THE THEORY OF UNIFIED FIELD (REPORT)

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The report discusses the theory of united field. In it's light the solution of fundamental problems of the natural science: cosmology, cosmogony, elementary particles, nuclear physics, seismology, geology, magnetology, climatology etc is given.

Introduction

The theory of united field – is the explanation of natural phenomena. The united field entails different natural laws. That is why there is a tie between different phenomena. Specialists considered that the problems of cosmology and elementary particles were the same. Seismologists, geologists, geophysicists, magnetologists and others after protracted research have come to a unique conclusion that all fundamental problems of the above-mentioned sciences depends on the alteration of Earth's mass.

Cosmology problems: evolution and Universe dimensions. Is it finite or infinite according to time? Is the number of particles finite or infinite?

Problems of elementary particles: structure of particles, the cause of stability or instability of particles.

Problems of nuclear physics: nuclear force. Not knowing the force, it is impossible to know the structure of nucleus atom

Cosmogony is the science of galaxies, stars, planets etc. and it should give answers to three questions posed by academic Abratsumyan:

1. Why stars are gathered into galaxies?
2. What are the upper limits of galaxy

3. Why quantitative characters of galaxies, stars, planets are defined with universal constants?

Briefly, these are the fundamental problems of natural sciences, which we revised in the report.

The theory of united field makes reconstruction in the natural sciences. Display of united field is everything that exists and occurs in the universe and in human's mind.

Creation of the theory of united field was developed by Lorenz, Mie, Einstein, Geyzenberg, Salam and others. But a mistake they made was that all researchers

of the united field referred to one type of interaction and we have to consider that.

Facts.

Isosymmetry is violated in the experiment. The fact shows that in the nature there is no weak interaction which carrier is boson W^+,W^-, Z^o... Three fields remain. They are nuclear, gravitation, electromagnet.

Each field is characterised with its constants.

$$\lambda_э = \frac{e^2}{C\eta} = \frac{1}{137}$$

$$\lambda_S = \frac{g^2}{C\eta} = 1 \div 8$$

$$\lambda_\sigma = \frac{\sigma_H m_P}{C\eta} \approx A^{-1/2}$$

, where $A^{-1/2}=10^{-40}$

According to ideology of the theory of united field one of the said fields is fundamental and the rest are its different displays.

That is why one type of charge, t.i. charges of the other fields should be shown through the charge of the fundamental field.

To solve these tasks one should choose constants of the theory. According to our theory the constants of the theory are C, h, m (where m= m or mp, t.i. mass of electron of proton).

The law of conservation of electric and baryon charges points out that electron and proton are stable particles. The source of the field can be only stable particles.

C=const provides the principle of causality and is utmost speed.

h=const refers to radius of particles and displays that particles are quantum objects.

e– electric charge, g - nuclear charge, $\sqrt{\sigma_H} \cdot m$ - gravitation charge. Where σ_H – Newton bond.

The experiment proves that gravitational acceleration depends on the load under consideration. This experiment displayed two problems to sciences:

1. To find the sources of gravitation force
2. To find the sources of inertia force.

According to Newton, forces of inertia and gravitation are equivalent. But as the experiment showed that these two forces are not equivalent.

Let's solve the first task, which was unsolved since Aristotle. G.Ya.Myakishev ("From dynamic to statistics" Moscow: Znaniye, 1983/1) says: "Isosymmetry and parity are not conserved during the experiment. Three laws of conservation of electric, baryon and lepton charges take place. Why are they conserved; we don't know yet" We will show that the reason of violation of isosymetry is unity of natures of all forces.

In electrodynamics isosymetry is violated because two protons (p^+, p^+) are repelled by electric forces and (p^+, p^-) visa versa are attracted, where p^- - antiproton. Isosymetry is violated in nuclear interaction also. Then (p^+, p^+) are repelled by nuclear force and (p^+, p^-) visa versa are attracted. Thus the nature of electric and nuclear force are unique. Same properties should belong to gravitation in the world of particles. Only in this case gravitational acceleration depends on the load under consideration.

"Violation of parity shows that between matter and anti matter there is asymmetry. We have to define the demonstration of gravitation in the world of elementary particles. Quantum gravitation should answer these questions,- said R.Feinman ("The character of physics law". Moscow, 1975 translation from English) – But we don't have quantum gravitation yet."

The research [1] points out the source of gravitation force of Newton is gravitational charge, the bearer of which is electrons, protons and their antiparticles but not mass of the macrosubstance.

S.Drell and others "Electromagnetic structure of nucleons". Moscow, 1962 informs that: "Meson clouds of protons, as experiment showed have distinctive bedded structure. Upper layer of pi-cloud, beneath – ρ, beneath – θ. Nucleus of proton consists of hyperons." That is why one can imagine that

$$m_p = m + M_\sigma \qquad (1)$$

where M_σ – mass of meson field, m- mass of proton nucleus. From (1) we can see that proton has quantum radius of proton r_k. M_σ mass of pi-meson, K – mesons etc.

When quantum acquires mass the charge e is chipped. This is Higgs's mechanism. That is why when $r \le r_k$ assuming that $e(r)$, $g(r)$, $\sigma(r)$.

If $r > r_k$, then $e(r) \to e$, $\sigma(r) \to \sigma_H$ and $e = \text{const}$, $\sigma_H = \text{const}$

We consider that division into internal and external linkage has relational character.

The theory $(C, \sigma(r), h)$ is quantum gravitation.

Field sources are charges: e,g, $\sqrt{\sigma_H \bullet m}$, where g – nuclear charge. Let's define g. To define this one should know nuclear force of nucleus particles of e^2/r^2 type etc.

