformations of Lorentz. It to experiences in CERN. Having standard, out of any fields the speed of the electron $(W_e = \alpha * c)$ radiating standard out of any fields a photon $V(\gamma) = c$, the constant $\alpha = W_e / c = \cos \varphi_\gamma = 1/137,036$ gives on analogies, calculation of speeds $V(c) = \alpha * V_2(\gamma_2)$ for superlight photons in a look: $V_2(\gamma_2) = \alpha^{-1}c$, $V_4(\gamma_4) = \alpha^{-2}c \dots$ $V_i(\gamma_i) = \alpha^{-N}c$, in standard, out of any fields conditions. The orbital electron, with a corner of parallelis $\alpha = \frac{W_e}{c} = \frac{1}{137} = \cos \varphi_{MAX}(Y-)$ a trajectory does not radiate a photon, as well as in rectilinear, without acceleration, the movement.

This Bohr's postulate, as well as the principle of the uncertainty of space and time, are axioms of dynamic space-matter.

Like radiation $(e \rightarrow \gamma)$ the sequence of radiations in a range of Areas of Localization (OL_1) Indivisible $(X\pm)$, $(Y\pm)$ quanta, including superlight space of speeds exists $e_j \dots \rightarrow e_{10}^+ \rightarrow e_8^- \rightarrow e_6^+ \rightarrow e_4^- \rightarrow e_2^+ \rightarrow (e^- \rightarrow \gamma^+) \rightarrow \gamma_2^- \rightarrow \gamma_4^+ \rightarrow \gamma_6^- \rightarrow \gamma_8^+ \rightarrow \dots \gamma_i$ analog:
 $p_j \dots \rightarrow p_{10}^- \rightarrow p_8^+ \rightarrow p_6^- \rightarrow p_4^+ \rightarrow p_2^- \rightarrow (p^+ \rightarrow v^-) \rightarrow v_2^+ \rightarrow v_4^- \rightarrow v_6^+ \rightarrow v_8^- \rightarrow \dots v_i$.

These are "visible" range of radiations which can absorb ("to see") and radiate atoms of the first Area of Localization (OL_1) of indivisible quanta, usual $(Z(p^+ / n) + Ze^-)$ substance of atoms. But the electron cannot radiate $(Y\pm=\gamma_0)$ a "heavy" photon. It cannot it and absorb ("to see"). Such

$(Y_{\pm} = \gamma_0)$ "heavy" photon, can radiate and absorb only a "heavy" ($e_1 \rightarrow \gamma_0$) electron. Similarly invisible ($p_1 \rightarrow \nu_{\mu}$) radiation. Therefore, in a range of Areas of Localization indivisible (X_{\pm}), (Y_{\pm}) quanta, there is a sequence of "invisible" quanta of radiation.

$e_j \dots \rightarrow e_9 \rightarrow e_7 \rightarrow e_5 \rightarrow e_3 \rightarrow e_1 \rightarrow \gamma_0 \rightarrow \gamma_1 \rightarrow \gamma_3 \rightarrow \gamma_5 \rightarrow \dots \gamma_i$ Similarly:

$p_j \dots \rightarrow p_9 \rightarrow p_7 \rightarrow p_5 \rightarrow p_3 \rightarrow p_1 \rightarrow \nu_{\mu} \rightarrow \nu_1 \rightarrow \nu_3 \rightarrow \nu_5 \rightarrow \dots \nu_i$ invisible radiation

$(p_3/e_3) \dots (p_1/e_1) \dots (\nu_{\mu}/\gamma_0) \dots (\nu_1/\gamma_1)$ substances of the world "parallel", invisible to us.

Atoms ($Z(p^+ / n) + Ze^-$) of usual substance, cannot in principle directly, interact with this range of radiations. These ranges include both "heavy" protons and electrons, and superlight photons and a neutrino. For us it - "dark matter", and nevidimyy structures of substance.

$$\dots (p_3/e_3) \dots (p_1/e_1) \dots \quad (\nu_{\mu}/\gamma_0) \dots \quad (\nu_1/\gamma_1) \dots$$

Dynamics ($\varphi \neq const$) of mass ($Y- = X+$) fields is caused by dynamics ($Y+ = X-$) of electromagnetic fields and vice versa, in quanta (X_{\pm}), (Y_{\pm}) uniform ($Y- = X+$) ($Y+ = X-$) dynamic space matter. To limit corners of parallelism ($\varphi_{MAX}(Y-)$) also ($\varphi_{MAX}(X-)$) there correspond interaction constants. For the speed of the electron $W_e(Y_{\pm} = e) = \alpha * c$ radiating ($Y_{\pm} = \gamma$) a photon, a constant $\alpha = \frac{W_e}{c} = \frac{1}{137} = \cos \varphi_{MAX}(Y-)$. Similarly for the proton ($X_{\pm} = p^+$) radiating an electronic ($X_{\pm} = \nu_e$) neutrino, $W_p = \cos \varphi_{MAX}(X-) * W_{\nu_e}$ where $\cos \varphi_{MAX}(X-) = W_p / (W_{\nu_e} = c) = \sqrt{G}$, a constant ($G = 6,67 * 10^{-8}$).

From the experimental mass $m(p) = 938.28 MeV$ of a proton, electron $m(e) = 0,511 MeV$, and muonic $m(\nu_{\mu}) = 0,272 MeV$ neutrino, settlement masses follows.

$$(\alpha/\sqrt{2}) * \Pi K * (\alpha/\sqrt{2}) = \alpha^2 m(e)/2 = m(\nu_e) = 1,36 * 10^{-5} MeV, \text{ or: } m_x = \alpha^2 m_y / 2$$

$$\sqrt{G}/2 * \Pi K * \sqrt{G}/2 = G * m(p)/2 = m(\gamma_0) = 3.13 * 10^{-5} MeV \text{ or: } m_y = G m_x / 2$$

They coincide with the known masses (Sarycheva, MSU-2007g.). At the same time, communication of mass and charging fields uniform ($+ = Y-$) ($X- = Y+$) of space matter follows X from ratios: $\bar{m} = \sqrt{(\hbar c)/G} = \sqrt{q}$; or: $G \bar{m}^2 = \hbar c = q^2/\alpha$; from where for mass ($X+ = Y-$) fields of quanta of $HOJL = m(X+)m(Y-) = 1$, $G(\bar{m}^2 = q(m_0 = 1))\alpha = q^2$; follows: ; or $G(m_0 = 1)\alpha = q$, charge.

Таблица 2: Свойства фундаментальных фермионов

Частицы	Лептоны		Кварки	
Электрический заряд, Q_i	0	-1	-1/3	2/3
I поколение	ν_e	e	d	u
m	$< 17 \text{ эВ}/c^2$	$0.511 \text{ МэВ}/c^2$	$0.34 \text{ ГэВ}/c^2$	$0.33 \text{ ГэВ}/c^2$
II поколение	ν_μ	μ	s	c
m	$< 270 \text{ эВ}/c^2$	$105.7 \text{ МэВ}/c^2$	$0.45 \text{ ГэВ}/c^2$	$1.5 \text{ ГэВ}/c^2$
III поколение	ν_τ	τ	b	t
m	$< 35 \text{ МэВ}/c^2$	$1784 \text{ МэВ}/c^2$	$4.9 \text{ ГэВ}/c^2$	$175 \text{ ГэВ}/c^2$

Кроме характеристик частиц, указанных в таблице, важную роль для лептонов играют лептонные числа: электронное L_e , равное +1 для e^- и ν_e , мюонное L_μ , равное +1 для μ^- и ν_μ и таонное L_τ , равное +1 для τ^- и ν_τ , которые соответствуют ароматам лептонов, участвующих в конкретных реакциях, и являются сохраняющимися величинами. Для лептонов

At the same time, in gravit ($X+ = Y-$) mass fields two differ, a type of masses: (m_X) and (m_Y), for example weight ($m_X = p^+$) proton and weight ($m_Y = e^-$) an electron, it is various masses just as in electro ($Y+ = X-$) magnetic fields there are two look (+) and (-) a charge. Similarly, the dynamic mass of a photon (the mass of rest = 0) has an appearance: $\sqrt{G/2} * PK * \sqrt{G/2} = G * m(\nu_\mu) / 2 = m(\gamma) = 9.07 * 10^{-9} \text{ MeV}$ mass ($\gamma = Y-$) a trajectory which is bent in ($X+ = Y-$) the field of a star.

Charging ($Y+ = X-$) isopotential $q(p) \approx q(e)$ of a proton and electron, generates the mass ($Y- = X+$) isopotential $m(\nu_e) \approx m(\gamma_0)$ of quanta ($X^\pm = \nu_e$), ($Y^\pm = \gamma_0$) spaces matters, similar to $m(e) \approx m(\nu_\mu)$ isopotential. Similar to it, there is a subcharging ($X- = Y+$) isopotential $q(\nu_e) \approx q(\gamma)$ of leptons. For a photon $\gamma(Y-)$ the mass trajectory ($Y-$) $\sqrt{G/2} * PK * \sqrt{G/2} = G * m(\nu_\mu) / 2 = m(\gamma) = 9.07 * 10^{-9} \text{ MeV}$, a photon, is bent in ($X+$) gravitational field, the fact of uniform ($Y- = X+$) space matter.

Indivisible Area of Localization of an electron and proton as substances, in space matter correspond products of annihilation of Indivisible quanta of antimatter:

$$(Y^\pm = e^-) = (X- = \nu_e^-)(Y+ = \gamma^+)(X- = \nu_e^-), \quad (X^\pm = p^+) = (Y- = \gamma_0^+)(X+ = \nu_e^-)(Y- = \gamma_0^+).$$

Dynamics of this mass field in limits $\cos \varphi_Y = \alpha$, $\cos \varphi_X = \sqrt{G}$, interaction constants, gives the charging isopotential of their single masses. $m(p) = 938,28 \text{ MeV}$,

$$(m_{\nu_\mu} = 0,27 \text{ MeV}), \quad m_X = \alpha^2 m_Y / 2, \quad m_Y = G m_X / 2, \quad m(\nu_e) = \frac{\alpha^2 m(e)}{2} = 1,36 * 10^{-5} \text{ MeV},$$

$$(m_e = 0,511 \text{ MeV}), \quad m(\gamma_0) = \frac{G m(p)}{2} = 3,13 * 10^{-5} \text{ MeV}, \quad m(\gamma) = \frac{G m(\nu_\mu)}{2} = 9,1 * 10^{-9} \text{ MeV},$$

$$(X+ = \nu_e^-)(\sqrt{2} * G)(X+ = \nu_e^-) = (Y- = \gamma^+), \quad \text{or} \quad \frac{(X+ = \nu_e^-)(\sqrt{2} * G)(X+ = \nu_e^-)}{(Y- = \gamma^+)} = 1,$$

$$q_e = \frac{(m(v_e)/2)(\sqrt{2} \cdot G)(m(v_e)/2)}{m(\gamma)} = \frac{(1.36 \cdot 10^{-5})^2 \cdot \sqrt{2} \cdot 6.67 \cdot 10^{-8}}{4 \cdot 9.07 \cdot 10^{-9}} = 4.8 \cdot 10^{-10} \text{ CGSE}$$

$$(Y- = \gamma_0^+) (\alpha^2) (Y- = \gamma_0^+) = (X+ = v_e^-), \quad \text{or} \quad \frac{(Y- = \gamma_0^+) (\alpha^2) (Y- = \gamma_0^+)}{(X+ = v_e^-)} = 1,$$

$$q_e = \frac{(m(\gamma_0^+)/2)(\alpha^2/2)(m(\gamma_0^+)/2)}{m(v_e^-)} = \frac{(3.13 \cdot 10^{-5}/2)^2}{2 \cdot 137.036^2 \cdot 1.36 \cdot 10^{-5}} = 4.8 \cdot 10^{-10} \text{ CGSE}$$

These coincidences can not be random. In principle, it is enough to know the constants $G = 6,674 \cdot 10^{-8}$, $\alpha = 1/137.036$ of the limiting angles and the velocity $c = 2.993 \cdot 10^{10} \text{ cm/c}$ to determine the Planck action constant for unit masses ($m_0 = 1$) of their charges in the form:

$$\hbar = Gm_0 \frac{\alpha}{c} Gm_0 (1 - 2\alpha)^2 = \frac{(6.674 \cdot 10^{-8})^2 \cdot (1 - 2/(137.036))^2}{137.036 \cdot 2.993 \cdot 10^{10}} = 1.054508 \cdot 10^{-27} \text{ эрг} \cdot \text{с}$$

or: $m_0 \cdot m_0 = (K\Xi = m_m)(K\Xi = m_n) = 1$, in the axioms of dynamic space-matter. Similarly, the charge of unit masses is determined $m_0 = 1$, in the form:

$q = Gm_0 \alpha (1 - \alpha)^2 = 6.674 \cdot 10^{-8} (1/137.036) \cdot (1 - 1/137.036)^2 = 4.8 \cdot 10^{-10}$, and their relations: $\hbar \alpha c = q^2$. The model of products of an annihilation of proton and electron corresponds to such calculations. Mass fields ($Y- = e$) ($X+ = p$) of an atom.



Fig. 3.3. geometrical facts of dynamic space.

