

# Real magnetic charges in physics of “dark matter” and “black holes”

## Abstract

Experimental and theoretical studies carried out by the author (period: 1968–present) have shown that the magnetic spinor particles (magnetic charges) are real constituents of atoms, nucleons, substance and are the immediate sources of all magnetic fields in Nature. The joint orbital currents of electric and magnetic charges within atomic and nucleons shells are natural sources of the gravitational field which is the vortex electromagnetic field. All varieties of mass are of the atomic–shaped electromagnetic structures consisting of electric and magnetic spinor particles. The masses are, for example, atoms and nucleons. Atomic–shaped device all varieties of mass is the natural and only possible organizations of spinor particles which is able to emit the gravitational field and photons. The necessary condition determining possibility forming of mass is presence of appropriate “assortment” and density of spinor particles from which are collected atoms and nucleons in the particular area of cosmic space. As result of explosions supernovae their stellar content is ejected in the space in form of spinor particles. According to the concept of the World Physical Triad, developed by the author, all spinor particles are divided into particles of Matter and Antimatter. Particles with negative charge belong to Matter and particles with positive charge to Antimatter. The spinor particles which collect together in certain region of the galactic space and represent what is commonly called “Dark matter”. Namely, the so–called “Dark matter” which, in fact, is the “storehouses” of magnetic and electrical spinor particles is the main content of “Black holes”. These spinor particles serve as the initial “raw material” for formation of varieties of the Mass, for example, such as atoms and nucleons. In oblasts of “Black holes” is realized condensation of spinor particles in the compositions nucleons, and then and in atoms, mainly, in the atoms hydrogen. All varieties of Mass after formation in “Black hole” by means its own of gravitational field are pushed out of the “hole” and are sent to replenish of mass in the Universe. Since number the formations of mass within the “Black Hole” is little their gravitational field is also extremely weak. The masses, during their stay in oblast of the “Black holes”, may be sources the weak photons emission which may well be Hawking radiation. As for the main content of “Black holes”, i.e. of particles Matter and Antimatter, then in the absence the mass they can’t form neither the gravitational field, neither the photons. The main reasons that real magnetic charges were “buried alive” in modern theoretical notions are Physics their of confinement in the structures of atoms and substance that is radically different from the confinement of electrons, as well as the vicious electric magnetism of Maxwell in which the magnetic field, by mistaken, was deprived its own source, i.e. of the magnetic pole or magnetic charge.

**Keywords:** magnetic spinor particles (spinors and antispinors), magneton and antimagneton, true antielectrons, bispinor, physical mass, vortex electromagnetic (gravitational) field, photons, levitation effect.

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

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Robert A Sizov

Solid State Physics Institute, Moscow, Russia

**Correspondence:** Robert A Sizov, Solid State Physics Institute, Paustovskogo st. 3-566, Moscow, Russia, Tel +7 495 4226930, Email sizov.robert@gmail.com

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## Introduction in physics of real electric and magnetic spinor particles

The magnetic spinor particles (magnetic charges) which are the immediate sources all magnetic fields in Nature have been experimentally found by the author in structures of atoms and substance and first be introduced to the scientific community in 2001 in the publication.<sup>1</sup> It should note that initial experiments which prompted the author to studies problem of participation magnetic spinor particles in the structures of atoms and substance were his experiments with magnetic scattering of neutrons in the ferrimagnetic crystals.<sup>2,3</sup> The results main experiments of the author related to detection and studies of the real magnetic charges and their currents in atoms and substance is given in Sizov<sup>4</sup> and, in addition, their brief annotation is given in Sizov<sup>5</sup>. Below is description of three real spinor

particles, unrecognized in modern physical science, which together with electrons form the atomic shells.

The magnetic spinors in compositions of atomic shells (author’s name is magnetons) are the fundamental particles of Matter which by their physical parameters are the magnetic analogs of electrons, i.e. have magnitude of charge and spin equal to corresponding values for electrons. Magnetons, like electrons, have charge with negative sign ( $g^-$ ) they belong to class of leptons and along their statistical properties to fermions (spin 1/2). Magnetic antispinors, for example, antimagnetons are true antiparticles to magnetons. Antimagnetons are particles of Antimatter. They have positive charge ( $g^+$ ) and belong to class of antileptons. According to statistical properties the antimagnetons are antifermions with the antispin ( $-1/2$ ) on relation to spinors.

**Note 1:** It should be added that detection of the magnetic spinor particles (magnetic charges) which managed to make by author of this article should not be seen as something unique. The merit the author is only in the fact that he showed real participation of magnetic charges in structures of atoms, substance and, in general, in compositions Physical Mass (PM), and also established their basic physical parameters. Of course, this is very important result. This was followed by chain of physical findings and experiments that, in the end, and led the author to his Gravito–Physics and Gravito–Technics.<sup>6–10</sup> If we talk about of first detection of real magnetic charges it is the merit of the Felix Ehrenhaft who made his remarkable discoveries in the early 20<sup>th</sup> century.<sup>11</sup> The reasons which more than hundred years blocked recognition of the fundamental experiments and valid conclusions F. Ehrenhaft were discussed in detail in the publications of the author<sup>4,5</sup> and is noted in this article.

