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## **THE DEVELOPMENT OF THE IMPROVED STRUCTURE OF FUNDAMENTAL INTERACTIONS**

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The experimental observations, carried out by the independent authors, prove the existence of the nonelectromagnetic phenomena, which cannot be perceived on the base of the known fundamental interactions structure. We have to point out the known structure shortcoming which is the absence of the symmetry. The improved fundamental interactions structure has the symmetrical form and includes the places for the observed nonelectromagnetic phenomena. We have obtained the fundamental notions base for the integrated science formation and the new technological means construction.

*Key words:* nonelectromagnetic biological phenomena, biological object, cosmophysical nonelectromagnetic radiation

### **1. Introduction**

The reports about the nonelectromagnetic biological phenomena registration were considered as doubtful till the XX century nineties due to the known postulate, which declares the limitation of human perception ability by the five senses. Under the mentioned postulate action it was created a lot of the wrong notions (mysticism, magic, sixth sense), which reflect the academic science helplessness. In the nineties a lot of experimental investigations were carried out and now we are able to make such a conclusion: the so-called “mystic” phenomena really are connected with the human organism ability for the perception of information, supplied by the nonelectromagnetic radiation, which exists in nature despite the wrong five senses postulate. The “sixth sense” really is not the sixth, but the first one, because any biological object (flora, fauna and Homo sapiens population) has the ability for the nonelectromagnetic radiation generation and reception. Besides the biogenous nonelectromagnetic radiation, commonly known as “biofield”, there is the cosmophysical nonelectromagnetic radiation, generated by the great cosmic bodies (Earth, Sun). The moon makes its addition to the total nonelectromagnetic radiation flow by reflection of the Earth and Sun flows.

Together with the nonelectromagnetic radiation registration it was shown by the apparatus methods the reality of the biogenous magnetic-like effects (telekinesis, levitation), which produce the gravity force compensation. Thus we have to come to conclusion about the biological objects ability for the formation of the stationary field, which is able to compensate the gravity force. One should note that this field exists beyond the fundamental electromagnetic interaction.

In the XX century eighties some authors put forward a lot of speculative conceptions (torsion, psi, etc), which were not able to explain the set of the nonelectromagnetic phenomena, perceived as “nontraditional”. In the nineties the additional investigations were published and thus we got the possibility to consider the more wide set of experimental data. Among the wide list of authors we should like to point out the following researchers: Backster (USA), Pagot (France), Shnol and Lavrentiev (Russia), Tokata and Komaki (Japan) [1-6]. In particular, one has to note the two phenomena: the influence of the cosmophysical radiation on the radioactivity process and the cold nuclear reactions in the active biological matter [4, 6]. Besides, our own experimental investigations were taken into account; we succeeded to register the nonelectromagnetic radiation, generated by Earth, Sun and people [7, 8]. The known experimental data generalization provided us to put forward such a simple hypothesis: the nonelectromagnetic phenomena have the nuclear-physical essence, they take place in the atom nucleus volume and thus they can be treated as the “hadron (i. e. nuclear) phenomena” [8, 9].

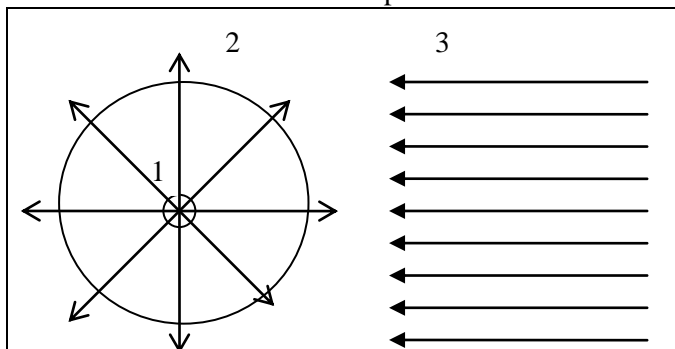
The mentioned simple hypothesis is based on the known conception: all objects in this world, including the biological ones, consist of atoms, whereas the 99.9% of the atom mass is concentrated in its nucleus. Thus any object, including the biological one, is the nuclear-physical by 99.9%. It is time, when we have to get rid of the shameful labels (nontraditional phenomena, psi-effects, etc) and begin

to develop the integral natural science, including the remote biogenous communication with the environment.

