Quantum Gravitation in the Uniform Theory Updated

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Abstract

A single theory is not a theory of everything. These are unified equations for electromagnetic fields (Maxwell) and equations for gravitational fields. These are the unified equations of relativistic dynamics of the Special Theory of Relativity and quantum relativistic dynamics. These are the unified equations of the General Theory of Relativity and quantum gravity.

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Introduction.

A single theory is not a theory of everything. These are unified equations for electromagnetic fields (Maxwell) and equations for gravitational fields. These are the unified equations of relativistic dynamics of the Special Theory of Relativity and quantum relativistic dynamics. These are the unified equations of the General Theory of Relativity and quantum gravity.

Keywords: space of matter, quantum gravitation, uniform theory

Chapters

1. Space-time is a special case of the space of matter
2. General equations of electromagnetic (Maxwell) and gravity mass field.
3. General equations of the Special Theory of Relativity and quantum relativistic dynamics.
4. Scalar bosons.
5. The spectrum of undivided quanta of space-matter.
6. General equations of the General Theory of Relativity and quantum gravity.
7. Dynamics of the Universe.

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

Modern physics has a lot of different problems and facts, which go out of the frame of its theoretical views. Theoretical models and fundamental views are contradictory. Mathematics answers the question HOW? physics answers the question WHY? We will look for physical reasons.

It is very important. If (+) a proton charge (p^+), in quark ($p = uud$) models is presented by a 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, completely the same (+) charge (e^+) of positron does not have any quarks. Such model and view of(+) charge does not correspond to reality. In addition, a proton does not emit an exchange photon in charge interaction with an electron of an atom. The Euclidean axiomatic itself has its own insoluble contradictions. For example,

1. Many point at one point, gives a point again. Is it a point or a set of them, determined by the elements and their relationship?

2. Many lines in one "length without width", gives a line again. Is it a line or a set of them defined similarly?

Euclidean axiomatic does not provide answers to such questions. If in times before our era, these axioms suited everyone, for measuring areas, volumes ..., then in modern research such axioms simply do not work. These ones and many other fundamental contradictions do not have any solutions in theories.

The main characteristic of matter – movement. It is presented by a dynamic space-matter with non-stationary Euclidean space. Straight lines of dynamic ($\varphi \neq const$) beam, do not cross initial line ($AC \to \infty$) on infinity (Fig. 1.), it means that they are parallel. This means that when moving along the AC line, there is always a space (X-) into which we cannot get.

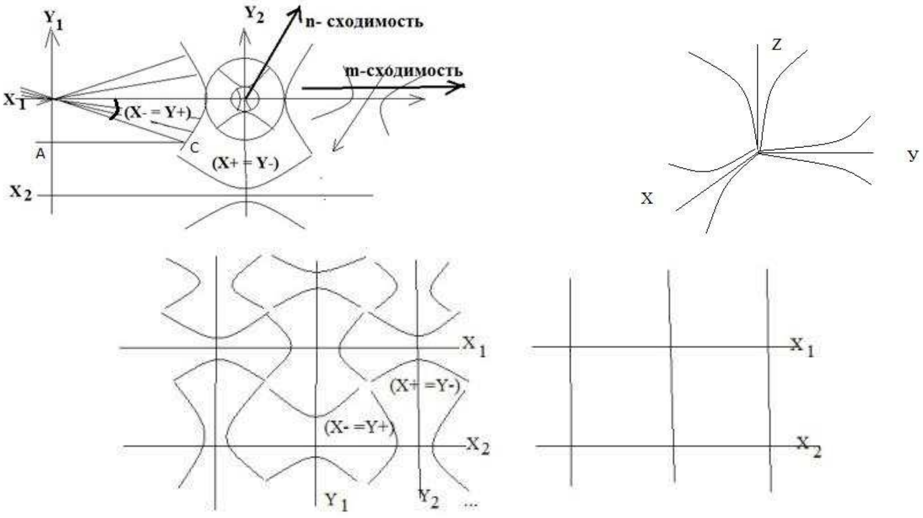

Fig. 1. Dynamic space-matter.

Such dynamic ($\varphi \neq const$)space-matter has its own geometrical facts, as axioms, that do not require any evidence. In two-dimension space, zero angle of parallelism (φ=0) for (X-) и (Y-) lines, gives Euclidean straight lines. In a maximum case of zero angle of parallelism (φ = 0) in each axis, a dynamic space-matter goes into the Euclidean space, as particular case of a dynamic space-matter. It is profound and principal changes of technology of theoretical researches, which form our views about the natural world. As we see, in Euclidean view of space, we do not see everything. Such dynamic $(\varphi \neq const)$space-matter has its own geometrical facts, as axioms, that do not require any evidence.

Axioms of dynamic space-matter

1. Non-zero, dynamic angle of parallelism, of a beam of parallel lines, determines orthogonal fields $(X-) \perp (Y-)$ of parallel lines - trajectories, as isotope characteristics of space-matter.

2. Zero angle of parallelism$(\varphi = 0)$, gives «length without width» with zero or non-zero (Y_0) - radius of sphere-point «That does not have parts» in Euclid $(\varphi \neq 0) \neq const$ e an axiomatic.

3. A beam of parallel lines with zero angle of parallelism$(\varphi = 0)$, «equally located to all its points», gives variety of straight lines in one «without width» Euclidean straight line.

4. Inside $(X -), (Y-)$ and outside $(X +), (Y+)$ fields of lines-trajectories non-zero$(X_0 \neq 0)$ or $(Y_0 \neq 0)$ of physical sphere-point, form Undivided Region of Localization $\text{НОЛ}(X \pm)$ or $\text{НОЛ}(Y \pm)$of dynamic space-matter.

5. In single fields $(X-= Y+)$, $(Y-= X+)$ of orthogonal lines-trajectories $(X-) \perp (Y-)$ there are no two the same sphere-points and lines-trajectories.

6. Sequence of Undivided Regions of Localization$\text{НОЛ}(X \pm)$, $(Y \pm)$,$(X \pm)$… on radius $X_0 \neq 0$ or $(Y_0 \neq 0)$ of sphere-point on one line-trajectory gives (n) convergence, and on different trajectories (m) convergence.

7. To each Undivided Region of LocalizationНОЛ of space-matter corresponds the unit of all its Criterion of Evolution (КЭ), in single $(X-= Y+)$, $(Y-= X+)$ space-matter on $(m-n)$convergences,

$$\text{НОЛ} = \text{КЭ}(X-= Y +)\text{КЭ}(Y-= X +) = 1, \qquad \text{НОЛ} = \text{КЭ}(m)\text{КЭ}(n) = 1,$$

In the system of numbers that are equal by analogy of numbers 1.

