

"Crooked Magnetism" of Maxwell (Without Real Magnetic Charges) as the Age-Old Imprecation of Physical Science

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ABSTRACT

Experimental and theoretical studies of the author (period: 1968 - present) have shown that magnetic fundamental particles (magnetic charges) are real structural components of atoms and substance. It is the magnetic charges, and not the electrons moving are the direct sources of all magnetic fields and magnetic manifestations in nature. Magnetic charges together with electric charges make up the shells of atoms which in reality are electromagnetic, and not electronic. It is the shells of atoms and nucleons that are the sources of the gravitational field, which is a vortex electromagnetic field. The main reason for ignoring magnetic charges, as well as true antielectrons in physical science are the harsh conditions for their confinement in the structures of substance which is cardinally different from confinement of electrons. In addition, a very negative role in the "fate" of the noted problematic particles was played by Maxwell's vicious concept of electric magnetism, in which the great physicist, back in 1873, based on his superficial impressions of the famous Oersted Experiment declared moving electrons by the direct sources of the magnetic field. Paradoxically, the world physical community has accepted Maxwell's erroneous concept as the absolute truth and, for almost 150 years, his vicious electric magnetism largely determines the "development" of world fundamental physics. The article shows how the introduction of these problematic particles into basic physics radically changes the representation of most physical effects and manifestations. So, for example, the gravitational field in physics with magnetic charges is just the vortex electromagnetic field that has nothing to do with the ritual curvature of 4-dimensional space-time. To obtain a gravitational field and use it in practice, it is necessary to legalize magnetic charges and learn how to work with them in superconductivity conditions.

Keywords: Magnetic charges, True antielectrons, Electromagnetic shells, Physical Triad, Matter, Antimatter, Energo-medium, Physical Mass, Vortex electromagnetic (gravitational) field, "Dark energy", annihilation of particles, Expansion of the Universe, Relic radiation.

INTRODUCTION TO GENERAL PHYSICS WITH REAL MAGNETIC CHARGES

Experiments F. Ehrenhaft (1910 - 1952) with followers, as well as experimental and theoretical studies of the author (period: 1968 - present) have shown that true sources of magnetic field are magnetic fundamental particles (magnetic charges) but not a moving electrons [1 - 7]. Magnetic charges, which make up half of all spinor (charged) particles in the real World, turned out to be unrecognized in physical science because of their hard confinement in the structures of substance, which is radically different from the retention of electrons. Together with

magnetic charges under conditions of rigid confinement exist in atoms and substance such fundamental particles as true antielectrons, also unrecognized in existing physics [8]. The magnetic and electric charges mentioned above and not recognized in official physics, together with electrons form atomic shells which are actually electromagnetic, not electronic, as is commonly believed in existing sciences [9].

Paradoxically, but the existing physical science has ignored the existence of three, out of four real fundamental particles that make up atomic shells (two magnetic particles with charges g^- and g^+ , as well as the true antielectron e^+), leaving only one electron for the "convenience" of own interpretations. A physical theory built on such a flawed basis should be defined as **Electronic Physics, Physics with "crooked magnetism"** or just **"Curve Physics"**. Further in our article, we will use, as the most consistent with reality, the latter definitions.

This vicious situation in Physics was initiated by the Great J.C. Maxwell who, back in 1873, on the basis of his superficial impression of the famous Experience of Oersted, declared moving electrons to be the direct sources of the magnetic field. This vicious verdict was positively perceived by the world physical community and, as an absolute truth, dominates in the natural sciences for almost 150 years [10, 11].

The **Appendix** to this article describes in detail the main reasons that led physical science to the vicious disregard of magnetic charges, as well as true antielectrons.

However, it was impossible to completely "disconnect" from magnetic charges and true antielectrons in the physical theory, since their physical "ears" invariably "stuck out" in the results of experiments. Over time, fundamental magnetic charges in the structures of atomic shells were replaced by such theoretical surrogates as the magnetic moments of electrons, and true anti-electrons by Dirac holes or electron vacancies [12, 13].

It is important to note that this last theoretical "trick" not only did not resolve a vicious situation in physics, but also created additional difficulties in the interpretation of effects and manifestations and led to an incredible complication of physical theory. It should be noted that the most "deadly" argument put forward by the opponents of real magnetic charges, in general terms, can be defined by the expression **"this can never be"**.

The result of the vicious disregard of real magnetic charges and true anti-electrons in physical theory were the surrogate theoretical "Himalayas" which include: the global expansion of the Universe and a very big bang; destruction of particles in an electron-positron pair; the field and the Higgs boson, as the primary cause of the formation of the mass of particles, the representation of the gravitational field in the form of a curved four-dimensional space-time and a huge variety of others [14].

The vicious situation described above with magnetic charges and true antielectrons in physics has closed all reasonable approaches to finding out the real essence of the known ones, as well as to discovering new, physical effects and manifestations. For example, the introduction of magnetic charges into basic physics allowed the author to establish that the gravitational field is just a vortex electromagnetic field and it does not need to bend space at all to form it. In turn,

the identification of the true nature of the gravitational field showed that the main mechanism of the chemical bond is the gravito-chemical bond. As for the existing theory of electronic chemical bonding, which is based on a vicious model of a purely electronic shell of atoms, this theory is extremely erroneous [15, 16].