In the same models the hydrogen atom model is formed. Availability of antimatter in the substance of a proton and an electron is the geometrical **fact** here. At the same time, products of annihilation of a proton

$$(X\pm = p^+) = (Y- = \gamma_0^+) (X+ = v_e^-) (Y- = \gamma_0^+)$$

and products of disintegration of a neutron

$$(Y\pm = n) = (X- = p^+) (Y+ = e^-) (X- = v_e^-),$$

correspond their kvarkovy ($Y\pm = u$) and ($X\pm = d$) to models: ($p = udu = uud$), ($n = dud = ddu$) ... Similar to everything elementary particles have kvarkovy models in compliance products them disintegration (<http://pva1.mya5.ru>) "Technology of theories. Quantum Theory of Relativity").

Other **stable** quanta of space matter are not recorded. Kvarkovy models give a proton charge. But just the same charge has a positron without quarks. Such kvarkovy model of

charges is invalid, it is not in the nature. And all range of masses pays off without quarks, in full accordance with their kvarkovy ($Y_{\pm} = u$) ($X_{\pm} = d$) models.

Bosons of electroweak interaction.

Their calculations follow from mass isocapacities of uniform ($Y_{+} = X_{-}$) ($X_{+} = Y_{-}$) fields in (G), (α) constants of interaction of an electron e^{\pm} and a muonic neutrino ν_{μ} as Indivisible Area of Localization in space matter.

$$\begin{aligned} \text{НОЛ}(Y) &= (Y_{+} = e^{\pm})(X_{-} = \nu_{\mu}^{\mp}) = \frac{2\alpha^{*} \left(\sqrt{m_e(m_{\nu_{\mu}})} \right)}{G} = 81,3 \text{ GeV} = m(W^{\pm}), \text{ with charge } e^{\pm}, \\ \text{НОЛ}(X) &= (X_{+} = \nu_{\mu}^{\mp})(Y_{-} = e^{\pm}) = \frac{\alpha^{*} \left(\sqrt{(2m_e)m_{\nu_{\mu}} \exp 1} \right)}{G} = 94,8 \text{ GeV} = m(Z^0) \end{aligned}$$

New stable particles

on counter bunches of muonic antineutrinos (ν_{μ}^{-}) in magnetic fields:

$$\text{НОЛ}(Y = e_1^{-}) = (X_{-} = \nu_{\mu}^{-})(Y_{+} = \gamma_0^{-})(X_{-} = \nu_{\mu}^{-}) = \frac{2\nu_{\mu}}{\alpha^2} = 10,216 \text{ GeV},$$

on counter bunches of positrons (e^{+}) which disperse in a stream of quanta ($Y_{-} = \gamma$), photons of the "white" laser in a look:

$$\text{НОЛ}(X = p_1^{+}) = (Y_{-} = e^{+})(X_{+} = \nu_{\mu})(Y_{-} = e^{+}) = \frac{2m_e}{G} = 15,3 \text{ TeV},$$

On counter bunches of anti-protons (p^{-}), takes place:

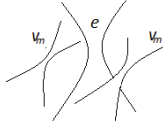
$$\text{НОЛ}(Y = e_2^{-}) = (X_{-} = p^{-})(Y_{+} = e^{-})(X_{-} = p^{-}) = \frac{2m_p}{\alpha^2} = 35,24 \text{ TeV}.$$

Similarly, for quantum $\text{НОЛ}(Y_{-}) = (X_{+} = p^{+})(X_{+} = p^{-})$, the mass of quantum of space-matter pays off.

$$\begin{aligned} M(Y_{-}) &= (X_{+} = p^{+})(X_{+} = p^{-}) = \left(\frac{m_0}{\alpha} = \bar{m}_1 \right) (1 - 2\alpha) \quad \text{or} \\ M(Y_{-}) &= \left(\frac{2m(p^{\pm})}{2\alpha} = \frac{m(p)}{\alpha} = \bar{m}_1 \right) (1 - 2\alpha) = \frac{0,93828 \text{ GeV}}{1/137,036} \left(1 - \frac{2}{137,036} \right) = 126,7 \text{ GeV} \end{aligned}$$

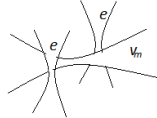
It also is that, an elementary particle, newly opened on a collider of CERN. The nature of the Higgsovy boson is opened in Superkvazarakh.

Electroweak interaction.



W^\pm

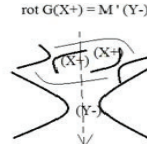
$$(Y += e^\pm) + 2(X -= \nu_\mu)$$



Z^0

$$(X += \nu_\mu) + 2(Y -= e)$$

Higgs boson.



Higgs boson.

$$(X += p^+) + (X += p^-) = (Y -)$$

Fig. 5.1. new "Higgs's particle"

The principle of formation of particles is based on fragmentation in limits G, α - constants, "dumped" in vacuum at collisions of particles, density $\rho = v^2 = \frac{E^2}{\hbar^2}$ of mass ($Y-$) or magnetic ($X-$) field induced by dispersal. The fragmented matter density, has the respective mass ($Y- = X+$) and charging ($Y+ = X-$) fields and their symmetry. Similarly the mass $p_2^- = 2e_1 / G = 2,8 \cdot 10^5 TeV$ of a "heavy" proton. To level of mass $HQI(Y = e_1^-)$ of "heavy" stable "electron", **there correspond unstable levels an ipsiloniva. It is the fact** of existence ($Y = e_1^-$) of quanta. To the mass of new particles $HQI(X = p_1^+)$ $HQI(Y = e_2^-)$, by analogy, there correspond **unstable** levels of masses $15,3 TeV$, an electron - positron bunches and $35,24 TeV$ a proton - an anti-proton bunch, without quarks and higgsovy bosons as artificial models.

Within the Quantum Theory of Relativity (<http://pva1.mya5.ru>) calculation of a range of mass of the known particles is carried out:

$$\bar{m} = \left(\left(\left(\frac{m_0}{\sqrt{2}ch2} = \bar{m}_1 \right) (1 + \alpha) = \bar{m}_2 \right) (1 + \alpha) = m_3 \right) (X+) + m_o(X-).$$

6. Features of forms of dynamic space matter.

In atomic nuclei at K-capture, mass fields ($Y- = e^-$) of electrons, are included into ($Y- = X+$) the field of Strong Interaction ($X\pm = p^+$) of a proton, forming a neutron in a look ($Y\pm = n$) ($X- = p^+$)($Y+ = e^-$)($X- = \nu_e^-$). Protons and neutrons in a cores, form the loaded ($Y- = p^+ / n$) and neutral ($Y- = 2n$) quanta of Strong Interaction. Their closed mass ($Y-$) trajectories form the loaded and neutral structures of covers of a cores. Here the minimum specific $E_{yfl.min} = \alpha * m(p) = 938.28/137 \approx 6.85 MeV$ binding energy of nucleons of a cores is defined in dynamic space matter. Settlement specific binding energy of nucleons of a cores, coincide with experimental data. At the same time in invariable structures of neutral ($Y- = 2n$) quanta, the law of an increment ($\Delta E_{yfl} = \Delta mc^2$) of specific binding energy is strictly carried out. Binding energy of two quanta ($Y- = p^+ / n$) and ($Y- = 2n$) Strong Interaction corresponds $E_{min} = 2\alpha * m(p) = 13,7 MeV$ to "exchange" quantum as mass ($Y-$) trajectory. In theories it is perceived as $E_{min} = 2\pi^2 \alpha * m(p) = 135,2 M\text{эВ}$ мезон Yukava. Its wavelength $\lambda = \frac{\hbar}{mc} = 1,44 * 10^{-12} \text{ см}$. Two such waves of exchange quanta of a cores (${}^4_2\text{He}(2(Y- = p/n))$), give the radius $r = 4,6 * 10^{-13} \text{ см}$ of such cores. The same calculations for "a heavy proton" $m(p_1) = 15,3 \text{ TeV}$ correspond to "exchange" quantum of a cores of uranium, $E_{min} = 2\alpha * m(p_1) = 238m(p) = 238U$ where ($\alpha \approx 1/137$). Follows from axioms of dynamic space matter:

$$M(m)M(n) = 1, \quad M_{\text{ЗЕМЛИ}} \left(\frac{G}{4 \exp 1} \right) M(p_1) = 1,$$

$$(5,977 * 10^{27}) \left(\frac{6,672 * 10^{-8}}{4 * 2,72} \right) (15,3 * 10^6 \text{ MeV} * 1,7826 * 10^{-27}) = 1,$$

Follows from these ratios that in the center of a cores of Earth quanta of Strong Interaction ($Y- = p_1^+ / n_1$) ($Y- = 2n_1$) QI_2 - level, generate $2\alpha * m(p_1) = 238m(p) = 238U$ uranium cores quantum . And already uranium 238 breaks up in a range of atoms of the table of Mendeleyev.

Similarly for the Sun, there are ratios of its weight with ($X\pm = p_2$) star cores quanta

$GM_{\text{СОЛНЦА}} \alpha^2 4Gm(p_2) \approx 1$, $m(p_2) \approx m(n_2)$, where ($Y- = p_2^- / \bar{n}_2$) and ($Y- = 2\bar{n}_2$) quanta of Strong Interaction of a cores of a star. Like atomic nuclei, they form various structures of a cores of various stars, and the generated quanta $2\alpha * m(p_2) = 290m(p_1)$, form "heavy atoms" of substance and their structural forms, over a cores of stars.

The Galaxy cores model $M_{\text{Г}} \left(\frac{G}{2} \right)^4 2\alpha * M(p_4) = 1$, with a weight

$M_{\text{Г}} = 1,9 * 10^6 * M_{\text{СОЛНЦА}}$ corresponds to the observation fact.

Maxwell's equations for electromagnetic fields and the equation of gravitmassovy fields, reflect real induction of vortex electric ($Y+$) field variation magnetic ($X-$) field and vice versa. Just the same, real induction of mass ($Y-$) fields, as well as in relativistic dispersal with acceleration, variation ($X+$) fields of "heavy" quanta ($Y- = p_1 / n_1$), ($Y- = 2n_1$) Strong Interaction of a cores OII_2 of level, with generation of quanta give. The same generation of mass ($Y- = X+$) fields of a pulsar of the Crab Nebula with a frequency ($\nu = 30\Gamma u$), gives

$$(\overline{G\Delta m})(\alpha c)^2 \hbar \nu = ch^2 1, \text{ gives induction of mases } \Delta m' = 2,28 * 10^{16} \text{ g} / c, \text{ or}$$

$$\Delta t = \frac{M_{\text{СОЛНЦА}}}{\Delta m} = 2,55 \text{ млрд. лет}, \text{ time of formation of mass of a protostar similar to the Sun.}$$

Radiation photon ($Y\pm = \gamma^+$) antimatter electron ($Y\pm = e^-$) substance is the geometrical **fact**, according to the Lenz rule. Antimatter of products of annihilation of an indivisible electron as substances with symmetry of fields is the same geometrical **fact**:

$$(X^- = \nu_e^-)(Y^+ = \gamma^+)(X^- = \nu_e^-) = (Y\pm = e^-) \text{ and } (Y^- = \gamma_0^-)(X^+ = \nu_e^+)(Y^- = \gamma_0^-) = (X\pm = p^+)$$

indivisible proton. Such properties have Indivisible Areas of Localization of quanta ($X\pm$), ($Y\pm$) spaces matters in all their range OII_{j-i} of levels. Thus, any substance consists of antimatter and vice versa, antimatter annihilates in substance.

Trajectories of quanta ($X\pm$), ($Y\pm$) spaces matters mutually ($X-$) \perp ($Y-$) ortogonalna. Structural forms of levels and covers of a cores are defined by the closed magnetic ($X-$) and mass ($Y-$) fields, in whirlwinds $rot_y E(Y+) = \partial B(X-)/\partial T$ electric and Strong water $rot_x G(X+) = \partial M(Y-)/\partial T$ interactions. The stream of whirlwinds $rot(E+)$ and $rot(X+)$ in the connected states ($Y+)(Y+) = (X-)$ or ($X+)(X+) = (Y-)$ generates in induction the mass ($Y- = p_1 / n_1$) density ($\rho = \nu^2$) of matter of quanta of a cores of uranium $2\alpha * m(p_1) = 238m(p) = 238U$, with a frequency (ω). It concerns all quanta ($Y- = p_j / n_j$) of Strong Interaction of "heavy" nucleons of a cores in all OII_j levels of physical vacuum.

From a ratio of speeds of quanta OII_j of a range, for example for ($Y\pm = e^-$) an electron $W_e(e^-) = \alpha * c = \frac{\alpha * \lambda_c}{T_e} = \frac{\lambda_e}{\alpha^{-1} T_e}$, similarly further $W(e_2^+) = \alpha * W_e = \alpha^2 c$, $W(e_4^-) = \alpha^3 c$,

$W_j = \alpha^N c$ follows $W_j(e_j) = \frac{\lambda_j}{T_j} = \alpha^N c = \frac{\alpha^N \lambda_c}{T_e} = \frac{\lambda_e}{\alpha^{-N} T_e}$. For the fixed wavelength

$\lambda_j = const$, there is own period of dynamics $T_j = \alpha^{-N} T_e \rightarrow \infty$, "heavy" electrons OII_j of levels, concerning ($\gamma = c$) photons. Similarly in OII_i the level

$V_i(\gamma_i) = \frac{\lambda_i}{T_i} = \alpha^{-N} c = \frac{\alpha^{-N} \lambda_c}{T_e} = \frac{\lambda_e}{\alpha^N T_e}$ of physical vacuum. For the fixed wavelength

$\lambda_i = const$, own period $T_i = \alpha^N T_e \rightarrow 0$ of superlight photons in OII_i levels.

