

# INTERPLAY OF FIELDS

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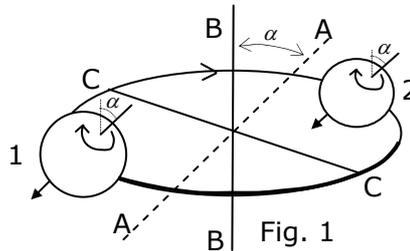
## Abstract

In the article the different aspects of interplay of fields with field carriers are reviewed.

## ON STABILITY OF GRAVIDYNAMIC SYSTEMS

It is necessary to distinguish dynamic stability ("elementary" particles, atoms, space systems) and static stability (nuclei of atoms, solids).

Let's consider a gravidynamic system, introduced on a figure 1.



Indispensable by attributes of such system is: a). Proper rotation of bodies 1 and 2 in the side of their orbital motion. b). Presence angle of inclination  $\alpha$  between rotation axis of a body and perpendicular to orbital plane.

Idiosyncrasy of a gravidynamic system is the brightly expressed anisotropy of strength in miscellaneous directions. Really, earlier we were convinced what to shatter this system compressing or expanding in a radial direction in orbital plane it is impossible because of a deep potential well, in which one there are bodies 1 and 2. In a tangential direction the system also possesses stability that is visible from following reasons. To similarly driving electric charge, the induction of a gravidynamic field of a gravitational charge will be:

$$B_m = \frac{K \sin(V, r)}{r^2} \quad (1),$$

where:  $r$  - spacing interval from a body 1 up to a body 2,  $V$  - orbital velocity. It is uneasy to show, that at approach of bodies 1 and 2 on orbit, the formula is fair:

$$r = 2R \sin(V, r) \quad (2),$$

where:  $R$  - radius of orbit. By substituting (2) in (1), we shall discover:

$$B_m = \frac{K}{2Rr} \quad (3)$$

whence it is visible, that the gravidynamic system is steady concerning approach of bodies 1 and 2 along orbit, since it should result in to decreasing of radius of orbit at the expense of increase of gravidynamic analog of force of the Lorentz, but it prohibits an energy conservation law, therefore approach of bodies on orbit also is impossible, as well as their dispersion in orbital plane. At the same time, at presence near to the third body driving outside of considered orbit, small distorting of motion 1 or 2 bodies can result that  $\sin(V, r)$  accepts zero value and the gravidynamic interplay of these bodies will vanish. The closer on orbit 1 and 2 bodies are arranged to each other, the smaller disturbance can result in destruction of a system. Therefore is complex the arranged elementary particles have a small life time. The third body moved in a counter direction to a body 1 or 2 not only can distort a trajectory, but also in general to intercept body 1 or 2 with destruction of an old system and formation new, that is well visible on an example of a  $\pi^0$ -meson (see of fig. 9.2.2 [1]).

By consideration of the schemes of "elementary" particles the following circumstance rushes in eyes. All particles with composite orbits (having large and small orbits) are unstable, and with simple orbit - are stable. Comparing a constitution of "elementary" particles with their life time, we can see that the above-stated reasoning is fair.

Except for of gravodynamic analog of force of the Lorentz who is operational on each body, driving in a field another, on each body prolongs to act and force of the Lorentz (its gravodynamic analog), directional perpendicularly its rotation axes, which one urged it in a free condition to move on a screw line. Though last is minute in matching with first, nevertheless, it urges orbit to be turned counter-clockwise around of an axis *C-C* (fig.1), that results in precession of an axis of orbit around of an axis *B-B* and, accordingly, to precession of rotation axes of bodies around of perpendiculars to orbital plane. These precessional movements promote periodic originating of a favorable geometrical situation for possible destruction of a system. The slope of a own rotating axis of particles to an axis of orbit determines beforehand that fact, that at destruction of a gravodynamic system consisting of two particles at their dispersion in the counter sides lengthwise axis *A-A* (fig.1) one of them will move on a right-screw line, and another on left-screw line. Such decay we can watch for a photon, neutron,  $\pi^\pm$ -mesons and other particles. Thus it is necessary to note, that the stability of a gravodynamic system in a direction of an axis *A-A* is significant less, than in a radial direction in orbital plane, in spite of the fact that the well depth, apparently, is identical. It is conditioned by that the gravodynamic field the same as also magnetic has a mirror symmetry concerning a current of traffic and along a trajectory the induction of a gravodynamic field is peer to zero point. Therefore potential well in a direction of radius of orbit is rather wide and considerably exceeds the sizes of particle components gravodynamic system, but in a perpendicular direction, at the same depth of a pit, width it considerably less and is comparable to the size of a particle.

Dynamically stable systems of particles differ from statically steady on arrangement of energy levels at impart to the system of exuberant energy. In dynamically stable systems there is a capability to transfer in an exited state of a separate member of a system for what to rather small energy; therefore energy levels are inspissated closer to a ground state of a system (atoms, planetary systems). In statically stable systems the excitation of a separate member is reallocated between remaining members of a system, therefore to transfer in an exited state it is possible only all system bodily. The considerable energy is indispensable for this purpose; therefore energy levels are inspissated in process moving off from a ground state (nuclei of atoms, solids).

### **The theory of gravodynamic interplay**

From matching a Coulomb's law and law of universal gravitation, apparently, that the gravitational charge is peer  $m\sqrt{G}$ , where  $G$  - gravitational constant. If to equate a gravitational charge to elementary electric charge, it is possible to find numerical value of mass creating in space a power gravitational field with the same parameters, as an electrostatic field of an elementary charge:  $m\sqrt{G} = e$ , whence  $m = 1.859 \cdot 10^{-6}$  g. It is possible conditionally to consider the obtained value as "elementary" mass, then the massive body inclusive  $N$  of "elementary" masses creates the same force field, as  $N$  of elementary electric charges.

Electrostatic intensity

$$B_e = \frac{q}{r^2} \quad (4).$$

Accordingly, the intensity of a gravitational field will be

$$B_g = \frac{m\sqrt{G}}{r^2} \quad (5).$$

At motion of electric charge there is a magnetic field, the equipotential surface which has one the form of a torus ring formed by rotation of a circumference in a plane, perpendicular to a current of traffic of a charge. The magnetic intensity in this case will be determined by the formula:

$$B_m = \frac{q}{r^2} \cdot \frac{V}{C} \sin \varphi \quad (6),$$

where  $\varphi$  - angle between a current of traffic and given point of space,  $V$  - running speed of a charge,  $C$  - speed of light (electrodynamics' constant). From the formula (6) it is visible, that the magnetic field is considerably more weak electrostatic and is compared to it on power effect only at motion of electric charge with speed, equal speed of light. In practice electric charges (for example, in a conductor) moves slowly, but we easily fix originating a magnetic field only at the expense of summation magnetic fields of huge quantity of simultaneously driving charges while the electric charges inside a conductor are balanced.