The noted vicious disregard of magnetic charges in the compositions of atomic shells also closed approaches to the detection and implementation of new useful technologies in practice. For example, an experimental study of vector varieties of the gravitational field allowed the author to develop and propose for practical implementation the very effective method of decomposition of water, carbon dioxide and hydrocarbons by means of a technical ferrogravitational field. The last method of decomposition of the noted molecules, which was called **ferrogravitolysis**, in terms of efficiency, many times exceeds the capabilities of the electric field used for these purposes, i.e. electrolysis. In addition to the noted method of efficient extraction of green hydrogen, the author has developed a set of other useful technologies that use a technical ferrogravitational field [17-19].

However, for the realization and acceptance of these very promising copyright technologies for high physical science, it is necessary to show a civil feat and, stepping on the "throat" of the vicious electric magnetism, to accept magnetic poles, as well as true anti-electrons as the natural reality.

Of course, the serious difficulties described in the author's publications related to the experimental detection and investigation of the noted problematic particles serve as an apology of high physics for vicious situation in science. However, at some point it is necessary to stop and make a fundamental revision of the existing physical theory. Because it is impossible for another 150 years, ignoring the results of experiments and common sense, to remain faithful to Maxwell's vicious concept and the conviction of the amazing universal "super-abilities" of the electron [20].

This article provides comparative representations of the well-known fundamental effects and manifestations adopted in the existing physics with "curved" magnetism and in physics with real magnetic charges. The author hopes that the information given in the article will serve as an additional argument for a radical revision of the physical basis of modern physical theory.

INTERPRETATION OF KNOWN EFFECTS AND MANIFESTATIONS IN PHYSICS WITH REAL MAGNETIC CHARGES AND IN EXISTING PHYSICS WITH "CROOKED MAGNETISM"

This chapter provides brief comparative interpretations of 15 known fundamental effects and manifestations adopted in Physics with real magnetic charges (PMC) and in existing Physics with "crooked magnetism" (P"CM"), i.e. without involving magnetic charges in the analysis. The provisions of the latter Physics, given in the article, are usually borrowed from the corresponding physical sections of Wikipedia.

Real magnetic charges in atoms and substance

PMC. Magnetic charges (magnetic analogues of electrons and true antielectrons), that really existing in atomic shells, have received the author's name magnetons and antimagnetons. These elementary particles have magnetic charges, respectively, g^- and g^+ , under the fundamental

condition $g = e$ where e is the electron charge. The basic state of magnetic charges in atoms and substance (as well as of electric charges) is their existence in the compositions of the corresponding dipoles. In addition to participating in atomic structures magnetic charges populate potential conduction bands in normal conductors. Under conditions of superconductivity magnetic charges exit in real conduction bands and under the influence of the magnetic charged potential difference, can participate in the composition of the magnetic current, i.e. of the magnetic analogue of electric current (see, [21] and also [3 - 6]).

Note. The name of magnetic particle the magneton should not be confused with such a theoretical surrogate as Bohr's magneton which, in turn, is a unit of measurement for such a vicious theoretical concept as the magnetic moment of an electron. These last moments, were used in theory as forced replacement for unrecognized, but really existing in atoms and substance, magnetic charges.

P"CM". Fundamental magnetic charges, i.e. true sources of magnetic field are not recognized in existing physics with "crooked magnetism" and are not included in the Standard Model.

True antielectrons

PMC. True anti-electrons, i.e. real antiparticles to electrons were "buried alive" in existing physics for same reasons as magnetic charges, i.e. in result of hard confinement in atoms and substance and, consequently, of great difficulties with their experimental detection. The antielectrons that actually exist in atomic shells have been replaced by such theoretical surrogates as Dirac holes or electron vacancies. As for free antielectrons so, in the absence of their experimental detection and recognition, it role was mistakenly assign to positrons (see, [12, 13]).

P"CM". Fundamental antielectrons, i.e. true antiparticles to electrons, similarly of real magnetic charges, are not recognized in existing physics and, as real fundamental particles, are ignored at all stages of physical-theoretical analyzes.

The physical device of the Real World and "Dark Energy"

PMC. According to the provisions of Physics with magnetic charges, the Real World consists of three fundamental phases: Matter, Antimatter and Energo-phase (Energo-medium) which make up the World Physical Triad. The Matter (Material phase) consists of magnetic and electric fundamental particles with a negative charge, and the Antimaterial phase consists of magnetic and electric particles with a positive charge. The Energo-phase is the isotropic high-density gas-like medium consisting of its own ultra-small massless and spinless particles - energions, moving in all directions at near-light speeds. It is the energions are the corpuscular filling of all spinor fields, i.e. the fields of charged particles (particles of the Material and Antimaterial phases). The force derivative from Energo-phase which is called "Dark Energy" ("DE"), manifests itself in the form of zones with anisotropy of the energion's density or energo-pressure fields. The prefix "Energo", which is used in the name of the world medium (Energo-medium), as well as in the name its of own particles - energions, is associated with the global significance of this medium in the dynamics particles and masses of real World [22, 23].

P"CM". In physics with "crooked magnetism" there is no such (structural) concept as the Physical Triad. In the physical concepts given in the physical sections of Wikipedia on this topic, you can find such very broad definitions as: virtual reality, quantum reality, the materiality of the world and its unity, the submicroworld, the macrocosmos, and the megaworld, the movement of matter, space and time, and a lot of other things.

Note. The lack of clear specifics in the issue of the fundamental composition of the Physical World in **P"CM"**, according to the author, is explained by the defectiveness of the physical arsenal of theoretical physics, limited by the Standard Model. This arsenal, for example, lacks three-quarters of the spinor (charged) particles actually existing in Nature i.e. magnetic spinors and antispinors, as well as fundamental electric particles with a positive charge, which, together with electrons, form atoms and substance. In addition, the existing Electronic Physics does not recognize and the world Energo-medium and its corpuscular filling in the form of own real particles which received the author's name energions (see, [23]).