In research [2] it is defined that potential energy of nuclear forces between p^+ and n^0 is

$$U = E - \frac{\eta^2}{m \bullet r^2} \qquad (1)$$

Where m – reduced mass p^+ and n^0 , E – binding energy. Force (1) is central force. Taking into account that isosymmetry is violated during nuclear interaction that we have for two (p^+ and p^+) protons:

$$V = +\frac{\eta^2}{m \bullet r^2} \qquad (2)$$

For one proton:

$$V = +\frac{\eta^2}{m_P r^2} = \frac{g^2}{r} \qquad (3)$$

From this

$$g^2 = \frac{\eta^2}{m_P r}$$

$$\lambda_S = \frac{g^2}{C\eta} = \frac{\eta}{m_P C} \bullet \frac{1}{r} \qquad (4)$$

If $r=r^k$, then

$$\lambda_S = \lambda_Э = \frac{e^2}{C\eta} = \frac{1}{137} = \frac{\eta}{m_P C} \bullet \frac{1}{r}$$

Then we have r=0.2·10 $^{-11}$ sm. At quantum rate r^k all forces merge. That is why when $r=r_k$

$e(r)= g(r) = \pm \sqrt{\sigma(r)} \bullet m_p$ (5) (5)

And at $r \le r_k$

$$\lambda_Э = e^2(r) = e_0^{\,2} \bullet \frac{1}{r} \qquad (6)$$

$$\lambda_\sigma = \sigma(r) \bullet m_P^{\,2} = e_0^{\,2} \bullet \frac{r_0}{r} \qquad (7)$$

Where $r_0 = \hbar / m_p C$ – radius of the proton nucleus.

In fact mass of meson field of the proton $M_\sigma = e^2 / r C^2$.
Hence at $r_0=\hbar/m_pC$ we have $M_\sigma=mp \bullet (e2 / C \hbar)$, at $r \le r_k$ charge e^2 (r) is not conserved.
If r = r0, then Mσ=mp, that is why reducing further r is impossible. As we see $U_{вз} = M_\sigma C^2 = e(r)^2 /r$ – potential energy of interaction, and $U= m_p C^2$ - maximum potential energy. $U_{вз} < U$ always, $e_0^{\,2} = C\hbar$ − charge of proton nucleus.

H.Jorgy ("Unified theory of elementary particles") states: "Bare charge of electron and proton is many times larger than the one is measured in the experiment".

Let $M_\sigma = m_п$ - mass of pi meson. Then from

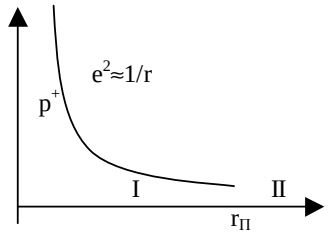
$$M_\sigma = m_P \frac{e^2}{C\eta}$$ and

$$\lambda_Э = \frac{e^2}{C\eta} = \frac{\eta}{m_P C} \bullet \frac{1}{r}$$ at $r \le r_K$, we have

$$m_П = \frac{\eta}{rC}$$ or

$$r_П = \frac{\eta}{m_П C} = 1{,}4\varphi$$ where $\varphi=10^{-13}$см

If $M_\sigma = m_\kappa$ – mass of K-meson, then $r_k = 0{,}4\ \varphi$ etc.
Nuclear field is included in the structure of nuclear particles.



Mesons are non-independent particles, they are quantum of a nuclear field. Principle of electromagnetism takes place only at $r > r_k$. When $r \le r_k$ the principles are violated and that is why it is not a closed theory. r_k radius of nuclear force. Nuclear interaction is non-local.

When $e=g= \pm \sqrt{\sigma(r)} \bullet m_p$ (♦)

All charges have two marks «+» and «-». That is why two similar particles (p p), (n n), (e^+ e^+), ($\bar{p}$ $\bar{p}$), ($\bar{n}^0$ $\bar{n}^0$) repel each other by electric, nuclear and gravitational forces; and (p n), (p^+ p^-), (n^0 $\bar{n}^0$), (e^- e^+) vice versa are attracted by said above forces. Thus, violation of isosymmetry in the experiment shows that the nature of all forces is one. All fields are vectorial.

$-\sqrt{\sigma(r)} \bullet m$ is anti-gravitation, when m- mass of electron or proton. Between electron and proton there is attraction and between positron and proton there is gravitational repulsion. That is why gravitational acceleration depends on the load under consideration.

Hence the source of propulsive force is gravitational charges. Charge bearers are electron, proton and their antiparticles. Steadiness condition of electron and proton is gravitation. According to (♦) gravitation entails electricity. The cause of charge conservation is the steadiness of electron and proton t.i (♦).

These principles are the unity of all forces.

I. Quantum cosmology.

Dirak, Shredinger, Edington on the basis of the astronomic facts empirically established the following principles.

$$\frac{\sigma_H m_P^{\,2}}{C \bullet \eta} \approx A^{-1/2} \qquad (1)$$

$$\frac{e^2}{\sigma_H m_P^{\,2}} \approx A^{1/2} \qquad (2)$$

$$\frac{\sigma_H m_P^{\,3} C}{\eta^2} = H \qquad (3)$$

Academician Zel'dovich proposed that $\wedge^{-1/2}$ = R - radius of closed Universe, where principles (1,2,3) take place.

$$\wedge^{-1/2} : \frac{\eta}{m_P C} = \frac{C \bullet \eta}{\sigma_H m_P^{\,2}} \qquad (4)$$

This defines $\wedge$.

$$\wedge = \frac{\sigma_H m_P^{\,6} C^2}{\eta^4} \qquad (4)$$

where H = 1/t , t - time.

Principles (1-4) associate with parameters of microcosm and cosmology. Zel'dovich considers that this association is the way of science development.

Principles (1-4) as we see further are the unity of problems of particles and Universe.

If M – mass of the World (1-4).

Then $M = A\ m_p \approx \rho_{кр}\ r^3 = \rho_{кр}\ (C/H)^3$, where $\rho_{кр}$ – critical density of the World.

Hence $A = n\ (C/H)^3$, where $n = \rho_{кр} / m_p$ – number of particles in a unite of volume.