At motion of electric charge in a magnetic field on it the force of the Lorentz acts:

$$F_m = \frac{qV}{C} B_m \quad (\text{if } \mathbf{V} \perp \mathbf{B}_m) \quad (7).$$

At motion of a gravitational charge arises a gravidynamic field, the equipotential surface which has one precisely same form, as well as at motion of electric charge. For gravitational charges the intensity of a gravidynamic field can be expressed by the formula similar (6):

$$B_{gd} = \frac{m\sqrt{K}}{r^2} \cdot \frac{V}{C} \sin \varphi \quad (8),$$

where  $K$  - a gravidynamic factor dependent on a running speed, at  $V \rightarrow 0$ ,  $K \rightarrow G$ , at  $V \rightarrow C$ ,  $K \rightarrow K_c$ .

From (8) it is visible, that the gravidynamic field at customary running speeds of bodies too is considerably more weak gravitational. It is compared on force to a gravitational field only at speeds close to speed of light, if  $K$  did not depend on speed. It is increases together with relativistic increase of a gravitational charge. Besides the gravidynamic factor  $K$  increases at increase of a running speed sharply.

At motion of a gravitational charge in the gravidynamic field on it acts gravidynamic analog of force of the Lorentz:

$$F_{gd} = m\sqrt{K} \cdot \frac{V}{C} B_{gd} \quad (\text{if } \mathbf{V} \perp \mathbf{B}_{gd}) \quad (9).$$

Generally running speeds of a gravitational charge forms a gravidynamic field in (8) and gravitational charges driving in a gravidynamic field (9) do not coincide (it there can be even two miscellaneous charges).

It is known, that if the electric charge is gone in a homogeneous magnetic field so, that the vector of its speed makes an angle  $\alpha$  with a direction of a magnetic induction  $B_m$ , a trajectory of a charge is the screw line with radius of coils  $R_e$  and step  $\lambda_e$ . New physics has shown, that all free bodies micro and macro world moves on a screw line with equal translational and tangential velocity, therefore, the angle  $\alpha$  makes  $45^\circ$ .

Any body micro or macro world represents a rotated top, for which one the direction of rotation axis in space remains invariable. Thus the absolutely precise coincidence of vector of an own angular momentum with velocity vector of motion of a charge as a whole is impossible. Thus, the motion of charges on a screw line is necessarily. The calculations demonstrate that for microparticles it is impossible to ensure observed parameters of a screw trajectory at the expense of a magnetic field, since it too weak. Macrobodies have not dominating electric charge - are neutral, therefore even at presence of an own magnetic field, they can not move on a screw line. As will be shown below, to ensure screw motion of any free bodies can only a gravidynamic field.

Radius of a screw line we shall discover from a condition of equaling of gravidynamic force of the Lorentz and centrifugal force. In the formula (9) we shall take into account, that  $V$  - forward speed of a body (it is peer to a tangential velocity, perpendicular  $B_{gd}$ ). In the formula (8)  $V$  - circumferential rotary speed of a body (we shall designate  $V_p$ ),  $r$  - radius of a body. In view of these arrangements, (8) we shall substitute in (9) and we shall discover gravidynamic analog of force of the Lorentz:

$$F_{gd} = \frac{m^2 V V_p K}{C^2 r^2} \quad (10).$$

Equating (10) centrifugal force  $mV^2/R$ , we shall discover radius of a circular helix:

$$R = \frac{C^2 r^2 V}{m V_p K} \quad (11).$$

By multiplying both parts (11) on  $mV$  and allowing, that  $mVR=S$  values a constant (angular momentum of a body on a screw trajectory or on orbit, when it is captured), and  $V_p=2\pi \cdot rn$ , where  $n$  - rotational frequency ( $\text{sec}^{-1}$ ), we shall discover expression for of a gravidynamic factor for a macroworld:

$$K = \frac{C^2 r V^2}{2\pi n S} \quad (12).$$

Apparently, that from definition of an angular momentum it is possible to record:

$$R = S/mV \quad (13).$$

By multiplying (13) on  $2\pi$ , we shall discover a wavelength de Broglie for a space body. On physical sense the obtained expression will not differ from a de Broglie formula for microparticles. Apparently, that (13) will be fair and for space objects with high speed of movement in space. Here it is necessary to pay attention the reader to one more endorsement of a commonality micro and macroworld.

For a microcosmos the speed of rotation of components elementary particles is peer to speed of light, therefore in (11)  $V_p=C$ ,  $K=K_c$  and the formula (11) puts on:

$$R = \frac{CVr^2}{mK_c} \quad (14).$$

To find relation  $K_c$  to a running speed of a microparticle, we shall take into account, that  $\hbar = mVR$  - angular momentum of a microparticle (new physics has shown, that the spin of an electron also is peer  $\hbar$ , instead of half of this value, as official physics considers). After some transformations, we shall discover:

$$K_c = \frac{CV^2 r^2}{\hbar} \quad (15).$$

Similarly to macroworld, from definition of an angular momentum of a particle it is possible to record:

$$R = \frac{\hbar}{mV} \quad (16).$$

By multiplying (16) on  $2\pi$ , we shall discover a wavelength de Broglie for microparticles:

$$\lambda = \frac{2\pi \hbar}{mV} = \frac{h}{mV} \quad (17),$$

where  $h$  - constant of the Planck.

In (17) it is necessary always to mean, that in a denominator it is possible to substitute miscellaneous masses of particles only thus indispensable a condition, that the moments them on a screw trajectory are identical. In this respect official physics does an inexcusable error, substituting in (17) masses macrobodies and draw a conclusion that they have not "wave" properties. Besides (17) for macrobodies is not suit at all, and it is necessary to use the formula (13), multiplied on  $2\pi$ .

For a microcosmos, where components of elementary particles moves with speed of light, and the intensity of a gravidynamic field has huge value (it causes "strong" interplay), the formula (9) with the registration (8) puts on:

$$F_{gd} = K_c \frac{m^2}{r^2} \quad (18).$$

Instead of  $K$  in (18) there is a gravidynamic constant  $K_c$  (at  $V=C$ ,  $K=K_c$ ), since at relativistic velocities the gravidynamic charge  $m\sqrt{K}$  on many orders is more than a gravitational charge  $m\sqrt{G}$ .

The value by a gravidynamic constant  $K_c$  can be found from an equilibrium condition of forces for a neutrino which is forms an electron. Apparently, that the centrifugal force which is operational on a neutrino, mass which one twice is less than electronic mass  $\frac{m_e C^2}{2r_e}$ ,

where  $r_e$  - radius of an electron, should be peer to gravidynamic attractive force two oncoming driving a neutrino and minus the force of a coulomb repulsion. The force of gravidynamic attraction from (18) is peer:

$$F_{att} = \frac{K_c m^2}{16r_e^2} \quad (19).$$

Force of a coulomb repulsion (charge the neutrino is peer to half of elementary charge):

$$F_{rep} = \frac{e^2}{16r_e^2} \quad (20),$$

and the force of magnetic repulsing at speed of light has the same value. Allowing above-stated:

$$K_c = 8C^2 \frac{r_e}{m_e} + 2 \frac{e^2}{m_e^2} \quad (21).$$

By substituting in (21) numerical values of constants, we shall discover  $K_c = 2.783 \cdot 10^{36}$ . Thus, a gravidynamic factor in these conditions in  $4.17 \cdot 10^{43}$  times more by gravitational constant.