8. Fixation of an angle $(\varphi \neq 0) = const)$ or $(\varphi = 0)$a beam of straight parallel lines, space-matter, gives 5th postulate of Euclid and an axiom of parallelism.

Any point of fixed lines-trajectories is presented by local basic vectors Rimanov's space:

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

With 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, Rimanov's space is fixed$(\varphi \neq 0) = const)$ state of dynamic $(\varphi \neq const)$ space-matter. Particular case of negative curvature $\left(K = -\frac{Y^2}{Y_0} = \frac{(+Y)(-Y)}{Y_0}\right)$ (Smirnov b.1,p.186) Rimanov's space is space of Lobachevski's geometry (Math encyclopedia b.5, p.439).

These axioms already solve the problems of the Euclidean axiomatic of a set of points at one point "without parts" and a set of lines in one "length without width" of a line.

Uniform Criteria of Evolution of space-matter.

All Criteria of Evolution of dynamic space matter, are created

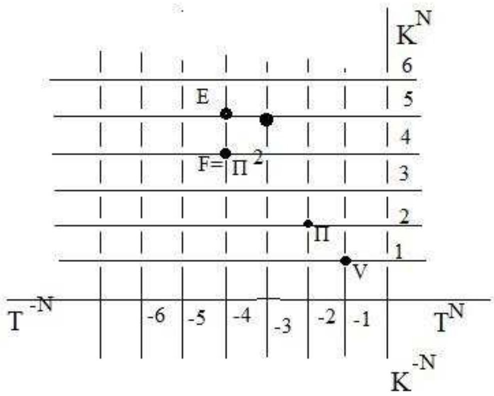

Fig. 1.1. Criteria of Evolution in space-time.

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

2.Electro (Y+ =X -) magnetic and gravity (X+=Y-) mass fields.

In uniform (X + = Y-) (Y + = X-) =1, space - matter, remove Maxwell's equations 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, b.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: $\int_{L_2} A_n dL_2 = \iint_{S_2} rot_m \frac{A_n}{\cos\varphi_X} dS_2$.

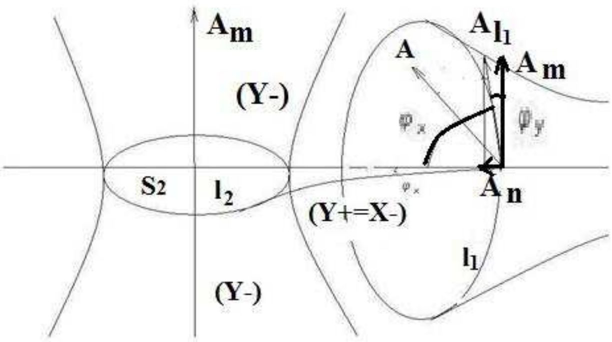

Fig. 2. Electro (Y+ =X -) magnetic and gravity (X+=Y-) mass fields.

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 $\varphi_Y = 0$ axiomatic, 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

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

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

Maxwell's equations.

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

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

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 orthogonally $A_n \perp A_m$ the vector component A, in nonzero, dynamic $(\varphi_X \neq const)$ and $(\varphi_Y \neq const)$ 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 streams through S_1 a whirlwind surface ($rot_n A_m$) out of a space angle $(\varphi_Y \neq const)$ of parallelism corresponds to conditions

$$\iint_{S_1} rot_n A_m dS_1 \; + \; \iint \frac{\partial A_m}{\partial T} dL_1 dT = 0 = \iint_{S_1} A_n (Y-) dS_1 .$$

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

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

$$\iint_{S_1} rot_n A_m (X+) dS_1 = -\iint \frac{\partial A_m (Y-)}{\partial T} dL_1 dT , \qquad \iint_{S_1} A_n (Y-) dS_1 = 0 .$$

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

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

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

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

$$c * rot_Y M(Y-) = rot_Y N(Y-) = \varepsilon_2 * \frac{\partial G(X+)}{\partial T} + \lambda * G(X+)$$

$$M(Y-) = \mu_2 * N(Y-); \qquad rot_y G(X+) = -\mu_2 * \frac{\partial N(Y-)}{\partial T} = -\frac{\partial M(Y-)}{\partial T} ;$$

By analogy with Maxwell's equations for electro(Y+ =X -) magnetic fields. Here the uniform mathematical truth of such fields in uniform, dynamic space-matters is presented. From these truths follows the induction of a mass field in a dynamic gravitational field, similar to the induction of a magnetic field in a dynamic electric field.

3.General equations of the Special Theory of Relativity and quantum relativistic dynamics.

Special Theory of Relativity (STR).	Quantum Theory of Relativity (QTR).
Classical representation: $Y^2 \pm (icT)^2 = \left(a^2 = \frac{c^4}{b^2} = const \right) = \bar{Y}^2 \pm (ic\bar{T})^2$ Circular $(+)$ or hyperbolic $(-)$ uniformly accelerated movement. 1). $\bar{X} = a_{11}X + a_{12}Y$, $\quad Y = icT$, $\quad T = \frac{Y}{ic}$, $\bar{X} = a_{11}X + a_{12}\frac{Y}{ic}$ $\frac{\bar{Y}}{ic} = a_{21}X + a_{22}\frac{Y}{ic}$ $\bar{Y} = a_{21}X + a_{22}Y$, $\quad \bar{Y} = ic\bar{T}$, 2). $\begin{matrix} \bar{X} = a_{11}X + \frac{a_{12}}{ic}Y \\ \bar{Y} = a_{21}icX + a_{22}Y \end{matrix}$. $a_{11} = b_{11}$, $\frac{a_{12}}{ic} = ib_{12}$, $a_{21}ic = ib_{21}$, $\quad a_{22} = b_{22} . a_{22} = b_{22}$. 3). $\begin{matrix} \bar{X} = b_{11}X + ib_{12}Y \\ \bar{Y} = ib_{21}X + b_{22}Y \end{matrix}$, $\quad \delta_{KT} = 1$ для $K = T$, $b_{11}^2 - b_{12}^2 = 1 = b_{22}^2 - b_{21}^2$ Conditions of orthogonally vector component. In Globally Invariant conditions of the sphere	The special Theory of Relativity is invalid under conditions: 1). not the uniformly accelerated $(a^2 \neq const)$ movement. 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. 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 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 $\psi = K_Y - Y_O$. $Y = K_Y$ $X = K_X$ $\bar{K}_Y = a_{11}K_Y + a_{12}K_X$ 1). $\bar{K}_X = a_{21}K_Y + a_{22}K_X$ where $K_X = cT$, $T = \frac{K_X}{c}$, time is entered.