The most famous representative of the electric spinors is electron. According to results the author’s research in compositions of atomic shells, in addition to the electron and pair of magnetic charges, there is also the true antielectron, i.e. real spinor particle with charge  $e^+$ . It is important to note that this antielectron is neither positron nor the “hole” of Dirac. The stories with the “adventures” of true antielectron in physical science are described in detail in the author’s publication.<sup>12</sup> The true antielectrons which are particles of Antimatter should be classified as antileptons and according to their statistical properties as antifermions (spin:  $-1/2$  with respect to the electron). The main physical parameters of the magnetic and electric spinor particles (magnetons, antimagnetons and antielectrons) constituting together with electrons the atomic shells are contained in Appendix to this article.

The author’s research has shown that real magnetic charges, which are not recognized by modern physical science, constitute half of all real spinor particles in Nature. When compensating for the “absence” of these real particles, the physical theory was forced to use such surrogates as the electron magnetic moment and the Dirac monopole. In addition, modern physics “successfully” ignores and such important real particle as true antielectron, replacing it with Dirac’s hole and even a positron. It should be noted after all that has been said above, that the world physical theory has done the impossible, having managed to explain most of natural effects and manifestations in Nature without considering the existence three quarters of the real spinor particles. Is it worth, after all this, to be surprised at the super complex state of physical theory.

In concluding this introduction it is important to note that by the basic (unperturbed) state of spinor particles, both electrical as and magnetic, is the state of the bispinor, i.e. of the connected pair of homogeneous particles with charges of opposite signs. In this state, the particles are tightly pressed together, which is accompanied by a compensation of the activity of their spins. In this case, there is no annihilation of the particles. All other states of spinor particles (dipole or monopole states) refer to the perturbed states. Questions related to the states of real spinor particles in the real world were considered in detail in the author’s publications.<sup>5,13</sup>

The purpose of this article is to elucidate real physics and the functional role of the “Black holes” in the Universe in connection with the new possibilities which opened by the introduction of real magnetic poles (magnetic charges) as well as true antielectrons into

basic physical representations.

## The physical triad of real world, spinor particles of matter and antimatter, nature of “dark energy”

The results of experimental and theoretical research real magnetic charges allowed the author to formulate conception of the World Physical Triad (PT) according which the real World consists of three fundamental phases: of the Matter, Antimatter and Energo–phase (Energo–medium).<sup>13</sup> By the Matter particles are the electric and magnetic fundamental particles with charge of negative sign. The particles of Antimatter are all spinor particles with positive charges. For example, by classical material particle is well–known electron as well as little–known magneton discovered by the author and presented above in the article.

The Energo–phase is the gas–like medium of extra–high density that fills the entire World Space and consists of its own massless and spinless particles which are called the Energiones (are denoted in the article as  $\epsilon$ ). Particles of the Energo–phase are very small they move at speeds close to the speed of light and differ only by the direction of their own rotation: left or right. The Energo–phase can also be referred to as Energo–ether. With the notion by Energo–phase one can, in some aspects, associate such odious representation as the Physical vacuum.

The force derivative from Energo–phase is the so–called “Dark energy” (“DE”) which is determined by the non–equilibrium states of Energo–phase in the form of local pressure fields ( $P_\epsilon$ ) created by Energiones. The formations of “Dark energy” induce by spinor fields, i.e. fields of charged particles. Under this all the varieties of spinor fields, including gravitational fields, themselves not have real of the force value. They are only intermediaries that influence on the state of Energo–medium and induce the formation of “DE” in it. Namely the “Dark Energy” is the global force factor which performs all the power actions with particles and masses, both in the scales of cosmos (the motion of galaxies, stars, planets, etc.), so and in the microcosm (dynamics and so–called interactions of atoms and charged particles in mass compositions).

Here it is important to emphasize once again that generally accepted physical interactions between the charged particles and masses are nothing more than theoretical prostheses, inspired only by superficial impressions from the processes observed in practice. In reality, behind these “interactions”, in the vast majority of cases, lie the forces of “DE”. As noted above, the spinor fields (electric, magnetic or gravitational) are only intermediaries that induce the formations of “Dark energy” between their sources and which can be either positive or negative. So, for example, it is the forces by negative “Dark energy” press the bodies emitting paragravitational fields to each other’s what is mistakenly perceived in the sciences as the mutual gravitation of bodies. As will be shown below, between the electric particles with charges of the different signs, a negative “Dark energy” is realized, the forces of which press the particles to each other, which in the existing physics is interpreted as the attraction of charges.

**Note 2:** The use of the term “Energo” in names the Energo–medium and its particles the Energions is determined by fact that this world phase is the bearer of the world force. In addition, the Energo–phase

can also be called as the universal storage of energy in Universe. The main physical parameters of Energo–medium and its own particles are presented in the author’s publications.<sup>13,14</sup>

**The atomic-shaped electromagnetic structures (masses) are natural and the only possible sources of gravitational field and photons**

Since 2001,<sup>1</sup> the author in his publications tried to explain that all varieties of Physical mass (PM) are electromagnetic structures of the atomic-shaped type consisting of electric and magnetic spinor particles. One of main characteristic properties of all varieties of physical mass is their ability to emit a gravitational field which is formed as result of joint orbital currents of the electric and magnetic charges and is of the vortex electromagnetic field. Thus, Physics mass or, simply the mass, can be called as the electromagnetic spinor structure which form the gravitational field or as the gravity–forming structure. Another characteristic property of mass is its ability to emit photons. The masses are, for example, atoms, nucleons and substance. It is important to emphasize that mass and, for example, Matter are completely different physical categories. Individual spinor particles, both electric and magnetic, have no mass, since the mass is the result of their joint structural association. For example, the electron is massless particle and no “divine bosons” can’t give him mass. Below in this chapter briefly the physics of formation gravitational field and photons in the structures of the mass are presented.