Under the literary data it is known, that nuclear forces approximately in 100 times more electrostatic forces. In our case this ratio will be significant less, since masses a neutrino in an electron small, therefore, the gravidynamic interplay is insignificant.

Let's discover bond energy a neutrino in an electron, which one is peer to the algebraic sum of energy of universal repulsing and energy of attraction:

$$E_{tie} = -\frac{K_c m_e^2}{8r_e} + \frac{m_e C^2}{4} \quad (22).$$

Substituting numerical values of constants, we shall discover  $E_{tie} = 8.197 \cdot 10^{-7}$  ergs = 0.511 MeV. In this case  $E_{tie}$  is peer to energy of formation of an electron  $E = mC^2$ . Substituting this expression (with a converse sign, since it is negative energy applicable to a depth of potential wells for a neutrino) in the left-hand part (22), it is possible to find other expression for a gravidynamic constant:

$$K_c = \frac{10C^2 r_e}{m_e} \quad (23).$$

Equating (21) and (23), we shall discover expression for classic radius of an electron:

$$r_e = \frac{e^2}{m_e C^2} \quad (24),$$

which one demonstrates, that all above-stated calculations and reasoning are valid.

In conclusion of this section some useful conclusions for the explorers of torsion fields and organizations, bound with start of artificial satellites.

За счет самоиндукции бумажный цилиндр повернется на некоторый угол, пропорциональный наведенной «электродвижущей силе»: For obtaining enough powerful of a gravidynamic field in laboratory conditions are indispensable the very much high speeds of rotation of rather massive bodies. It strongly embarrasses measurement of gravidynamic interplay between them, and interplay is on the verge of sensitivity of devices. Usage of gravidynamic induction is more perspective. The light paper barrel is hanged on a lengthy thin thread and is concluded in a glass tube for preventing influencing of airflows. Inside the barrel one more glass tube. In it untwists the massive barrel and fast moves inside of the paper barrel. At the expense of self-induction the paper barrel will be turned on some angle, proportional induced "electromotive force":

$$E_s = \frac{mSa\sqrt{G}}{l^2} \quad (25),$$

where  $m$  - mass of the displaced barrel,  $S$ ,  $l$  - its sectional area and length,  $a$  - the acceleration with which one is gone the massive barrel.

The evolution of satellite orbits takes place precisely the same as remaining bodies of a solar System. If the satellite is gone in a direction of rotation of the Earth, its orbital the gravidynamic moment interacts with the gravidynamic moment of the Earth. In outcome the additional force, directional to the Earth acts on a satellite, and the orbital plane aims at an equatorial plane of the Earth. If the satellite is gone against a direction of rotation of the Earth, the additional force, directional from the Earth acts on it, and the orbital plane aims

to be inverted on  $180^\circ$ . If the satellite is gyrated in a direction of the motion, these effects are considerably increased.

### **The fields and interplay of charges**

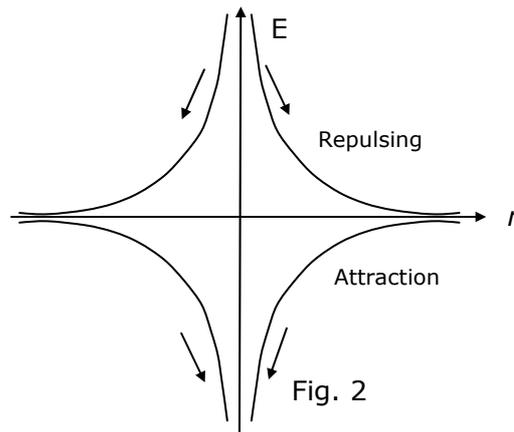
I shall remind that new physics distinguishes four kinds of fields: gravitational, gravidynamic, electrostatic and magnetic.

Concerning electromagnetic radiation, which one the orthodoxes call as an electromagnetic field it is necessary to state following. Official physics does an error, considering, that the electromagnetic radiation takes place at positive and negative acceleration of electric charges. If it was so, the oscillations of definite frequency in a loop would beam in space of electromagnetic waves of the doubled frequency, since for one oscillation of charged particles tests doubly acceleration and doubly deceleration. Therefore radiation takes place only at deceleration a charge. New physics considers that an electromagnetic field does not exist. That call as an electromagnetic field, there is a flow of photons, to which one the theory of the Maxwell has not relation.

Apparently, that all fields take an infinite volume of space therefore can have not neither mass, nor energy. As the field intensity is inversely proportional to a square of spacing interval from the carrier of a field (charge), and the volume of a field is proportional to a cube of spacing interval from the carrier of a field, at any small mass or energy of a voxel of a field, its total mass or the energy will be infinite, that is dispossessed of physical sense. That the field has not mass, it is diffused in space with indefinitely by a high speed, and therefore interplay through a field takes place instantaneously. The fields do not interact in any way among themselves; a principle of superposition of fields therefore is abided. The field around of each charge absolutely hardly also can not by any image be distorted. That we are observed, as the field distortion, is outcome of summary operating of several charges. The fields are only intermediary of interplays and act not against each other, but only on the applicable carrier of a field. Own electrical and gravitational field do not act in any way on the carrier of a field because of their symmetry. Magnetic and a gravidynamic field can act on the own carrier of a field, allowing the final sizes of any elementary charge, causing, for example, deviation from rectilinear motion, but this operating permanently in time and not bonded with energy consumption. Thus, the behavior of each carrier of a field can be changed only by other carrier of a field. Thus the power condition of both carriers of a field changes as a result of potential interplay. To demonstrate interplay of charges through a field it is possible by following figurative matching. Imagine that for you in arms lengthy weightless and absolutely rigid stick, for other end by which one keeps your friend from a distant galaxy. You can instantaneously push the friend or to attract him to yourselves.

Here opportunely to result some answers to orthodoxes stating, that the running speed can not exceed speeds of light. In quality of "evidence" indicate violation of a principle of causality and result a following example. If we shall move faster than light, we shall catch up with those photons, which one have abandoned the Earth week, month, year back. Thus we shall watch at first consequent of some phenomenon, and then its reason. But let's at first to move much more speed of light, and then we shall stay. Photons, which one we have passed, will demonstrate us exact causal connection of past events. It is better to consider a simpler and convincing example of a principle of causality and running speed, which one among themselves are not connected in any way. Let's throw in the river a log with a title "reason" and a bit later log with a title "consequent". If to float after logs, at first we shall catch up "consequent", and then "reason". But if pass along on a bank of the river and to wait for comings logs, at first we shall meet "reason", and then "consequent". From these examples it is visible, that "evidence" of orthodoxes demonstrates only absence the logic for them. Official physics agrees that the point of intersection of two rules with a small angle between them (scissors) can be roamed faster than light. Simultaneously asserted that the transmission of a signal with superlight speed is impossible. In point "A" it is possible to manipulate scissors, the ends which one in point "B" fences a light beam. The point of intersection will transmit from "A" in "B" any information. These examples once again demonstrate that the relativity theory cannot be trusted.