If $n = 10^{-5}$ (1/ см^3), then as Dirak, Shredinger and others supposed $t = 1/H \approx 10^{17}$ sec. So we have $A \approx 10^{80}$.

Conclusions of (1-4) principles.

As we observed when $r > r_k$, $\sigma(r) \to \sigma_н$ = const, $e(r) \to e$ = const. Then

$$\frac{\sigma_H m_P^{\,2}}{C \bullet \eta} = \frac{\eta}{m_P C} \bullet \frac{1}{r} \qquad \text{(I)}$$

If r=Ct= (C/H), then from (I) we got (3)

If $\wedge^{-½}$ = r - radius of the World, then from (I) we got (4).
If $r = \sigma_н M / C^2$ and $M = A / m_p$, then we have (1).
As $e_0^2 = C\hbar$ – charge of the proton with radius $r_0 = \hbar / m_p C$, we have

$$\frac{e_0^{\,2}}{\sigma_H m_P^{\,2}} = A^{1/2}$$

Steadiness condition of the closed Universe consisting of N substances is gyration.

If Universe of M mass gyrates with rapidity "C" then

$$\frac{\sigma_H M^2}{r^2} = \frac{MC^2}{r}$$

From this $\sigma_н M / rC^2 = 1$
Angular momentum of the World

$$S = M \bullet rC = M \bullet \frac{\sigma_H MC}{C^2} = \frac{\sigma_H M^2}{C}$$

From this when $M = A\, m_p$ we have

$$S = \eta \bullet \left(\frac{\sigma_H m_P^{\,2}}{C \bullet \eta}\right) \bullet A^2 \qquad (1)$$

taking into account

$$\frac{\sigma_H m_P^{\,2}}{C \bullet \eta} = A^{-1/2}$$

from (1) we got

$S = \hbar\ A^{-½} \bullet A^2 = \hbar\, A^{3/2}$ or

$S = \hbar (M/ m_p)^{3/2}$ (2)

Hence we see ħ – angular moment of the World. Law (2) is applicable for galaxies and systems of galaxies.

One can consider that the nusleus of proton revolves with rapidity «C» because

$\hbar = m_p C r_0$.

Principles (1-4) showed, principles of micro and macro World are unified. t = 1/H - period of revolution of the World.

If A=1 and $r \le r_k$, then $\sigma_н \to \sigma(r)$. That is why spin of proton

$$S = \eta \bullet (\frac{\sigma(r) m_P^{\ 2}}{C \bullet \eta})$$

$$\lambda_\sigma = \frac{\sigma(r) m_P^{\ 2}}{C \bullet \eta} = \frac{\eta}{m_P C} \bullet \frac{1}{r}$$

$r \le r_k$.

Hence we can see that proton arrangement revolves.

When $r \le r_k$ $\sigma(r)\, m_p^{\ 2} = e^2(r)$, that is why

$$S = \eta \bullet (\frac{e^2(r)}{C\eta}) \qquad (3)$$

$$\lambda_э = \frac{e^2(r)}{C \bullet \eta} = \frac{\eta}{m_P C} \bullet \frac{1}{r} \qquad (4)$$

When $r \to -r$, $S \to -S$ arrangement of particles and their antiparticles revolve in opposite directions, t.i spins of the particles and their antiparticles are opposed. That is why character of charge is defined by self movement.

According to $e = g = \pm \sqrt{\sigma(r) \bullet m}$, charge e – as special material substance does not exist in nature. «Charge is unified, intact, complete closed formation of the fields. Field has mass.» That is why the nature of charge and mass of the particles is unified.

The cause of parity violation is the self-movement t.i. the revolving particles arrangement. Self-movement is the source of the field.

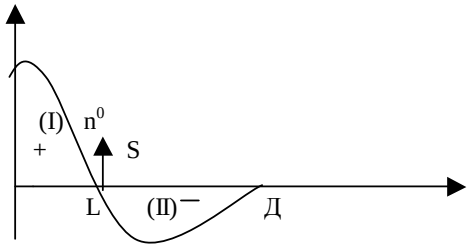
$\vec{E} \equiv \vec{\Gamma}$ **- field of propulsive forces**

If $U = r\nu$ - number of revolutions of arrangements. From $U = r\nu = C^2 V = m C^2 / mV = h\nu / p$. Hence $r = \lambda = h/p$.

Surge of de Broil – is radius of gyration, ν - gyration frequency, V – phase velocity, U – group velocity.

If $S = ½ \hbar$ – spin of proton. Then from (3) and (4) we have $r = r_S = 0{,}4\ \varphi$

Sphere with radius $0{,}4\ \varphi$ contains the observed spin of proton. Neutron $n^{0\ has}$ spin $S = ½ \hbar$, and $e = 0$. That is why one can assume that structures n^0 gyrate in opposite direction. Magnetic moment of neutron $\mu<0$, that is why we consider that facing layers bear negative charge.



Numbers of positive and negative charges are equal. Experiment proved that p^+ and $n^{0 repels}$ at a distance $0{,}4\ \varphi$. Therefore $L = 0{,}4\ \varphi$, which said that area I – is proton, and II – electron blanket.

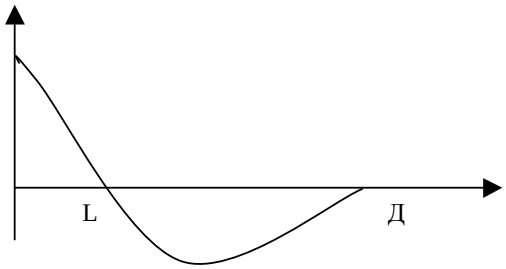
Proton and neutron from $Д = r_к$ = till n_1 attract, and in L - they repels. Two proton – repel.

Hence on the centre there is n^0 proton. $p^+ + e^- \rightarrow n^0 + \nu$.