The Spin, Spinors and Antispinors. Spinor fields

PMC. The notion the spinor particle, used in Physics with real magnetic charges, refer to fundamental particles having such a physical property as spin (lit. - "rotation"). It is the rotational property of particles that determines its spin or its so-called spinority and is responsible for such a state of particles as its charged. However, the rotational state of a particle is only one of the two necessary conditions for the formation of its charge. Another necessary condition here is the interaction of rotating (spinor) particle with the Energo-medium and the formation of flows its particles an energions, which and are the fields of charged particles or a spinor fields (see paragraph 2.3 above and as well as [24]). The term "spinor fields", if we strictly approach this definition, refers to fields or of flows particles of the Energo-medium called energions, which are formed with the help of spinors, i.e. particles with negative magnetic and electric charges. As for anti-spinors, that is, particles with a positive charge, their fields are anti-flows of the energions, and such fields should name are antispinor fields. At the same time, taking into account that spinor fields in physics are the primary manifestation in relation to antispinor fields, as well as the fact that in the physics under consideration these fields are usually in a natural union we, in future, be all fields of charged particles to call as the spinor fields (see [22]).

Note. The dipole physics presented by the author, which determines the conditions for the existence of charged particles in Nature, i.e. their obligatory binding in pairs: particle - antiparticle, is one of the main conditions that determine the status quo of the existing Physical World. The fact is that spinor fields, i.e. the fields induced by the spinors have a disturbing effect on the state of the Energo-medium and lead to the formation of "DE" regions in it. As for the anti-spinor fields, they are anti-poles to the spinor fields and carry out their annihilation. It is the dipole state of charged particles that makes it possible to minimize the "DE" level in the Energy environment and, therefore, ensure the stability of the existing real World. So, for example, all known varieties of Physical Mass (atoms, nucleons, substance and others) are formed by charged particles in dipole states, which ensures the minimization of "DE" in the corresponding areas.

P"CM". Any particle can have two types of angular momentum: orbital angular momentum and spin. Spin (from the English - "rotation") is the intrinsic angular momentum of elementary particles, which has both a quantum and a classical nature. Unlike the orbital angular momentum, which is generated by the motion of a particle in space, spin is not associated with such motion. Spin is an internal, exclusively quantum characteristic that cannot be explained within the framework of relativistic mechanics. Despite the fact that the spin is not associated with the real rotation of the particle, it nevertheless generates a certain magnetic moment, which means that it leads to an additional (in comparison with classical electrodynamics) interaction with the magnetic field (see Wikipedia "Spin of particles").

Magnetic charges in the processes of magnetic field formation

PMC. Magnetic field is the spinor field which is formed by magnetic spinors (magnetic particles with negative charge) in the processes of interaction with particles of the Energo-medium (see paragraphs 2.3 and 2.4 above). The magnetic field is a stream of particles of the Energo-medium which polarized along linear and angular impulses, called energions which have the right-handed rotation (energions with left-handed rotation constitute electric fields). During the formation of such flows, the magnetic charge (spinor) plays the role of a time-of-flight selector which, in accordance with the parameters of its own rotation, cuts out of the spectrum of right-handed energions the line of corresponding to the condition $u = c$, where c is the speed of light. It is these flows in the Energo-medium and represent the known magnetic field (see, [23, 24]).

P"CM". Magnetic field is a field that acts on moving electric charges and on bodies with a magnetic moment, regardless of the state of their motion; the magnetic component of the electromagnetic field. The magnetic field can be created by electric current in conductors and / or by the magnetic moments of electrons in atoms. In addition, it arises as a result of a change in the electric field in time (see, Wikipedia "Magnetic field").

Vector varieties of magnetic field

PMC. According to Physics with magnetic charges, magnetic spinor particles exist in atoms and substance in the composition of magnetic dipoles. The distribution of magnetic field lines in a static magnetic dipole is similar to the distribution of electric field lines in a static electric dipole. With the rotational motion of the magnetic dipole a well-known vortex magnetic field is formed around it, which is described by the expression $\text{rot}H$. The process of untwist magnetic dipoles is most often realized by means of an electric current (J_e). Therefore, in reality, the formation of the vortex magnetic field in conductor is carried out as a result of the implementation of two different physical processes: 1) $k_1 J_e = \text{rot}J_g$ and 2) $k_2 \text{rot}J_g = \text{rot}H$, where $\text{rot}J_g$ is the vortex orbital current of the magnetic charges (rotating magnetic dipole). It is important to note that electrons in the process of forming a vortex magnetic field are exclusively intermediaries, that are only able to untwist magnetic dipoles that actually exist in substance (see the first equation and [6]). As for the formation of a magnetic field, so this is the prerogative of exclusively magnetic charges which, unlike electrons, have all the necessary natural data for this (see the second equation).

The scheme of formation of the vortex magnetic field $\text{rot}H$ by means of a rotating magnetic dipole ($\text{rot}J_g$), as well as the equation of its formation are presented in Figure 1a.

