

# “Electrical” and “Magnetic” Worlds in Universe

Robert A. Sizov\*

Solid State Physics Institute, Moscow Region, Russia  
Email: [sizov.robert@gmail.com](mailto:sizov.robert@gmail.com)

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## Abstract

Magnetic spinor particles (magnetic charges), which are the direct sources of all magnetic fields and magnetic manifestations in Nature, were experimentally discovered by the author in the structures of atoms and substance. The main reasons that the real magnetic charges were “buried alive” in modern theoretical concepts are the Physics their of confinement in the structures of substance, which is cardinally different from the confinement of electrons, as well as electromagnetic concept of Maxwell, in which magnetic field was erroneously deprived of its own source, *i.e.* of magnetic pole or magnetic charge. Magnetic and electric charges form atomic shells, which are electromagnetic, and not electronic, as is commonly assumed in the existing physical theory. Namely, the magnetic and electric charges in the joint physical processes form all the varieties of the physical mass, *i.e.* atoms, nucleons, substance and others. The main feature of physical mass is its ability to radiate gravitational field, which in reality is of the vortex electromagnetic field. The immediate sources of gravitational field are joint orbital currents of electric and magnetic charges in compositions of atomic shells. In 2008 the author for the first time introduced the concepts of “electric” and “magnetic” worlds. So, in the “magnetic” world the processes of condensing all elementary varieties of physical mass: atoms, nucleons and others are initiated not by electric charges as in our “electric” world, but by means of magnetic charges. Electric and magnetic charges in the compositions of physical mass, in differently charged worlds are changing their functional roles and, for example, detect electrons in the “magnetic” world also difficult as the magnetic charges in our of “electric” world. According to conceptions of the author and in our Universe existence of both “electric” so and “magnetic” masses, including charged differently of biological masses is quite possible. It is impossible to exclude and the existence of otherwise “charged” living organisms and even “electrical” and “magnetic” anthropoid beings. The latter allows to assume perhaps the existence of the differently “charged” civilizations and in our Universe.

## Keywords

Magnetic and Electric Spinor Particles (Spinors and Antispinors), Antielectrons, Magnetons, Antimagnetons, Bispinors, Physical Mass, Vortex

\*At present works as individual researcher, Dr. of physical and mathematical sciences.

## 1. Introduction to Physics of the Electric and Magnetic Spinor Particles Forming the Atomic Shells

The discovery by author of the real magnetic spinor particles (magnetic charges), which together with electric particles form atoms, nucleons, substance and others, allowed him to come up with new positions to explain many physical effects, as well as to predict the physical novations, which, in the absence of magnetic charges, would be impossible. Namely, such possible novations are the “electric” and “magnetic” worlds, presented in this article.

The author’s approach to the problem of the possible existence of real magnetic charges in atoms and substance began in 1969 with his neutron diffraction studies of magnetic structures of hexagonal ferrites of the type Y and Z, made on the atomic reactor of the ITEP in Moscow. These studies revealed the presence of substantial shifts of the entire density of the so-called magnetic moments of  $\text{Fe}^{3+}$  ions from their nuclei [1] [2]. Based on results of these studies, the author made conclusions about the possibility of the existence of real magnetic charges in atomic shells. Subsequent general-physics experiments of the author, which were conducted from 1972-1992, confirmed the author’s assumptions and allowed him to determine the parameters of real magnetic charges, as well as the features of their structural participation in structures of atoms and substance. The first official presentation of the magnetic charges discovered by the author was made in 2001 in the publication [3].

The author’s experiments have shown that magnetic charges which realized in the structures of atoms and substance are magnetic analogs of atomic electric charges. Taking into account the noted analogy, the probability of the formation of the Physical masses *i.e.* atoms, substance etc., in which the electric and magnetic charges change its functional roles, is very high. In this case, they are formed as “electric” masses, which form our “electric” world, so and “magnetic” masses, which form the “magnetic” world. Consideration of all circumstances is associated with the possible existence of “magnetic” masses and “magnetic” world and is the purpose of this work of author.

Detailed description of main experiments of author on the problem of the real magnetic charges in substance is given in publications [1] [2] [3] [4] [5]. In addition, their brief description is given in [6].

The magnetic **spinors** in compositions of the atomic shells (copyright name of this particles is **magnetons**) are the fundamental particles of Matter, which by their physical parameters are the magnetic analogs of electrons, *i.e.* they have a magnitude of charge and spin, equal to the corresponding values for electrons. Magnetons like electrons have a charge with a negative sign ( $g^-$ ), and they belong to the class of leptons, and on their statistical properties to fermions (spin equal 1/2).