The numerous experiment data testify that **at any interplays electrical and magnetic field aim at attenuation, and gravitational and gravodynamic - to amplification.** Outwardly it is exhibited that is of the same name charged carriers electrical and the magnetic fields are repulsed, and unlike charged - are attracted. For example, the magnetic interplay of two conductors with an electric current in one direction results in their attraction, since between them the magnetic fields are directed to the counter sides and compensate each other. If the current flows in opposite directions, the conductors are repulsed, since between them the magnetic field is directed to one side and is summarized. The gravitational charges are always attracted, that results in amplification of a gravitational field. The opposite driving masses in elementary particles also are attracted at the expense of amplification of a gravodynamic field between them. Becomes understandable, why the gravitational charges of one sign, and electrical has two opposite signs. Only under such condition the implementation of attenuation of an electrical field is possible at interplay.



Set up visually is illustrated on a figure 2, where are figured the potential curves (repulsing) of interplay is of the same name of charged electric charges, like magnetic poles and carriers of a gravodynamic field driving in one direction. Curves (attraction) of interplay of unlike electric charges, unlike magnetic poles, gravitational charges and carriers of a gravodynamic field driving in opposite directions. The branches of curves do not leave in infinite values of potential energy because of the final size of charges and originating of the new factors precluding approach of charges.

Let's put some quotations illustrating notions of official physics of the comparatively field form of a matter.

"The fixed charge  $q$  is inextricably related with an electrical field in space, ambient it. The electrical field represents the special kind of a matter and is the material carrier of interplay between charges even in case of absence of substance between them". N.I. Kariakin etc., Brief reference book on physics, "Higher School", M., 1962, page 182.

"...the energy is dispersed on all volume held by a field, instead of is localized in an charged body. Thus, this energy has the electrical field as one of kinds of a matter". Ibidem, page 196.

The driving electric charge creates around of itself a magnetic field. New physics completely advocates a hypothesis of Ampere, that the development of magnetic properties for neutral macroscopic bodies (magnets) is explained by presence in these bodies of self-contained microscopical electric currents, only updating it in the respect that permanent magnets can be only substances inclusive in the structure atoms with quasicircular orbits of electrons (see a constitution of atoms). Orthodox physics considers electrostatic and magnetic field as the same "electromagnetic" field, supposing, that the magnetic field is a "relativistic" addition to an electrostatic field pursuant to a special relativity theory of the A. Einstein (SRT). Here is how J. Orir in the book "Popular physics" ("World", M., 1969, page 235) explains interplay between a conductor with a current and electric charge, driving in parallel to a conductor: "According to a Coulomb's law resultant electrostatic force which is operational on a charge... should turn to zero point irrespective of, moves conduction electrons in a conductor whether or not. If, however, we shall take advantage of a relativity theory, mean spacing interval between conduction electrons at their motion is reduced to the Lorentz factor, i.e. in  $\sqrt{1-v^2/c^2}$  times, where  $v$  - drift velocity of these electrons. In

outcome the density of charge of conduction electrons will be increased according to a relativity theory in  $1/\sqrt{1-v^2/c^2}$  times; at the same time density of charge of positively ionized atoms occupying a locked position, remains same. Therefore, the resulting charge will not be peer any more to zero point". Such "explanation" does not maintain a critic on following points.

1. Though new physics clean disclaims SRT, of what the reader can be convinced later, here, naturally, it is necessary to start with this theory. Agrees to it, the sizes of driving bodies are reduced in a current of traffic, but just the sizes of bodies, instead of interspaces between them are reduced. The reduction of interspaces between bodies (see pointed out) is a "creative" development SRT, resulting in to uttermost nonsense. This conclusion contradicts the idea of relativity, since has not value, whether moves of a particle concerning "space" or "space" concerning them.

2. If the density of charge of electrons is augmented, additional electrons whence arises? You see about relativistic change of value of an elementary charge SRT hold back.

3. If the charge is immobile concerning a conductor with a current, the interplay misses, though after the logic of orthodoxes the electrostatic interplay should be watched, since the conductor "was charged".

4. If instead of a conductor with a current we shall make convective carry of an electrified body, magnetic interplay we shall watch experimentally (in 1901 A.A. Einhenwald has shown, that the magnetic field of a convection current coincides a magnetic field of a current of the same value in a conductor), and on above to the set up orthodox views the interplay should miss, since at convective carry the drift velocity of electrons in accuracy is peer to a drift velocity of positive charges in points of lattice. Therefore "relativistic" additive to positive and negative charge is identical.

5. Is apparent, that "the relativistic additive" to a Coulomb's law in a metallic conductor can be only as increase of negative "charge" without dependence from a current of traffic of electrons (direction of a current in it), though the experiment demonstrates a veering of a magnetic field of a conductor with a current on opposite.

6. Speed of heat motion of electrons in a conductor, as a minimum, in  $10^6$  times more drift speed under operating of an electrical field, therefore "interspaces" between electrons already strongly "are abbreviated" also chunk of metal should spontaneously be charged by a large negative charge, that contradicts experiment.

Behind a sinus of orthodox physics is hidden and completely other notion of a "electromagnetic" field as a field of virtual photons, which one the interacting bodies interchange. Here we shall not criticize this even more absurd notion, as such of a critic is scattered under the book.

Allowing, that in a macro scale we can watch objects, for which one, for example, the gravitational field considerably dominates above electrical, and magnetic - above gravidynamic and on the contrary, there is a sense to section them and to esteem separately four kinds of a field. The analysis of all body of the known physical laws results in a conclusion, that all four kinds of a field interact with carriers of a field so that to ensure minimum potential energy of a system of carriers of a field as a whole. Also consists of it sense of a long-range action realizing a minimum of potential energy of carriers of a field of each kind though the mechanism of implementation remains vague.