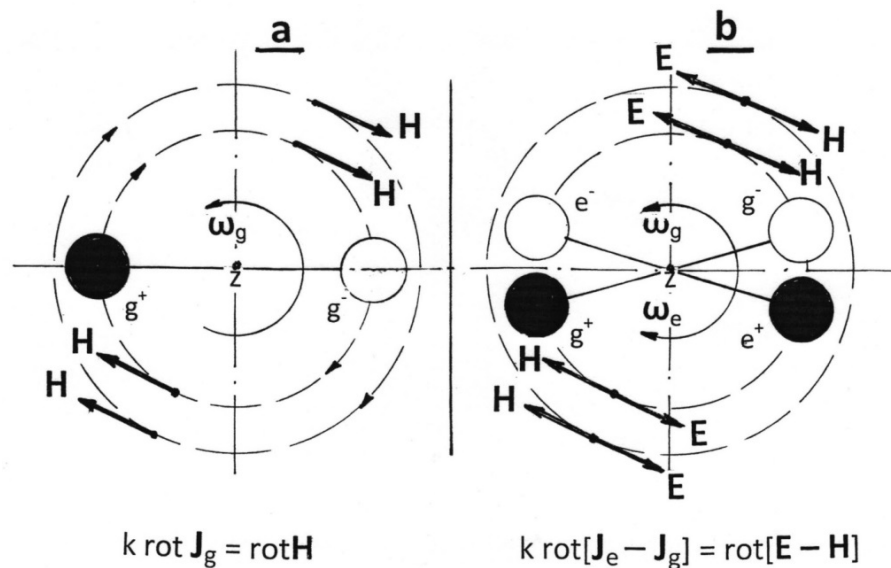


Figure 1. Schemes of mechanisms formation of the vortex spinor fields: magnetic (a) and electromagnetic (gravitational) (b). By white circles on the Fig. 1 showed negative charged electric and magnetic spinors: electron (e^-) and magneton (g^-) and black circles is positively charged antispinors corresponding to them with charges e^+ and g^+ .

P"CM". The existing "curve" Physics, in which real magnetic charges are not recognized, excludes and the possibility of existence a static magnetic field. According to the official electronic theory, the magnetic field can only be vortex (expression $\text{rot}\mathbf{H}$), which is formed, exclusively, by the current electric charges, in accordance with the vicious, so-called of the first Maxwell equation: $k \mathbf{J}_e = \text{rot}\mathbf{H}$, where $\mathbf{J}_e$ is the electric current.

Note. It is important to note that even such a well-known theoretic surrogate as a Dirac's magnetic monopole is filled exclusively with a vortex magnetic field, since the Dirac filaments with an electric current are introduced into its design, feeding monopole with a vortex magnetic field [24].

Nature, physics and vector varieties of the gravitational field

PMC. Coupled magnetic and electric dipoles in atomic shells form eddy electromagnetic currents, which are described by the eddy vector $\text{rot}[\mathbf{J}_e - \mathbf{J}_g]$, where $\mathbf{J}_e$ and $\mathbf{J}_g$ are vectors of instantaneous currents of electric and magnetic charges in the eddy EM-current. The basic element of the eddy EM-current is a vortex electromagnetic quasiparticle called S - Graviton (not to be confused with such a theoretical surrogate as Bohr's graviton), which consists of two coupled dipoles (electric and magnetic) rotating in antiphase in the same atomic orbit. It is S - Gravitons (S from the word **source**) that are the elementary sources of the gravitational field, which is described by the vortex vector $\text{rot}[\mathbf{E} - \mathbf{H}]$. The equation for the formation of a vortex electromagnetic (gravitational) field, by means of the S -Graviton is described by the equation $k \text{rot}[\mathbf{J}_e - \mathbf{J}_g] = \text{rot}[\mathbf{E} - \mathbf{H}]$, where $\mathbf{E}$ and $\mathbf{H}$ are the vectors of the instantaneous intensity of the electric and magnetic fields, respectively, at each point of the gravitational field. The minus signs, set in the above equation of the formation of the gravitational field, are determined by the conditions for ensuring the minimization of "DE" during the implementation of this process.

Scheme of S - Graviton and the equation of the process formation of the gravitational field is shown in **Figure 1b**. Depending on the state of polarization of the vortex vectors $\text{rot}[\mathbf{E} - \mathbf{H}]$ in compositions of gravitational fields emitted by atoms, gravitation fields are subdivided into paragravitational (PGF) and ferrogravitational (FGF) (see, [6, 23]).

Note. Thus, the introduction of real magnetic charges into basic physics radically changes the concept of the nature and physics of the gravitational field, for the formation of which, no case, is it necessary to bend space and, especially, the 4-dimensional. To do this it is necessary to acknowledge magnetic charges by real components of atoms and substance and learn how to work with them in superconductors (see [3 - 5]).

P"CM". In the existing physics with curved magnetism, the gravitational field is described in two basic approximations. 1) Within the framework of classical physics, the gravitational interaction is described by Newton's "law of universal gravitation" and is a purely mathematical representation. 2) In the general theory of relativity (GTR), the gravitational field is not a separate physical concept, but a property of 4-dimensional space-time that appears in the presence of matter. (see Wikipedia "Gravitational field").

Shells of atoms. The structure of the hydrogen atom

PMC. According to the provisions of Physics with magnetic charges, developed by the author, in addition to electrons in the compositions of atomic shells there three more the real charged particles that are not recognized in the "Curve Physics": two magnetic (the magneton and antimagneton), as well as a true antielectron. Thus, real atomic shells, in terms of the composition of charged particles, are electromagnetic, and not electronic, as has always been believed. The main state of magnetic and electric charges, including those and in atomic shells, is their being in the compositions of the corresponding dipoles (see, [9]).