Magnetic **antispinors**, for example, **antimagnetons**, are by true antiparticles

to magnetons. They have a positive charge ( $g^+$ ) and belong to the class of anti-leptons. According to statistical properties, the antimagnetons are antifermions with antispin ( $-1/2$ ) on relation to spinors.

According to research of author, by true antiparticle for the electron is the real antimaterial particle with a charge of  $e^+$ , which is neither the positron nor the Dirac's "hole". Fortunately, unlike from real magnetic charges, the presence of positive electric charges in substance is not a surprise for modern physical science. The merit of the author in solving the problem with the real status the positive charges in the atoms and substance is possible to consider so-called the "antimaterialization" of Dirac's "holes" [7]. In addition, the author shows why of observed everywhere positive electric charges not have been entered in the category of real elementary particles (of antispinors), and almost a hundred years, in accordance with the erroneous opinion P. Dirac, necessarily consider in physical theory as quasiparticles, so-called "holes" or vacancies of electrons [8].

To the above, with respect to the spinor particles, we must add, that according of the results of the author's researches the magnetic and electric spinor particles in atoms and substance exist in the form such of the spinor associations as the **magnetic** and **electric bispinors**. Bispinors can be in two states: in a state of **closed** or **spin-shorted of bispinor** (basic state of bispinors) and in a **polarized state** *i.e.* in **state of spinor dipole** [9].

The concept a bispinor, *i.e.* of bound pair of spinor particles with charges of opposite signs, introduced by the author in his publications, is extremely important for physical science. Within the framework of this unification (in the main, unperturbed state), the particles are pressed against each other, which leads to compensation of the activity of their spins. In such a closed state, the particles do not manifest themselves by spinor fields and are difficult to detect. **It is important to note that annihilation of particles is absent in this case.** The well-known myth of the annihilation of particles in a spinor pairs appears solely from observations of the interaction of an electron with a positron. It is important to note here that the positron is not the spinor particle and not is a true antiparticle to an electron, as this is commonly assumed, but is the kind of mass. The true antielectron "sits" in structure of positron and determines its charge ( $e^+$ ). When the electron contacts the positron, it is compressed with the true antielectron, which was in the positron structure, and all the excess the other particles is thrown away. Evidence of the destruction of the electromagnetic structure of the positron is gamma quanta.

It should be emphasized that in the form of spinor dipoles (the perturbed or polarized form of bispinors) electrical and magnetic particles enter into compositions of any kind of physical mass, *i.e.* into atoms, nucleons, substance and others.

## 2. Electromagnetic Atomic Shells Are the Direct Sources of the Gravitational Field

Based on the results of their own experiments [1]-[6], as well as the works of

other researchers the author has shown, that the atomic shells, consisting of the electric and magnetic charges are electromagnetic, rather than electronic, as this was customary consider. In addition, electric and magnetic charges exist in the structures of substance exclusively in the compositions of corresponding bispinors (spinor dipoles). At the same time, the number of the magnetic spinor particles in atomic structures is approximately equal to number of the electric particles. Namely the electromagnetic shells of the atoms are the natural sources (generators) of the gravitational field, which in reality is the vortex electromagnetic field [6] [10].

Elementary source of the gravitational field is the electromagnetic spinor quasiparticle, which the author has assigned the name **S-graviton** ( $s = \text{source}$ ). Composition of the S-graviton: two spinors (electron and magneton) and two antispinor corresponding to them. Figuratively speaking the S-graviton is a combination of electric and magnetic bispinor (spinor dipoles), rotating in antiphase at the same atomic orbital. This quasiparticle can also to associate with two orbital currents of electric and magnetic charges coordinated on phase. The model representation of the orbital electromagnetic current or S-graviton, must be written in the following form:  $\text{rot}[\mathbf{J}_e - \mathbf{J}_g]$ , where  $\mathbf{J}_e$  and  $\mathbf{J}_g$  are vectors of instantaneous density currents of electric (e) and magnetic (g) charges, which correspond their of vortex (circular) flows. Then the equation of the process of gravitational field formation by S-graviton can be presented in the form:

$$k \text{rot}[\mathbf{J}_e - \mathbf{J}_g] = \text{rot}[\mathbf{E} - \mathbf{H}] \quad (1)$$

where  $\mathbf{E}$  and  $\mathbf{H}$  are vectors instantaneous strength of electric and magnetic fields in the structure of the **vortex electromagnetic (gravitational) field**.  $k$  - coefficient of proportionality. Minus signs put in the above equation of the gravitational field formation corresponding as the antiphase of orbital currents electric and magnetic charges, so and antidirectionality of vectors of the instantaneous strength of the electric and magnetic fields in every point of the gravitational field. As follows from the above gravitational Equation (1), the gravitational field is the vortex electromagnetic field which is characterized by change of directions vectors  $\mathbf{E}$  and  $\mathbf{H}$  of the electric and magnetic fields, which are equal by absolute value and opposite directed in every point.