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

$b_{12} = -\dfrac{a_{12}}{c}$, $b_{21} = a_{21}c$ $b_{12} + b_{21} = 0$, take place: $a_{21}c = \dfrac{a_{12}}{c}$, or for: $c = \dfrac{\Delta Y}{\Delta T}$, $\dfrac{a_{21}\Delta Y}{\Delta T} = \dfrac{a_{12}\Delta T}{\Delta Y}$.

4). Further two cases take place.

a). Conditions $(a_{21} = 0 = a_{12})$, nullify projections $\Delta Y = ic\Delta T$, dynamic 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 …" $\chi\sqrt{1 - \dfrac{W^2}{c^2}}$, orSmirnov (b.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:

$$\overline{X} = bX + iabY$$
$$\overline{Y} = -iabX + bY,$$

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

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

$\overline{X} = \dfrac{X + iaY}{\sqrt{1 - a^2}}$, $\overline{Y} = \dfrac{Y - iaX}{\sqrt{1 - a^2}}$.

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

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

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

Lorentz's transformations in classical relativistic dynamics

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

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

<u>Transition</u>QTR <u>in</u> STR.

The mathematical truth of transition of the

$\overline{K}_Y = a_{11}K_Y + \dfrac{a_{12}}{c}K_X$

2). $\dfrac{\overline{K}_X}{c} = a_{21}K_Y + \dfrac{a_{22}}{c}K_X$ or $\overline{K}_Y = a_{11}K_Y + \dfrac{a_{12}}{c}K_X$, $\overline{K}_X = a_{21}cK_Y + a_{22}K_X$.

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:

$\overline{K}_Y = ia_{11}K_Y + (\dfrac{a_{12}}{c} = b_{12})K_X$

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

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

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

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

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

Period $(T = 1)$. In Globally - Invariant conditions $ia_{11} = ia = ia_{22}$, the matrix has an appearance

6). $\begin{matrix}\overline{K}_Y = ia_{11}K_Y + b_{12}K_X \\ \overline{K}_X = b_{21}K_Y + ia_{22}K_X\end{matrix}$, or $\begin{matrix}\overline{K}_Y = iabK_Y + bK_X \\ \overline{K}_X = bK_Y + iabK_X\end{matrix}$,

$$\overline{K}_Y = iabK_Y + bK_X$$
$$\overline{K}_X = bK_Y + iabK_X$$

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

7). In the conditions of orthogonally $\delta_{KT} = 1$ $K = T$, 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:

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

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

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

It is also the decisive moment of relativistic dynamics of quantum of space matter, whichis presented in modern theories by the calibration A_K field.

$$\psi = \psi_0 \exp(ap \neq const) + A_K$$

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

Quantum Theory of Relativity to transformations of the Special Theory of Relativity takes place. For zero corners of parallelism in Euclidean axiomatic, with speeds smaller velocity of light $W_Y < c$, limit cases of transition of quantum relativistic dynamics vector a component take place $a_{22} = (\cos(\alpha^0 = 0) = 1) = a_{11}$ $a_{22} = 1$ $a_{11} = 1$ $Y = WT$, $(\overline{K}_Y = \overline{Y}) = \frac{(a_{11}=1)(K_Y = Y) \pm WT}{\sqrt{1-W^2(X-)/c^2}}$, $\overline{Y} = \frac{Y \pm WT}{\sqrt{1-W^2/c^2}}$, $\overline{T} = \frac{K_Y/c + (a_{22}=1)T}{\sqrt{1-W^2(X-)/c^2}}$, $K_Y = K(\cos\alpha^0 = \frac{W}{c})$, $\overline{T} = \frac{T \pm KW/c^2}{\sqrt{1-W^2/c^2}}$, in Lorentz's transformations classical relativistic dynamics.	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: $\overline{K}_Y = \frac{a_{11}K_Y + cT}{\sqrt{1-a_{22}^2}}$, $\overline{K}_Y = \frac{a_{11}K_Y + cT}{\sqrt{1-W^2/c^2}}$, $c\overline{T} = \frac{K_Y + a_{22}cT}{\sqrt{1-a_{22}^2}}$, $\overline{T} = \frac{K_Y/c + a_{22}T}{\sqrt{1-W^2/c^2}}$, $\overline{W}_Y = \frac{\overline{K}_Y}{\overline{T}} = \frac{a_{11}K_Y + cT}{K_Y/c + a_{22}T}$, $\overline{W}_Y = \frac{a_{11}W_Y + c}{a_{22} + W_Y/c}$, Local Invariance (LI) in conditions $(a_{22} \neq a_{11}) \neq 1$, in extremely when: $a_{11} = \frac{W}{c} = \alpha = \frac{1}{137.036}$ $W = \alpha\ c$; $\alpha = \frac{q^2}{\hbar c}$ 10). Speed limits $W_Y = c$, in conditions $a_{22} = a_{11} \neq 1$, give $\overline{W}_Y = \frac{c(a_{11}+1)}{(a_{22}+1)} = c$, invariable velocity of light $\overline{W}_Y = c = W_Y$, in any system of coordinates.

Such transformations in angles of parallelism of dynamic space-matter, with induction of relativistic mass are impossible in Euclidean axiomatic. Both theories STR and QTR accept superlight(v_i = N*c) space.

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

4. **Scalar bosons.**

It is impossible to fix an action of quantum ($\hbar = \Delta p \Delta\lambda = F\Delta t\Delta\lambda$) in space ($\Delta\lambda$) or in time ($\Delta t$). It is connected with zero ($\varphi \neq const$) angle of parallelism (X-) or (Y-) trajectory ($X \pm$) or ($Y \pm$) of quantum of space-matter. There is only certain probability of an action. The transformation of relativistic dynamics of wave (ψ)- function of quantum field with density of probability ($|\psi|^2$) of interaction in ($X+$) field (picture 1), corresponds to Globally Invariant$\psi(X) = e^{-ia}\overline{(\psi)}(X)$,($a = const$) Lorenz's group. These transformations correspond to turns in the space of circle S, and relativistic-invariant equation of Dirac.

$$i\gamma_\mu \frac{\partial\psi(X)}{\partial x_\mu} - m\psi(X) = 0, \quad \text{and} \quad i\gamma_\mu \frac{\partial\overline{\psi(X)}}{\partial x_\mu} - m\overline{\psi(X)} = 0.$$

Such invariance gives laws of preservation in equations of movement. For transformation of relativistic dynamics in hyperbaric movement.