Figure 2 shows the structural schemes of the hydrogen atom (protium) in representations: of **Physics with "curved magnetism"** (pure-electronic shell Fig. 2a) and an atom with an electromagnetic shell (Fig. 2b) adopted according of the results of experimental study in the **Physics with real magnetic charges**.

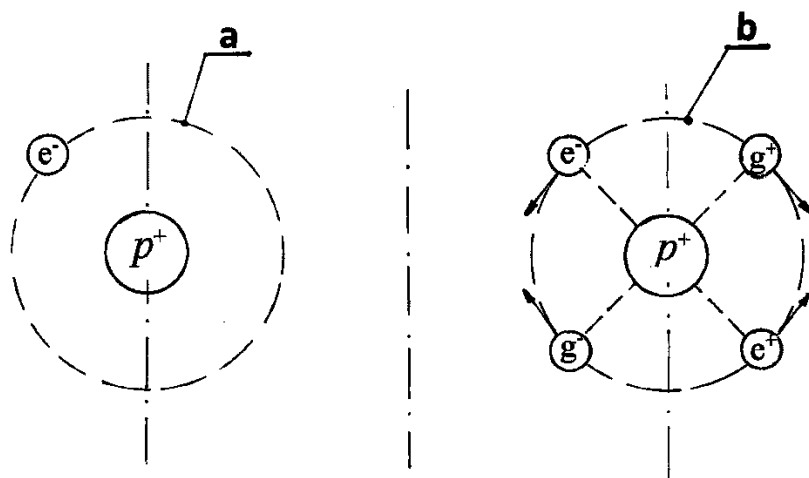


Figure 2. Schematic diagrams of the structural device of hydrogen atom (protium): the currently generally accepted atom with a purely electronic shell (2a) and the atom existing in reality with an electromagnetic shell (2b). At the center of the atoms is the nucleus - proton (p^+) with the charge e^+ . Arrows for electric and magnetic charges in Fig. 2b indicate the direction of rotation of the electric and magnetic dipoles in composition of electromagnetic shell of the protium atom

P"CM". The electron shell of an atom is the region of the space most likely to find electrons having the same value of the main quantum number n and, as a consequence, located at close energy levels. The number of electrons in each electron shell cannot exceed a certain maximum value.

Note. Magnetic charges, as well as true antielectrons, are categorically not recognized in the existing "Curve" Physics". Highly intellectual and beautifully mathematically formed vicious theoretical concepts, which, in the "absence" of real magnetic charges filled the physical theory, turned out very attractive to many physicists, and as it turns out, they are not so easy to abandon. This is the rare case when a situation is realized in science, defined by the expression: woe from wit.

Physical mass

PMC. Mass (physical) is a structural formation consisting of material and antimaterial particles with magnetic and electric charges the characteristic property of which is the ability to radiate a gravitational field. In other words, everything that is capable of generating a gravitational field is Mass. An elementary source of the gravitational field in structures of Mass is an EM-quasiparticle (S - Graviton) consisting of two coupled electric and magnetic dipoles rotating in antiphase on one of the atomic or nucleon orbit (see **Figure 1b**). The S - Gravitons are realized, as a rule, in atomic-like electromagnetic structures (atoms, nucleons etc). In the same time, fundamental charged particles, for example, such as an electron, magneton and others, are massless, because individually they cannot form of the gravitational field. It is important to emphasize here that no bosons and Higgs fields, with all the will, can award these particles with Mass (see [14, 23]).

P"CM". Mass is a scalar physical quantity that determines the inertial and gravitational properties of bodies, which manifests itself in nature in two qualitatively different ways: both the inert mass, which characterizes the inertia of bodies and appears in the expression of Newton's second law, and the gravitational mass, which shows with what force the body interacts with the external fields of gravity. In everyday life and in the physics of the XIX century, mass is associated with weight. The presence of mass in particles is explained by their interaction with the Higgs field (see, Wikipedia "Mass").

Atomic-like structures of Nucleons. Weak Interaction and Nuclear Forces

PMC. The elucidation of the real physics of the gravitational field, as well as the essence of Physical mass (see, paragraphs 2.7 - 2.9 above) within the framework of Physics with real magnetic charges, allowed the author to assert that nucleons (proton and neutron) have the atomic-like device, i.e. this are "little atoms". As you know, nucleons participate in gravitational interaction, for example, with the Earth and, therefore, induce a gravitational field and are Physical Masses (FM). According to the author's research, all FMs have an atomic-like electromagnetic device, including an electromagnetic shell and a nucleus. Electromagnetic shells of nucleons are formed by quarks with electric and magnetic charges, and the elementary source of its of gravitational field are of nucleon's S-gravitons. As far as nuclei are concerned, the most probable nucleus of a proton is positron. The neutron nucleus, according to the author's research, it consists of positron and magneton, i.e. magnetic charge with negative sign (g^-) under the condition $g = e$, where e is the electron (positron) charge. The existence of real magnetic charges in structures of Mass draws attention to such an important problem as the interaction between charges in a system of electromagnetic dipoles, such as $e^+ \div g^-$ and $e^- \div g^+$ in which weak attraction is manifested. It is this attraction and represents the weak interaction which is of an electromagnetic nature [25].

P"CM". Nucleons (from Lat. "nucleus") is a common name for the components of the atomic nucleus - protons and neutrons. From the point of view of electromagnetic interaction, a proton and a neutron are different particles, since a proton is electrically charged, but a neutron is not. However, from the point of view of the strong interaction, which is decisive on the scale of atomic nuclei, these particles are indistinguishable, which is why the term nucleon was introduced, and the proton and neutron began to be considered as two different states of the nucleon, differing in the projection of isotopic spin. The proximity of the properties of the isospin states of nucleons is one of the manifestations of isotopic invariance. Nucleons belong to the family of baryons (the N-baryon group). They are the lightest known baryons. Neutrons are formed by three Udd quarks, and protons are formed by three Uud quarks (see Wikipedia "Nucleons").