**Note 1.** In the author's opinion, in the notation of vectors a strength of the vortex fields and the vectors of the eddy current density, it is useful to use small circles that refer these vectors to vortex processes (for example,  $\mathbf{H}^\circ$  and  $\mathbf{E}^\circ$ ), in contrast to the designations of polar vectors of fields strengths and density vectors of linear currents (without circles). It is these notations that are made in **APPENDIX** of this article. Such designations will be necessary when introducing real magnetic charges into wide physical representations. As for the notations of these vectors in the text of this article, we, below, left them in the traditional form, *i.e.* without circles.

Vector-vortical analogy between magnetic (**a**) and gravitational (**b**) the fields show on **Figure 1**. Unlike from the vortex magnetic field of each point of which is answered by one vector of instantaneous strength  $\mathbf{H}$ , of each point of elemen-

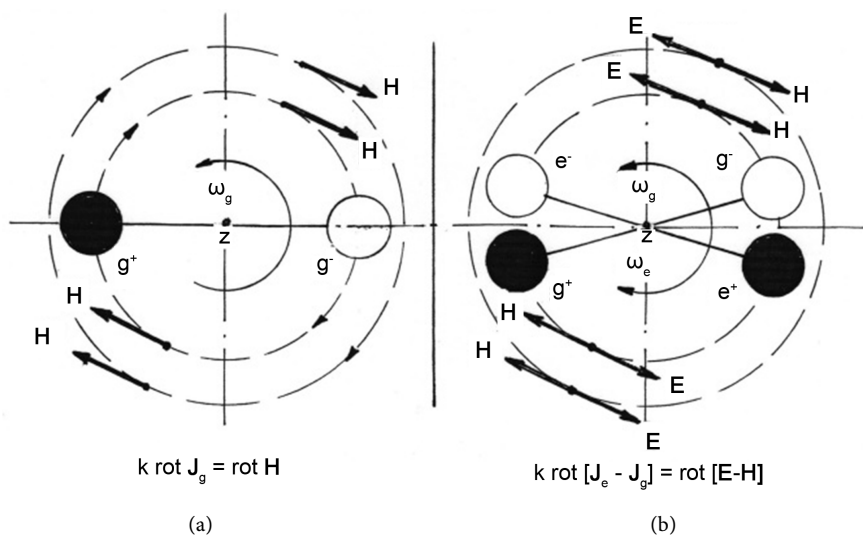
tary gravitational field are responsible by two vectors of instantaneous strength of the fields  $\mathbf{E}$  and  $\mathbf{H}$  that are equal by value and oriented antiparallel to each other. In addition, on **Figure 1** it is shown that the vortex magnetic field which is determined by the vortex vector  $\text{rot}\mathbf{H}$ , is formed by a rotating of the magnetic bispinor or, that too, by of the rotating magnetic dipole. The source of the elementary gravitational field is the S-graviton that yet can be defined as the dynamic electromagnetic dibispinor, *i.e.* two of related bispinors (electric and magnetic) circulating in antiphase on one atomic orbital. The classical equations of processes formation magnetic and electromagnetic (gravitational) of the vortex fields are also down in **Figure 1**.

If polarization of the vortex vectors  $\text{rot}[\mathbf{J}_e - \mathbf{J}_g]$  of S-Gravitons is realized in the structures of physical masses (in atoms, nucleons, substance et al) what is accompanied by polarization of vortex vectors  $\text{rot}[\mathbf{E} - \mathbf{H}]$ , then by analogy with ferromagnetism, the gravitational fields being emitted by these masses can be called a **ferrogravitational** fields.

The gravitational field, which is generated by masses in the absence of polarization of the vortex vectors  $\text{rot}[\mathbf{J}_e - \mathbf{J}_g]$  in their structures, is a tensor or quasi-scalar field. And again, by analogy with magnetism, such field can to define as **paragravitational** field.