$\overline{W}(e_j) = \alpha^+ c$, heavy electrons		$V(\gamma_i) = \alpha^- c$, superlight photons	
Own speed	Time	Own speed	Time

$W(e) = \alpha c = 2,2 * 10^8 \text{ cm/c}$	$\Delta T_2 = \alpha^{-1} t_c$	$V(\gamma_2) = \alpha^{-1} c = 4,1 * 10^{12} \text{ cm/c}$	$t_2 = \alpha^1 t_c$
$W(e_2) = \alpha^{+2} c = 1,6 * 10^6 \text{ cm/c}$	$\Delta T_2 = \alpha^{-2} t_c$	$V(\gamma_4) = \alpha^{-2} c = 5,6 * 10^{14} \text{ cm/c}$	$t_4 = \alpha^2 t_c$
$W(e_4) = \alpha^{+3} c = 1,7 * 10^4 \text{ cm/c}$	$\Delta T_4 = \alpha^{-3} t_c$	$V(\gamma_6) = \alpha^{-3} c = 7,7 * 10^{16} \text{ cm/c}$	$t_6 = \alpha^3 t_c$
$W(e_6) = \alpha^{+4} c = 85 \text{ cm/c}$	$\Delta T_6 = \alpha^{-4} t_c$	$V(\gamma_8) = \alpha^{-4} c = 1,1 * 10^{19} \text{ cm/c}$	$t_8 = \alpha^4 t_c$

For example, 1 second ($\Delta T_6 = 1c$) of a "heavy" electron (e_6), is equal 11 years on Earth on which time is measured by an optical photon. Similarly further. For constants $G = 6.672 * 10^{-8}$, $\alpha = 1/137$, $1 \text{ TeV} = 1,78 * 10^{-21} c$, and formulas $p_j = 2(e_{j-1})/G$, $e_j = 2(p_{j-2})/\alpha^2$, the range of mass OII_j of levels pays off.

Table 6.2

OII_2	$p_3 = 2e_2/G = 1,057 * 10^9 \text{ TeV}$ $p_2^- = 2e_1/G = 3,06 * 10^5 \text{ TeV}$ $p_1 = 2e/G = 15,32 \text{ TeV}$	$e_3 = \alpha^{-2} p_1 = 5,75 * 10^5 \text{ TeV}$ $e_2^+ = \alpha^{-2} p^+ = 35,24 \text{ TeV}$
OII_1	$p^+ = 938,28 \text{ MeV}$ $v_\mu = 0,272 \text{ MeV}$ $v_e^- = \alpha^2 e = 1.36 * 10^{-5} \text{ MeV}$	$e^- = 0,511 \text{ MeV}$ $\gamma_0 = Gp/2 = 3,13 * 10^{-5} \text{ MeV}$ $\gamma^+ = Gv_\mu/2 = 9,07 * 10^{-9} \text{ MeV}$

Similar calculations of mass of Indivisible quanta (X^\pm), (Y^\pm) spaces matters in their OII_i levels of physical vacuum, on the same transformed formulas.

Table 6.3

	$v_i = (\alpha^2 \gamma_{i-2})/2$	$\gamma_i = (Gv_{i-1})/2$
OII_0	$v_1 = \alpha^2 \gamma_0/2 = 0,83 * 10^{-3} \text{ eV}$ $v_2 = \alpha^2 \gamma/2 = 2,4 * 10^{-7} \text{ eV}$ $v_3 = \alpha^2 \gamma_1/2 = 1,2 * 10^{-11} \text{ eV}$	$\gamma_1 = Gv_e/2 = 4,5 * 10^{-7} \text{ eV}$ $\gamma_2 = Gv_1/2 = 2,78 * 10^{-11} \text{ eV}$ $\gamma_3 = Gv_2/2 = 8,05 * 10^{-15} \text{ eV}$

Charging $q(p^+) = q(e^-)$ isopotentials OII_1 of level are similar to charging $q(v^-) = q(\gamma^+)$ isopotentials OII_1 and further in OII_j : $q(p_j^\pm) = q(e_j^\mp)$, OII_i , $q(v_i^\pm) = q(\gamma_i^\mp)$ levels. Similarly mass $m(e) \approx m(v_\mu)$ and $m(\gamma_0) \approx m(v_e)$ isopotentials OII_1 of level are similar in OII_j : $m(e_j) \approx m(p_{j-1})$, OII_i , $m(\gamma_i) \approx m(v_{i+1})$ levels to mass isopotentials. Such isopotentials form structures of usual atoms OII_1 of level, and by analogy of "heavy" atoms of a cores of stars, OII_j level galaxies , or structures OII_i of physical vacuum. Full calculation of a range of masses in OII_j , OII_i levels of physical vacuum has an appearance.

Table 6.4

Cores quanta	$2\alpha * p_j = N * p_{j-1}$	N	$(X^\pm) = p_j \text{ (TeV)}$	$(Y^\pm) = e_j \text{ (TeV)}$
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				p_{27}	$e_{27}=2,88640E+99$
Exa quasar	$2\alpha * p_{26}^- = 290 p_{25}^+$	○	14	$p_{26}^- = 3,055857E+99$	$e_{26}^+ = 1,76805E+95$
	$2\alpha * p_{25}^- = 238 p_{24}^+$			$p_{25}^- = 1,537856E+95$	$e_{25}^- = 1,01943E+92$
Superquasar Galaxies of the 1st kind	$2\alpha * p_{24}^+ = 25 p_{23}^-$	●	13	$p_{24}^+ = 9,42004E+90$	$e_{24}^- = 5,13029E+87$
black spheres 1st kind	$2\alpha * p_{23}^+ = 290 p_{22}^-$			$p_{23}^+ = 5,431477E+87$	$e_{23}^- = 3,142526E+83$
Super quasars of the 1st kind	$2\alpha * p_{22}^- = 238 p_{21}^+$	○	12	$p_{22}^- = 2,733383E+83$	$e_{22}^+ = 1,8119409E+80$
	$2\alpha * p_{21}^- = 25 p_{20}^+$			$p_{21}^- = 1,6743175E+79$	$e_{21}^+ = 9,118565E+75$
Superquasar Galaxies of the 2st kind	$2\alpha * p_{20}^+ = 290 p_{19}^-$	● ●	11	$p_{20}^+ = 9,653902E+75$	$e_{20}^- = 5,58552E+71$
black spheres 2st kind	$2\alpha * p_{19}^+ = 238 p_{18}^-$			$p_{19}^+ = 4,858312E+71$	$e_{19}^- = 3,220542E+68$
Super quasars of the 2st kind	$2\alpha * p_{18}^- = 25 p_{17}^+$	○ ○	10	$p_{18}^- = 2,975930E+67$	$e_{18}^+ = 1,620733E+64$
	$2\alpha * p_{17}^- = 290 p_{16}^+$			$p_{17}^- = 1,7158835E+64$	$e_{17}^+ = 9,92770E+59$
megastar galaxies	$2\alpha * p_{16}^+ = 238 p_{15}^-$	●	9	$p_{16}^+ = 8,6351585E+59$	$e_{16}^- = 5,724187E+56$
black spheres	$2\alpha * p_{15}^+ = 25 p_{14}^-$			$p_{15}^+ = 5,2894160E+55$	$e_{15}^- = 2,880689E+52$
megastars	$2\alpha * p_{14}^- = 291 p_{13}^+$	○	8	$p_{14}^- = 3,0498095E+52$	$e_{14}^+ = 1,764549E+48$
superplanety	$2\alpha * p_{13}^- = 238 p_{12}^+$			$p_{13}^- = 1,534812E+48$	$e_{13}^+ = 1,0174164E+45$
quasar galaxies of 1 genus	$2\alpha * p_{12}^+ = 25 p_{11}^-$	●	7	$p_{12}^+ = 9,401402E+43$	$e_{12}^- = 5,120133E+40$
black spheres	$2\alpha * p_{11}^+ = 290 p_{10}^-$			$p_{11}^+ = 5,4207280E+40$	$e_{11}^- = 3,1363078E+36$
quasars 1st kind	$2\alpha * p_{10}^- = 238 p_9^+$	○	6	$p_{10}^- = 2,7279734E+36$	$e_{10}^+ = 1,8083549E+33$
	$2\alpha * p_9^- = 25 p_8^+$			$p_9^- = 1,3 E+33$	$e_9^+ = 7,3 E+29$
2 quasar galaxies	$2\alpha * p_8^+ = 290 p_7^-$	● ●	5	$p_8^+ = 3,88 E+29$	$e_8^- = 4,47 E+25$
black spheres	$2\alpha * p_7^+ = 238 p_6^-$			$p_7^+ = 1,94 E+25$	$e_7^- = 1,3 E+22$
quasars of 2 kind	$2\alpha * p_6^- = 25 p_5^+$	○ ○	4	$p_6^- = 1,19 E+21$	$e_6^+ = 6,48 E+17$
	$2\alpha * p_5^- = 290 p_4^+$			$p_5^- = 3,45 E+17$	$e_5^+ = 3,97 E+13$

star galaxies	$2\alpha * p_4^+ = 238p_3^-$	•	3	$p_4^+ = 1,7 \text{ E}+13$	$e_4^- = 1,15 \text{ E}+10$
Galactic black spheres	$2\alpha * p_3^+ = 25p_2^-$			$p_3 = 1,057 \text{ E}+9\text{TeV}$	$e_3 = 5,746 \text{ E}+5\text{TeV}$
the stars	$2\alpha * p_2^- = 290p_1^+$	○	2	$p_2^- = 3,06 \text{ E}+5\text{TeV}$	$e_2^+ = 35,24 \text{ TeV}$
the planets	$2\alpha * p_1^- = 238p^+$			$p_1 = 15,32 \text{ TeV}$	$e_1 = 10,216 \text{ GeV}$
	$2\alpha * p^+ = 25v_\mu^-$	²³⁸	1	$p^+ = 938,28 \text{ MeV}$	$e^- = 0,511 \text{ MeV}$
	$2\alpha * v_\mu^+ = 292v_e^-$			$v_\mu = 0,272 \text{ MeV}$	$\gamma_0 = 3,13 * 10^{-5} \text{ MeV}$
			0	$v_e = 1,36 * 10^{-5} \text{ M eV}$	$\gamma^+ = 9,07 * 10^{-9} \text{ MeV}$
Physical vacuum OJ ₁ level				$v_i = \alpha^2 \gamma_{i-2} / 2$ $v_1 = 8,3 * 10^{-10} \text{ M eV}$	$\gamma_i = G v_{i-1} / 2$ $\gamma_1 = 4,5 * 10^{-13} \text{ M eV}$
			-1	$v_2 = 2,4 * 10^{-13} \text{ M eV}$	$\gamma_2 = 2,78 * 10^{-17} \text{ M eV}$
				$v_3 = 1,2 * 10^{-17} \text{ M eV}$	$\gamma_3 = 8,05 * 10^{-21} \text{ M eV}$
Physical vacuum OJ ₂ level			-2	$v_4 = 7,4 * 10^{-22} \text{ M eV}$	$\gamma_4 = 4,03 * 10^{-25} \text{ M eV}$
				$v_5 = 2,14 * 10^{-25} \text{ M eV}$	$\gamma_5 = 2,47 * 10^{-29} \text{ M eV}$
			-3	$v_6 = 1,07 * 10^{-29} \text{ M eV}$	$\gamma_6 = 7,05 * 10^{-33} \text{ M eV}$
Physical vacuum OJ ₃ level				$v_7 = 6,57 * 10^{-37} \text{ M eV}$	$\gamma_7 = 3,58 * 10^{-37} \text{ M eV}$
			-4	$v_8 = 1,9 * 10^{-37} \text{ M eV}$	$\gamma_8 = 2,2 * 10^{-41} \text{ M eV}$
				$v_9 = 9,53 * 10^{-42} \text{ M eV}$	$\gamma_9 = 6,35 * 10^{-45} \text{ M eV}$

Classical dynamics of a star cores with quanta of Strong Interaction, comes down to generation in these quanta of mass fields, to growth of forces of gravitation of a cores, K-capture, a cores collapse in a neutron cores, to falling of masses on this cores with their scattering as explosion of a supernew star. In the Areas of their Localization allocated in the table, similar K-captures, and generation corresponding $2\alpha * p_j = 290p_{j-1}$ and $2\alpha * p_j = 238p_{j-1}$ quanta are presented in a range of Indivisible quanta . Their distinction as the reason, leads to various investigations, their properties. Such various objects, are designated as sort objects 1 and 2. From the presented objects quasars and superquasars with own kvazarny and super kvazarny galaxies are allocated.

In axioms of dynamic space matter, $M_{MAX}(m)M_{MIN}(n)=1$ on $(m-n)$ convergence $M^2 = 1$. It corresponds to ratios of Indivisible Area of Localization as large-scale quantum

object, within $hc = \alpha * GM(m) * GM(n)$ interaction constants, or $M_{MAX}M(\gamma_i) = 1$, the maximum mass M_{MAX} of objects, correspond to their $M(\gamma_i)$ level of singularity in physical vacuum. Below such power levels, "heavy quanta" do not prove.