Note. The Ignoring real magnetic charges and, consequently, a vicious perception of the nature of the gravitational field in existing "Curve Physics", manifested itself not only in the erroneous idea of the structure of nucleons. The fact is that the gravitational "Dark energy", which is formed between nucleons in atomic nuclei, is decisive in the formation of nuclear forces. And, finally, in publication [25] it is shown that the so-called anomalous magnetic moment of the neutron is formed by quark magnetic dipoles, which, like "unpaired electrons" in the so-called magnetic atoms, rotate on orbit the shell of neutron.

Physics of chemical bonding

PMC. Introduction to the fundamental physics of real magnetic charges and true anti-electrons, which together with electrons make up the electromagnetic shells of atoms, as well as the elucidation of the real physics of the gravitational field, allowed the author to propose a new vision physics of chemical bond, based on the concept of gravito-chemical bonding (GCB). It is the GCB, or rather the paragravitational chemical bond is responsible for the formation of the overwhelming number of chemical compounds. The exception here is the ionic bond in ionic crystals. However, all ions have electromagnetic shells that create a gravitational field. Consequently, ionic bonding is a relatively rare addition to the processes of gravito-chemical bonding (see [15-17]).

P"CM". The chemical bond is the interaction of atoms that determines the stability of a molecule or crystal as a whole. The chemical bond is determined by the interaction between charged particles (nuclei and electrons). The modern description of the chemical bond is carried out on the basis of electronic and quantum theories (Wikipedia "Chemical bond").

Note. As you know, the formation of chemical compounds, at the moment, is described on the basis of the theory of electronic chemical bonding which arose as the result of a vicious situation in the natural sciences when physicists have "bury alive" the real magnetic charges, as well as true anti-electrons and announced that the shells of atoms are purely electronic. As noted above in the article, as well as in detail shown in the Appendix, the main reason for such "burial" is the super-rigid conditions for the confinement of these particles in the composition of atoms and matter, which are fundamentally different from the confinement of electrons.

Annihilation of particles in a pair: electron - positron

PMC. In physics with magnetic charges, it is shown that a positron is not a true antiparticle with respect to an electron, but is a mass, i.e. it has of the atomic-like structure and is a source of a gravitational field. The true antielectron (e^+) is located in the positron as its nucleus and determines its known electric charge. But in addition to the true antielectron, the positron includes small charged particles (presumably quarks) that form its electromagnetic shell and are responsible for the formation of the positron gravitational field. When an electron is combined with a positron, a dense compression of a pair of true antiparticles occurs, and everything else from the positron atomic-like structure is thrown away. The evidence of such "ejection" is gamma quanta, i.e. photons, which are the only ones that observed experimentally in this reaction. As for the electron and the true antielectron so they being in a tight ligament, in a result of complete spins shorting, do not manifest themselves by spinor fields and turn out to be practically undetectable (see, [26]).

P"CM". Annihilation (Latin annihilatio "complete" annihilation") is the reaction of the transformation of a particle and an antiparticle in their collision into photons or any other particles other than the original ones (Annihilation of an electron-positron pair). At low energies of colliding electrons and positrons, as well as during the annihilation of their bound state in the positronium this annihilation reaction gives two or three photons in the final state, depending on the orientation of the electron and positron spins. At energies of the order of several MEV, multiphoton annihilation of an electron-positron pair becomes possible (Wikipedia).

The essence of fundamental physical notions: Matter, Antimatter, Substance and Antisubstance

PMC. The most striking confusion in concepts in Physics with curved magnetism is associated with such fundamental definitions as Matter and Antimatter, as well as Substance and Antisubstance. Paradoxically, vicious electronic Physics has turned even such fundamental physical notion as Matter and Antimatter into a category of false definitions. As noted above, in Physics with real magnetic charges, the concept of Matter or Material phase refers exclusively to fundamental electric and magnetic particles with a negative charge. The electron is the representative of Matter or Material phase. As for the positively charged fundamental particles, both electric and magnetic, they constitute Antimatter or Antimater phase which is not is Antisubstance, as the "Curve of Physics" proclaims. The atoms, nucleons, substance is not Matter at all. All these last electromagnetic formations are Physical Masses consisting of material and antimaterial particles. The above correction of fundamental concepts also suggests that Antimatter and Antisubstance are completely different physical categories (see, [22]).

P"CM". Matter (from Lat. *materia* "substance") is one of the basic concepts of physics, a general term defined by the set of all the contents of space-time and affecting its properties. Substance is one of the forms of matter consisting of fermions or containing fermions along with bosons; it has a rest mass, unlike some types of matter. Antimatter is matter consisting of antiparticles - "mirror reflections" of a number of elementary particles that have the same spin and mass, but differ from each other in the signs of all other interaction characteristics: electric and color charge, baryon and lepton quantum numbers (Wikipedia).