We write the mathematical expressions that determine the states of the **ferrogravitation** and **paragravitation**. So, gravitational fields corresponding vector condition:  $\langle \text{rot}[\mathbf{E} - \mathbf{H}] \rangle \neq 0$ , by analogy with the ferromagnetism can be called **ferrogravitational fields (FGF)**, and the fields corresponding to the condition:  $\langle \text{rot}[\mathbf{E} - \mathbf{H}] \rangle = 0$ , by analogy with the paramagnetism can be called **paragravitational fields (PGF)**.

The Physical Masses (nucleons, atoms, substance), which form paragravitational field, exhibit so-called **attraction** or **gravitation** to each other. The physi-



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

cal masses forming ferrogravitational field will push off from masses-sources of paragravitational field, for example from the Earth, what constitute the discovered by author of the present article the **Gravito-levitational effect** or **Gravitational levitation** [6] [11].

**Note 2.** It's important to notice that results of experiments of the author with magnetic charges and their currents in superconductors allowed it to develop a technology of receiving a technical ferrogravitational fields (**FGF**). The technical levitational forces induced them, can be used in transport, load-lifting and space technics, in power engineering and also in numerous the gravito physical and gravito chemical technologies (see a publications author [12] [13] [14]).

### 3. The Physical Nature of Mass

Since 2001 ([3]), the author in his publications tried to explain that all varieties of Physical Mass are the electromagnetic structures of atomic-shaped type, consisting of electric and magnetic spinor particles. One of the main characteristic properties of all varieties of Physical mass is their ability to emit a gravitational field that is formed as the result of joint orbital currents of electric and magnetic charges and is of the vortex electromagnetic field. **Thus, Mass can be called as the electromagnetic spinor structures, which form a gravitational field or the gravito forming structures.** It is important to emphasize that **Physical mass**, and for example, the **Matter** is completely different physical categories. By Physical masses, for example, are nucleons and atoms.

It is important to note that the individual spinor particles, as electric so and magnetic are massless, because the mass is the result of their joint “structural operations”. For example, the electron is massless particle and no “divine bosons” can't give it mass. **Should also add, that the atoms or nucleons, which are a form of Physical Mass, cannot be identified as Matter, as it is now accepted in modern physical Science.**

The opening and many years of researches of the magnetic spinor particles (real magnetic charges) in atoms and substance have enabled the author to formulate the conception of the **Physical Triad**, according which real World consists of three fundamental phases: of Matter, Antimatter and Energetic phase or Energetic medium. Particles of Matter are called spinors, and particles of Antimatter called antispinors. Thus, under the concept of Matter fall exclusively spinor particles that make up the material phase of World Physical Triad. As for, for example, of atoms or nucleons, then to name them, as the Matter, quite incorrectly, as they are varieties of Physical mass.

Energetic medium, *i.e.* the third component of Physical Triad, consists of its own particles, which have received the author's title as the **energions** and which are neither material nor antimaterial. Namely the Energetic medium and its power component, called “Dark energy”, are responsible for all forces actions in the real World. In detail the concept of the Physical Triad is presented in the author's publications [9] [15].

#### 4. Electric and Magnetic Charges in a Physics of “Electric” and “Magnetic” Worlds

In 2008 in a publication [5] the author first introduced concept the “**magnetic world**”, in which processes condensation of all varieties of Physical mass: atoms, nucleons and other are initiated not by the electric charges, as is with us, but by means of the magnetic charges. In the “magnetic world” the protons of the atomic nuclei are charged of magnetic charges ( $g^+$ ), in contrast to our “electric” protons. The magnitude charge of the “magnetic” proton is equal charge of magneton. Recall that magnetons, *i.e.* the magnetic spinor particles of Matter, which exist in the atomic shells, along all their physical parameters are magnetic analogues of electrons. Atomic shells as in “magnetic” world so and in our “electric” world are electromagnetic on composition of participating particles, and values of their electric and magnetic charges meet the condition:  $e = g$ .

Of course, a necessary condition that determines the possibility of forming “magnetic” or “electric” masses is the presence of the appropriate assortment and density of spinor particles in the oblasts of space, in which are formed the atoms and nucleons for of “magnetic” or “electric” worlds. According to the author’s opinion, namely the **Black holes** are a sort the “storages” of spinor particles, which serve as the initial “raw material” for forming such structures how the atoms and nucleons. As a result of the supernova explosions in a space is thrown a large part of its stellar content in the form of a spinor particles, which in writings on cosmology their called the non-baryonic Matter.

These spinor particles and are a main content of the Black holes. Thus the Black holes, according to the author are of the “factories” or “productions” the Physical Mass. In the oblasts of Black holes is realized the condensation of the spinor particles in the compositions of the nucleons and then and in atoms and, mainly, in hydrogen atoms. Recent atoms, as already noted, may be both “electric” so and “magnetic”, depending on the charge of their protons. Detailed exposition of views the author concerning of real Physics of the Black holes, is given in [9].