**The physics of formation electromagnetic vortex (gravitational) field in the structures of mass (in atoms, nucleons, substance)**

According to the results of own experiments the author came to a very unusual, from the point of view of modern physical notions the conclusion, that the atomic shells consist of electric and magnetic spinor particles and are electromagnetic, rather than electronic as it has always considered. At the same time, number of magnetic spinor particles in atomic structures, is approximately, equal to the number of particles electric. The electromagnetic shells of atoms are natural source (generators) of the gravitational field which in reality is vortex electromagnetic field.<sup>1,5,15</sup>

The elementary source of gravitational field is the spinor electromagnetic quasi–particle which the author called as S–Graviton (S=source). Composition of the S–Graviton: two spinors (electron and magneton) and two antispinor corresponding to them. In figuratively speaking S–Graviton is combination of the electric and magnetic dipoles which rotating in antiphase at the same atomic orbital. This quasi–particle can be represented as two orbital currents of electric and magnetic charges which coordinated in antiphase. Model representation of the orbital electromagnetic current must be written in the following form  $rot[\mathbf{J}_e - \mathbf{J}_g]$  where  $\mathbf{J}_e$  and  $\mathbf{J}_g$  are vectors density of instantaneous currents of electric (e) and magnetic (g) charges.

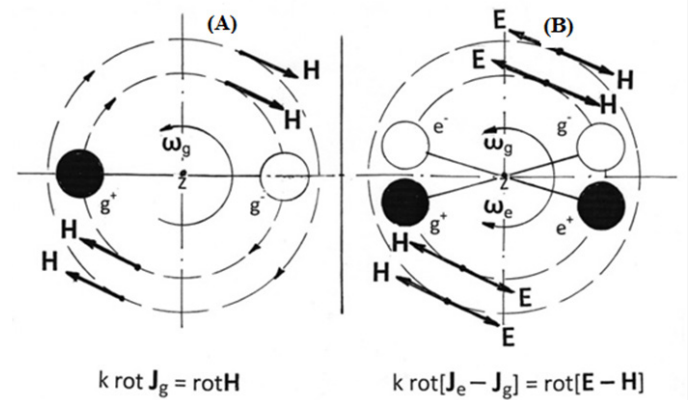
Then equation process of gravitational field formation by S–Graviton can be presented in the form:  $k rot[\mathbf{J}_e - \mathbf{J}_g] = rot[\mathbf{E} - \mathbf{H}]$  where  $\mathbf{E}$  and  $\mathbf{H}$  are vectors instantaneous strength of electric and magnetic fields in composition of the vortex electromagnetic (gravitational) field. The minus signs put in the above given equation of gravitational field formation correspond both to antiphase of

orbital currents of the electric and magnetic charges so and the anti–directivity of vectors instantaneous strength of electric and magnetic fields in every point of the gravitational field.

The above–mentioned mutual orientations of vectors electric and magnetic currents in the composition S–gravitons and corresponding orientations of vectors strength of electric and magnetic fields in the structure of the gravitational field, meet the fundamental principle of minimizing the “Dark energy” or, what is the same, by principle least action. Namely minimization of “Dark energy” is basic physical principle which responsible for formation of all types of Physical mass. Read more about the principle of minimizing the “Dark energy”.<sup>13</sup>

The vector–vortex analogy between magnetic ( $\mathbf{A}$ ) and gravitational ( $\mathbf{B}$ ) the field is shown on Figure 1. Unlike from the vortex magnetic field of each point of which there corresponds one vector of instantaneous strength of field  $\mathbf{H}$  by every point of elementary gravitational field are answered two vectors instantaneous strength of fields  $\mathbf{E}$  and  $\mathbf{H}$  which equal by value and orienting antiparallel to one another.

In addition, on Figure 1 it is shown that the vortex magnetic field which determined by vortex vector  $rot\mathbf{H}$  is formed by revolved magnetic dipole. The source of the elementary gravitational field is the S–Graviton that can be defined as revolved EM–dibispinor, i.e. two coupled dipoles (electric and magnetic) which revolve in opposite phase on one the atomic orbitals. The classical equations of processes formation the magnetic and electromagnetic (gravitational) vortex fields are also given on Figure 1.



**Figure 1** Schemes of mechanism formation of the vortex spinor fields: magnetic (A) and electromagnetic (gravitational) (B). White circles on the Figure 1 showed negative charged electric and magnetic spinors, i.e. electron (e<sup>-</sup>) and magneton (g<sup>-</sup>), and black circles is positively charged antispinors corresponding to them with charges e<sup>+</sup> and g<sup>+</sup> when the General condition e = g.