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

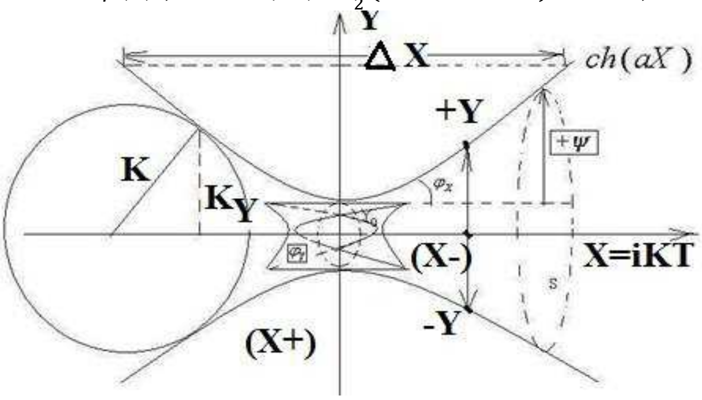

Fig. 3. Quantum ($X \pm$) of dynamic space-matter.

Additional component appears in the equation of Dirac.

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

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

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

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.

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

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

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 $A_\mu(X) = \bar{A}_\mu(X)$. Presence of scalar boson $(\sqrt{(+a)(-a)} = ia(\Delta X) \neq 0) = const$, in the limits of calibration $(\Delta X) \neq 0)$ field (Fig. 3.). These conditions give constant extremals of dynamic space-matter in global invariance. And there are no scalar bosons here. Thus, scalar bosons in calibration fields are produced artificially, to address deficiencies of $A_\mu(X) = \bar{A}_\mu(X) + i\frac{\partial a(X)}{\partial x_\mu}$ Theory of Relativity in quantum fields.

5. **Spectrum of undivided quantum is of space-matter.**

Undivided Regions of localization of quantum's $(X \pm)$, $(Y \pm)$ of dynamic space-matter correlate with stable quantum's of space-matter. In both cases, these are facts of reality. Stable $(Y \pm = e)$ electron, radiates stable $(Y \pm = \gamma)$photon, and interacts with stable $(X \pm = p)$ proton and$(X \pm = \nu_\mu)$, $(X \pm = \nu_e)$ neutrino. In single (X-=Y+), (X+=Y-) space-matter they produce first $ОЛ_1$Localization region of undivided quantum's on their (m-n) convergences (Fig. 4.).

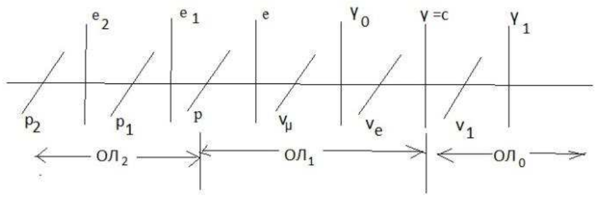

Fig.4. the spectrum of undivided quanta of space-matter.

For preservation of a continuity of single (X-=Y+), (X+=Y-) space-matter, photon $(Y \pm = \gamma_0)$ is introduced, that is equivalent to$(Y \pm = \gamma)$ photon. It corresponds to analogy of anmuon$(X \pm = \nu_\mu)$and electronic$(X \pm = \nu_e)$ neutrino. In this case, both neutrinos (ν_μ), (ν_e) and photons (γ_0), (γ), can accelerate as proton or electron till speeds (γ_1), $(\gamma_{2\ldots})$, via the same Lorenz's transformations. If we have standard, outside of any fields, speed of electron $(W_e = \alpha * c)$, radiating standard, outside of any field photon $(V(\gamma) = c$, constant $\alpha = W_e/c = cos\varphi_Y = 1/137{,}036$ gives by analogy a calculation of speeds $V(c) = \alpha * V_2(\gamma_2)$ for superlight photons in the view: $G = 6{,}67 * 10^{-8}$.

$$V_2(\gamma_2) = (\alpha^{-1}c), \qquad V_4(\gamma_4) = (\alpha^{-2}c), \ldots \qquad V_i(\gamma_i) = (\alpha^{-N}c),$$

in standard, outside of any fields, conditions. Orbital electron, with an angle of parallelism $\alpha = W_e/c = cos\varphi_{MAX}(Y-) = 1/137$, trajectory, does not radiate photon, as in rectilinear, without acceleration, movement. **This postulate of Bohr, as well as the principle of indeterminacy of space-time and Einstein's principle of equivalence, are the axioms of dynamic space-matter.** Dynamics of mass fields in limits$(cos\varphi_{MAX}(X-) = \sqrt{G})$, $(cos\varphi_{MAX}(Y-) = \alpha = 1/137)$, of constants of interaction, gives charge isopotential of their masses, that are equal to one. $m(p) = 938{,}28MeV$,

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

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

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

$$q_e = \frac{(m(\nu_e)/2)(\sqrt{\boldsymbol{2}} * \boldsymbol{G})(m(\nu_e)/2)}{m(\gamma)} = \frac{(1.36 * 10^{-5})^2 * \sqrt{2} * 6{,}67 * 10^{-8}}{4 * 9{,}07 * 10^{-9}} = 4{,}8 * 10^{-10}\text{СГСЕ}$$

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

$$q_p = \frac{(m(\gamma_0^+)/2)(\alpha^2/2)(m(\gamma_0^+)/2)}{m(\nu_e^-)} = \frac{(3{,}13 * 10^{-5}/2)^2}{2 * 137{,}036^2 * 1.36 * 10^{-5}} = 4{,}8 * 10^{-10}\text{СГСЕ}$$

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

$$\hbar = Gm_0\frac{\alpha}{c}Gm_0(1 - 2\alpha)^2 = \frac{(6{,}674*10^{-8})^2*(1-2/(137.036))^2}{137.036*2.993*10^{10}} = 1.054508 * 10^{-27}\text{erg} * \text{s}$$

Or: $m_0 * m_0 = (КЭ = m_m)(КЭ = m_n) = 1$, in the axioms of dynamic space-matter. Similarly, the charge of unit masses is determined$m_0 = 1$, in the form:

$$q = Gm_0\alpha(1-\alpha)^2 = 6{,}674 * 10^{-8}(1/137.036) * (1 - 1/137.036)^2 = 4.8 * 10^{-10}\ ,$$

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. In addition, the proton does not emit an exchange photon during an electromagnetic, charge interaction with an electron of an atom.