Physical effects and phenomena in the “magnetic” world by functionality of the spinor particles involved in its, are antisymmetric by corresponding manifestations, which observed in the “electrical” world. For example, the cathode emission in the “magnetic” world is manifested by output of magnetons, and not electrons, as in us. Around the conductor with the direct current of magnetic charges is formed the vortex electric field that is determining by the vortex vector  $\text{rot}\mathbf{E}$  and which is an electrical analog of the vortex magnetic field ( $\text{rot}\mathbf{H}$ ). Namely it is field was experimentally discovered by the author during the implementation the current of magnetic charges in the superconductor [5].

If superconductivity in the “electric” world is defined by ultra-low electrical resistance of the conductor, then in the “magnetic” world the superconductivity characterized by zero resistance for the current of magnetic charges. It is important to note, that the electrons (the electric spinors) in the “magnetic” world is also difficult to detect, as we have with the magnetic charges from us. If super-

conductivity in the “electric” world is defined by ultra-low electrical resistance of the conductor, then in the “magnetic” world the superconductivity characterized by zero resistance for the current of magnetic charges. The comparative characteristics of these induction processes are presented in the author’s article: “Magnetic and electric charges in the physics and technology of electromagnetic and magneto-electric induction” [16]. An analog of the so-called first equation of Maxwell’s in “magnetic” world should be written in the form:  $\text{rot} \mathbf{J}_g = \text{rot} \mathbf{E}$ , where  $\mathbf{J}_g$  is the vector of density of the linear current of magnetic charges.

It should also be noted that the usual vortex magnetic field defined by the vortex vector  $\text{rot} \mathbf{H}$  (the more correct designation  $\text{rot} \mathbf{H}^\circ$ ) in the “magnetic” world is just as difficult to obtain as for us the stable vortex electric field described by the vortex vector  $\text{rot} \mathbf{E}^\circ$ . The list of these interesting differences in physical manifestations can be continued for a long time, but in the end it is important to note that they are all determined solely by differences in the **physics of confinement** of the electric and magnetic charges in the structures of the physical masses in differently charged worlds [5] [6] [10].

The hypothesis of confinement fundamental particles was put forward to explain the retention of quarks inside hadrons, and also that would to explain the negative results in search for free quarks. The notion of confinement with much more reason than for quarks needs to be expanded on the confinement a freedom of magnetic charges and the real antielectrons in atoms and substance, and also for explaining the ban on their free exit from a substance. Of the Physics of confinement of electric and magnetic spinor particles in the composition of our (“electric”) world was given a lot of attention, which is reflected in publications of the author (see [6] [9]). A brief introduction to this issue, in relation to the two of the differently charged worlds, contains in of this article. It is important to note that the electromagnetic equations in the “electric” and “magnetic” worlds, are completely identical, and the differences in their applicability is defined exclusively of features confinement of the electrical and magnetic particles in the Masses of corresponding worlds.

The results of the author’s research allow him to assert that the nature of charge of mass in the “electric” and “magnetic” worlds is determined by the appropriate nature of the charges of atomic nuclei or, more precisely, by the charges of their protons. As for the shells of atoms, in any of the differently charged worlds the composition of the atomic shells of the corresponding elements is completely identical. Since the atomic shells are the main sources of the atomic gravitational fields, the identity of the composition of shells assumes complete an analogy of physics the gravitational manifestations in the differently of charged worlds.

As noted above, observed asymmetries in the manifestations of spinor particles in numerous physical effects in the differently of charged worlds, is determined exclusively by the peculiarities of the physics of confinement of electric and magnetic particles in atoms and substance. As for the physics of the formation of fields and interactions, so the electric and magnetic spinors and antispi-



nors exhibit here an exceptional symmetry. The most striking evidence of symmetry in the manifestations of spinor particles in the differently of charged worlds are electromagnetic radiations. The symmetry of the magnetic and electrical manifestations of spinor particles is emphasized below in **Appendix** where the unified equations of electromagnetic states are given that satisfy the conditions of both the “electric” and “magnetic” worlds. In addition, the features symmetry in of the electromagnetic device the differently of charged atoms can be clarified by the example of the structure of atoms of ordinary hydrogen, that adapted to the conditions of the “magnetic” and “electrical” worlds (see below Section 5).