The expansion of the Universe and the big bang

PMC. The introduction of real magnetic charges, as well as true antielectrons, into basic physics showed that the expansion of the Universe and the Big Bang were the result of E. Hubble's erroneous (superficial) perception, back in 1920, of the manifestation of the cosmological red shift of the photon frequency, which he interpreted as a Doppler shift in the frequency of the so-called light waves. It follows from PMC that the frequency processes in photons are determined by intra-photon physics and cannot manifest themselves in the form of any spatial wave formations in the environment, and shifts of the photonic frequency have nothing to do with the Doppler effect. The values of the red shift $\Delta\nu$ of the frequency of photons, under conditions of translational motion of their sources, are exactly the same, both in the case of the source moving towards the observer, and in the case of its movement, at the same speed, from the observer. As for violet shift of the photon frequency, this is an unambiguous sign of the rotational dynamics of photonic sources, and in the case of combined source motion (translational and rotational), for example, the mechanism of photonic frequency pulsations is possible (see, [21-23]).

P"CM". The expansion of the Universe is a phenomenon consisting in an almost homogeneous and isotropic expansion of outer space on the scale of the entire Universe, derived through the cosmological redshift observed from Earth. Experimentally, the expansion of the Universe is confirmed by the fulfillment of Hubble's law, as well as by a decrease in the luminosity of extremely distant "standard candles" (type Ia supernovae). According to the Big Bang theory, the universe is expanding from an initial super-dense and super-hot state. Whether this initial

state is singular (as predicted by the classical theory of gravity - general relativity) or not is an actively debated question, which they hope to solve by developing a quantum theory of gravity. (Wikipedia).

Relict radiation

PMC. According to Physics with magnetic charges, the real World consists of three fundamental Phases forming a Physical Triad (see paragraph 2.3 above). As part of the Triad, there is an Energo-phase (Energo-medium), i.e. a high-density gas-like medium formed by its own dynamic particles - energions, which fills the entire space of the Real World. In the main, unperturbed state of the Energy-medium, there are no dissipations of its density, and the spectrum of energies by of their linear velocities, correspond in shape to the Planck spectrum of the ABB with a temperature of 0°K. Spinor fields, i.e. the fields of spinors have a disturbing effect on the Energy-environment and cause the formation of "Dark energy" regions in it. In the conditions of the dipole state of charged particles which realized in the Physic World, the spinor fields are compensated by the anti-spinor fields and, thus, the formation of "DE" is minimized. However, complete compensation of the disturbing effect of spinor fields on the state of the Energy-medium does not occur and, in fact, its weak constant acting disturbances take place, which, propagating in space over long distances, create the observed EM background which was mistakenly mistaken for "relict radiation" (see [21 - 23]).

P"CM". Relict radiation (Latin. relictum - remnant), cosmic ultrahigh-frequency background radiation that evenly fills the universe, originated in the era of primary hydrogen recombination. It has a high degree of isotropy and a spectrum characteristic of a blackbody with a temperature of 2.72548 ± 0.00057 °K. The existence of relic radiation was predicted theoretically within the framework of the Big Bang theory. Along with the cosmological redshift, the relic radiation is considered as one of the main confirmations of the Big Bang theory. This radiation was discovered in 1965. A. Penzias and P. Wilson, was interpreted by physical theory as a message from the fireball phase, which reached us after about 13 billion years from the moment of "departure" (see Wikipedia).

CONCLUSION

The tragic situation in physical science, which has developed as a result of the vicious ignoring, for almost 150 years, of magnetic charges, as well as true antielectrons, which make up three-quarters of all charged particles in the real world, has led to an incredible complication of physical theory. All this is not difficult to understand, given that the theoretical surrogates used to replace the problematic particles could not completely, replace the ignored fundamental particles. In order to present the level of forced complexity that distinguishes the existing physical theory in the current vicious circumstances, it is possible, with apologies, to use an exotic example with laparoscopic removal of the tonsils person, which is realized through the anus. Of course, such removal can take place only if the "surgeons", for some reason, could not detect the existence of a mouth in the "patient".

Especially regrettable is the existing in physics representation of the gravitational field, which, as shown by the author's experiments, is just a vortex electromagnetic field. For its formation and use in practice, there is no need to bend the 4-dimensional space-time. All you need for this is to legalize real magnetic charges and learn how to work with them.

The vicious EM-concept of Maxwell, which is called in the publication author as "vicious virus Maxwell's", can to associate with the "cancerous" an education in "body" of Physical science, the "metastasis" of which pierce through many directions of physical theory, giving them a false and even mystical significance. Conducting global "chemotherapy" of the modern physical theory with the purpose of eliminating the numerous misconceptions generated by Maxwell's vicious concept, according to the author, is the most urgent task for today. All this needs to be done, and as soon as possible because after 10 - 15 years even robots will laugh at us.

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APPLICATION

The main reasons for ignoring real magnetic charges in existing physics

Real magnetic charges, as well as true antielectrons, which make up 3/4 of atomic shells, were "buried alive" in existing physics as a result of four basic physical and general human circumstances.

Hard confinement of magnetic charges and true antielectrons in structures of substance is the main reason for their "burial alive" in physics (see [8])

It is the physics of confinement mentioned above that was the main reason why these particles very difficult to experimentally extract from the substance and to study in detail.

The conditions for confinement electric and magnetic charges in the normal (non-superconducting) state of a conductor are submitted by in **Figure**, which shows the location of the levels of electrons, true anti-electrons and magnetic charges (magnetons and antimagnetons) on of energy scale.