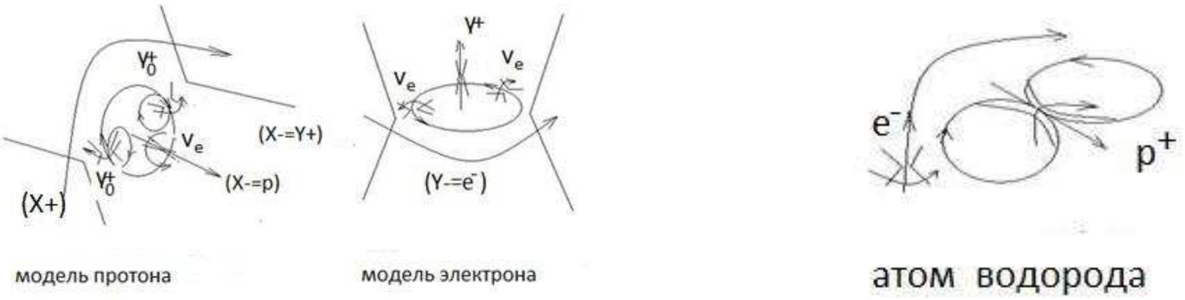

Fig. 5. Mass fields of an atom.

Presence of antimatter in a matter of proton or electron is a geometric fact here. In this case, products of annihilation of proton

$$(\boldsymbol{X}\pm = p^+) = (\boldsymbol{Y}-= \gamma_0^+)(\boldsymbol{X}+= \nu_e^-)(\boldsymbol{Y}-= \gamma_0^+)\ \boldsymbol{,}$$

And products of annihilation of an electron $(Y \pm = e^-) = (\boldsymbol{X}-= \nu_e^-)(Y+= \gamma^+)(\boldsymbol{X}-= \nu_e^-)$**,**

By analogy, in single fields of space-matter Bosons of electroweak interaction:

$$\text{НОЛ}(Y) = (Y+= e^\pm)(X-= \nu_\mu^\mp) = \frac{2\alpha * \left(\sqrt{m_e(m_{\nu_\mu})}\right)}{G} = 81{,}3\ GeV = m(W^\pm),\quad \text{with}\quad \text{charge} e^\pm,$$

$$\text{НОЛ}(X) = (X+= \nu_\mu^\mp)(Y-= e^\pm) = \frac{\alpha * \left(\sqrt{(2m_e)m_{\nu_\mu}exp1}\right)}{G} = 94{,}8\ GeV = m(Z^0)$$

New stable particles

On opposite beams of muon antineutrino(ν_μ^-) in magnetic fields:

$$\text{НОЛ}(Y \pm = e_1^-) = (\boldsymbol{X}-= \nu_\mu^-)(Y+= \gamma_0^+)(\boldsymbol{X}-= \nu_\mu^-) = \frac{2\nu_\mu^-}{\alpha^2} = 10{,}21\ GeV$$

Unstable, these are known levels of upsilonium.

On opposite beams of positrons(e^+), that accelerate in flow of quantum's$(Y- = \gamma)$, of photons of **«white» laser** in a view:

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

On opposite beams of antiprotons(p^-), takes place:

$$\text{НОЛ}(Y \pm = e_2^-) = (\boldsymbol{X}-= p^-)(Y+= \nu_\mu^-)(\boldsymbol{X}-= p^-) = \frac{2m_p}{\alpha^2} = 35{,}24\ TeV$$

For opposite $НОЛ(Y-) = (X+ = p^+)(X+ = p^-)$, Mass of quantum is calculated

$$M(Y-) = (X+= p^+)(X+= p^-) = \left(\frac{m_0}{\alpha} = \overline{m_1}\right)(1-2\alpha),\quad \text{or}$$

$$M(Y-) = \left(\frac{2m_p}{2\alpha} = \frac{m_p}{\alpha} = \overline{m_1}\right)(1-2\alpha) = \frac{0{,}93828\ GeV}{(1/137{,}036)}\left(1 - \frac{2}{137{,}036}\right) = 126{,}7\ \ GeV\ ,$$

This elementary particlewas discovered in collider of CERN.

PS. Based on models of a spectrum of atoms, model of quantum (X± =^4_2He) of a core of helium is

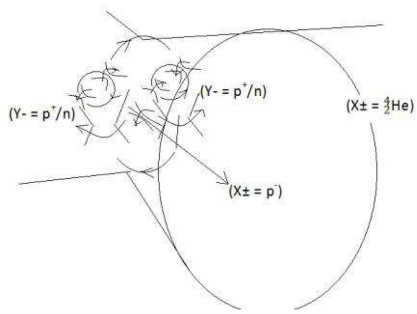

Fig. 5.1Model of quantum

Structural form of quantum's (Y- = p+/n) of Strong Interaction of structured by (X-) field of antiproton (X± = 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 ($^2_1$H) plasma + (p^-) antiprotons of low energies, or ($^3_1$H) plasma + (p^+) protons of high energies. 2 grams of such plasma is equivalent to 25 tons of gasoline.

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

6.1 General Theory of Relativity (GTR) of Einstein in space-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).

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

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

$$\begin{matrix} R_1 = a_{11}Y_1 + 0 \\ R_Y = 0 + a_{YY}Y_Y' \end{matrix} \qquad a_{11} = a_{YY} = \sqrt{G}\ , \qquad R^2 = a_{YY}^2 Y_Y^2 = GY_Y^2\ ,$$

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

For relativistic dynamics:

$$c^2T^2 - X^2 = \frac{c_Y^2}{b_Y^2}, \qquad b_Y = \frac{F_Y}{M_Y}, \qquad c_Y^4 = F_Y\ , \qquad c^2T^2 - X^2 = \frac{M_Y^2}{F_Y},$$

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

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

$$W^2 = \frac{2GM}{R_3}, \qquad F_Y = G\frac{Mm}{R^2(1-2GM/R_3c^2)},$$

It is particular case of General Theory of Relativity. From these relations it follows only that $(1 - 2GM/Rc^2 \neq 0)$. We obtain for the proton mass $(M = 1{,}67 * 10^{-24}g)$with the conditional circle $(2\pi R)$ of the sphere and the limiting velocity$(W = c)$, we have the radius of the proton.

$$R = \frac{GM}{2(2*3.14)c^2} = \frac{6.67*10^{-8}*1.67*10^{-24}}{2*(2*3.14)*9*10^{20}} = 0.98 * 10^{-13}cm.$$

This is the minimal "black hole", with the space of the velocities of quanta $(\gamma_0 + \nu_e + \gamma_0) = p$ less than the speed of light. And this is proof that the neutrino has a nonzero mass. To recognize such "black holes" with an event horizon equal to the speed of light is to divide by zero. But the infinities obtained in this way are not found in mathematics or in nature.

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 $(k = 8\pi G/c^4)$ 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 vacuum,

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

This does not change the conditions for 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 General equations of the General Theory of Relativity and quantum gravity.