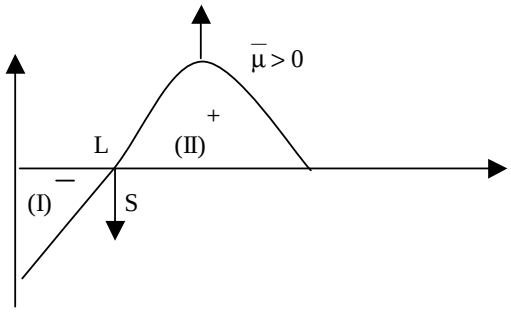
Similarly we can assume that in the centre of all baryons there is a proton with its spins. Therefore conservation law of baryon charge takes place.

Arrangement of neutron indicates that complete nuclear force ($p^+ n^0$) consists of the sum of two components with charges "+" and "-".

For example as follows:



Arrangements of anti-neutron have the following appearance



(I) – positron area
(II) –area of positron blanket

($n^0\ \bar{n}^0$) – attract, a ($n^0\ n^0$) – repel etc.
Isosymmerty is violated but baryon charge is conserved.

Notes.

Coulomb potential energy between two protons is e^2/ r . When $r \le r_к$

$$\frac{e^2}{r} \to \frac{\eta^2}{\bar{m} \bullet r^2}$$

Nuclear forces between p^+ and n^0 show that classical force between p^+ and n^0 consists of the sum of two components: attracting on the minor distances and repelling on the small distances.

Pi thickness of proton's cloud is $\Delta\nu = \Delta\nu_к - \Delta\nu_п$. In this case energy can be only $\Delta E = h\ \Delta\nu = h \bullet 1/\ \Delta t$. Hence $\underline{\Delta E \bullet \Delta t = h}$, where Δt – number of revolution.

Since p^+ is a quantum object, it is activated. If proton particle is absorbed by coating $\Delta\nu$. Then $\Delta E \to \Delta E^* = m^* C^2$, $\Delta t \to \Delta\tau$. From this life time of new particles m^* is $\Delta\tau = h / \Delta L^* = h / m^* \bullet C^2$. The more m^*, the less $\Delta\tau$ etc.

Let coating $\Delta\nu$ - gyrate with rapidity

$\Delta U = \Delta r \bullet \Delta\nu$, где $\Delta r = r_п - r_к$

$$\frac{\Delta E \bullet \Delta U}{\Delta U} = \Delta p \bullet \Delta U = \Delta p \bullet \Delta r \bullet \Delta\nu = h \bullet \Delta\nu$$

From which $\Delta p \, \Delta r = \hbar$.

Geizenberg inequality showed that particles are quantum objects, but not wave. Interpretation $\Psi\Psi^* = 1$ is not true. Particles move according to definite glidepath and have intermittent character.

II. Elastic power

Showing that field has property of elasticity.

When $r \le r_к$, we have

$$\frac{\sigma(r) \bullet m_P^{\,2}}{C \bullet \eta} = \frac{\eta}{m_P C} \bullet \frac{1}{r}$$

From which

$$f_{упр} = \frac{C^4}{\sigma(r)} = \frac{m_P^{\,2} C^3}{\eta} \qquad (1)$$

As $\vec{E}$ и $\vec{\Gamma}$ - fields are a tail of the nuclear field, they also possess property of elasticity.

According to $\pm\sqrt{\sigma(r)} \bullet m$, gravitation compresses particle and elasticity of nuclear field to withstands it.

Let's show that the particle is quantum oscillator with closed hinges.

If

$$f_{упр} = \frac{m_P^{\,2} C^3}{\eta} = Kr$$

where K – stiffness of the field and $K = m_p W^2$

$W = 2\pi\nu$.

$$\frac{m_P{}^2 C^3}{\eta} = m_P W^2 \bullet r$$

when

$$r = \frac{\eta}{m_P C}$$

we have $m_p C^2 = \hbar W = h \nu$.

The particle is a curl of the field and oscillator. That is why interspace is emptiness and 3-dimensional.

Notes.

If the energy of nonvolatile particles less than K, then the particle leaks as it is dot particle.

Rotary motion is realised in the interspace with odd number of dimensions.

Time as it is known, is not existing in nature. Different processes and movement forms with different tempos occur in the nature. In order to define tempos of these processes time was introduced. The hour can be atomic or earth hour. Time used in equalisation is evenly flowing time. That is why time is absolute and does not depend on our choice. Interspace is absolute etc.

III. To the theory of inertia forces

Self-movement is the source of the field $\overline{E}$. Character of propulsive forces $\overline{\Gamma}$ и $\overline{E}$ is unified.

Electromagnetic field is defined by two amounts ($\overline{E}$, $\overline{B}$), where $\overline{B}$ – inductance.

From ($\overline{\Gamma}$,) and ($\overline{E}$, $\overline{B}$) one can assume there exists a curl gravitational field – field of inertia forces U, which appears while moving. If $\overline{\Gamma} \equiv \overline{E}$, then there should be $\overline{U} \equiv \overline{B}$.

Therefore we accept Tomson's, Heavyside's, Lorenc's, Puankare's idea, which says that inertia is self-inductance, t.i. when m mass moves along with Newton field $\overline{\Gamma}$ curl gravitational field appears. Mass of this field is inertial mass. This movement is absolute. Their absolute reference system exists.

Let m_U – inertial mass, m – mass of macrosubatance.