## 2. The experimental investigations analysis

### 2.1. The cosmophysical nonelectromagnetic radiation

It is known from the ancient times that our planet is the source of special radiation, spread over the whole its surface. The planet radiation forms on the Earth surface the stable structure, which



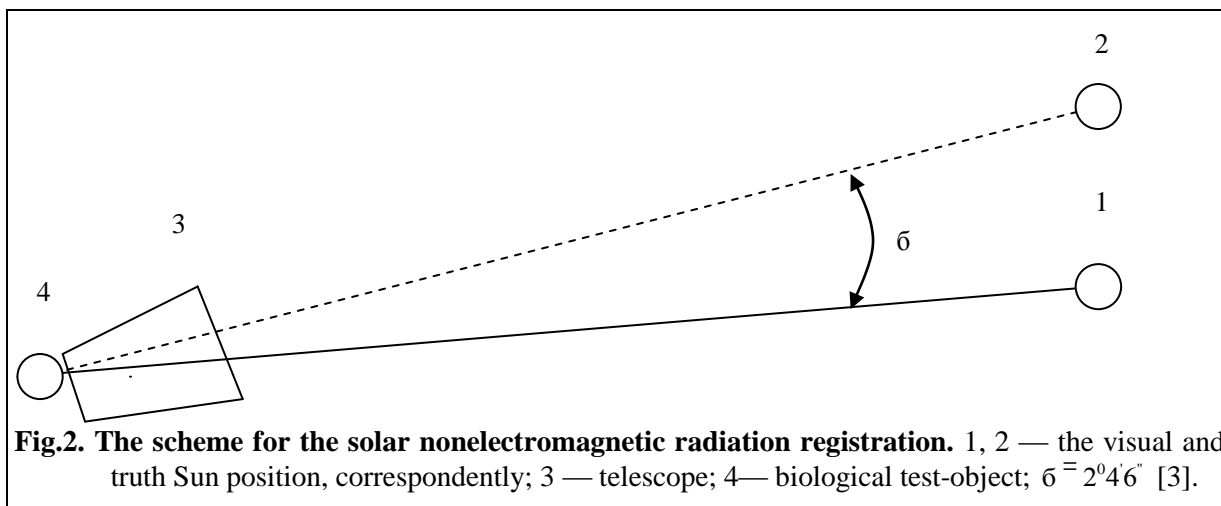
**Fig.1**

The scheme of the Fig.1. planet and Sun nonelectromagnetic radiation penetration in the Earth volume. 1—the high temperature planet core; 2, 3 — the nonelectromagnetic radiation of the planet and Sun origination, correspondingly [13].

got the modern name “Hartman network”. This structure is added by the separate lots, which produce the lifeful (ritual zones) or harmful (geopathogen zones) action on people and animals. In the ancient times the ritual zones were used for the cult buildings placing whereas it was forbidden to place any home on the geopathogen zones. Besides, the planet radiation is used as the legitimate signal carrier under the biological location (remote search of minerals). This ancient method remains its practical application till our times together with the usage of the modern geological technique. During the last years the planet nonelectromagnetic radiation was registered by different device methods as well

as the similar sun radiation [3-5, 7-12]. The known experimental data generalization provided us to put forward a scheme, presented on the fig.1 [13].

According to the known geophysical conception, in the Earth center there is the high temperature mass, which has the following parameters: radius about 1000 km and temperature approximate  $6000^{\circ}\text{C}$ , what corresponds to the Sun surface temperature. Namely the cosmic bodies thermal energy is the energetic resource for the nonelectromagnetic radiation generation. This radiation produces the stimulation of biological processes in the alive nature, including flora, fauna and the famous Homo sapience population. A lot of labels was proposed for the cosmophysical radiation designation: chronal, psi, etc. In particular, one label refers to the planet radiation natural function: evolution field [14]. The planet radiation penetrates along the Earth radius with attenuation, and spreads through its surface. It is easy to assume that the stable structure “Hartman network” is mere the projection of the Earth center structure. The planet radiation intensity does not depend on the mutual Earth and Sun situation, whereas the Sun radiation intensity changes during a day as one can see from the fig.1. In the middle



**Fig.2. The scheme for the solar nonelectromagnetic radiation registration.** 1, 2 — the visual and truth Sun position, correspondently; 3 — telescope; 4— biological test-object;  $\delta = 2^{\circ}46'$  [3].

of the twenty four hours period the solar radiation falls directly on the planet surface but in night it penetrates through the Earth volume with attenuation. Thus the summary intensity of the two cosmophysical flows, shown on the fig.1, is reduced during the night. Besides, one should take into account the flow, reflected by the Moon.

The solar nonelectromagnetic radiation registration was independently produced by Tokata and Levchook with the use of different biological test-objects, shielded from electromagnetic radiation [5, 8]. These experiments were carried out during the time interval, including the sunrise moment, when the sharp increase of solar radiation (electromagnetic and nonelectromagnetic ) has place on the local lot of the planet surface. The most significant resonance of scientific community was produced by Lavrentiev experiment, carried out in the middle of a day [3]. The scheme of this experiment is shown on the fig.2.