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

The gravitational fields formed by masses in the absence of polarization of the vortex vectors of S–gravitons in their structures are a tensor or quasi–scalar fields. And again, by outward analogy with magnetism such fields can to define as the paragravitational fields (PGF). Between the masses (bodies) that emit paragravitational field

is implemented a well-known Attraction or Gravity. The physical masses which emit the ferrogravitational fields will push off from masses–sources of the paragravitational fields, for example, from Earth what constitute effect of the Gravitational–levitation (GL) open by author present article.<sup>5–7</sup>

### The elements of photonic physics with real magnetic charges

When move of electric charges in conductor around electric current lines the vortex motion of magnetic charges (the rotating magnetic dipoles) is realized. It is this process that underlies formation of magnetic field around conductor with the constant electric current which was comprehensively investigated by the author and schematically presented in Figure 1A. It is important to note that this current is collective process in which participate both electrons and real spinor particles with the charge  $e^+$ , i.e. true antielectrons. In addition, taking into account the vortex motion of magnetic charges (magnetic dipoles) around electric current lines it can be understood that four spinor particles (two electric and two magnetic particles) are involved in the process of electric current in conductor rather than one electron, as this now customary in physics.

The last statement should not be perceived as something supernatural if we take into account the results of the author’s study in which it is shown that real magnetic charges and true antielectrons together with electrons are structural components of the atomic shells, and also, together with electrons inhabit the potential and even, in special cases, real zones of conduction.<sup>12,13</sup>

However, physics of confinement of electrons and antielectrons in compositions of mass are radically different. It is this difference that was the main reason why the true antielectrons on not received the status of real spinor particles. The mobility of electrons, for example, in the lattice of conductor is many times greater than the mobility of antielectrons and, consequently, the concept of electric current which is defined, as the linear movement of electric charges, can link with movement only electrons, what is now and done in physical science.

Unlike the vortex magnetic field, which is formed around a conductor with an electric current, the process of photon formation it is represented, in the first approximation, as individual electronic process. It is initiated by a separate electric charge, for example, of electron in its translational motion in mass structures, i.e. in atoms and substance. This so-called primary electron, whose motion is associated with local perturbation in the structures of atoms or substance and initiates the process of the photon formation. In publications<sup>13</sup> the author showed that under translational motion of electron in the Energo–medium (i.e. in space) its spin vector  $\mathbf{S}$  which precesses along generatrix of spin cone with the angle of  $\alpha$ . Herewith the end of the spin vector describes in space the spiral line with wave vector  $k\mathbf{l} = 2\pi / \lambda$ , where  $\lambda$  is the period (wavelength) of such spiral.

The conic spiral electric field which is formed when the primary electron have translational motion in the mass structure, conditionally, can be denoted by the vector  $\mathbf{E}_{sp}$  ( $sp$  from word the “spiral”) which directed along the spin cone generatrix, i.e. in the direction of the spin vector of particle. The equation of the process formation of conical spiral field  $\mathbf{E}_{sp}$  by an electron can be written in the form  $k\mathbf{J}_e = \mathbf{E}_{sp}$  where  $\mathbf{J}_e$  is the linear electron current vector that is formed by primary electron moving in structure of mass. The conical spiral field  $\mathbf{E}_{sp}$  formed by primary electron is the electrical component of photon.

The vectors of strength the spiral conic field  $\mathbf{E}_{sp}$  can be decomposed into the components: the linear (axial) component  $\mathbf{E}_{sp}\cos\alpha/2$  and the vortex component  $\mathbf{E}_{sp}\sin\alpha/2$ . The vortex component  $\mathbf{E}_{sp}\sin\alpha/2$  induces of corresponding vortical “Dark energy” in Energo–medium the force of which leads to vortex (circular) motion of magnetic dipoles around the axial (electric) component of photon. The vortex motion of magnetic dipoles which is described by the expression  $\text{rot}\mathbf{J}_g$  generates in plane their motion the vortex magnetic field  $\text{rot}\mathbf{H}$ , and the equation its formation is form  $k\text{rot}\mathbf{J}_g = \text{rot}\mathbf{H}$ . The linear component of field  $\mathbf{E}_{sp}$  acting on the Energo–medium creates the region of negative “Dark energy” in the direction of vector  $\mathbf{E}_{sp}\cos\alpha/2$ . It is this “DE” that ensures the acceleration of the photon, after its formation, up to the speed of light.

The sequence of physical processes which ultimately lead to the formation of photon can be represented in the following form:

$\mathbf{J}_e \rightarrow \mathbf{E}_{sp} \rightarrow \text{rot}\mathbf{J}_g \rightarrow \text{rot}\mathbf{H}$ . The fields  $\mathbf{E}_{sp}$  and  $\text{rot}\mathbf{H}$  are the structural components of photon. The spiral conical field  $\mathbf{E}_{sp}$  which is formed when the electric particle (in our case this primary electron) moves in the mass structure constitutes the internal field of photon and is called core of photon. The magnetic field  $\text{rot}\mathbf{H}$  which, geometrically, is the external field of photon is called of the photon ring.