Let's consider the problem on interference of miscellaneous kinds of fields. Apparently, that the electrical field does not interact in any way with magnetic, and gravitational - with gravidynamic. Otherwise we could watch self-acceleration or self-deceleration in motion gravitational and electric charges in an inconsistency with an energy conservation law. Similarly, the gravitational field in any way should not interact with magnetic, and electrical - with gravidynamic. On this basis the statement of the Maxwell, that by a source of originating of a vortical magnetic field is a displacement current - variable electrical field and, back, that the variable magnetic field creates a vortical electrical field it is impossible to recognize fair with all flowing out from here consequences. We once again can be convinced that obsequious of mathematics is prostitute of science and gives not objective outcomes and that from it want. The truth, Maxwell is possible to understand, for him was not under an arm of a gravidynamic field, and light should as move in space. If he was right, uniformly and the rectilinearly driving electric charge on him the theories should beam electromagnetic waves, since such charge in each point of space creates a variable magnetic field, i.e. all electric charges should lose energy and to be stopped. We easily fix

originating a magnetic field at convective carry of an electrified body, but not we discover thus electromagnetic radiation - this simple experiment disclaims the suppositions of the Maxwell about the mechanism of formation of electromagnetic waves. There is one more weighty argument in an inaccuracy of the theory of the Maxwell: from matching properties of a photon with other particles is apparent, that the reason of waves of the de Broglie and electromagnetic waves of the Maxwell same and has not relation to the most electromagnetic theory. As endorsement of initial notions of the Maxwell and the validities of the electromagnetic theory frequently indicate presence of synchrotron emission by activity of particles accelerators. Here we, ostensibly, is observed radiation from electric charges moved on a circumference. However synchrotron emission confirms only that circumstance, that the accelerator is fine model of an excited atom (see theory of hydrogen-like atoms). At impart to the charged particle of exuberant energy it can not move strictly on a circumference, though its trajectory and introduces an ellipse with a very small eccentricity. Therefore synchrotron emission has not relation to a considered problem (see chapter 11.5 [1]).

Interplay electrical with a gravitational field and magnetic with gravidynamic the energy conservation law resolves. Nay, in substantial objects these fields are inextricably related, therefore we can imagine increase of intensity of an electrical field at the expense of decreasing gravitational and magnetic at the expense gravidynamic in a loop system, i.e. they mutually loosen each other. However interplays electrical and gravitational field, while, nobody watched, though it is enough of such capabilities. The change of an electrical field at the expense of gravitational would upset a principle of common electro neutrality. There is a capability of interplay magnetic and of a gravidynamic field, which one could be realized in so-called "electromagnetic waves", if the photon did not make Maxwell equations redundant. In this connection opportunely to recollect a hypothesis of existence of magnetic monopoles. It has arisen not so much under the requirements the physical logic, how many mathematical: that the Maxwell equations become symmetrical. If to take into account a gravidynamic field, these equations will become really symmetrical, simultaneously contenting the physical logic and depriving a hypothesis about magnetic monopoles of any fundamentals. "A magnetic monopole - the hypothetical magnetic charge - was forecast by the Dirac in 1931. The magnetic charge  $\mu$  of a monopole should obey to a following condition of quantizing:  $e\mu = n(\hbar c/2)$ , where  $n$  - integer,  $e$  - elementary electric charge. The models of Great Association contain as the solutions magnetic monopoles. Their rest-mass  $10^{16}$ - $10^{17}$  GeV/ $c^2$ . The magnetic monopoles could arise in the Universe at the moment of Big Bang". Subatomic physics. Publishing house the Moscow University, 1994, page 111. The magnetic monopoles are not detected experimentally, despite of considerable efforts on their looking up. The unsuccessful looking ups of a magnetic monopole indirectly indicate an inaccuracy of a classic electrodynamics of the Maxwell and quantum mechanics, on which one the magnetic monopole should exist.

In the same section it is be worth-while to consider a problem of a long-range action and short-range interaction. The modern physics negates a long-range action, i.e. interplay of bodies apart without the intermediator between them. Such statement cannot something oppose, for the intermediator, apparently, is indispensable. Following convictions mechanicians of past centuries, that at interplay something about something should necessarily "to bob" (short-range interaction), the quantum physics even interplay by means of a field reduces to "knocking" of particles - carriers of a field (field quantum). So, the electrostatic interplay is represented by carry of photons, and gravitational - not detected till now gravitons. Thus, orthodox physics reduces all interplays to a short-range interaction, though the mechanism of a short-range interaction for it remains vague.

From the point of view of new physics, the fields can not contain any particles in quality "of carriers of a field". Any particles should have mass distinct from zero; therefore their rate of propagation can not exceed speed of light. However, the propagation of fields takes place to speed, is significant superior speed of light, otherwise there is a problem of "retarded potential". For example, because of "retarded potential" the existence of planets would become impossible. The sun "sees" a planet not in its true position, and it is a little behind on orbit because of terminal velocity of propagation of a gravitational field, therefore attractive force to the Sun and centrifugal force applied strict on center of a planet will forms torque in the party opposite to orbital motion and proper rotation of a planet. This moment by nothing is indemnified and should result at the end in a gap of a planet under

operating of centrifugal forces. Precisely same reasoning is fair and for an electrostatic field at motion of an electron around of a nucleus.

Apparently, that the interplay by "contact" in the nature is not watched anywhere. Even shock the each other of billiard balls as a matter of fact demonstrates a long-range action through a field by repulsing of electronic shells of atoms of these balls. Especially it is fair for "field quantum". New physics asserts, that substance does not exist at all in the nature and that we imply it, actually is combination of four kinds of fields, any of which one represents the substance, spread in space, without "of carriers of a field" as any particles, therefore speed of its propagation does not limit by speed of light.

If under a field to understand such spread substance, which is absent mass and electric charge, a particle will be a certain vortex of this field, qualitatively its other form, in which one appears gravitational and electric charge localized as "particle".

### Possible mechanism of fields operating

The mechanism of fields operating to modern science is unknown. The Newton in one's time has not offered any mechanism of gravitation operating. The Einstein attempted to explain a gravitation by a bending of space - time, but the general relativity theory does not maintain critics, introduced in this book. Indirectly confirms an inaccuracy of a general relativity theory unsuccessful attempt of the Einstein to elaborate something similar for an electrostatic field, as the apparent family tie gravitational and electrostatic field is represented. The modern physics explains the mechanism of fields operating by exchange of virtual particles - quanta of the applicable field (how many particles, it is so much also fields) not having representation, as it takes place, i.e. nothing explains. Thus, for today nobody knows, why the gravitational and unlike electric charges are attracted, and like are repulsed. Despite of considerable efforts to aggregate all fundamental interplays in the unified theory, most likely, it will be not possible to construct communism among them, where all common, means nobody's.

I shall remind the basic representations of new physics about fields.

1. It is the substance, spread in space which is not having mass and energy, does not contain any particles, therefore is diffused with indefinitely by a high speed.

2. The field absolutely hardly also can not be distorted by any factors. The apparent distorting of fields is conditioned by their combined effect on a trial charge or carrier of a field. Gravitational and electrostatic field have a spherical symmetry. At the same time principle of superposition of fields allows in the same point of space to coexist to different fields of infinite number of charges - carriers of a field.

Similarly, how the wave-corpuscule dualism of particles is represented completely not clear and contradictory, will not learn yet its true essence, and the different conceivable scripts of interplay of fields and charges continually come across irresolvable inconsistencies. I tender on court of the reader the not contradictory mechanism of fields operating, though at first sight it and seems improbable.