It is known that the light passes the way Sun-Earth during 8,3 minutes and thus the visual solar position is backward of the truth one by the angle  $\delta$  . Lavrentiev directed his telescope, shielded from the light, to the truth solar position. The E. coli cells were used as the test-object and the colonies formation was chosen as the test-object reaction. The observations were produced under the various angles and when the angle takes the  $\delta$  value, the mentioned test reaction activity was observed. This observation provided the author to make the following conclusion: the Sun is the source of the non-electromagnetic radiation which has the biological action. Under the fig.2 analysis one has to know that the nonelectromagnetic radiation speed exceeds the light speed by 10 times of more. It should be noted that the mentioned discovery does not contradict to known Einstein postulate about the impossibility of the light speed exceeding . This postulate is valid only within the limits of the electromagnetic fundamental interaction. But if the radiation is nonelectromagnetic (exactly to say, the hadron one), it can have any speed value independently of the light speed. The Lavrentiev work is under discussion during the last decade but we have included it in this work because the obtained result is in agreement with the Tokata and Levchook observations, produced without telescope.

The planet nonelectromagnetic radiation was studied with the use of the different test-objects. We are not able to switch on and turn out the planet radiation and thus the investigations are produced with the use of the concentrators, which raise the mentioned radiation local intensity like the concave mirror raises the local intensity of the light. The concentrated planet radiation flow, which is able to produce the technological operations, is formed in the concentrator volume by the mentioned way.

The pyramid concentrators, made with the use of usual materials (wood, metal, plastic), have the most wide application. The concentrated planet radiation spectrum depends on the pyramid construction parameter height /base, which is presented in the table 1 for technological pyramids. Every pyramid has the special connection with the golden proportion.

**Table 1. The height/base parameter value for different technological pyramids.**

The pyramid designation	Cheops	Adamenko	Golod
The parameter value	0,637	1,27	2,08

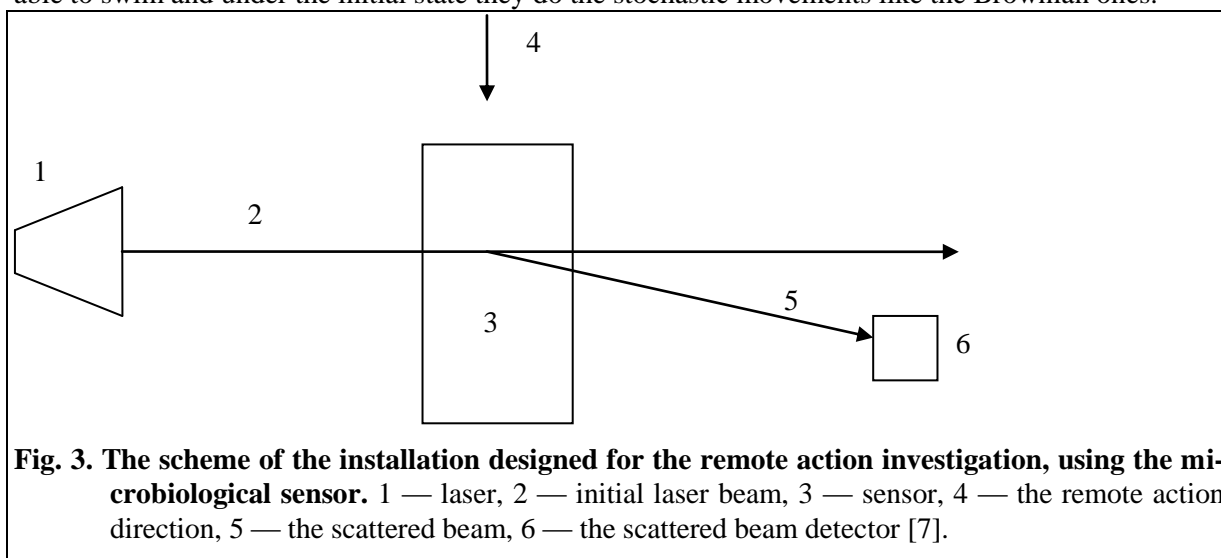
The first of the mentioned technological pyramids reproduces the proportion of the famous Egypt one whereas the two others constructions were developed in Ukraine and Russia. Some studied test-objects, which show the significant reaction, are presented in the table 2. The concentrated planet radiation influence on the different test-objects was studied by the following method (to the exclusion of the sensor): the preliminary measurement of the certain test-objects characteristic, the test-objects treatment in the pyramid volume and the repeat measurement after the treatment.