$m_{наб} = m + m_U$, where

$$m_U = m\frac{V^2}{C^2}$$

Let m solid freely fall to M. Then the force has effects to m.

$$F = -\sigma_H \frac{M \bullet m_{НАБ}}{r^2} = -\frac{\sigma_H Mm}{r^2} - \frac{\sigma_H Mm}{r^2} \bullet \frac{V^2}{C^2} \qquad \text{(I)}$$

hence

$$g = \frac{|F|}{m} = g_H \bullet (1 + \frac{V^2}{C^2})$$

where g – gravitational acceleration, $g_н$ – Newton acceleration.
$(g - g_1) / g_н = a = V^2 / C^2$
There is anti-gravitation that is why different solids fall with different rapidity.
Second component is force of inertia.

$$F_{ИНЕР} = -\sigma_H \bullet \frac{M}{rC^2} \bullet \frac{mV^2}{r}$$

In this case inertia forces are directed to the center of M solid.

$$U = \frac{|F_{ИНЕР}|}{\sqrt{\sigma_H} \bullet m \frac{V}{C}} = \frac{\sqrt{\sigma_H} \bullet M}{r^2} \bullet \frac{V}{C}$$

$$|F_{ИНЕР}| = \frac{\sqrt{\sigma_H} \bullet m}{C} [\overline{V\ U}]$$

$\sqrt{\sigma_н} * m$ –gravitational charge. The filed affects the charge. To define the sources of the field one should divide into charge.

$$U = \frac{\sqrt{\sigma_H} \bullet M}{r^2} \bullet \frac{V}{C} \qquad (1)$$

Showing that the nature of $\bar{U}$ field is magnetic. If M – mass of earth, $V = rW = r \bullet 2\pi/T$ - revolution rapidity of earth around its' axe. Then

$$U = \frac{\sqrt{\sigma_H} \bullet M}{rC} \bullet W \qquad (2)$$

When T=24 ч, we can define field $\bar{U}$ – according to surface of Earth, r – Earth radius. Then we get U = 0,6 gauss. Measurement showed, that magnetic field of Earth on the poles B = 0,5 – 0,6 gauss, meanwhile at the equator B = 0,3 gauss.

Considering that revolution is even we can calculate field energy U at the Earth surface.

$$E=\frac{1}{8\pi}\bullet\int_V\left|U^2\right|dV$$

We had E = $6*10^{26}$ erg. Evaluation and measurement showed that energy of magnetic field of Earth on the surface of Earth is equal to E=$3\bullet10^{26}$erg.

To find the magnetic field $\bar{U}$.

$$U=\frac{\sqrt{\sigma_H}}{C\bullet r^3}\bullet S$$

where S = M r^2 W.
Hence

$$\bar{\mu}=\frac{\sqrt{\sigma_H}}{C}\bullet\bar{S}$$

this is Blekett's principle. Thus inertia establishes magnetism $\bar{U}\equiv\bar{B}$. Hence we see that movement is the source of fields $\bar{E}$ and $\bar{B}$. Any forces are established by movement. 4 thousand years ago existence of magnetic field was known. But the sources of the field were unknown unless our theory appeared.

Carlious force is of magnetic origin. Gyrating mass affects to trial mass m by Carlious force. This is Lenze – Tringy effect. Carlious force is real force. As we see acceleration is absolute. In this case Copernique was correct. According to Makh, Veber, Riman acceleration is relative. Inertia forces appear during relative movement. Acceleration in this case is relative.

Relativity theory of inertia was establisheed by G.Treder [3]. The instrument of the theory was Riman potential. But at the same time Treder truly noticed : "Riman's mechanics can only be the extreme cases of some relativistic theory, which does not exists yet. This new theory should contain Makh's doctrins. From this new theory as an extreme case the potential of Riman should ensue."

From force (I) we have Riman potential

$$V(r)=-\frac{\sigma_H\bullet M}{r}\bullet(1+\frac{V^2}{C^2}) \qquad \text{(II)}$$

As $\bar{U} \equiv \bar{B}$ Maxwell theory has absolute movement and relativism. Principle of relativity of Galileo and Einstein has no sense. Therefore for establishing relativistic theory of gravitation application of Lorenz reduction (LR) is impossible.

But wave equation is invariant as respect to LR. Rapidity C, which is included to LR is wave velocity. Therefore according to LR nothing is change: neither mass, or wave length, or duration. That is why STO theory is no physical sense.

If we denote by

$$K = \frac{\mu}{S} = \frac{\sqrt{\sigma_H}}{C} = const$$

$K_{earth} = 1{,}11 \bullet 10^{-15}$
$K_{sun} = 0{,}79 \bullet 10^{-11}$
$K_{star} = 0{,}89 \bullet 10^{-11}$

Notes.

Field mass $\bar{U}$ is m_U - of magnetic origin. Rest mass of m particles is of electric origin. Energy of the field $\bar{E} \equiv \bar{\Gamma}$, potential energy, and energy of the field $\bar{U} \equiv \bar{B}$ is kinetic energy. Energy conservation law $U + E_{kin} = const$ shows interconversion of two fields. That is why Maxwell's theory is consequence of energy conservation law, and law of conservation of energy is a consequence of matter and movement because according to $h\nu = mC^2$ when $\nu = 0$, $m=0$, ν - Broyle frequency.

These laws are consequence of the unity of all forces.

In conclusion we mark as $E \equiv \bar{\Gamma}$, $\bar{U} \equiv \bar{B}$ then the theory of gravitation is defined by amounts (A_1, A_2, A_3, φ). If STO of Einstein was reasonable then we would not have the unity of physics. Therefore STO is anti-scientific theory.

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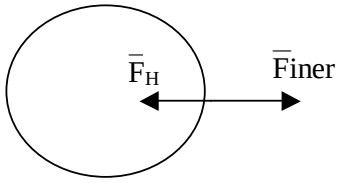
Let M- mass of Universe, which gyrates around its' axe. Gyrating object has centrifugal force. Therefore in this case the force affecting to M is

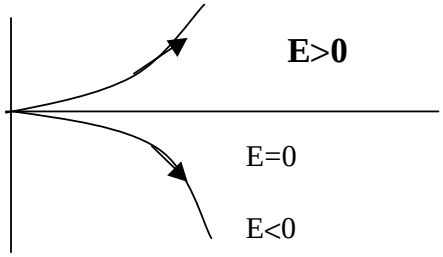
$$F = -\sigma_H \frac{M^2}{r^2} + \sigma_H \frac{M^2}{r^2} \bullet \frac{V^2}{C^2}$$



The object is steady if two forces are equal between each other. And this is possible if V = C, т.i. Universe should gyrate with rapidity "C".