Table 6.5

$M(e_j)M(\gamma_i) = 1$	$M(p_j)m(v_i) = 1$	Atoms of matter and antimatter
$M(e_1)(k=3,2)M(\gamma_0) = 1$	$\sqrt{G}p_1^-(1,8)v_\mu\sqrt{G} = 1$	$(Z[p_1^+ / n_1 + e_1^-] + N[2n_1])$
$M(e_2)(k=3,15)M(\gamma) = 1$	$\sqrt{G}p_2^-(1,7)v_e\sqrt{G} = 1$	$(Z[p_2^- / \bar{n}_2 + e_2^-] + N[2\bar{n}_2])$
$M(e_3)(k=3,8)M(\gamma_1) = 1$	$\sqrt{G}p_3^+(1,7)v_1\sqrt{G} = 1$	$(Z[p_3 / n_3 + e_3^-] + N[2n_3])$
$M(e_4^-(k=3,15)M(\gamma_2) = 1$	$\sqrt{G}p_4^+(1,8)v_2\sqrt{G} = 1$	$(Z[p_4^+ / n_4 + e_4^-] + N[2n_4])$
$M(e_5)(k=3,15)M(\gamma_3) = 1$	$\sqrt{G}p_5^-(1,8)v_3\sqrt{G} = 1$	$(Z[p_5 / n_5 + e_5^-] + N[2n_5])$
$M(e_6^+(k=3,9)M(\gamma_4) = 1$	$\sqrt{G}p_6^-(18,9)v_4\sqrt{G} = 1$	$(Z[p_6^- / \bar{n}_6 + e_6^-] + N[2\bar{n}_6])$

For transformations $A = 1MeV = 1,78 * 10^{-27} z$, there are ratios of masses.

$-M_{MAX} = 1 / M(\gamma_0) = 1 / (3,13 * 10^{-5} MeV * A) = 1,8 * 10^{31} z$, ($M_{MAX} = M_{СОЛНЦА} / 100$), the maximum mass of the planet with quanta of a cores ($Z[p_1 / n_1 + e_1^-]$), the mass fields generating in induction, $2\alpha * m(p_1) = 238U$ uranium cores quantum, with disintegration in a range of atoms.

$M_{MAX} = \frac{1}{M(\gamma^+)} = \frac{1}{9,07 * 10^{-9} * A} = 6,2 * 10^{34} = 31 * M_{СОЛНЦА}$ the maximum mass of a star with quanta

of a cores ($Z[p_2^- / \bar{n}_2 + e_2^-]$) of antimatter which radiate quanta ($\dots p_2^- \rightarrow p^+ \dots$); ($\dots e_2^+ \rightarrow e^- \dots$)

hydrogen or $M_{MAX} = \frac{1}{M(v_e)} = \frac{1}{8,3 * 10^{-10} * A} = 6,77 * 10^{35} = 338 * M_{СОЛНЦА}$ the maximum mass of a star with cores quanta ($Y^- = e_3^+$) antimatters.

For the Sun there is a ratio $GM_{СОЛНЦА} \alpha^2 4GM(p_2) \approx 1$. Like speed:

$W_c = \sqrt{\frac{(GM_c = M_y)}{R_c \exp 1}} = 265,6 \frac{KM}{c}$ the movements of the Sun, each star of a galaxy has the same

order of speeds, without everyones "the hidden masses". "The hidden masses" is caused by an invisible range of quanta OL_{j-i} of levels.

Similarly the speed of the Moon pays off: $W_{II} = \sqrt{\frac{(GM_{II} = M_y)}{R_{II} \exp 1}} = 1,019 \frac{KM}{c}$ where

$R_{II} = 1738KM$, unlike Earth: $W_3 = \frac{1}{e^2} \sqrt{\frac{(\alpha^2 M_3 = M_x)}{R_3}} = 30 \frac{KM}{c}$ for $M_3 = 5,976 * 10^{27}g$.

Above the extreme mass $310 * M_{СОЛНЦА}$ of a star, the photon quantum $M(\gamma^+)$ does not exceed the limit of such masses any more. It enters their level of singularity. Such objects correspond to black "holes" with an extreme mass of the following $M(\gamma_i)$ level of singularity of physical vacuum, or

$$M_{MAX} = \frac{1}{M(\gamma_1)} = \frac{1}{4,5 * 10^{-13} * A} = 1,25 * 10^{40} \Gamma = 6\,250\,000 * M_{Sun}$$

Here the level $M(\gamma_1)$ of photons in a range $\dots e_3 \rightarrow e_1 \rightarrow (\gamma_0) \rightarrow \gamma_1 \dots$, out of visible radiation.

$$M_{MAX} = \frac{1}{M(\gamma_2)} = \frac{1}{2.78 \cdot 10^{-17} \cdot A} = 2 \cdot 10^{44} \Gamma = 10^{11} \cdot M_{\text{Солнца}}, \text{НОЛ}=1, M(e_4^-)(k=3,15)M(\gamma_2) = 1.$$

This is **100 billion M Suns**, ($3 \cdot 10^{11} \cdot M_{\text{Солнца}}$) corresponds to the limiting mass of the nucleus of galaxies containing matter up to the level of neutrino singularity. $3 \cdot 10^{11} \cdot M_{\text{Солнца}}$ Corresponds to the limiting mass of the galaxy Structures ($Z[p_3 / n_3 + e_3]$) "heavy" atoms of "a

black hole" which mass $M(\gamma^+)$ photons enter follow from these calculations. For example, for a galactic nucleus ($2 \cdot 4 |p_4/n_4 + e_4|$ including the substance of protons, ($GM_{\text{Галактика}} \cdot 2\alpha \cdot A \cdot Gm(p)$) = 1 that is, fixed hydrogen, the limiting mass of the core of the galaxy. $M_{\text{galaxies}} = 4,6 \cdot 10^6 \cdot M_{\text{Sun}}$. This is consistent with the facts. Or $\left(\frac{G}{2}\right)^2 M_{\text{galaxies}} \cdot \sqrt{\frac{G}{2}} \cdot p_4 \cdot A \left(\frac{G}{2}\right)^2 = 1$,

$$M_{\text{galaxies}} = 4,6 \cdot 10^6 \cdot M_{\text{Sun}},$$

$$A = 1MeV = 1,78 \cdot 10^{-27} \text{ c} \quad M_{MAX} = \frac{1}{M(\gamma_3)} = \frac{1}{8 \cdot 10^{-21} \cdot A} = 7 \cdot 10^{47} \Gamma = 3,5 \cdot 10^{14} \cdot M_{\text{Солнца}}$$

There correspond 35 thousand $M_{\text{Солнца}}$ to the extreme mass of the extragalactic "black sphere (hole)" and, the minimum mass of the following class of objects - a quasar. By analogy to stars,

$$M_{MAX} = \frac{1}{M(\gamma_4)} = \frac{1}{4 \cdot 10^{-25} \cdot A} = 1,4 \cdot 10^{52} \Gamma = 7 \cdot 10^{18} \cdot M_{\text{Солнца}}$$

this weight corresponds to the extreme mass ($M_{\text{КВАЗАР}}$) of a cores of a quasar. Further

$$M_{MAX} = \frac{1}{M(\gamma_5)} = \frac{1}{2,47 \cdot 10^{-29} \cdot A} = 2,3 \cdot 10^{55} \Gamma = 1,14 \cdot 10^{55} \cdot M_{\text{Солнца}}, \quad M_{MAX} = 15 \text{млн} \cdot M_{\text{КВАЗАР}}$$

corresponds to the extreme mass of "black (hole)", bigger quasars. And further,

$$M_{MAX} = \frac{1}{M(\gamma_6)} = \frac{1}{7,15 \cdot 10^{-33} \cdot A} = 7,8 \cdot 10^{58} \Gamma = 3,9 \cdot 10^{25} \cdot M_{\text{Солнца}}$$

By analogy with galaxies - it is the extreme mass of a cores of kvazarny galaxies.

Follows from these ratios that the more the mass of an object, the more its speed in physical vacuum $\rho_j W_j^2 = (p = const) = \rho_i V_i^2$ of the field of the Universe. These are large-scale quanta with singularity levels $hc = \alpha \cdot GM(m) \cdot GM(n)$, form Indivisible Area of Localization $(((((HOI = M(m) \cdot M(n) = 1) \cdot 1) \cdot 1 \dots \cdot 1) = 1)$, all Universe on $(m - n)$ convergence, in own levels of singularity of each quantum.

6.1 Space matter of a cores of planets, stars, galaxies.

The sun star, is represented in large-scale quantum $GM_{\text{Солнца}} \alpha^2 4GM(p_2) \approx 1$ of space matter, with $(Y \pm = p_2^- / \bar{n}_2)$ trajectories of the indivisible quanta $(X \pm = p_2^-)$ of space matter radiated $(X \pm = p_4^+)$ by galaxy cores quanta Galaxies in turn form intergalactic quanta of space matter, with own level of singularity $M(e_4^-)(k=3,15)M(\gamma_2) = 1$, in space of speeds of physical vacuum

$$V(\gamma_2) = \alpha^{-1} c = 4,1 \cdot 10^{12} \text{ cm} / \text{c}.$$

Such ($Y-$) trajectories of rotation ($Y\pm$) of quanta of the Sun, correspond to mass ($Y-$) trajectories, in space of speeds $W_{\Delta_{\max}}^2$, at distance A . Mass ($Y-$) trajectories of quantum of space matter of the Sun star, we will write down in a look: $W_{\Delta_{\max}}^2 * A = M_S = 1.989 * 10^{33} \text{ } \epsilon$.

Taking for $W_X(X-) = W_{PL}$ the speed of quanta ($X\pm$) of space matter of planets, on ($X-$) circular trajectories of steady state ($Y+$) in the field of interaction ($Y\pm$) of the Sun stars at distance A from the Sun: $GM_S = W_{PL}^2 * A$ $G = 6.673 * 10^{-8}$

Substituting the known distances A of planets to the Sun, we will write down settlement and real space of their speeds in a look:

	Merk	Venus	Earth	Mars	Jupiter	Saturn	Uranium	Neptune	Pluto
$A * 10^{13} \text{ cm}$	0.5791	1.082	1.496	2.28	7.783	14.3	28.75	45.04	59.12
Distances	2.58	1.38	1.0	1.52	5.2	9.56	19.2	30.1	39.5
Estimated speed	48.87	35.02	29.785	24.13	13.06	9.63	6.79	5.43	4.74
fact speed W_{PL}	48.87	35.02	29.786	24.13	13.07	9.67	6.8	5.48	4.75

From this space of speeds of quantum ($Y\pm$) of space matter of the Sun, in physical vacuum of a galaxy: $W_{PL}^2 = GW_{\Delta_{\max}}^2$ ratios of forces for m - the mass of planets in circular orbits in the plane, perpendicular Y - axes, with a radius A from the Sun star in the form of Newton's law follow $m Y A$

$$F = \frac{mW_{PL}^2}{A} = \frac{mGW_{\Delta_{\max}}^2}{A} \frac{A}{A} = \frac{mG(W_{\Delta_{\max}}^2 * A = M_S)}{A^2} = G \frac{mM}{A^2}, \quad \frac{mW_{PL}^2}{A} = F = G \frac{mM}{A^2}.$$

In the conditions of Global Invariancy ($y = x_0$) of the sphere of quantum ($Y\pm$) of space matter of the Sun, mass ($Y-$) trajectories of planets of solar system in a look ("Nuclear matter") take place:

$$\alpha^2 m_{PL}(X+ = Y-) = (G/2)M_S(Y-) * e^{\pm S} (\sqrt{chl}(1+\alpha))^N, \quad S = 1,2,3\dots, N = 1,2,3\dots,$$

For the mass of the Sun $M_S = 1.9929 * 10^{33} \text{ } \epsilon$ (a little bit there is more real), in the period of its quantum relativistic dynamics $\bar{m} \leftrightarrow m_0$ in the field of ($X+ = p_i$) quantum, "dumping" of mass of planets of solar system in a look takes place calculated and actual values.:

$$M_{\text{ЮПИТЕР}} = \frac{(G/2)M_S}{\alpha^2} e^0 (\sqrt{chl}(1-\alpha))^2 = 1898.8 * 10^{27} \text{ } \epsilon (1898.8 * 10^{27} \text{ } \epsilon - \text{реально})$$

$$M_{\text{САТУРН}} = \frac{(G/2)M_S}{\alpha^2} e^{-1} (\sqrt{chl}(1-\alpha)) = 566.5 * 10^{27} \text{ } \epsilon (568.5 * 10^{27} \text{ } \epsilon)$$

$$M_{\text{НЕПТУН}} = \frac{(G/2)M_S}{\alpha^2} e^{-2} \left(\frac{\sqrt{chl}}{1-\alpha}\right) = 102.7 * 10^{27} \text{ } \epsilon (102.78 * 10^{27} \text{ } \epsilon)$$

$$M_{\text{УРАН}} = \frac{(G/2)M_S}{(\alpha\sqrt{2})^2} e^{-2} \frac{1}{(1-\alpha)^4} = 86.4 * 10^{27} \text{ } \epsilon (86.6 * 10^{27} \text{ } \epsilon)$$

$$M_{\text{ЗЕМЛЯ}} = (\alpha * M_{\text{САТУРН}}) e^0 \frac{\sqrt{2}}{(1-\alpha)^3} = 5.976 * 10^{27} \text{ } \epsilon (5.974 * 10^{27} \text{ } \epsilon)$$

$$M_{\text{ВЕНЕРА}} = (\alpha * M_{\text{ЮПИТЕР}}) e^{-1} ((1-\alpha)^2)^3 = 4.878 * 10^{27} z (4.87 * 10^{27} z)$$

$$M_{\text{МАРС}} = \frac{M_{\text{ЗЕМЛЯ}}}{\sqrt{ch1}} e^{-2} = 0.6416 * 10^{27} z (0.6419 * 10^{27} z)$$

$$M_{\text{МЕРКУРИЙ}} = \frac{M_{\text{ВЕНЕРА}}}{2} e^{-2} = 0.330 * 10^{27} z (0.3302 * 10^{27} z)$$

Such settlement masses corresponds to the facts real (in brackets) the mass of planets of solar system.