**Table 2. The list of the test-objects, studied with the use of the technological pyramids, presented in the table 1 [7-12].**

<i>Test-objects</i>	<i>Measured characteristic</i>
Microbiological sensor	Local cells concentration
Bacterial culture	Biological activity
Benzene acid	UV-radiation absorption
Hydrogene peroxide	UV-radiation absorption

<i>Test-objects</i>	<i>Measured characteristic</i>
Water	pH, O <sub>2</sub> concentration
Polymer materials	Optical density
Plant seed	Plant raise rate, weight
Quartz	Weight

The most significant statistical data were obtained under the investigation, produced with the use of the microbiological sensor, which is the alive suspension of movable cells, situated in the dish and tracked by laser system [7]. The laboratory installation scheme is shown on the fig.3. The cells are able to swim and under the initial state they do the stochastic movements like the Brownian ones.



**Fig. 3. The scheme of the installation designed for the remote action investigation, using the microbiological sensor.** 1 — laser, 2 — initial laser beam, 3 — sensor, 4 — the remote action direction, 5 — the scattered beam, 6 — the scattered beam detector [7].

The initial laser beam scatters on the cells and the scattered beam intensity is the measure of the local cells concentration. The planet radiation concentrators (David sign, ring, pyramids) were situated above the sensor and the remote action was directed due to the pointer 4. The sensor shows its reaction by the collective motion, directed up or down and registered by the detector 6 via the scattered beam intensity measurement. In the first case (up directed motion) the local cells concentration is increased and the measured intensity is raised. In the second case (down directed motion) the local cells concentration is decreased and the correspondent change of the measured light intensity has place. The sensor reaction is valued by the Student coefficient  $k$ , calculated by the following expression:

$$k = \frac{I_1 - I_0}{\sqrt{y_1^2 + y_0^2}}, \quad (1)$$

where  $I$  is the measured light intensity,  $y$  is the standard error of  $I$ , subscript indexes “0” and “1” refer to the initial state and remote action, correspondently. The  $k$  value is the measure of the sensor reaction and the positive and negative signs of  $k$  refer to the up and down collective cells movement, correspondently.

It was shown that the sensor reaction on the concentrated planet radiation action is quasi-periodical and consists with the two phases: activation and suppression, when collective cells movement is directed up and down, correspondently, and  $k$  takes plus and minus signs. The reaction period changes fluently within the 5-8 days range and thus we perceive this process as quasi-periodical. The similar test-object reaction was observed by another researchers under the investigation of the UV- radiation absorption spectrum for the benzene acid, which is the biological matter component.

The mentioned biological test-objects reaction can be explained by the following way. The planet radiation spectra includes the two ranges, which produce the activation and depression action on the biological objects. Some separate lots on the ground have the permanent exceeding of the certain spectral range intensity and thus these lots are known as ritual or geopathogen zones. At the same time on the whole planet surface namely the quasi-periodical exceeding of the certain frequencies has

place. Such a phenomenon, known as beats, has place under the two near wave flows superposition and was studied for the well-known flows (acoustic and electromagnetic). It is rather obviously that the beats effect also has place for the planet radiation and the resulted spectral oscillation causes the observed test-objects reaction.

It is clear now that our planet produces the two phases stimulation of biological processes. Under the activation phase it is produced the direct bioinformation replenishment of biological processes in order to decrease the entropy. Whereas under the suppression phase it is produced the action like the small poison dose in order to activate the immune system. The modern experimental data, presented in the table 2, show the possibility for the biological process control with the use of the concentrated planet radiation. Some stones produce the planet radiation concentration in the lifeful spectral range and that is why they are perceived as “precious” and used for the curing of patients. The detailed study of the precious stones therapy was produced by Pagot [2].

A special conclusive remark has to be done in respect of the table 2. In particular, the weight decrease of seed and quartz is considered in Narimanov work as the effect of the moisture content reduction [11]. We suppose that this effect refers to the magnetic-like phenomenon, which is considered in the 2.4 part of this article.

### *2.2. The biogeneous nonelectromagnetic radiation*

The experimental branch, designed for the investigations of the remote biogeneous communications, was founded by Backster [1]. Till now the existence of the biogeneous nonelectromagnetic radiation was shown by many experiments, carried out with the use of different biological test-objects. In particular the remote mental communication of man with other alive nature representatives was shown with the use of the test-objects, listed in the table 3. The detailed list of authors is presented in the survey article [8]. Frankly speaking, namely the empirics, witches and wizards took part in these investigations.