The like electric charges are repulsed from each other, therefore, the minimum of potential energy them is on indefinitely large spacing interval from each other, since any system aims at a minimum of potential energy. The unlike electric charges and gravitational charges are attracted to each other, therefore minimum of potential energy for them corresponds minimumly to possible spacing interval. Let's suspect, that the own electrostatic field of a charge aims to take away it in the miscellaneous parties, but because of a symmetry of a field the net force is peer to zero point. If somewhere there is a like electric charge, the operating of a proper field becomes not symmetrical, as shown in a figure 3.

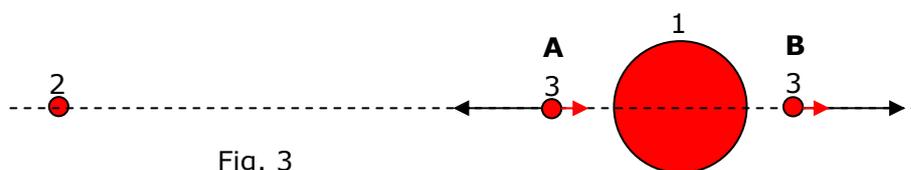


Fig. 3

On a figure 2: 1 – concerned electric charge, 2 - distant like electric charge, 3 – test like charge. In area **A** the distant charge 2 a little loosens a field of a charge 1 (in inverse proportion to a square of spacing interval), and in area **B** in the same degree increases a field of a charge 1. Therefore under operating of an proper field the charge 1 will leave from a charge 2 so that the potential energy of these charges decreased. The same reasoning are fair and concerning a charge 2. Without partner on interplay (charge 2) the considered charge is not displaced anywhere, and at presence of partner the potential energy of their interplay is transformed in kinetic.

Let's consider interplay of unlike electric charges, introduced on a figure 4.

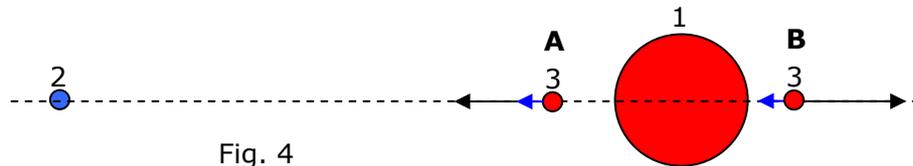


Fig. 4

Now trial charge demonstrates, that the field was heightened (in inverse proportion to a square of spacing interval up to a charge 1) in area **A**, slightly loosened in area **B**. Therefore under operating of an proper field the charge 1 will come nearer to a charge 2 so that the potential energy of these charges has decreased. The same reasoning are fair and concerning a charge 2.

The gravitational interaction to the similarly reviewed electrostatic interplay with that only by difference, that a gravitational field of mass aims from the miscellaneous parties to tighten a gravitational charge 1, but because of a symmetry of a field the net force is peer to zero point. If somewhere there is one more mass 2, the operating of an proper field becomes not symmetrical, as shown in a figure 5.

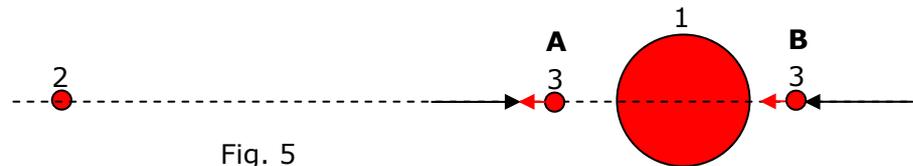


Fig. 5

In outcome the own gravitational field of mass 1 in area **B** acts stronger on gravitational charge and displaces it to the side of a charge 2 for provision of a minimum of potential energy of charges 1 and 2.

For a magnetic field the principle of interplay with carriers of a field is opposite to an electrostatic field and is similar to a gravitational field. The magnetic field presses on the carrier of a field and aims to pop it in the side of a more weak field that it to boost, if it becomes not symmetrical. Magnetic and a gravidynamic field have center of symmetry but not are spheric uncambered. In section along traffic route of the carrier of a field the form of a field represents a figure formed by rotation of a circumference around of tangent, conterminous with a motion trajectory, as shown in a top of a figure 6 therefore other carriers of a field basically act in a direction, perpendicular motion.

Let's consider the mechanism of originating of force of the Lorentz at motion of electric charge in a magnetic field figured on this figure. The external magnetic field **H** is shown black arrows, the positive electric charge is indicated by red colour, and negative - cyan. The current of traffic of charges is shown in center of a charge a tail unit of an arrow (from us) or spearhead of an arrow (to us), the direction of an own magnetic field is shown in a circumference around of the applicable charge. The force direction of the Lorentz is shown green arrows.

To the left of a charge № 1 proper field is reinforced by an external field, and on the right external field **H** loosens operating an proper field on a charge, therefore own magnetic field moves a charge to the right on a figure. For a charge № 2 outcomes of interplay with an external field is similar. To the left of a charge № 3 external fields loosen, and on the right - boosts operating an own magnetic field on a charge, therefore it is gone to the left. At opposite motion of a charge № 4 on similar reasons it should move to the right under operating of force of the Lorentz.

Now we shall consider, that the external field  $\mathbf{H}$  is switched off. Then it is possible to consider interplay of own magnetic fields of driving charges or conductors with a current of positive or negative electric charges. From a figure 6 it is clear, that the driving charges (or conductors) № 1 and № 2 will be attracted because of mutual field reduction between them, the charges № 1 (or № 2) and № 3 will be repulsed because of strengthening of a field between them, the charges № 1 and № 4 are attracted because of mutual field reduction between them, and the charges № 3 and № 4 are repulsed from each other. Therefore conductors with one direction of a current of like electric charges are attracted, and with an opposite direction are repulsed from each other. For a current of unlike electric charges the outcome is opposite.