Complete energy of Universe $E = E_{kin} - U(r)$, where E_{kin} – energy of field $\bar{U}$, and U(r) – energy of field $\bar{\Gamma}$. If V=C, then E=0.

If E>0 Universe is expanded and when E<0 it is compressed.



E>0 is possible when V>C, but C –top speed. Therefore the case when E>0 does not exist in nature. The case when E<0 does not exist either, because the system of N solids is not compressed (we will demonstrate below).

The only Universe is when E=0. The Universe has no beginning or end. There is potential of an exchange type in nature, that is why thermal death will not occur. Interspace is perpetuity and emptiness. May be our galaxy is the first metagalaxy and behind it there is another one etc. That is anthropological principle exists.

When $r \le r_к$ taking into account the law $\sigma(r)$ we have

$$\wedge_{BH} = \frac{1}{r_B^{\,2}},$$

$$H_B = \frac{1}{t} = v$$

where r_r – revolution radius of the proton structure and $t_в$ - period of revolution. So Habble's law V = Hr – is connected with revolution movement but not with enlargement.

IV. Cosmogony

Cosmogony is the science about establishment of galaxies, stars, planets etc. In gyrating Universe galaxies, stars, planets were established of curl gas. The theory of Gelimgols says: “If the environment is incessant and moving then in such an environment revolving movement appears in the centre of which curl is formed.”

Radius of our galaxy is $\approx 10^{23}$ cm, average density is $\approx 10^{-24}$ g/sm^3, number of stars $\approx 100 \bullet 10^9$ etc.

Law $S = \hbar (M/m_p)^{3/2}$, where M – mass of galaxy, indicates that galaxies were formed of curl gas. Let's define dimensions of the curl, from which the galaxies were formed. From

$$\frac{\sigma_H m_P^{\,2}}{C \bullet \eta} = \frac{\eta}{m_P C} \bullet \frac{1}{r}$$

we have

$$r = \frac{\eta^2}{\sigma_H m_P^{\,3}} \qquad = 10^{24} \text{см}.$$

this is gas dimensions. Mass of gas $M = A\, m_p = \bar{\rho}\, r^3$. Hence $A = n\, r^3$, when $n = 10^{-4}$ g/sm^3, $A \approx 10^{68}$. $M = A\, m_p = 2 \bullet 10^{44}$ r. Mass of our galaxy is $\approx 10^{43}$ g., average density of gas is $\bar{\rho} \approx 10^{-28}$ g/sm^3.

***

Number of particles in the stars as was defined by Waiskopf

$$N^{2/3} = \left(\frac{C \bullet \eta}{\sigma_H m_P^{\,2}}\right)$$

Is equal to
Universe spin

$$S = \eta \bullet \left(\frac{\sigma_H m_P^{\,2}}{C \bullet \eta}\right) \bullet A^2$$

If A= N then we have

$$S = \hbar \bullet (M/\, m_p)^{4/3} \qquad (1)$$

The law (1), applicable for stars and planets shows that these objects were created from curl gas. Thus galaxies and their stars were formed simultaneously by united cycle. Planets were formed from materials of burst stars. Stars of big mass collapsed. As nuclear interaction is extended the density $\rho = \infty$ is excluded. Marginal density exists.

Nuclear field has the property of elasticity that is why pressure

$\rho = -(f_{elas}/\, 4\pi\, r_o^{\,2})$, where $r_o = \hbar / m_p C$ - nucleus radius of proton. Hence

$$\rho = -\frac{1}{4\pi} m_P C^2 \left(\frac{C \bullet m_P}{\eta}\right)^3 = \rho_{ПР} \bullet C^2$$ or

$$\rho_{ПР} = \frac{1}{4\pi} m_P \left(\frac{C \bullet m_P}{\eta}\right)^3 \approx 10^{16} \frac{г}{см^3}$$

$\rho_{пр}$ – marginal density.

During collapse chemical elements appeared. When density of stars reach $\rho_{пр}$, then environment pressure is $\rho<0$, the object is explodes and from its' materials planets appear.

***

It is apparent that the nucleus of Sun with radius 2/3 R_0 turnovers its' axe in 12 days and Sun in 27 days. The Law (1) indicates that bulk of sun is concentrated in the nucleus. The source of magnetic field of Sun is nucleus. Breakdown of field lines of magnetic field of the nucleus results in the explosion in Sun.

All stars have the nucleus. Mass M, which is included in the (1) is observed mass and it equals $M=M_o + m_U = M_o + M_o \bullet V^2 / C^2 = M_o (1+V^2 / C^2)$. Where $V = r \bullet W = r \bullet 2\pi/T$ – number of revolutions. m_U – mass of magnetic field. While increasing V, M is increased that results in compressing and enlarging of the object.

$S = \hbar (M / m_p)^{4/3}$ (I)

$U=B=\mu/r^3 = 1/ r^3 \bullet (\sqrt{\sigma_н} / C) \bullet S$ (II)

While degradation S magnetic field is degraded.

Facts.

Currently Moon moves away from Earth with a velocity 4 sm a year. Duration of day and night is increased for 0.0015 sec in 100 years t.i. number of revolution of Earth is reduced. Earth is expanding. For the last 2000 years the radius of Earth has grown for 2.4 m and magnetic field of Earth has reduced for 5% in 100 years. It shows the validity of the laws (I) and (II). Climatologists think that for the movement of atmosphere Carlios force is responsible.

So we showed that Carlios force is of magnetic origin. Therefore atmosphere temperature depends on magnetic field of Earth. Geophisicists state that there is direct connection between climate conditions and magnetic field of Earth. That is why average temperature of air is reduced.