**Table 3. The list of the test-objects, used for the remote mental action demonstration.**

<i>Test-object</i>	<i>Measured characteristic</i>
Microbiological sensor	Local cells concentration
Plant	Electric signal generation
Fish	Electric signal generation
Animal	Electric signal generation
Animal	Muscle force
Animal	Reaction on food
Animal	Stability against radiation

The most significant statistical investigations were carried out with the use of the microbiological sensor, presented on the fig.3 [7]. Some hundred volunteer tried to show their biogeneous activity and this case not the concentrator but the human hand was the source of the remote action. All the participants were divided in the two divisions: amateur (ordinary people) and professional (empirics, witches, wizards). It occurred that the sensor produced another divisions: positive and negative, due to the plus or minus  $k$  sign. The ordinary people were concentrated in the range  $-1 < k < +1$  with the mean value  $k=0$ . Whereas the professionals formed the two separate distributions in the  $0 < k < 5$  and  $-5 < k < 0$  ranges with the two mean values,  $k=2,5$  and  $k=-2,5$ . Some empirics showed the results in the amateur range and thus their curing abilities are based only on the psychotherapy action without significant biogeneous influence.

What refers to the professional division, one should not perceive a positive wizard as a useful and a negative one as a harmful, because the biogeneous curing must be used according to the disease essence. If a disease is connected with the patient organism weakness, the positive empiric has to be engaged for curing procedure. At the same time in the case of cancer, the helpful biogeneous action can be done only by the negative wizard, who is able to suppress an undesirable biological process. The last three experiments, shown in table 3, were carried out under the following conditions: the wizard was situated at the great distance from the test-animal (from 450 till 2800 km) and looked on the

animal photograph. It is obvious that the test-animal image, transmitted to the wizard brain by the visual channel, is used for the biogeneus radiation modulation in order to provide the resonance absorption of the mentioned radiation by this animal [15, 16].

Besides the test-objects, the volunteers were used as the targets for the remote wizard action and the encephalograph was used for this influence registration [17]. Thus we have to point out that the witchery is nothing but the proved experimental observation. The perspective of possible biogeneus weapon development is discussed in the book, published by Maharishi university [18].

It is clear now that a human person can survive under the following condition: the presence of the self-made defence from the remote harmful biogeneus action. If such action produces the human health damage, the medical staff used to say: the disease arised due to the nervous reason. Namely the prayer is a tool for the mentioned defense provision. The additional defence is provided by a set of local concentrators (icon, talisman, necklace, etc.) which produce the scattered planet radiation flows, designed for the bioinformation processes stabilization in the human organism.

### *2.3. The hypothesis on the physical essence of the nonelectromagnetic radiation*

It was proposed a set of complex models (torsion, bivacuum, psi) in order to explain the “non-traditional” phenomena, which are mere the nonelectromagnetic ones. At the same time rather simple approach to this problem was put forward by Adamenko: all the nonelectromagnetic phenomena can be explained taking into account the known conception about the existence of hadron fundamental interaction [9, 13, 19]. In particular, the nonelectromagnetic radiation is arised in the atom nucleus volume due to vibrations along the hadron bond proton-neutron and thus it can be called the hadron radiation. Such a designation points out the origination of this radiation and separates it from the known kind of nuclear radiations (alpha, beta, gamma). One should note that the hadron generation process has the difference compared with the origination of the known nuclear radiations, which are generated due to the structural changes in the nucleus volume. At the same time the hadron radiation is generated by the nondestructive vibrations of nucleons. The hadron radiation generation model was proposed on the base of the modern approach, which treats the atom nucleus like the polymer molecule [20]. It is known that the mentioned molecule includes the atoms, connected by the short-range covalent forces. The similar situation has place in the nucleus volume, where the hadron particles proton and neutron are connected by the short-range hadron forces. The short-range property of the covalent bond does not prevent the connected atoms to produce the vibrations along this bond and the so-called infrared radiation is generated due to these vibrations. The infrared radiation has the electromagnetic essence because the covalent bond refers to the electromagnetic fundamental interaction. We can suppose by analogy that the short-range of the hadron bond does not prevent the connected nucleons to produce the vibrations and the generated radiation has the correspondent essence, exactly to say, the hadron one. The hadron oscillator frequency was calculated on the base of the usual vibration theory and occurred to be  $10^{22}$ Hz by the order of value [9].