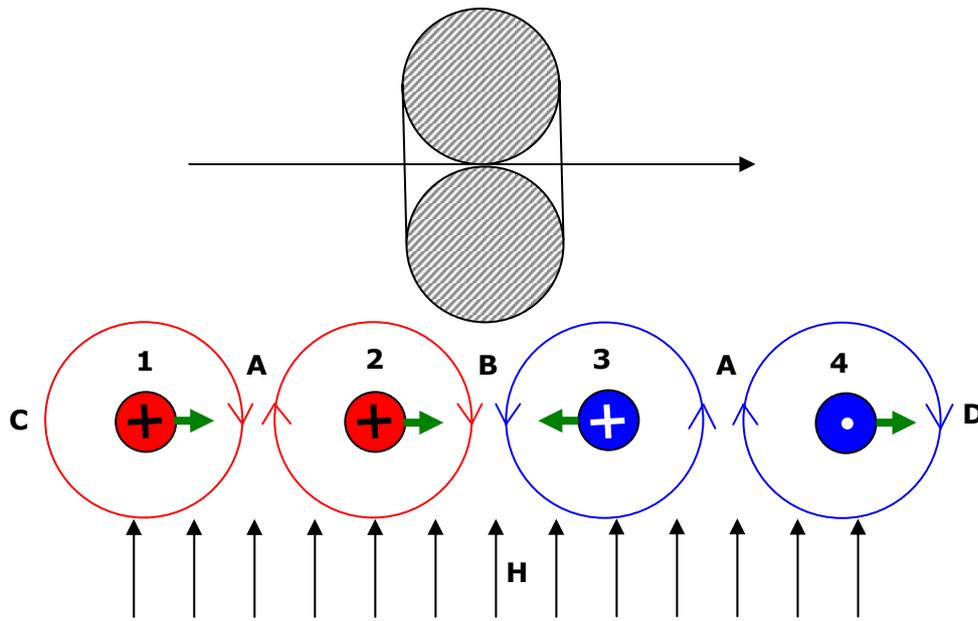


Fig. 6

It is possible to take advantage by a figure 6 for the analysis of the mechanism of operating of a gravodynamic field. For this purpose it is necessary to take into account, that the behavior of carriers of a gravodynamic field is opposite to behavior of carriers of a gravitational field and similarly to behavior of carriers of electrostatic charges, i.e. own the gravodynamic field attempts to displace the carrier in a direction of more strong field. Let's consider, that the antimatter positively is charged electrically (for example, the positron) and corresponds to particles № 1 and № 2, and the matter bears negative electric charge (for example, the electron) and corresponds to particles № 3 and № 4. As the gravodynamic interplay brightly is exhibited for components of elementary particles, we shall reason on their example. The unidirectional motion of particles of a matter or antimatter results in them to gravodynamic repulsing from each other because of field reduction between them. For this reason it is impossible very close to arrange, for example, nucleones. The orthodoxes link this fact with «by a repulsing core» of nucleones. In elementary particles the components commit orbital motion therefore close arranged on orbit components homomatter move is unidirectional and can not be pulled together, and the diametrically arranged components homomatter move counter and if they the quoters of a matter or antimatter, between them there is such attraction, to which one is not present equal in the nature (potentially by more strong there can be only generalpurpose repulsing), for example, electron (two neutrinos) or positron (two antineutrinos). Therefore such particles have a rest-mass, since the components are in a deep potential well formed by gravodynamic attraction and generalpurpose repulsing. If the components of a particle introduce heteromatter, for example, photon, consisting neutrino and antineutrino, the gravodynamic repulsing their does not give them a capability to form a particle with a rest-mass. In this case integrity of a photon provides an electrostatic attraction of unlike charged components and magnetic attraction of counter currents of unlike charges, which one, in conditions of motion of components with speed of light, on force is equal to an electrostatic attraction.

In connection with that the gravodynamic interplay is similar to behavior of electric charges, and the magnetic interplay is similar gravitational, it is possible to suspect, that the gravitational charges the same as electrical have two miscellaneous signs, and as against last the like charges are attracted, and unlike are repulsed. Let's take into account also that the gravitational field aims to tighten a gravitational charge, that results in moving it in the side of a more weak field, as was indicated above. Our world on mass on 2/3 consists of an antimatter and is an anti-world (see chapter 11.3 [1]), therefore matter in our world should follow to the law of world-wide repulsing, instead of world-wide attraction, as an antimatter. It can be tested by overseeing by an antineutron (it is a matter). In space by interesting object for analysis of gravitational repulsing of a matter and the antimatter are jet emissions of electrons (jets) from many space objects. The electrons (matter) are repulsed at a gravitational interaction from a mother space body (antimatter) and should move with positive acceleration, instead of with deboosting, that would be watched at a gravitational attraction. Thus, the antigravitation appears for us under a nose, as on 1/3 mass our world not only antimatter, but also matter.

To illustrate a gravitational interaction of a matter and antimatter we shall take advantage of figures 5 and 7.

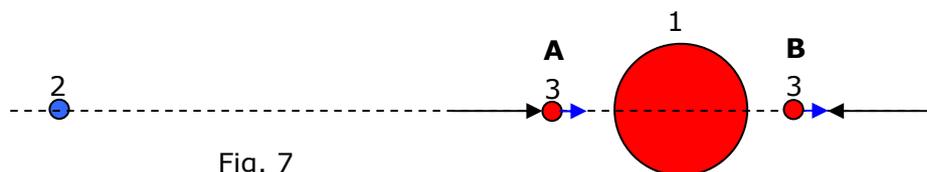


Fig. 7

On a figure 5 the gravitational interaction of two like gravitational charges of an antimatter component on 2/3 basis of our world is shown. If to take into account, that the proper field aims to tighten a gravitational charge, it will move to the side of a proper field, seared by distant mass, because of dominance of a strength of the influence of a field in area **B** in matching with area **A**, i.e. the like masses are attracted. On a figure 7 the gravitational interaction of two unlike gravitational charges is shown, where a matter and its operating are shown cyan colour. The same reasoning result in a conclusion about repulsing of a matter and antimatter.

To not be confused in every possible cases of operating of fields, on a figure 8 operating an proper field on the carrier of a field and current of traffic of the carrier is shown in case of attenuation of a field on the one hand. 1 - gravitational field, 2 - a gravodynamic field, 3 - electrostatic field, 4 - magnetic field.

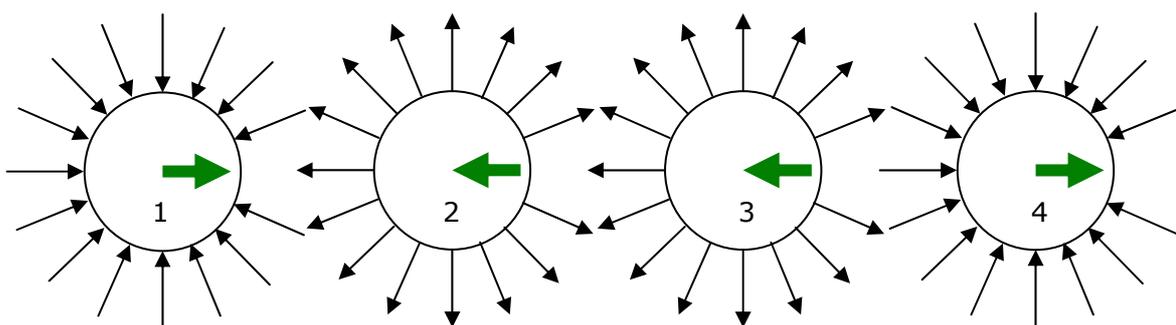
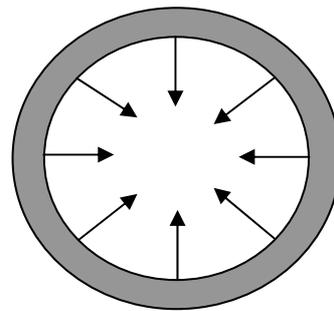
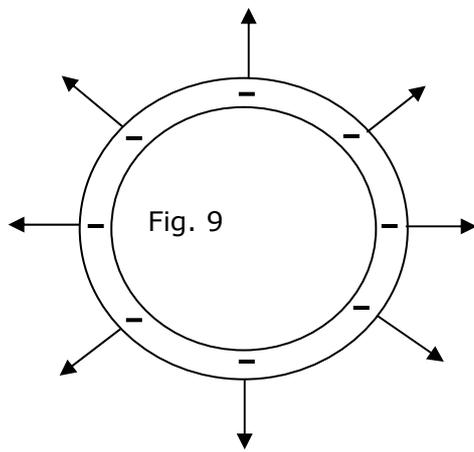


Fig. 8

Thus, all probable cases of operating of different fields receive simple and logical explanation.