The quanta radiated by the Sun e_2, p_1 - spaces matters, correspond to quanta of a cores of planets (in brackets the valid values of mass of planets):

$$M_{\text{МЕРКУРИЙ}} = \frac{\sqrt{ch1}}{\sqrt{2}G(p_1)} e^0 = 0.336 * 10^{27} z = (0.3302 * 10^{27} z) = \frac{M_{\text{ВЕНЕРА}}}{2} e^{-2} (1-\alpha)^2$$

$$M_{\text{ВЕНЕРА}} = \frac{\sqrt{ch1}}{G(p_1)} e^2 = 4.9 * 10^{27} z = (4.869 * 10^{27} z) = \alpha * M_{\text{ЮПИТЕРА}} e^{-1} ((1-\alpha)^2)^3$$

$$M_{\text{ЗЕМЛЯ}} = \frac{2}{(G/2)(p_1)} e^1 = 5.977 * 10^{27} z = (5.974 * 10^{27} z) = \alpha \sqrt{2} * M_{\text{САТУРН}} e^0 (1-\alpha)^{-3}$$

$$M_{\text{МАРС}} = \frac{2}{(G/2)\sqrt{ch1}(p_1)} e^{-1} = 0.64 * 10^{27} z = (0.642 * 10^{27} z) = \frac{M_{\text{ЗЕМЛЯ}}}{\sqrt{ch1}} e^{-2} (1-\alpha)^2$$

$$M_{\text{ЮПИТЕР}} = \frac{\sqrt{ch1}}{G\alpha*(p_1)} e^3 = 1858.8 * 10^{27} z = (1898.8 * 10^{27} z)$$

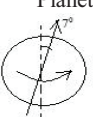
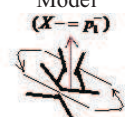
$$M_{\text{САТУРН}} = \frac{\sqrt{2}}{(G/2)\alpha*(p_1)} e^1 = 579 * 10^{27} z = (568,5 * 10^{27} z)$$

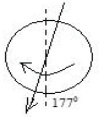
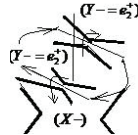
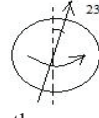
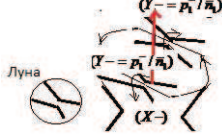
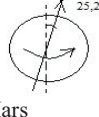
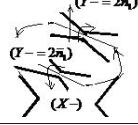
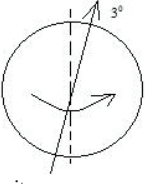
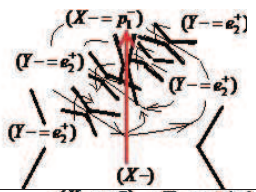
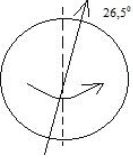
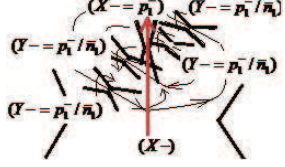
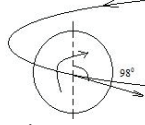
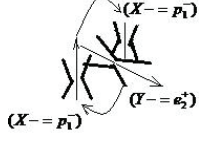
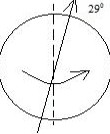
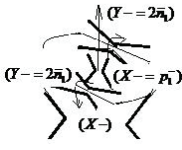
$$M_{\text{УРАН}} = \frac{\sqrt{ch1}}{G\alpha*(p_1)} e^0 = 92,9 * 10^{27} z = (86,63 * 10^{27} z)$$

$$M_{\text{НЕПТУН}} = \frac{\sqrt{2}}{G\alpha*(p_1)} e^0 = 106,5 * 10^{27} z = (106,5 * 10^{27} z)$$

Physically admissible there are models of structural forms of a cores of planets in a look:

Table 7.2

	Planet	calculation of masses	Model ($X = p_1$)
1	 Mercury	$M_{\text{МЕР}} = \frac{\sqrt{ch1}}{\sqrt{2}G(p_1)} e^0 = \frac{M_B}{2 * e^2} (1-\alpha)^2$ With weak magnetic field	 ($X = e_2$)

2	 <p>Venus</p>	$M_B = \frac{\sqrt{chl}}{G(p_1)} e^2 = \frac{\alpha * M_{Ю}}{e} ((1-\alpha)^2)^3$	
3	 <p>Earth</p>	$M_{ЗЕМЛИ} = \frac{4 * e}{G(p_1)} = \alpha \sqrt{2} * M_{САТ}$ With magnetic field	
4	 <p>Mars</p>	$M_{МАР} = \frac{4 * e^{-1}}{\sqrt{chl}G(p_1)} = \frac{M_3 * (1-\alpha)^2}{\sqrt{chl} * e^2}$	
5	 <p>Jupiter</p>	$M_{ЮПИТЕР} = \frac{\sqrt{chl}}{G\alpha * (p_1)} e^3$ With magnetic field	
6	 <p>Saturn</p>	$M_{САТУРН} = \frac{2\sqrt{2} * e}{G\alpha * (p_1)}$ With magnetic field	
7	 <p>Uranium</p>	$M_{УРАН} = \frac{\sqrt{chl}}{G\alpha * (p_1)} e^0$	
8	 <p>Neptune</p>	$M_{НЕПТУН} = \frac{\sqrt{2}}{G\alpha * (p_1)}$	

Such models correspond to the specified rotations of planets in orbits, to their characteristics.

6.2. "Pulsation" of quanta of space matter.

Quantum relativistic dynamics ($\varphi \neq const$) ("pulsation") of quanta ($X\pm$), ($Y\pm$), is caused by existence $m-n$ of convergence of quanta with space of speeds

$$W_j = \alpha^N c, V_i = \alpha^{-N} c, \text{ where } \alpha = 1/137,036 = \cos \varphi_y$$

$$HOI = (hc = \Pi^2 K^2)(\rho W^2 = b^2 = \frac{\Pi^2}{K^2}) = (\Pi^2 = F_j)(\Pi^2 = F_i) = F_j F_i = 1.$$

In mass $m(Y-)$ trajectories, $m-n$ convergence have potentials $\Pi(m)$ and $\Pi(n)$. $m(Y-) = \Pi(m) * K_y = W_j^2 * K_y$, $m(Y-) = \Pi(n) * K_y = W_i^2 * K_y$. Like Newton's law, for

speeds $\frac{1}{2} W_c^2 W_3^2 = \Pi^2 = F_j = G \frac{M_c M_3}{R^2}$ and the mass of the Sun and Earth, they Π are

potentials form force $F = \Pi(m)\Pi(n) = W_x^2 W_y^2$ which is perpendicular cross-sectional areas of a trajectory $(Y+)(Y+) = (X-)$ or $(X+)(X+) = (Y-)$ the dynamic sphere

$p = \frac{F}{S} = \frac{E}{V} \equiv \rho_j W_j^2 = \rho_i V_i^2 = b^2$ of quantum. For space matter quantum

$HOI = (hc)(\rho W^2) = F_j F_i = 1$, under the influence of this force, matter of bigger density $\rho_j > \rho_i$ and smaller speed $W_j < V_i$, "falls" (like Newton's gravitation) along a mass ($Y-$)

trajectory of quantum in space of smaller density ρ_i with acceleration (b). Considering potentials $W_x^2 = W_j^2 (\cos^2 \varphi_x = G)$, $V_y^2 = V_i^2 (\cos^2 \varphi_y = \alpha^2)$, in corresponding ($X-$), ($Y-$)

fields on n -convergence ($X\pm$), ($Y\pm$), ($X\pm$), ..., quanta, for force $F = \Pi(m)\Pi(n)$ ratios $F = W_j^2 \cos^2 \varphi_x V_i^2 \cos^2 \varphi_y \neq 0$, from where a condition follow $\cos^2 \varphi_x \cos^2 \varphi_y \neq 0$, gives

limits $0 \leq \varphi < \varphi_{MAX}$, and $\varphi \neq 90^\circ$. In the course of dynamics $\varphi \neq const$, in interextreme values $G * 1 = const$, and $1 * \alpha^2 const$, disappearance of one constant

$(G \rightarrow 1) \equiv \cos^2(\varphi_{X_{MAX}} \rightarrow 0)$, is followed $\cos(0^0) = 1 = \frac{K_x^2}{K^2} = \frac{K_y^2}{K^2}$ by emergence another

$(1 \rightarrow \alpha^2) \equiv \cos^2(0^0 \rightarrow \varphi_{Y_{MAX}})$. From here, the attracting force (F_j), alternates with a repellent

force. Such quantum relativistic dynamics corresponds to Local Invariancy, its Criteria $(\cos \varphi * ch(Y/X_0) = 1)$, in each quantum ($X\pm$), ($Y\pm$) spaces matters.

7. Universe.

It is (HOI) - Indivisible Area of Localization of all its (CE) - Criteria Evolutions in uniform ($X+ = Y-$), ($X- = Y+$) space matter. To everyone ($X\pm$), ($Y\pm$) to quantum OI_{J-i} of a range there correspond dynamics conditions $\cos^2 \varphi_X \cos^2 \varphi_Y \neq 0$, $0 \leq \varphi < \varphi_{MAX}$, $\varphi \neq 90^0$, $(\cos \varphi_Y * ch(Y/X_0) = 1)$, $(\cos \varphi_X * ch(X/Y_0) = 1)$, with interaction constants $\cos^2 \varphi_X = G = 6,672 * 10^{-8}$, and $\cos \varphi_Y = \alpha = 1/137,036$. It means that with reduction of corners of parallelism $\varphi(Y-) \rightarrow 0$ as disappearance of fields, fields appear, corners $\varphi(X-) \rightarrow \varphi_{MAX}(X-)$ and vice versa increase. Matter at the same time, does not disappear, and passes from one look into another, in the form of change of prepotent fields.

Dynamics of matter ($\varphi \neq const$), is fixed in Euclidean ($\varphi = 0$), ($\varphi = const$) axiomatics of the Criteria of Evolution created in time space ($K^{\pm N}$) ($T^{\mp N}$). To each fixed ($\varphi = const$) state, there corresponds own space time, and is equal also Criteria of Evolution, according to Theories of Relativity. Extreme Plankovsky values of length and time, concerning OI_1 the level of physical vacuum (p^+ , e^- , ν_μ , γ_0 , ν_e , γ), correspond:

$$l_{III} = \sqrt{\frac{Gh}{c^3}} = \sqrt{G}K_i = \sqrt{\frac{6,67 * 10^{-8} * 6,62 * 10^{-27}}{(3 * 10^{10})^3}} = 4 * 10^{-33} \text{ cM},$$

$$t_{III} = \sqrt{\frac{Gh}{c^5}} = \sqrt{G}T_i = \sqrt{\frac{6,67 * 10^{-8} * 6,62 * 10^{-27}}{(3 * 10^{10})^5}} = 1,35 * 10^{-43} \text{ c}, \text{ where } \sqrt{G} = \cos \varphi(X-).$$

These extreme values of length (l_{III}) and time (t_{III}) are calculated with a constant \sqrt{G} , and belong to limit quantum ($X\pm = \nu_i$) of a range OI_{J-i} of indivisible quanta. From a ratio $t_{III} = \sqrt{G}T_i = 1,35 * 10^{-43} \text{ c}$, for the period (T_i) of dynamics (ν_i) of quantum $(\sqrt{G})^N * 1 = 1,35 * 10^{-43} \text{ c}$, $N = \log_{\sqrt{G}} t_{III}$, $N = -43 \frac{\ln 10}{\ln \sqrt{G}} \approx 12$. In a range (fig. 4) OI_i of levels, ($N = 12$) corresponds to subneutrino quantum (ν_{24}), with a subphoton quantum isopotential ($\gamma_{24}^+ = \alpha^{-12} * c$).