Any body is a source of the disordered hadron radiation whereas in some objects the hadron oscillators synchronization takes place and it is the reason for the formation of the intensive hadron radiation flow. It was shown on the vibration theory base that the total energy of the  $n$  synchronized oscillators is  $n^2E$  ( $E$  is the single oscillator energy), which exceeds by  $n$  times the total energy of the  $n$  independent oscillators [9]. This result does not contradict to the energy concervation law because the synchronized oscillators consume more energy from the source compared with the independent oscillators. The ensemble of oscillators was considered on the base of the thermodynamic model and it was shown that the synchronization can arise by the two reasons: the high temperature (Earth center, Sun) and the chemical potential (biological objects). Thus it was obtained the theoretical grounds of the existence of the hadron radiation flows, generated in the great cosmic bodies as well as in the biological objects.

The reception of hadron radiation was explained on the base of the two known phenomena: nuclear magnetic resonance and Messbauer effect [8]. These phenomena show the interaction between the atom nucleus structure and its valency electrons. We suppose that the similar interaction has place under the hadron radiation absorption and thus we put forward the following assumption: the hadron-

electric conversion has place in the nucleus, i. e. the hadron quantum absorption and the electromagnetic quantum origination. The last quantum produces its action on the valence electrons, which are responsible of the biological processes realization.

On the base of the proposed theory we are able to consider the alternative vision effect, shown by Behtereva [21]. The group of teenagers was prepared by the special psychoterapy method, which provides the ability to obtain the visual information in the darkness or with covered eyes. This effect was shown by the computer experiment: the prepared teenagers recognized the patterns on the display under the condition when the light vision was impossible. It is obvious that namely the hadron radiation, scattered from the pattern, was registered by the prepared person brain. The most probable version refers to the planet origination of the mentioned radiation. At the same time an other version also is worth of our attention: the prepared person generates the own biogeneous hadron radiation in order to provide the alternative vision.

#### 2.4. The hundred years paradox elimination

The radioactive decay was discovered in 1896 and perceived as a spontaneous process despite to the known conception about the reason-consequence conception within the natural processes. Thus the spontaneous decay conception is nothing but the fundamental paradox of the nuclear physics. In the XX century ninties a set of experimental observations proved the doubtful sense of the spontaneous conception [4]. The obtained data were generalized by Adamenko and the conclusion was made in such a form: the radioactive decay takes place under the stimulation action of the cosmophysical hadron radiation [9]. Some nuclides have the property for the resonance absorption of the hadron radiation and the structural changes take place under such external action. If the nucleus is destructed under the action of the high energetic electromagnetic radiation, the decay, it is called the “nuclear photoeffect”. But when the hadron radiation is the external destructive reason, the nucleus decay is treated as “spontaneous”. The development of the resonance hadron radiation absorption model provided the obtaining of the expression for the half-life period  $T$  [22]:

$$T = \frac{0,69}{ac}, \tag{2}$$

where  $a$  is the cross section of resonance hadron radiation absorption by certain nuclide,  $c$  is the density of the total hadron quantum flow (planet, solar, cosmic background). We can explain the covered essence of the known classification of nuclides by the use of the expression (2) as it is shown in the table 4.

**Table 4. The connection of the usual nuclide characteristic and the value of the cross section of the resonance hadron radiation absorption  $a$  [22].**

<i>Nuclide characteristic</i>	<i>Stable</i>	<i>Radioactive</i>	
		<i>long-life</i>	<i>short-life</i>
Value of $a$	near zero	Low	High

If the  $a$  value is near zero, the  $T$  value tends to infinity and we perceive such a nuclide as stable. At the same time, if the  $a$  takes any significant value, the nuclide can be destroyed due to the hadron quantum absorption and thus we treat it as radioactive. The hadron theory provides us the way for the remote operation of the radioactive decay of waste as well as of the nuclear reactor fuel.

#### 2.5. The magnetic-like biogeneous phenomena

Some wizards have the unique ability to produce the remote movement of objects by the mental effort (so-called telekinesis). This phenomenon can be explained on the base of the simple school experiment. If we take an usual magnet and produce the remote action on an iron nail, we can observe the real telekinesis: a nail moves up. An usual magnet has the telekinesis property but nobody perceive this phenomenon as a miracle; the ordinary magnetism and nothing else. The man hand is the more complex object compared with the ordinary magnet and we have to put forward a conception about the existence of another kind of magnetism beyond the fundamental electromagnetic interaction.