The fields  $\mathbf{E}_{sp}$  and  $\text{rot}\mathbf{H}$  that make up the photon correspond to each other by the appropriate physical parameters i.e. are in the conditions of mutual quantization. In this case, the combined impact of these fields on the state of Energo–medium leads to a decrease in the level of the local “Dark energy” i.e., condensation of electric and magnetic fields in composition of photon is energetically more advantageous than their separate existence. The most important point that the author tried to convey is the statement that such important physical manifestations as gravitational field and photons can be realized only in the structures of mass, i.e. in atoms, nucleons, substance. In other words, necessary condition for formation of the gravitational field and photons is the state of the ordered structures of atomic–shape type. The chaotic (unordered) media formed by spinor particles are unsuitable for such processes.

**Note 3:** It should be noted that in this article, as well as in general in the existing physical theory, the role of true antielectrons in the processes of photon formation has remained unclear. The physics of electrons and magnetic charges whose fields are constituents of the photon quite clearly represented in article. As for the true antielectrons, in the author’s opinion, their role in the processes occurring in the structures of the mass is reduced to intermediary operations that create energetically favorable conditions for the above–described motions of electrons and magnetic charges. Problems with elucidating the functional role of true antielectrons in atoms and substance are largely determined by the physics of their fields, which are antipoles to the fields of electrons and are used in Nature for depolarization, i.e. destruction of fields created by electrons.<sup>12–14</sup>

### “Black holes” are galactic “factories” of mass

Above in this article the author presented such structural formations as the physical masses (PM) the characteristic feature of which is ability to emit gravitational field and photons. At the same time, in the Universe there can exist media consisting of spinor particles of Matter and Antimatter that are not structured in the compositions of mass and, therefore, are not capable of creating either a gravitational

field or photons. It is precisely such environments that represent what in modern astrophysics are called “Dark matter”. It is important to note that the current term “Dark matter” does not reflect the real state of things in this area of physical representations. According to the author’s research all spinorial, i.e. the charged fundamental particles in real world, are divided into particles of Matter and Antimatter. Therefore, it is physically correct to define what is now called “Dark matter” by means of the term “Dark medium”(“DM”), i.e. instead the word “matter” You must use “a medium”. The term “Dark medium” as more appropriate for real physical conditions will be used in the article. In stellar cataclysms, for example, during supernova explosions huge amount of their stellar content is emitted into the space in the form of electric and magnetic particles of Matter and Antimatter. These the spinor particles which accumulate in the regions of the galactic space with the minimum intensity of gravitational field and represent the “Dark medium”. The features transport of the spinor particles in oblast of “DM” are discussed below in Section 5. “Dark medium”, by the author’s definition, can’t produce either gravitational field or photons. In addition, “DM”, most likely, does not have and the ability to reflect photons i.e. it is the true “Dark medium”. It is in the regions of “DM” realize the synthesis of nucleons and atoms and first of all of hydrogen atoms. Of course, for realization the synthesis processes of masses in the “DM” it is necessary to provide in this oblast the appropriate “assortment” and density of spinor particles.

In regions “DM” in addition to the spinor particles constituting their main content the masses synthesized in this medium is present, i.e. nucleons, atoms, and others. After formation, all these of mass are pushed out of the “DM” area and are sent on the replenishment of mass in Universe. The unified complex of essences: “DM” and the Physical masses (PM) represent what is commonly called the “Black holes”(“BH”). The conditional equation “Black holes” can be represented in the form: “BH” = “DM” + PM. Thus, the “Black Holes” are the galactic “factories” of mass which maintain the constancy of mass in the Universe. They have nothing to do with the currently existing representations of “BH” in the form of galactic “monsters”, liquidators of stars with which in the scientific and popular literature there are numerous speculations on the themes of parallel worlds, travel in the space and time and many others.

**Note 4:** It is important to note that the absence of any significant gravitational field in real “Black holes” fundamentally distinguishes the approach of the author from of generally accepted views, in which the gravitational field acts as the main characteristic factor determining the properties of “BH”.

According to astronomical observations the “Black holes” are formed in so-called active galaxies with intense processes of star formation and star destruction. These are the Seyfert galaxies and Quasars. As indicators of the processes that produce a large number of spinor particles as a result of stellar explosions, X-ray and gamma radiation accompanying these processes are used. The first radiation, as a rule, corresponds to the destruction of electromagnetic atomic shells, and the second is associated with the destruction of the shells of nucleons, positrons and, possibly, other mass formations.

## The “electric” and “magnetic” “black holes” as well as the circulation of spinor particles and masses in nature

The basic state of spinor particles is the state of bispinor, i.e. of connected pair of homogeneous spinor particles with charges opposite

signs. Particles in this state are tightly pressed together what is accompanied by compensation of activity their spins. Such the spinor pair can also be called as enclosed or spin-enclosed dipole. The above ground state of spinor particles in the form of magnetic or electric bispinors does not lead to particle annihilation.