Elements quantum gravity (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 Riemannian spaces, as to mathematical true tensor Einstein. (G. Korn, T. Korn, c.508). Here $g_{ik}(1) - g_{ik}(2) \neq 0, \quad e_k e_k = 1$, on conditions $e_i(X-), \quad e_k(Y-)$, fundamental tensor $g_{ik}(x^n) = e_i e_k$ Riemannian spaces in (x^n) system of coordinates.

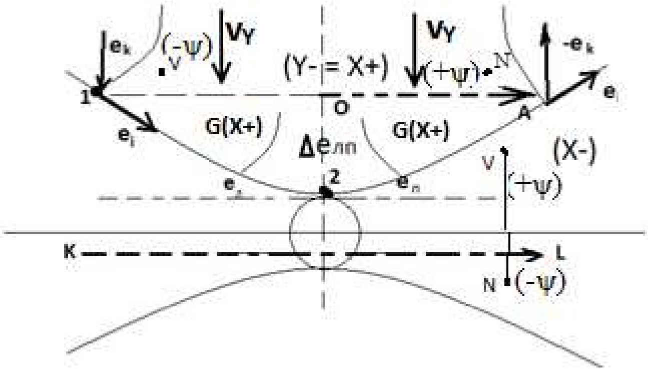

Fig. 6. Quantum gravity (X + = Y-) a mass field.

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

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

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 ($e_л$) and ($e_п$) and we take average value $\Delta e_{лп} = \frac{1}{2}(e_л + e_п)$. Accepting $(e_п = e_к)$ and $g_{ik}(1) - g_{ik}(2) \neq 0$. $\Delta e_{лп} = \frac{1}{2}(e_л + e_к) = \frac{1}{2}e_к(\frac{e_л}{e_к} + 1)$, we will receive:

$$g_{ik}(1)(X+) - g_{ik}(2)(X+) = кT_{ik}(Y-), \quad g_{ik}(1) - \frac{1}{2}e_i e_к\left(\frac{e_л}{e_к} + 1\right)(2) = кT_{ik}, \quad \left(\frac{e_л}{e_к} = R\right).$$

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

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

Average value of a local basic vector Riemannian spaces ($\Delta e_{лп}$), 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 (↓↑) 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 mutual $(Y- = X+)$ action. In the general case, the points V; N (Y-) mass (Fig. 6) or V; N (X-) charge trajectories are identical to each other in the line trajectory of a single beam of parallel straight lines. Each pair of points has its own wave function$\sqrt{(+\psi)(-\psi)} = i\psi$, in the interpretation of quantum entanglement. In this view, quantum entanglement is a fact of reality, which follows from the axioms of dynamic space-matter. The entropy of the quantum entanglement of the set gives a potential gradient, but here the Einstein equivalence principle for inert $v_Y M(Y-) = G(X+)$and gravitational mass is lost.

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 Criteria 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 $\hbar = \Pi^2 KT$ and so on. Let us designate $(\Delta e_{лп} = 2\psi e_k)$, $T_{ik} = \left(\frac{\mathcal{E}}{P}\right)_i \Delta\left(\frac{\mathcal{E}}{P}\right)_{лп} = \left(\frac{\mathcal{E}}{P}\right)_i 2\psi\left(\frac{\mathcal{E}}{P}\right)_к = 2\psi T_{ik}$ in a kind tensor energy $(\mathcal{E})$ – (P) - an impulse with wave function (ψ). The equation from here follows:

$$R_{ik} - \frac{1}{2}Re_i\Delta e_{лп} = \kappa\left(\frac{\varepsilon}{P}\right)_i \Delta\left(\frac{\varepsilon}{P}\right)_{лп} \text{ or } \quad R_{ik}(X+) = 2\psi\left(\frac{1}{2}Re_i e_k(X+) + \kappa T_{ik}(Y-)\right) \quad \text{and}$$

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

This equation of quantum Gravitational potential with dimension $\left[\frac{K^2}{T^2}\right]$ of potential $(\Pi = v_Y^2)$ and spin(2ψ). In brackets of this equation, a member of equation of the General Theory of the Relativity in the form of a potential П(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:

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

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

The parity $G(X+)=grad_l\Pi(X+)$ 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 $\Pi(M)=C_{1,2,3\ldots}$, 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:

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

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: $G(X+)=\frac{\psi}{t_T}grad_l\Pi(X+)\left[\frac{K}{T^2}\right]$.

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

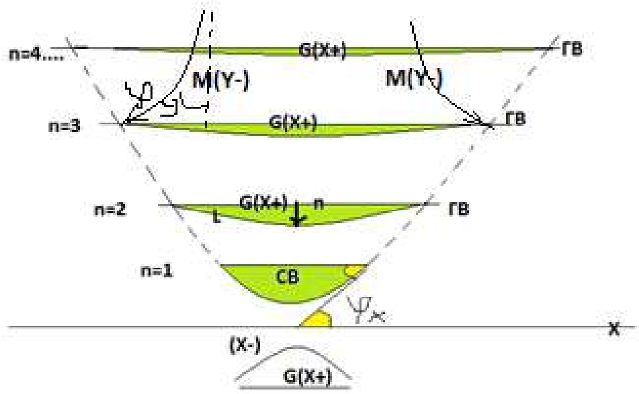

Fig. 7. Quantum gravitational fields.

This chosen direction of a normal fixed in section $n\perp l$. . In dynamical space-matter, it is a question of dynamics $rot_X G(X+)\left[\frac{K}{T^2}\right]$ of fields on the closed $rot_X M(Y-)$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 $(\cos^2\varphi(X-)_{MAX}=G=6.67*10^{-8})$ constant. Here $t_T=\frac{t}{T}=n$, an order of quasipotential surfaces, and

$$(cos\varphi(Y-)_{MAX}=\alpha=\frac{1}{137.036}).\qquad G(X+)\left[\frac{K}{T^2}\right]=\frac{\psi*T}{t}\left(G*grad_nRg_{ik}(X+)+\alpha*grad_nT_{ik}(Y-)\right)\left[\frac{K}{T^2}\right].$$

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 (↓↑), (2ψ).

Fields of accelerations, as it is known, it already force fields. In addition, 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 Δtwithin dynamics period T is represented parity:

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

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:

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

Here $G=6.67*10^{-8}$, $\hbar=\Pi^2\lambda T$ a stream of quantum energy $\varepsilon=\Pi^2\lambda=\Delta mc^2$ 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 $(Y-=X+)$field's mesons. 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:

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

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 $\Delta \boldsymbol{m}(\boldsymbol{Y}-)=\mathbf{17}\ \boldsymbol{MeV}$ 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 field

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

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.