In the Indivisible Area of Localization $HOI = m(e_{26}^+)(k = 3,14)m(\gamma_{24}^+) = 1$, to quantum ($Y\pm = e_{26}^+$) of an eksakvazar there corresponds speed $W_J = \alpha^{14} * c = W_J(e_{26}^+)$. In system of coordinates of atomic (p^+ / e^-) structures OI_1 of level of usual atoms where ($W_e = \alpha * c$) electron speed, there is a ratio

$$HOI = W_J(e_{26}^+) * V_i(\gamma_{24}^+) = (\alpha^{13}W_e)(\alpha^{-13}W_e) = W_e^2 = \Pi_e = 1. \quad (12.3)$$

From this ratio wavelength $\lambda(e_{26}^+)$, through electron wavelength

$$\lambda(e^-) = \frac{h}{m_e \alpha^* c} = 3,3 * 10^{-8} \text{ cm}. \quad 2\pi \alpha^{13} W_e \equiv W_J = \frac{\alpha^{13} \lambda_e}{(T_J = 1)}, \text{ from a ratio is calculated}$$

$$\alpha^{13} \lambda_e = 2(\cos \varphi_\gamma = \alpha) \lambda(e_{26}), \text{ and}$$

$$\lambda(e_{26}) = 2\pi \alpha^{12} \lambda_e = 2 * 3,14 * 2,28 * 10^{-26} * 3,3 * 10^{-8} \text{ cm} = 4,7 * 10^{-33} \text{ cm}.$$

If $I_{III} = \sqrt{G} K_i = 4 * 10^{-33} \text{ cm}$ it is calculated through a constant $\sqrt{G} = \cos \varphi(X-) = I_{III} / K_i$ for $(X\pm = \nu_i)$ subneutrino quantum, then wavelength $\lambda(Y- = e_{26}) = 4,7 * 10^{-33} \text{ cm}$, is calculated through a constant $\alpha = \cos \varphi(Y-) = 1/137,036$, of quantum $(Y- = e_{26}^+)$ of an exa quasar. Both lengths identical also correspond $HOI = K\mathcal{D}(m)K\mathcal{D}(n) = \lambda(Y- = e_{26}^+) * \lambda(Y- = \gamma_{24}^+) = 1$, spaces matters.

From the experimental data, for the minimum $(\lambda_i \approx 10^{-16} \text{ cm})$ distances measured $(Y\pm = \gamma)$ by quanta with dynamics period $t = \frac{\lambda_i}{c} \cong 10^{-26} \text{ cek} = \alpha^N T_i$, value (N) for $(T_i = 1)$ dynamics period, is calculated $10^{-26} \text{ cek} = \alpha^N * 1$, $N \approx -26 \frac{\ln 10}{\ln \alpha} \approx 12$, $N = 12$. This order OI_i of a range corresponds $(Y\pm = \gamma_{24}^+)$ to quantum of a sub photon.

Thus, $N = 12$ both for (ν_{24}) , and for (γ_{24}^+) quanta, and from fixed G, α, h, c - constants, the fixed space matter limits, correspond $N_j = 14$ also $N_i = 12$ to levels OI_{j-i} of a range of physical vacuum, rather invariable c - velocity of light.

1). For Indivisible Area of Localization of the Universe, it means dynamics $(X\pm)$, $(Y\pm)$ range quanta OI_{j-i} in the form of two limit conditions of dynamics. For the period $T_i = T(\gamma_{24}) = 1$, quantum $(Y- = \gamma_{24}^+)$ will make full turnover $\frac{2\pi R_i}{(T_i = 1)} = V_i(\gamma_{24})$ to the sphere of radius

$$R = \frac{\alpha^{-12} * c}{2\pi * 1} = \frac{4,3855 * 10^{25} * 3 * 10^{10}}{6,28} = 2,1 * 10^{35} \text{ cm} \text{ or } (R \approx 2,2 * 10^{17}) \text{ light years. For the}$$

sphere of the optical horizon of the Universe in 15 billion light years, such spheres the Universe fixed in constants has about 15 million. Proceeding from these calculations of Indivisible "heavy" quanta $\lambda(Y- = e_{26}^+) = 4,7 * 10^{-33} \text{ cm}$, $I_{III} = \lambda(X- = \nu_{24}) = 4 * 10^{-33} \text{ cm}$, with own period of dynamics $(X-)_j$ in the field of the Universe, that is $t_{III} = T(X- = \nu_{24}) = 1,35 * 10^{-43} \text{ c}$. Dynamics of radiuses $(r_0 \rightarrow R)$ and corners of parallelism (H-) and (Y-) of trajectories, **in period of time expansions** of the Universe, follow ratios of their density.

$$\rho_j(X- = p_j) = \frac{1}{(T^2 \rightarrow \infty)} \rightarrow 0 \quad \rho_i(X- = \nu_i) = \frac{1}{(T^2 \rightarrow 0)} \rightarrow \infty$$

$$\varphi_X(X- = p_j) \rightarrow 0; \quad \varphi_Y(Y- = e_j)_{MAX}; \quad \varphi_X(X- = v_i) \rightarrow \varphi_{X MAX}; \quad \varphi_Y(Y- = \gamma_i) \rightarrow 0,$$

$$\rho_j(Y- = e_j) = \frac{1}{(T^2 \rightarrow 0)} \rightarrow \infty \quad \rho_i(Y- = \gamma_i) = \frac{1}{(T^2 \rightarrow \infty)} \rightarrow 0$$

in space of speeds

$$W_j(X- = p_j) = \frac{(\lambda \rightarrow \infty)}{(T \rightarrow \infty)} = W_j \quad V_i(X- = v_i) = \frac{(\lambda \rightarrow 0)}{(T \rightarrow 0)} = 0$$

$$W_j(Y- = e_j) = \frac{(\lambda \rightarrow 0)}{(T \rightarrow 0)} = 0 \quad V_i(Y- = \gamma_i) = \frac{(\lambda \rightarrow \infty)}{(T \rightarrow \infty)} = V_i$$

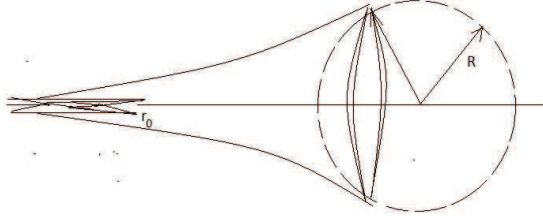


Fig. 7.1. dynamics of space matter of the Universe.

2). Here from quantum energy of level of singularity of Physical Vacuum of space matter of the Universe, $\hbar(\alpha^{-12} * c = V(\gamma_{24})) = E(\gamma_{24})R_2$ where $E(\gamma_{24}) = m(\gamma_{24}) * c^2$, calculations follow:

$$m(e_{26}) * k * m(\gamma_{24}) = 1 \quad m(e_{26}) = 1,77 * 10^{95} \text{ TeV} = 3,15 * 10^{80} \text{ } \epsilon \quad (k = 3,14), \text{ where}$$

$$m(\gamma_{24}) = 1/m(e_{26}) * k = 10^{-81} \text{ } \epsilon, \quad E(\gamma_{24}) = \dot{m}(\gamma_{24}) * c^2 = 9 * 10^{-61} \text{ } \rho p \epsilon,$$

$$R_2 = \frac{\hbar * \alpha^{-12}}{m(\gamma_{24}) * c} = 1,54 * 10^{69} \text{ } \text{CM}. \text{ These ratios } 2\pi R_1^2 \cong 2\pi R_2 * 2\pi(R=1) = HOI,$$

determine the single radius of all Universe, in the level of singularity of its vacuum. The quantum of the general condition of the Universe, extends as quantum ($Y+ = X-$) of an electromagnetic and gravitational and mass ($X+ = Y-$) wave, according to their equations. Quantum dynamics of space matter during expansion of the Universe is caused by primary "failure" of density $\rho_j(Y- = e_j)$ in okolonulevy mass ($\downarrow \rho_i(Y- = \gamma_i) \approx 0$) density of physical vacuum.

At "compression", grows $\varphi_Y \rightarrow \varphi_{Y MAX}$, there is a constant $\alpha(Y+)$, and gravitation $G(X+)$ of fields of interaction disappears $\varphi_X \rightarrow 0$, and also $\lambda_j(X- = p_j) \rightarrow \infty \leftarrow \lambda_i(Y+ = \gamma_i)$. At achievement of a limit corner $\varphi_{Y MAX}$, there is "pushing away" of all quanta ${}^2(Y+)_j = (X-)$, to (X-) the field of the Universe, its "EXPLOSION". That is there is "scattering" of density $\rho_j(Y- = e_j)$ with "a brake radiation" ($e_j \rightarrow \gamma_i$) disappearance of a constant $\alpha(Y+)$, and $\varphi(Y+) \rightarrow 0$ parallelism corner, with the subsequent period of

expansion and emergence of gravitational action $G(X^+ = \nu_i)$ of quanta. At the same time wavelength $\lambda_i(X^- = \nu_i) \rightarrow 0$, around $\lambda_i(Y^- = \gamma_i) \rightarrow \infty$ quanta decreases.

It corresponds to the general dynamics $\uparrow \varphi(X^-)$ of the field (fig. 9) of the Universe, with dynamics of radius ($r \rightarrow R$) of the sphere of the horizon of the Universe with the Euclidean isotropy. For the fixed levels of singularity $\varphi(X^-) = const$, the sphere point of space matter, for example visible galaxies $M(e_4) * (k=3,15) * m(\gamma_2) = 1$, with the level of singularity ($Y^\pm = \gamma_2$) of quanta of physical vacuum, have own ($W_{j=4} = \alpha^3 * c$) speeds (X^-) in the field of the Universe. The set of such spheres points of galaxies ("not having parts" in Euclidean axiomatics), on the chosen directions ($K = c * T$) measured by light years is considered. Owing to the general dynamics $\uparrow \varphi(X^-)$ of the field (fig. 9) of the Universe, radiuses of spheres points of galaxies increase, and equally and distances between centers of galactic spheres points on the chosen direction from any galaxy increase. It means that each galaxy is removed ($\Delta W_j > 0$), from the observer of any galaxy, in the directions ($K = c * T$) of the isotropic sphere of the horizon of the Universe.

The set of spheres points of galaxies on the direction, gives the total speed ($\Delta W = \sum \Delta W_j$) of subjects, radial from the observer, big, than it is more than a distance ($K = c * T$).

Both increments of speed of spheres points (galaxies) ($\Delta W_j \approx \varphi(X^- = c * T)$) and ($\Delta W = \sum \Delta W_j$), give ($\partial^2 W_j / \partial t^2 = \partial b / \partial t > 0$), an acceleration increment ($b \neq const$), with increase in distance ($K = c * T$). This effect of an increment of acceleration with distance is caused by dynamics of topology ($g_{ik} \neq const$), (expansion) $\uparrow \varphi(X^-)$ of the field of the Universe, and the increasing number of the extending spheres points (galaxies) with increase ($K = c * T$) in distance on the chosen direction from any galaxy. Speeds $W_j = \alpha^N c$ of galaxies and extragalactic objects are invariable, as well as (c) - velocity of light.

7.1. Intergalactic flights.

Physical reality is various space of speeds of the Sun and Earth. Without any fuel engines Earth flies in space of physical vacuum with a speed $30\kappa M/c$, and the Sun with an order speed $265\kappa M/c$. It is about the main property of space matter - the movement. The stream of mass (Y^-)_A of the device is created by fields ($Y^- = \gamma_i$) = ($X^+ = p_j$) ($X^+ = p_j$) of Strong and Gravitational Interaction of power quanta ($X^\pm = p_1$), ($X^\pm = p_2$) ..., O/I_2 the level of the indivisible quanta of space matter of physical vacuum connected among themselves by the same (X^+) fields on (X^-) module trajectories without external power source.

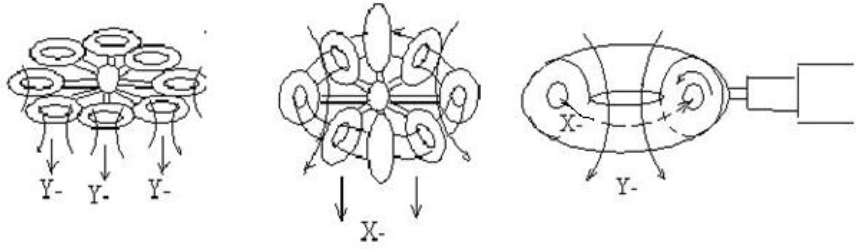


Fig. 7.2. The intergalactic device without fuel engines.

Consistently including space of speeds $(Y-)_A$, $(X-)_A$ the device in the level of singularity of physical vacuum, the device comes on a radial trajectory from the level of singularity of physical vacuum of quantum $(X\pm)$ of space matter of the planet, $(Y\pm)$ space matter of a star, $(X\pm)$ space matter of a galaxy, $(Y\pm)$ space matter of a congestion of galaxies, to other congestions and galaxies in the field of the Universe, with the return inclusions at return to the planet of the or other galaxy.