The particle annihilation version was initiated by the results of the electron-positron interaction. However, the positron not a true antielectron, but is a varieties of Mass, i.e. it have atomic-shaped structure.<sup>16</sup> Real antielectron “sits” in the positron structure as its nucleus and determines the electric charge of the positron. Upon contact with positron the electron combines with the true antielectron with forming the electric bispinor and everything else from the composition of the positron in the form of the shallow electric and magnetic particles, most likely quarks, is ejected away. Gamma quanta, observed in this case, are evidence of the “annihilation” but, exclusively, of the electromagnetic shell of positron. It is important to note that charges in state of bispinor do not manifest themselves by spinor fields and are very difficult to detect. When a positron collapses at the so-called annihilation of particles, it is relatively easy to detect only gamma quanta, that and is observed in practice.

In addition, the spinor particles, in mass compositions, are characterized by clear charge symmetry. Thus, for example, the shells of atoms are formed by electric and magnetic dipoles with electric and magnetic charges corresponding to the condition  $e = g$ . Like particles of atomic shells, manifest themselves the electric and magnetic quarks in such formations of mass as nucleons, positrons, neutrinos.

However, the quantitative ratio of the electrical and magnetic spinor particles that populate various galactic “Dark mediums” and, therefore, “Black holes” in the Universe can vary significantly. This difference, in the author’s opinion, lead to the formation of both “electric” and “magnetic” masses. The “Black holes” in which number electrical charges prevail over the number magnetic charges can, conditionally be called electric “Black Holes” (EBH). These the galactic “EBH” corresponds to our electrical world in which the masses are organized in accordance with well-known electrical principles. In 2008, in the publication,<sup>4</sup> the author first introduced the concept of “magnetic world” in which the condensation processes all varieties mass are initiated not by electric charges as in our World but by magnetic charges. In the “magnetic world” the protons of atomic nuclei charged with magnetic charges ( $g^+$ ) in contrast to our “electric” protons. The concept of electric and magnetic worlds was further developed in the author’s work.<sup>17</sup>

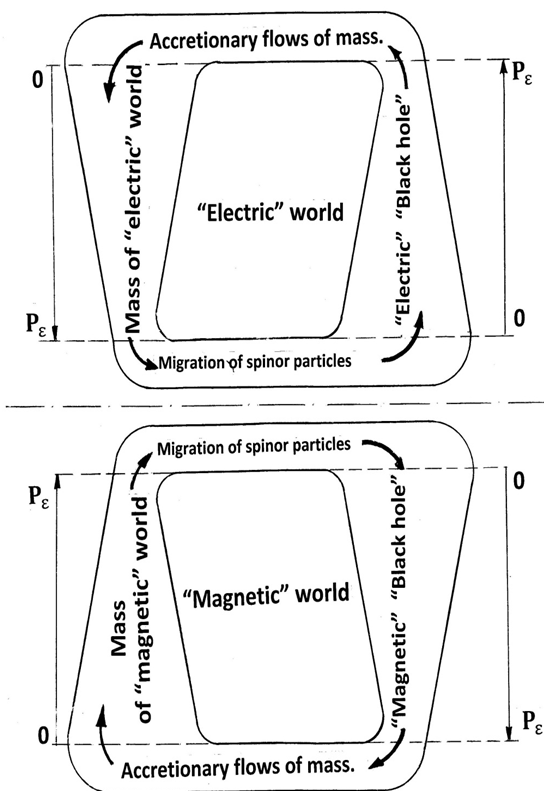
It is important to note that it is that the primary condensation processes of spinor particles into the compositions of magnetic masses (magnetic: nucleons and hydrogen atoms) which inhabit the “magnetic world” are realized in magnetic “Black holes”. The magnitude of the charge of the “magnetic” protons is equal of charge of the magneton. Recall that magnetons, i.e. the magnetic particles of Matter, which exist in the atomic shells, in 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 participated of particles, and the values their electric and magnetic charges is meet the condition:  $e = g$ .

The “electrical” and “magnetic” masses, for example, such as “magnetic” and “electrical” hydrogen atoms are formed in the “Black Holes” from the same set of the spinor particles. However, relation of the number of electric and magnetic particles in the compositions of different “Dark mediums” can substantially differ. These differences

are determined by the composition of stars which “feed” the “DM” by the spinor particles. It is the latter circumstance that determines the corresponding “casting” between the electron and magneton in protons and neutrons of atomic nuclei.<sup>16</sup>

Synthesis all types of masses both “magnetic” and “electrical” takes place in regions of the corresponding “Black holes” which are cosmic “factories” of the mass. Atoms of hydrogen and helium which in accretion streams most often come out of the “Black Holes”, in accordance with their charged “specialization”, can be both “electrical” and “magnetic.”

Figure 2 shows the schemes of circulation of spinor particles in the “electric” and “magnetic” worlds in which galactic “Black holes” ensure the condensation of the spinor particles in the compositions of corresponding charged masses. The funnels in the left part of Figure 2 represent the “electrical” and “magnetic” masses of the corresponding charged world. These masses were identified earlier by the author as gravitational-forming media (GFM). The funnels on the right side of Figure 2 represent the “Black Holes”. The pressure  $P_\epsilon$  in Energo-medium which determines the motion of spinor particles and masses in the processes of their circulation in Nature put off on vertical axes in Figure 2.



**Figure 2** The circulations of spinor particles and masses in the “electric” and “magnetic” world with real magnetic charges.