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

<u>For$\boldsymbol{n}\neq \mathbf{1}$,</u> and $n=2,3,4\ldots\to\infty$, we receive quasipotential $G(X+)$ fields of accelerations$G(X+)$ of a quantum gravitational field, as gravitation source $\frac{\psi}{t_T}G * grad_n\left(\frac{1}{2}Rg_{ik}\right)(X+)$, 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:

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

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 - impulse (T_{ik}) concern inductive mass fields in physical vacuum. In brackets, we have a gradient of potentials gravity$(X+=Y-)$a mass field.

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

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

The general gravitational potential $\Pi(X+=Y-)$in a general view includes also potential of a source of gravitation $(\frac{1}{2}Rg_{ik})(X+)$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 rotation this field.

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

For **Mercury**, perihelion $r_м=4{,}6 * 10^{12}$см, at average rate $4{,}736 * 10^6$см$/c$ there is a centrifugal acceleration$a_м=\frac{(v_м)^2}{r_м}=\frac{(4{,}736 * 10^6)^2}{4{,}6 * 10^{12}}=4{,}876\ cm/s^2$. The weight of the Sun$M_s=2 * 10^{33}g$, and Sun radius $r_0=7 * 10^{10}cm$,, create acceleration $G(X+)$ a field of gravitation with $(\psi=1)$ in a kind.

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

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 $r_м=5{,}8 * 10^{12}cm$ in a kind follow. $a_м(X+)-g_м(X+)=\Delta(Y-)=4{,}876-1{,}511=3{,}365\ cm/s^2$. 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 Mercurial in time (T). For $100 years=6.51 * 10^{14}s$, this turn of mass $M(Y-)$ trajectories makes $\frac{\Delta(Y-) * 6.51 * 10^{14}}{r_м * 2\pi\sqrt{2}}(57{,}3^0)=42{,}5''$.
It is about the rotation of all space-matter around the Sun.

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

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

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

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

Similarly $a_з(\text{X}+) - g_з(\text{X}+) = \Delta\,(Y-) = 0,6 - 0,465 = 0,135$ см$/s^2$. 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$r_в = 1.08 * 10^{13} cm$, and speeds $v_в = 3{,}5 * 10^6 cm/s$, centrifugal acceleration of Venus in an orbit makes

$$a_в = \frac{(v_в)^2}{r_в} = \frac{(3{,}5* 10^6)^2}{1.08*10^{13}} = 1{,}134\ \ cm/s^2 \ .$$

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

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

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

$$a_в(\text{X}+) - g_в(\text{X}+) = \Delta\,(Y-) = 1{,}134 - 0.644 = 0{,}49\ cm/s^2 \quad .$$

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 perihelion Mercurial,

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

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

No reason for this shift is visible, except for the curvature of space from the equation of the General Theory of Relativity. The idea is that the difference in the course of the relativistic time in the orbit causes its rotation and is proportional to the eccentricity. In fact, we are talking about the presence of inductive mass M (Y-) fields of space-matter, and their rotation around the Sun, as a cause, in accordance with the equations of dynamics. In other words, space itself revolves around the Sun.

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 $v_s = 2{,}3 * 10^7 cm/s$, weight of a cores of the Galaxy $M_c = 4{,}3 * 10^6 * M_s$; $M_G = 4{,}3 * 10^6 * 2 * 10^{33}(g)$, distance to the centre of the Galaxy 8,5 кпк or $r = 2{,}6 * 10^{22}$см. Centrifugal acceleration of the Sun in a galactic orbit:

$$\mathrm{a}_s = \frac{(v_s)^2}{r} = \frac{(2{,}3*10^7)^2 = 5{,}29*10^{14}}{2{,}6*10^{22}} = 2 * 10^{-8} cm/s^2 \ .$$

Using this technology of calculation, we will estimate core radius of our Galaxy $r_я$. In exactly this formula of calculation, we will receive $(r_я.)$ Core radius of our Galaxy $g_s = G(\text{X}+)$.

$$\mathrm{a}_s = G(\text{X}+) = \frac{1}{r} * G * \alpha * \frac{M_c}{2r_c}, \qquad \text{whence}$$

$$r_c = \frac{1}{r} * G * \alpha * \frac{M_я}{2\mathrm{a}_s} = \frac{6.67*10^{-8}*4{,}3*10^6*2*10^{33}}{2*137*2{,}6*10^{22}*2*10^{-8}} = 4 * 10^{15} cm \approx 267\ \text{a.e.},$$

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

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

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

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

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 $M_s = 2 * 10^{33} g$, $m_E = 5{,}97 * 10^{27} g$, $r_E = 6{,}371 * 10^8 cm$, $m_M = 7{,}36 * 10^{25} g$,

$$r_M = 3{,}844 * 10^{10} cm, \quad G = 6{,}67 * 10^{-8}, \quad \alpha = 1/137,$$

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

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

$$F_2 = \frac{Gm_E m_M}{(r_M)^2} = \frac{6,67*10^{-8}*5,97*10^{27}*7,36*10^{25}}{(3,844*10^{10})^2} = 1,98*10^{25}\ , \quad (F_1/F_2 = 2,2).$$
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:
$$g_E(\mathrm{X}+) = \frac{\pi}{r_M} * G * \frac{M_E}{r_E} * \alpha = \frac{3,14*\sqrt{2}*6,67*10^{-8}*5,97*10^{27}}{137*3,844*10^{10}*6,371*10^{8}} = 0,372\ cm/s^2.$$
The gravitational force of the mass field corresponds within the limits of measurement accuracy.
$$(\Delta F) = m_M * g_E(\mathrm{X}+) = 7,36*10^{25}*0,372 = 2,74*10^{25}.$$
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 $R_s = 6,963*10^{10}cm$, defined as:
$$\varphi = arc\ sin\frac{v}{c}, \text{ or } \quad \frac{v}{c} = \frac{2GM_s}{R_S^2} * \frac{2R_s}{c} * \frac{1}{c} = \frac{4*6,67*10^{-8}*2*10^{33}}{6,963*10^{10}*(3*10^{10})^2} = 8,515*10^{-6},$$
$$\varphi = arc\sin(8,515*10^{-6}) = 0,000488^0 = 1,75''s$$
This angle corresponds to the calculations of the General Theory of Relativity of Einstein.

7.Dynamics of the Universe.