After an increase in Sun number of revolutions of Earth around its' axis increases. Then in accordance with the law (I) mass of Earth is increased and earth is compressed. Maximum number of revolution corresponds to big number

of earthquake. After burst in Sun white spot appeared (strong magnetic field). Facts show that from 1640 till 1710 Sun did not have white spots. And there was "winter" on Earth.

Fundamental problems of seismology, geology and climatology associated with change of mass of Earth. Now these problems are finally solved.

Geologists think that Earth had the époque with the smallest radius and the époque with the largest radius. The period between these époques is $\approx 100 \bullet 10^6$ years.

Magnetologists consider that the magnetic field of Earth never have been constant. Not significant oscillations occur.

All these facts show that the orbit of Moon pulsates.

According to $m_U = m \bullet V / C^2$, where m – Earth mass and V – orbit rapidity of Earth. Then $m_U = 0,6 \bullet 10^{20}$ g.

If V = 0,5 км/s, then $m_U = 1,6 \bullet 10^{16}$ g. Earth mass $m = 6 \bullet 10^{27}$ г. Mass of solids and particles increase while movement because of m_U. Experiment proves that while movement mass of particles increases to 1.8%.

Thus mass of of solids and particles is changed only during absolute movement. We point out again that interspace is empty and 3-dimensional.

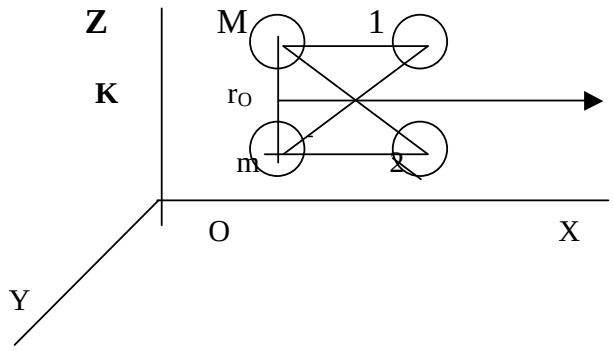
V. To the theory of gravitation

Arrangement of proton showed that nuclear forces consist of the sum of two components with charge "+" and "-".

When $r \le r_к$, then $\sigma_н \to \sigma(r)$, in result of two proton:

$$\frac{\sigma_H m_P^{\,2}}{r} \to + \frac{\eta^2}{m \bullet r^2}$$

Therefore when $r > r_к$, $\sigma_н \to \sigma(r) = \text{const}$. Full relativistic force of gravitation of two moving solids should be the sum of two components. First component is Newton force and the second is the force depending on relative rapidity. When two gravitating solids move the in same manner apparent movement is not considered. This is the cinematic principle of relativity of Copernicus. Let two macrosolids move parallel to each other comparatively reference system K.



When two solids are immovable interaction force is

$$\frac{\Delta \overline{P_Z}}{\Delta t_0} = -\frac{\sigma_H M \bullet m}{r_0^{\,2}}$$

Interaction is realized by the field. The field is transferred from one solid to another as a wave with velocity "C", Δt_0 -transmission time, $r_0 = C\Delta t_0$.

Let M and m move comparatively each other with velosity V. When solid m is in 2 position or M is in position 1, interaction is realized in Δt time, where

$$\Delta t = \frac{\Delta t_0}{\sqrt{1-\frac{V^2}{C^2}}} \qquad (1)$$

(1) – non-relativistic time. We know that in the basis of TTH there are two laws.

1. $\overline{F}_{12} = -\overline{F}_{21}$
2. $r^3 / T^2 = \text{const}$ (Cepler's law).

In this case in (1) the principle of action and counteraction is realised. Additional forces, which appear (inertia forces), for this case, are directed opposite to Newton force. Therefore distance between two solids M and m is not changed and the mass of the solids is not changed either. So:

$$\frac{\Delta\overline{P_Z}}{\Delta t}=\frac{\Delta\overline{P_Z}}{\Delta t_0}\bullet\sqrt{1-\frac{V^2}{C^2}} \qquad (2)$$

Or hence

$$F_Z=-\frac{\sigma_H M\bullet m}{r^2}\bullet\sqrt{1-\frac{V^2}{C^2}} \qquad (3)$$

r = r_0, wnere V – relative velocity.
If we multiply numerator and denominator (3) to $\sqrt{(1-V^2/C^2)}$ we have

$$F_Z=-\frac{\sigma_H Mm}{r^2\bullet\sqrt{1-V^2/C^2}}+\frac{\sigma_H Mm}{r^2\bullet\sqrt{1-V^2/C^2}}\bullet\frac{V^2}{C^2} \qquad (4)$$

Second component, as we see, is inertia forces. Division of two forces is impossible only in 3-dimensional flat interspace. When $V^2 \ll C^2$, then from (3) get

$$F=-\frac{\sigma_H Mm}{r^2}+\frac{1}{2}\bullet\frac{\sigma_H Mm}{r^2}\bullet\frac{V^2}{C^2} \qquad (5)$$

wherefrom

$$U=\frac{|F_{IIHEP}|}{\sqrt{\sigma_H}\bullet m\frac{V}{C}}=\frac{\sqrt{\sigma_H}M}{2r^2C}\bullet V$$

hence

$$\overline{\mu_L}=\frac{\sqrt{\sigma_H}}{2C}\bullet\overline{L} \qquad (6)$$

where $\bar{L} = M\,\bar{r} \bullet \bar{V}$ - orbital momentum of number of revolutions, $\bar{\mu}_L$ – orbitl magnetic momentum. Second component in (4) is of magnetic origin. When $V^2 \ll C^2$, then from (4) we get (5).

Dike's hypothesis.