The electric and magnetic spinor particles that are ejected into space as a result of stellar cataclysms migrate into galactic areas called “Black Holes”. In these regions the processes of condensation

of spinor particles in the simplest types of mass are realized and, first of all, into nucleons and hydrogen atoms which are necessary to restore the mass of the Universe. The motion of the spinor particles and masses which were synthesized in the “Black Holes” is indicated by the arrows in Figure 2.

It is the recovery of the mass and the maintenance of its balance in the real World is the fundamental function of the “Black Holes”. These giant “factories” of the mass retain the Peace that we know and in which we live. By analyzing the processes that determine the circulation of spinor particles and masses, which are shown in Figure 2, we can conclude that here the most important are three types of processes: the destruction of masses in stellar cataclysms, synthesis of mass in “Black holes” and the processes travel of particles in the oblast of the “Black holes”, as well as move of masses which form in the “DH”. Extremely important for clarifying the physics of the processes described in the article is to elucidate the migration processes of the spinor particles of Matter and Antimatter in the region of the “Black holes” where the restoration of the mass is realized. Of course, the main forces that are responsible for the motion of the spinor particles and masses are the forces of the “Dark Energy”.

**Note 5:** It should be noted that in the formation of elementary types of mass in of any the charged of “Black hole”, in addition to “profile” masses, it is impossible to exclude the possibility of the formation of masses with another charged “orientation”. Of course, the possibilities of such alternative processes are very limited however the probability of presence and in our “electric” world, in small quantities, of “magnetic” masses such as “magnetic” atoms and nucleons is very likely.

According to the results of the author’s research “Dark energy” is realized in the Energo-medium under the influence of spinor fields, i.e. the fields of charged particles. The forces of the “Dark energy” can be formed both by the action of the spinor field of an individual charged particle and under the action of a superposition of its field with the fields of other particles or their associations. In the first case, the forces “DE” realized which determine the motion of a particle in space in the direction of its spin vector. It is this force factor that drives the spinor particles in space, and also is responsible for the acceleration of the photon after its formation till speed of light. Here it is important to note that photons are not real spinor particles as they do not have charge. As was shown above in section 3.2 photon consists of spinor fields, which are formed by real magnetic and electric charges in the process of its formation in the structures of mass. Photons should be considered solely as the quasi-particle or, simply, photons. By the real particles are solely the spinor particles of Matter and Antimatter.

The second (combination) type “DE” is most common in Nature. It is realized under the influence of superposition of fields of many particles. The forces of the “Dark energy” of the latter type determine all the processes of so-called attraction or repulsion between charged particles and masses or, ultimately, all known interactions between particles and masses.

As noted above the spinor particles which ejected, for example, in result of the supernova explosions are collected in “Black Holes” which are galactic regions with a minimum voltage of gravitational field. The basis for such an assertion can serve as the behavior of photons in the gravitational field of large masses. As is known,

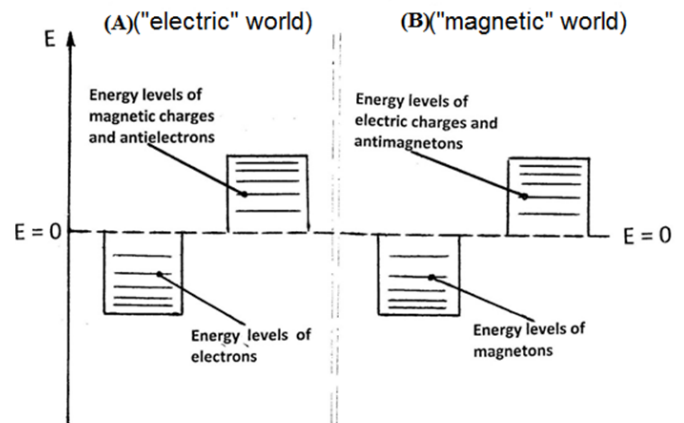
photons are pushed out of the gravitational field of the Sun, which indicates the formation of a positive “Dark energy” between the Sun and a photon, whose forces try to squeeze out photons from the gravitational field. As for the true spinor particles, in his publications the author constantly stressed that such particles are massless and capable of emitting, exclusively, an electric or magnetic but not a gravitational field. Therefore, do not expect the manifestation of the so-called gravitational attraction of these particles to the cosmic masses. At the same time, there is no reason to assert that there is no interaction between the electric field and the gravitational field. We recall here that the gravitational field according to the results of the author’s research is the vortex electromagnetic field.

Taking into account the fact of the photon deflection in the gravitational fields of large cosmic masses, that is determined by the interaction of the electric component of the photon field with the gravitational field, it can be assumed that the gravitational cosmic fields exert repulsive effect and on the spinor particles i.e. are implemented of processes gravitational lensing not only of photons but also of charged particles. Therefore with high degree of probability can be expected to expulsion of spinor particles such, for example, as electrons and magnetons from the gravitational fields of planets, stars and other cosmic masses. Of course, the “DE” forces that act on the spinor particles are very small in this case. However, it is the gravitational fields of the Universe are the main organizational factor that determines the accumulation of the spinor particles in oblasts “Black holes”.