Experimental results of the author of the article, as well as physical logic built on their basis, allow us to state that and in our Universe of existence of both “electric” and “magnetic” masses, including “charged differently” of biological masses is quite possible. The existence of differently “charged” living organisms and even of the “electric” and “magnetic” of man-shaped creatures also can’t be excluded. If admit the existence of the “magnetic” thinking beings, we can to expect the existence and of the “magnetic” civilizations in our Universe. In his book [9] the author considered a number of circumstances related to the possible existence of the differently charged civilizations in the universe, including the features of their development and communication between “magnetic” and “electric” of systems.

The conception of the “electric” and “magnetic” worlds that were introduced by the author, is not to be taken so, that somewhere is a “parallel magnetic” world, which is completely separate from our world. Essentially, it’s of the just the variety “charged” Mass in the Universe, which, apparently, can co-exist in the galaxies and in stellar systems. Of course, judging by our, predominantly “electric” mass, there is some physical isolation of the masses according to their “charged” type. But and in our world, in a very limited quantity, can meet representatives “magnetic” mass, *i.e.* the “magnetic” atoms, nucleons etc., what may manifest itself in various physical effects.

## 5. The Device of the Atoms of Ordinary Hydrogen in “Electric” and “Magnetic” Worlds

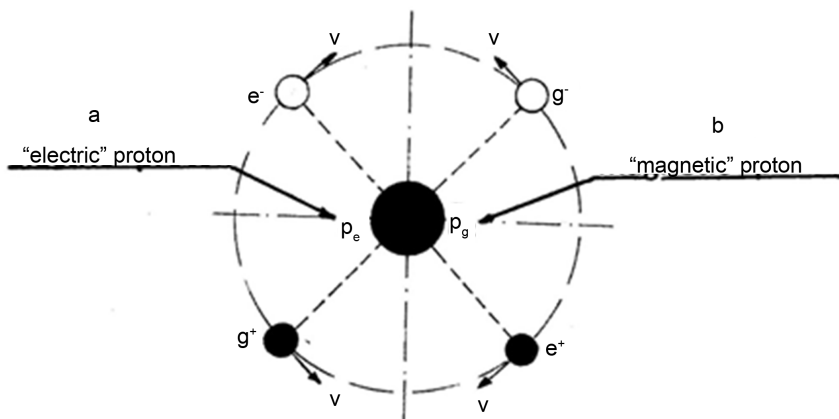
Most vividly the electromagnetic device of atom conformably to conditions of the “magnetic” and “electric” worlds, can imagine on the example of an atom of ordinary hydrogen, diagram of which is shown in **Figure 2**. In the center of atom is located nucleus, *i.e.* Proton (p), which in the “electric” world has an electric charge  $e^+$  and is denoted as  $(p_e)$ , and in “magnetic” world has a magnetic charge  $g^+$  and designation  $(p_g)$ . The states  $(p_e)$  and  $(p_g)$  of the proton in the composition of the hydrogen atom which refer to the “electric” and “magnetic” worlds are marked in **Figure 2**. Small circles represent the electric and magnetic spinor particles. White circles denote spinors, *i.e.* electrons and magnetons, respectively with charges  $e^-$  and  $g^-$ , and black circles are of the positively charged antielectrons (not to be confused with positrons) and antimagnetons with charges  $e^+$  and  $g^+$ . We can name the atoms in the “magnetic” world as “magnet-

ic” and the atoms in the “electrical” world as “electric”.

Vectors  $\mathbf{V}$  indicate the direction of rotation of the magnetic and electrical bispinors (in this case in **state of spinor dipoles**) on the sole orbital of the hydrogen atom. Thus, a pair of associated bispinors (electric and magnetic), *i.e.* one S-graviton (see **Figure 2**) is form the shell of a hydrogen atoms as in “electric”, so and in “magnetic” World.

Because the shell of the hydrogen atom in either of two different-charged worlds consists of one S-graviton the gravitational field emitted such shell, is ferrogravitational field. In publications of author are shows that the sources ferrogravitational field repelled from sources paragravitational field, for example, from the Earth. It is this repulsion is a Gravito levitational effect, which discovered by the author of this article [11] [12] [13]. The experiments with gaseous hydrogen, conducted by the author [5] has shown, that the volatility of hydrogen gas, defines namely by the Gravito levitation. Thus, it can be assumed that hydrogen atoms will exhibit of Gravito levitation as in “electric” so and in “magnetic” world.