Consider the mathematical truths of the dynamics of the chosen Evolution Criteria. In other Criteria, this will be a different view. If $(R)$is the radius of the non-stationary Euclidean space of the sphere of the visible Universe, then from the classical Special Theory of Relativity, where $(b = \frac{K}{T^2})$ acceleration, $(c^4 = F)$ force, it follows: $R^2 - c^2t^2 = \frac{c^4}{b^2} = \bar{R}^2 - c^2\bar{t}^2$, or $b^2(R\uparrow)^2 - b^2c^2(t\uparrow)^2 = (c^4 = F)$, force. In the unified Criteria, $\left(b = \frac{K}{T^2}\right)(R = K) = \frac{K^2}{T^2} = \Pi$, we talk about the potential in the velocity space $(\frac{K}{T} = \overrightarrow{e})$ vector space in any $\vec{e}(x^n)$ coordinate system, $\Pi = g_{ik}(x^n)$, is the fundamental tensor of the Riemannian space.
$$\Pi_1^2 - \Pi_2^2 = (\Pi_1 - \Pi_2)(\Pi_1 + \Pi_2) = (\Delta\Pi_1)\downarrow(\Delta\Pi_2)\uparrow = F$$
This force on the entire radius $(R = K)$of the visible sphere of the single $(X\pm = Y\mp)$space-matter of the Universe, gives (dark) energy $(U = FK)$ to the dynamics of the entire Universe.
$$(\Pi_1^2 - \Pi_2^2)K = (\Pi_1 - \Pi_2)K(\Pi_1 + \Pi_2) = (\Delta\Pi_1)\downarrow K(\Delta\Pi_2)\uparrow = FK = U$$
What is its nature? At the radius (R = K) of the dynamic sphere of the Universe, there is a simultaneous dynamics of a single (X ± = Y∓) space-matter. Considering the dynamics of potentials in gravity $(X+= Y-)$ mass fields, as is known, $(\Pi_1 - \Pi_2) = g_{ik}(1) - g_{ik}(2) \neq 0$, we are talking about the equation $R_{ik} - \frac{1}{2}Rg_{ik} - \frac{1}{2}g_{ik} = kT_{ik}$ of the General Theory of Relativity. The gradient of such $(\Delta\Pi_1)$ potential, as is also known, gives the equations of quantum gravity with inductive $M(Y-)$ (hidden) mass fields in a gravitational field. We are talking about energy-momentum $(\Delta\Pi_1 \sim T_{ik})\downarrow(X+= Y-)$ of the gravitational (X + = Y-) mass fields of the expanding Universe, with a decrease in density.
$$\Pi K = \frac{K^3}{T^2} = \left(\frac{1}{T^2} = \rho\downarrow\right)(K^3 = V\uparrow)(X+= Y-) = (\rho\downarrow V\uparrow)(X+= Y-), \quad (R \to 10^{33}\text{см}), \quad (\rho \to 0)$$
Consequently, at the same time, the density $(\rho\uparrow V\downarrow)(X-= Y+)$of electromagnetic fields increases in the Planck $(R \to 10^{-33}\text{см})$ limits of vacuum with limiting densities$(\rho \to \infty)$ in different depths of physical vacuum. These are mathematical truths.

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

Such mechanism gives a Higgs boson in gravity (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.
$$i\gamma_\mu\frac{\partial\psi}{\partial x_\mu} - m\psi(X) = 0, \text{ and } \quad i\gamma_\mu\frac{\partial\bar{\psi}}{\partial x_\mu} - m\bar{\psi}(X) = 0, \text{ for } \quad \psi(X) = e^{-ia}\bar{\psi}(X), \quad \text{transformations}$$
and $i\gamma_\mu\left[\frac{\partial}{\partial x_\mu} + iA_\mu(X)\right]\psi(X) - m\psi(X) = 0$, in conditions $A_\mu(X) = \bar{A}_\mu(X)$, $A_\mu(X) = \bar{A}_\mu(X) + i\frac{\partial a(X)}{\partial x_\mu}$, existence of a scalar boson $\left(\sqrt{(+a)(-a)} = ia\ (\Delta X \neq 0)\right) = const$, 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 us consider the principles of such mechanism.

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

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

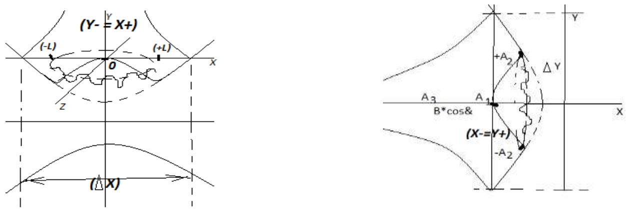

Fig.8. A scalar boson with Higgs's mechanism.

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: $\omega = 2\pi(f = \frac{1}{T})$, aro und 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: $L + x = \phi$, $x = \phi - L$ 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 $U(\phi, \vartheta) = \tilde{k} * \phi^2 + 0 * \vartheta + \widetilde{U}(\phi, \vartheta)$, 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 Higgs of an identification of fields in the conditions of local Invariances 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:

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

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.

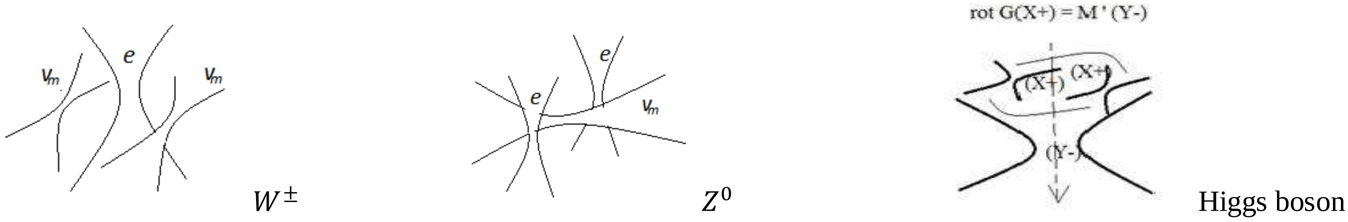

Fig. 8.1.. Electroweak interaction and Higgs boson.

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

$W^{\pm} = \frac{\sqrt{m_e m_{\nu_\mu} * 2\alpha}}{G} = 81.3GeV$, $Z^0 = \frac{\sqrt{exp1*(2m_e)m_{\nu_\mu} * \alpha}}{G} = 94.8GeV$ $\frac{2p}{2\alpha}(1 - 2\alpha) = 126{,}7\ GeV$

Here is an analogy of the same oscillations in the extremals of the Spontaneous Symmetry Breaking, with the same mass fields. However, 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 axiomatic of the zero angle of parallelism.

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 axiomatic. 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 axiomatic. 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 axiomatic, whichare 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 axiomatic. 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 axiomatic 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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