The figures 9 and 10 confirm a hypothesis that the electrostatic field aims to extend electric charge and to tighten gravitational. Preclude with this force of gravodynamic attraction and generalpurpose repulsing, which one on a microlevel on many orders are stronger than any other forces in the nature.

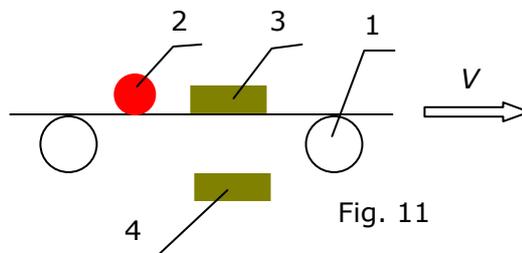


On a figure 9 the electrically charged hollow orb, and on a figure 10 - massive hollow orb not having of electric charge are figured.

### Commonality and differences of magnetic and gravidynamic field

The commonality of these fields is consist, that they arise at motion of electrical or gravitational charge. But any of these charges in essence is not in a state of rest, and is gone together with the Earth, Sun, Galaxy.

**1. Magnetic field.** There is a problem: whether the «fixed» electric charge has a magnetic field and if has, why we discover it not by our devices? The answer is very simple and is grounded on numerous experiments with a magnetic field. That it is necessary sensor of the detector to find out, to displace it concerning a magnetic field. If the movement misses, by any way to find out a magnetic field it is impossible. At the same time the actual magnetic field around of «fixed» electric charge can be of large value. If the absolute speed of motion of a charge in space comes nearer to speed of light, the magnetic density of this charge is compared to field intensity of the electric charge. On a figure 11 the evidences of these statements are shown.



The bogie 1 is gone with speed  $V$ . On it rest electric charge 2 and sensor of a magnetic field 3. The same sensor of a magnetic field 4 is arranged fixed outside of a bogie. Apparently, that at motion of a bogie the sensor 3 does not fixes presence of a magnetic field, and the sensor 4 will show originating a magnetic field at convective carry of electric charge. Apparently also, that owing to a principle of superposition of fields of magnetic fields of positive charges of matter are not indemnified by magnetic fields of negative charges and exist separately from each other. However at attempts to meter a magnetic field of a driving chunk of metal we shall make the error concluding, that the common magnetic field positive and negative charges is equal to zero point as a result of full compensation. Thus, we live in space by saturated magnetic fields, but not we feel it. Similarly we not feel, for example, our violent motion in space.

**2. Gravidynamic field.** Here it is possible to repeat a problem: whether the «fixed» gravitational charge (some mass) has a gravidynamic field and if has, how it to find out? The answer to this problem essentially differs from the answer concerning a magnetic field. At the analysis it is necessary to mean a feature of a gravidynamic field included, that at nearing speed of a gravitational charge to speed of light the field intensity not only reaches

tension of a gravitational field of mass, but also on many orders exceeds it and in this case is called as a strong interaction (in nuclear physics). Even taking into account of speed of our Galaxy of the order of 600 kms/sec, which one is even far from speed of light a gravidynamic field of the Earth and all bodies, which one on it are insignificant. But at the same time in the chapters dedicated fundamental particles is shown, that at counter motion of a matter or antimatter they are attracted, and at parallel - are repulsed. Therefore, the fixed subjects on the Earth should be repulsed from each other, since are displaced in space by a parallel course. In this connection I address attention of the reader to work of the Hungarian scientists (D. Sarkadi, L. Bodonyi. A Gravity Experiment Between Commensurable Masses. Journal of Theoretics, vol. 3-6). These scientists have found out a minimum of a gravitation between commensurable masses. Up to them the experiments were conducted with a massive body to which one approximated a small body, since the equipment did not allow to use a pair of massive bodies. From the orthodox point of view the outcomes of these experiments contradict official views, but from the point of view of new physics they confirm existence of a gravidynamic field and the repulsing homomatter at parallel motion which one for comparable masses will be, naturally, it is stronger.

### **Whether the antigravitation is possible?**

All set up in the previous chapter is logical with one exception. The symmetry of a world would be satisfied, if the gravitational charges too had two opposite signs. Thus the like gravitational charges are attracted pursuant to the set up principles, and unlike will be repulsed. That concerns also carriers of a gravidynamic field. For the answer on put in caption of the chapter the problem is necessary more carefully to analyze a matter and antimatter. We have shown that our world consists of equal number negatively charged neutrino (matter) and positively charged antineutrino (antimatter). In outcome in the Universe the electric charges indemnify each other. But equal quantity does not mean equal mass. Mass of our world basically is determined by protons and neutrons, which one also contain in the structure a proton. Mass of all remaining particles can be neglected. The exception is made with photons consisting from equal on mass a neutrino and an antineutrino; therefore they can be not esteemed.

Each proton contains 4 antineutrinos and 2 neutrinos, therefore our world on 2/3 is an anti-world on mass, on its antipode it is fall only 1/3 all mass. Some features of a constitution and the behaviors of elementary particles described in this book, indicate that the gravidynamic interplay strongly links a matter to a matter (electron) and antimatter with antimatter (positron) and does not link almost matter to antimatter (photon). It speaks that, at least, for carriers of a gravidynamic field the difference between a matter and antimatter consists not only in opposite electric charges, but also in opposite gravitational charges. The scientists have established that the thermal neutron is gone in a gravitational field of the Earth in full conformity with the law of world-wide attraction. If to manage the same experiment to put with an antineutron or atom of antihydrogen, with a large confidence it is possible to assert, that these particles will follow to the law of world-wide repulsing. It would be possible for such experiment to use an antiproton and even an electron, but it is impossible to be saved of external electrostatic fields practically, and they act on 36 orders stronger than gravitation or antigravitation. Whether it is possible on the basis of set up to assert, what the antigravitation exists? It is very possible, what yes, exists, but it cannot in the visible future practically be used for macrobodies.

It is possible, that the Nature will use an antigravitation for creation of ultrarays with large energy. The jets of relativistic electrons as sprays from many space objects are tracked on huge spacing intervals, that indirectly confirms repulsing a matter (electrons) from an antimatter (mother object).

### References:

- 1 <http://www.new-physics.narod.ru>