### Features confinement of the spinor particles in structures of mass in the “electric” and “magnetic” worlds

The main reason that real magnetic spinor particles constituting half of all spinor particles in Nature, as well as electric antispinors i.e. true antielectrons, were not acknowledged by physical science in our of “electric” world is determined by the physics of confinement these particles in the atoms and substance what fundamentally different, for example, from confinement of electrons. As for the “magnetic” world, in it under sanctions of the confinement will be all the electric particles (electrons and antielectrons) as well as magnetic antispinors, i.e. antimagnetons. In Figure 3 shows the scheme of disposition of the levels of electric and magnetic charges composing atomic shells, in the condensed state of substance on the scale of energy in “electric” (A) and “magnetic” (B) worlds.

As is known, in our electrical world (Figure 3A) of energy levels of electrons are located in the potential pit and for their exit into a free state the substance, for example, needs to be heated. Unlike electrons, the energetic levels of antielectrons and magnetic charges in the “electric” world are under potential cupola, and for the implementation of their free state, substance need cooled, that is, in reduce its internal energy. The deep stages of cooling there arises the superconductivity effect what is an evidence of transition of the magnetic spinorial particles, as and antielectrons into the state free from bonds with the lattice of superconductor. In this case, the electric current passes through the superconductor without resistance, since the free magnetic charges, which revolve around the current lines, do not experience friction on the lattice of the superconductor. Any pumping energetic of the substance (radiation, heat, etc.) will push magnetic charges on a higher energy level that is accompanied sharp increase in the electrical resistance of the conductor.



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

Of course, the above-noted cardinal differences in the confinement of magnetic charges and electrons in structures of mass are the main reason why magnetic particles in our electrical world have been left out of scientific interests. However, we should not forget and about the “merits” of J. C. Maxwell who, being impressed by the superficial reading of experience of Oersted, has pushed the physical science in the swamp of vicious concept of electric magnetism.<sup>18</sup>

### Conclusion

In his numerous publications the author has shown that namely distinctions in conditions of confinement electrons and magnetic charges in the atoms and substance are responsible for numerous “punctures” associated with the legalization of the real magnetic charges in physical science. The “absence” of magnetic charges in physical representations made stimulate theorists to seek suitable replacements (theoretical prostheses) which will enable, somehow, to explain numerous magnetic manifestations observed experimentally.

Namely by such prostheses have proved to be so-called the magnetic moments, which allowed the “shut down” in the physical science such serious theoretical problem as the true nature of magnetism. In his publications the author shows that by theoretical prostheses are also the “holes” Dirac’s as well as his famous magnetic Monopole.<sup>19</sup>

However, the most harmful to the development of science and technology is introduction in the mind of concept purely electronic shell of atoms. Not will be secret that the adoption of this concept without taking into account the existence in shells of the real magnetic charges, as well as the true anti-electrons, is one of the main obstacles for the promotion of physics to clarifying many fundamental questions of the natural science. Among them: the physical essence of mass and gravitation, real Physics of “Black holes”, “Dark matter” and photons, such important concepts as the World Physical Triad and “Dark energy”, as well as many others. Of course, model of the electronic shell of atoms is by Grand theoretical “puncture” but we should not forget that “first place” on harmfulness in Physics we must give J. C. Maxwell with his of the fallacious electrical magnetism.<sup>20</sup> As noted above in the article it is namely with of the “light hand” of Maxwell i.e. as result his superficial glance at the Oersted Experience

the physical science had been deprived the true source of magnetic field, i.e. magnetic pole or magnetic charge.

The author hopes that common sense, sooner or later, will win over pathological thinking of “electricians”. Just because that impossible for another 150 years, ignoring the real magnetic charges and common sense, to be loyal to the erroneous concept of the electric magnetism of Maxwell and his vicious idea that the mechanical motion of electric charges in the conductor can replace such natural source of magnetic field as magnetic pole or magnetic charge.

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## Conflict of interest

Author declares there is no conflict of interest.

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## Appendix

### The main physical parameters of the spinor particles forming together with electrons the atomic shells

- a) **Charge:** The magneton (magnetic spinor) and the antimagneton (magnetic antispinor) have the magnetic charges, respectively,  $g^-$  and  $g^+$  the value of which is equal to the value of the electron charge ( $g = e$ ). Researches of the author showed that the greatest possibility charge of the fundamental magnetic particle is equal to electron charge, i.e.  $g_{max} = e$ . The real electric spinor particle with a positive charge  $e^+$  is a true antielectron. The number of antielectrons in the shells of atoms, as a rule, is equal to the number of electrons.
- b) **Sign of the charges:** Like an electron the magneton has charged with sign “minus” ( $g^-$ ). Sign charge true antimagneton is “plus” ( $g^+$ ).
- c) **Mass:** Like an electron the magneton, antimagneton and antimagneton are massless particles, because the Physical mass is result of joint structural “activity” of electric and magnetic spinor particles.
- d) **Class of elementary particles:** The magneton is lepton, and antimagneton and antielectron are antileptons.
- e) **Statistical properties:** The magneton is fermion (spin equal  $\frac{1}{2}$ ), and the antimagneton is antifermion (spin equal  $-\frac{1}{2}$ ).
- f) **Relation to the phases of the physical triad:** Electron and magneton are particles of Material phase (the Matter) and antimagneton and antielectron are particles of Antimaterial phase (Antimatter).