**Note 3.** When forming a model of the electromagnetic shell of the hydrogen atom, as and shells of complex atoms, there is serious question about the physical possibility of existence in its shell such electromagnetic quasiparticle as S-graviton in place of the every electron. This issue was considered in the author’s publications (see [5] [9] [10]). Here it should be taken into account that the electron in shells with S-gravitons participates, at least, in two interactions: with charge of the atomic nucleus and with the system of spinor particles in the S-graviton structure. In turn, S-gravitons, as sources of the gravitational field, interact with the gravitational field of the nucleus of the atom. Thus, in the system of the electromagnetic envelope of hydrogen an electron directly and indirectly participates in three interactions, in contrast to the model of the electron shell, where the electron “communicates” only with the nucleus (proton). In the author’s publications [5] [10] the situation with EM shells of atoms is analyzed and it is shown why an electron which embedded in the structure of S-gravitons cannot fall on a nucleus. By the way, the question of why the electron does not



**Figure 2.** The electromagnetic device of atoms ordinary hydrogen in “electric” ( $p_e$ ) and “magnetic” ( $p_g$ ) worlds.

fall on the nucleus (in model the electron shell of atoms) is one of the most entertaining in physical science.

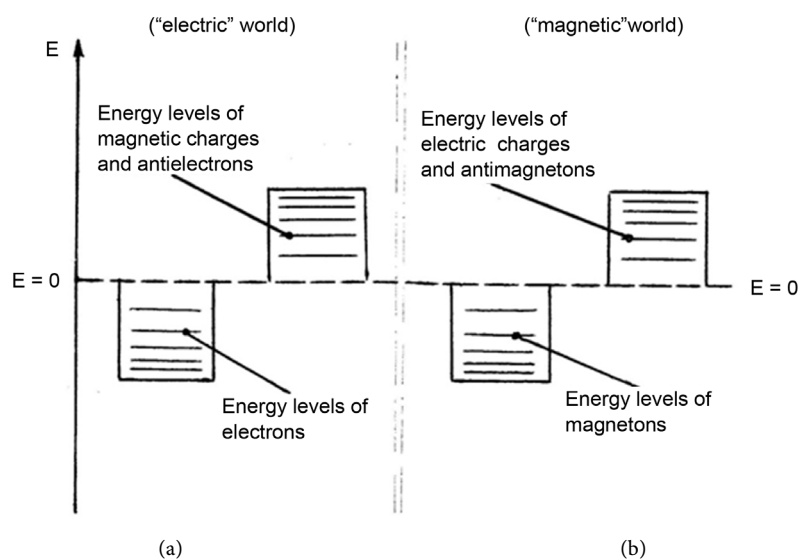
To that stated in Note 3 that all this applies equally to atoms in any of the differently charged worlds described in the article.

## 6. Features Confinement of Spinor Particles in Structures of Physical Masses in the “Electric” and “Magnetic” Worlds

As noted above, the main reason that the real magnetic spinor particles constituting about half all of real spinor particles in Nature, as well as the electric antispinors, *i.e.* true antielectrons, were not recognized by our physical science in our “electric” World is explained by the peculiarities of the Physics of their confinement in the atoms and substance that is fundamentally different, for example, from the confinement of electrons. In turn, in of the “magnetic” World under “sanctions” of confinement is enter the electric particles (electrons and antielectrons) and magnetic antispinors *i.e.* antimagnetons.

In **Figure 3** shows the schemes disposition of levels electric and magnetic charges, constituting the atomic shells, in the condensed state of substance on the scale of energy in “electric” (a) and “magnetic” (b) Worlds. It is well known, what in the “electric” World the electronic levels are located in a potential **pit** (see, **Figure 3(a)**) and for going out of an electron in a free state is necessary to increase the internal energy of a substance, for example, if to heat it. Unlike electrons, the energy levels of antielectrons, as and the levels of magnetic charges in “electric” World are under potential **cupola** and for the implementation of the free state these particles, substance must be cooled, that is, need to reduce his internal energy.

In **Figure 3(b)** shows the scheme of disposition of levels electric and magnetic charges in the condensed state of substance on the scale of energy in “magnetic”



**Figure 3.** Location on scale energy of levels electric and magnetic charges in the structures of physical masses in the “electric” (a) and “magnetic” (b) worlds.

World. As seen from **Figure 3(b)** in the “magnetic” world levels of magnetons are located in a potential **pit** and for exit these particles in a free state is necessary to increase the internal energy of a substance, for example, if to heat it. Unlike from the magnetons, the energy levels of antimagnetons, as and the levels of electric charges (electrons and antielectrons) in the “magnetic” world, is under potential **cupola** and for the implementation of their exit in the free state the substance necessary cool, *i.e.* to reduce it the internal energy.