While relative movement gravitation linkage changes according to the law.

$$\sigma = \sigma_H \bullet (1 - \frac{V^2}{C^2}) \qquad (7)$$

Subject to this, having changed $\sigma_н$ in (4) and (5) through σ taking into account (7)

$$F = -\frac{\sigma_H Mm}{r^2} + \frac{3}{2} \bullet \frac{\sigma_H Mm}{r^2} \bullet \frac{V^2}{C^2} \qquad (8)$$

from (5), when $V^4 / C^4 \approx 0$ we have

Subject to Sun movement in the galaxy in aphelion area between Sun and galaxy (8) forces effect. And in the area of periphelion Newton forces and inertia forces are directed towards the centre. Therefore planets fall down.

$$F = -\frac{\sigma_H Mm}{r^2} - \frac{\sigma_H Mm}{r^2} \bullet \frac{V^2}{C^2} \qquad (9)$$

Forces (8) and (9) turns over the ellipse. Planets have $\bar{\mu}_S$ and μ_L, which interact with each other.

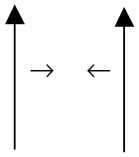
$$U = \frac{\vec{\mu}_S \vec{\mu}_L}{r^3} = \frac{\sigma_H}{2C^2 r^3} SL \bullet \cos\theta$$

Therefore orbit has intermittent character.

Notes.

In force (8) the first component has intermittent charge "+"then the second component has charge "-". As $\bar{\Gamma} \equiv \bar{E}$ and $\bar{U} \equiv \bar{B}$ two cocurrents interacts with force of (8) and (9) type.

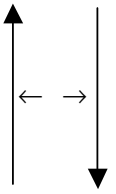
When



, they attract to each other

$$-\frac{e^2}{r^2}\bullet\frac{3}{2}\frac{V^2}{C^2} \qquad (10)$$

When



, they repel

$$+\frac{e^2}{r^2}\bullet\frac{V^2}{C^2} \qquad (11)$$

Forces (10) and (11) are directed perpendicularly to current t.i. according to radius. This is Arago experiment.
When dimensions of N system solids decrease then the rapidity of solid increase $V^2 \approx 1/R$.
At this $V = \sqrt{2}/3 \bullet C$, then the slid leaves the system. Therefore the system of solids does not collapse. Universe where E<0 is excluded.

VI. Full nuclear force (p^+, n^0)

Let $M=m=m_p\approx m_n$ – Mass of nucleons and if $r\le r_k$, then $\sigma_H\to\sigma(r)$ and, subject the law of variation $\sigma(r)$, for potential energy of nuclear forces between proton and neutron we have

$$U(r) = -\frac{\eta^2}{\overline{m}\bullet r^2} + \frac{3}{2}\bullet\frac{\eta^2}{\overline{m}\bullet r^2}\bullet\frac{V^2}{C^2}$$

,where $\bar{m}$ – reduced mass. When $V=\sqrt{2/3}\bullet C$ (p^+, n^0) – repel.

$$r=\frac{\eta}{\bar{m}\bullet V}=\frac{\eta}{\bar{m}\bullet\sqrt{2/3}C}\approx 0{,}4\varphi$$

$\varphi=10^{-13}$sm.

Situation of nuclear forces consists of the sum of two components, which depends on relative rapidity.
Two similar particles are repelled by nuclear forces. Charges "+" and "-" in (1) are saturation condition. All forces have saturation condition.

According to the theory of unified field the new form of the gravitation theory is as follows:

1. Inertia
2. Inertness
3. Interspace is empty and s-dimensional
4. The force distorts glidepath and particles.

From complete theory of gravitation the laws of electromagnetism and quantum mechanics come out. According to full theory of PEM is violated from relativistic theory, Riman's potential becomes extreme case and gravity waves are conceived as electromagnetic ones.

Shapiro [4] proved in experiment that when the light goes near by Sun it is delayed for $\approx 10^{-5}$ sec. The fact is comprehensively explained by Riman's potential.

In fact, if m – photon's mass. Then

$$\frac{mV^2}{2}-\frac{\sigma_H Mm}{r}\bullet\left(1+\frac{V^2}{C^2}\right)=\frac{mC^2}{2}$$

hence

$$\frac{mV^2}{2}-mC^2\varphi\bullet\left(1+\frac{V^2}{C^2}\right)=\frac{mC^2}{2}$$

Where $\varphi=\sigma_H M/rC^2$. Having solved the equalization we had

$V = C(1-2\varphi) < C$ (1)

Light speed V is reduced.
We showed that in perihelion area planets free fall down to Sun. Riman's forces affect from Sun.
Case (1) takes place when the light goes in the perihelion area.

$$n = C/V = 1 + 2\varphi = 1 + \frac{2\sigma_H M}{rC^2}$$

If M and r mass and radius of Sun then

$$\frac{2\sigma_H M}{rC^2} = 0{,}87$$

According to Shredinger hypothesis bias is the wave bias de Broyle. If it is so then

$$\lambda = \frac{\eta}{mV} = \frac{\eta}{mC(1-2\varphi)} = \lambda_0(1+2\varphi)$$

Hence

$$\frac{\lambda - \lambda_0}{\lambda_0} = \frac{2\sigma_H M}{rC^2}$$

Time delay

$$t = \frac{r}{V} = \frac{r}{C(1-2\varphi)} = t_0 \bullet (1+2\varphi)$$

$$t - t_0 = \Delta t = \frac{2\sigma_H M}{C^3} \cong 10^{-5}\, сек.$$

Bend and gravitational bias occurs simultaneously. The cause of their appearance is reduction of light speed in the field of massive solid.

Thus Shapiro's experiment indicates that forces of Riman are real forces and that acceleration is absolute. Gravitational acceleration depends on chemistry of falling solid t.i. there are gravitational charge of "+" and "-" the bearers of which are electrons and protons and their antiparticles. Interspace is empty and 3-dimensional. The nature of all forces is unified t.i. $e=g=\pm\sqrt{\sigma(r)}\bullet m$ is true.

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