Thus, to create the full periods of quanta $(Y-=\gamma_i)_A$, spaces of speeds it is necessary fields $(X+=p_j)(X+=p_j)$ of "heavy" quanta as "working substance", closed on $(X-)$ a trajectory of "ring" of the device. From ratios for quanta $T_j(X-=p_j)\rightarrow\infty$, $\lambda_j(X-=p_j)\rightarrow\infty$, the more the mass $(X-=p_j)$ of quantum formed $(p_j=2(e_{j-1})/G)$ by quanta (e_{j-1}) the is more $\lambda_j(X-=p_j)$, the diameter D of "ring" of the device is more. For ratios $(E=\Pi^2 K_X)(X-)(E=\Pi^2 K_Y)(X+)=HOI(X\pm=p_j)$, take place of a ratio $\uparrow E(X-)\downarrow E(X+)=HOI(X\pm=p_j)$, or $\uparrow K_X(X-)K_Y\downarrow(X+)=HOI(X\pm=p_j)$, as well as for masses $\uparrow(m=\Pi K_X)(X-)(m=\Pi K_Y)\downarrow(X+)=HOI(X\pm=p_j)$. All weight is concentrated $(X-=p_j)$ in the field, formed $(X-=p_j)=(Y+=e_{j-1})(Y+=e_{j-1})$ by electric fields of mass $(Y+=e_{j-1})$ trajectories, in the form of mass fields $m(X-=p_j)=2m(Y+=e_{j-1})/G$. Means enough in the created quanta $HOI=\lambda(Y+=e_{j-1})\lambda(Y-=e_{j-1})=1$, to know wavelength, $\lambda(Y+=e_{j-1})=\frac{1}{\lambda(Y-=e_{j-1})}$ to calculate an order of the quanta $N(e_j)$ forming a trajectory of quanta $(X-=p_j)$ of "working substance".

For example, if for $\lambda(X-=p_j)=\lambda(Y+=e_{j-1})$, diameter "ring" is necessary $D=\frac{2\lambda(X-=p_j)}{(\pi\approx 3)}$

$D=10M$, then $\lambda(X-=p_j)=15M=\lambda(Y+=e_{j-1})$. That is, quantum length takes place

$\lambda(Y+=e_{j-1})=\frac{1}{\lambda(Y+=e_{j-1})}=6,67*10^{-3}cm$. It corresponds to ratios

$\lambda(Y- = e_{j-1}) = 6,67 * 10^{-3} \text{ cM} = 2\pi * \alpha^N (\lambda_e = 3.3 * 10^{-8} \text{ cM})$, $\alpha^N = 2 * 10^{-5}$, from where, for $(J-1)$

gives $N = \log_{\alpha} 2 * 10^{-5} = \frac{\ln(2 * 10^{-5})}{\ln(\alpha = 1/137)} = \frac{-10,82}{-4,92} = 2.2 \approx 2$. Then $(N_j = 3)$ corresponds to an

order of quanta $(\alpha^3 * c) = W(e_4)$ of working substance $(X- = p_4^+)$, in "ring" with a diameter of 10 m. Such "rings" give the intergalactic device. Speed of the intergalactic device with it $(X- = p_4^+)$ "working substance", in singularity level $HOI = m(e_4) * m(\gamma_2) = 1$, makes $V(Y- = \gamma_2) = \alpha^{-1} * c \approx 137 * c$.

For terrestrial time in 10 years, it is possible to fly by $(r = 10 \text{ lem} * \alpha^{-1} * c)_{\text{KM}}$ or $(r = 10 * 365,25 * 24 * 3600 * 137 * 3 * 10^5 = 1,3 * 10^{16} \text{ KM} = 8,8 * 10^7 \text{ a.e} = 425,8 \text{ ПК}$. That is our galaxy (30 kilo parsec), the device will fly by approximately in 705 years. For crew of such device, own time makes $T = \alpha(705 \text{ lem}) = 5,14 \text{ лет}$, singularity level time (γ_2) .

The more mass of quantum (p_j) , the more length of its "wave" $\lambda(X- = p_j)$. For $(N_j = 4)$ $(X- = p_6^+)$ quasar cores substance quanta, I take place $(N_{j-1} = 3)$. Then from a ratio $2\pi * \alpha^N (\lambda_e) = \lambda(Y- = e_{j-3}) = 6,28 * (1/137)^3 * 3.3 * 10^{-9} \text{ cM} = 8,14 * 10^{-15} \text{ cM}$, also we calculate

$$\lambda(Y+ = e_{j-3}) = \frac{1}{\lambda(Y- = e_{j-1})} = \frac{1}{8,14 * 10^{-15} \text{ cM}} = 1,23 * 10^{14} \text{ cM} = \lambda(X- = p_6^+).$$

It makes $1,2 * 10^{14} \text{ cM} \approx 10^9 \text{ KM} = 8,2 \text{ a.e}$. diameter of a cores of an extragalactic quasar with $(X- = p_6^+)$ cores quanta $(X- = p_6^+)$. Such $HOI = m(e_4) * m(\gamma_2) = 1$, quanta flights already out of galaxies in the Universe give "Working substance" $HOI = m(e_4) * m(\gamma_2) = 1$. In 10 years of terrestrial time it is possible to fly by in the Univer $(r = 10 \text{ lem} * (V(\gamma_4) = \alpha^{-2} * c) = 1,78 * 10^{18} \text{ KM}$, or 188000 light years. For own time in the device $t = \alpha^2(10 \text{ lem})$ or 4 hours 40 minutes. This time for $(Y- = \gamma_4)$ quanta, in the intergalactic level of singularity of physical vacuum.

7.3. Quantum system of coordinates.

The isotropic Euclidean space of the Universe extends that is inadmissible in Euclidean axiomatics in which all theories are created. Light of far stars, galaxies, their congestions, point to such expansion of the space which does not have visible limits and existence in such space of black holes and dark energy, matter.

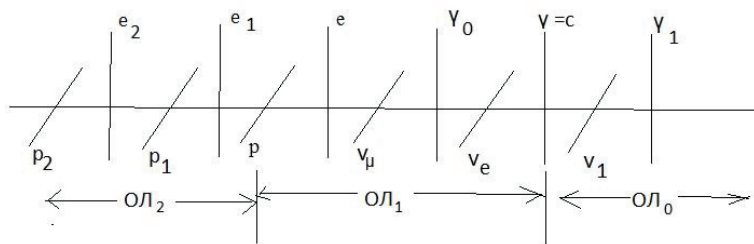


fig. 7.3. Indivisible quanta of space matter.

Physical vacuum of the Universe is presented by multilevel space as matter form. The dynamic space as matter form, is presented by axioms: All specified Universe objects, are considered in quantum system of coordinates in which reference points are Indivisible Quanta of space as matter forms.

In uniform ($X = Y+$), ($X + = Y-$) space matter the first Area of Localization ($O\mathcal{L}_1$) of indivisible quanta is formed three charging ($p - e, v_\mu - \gamma_0, v_e - \gamma$) (fig. 1) and two mass ($e - v_\mu, \gamma_0 - v_e$) isopotentials. Similarly everything ($O\mathcal{L}_2$), ($O\mathcal{L}_3$) ... ($O\mathcal{L}_j$) and ($O\mathcal{L}_0$), ($O\mathcal{L}_{-1}$), ($O\mathcal{L}_{-2}$) ... ($O\mathcal{L}_i$) Areas of Localization ($O\mathcal{L}_{ji}$) of physical vacuum. Each power quantum, ($X\pm = p_j$), ($Y\pm = e_j$) in ($O\mathcal{L}_j$) levels has the power level (singularity) ($X\pm = v_i$), ($Y\pm = \gamma_i$) quanta of physical vacuum below which they do not prove. They form Indivisible Areas of space - matter of their settlement mass characteristics.

Table 11.1

$\sqrt{GM}(p_j)k\sqrt{GM}(e_i)=1$	$M(e_j)kM(\gamma_i)=1$
$\sqrt{GM}(p_1)(k=1,8)\sqrt{GM}(v_\mu)=1$	$M(e_1)(k=3,2)M(\gamma_0)=1$
$\sqrt{GM}(p_2)(k=1,7)\sqrt{GM}(v_e)=1$	$M(e_2)(k=3,15)M(\gamma)=1$
$\sqrt{GM}(p_3)(k=17)\sqrt{GM}(v_1)=1$	$M(e_3)(k=3,8)M(\gamma_1)=1$
$\sqrt{GM}(p_4)(k=1,83)\sqrt{GM}(v_2)=1$	$M(e_4^-)(k=3,15)M(\gamma_2)=1$
$\sqrt{GM}(p_5)(k=1,83)\sqrt{GM}(v_3)=1$	$M(e_5)(k=3,15)M(\gamma_3)=1$
$\sqrt{GM}(p_6)(k=18,9)\sqrt{GM}(v_4)=1$	$M(e_6^+)(k=3,9)M(\gamma_4)=1$
$\sqrt{GM}(p_7)(k=1,82)\sqrt{GM}(v_5)=1$	$M(e_7)(k=3,5)M(\gamma_5)=1$
$\sqrt{GM}(p_8)(k=1,83)\sqrt{GM}(v_6)=1$	$M(e_8^-)(k=3,17)M(\gamma_6)=1$
.....

For example, quanta of a cores of "heavy" atom ($P^2/n_2 + e_2$) (a star cores) prove in physical vacuum at the level of an electronic neutrino (v_e) and a photon (γ), according to the submitted table. Quanta ($P^4/n_4 + e_4$) of a cores of galaxies, prove at the level over light neutrinos (v_2) and photons (γ_2), with speeds ($v = \alpha^{-1} * c = 137 * c$). Quanta ($P^6/n_6 + e_6$) of a cores of quasars, prove in physical vacuum, at the level over light neutrinos (v_4) and photons (γ_4), in space of speeds ($v = \alpha^{-2} * c = 137^2 * c$). Besides there are quanta of galactic ($P^3/n_3 + e_3$) and extragalactic ($P^5/n_5 + e_5$) Black Holes, in the center of a congestion of stars and galaxies, respectively. Optical photons (γ) have the closed trajectories (Y-) in their structural forms and do not leave such objects.

Such quantum system of coordinates (OL_{ji}) of levels of Indivisible Quanta, has mutually orthogonal points $r_0(X-) \perp r_0(Y-)$ and $(X-) \perp (Y-)$, in dynamic multilevel space of speeds, with local basic vectors:

$$(X-) = e_X(x^n) * \cos(\omega\varphi)_X \quad \text{and} \quad (Y-) = e_Y(y^n) * \cos(\omega\varphi)_Y,$$

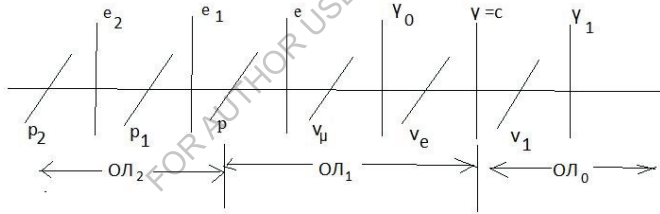
where dynamic $\varphi(X-)$ and $\varphi(Y-)$ corners of parallelism of lines trajectories, with dynamic system of coordinates $(x^n) \neq const$ and $(y^n) \neq const$, are real in the Universe, not stationary Euclidean space, ω - the angular speed $(X-)$ или $(Y-)$ of a trajectory.

For example, the speed of an electron and photon are connected by a ratio: $(v_e = \alpha * c)$, $\alpha = 1/137 = v_e/c = \cos(\omega\varphi)_Y$, cosine of a limit corner of parallelism $(Y-)$ of trajectories (fig. 1). Similar to proton speed $(v_p = \sqrt{G} * c_v)$, where $G = 6.67^{-8} = \cos(\omega\varphi)_X$.

7.4. Mathematical interpolation.

7.5.

In system of coordinates $OL_{ji}(m)$ of convergence of quanta $(X\pm), (Y\mp), (X\pm), \dots$ dynamic space matter, OL_j also OL_i levels charging $(X= Y+)$ and mass $(Y= X+)$ isopotentials are allocated. On an example OL_1 - the level of indivisible (HOJ) of quanta of space matter



They have an appearance: three $(X- = p) = (Y+ = e)$, $(X- = v_\mu) = (Y+ = \gamma_0)$, $(X- = v_e) = (Y+ = \gamma = c)$ charging and two mass $(Y- = e) = (X+ = v_\mu)$, $(Y- = \gamma_0) = (X+ = v_e)$ isopotentials. The reality facts are that. Therefore by analogy $OL_2, OL_3, OL_4 \dots OL_j$ levels of "heavy" quanta and $OL_0, OL_{-1}, OL_{-2} \dots OL_i$ levels of quanta of Physical Vacuum of all Universe within plankovsky scales are defined by such isopotentials. $HOJ = 10^{33} \text{cm} 10^{-33} \text{cm} = 1$, , fundamental constants (\hbar, c, α, G) in OL_1 - the level of indivisible quanta and seen in the optical horizon of the Universe.