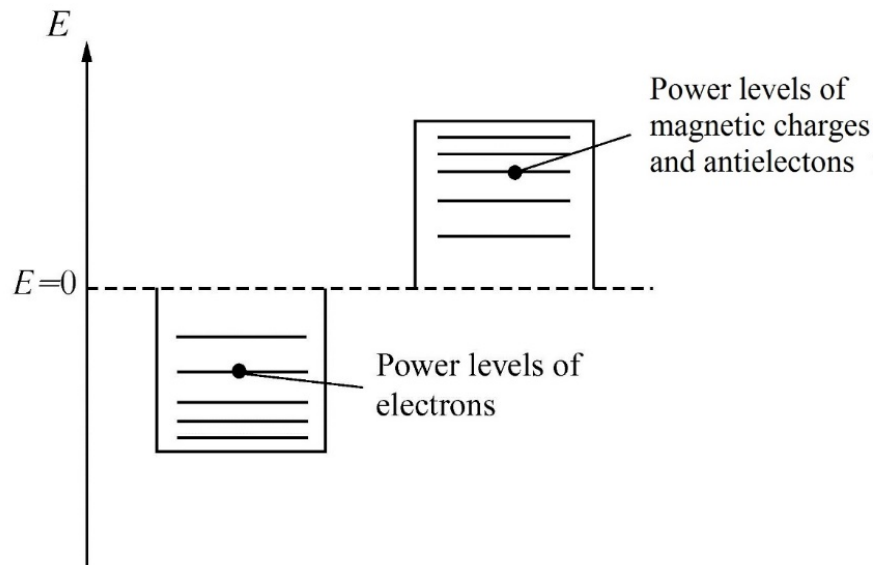


Figure. Schematic diagram of the location on the energy scale of the levels of electrons (in the energy well) and magnetic charges with true anti-electrons (under the energy dome) in the normal state of conductor

As you know, electronic levels are in a potential "well" and for an electron to come out into a free state from connection with the conductor lattice it is necessary to increase its internal energy, for example, by heating. As for the magnetic charges and true anti-electrons, their energy levels are located under the potential "dome" and for these particles to enter the free state, the substance should be cooled, i.e. reduce his internal energy. At deep stages of cooling of some substances, their superconducting state is realized which is associated with the transition of magnetic charges and true anti-electrons into a state free from coupling with the superconductor lattice. Under conditions of superconductivity the differences in the physics of confinement of electric and magnetic charges in the lattice of a solid are removed which manifests itself in the complete symmetry of electromagnetic effects and manifestations.

However, it is important to understand that the difficulties of experimental work with real magnetic charges do not all mean at all that these particles do not exist.

The primitive-superficial perception of J. Maxwell in 1873 of the results of well-known Oersted experiment

It is precisely J. Maxwell, based on his primitive and superficial impression of the famous Oersted experiment, introduced into physics the vicious myth that the direct sources of the magnetic field are moving electrons. The so-called first Maxwell equation $\text{rot}\mathbf{H} = \mathbf{J}_e$, in fact, is erroneous, since it involves two different physical processes: 1) $\text{rot}\mathbf{J}_g = \mathbf{H}$ и 2) $\text{rot}\mathbf{J}_g = \mathbf{H}$, where $\text{rot}\mathbf{J}_g$ is the vortex orbital current of magnetic charges (a rotating magnetic dipole). The fact is that electrons in the composition of an electric current are exclusively mediators, which are capable only of spinning magnetic dipoles that actually exist in substance (see the first equation). As for the magnetic field, its direct sources are real magnetic charges which in the compositions of rotating magnetic dipoles and form the well-known vortex magnetic field $\text{rot}\mathbf{H}$ (see the second equation and [20]).

The inertia of erroneous human thinking

During 150 years of the dominance of Maxwell's vicious electric magnetism, theoretical "Himalayas" were built in physical science, on which, starting from "kindergarten", many generations of scientists were brought up. It should also be noted that the physical theory in the described paradoxical circumstances was able to do the impossible, i.e. to provide, more or less, qualitative interpretations of most of the observed effects and manifestations, and even to make their satisfactory numerical estimates. Of course, the theoretical basis of existing physics, built in conditions of vicious disregard of magnetic charges and true antielectrons, cannot fully meet the natural realities. At the same time, this "collection" of highly intelligent and beautiful theoretical constructions have turned out to be very attractive to many physicists and out are not so easy to abandon. Of course, one can understand the negative reaction of venerable physicists and, especially theorists, whose entire scientific life passed under the sign of Maxwell's vicious Electric Magnetism. It is this layer of scientists that determines now what is good in physics and what is bad. But the big question to the young generation entering physical science. Is it worth building your scientific future on the basis of the vicious delusions of the past?

The discriminatory policy of the leading physical Publications

For example, the articles of author with the results of the study of real magnetic charges, sent to the so-called prestigious journals (Phys.Rev., Nature, etc.) were immediately repudiate, with expert opinions which, in general, can be described by the expression: this can never be. It is the leading physics Publications they stand guard over the existing theoretical physics, creating numerous "chippers" that prevent the penetration of views on their pages that are alien to official physical dogmas.

Of course, it is possible to understand the noted "defensive" reaction of the Editorials and their experts, since the introduction into fundamental physics of real magnetic charges, as well as true antielectrons, presupposes a radical revision of the entire theoretical arsenal of physics created in 150 years of ignoring these particles. By the way, this arsenal accounts for at least

70% of the content of the leading physical journals for all the years of the dominance of vicious electric magnetism in the sciences, i.e. counting from 1873.

At the same time, as it usually happens in life, any delusion, even such a grandiose one, as described above, sooner or later passes. Therefore, in the future we still have a very "fascinating" spectacle with the "fall" of modern physical theory from the conquered "peaks". Of course, only those who can live up to this moment will be able to see this.