## 7. Conclusion

The content of this article may, at first glance, present as scientifically unreasonable fantasy. We note that such a view is fully justified, but only if magnetic spinor particles (real magnetic charges) are guaranteed to be absent in the composition of the physical mass, and the shells of the atoms are purely electronic. If the author of rights and the magnetic charges are the real structural components of atoms and substance, then not only the differently-charged worlds should be included in fundamental physical representations, but also numerous other novations discovered by the author and presented in his publications. These are: the real nature of magnetism, the electromagnetic shells of atoms and nucleons, the electromagnetic nature and the vector-vortex device of the gravitational field, as well as such its states as paragravitation and ferrogavitation, gravito levitation and other things [6] [7] [9] [10] [15].

According to this conception, the electrical charges and especially the electrons in his publications since 2001 [1], the author has shown that namely distinctions in the physics of confinement of electrons and magnetic charges in the atoms and the substance are responsible for the negative results of experiments associated with detection of real magnetic poles (magnetic charges). Namely, the above noted features of a confinement of spinor particles in the structures of Physical Mass are responsible for the fact that the physical science has turned out in the “swamp” of the erroneous electromagnetic conception of Maxwell [17]. According to this conception, the electrical charges and especially the electrons have been forced responsible both for all electrical manifestations so and for all the magnetic effects. It is curious that at this, the real magnetic poles, that is, the true sources of the magnetic field, turned out to be completely superfluous. In 1931, P. Dirac proposed his version of the source of the magnetic field [18]. However, his magnetic pole (magnetic monopole), as shown in [5] [6] turned out to be purely mathematical construction, not relevant to reality.

However, the most harmful for science and technology is the introduction in the physical representations by vicious concept purely electronic shell of atoms. According to the author, the vicious concept of the electron shell of the atoms is one of the most serious obstacles to the promotion of physical science, and also to its adaptation to such ideas as the “electric” and “magnetic” worlds.

The author hopes that common sense, sooner or later, will win over the erroneous views of convinced “electricians”. Just because that is impossible for another 200 years, ignoring the real magnetic charges, being loyal to the errone-

ous concept of the electromagnetism of Maxwell and his vicious idea that a mechanical motion of electric charges in the conductor can replace such the natural source of the magnetic field as a magnetic pole or magnetic charge.

**Note 4.** Base provisions of the General Physics with real magnetic charges, developed by the author, were presented at the international PIERS 2009 Moscow Conference (Progress in Electromagnetics Research Symposium ([19] [20])).

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## Appendix

The classic equations of electromagnetic states with electric and magnetic charges in of the “magnetic” and “electric” worlds.

1.  $\text{div } \mathbf{E} = 4\pi\rho_e$
2.  $\text{div } \mathbf{H} = 4\pi\rho_g$
3.  $\text{rot } \mathbf{E} = 0$
4.  $\text{rot } \mathbf{H} = 0$
5.  $\text{div } \mathbf{H}^\circ = 0$
6.  $\text{div } \mathbf{E}^\circ = 0$
7.  $k_1 \mathbf{J}_e = \text{rot } \mathbf{J}_g^\circ$
8.  $k_1 \mathbf{J}_g = \text{rot } \mathbf{J}_e^\circ$
9.  $k_2 \text{rot } \mathbf{J}_g^\circ = \text{rot } \mathbf{H}^\circ$
10.  $k_2 \text{rot } \mathbf{J}_e^\circ = \text{rot } \mathbf{E}^\circ$
11.  $k_1 (\mathbf{J}_e + \mathbf{J}_g) = \text{rot} [\mathbf{J}_e^\circ - \mathbf{J}_g^\circ]$
12.  $k_2 \text{rot} [\mathbf{J}_e^\circ - \mathbf{J}_g^\circ] = \text{rot} [\mathbf{E}^\circ - \mathbf{H}^\circ]$

### Designation

$\mathbf{E}, \mathbf{H}$  – vectors strength of electrostatic and magnetostatic fields,  
 $\rho_e, \rho_g$  – density of the electric (e) and magnetic (g) charges,

$\mathbf{E}^\circ, \mathbf{H}^\circ$  – vectors instantaneous strength of the vortical of electric and magnetic fields,

$\mathbf{J}_e^\circ, \mathbf{J}_g^\circ$  – vectors instantaneous density of the vortical currents electric and magnetic charges,

$\mathbf{J}_e, \mathbf{J}_g$  – vectors density of linear currents electric and magnetic charges,

$k_1, k_2$  – the coefficients of proportionality



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