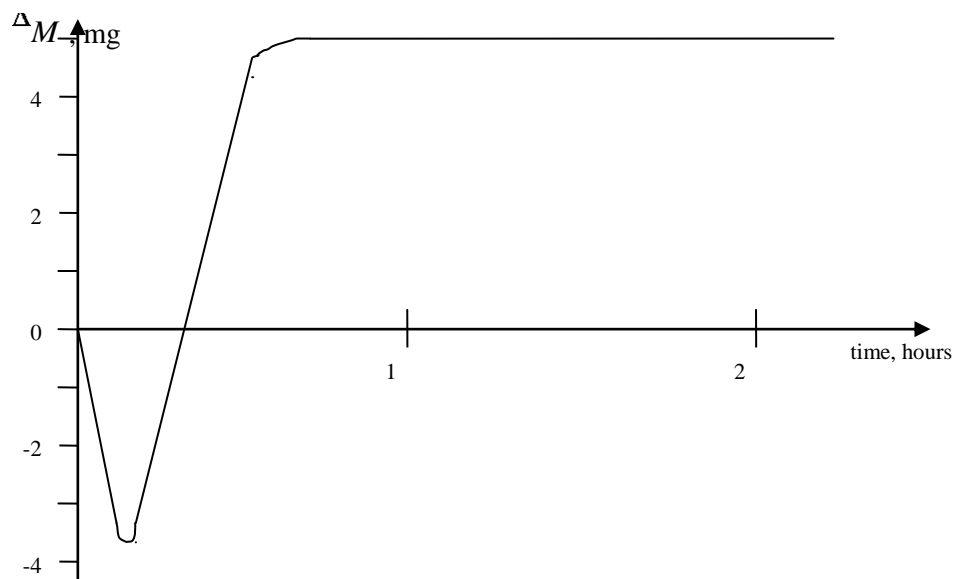
When we pronounce the noun “magnet”, we omit the adjective “electronic”, because it is assumed the absence of any other kind of magnetism. But the atom also contains the hadron (i. e. nuclear) particles, proton and neutron, and their total mass is the 99,9% of the atom mass. Thus we have to put forward the assumption about the hadron magnetism, existing together with the electron magnetism, perceived as an usual phenomenon.

The telekinesis effect was confirmed by the experiment, carried out in Russia and considered in the survey article [8]. The wizards produced the remote mental action on the sample, suspended by the spring in the vacuum box and tracked by the laser system, which registered the displacement of the sample under the mentioned action.

Besides the telekinesis there is the more complex biogeneous magnet-like phenomena, known as levitation and consists in the wizard body lifting over the ground under his own mental effort. This phenomena can be shown only by the most skilled wizards, trained due to special programme, including the intensive meditation [18]. It is rather probable that the birds have the levitation art because they can fly over a sea using a small energy resource, obtained by the food.

The levitation phenomena can be explained by the following assumption: the Earth is a hadron sphere-shaped magnet ; the one pole of this magnet is situated in the planet center and another is spread on its surface. Under the mental wizard effort the hadron magnet is formed in his body and the polarity of the human hadron magnet is opposite to the planet one. The mutual repulsion force is arised between the two hadron magnets; this force compensates the gravity force and provides the wizard body lifting over the ground.

The levitation effect existence was illustrated by the following experiment, proposed as the weighting of the soul [23]. It was the soul of the laboratory animal (mouse) , placed under the air-tight cap on the counter balance. It was a cruel test, the oxygen resource under the cap was limited and the lethal result was inevitable. The change of the mouse weight is shown on the fig.4.



**Fig.4.**  $\Delta M$  — the change of the weight of the laboratory animal, situated under the air-tight cap on the counter balance.

It can be seen from the fig.4, that the animal death is accompanied by the microlevitation, i. e. the small decrease of the animal weight. The analogy with levitating wizard is provided by the following way: the covered resources are mobilized in the animal organism under the death threat like they are mobilized in the wizard organism under his own mental effort. The hadron magnetization of the certain biological object is the result of this mobilization and the arised biogeneous hadron magnetic field has the opposite direction compared with the similar planet field. The mutual repulsion of the two hadron fields yields the small compensation of the animal weight, as it is shown on the fig.4.



The oxygen resource was exhausted and the lethal result took place. The animal weight returned to the initial state and then increased by the 5 mg. Thus we have to make the following assumption: the alive organism has the hadron magnetic field, which provided the weight compensation by the 5 mg, measured after the animal death. The weight of the dead body is provided by the gravitation force whereas the alive body weight is reduced due to the hadron magnetic field repulsion from the similar planet field. We assume that the life is the state, which is accompanied by the hadron magnetization with the opposite polarity to the planet hadron magnet field.

The hand-made object memory is based on the magnetism, which exists within the electromagnetic interaction. The biological memory also has the magnetic essence and we assume that the mentioned memory has namely the hadron magnetic essence. The water memory also can be treated on the base of the hadron magnetism assumption.