Thus, there is a sequence of OL -levels of Physical Vacuum in a look:

$$HOJ = OL_1 \dots OL_4 OL_3 OL_2 OL_1 OL_0 OL_{-1} OL_{-2} \dots OL_i = 1$$

According to space matter axioms, $HOJ = K\mathcal{E}(m)K\mathcal{E}(n) = 1$, take place, or in this case ($K\mathcal{E} = OL$), in the form of $HOJ = OL_j OL_i = 1$. It means that in the chosen direction $z = g_{ii}(x^n) = 1$, spaces of speeds of $HOJ = W_j v_i = 1$, singularity objects $R_{ji}(n)$, with a fundamental tensor $e_i e_k = g_{ik}(x^n)$ uniform space matter $(x^n \neq const) = (X- = Y+)(X+ = Y-)$ the ratio takes place:

$$\text{HOI} = (\text{OJ}_1 \dots (\text{OJ}_5 \{ \text{OJ}_4 (\text{OJ}_3 \{ \text{OJ}_2 (z) \text{OJ}_1 \} \text{OJ}_0) \text{OJ}_1 \} \text{OJ}_2) \dots \text{OJ}_i) = 1.$$

Proceeding from ratios in levels of singularity mass (Y- = X +) fields:

$M(e_j)M(\gamma_i) = 1$	$M(p_j)m(v_i) = 1$
$M(e_1)(k = 3,2)M(\gamma_0) = 1$	$\sqrt{G}p_1^-(1,8)v_\mu\sqrt{G} = 1$
$M(e_2)(k = 3,15)M(\gamma) = 1$	$\sqrt{G}p_2^-(1,7)v_e\sqrt{G} = 1$
$M(e_3)(k = 3,8)M(\gamma_1) = 1$	$\sqrt{G}p_3^+(17)v_1\sqrt{G} = 1$
$M(e_4^-(k = 3,15)M(\gamma_2) = 1$	$\sqrt{G}p_4^+(1,8)v_2\sqrt{G} = 1$
$M(e_5^-(k = 3,15)M(\gamma_3) = 1$	$\sqrt{G}p_5^-(1,8)v_3\sqrt{G} = 1$
$M(e_6^+(k = 3,9)M(\gamma_4) = 1$	$\sqrt{G}p_6^-(18,9)v_4\sqrt{G} = 1$

all space matter, is represented podprostanstvo $\text{OJ}_j \dots \text{OJ}_i$ of indivisible quanta, with $\text{HOI} = \{ \text{OJ}_2 \text{OJ}_1 \} = 1$, $\text{HOI} = \{ \text{OJ}_3 \text{OJ}_0 \} = 1$, $\text{HOI} = \{ \text{OJ}_4 \text{OJ}_{-1} \} = 1$, ... $\text{HOI} = \{ \text{OJ}_i \text{OJ}_i \} = 1$, levels of singularity. There is a question how to determine Criteria and funtsionalny properties Indivisible Kvantov $\text{HOI}(X\pm)$ or $\text{HOI}(Y\pm)$ and their field properties uniform (X- = Y+)(X+ = Y-) space matter in all $\text{HOI} = \text{OJ}_j \text{OJ}_i = 1$, subspaces and their combinations.

To define properties of each OJ_j , OJ_i of a subspace and their combinations in system of coordinates of $\text{OJ}(m-n)$ of convergence of dynamic space matter, we use mathematical interpolation of properties from the OJ_1 -level of physical vacuum in OJ_j , subspace OJ_i in the $\text{OJ}_{ji}(m)$ system of coordinates of indivisible quanta of $\text{HOI} = 1$.

In such $\text{OJ}_{ji}(m)$ system of coordinates, transition from $\text{OJ}_1 \dots \text{OJ}_4 \text{OJ}_3 \text{OJ}_2$ - levels of physical vacuum in $\text{OJ}_0 \text{OJ}_{-1} \text{OJ}_{-2} \dots \text{OJ}_i$ - levels, is relative (OJ_1)- level, has an appearance of a matrix of transformations to $\text{HOI} = \{ \text{OJ}_j \text{OJ}_i \} = 1$ condition of dynamic space matter, namely:

$$\text{HOI} = \begin{pmatrix} z & \text{OJ}_1 & \text{OJ}_0 & \text{OJ}_{-1} & \dots & \text{OJ}_i \\ \text{OJ}_2 & \text{OJ}_{2,1} & \text{OJ}_{2,0} & \text{OJ}_{2,-1} & \dots & \text{OJ}_{2i} \\ \text{OJ}_3 & \text{OJ}_{3,1} & \text{OJ}_{3,0} & \text{OJ}_{3,-1} & \dots & \text{OJ}_{3i} \\ \text{OJ}_4 & \text{OJ}_{4,1} & \text{OJ}_{4,0} & \text{OJ}_{4,-1} & \dots & \text{OJ}_{4i} \\ \dots & \dots & \dots & \dots & \dots & \dots \\ \text{OJ}_j & \text{OJ}_{j,1} & \text{OJ}_{j,0} & \text{OJ}_{j,-1} & \dots & \text{OJ}_{ji} \end{pmatrix} = 1,$$

Here diagonal elements $\text{OJ}_{2,1} = \text{HOI} = \{ \text{OJ}_2 \text{OJ}_0 \} = 1$, $\text{OJ}_{3,0} = \text{HOI} = \{ \text{OJ}_3 \text{OJ}_0 \} = 1$,

$\text{OJ}_{4,-1} = \text{HOI} = \{ \text{OJ}_4 \text{OJ}_{-1} \} = 1$, $\text{OJ}_{ji} = \text{HOI} = \{ \text{OJ}_j \text{OJ}_i \} = 1$, is similar basic g_{ik} - to vectors, represent levels of singularity of physical vacuum as a reference system in the general space matter, with any (x^n) - system of coordinates. Their work gives a normalization:

$\text{HOI} = (\text{OJ}_1 \dots (\text{OJ}_5 \{ \text{OJ}_4 (\text{OJ}_3 \{ \text{OJ}_2 (z) \text{OJ}_1 \} \text{OJ}_0) \text{OJ}_1 \} \text{OJ}_2) \dots \text{OJ}_i) = 1 \cdot 1 \cdot 1 \cdot 1 \cdot 1 \dots 1 = 1$, in strict accordance with axioms of dynamic space matter.

Not diagonal elements of a matrix give "projections" of various OJl - levels on various levels of singularity of physical vacuum. For example the matrix element $OJl_{2,-1}$, this work ($OJl_2 \cdot OJl_{-1}$) levels of indivisible quanta, is more faithful than them Criteria in uniform fields ($X^- = Y^+$), ($X^+ = Y^-$) fields of uniform HOJl = $(X \pm)(Y \mp) = 1$, spaces matters.

$$\text{Minors of such matrix: } : \text{HOJl} = (z = g_{ik}) \begin{vmatrix} OJl_{2,1} & OJl_{2,0} & OJl_{2,-1} & \dots & OJl_{2i} \\ OJl_{3,1} & OJl_{3,0} & OJl_{3,-1} & \dots & OJl_{3i} \\ OJl_{4,1} & OJl_{4,0} & OJl_{4,-1} & \dots & OJl_{4i} \\ \dots & \dots & \dots & \dots & \dots \\ OJl_{j,1} & OJl_{j,0} & OJl_{j,-1} & \dots & OJl_{ji} \end{vmatrix} = + \dots \text{ can be}$$

represented or diagonal system of coordinates in levels of singularity of physical vacuum here, or in lines or columns of elements of the general matrix.

Each OJl- level is allocated with three charging and two mass isopotentials of indivisible quanta of HOJl=1. Their vortex fields presented by the equations (Maxwell) for electro ($Y^+ = X^-$) magnetic also gravit ($X^+ = Y^-$) mass fields, with a matrix of transformations

$$\text{HOJl} = \begin{vmatrix} z_1 & a_{12}(Y^+) & a_{13}(X^+) \\ a_{21}(X^-) & z_2 & a_{23}(Y \pm) \\ a_{31}(Y^-) & a_{32}(X \mp) & z_3 \end{vmatrix} = \\ = z_1 \begin{vmatrix} z_2 & a_{23}(Y \pm) \\ a_{32}(X \mp) & z_3 \end{vmatrix} + z_2 \begin{vmatrix} z_1 & a_{13}(X^+) \\ a_{31}(Y^-) & z_3 \end{vmatrix} + z_3 \begin{vmatrix} z_1 & a_{12}(Y^+) \\ a_{21}(X^-) & z_2 \end{vmatrix};$$

also are represented by indivisible quanta in uniform fields of space matter.

For example, for OJl_1 - the level of indivisible quanta representation takes place:

$$OJl_1 = \begin{vmatrix} z_1 & (X \pm)_p & (X \pm)_{v_\mu} & (X \pm)_{v_e} \\ (Y \pm)_e & z_2 & (e \cdot v_\mu) & (e \cdot v_e) \\ (Y \pm)_{\gamma_0} & (\gamma_0 \cdot p) & z_3 & (\gamma_0 \cdot v_e) \\ (Y \pm)_\gamma & (\gamma \cdot p) & (\gamma \cdot v_\mu) & z_4 \end{vmatrix} \equiv 1$$

in uniform isopotential charging ($Y^+ = X^-$) and mass ($X^+ = Y^-$) fields. For example:

$q_e(Y^+ = X^-)q_p = q^2 = \hbar ac$, or in mass fields: $(Gv_\mu/\pi\sqrt{2})(X^+ = Y^-)(Ge/\pi\sqrt{2}) = \hbar c$, similarly $(Gv_e)(X^+ = Y^-)(G\gamma_0) = \hbar c$.. Combinations $(\gamma_0 \cdot p)$ are known $G^*m(p)/2 = m(\gamma_0)$ well as $(\gamma \cdot v_\mu)$ as $G^*m(v_\mu)/2 = m(\gamma)$, annihilation products. By analogy all $OJl_j \dots OJl_i$. are presented. Changes only combinations of structural forms on (n) - convergence with limit $\cos\varphi_x = \sqrt{G}$, and $\cos\varphi_\gamma = \alpha$, constants. Then in the general matrix, not diagonal elements of a matrix $OJl_{2,-1}$, for example, it is represented the work : $OJl_{2,-1} = (OJl_2 \cdot OJl_{-1})$ of such matrixes, by standard rules of multiplication of the Criteria of Evolution (CE) of indivisible quanta, like OJl_1 matrix, already in uniform fields with space of speeds of space - to matter in which KE are formed all. Thus, mathematical representation of any subspace, any level of singularity, any indivisible quanta of space - matter and their structural forms in limits takes place: $HOJl = 10^{33}\text{cm}10^{-33}\text{cm} = 1$, the plankovsky sizes measured in OJl_1 - the level of particles known to us, in the field of the Universe.

The following mathematical truth is the fact that on infinite radiuses of all space matter of the Universe ($r_j(X-) \rightarrow \infty$) with its mass ($\lambda_i(Y-) \rightarrow \infty$) trajectories, matter density ($\rho_j(X-) \rightarrow 0$), ($\rho_i(Y-) \rightarrow 0$), disappears in zero. Own time of dynamics (t) comes down to zero in axioms

HOJI=($t \rightarrow 0$)($T \rightarrow \infty$)=1, dynamic space matter, as well as dynamics

$$(b=(r_j(X-) \rightarrow \infty)(\rho_j(X-) \rightarrow 0) \rightarrow 0), (b=(\lambda_i(Y-) \rightarrow \infty)(\rho_i(Y-) \rightarrow 0) \rightarrow 0)$$

mass trajectories. In other words, disappearance in zero mass of dynamic space matter on infinity, with delay in zero time ($t \rightarrow 0$) its dynamics ($b \rightarrow 0$) is the mathematical truth. On the other hand, ($r_i(X-) \rightarrow 0$) takes place ($\rho_i(X-) \rightarrow \infty$), and ($\lambda_j(Y-) \rightarrow 0$), ($\rho_j(Y-) \rightarrow \infty$), with the corresponding interpretations and laws conservation of energy.

Summary.

There is no space without matter and there is no matter outside of space. The main property of matter is movement. The paper considers the properties of dynamic space, which have the properties of matter. Dynamic space-matter follows from the properties of the Euclidean axiomatics. The geometric facts of dynamical space determine axioms that do not require proof. In the framework of the axioms of dynamic space, the physical properties of matter are determined. In a unified mathematical truth, Maxwell equations for the electromagnetic field and equations of the dynamics of the gravitational mass field are derived. Already from these equations inductive mass fields follow, like inductive magnetic fields. These are two mathematical truths and two physical realities. Further. In a single mathematical truth, the equations of the Special Theory of Relativity and the equations of quantum relativistic dynamics are derived. Such equations are impossible in the Euclidean axiomatics. Einstein's tensor is also the mathematical truth of the difference in relativistic dynamics at two points in Riemannian space. The principle of equivalence of inert and gravitational masses is an axiom of the dynamic space of mass trajectories in a gravitational field. The complete equation of the General Theory of Relativity is deduced as the mathematical truth of a dynamic space-matter with elements of quantum gravity. Unlike the Einstein equation, in the complete equation of the General Theory of Relativity, the gravitational constant follows as mathematical truth. The acceleration equations of a quantum gravitational quasipotential field are derived in the framework of field theory. In the framework of this equation, the perihelion of Mercury, the nucleus, and the hidden masses of the Galaxy were calculated. In elementary particle physics there are unsolvable contradictions. For example, the fractional charge of quarks that form the proton charge and just such a positron charge, but without quarks. In the properties of dynamic space-matter, the proton and electron charges are calculated in a single way. There are limits of applicability of the Euclidean axiomatics which are determined by the uncertainty principle, the wave function. A scalar field is introduced into the calibration field to maintain relativistic invariance in quantum fields. There is no quantum relativistic dynamics. In turn, the Quantum Theory of Relativity is impossible in the Euclidean axiomatics. Already in an artificially created scalar field, in the model of Spontaneous Symmetry Breaking, the Higgs boson theory and the Electroweak interaction theory are being constructed. In both cases, the masses of these bosons are calculated in the framework of a dynamic space-matter without artificially created scalar bosons. In general, Euclidean axiomatics is a special case of a fixed state of dynamic space-matter. This reflects the reality of the properties of dynamic space-matter recorded in experiments. This is the technology of modern theories. In the framework of

the axioms of dynamic space-matter, a fundamentally new technology of theories themselves is considered.

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