The hadron magnetization approach provides us to explain the biological transmutation of chemical elements, discovered by Komaki and discussed by Adamenko and Levchook [6, 8]. It was carried out the precision investigation of the cell cultures chemical contents before and after the cells division. The observed change of the certain chemical elements concentration provided the author to make the following conclusion: the cold nuclear reactions have place in the active biological matter, for example:  $C^{12} + S^{28} = Ca^{40}$ . It occurred that the biological object produces the certain chemical elements, which are necessary for the biological processes provision.

The cold nuclear reaction has not an explanation within the electromagnetic fundamental interaction because of the absence of the electromagnetic reasons for the nuclei coulomb repulsion overcoming. The mentioned reaction explanation can be obtained taking into account the hadron magnetic field which is able to overcome the coulomb barrier.

### **3. The new approach to the fundamental interactions structure**

The variety of unperceived "nontraditional" phenomena refers to the different fields of science: geophysics, nuclear physics, biology. It is obvious that there is some general obstacle which hinders the scientific community from the mentioned phenomena adequate perception. Taking into account the wide range of "nontraditional" phenomena we have come to conclusion that it is time to reconsider the fundamental backgrounds of modern physics in order to eliminate the shortcoming which prevents the academic science to perceive the real effects.

The known conception assumes the existence of four fundamental interactions: electromagnetic, gravitational, hadron (strong) and lepton (weak). This classifying has neither symmetry nor logical structure: while electromagnetic interaction extends to a lot of various phenomena, each of the other ones includes only few applications.

The electromagnetic interaction contains the different types of bond on the atom and molecular levels: ionic, valence, metallic and van-der-vaals. This interaction also provides the basis for various magnetic phenomena. And lastly the electromagnetic interaction has the wide-spectrum radiation. At the same time all other fundamental interactions seem to be rather restricted. For example, the gravitational interaction contains only the gravitational law which is analogous to Coulomb law; neither local bonds nor magnetic-like phenomena are ascribed to gravitational interaction. It is known that namely the two heavy nuclear particles are responsible for gravitation and thus we have come to conclusion about amalgamation of nuclear (hadron, lepton) and gravitation interactions into one fundamental gravimagnetic interaction. After such generalization we obtain the two symmetrical fundamental interactions, electromagnetic and gravimagnetic, which both include a variety of particular realizations. The proposed generalized conception discovers the new niches for nonelectromagnetic radiation as well as for the unstudied quasi-magnetic effects (telekinesis, levitation), which can be included in united gravimagnetic interaction. At last we can discover the real nature of radioactivity which is really the gravimagnetic analogy of electromagnetic nuclear photoeffect. Thus the both generalized fundamental interactions have analogous properties which are listed in the table 5 [8].

**Table 5. The generalized structure of fundamental interactions.**

<i>Fundamental interactions</i>	
<b>Electromagnetic</b>	<b>Gravimagnetic</b>
Long-range interaction	
Coulomb force	Gravitational force
Strong short-range interaction	
Valence bond	Hadron bond
Weak interaction	
Van-der-vaals bond	Lepton bond
Waves generation	
Electromagnetic waves	Hadron waves
Destruction of particles	
Nuclear photoeffect	Radioactivity
Magnetism	
Ferromagnetism	Telekinesis, levitation

Long - range interaction. This form is presented by coulomb force in electromagnetic interaction and by gravitational force in gravimagnetic one. The analogy is rather obvious and expressed by well-known laws.

Strong short - range interaction. This form is presented by valence bond between atoms in electromagnetic interaction and by hadron bond between nucleons in gravimagnetic one. Analogy was discussed in this paper under the comparison of molecular and nuclear structure.

Weak interaction. This form is presented by van-der-vaals bond between atoms or molecules in electromagnetic interaction and by lepton bond between elementary particles in gravimagnetic one. Analogy is provided by the proportion between strong and weak forces within certain interaction.

Waves generation. This phenomenon is presented by the known wide spectrum electromagnetic radiation and by the recently discovered hadron one. Analogy is provided by the vibrational model of generation and by a lot of remote effects.

Destruction of particles. This phenomenon is presented by the nuclear photoeffect, produced with the use of the high energy electromagnetic radiation, and by the so-called radioactivity which really is assumed as the nucleus destruction under the resonant absorption of hadron photons by certain nuclides, considered as radioactive ones. Analogy is nothing but the particle destruction due to external photon action, the electromagnetic and hadron as well .

Magnetism. This phenomenon is presented by ferromagnetism in electromagnetic interaction and by the unstudied effects (telekinesis, levitation) in gravimagnetic one. Analogy is provided by the possibility of the remote movement of objects in both interactions using certain magnetic force.

The proposed generalized structure gives the solution of the problem, connected with the so-called “nontraditional” phenomena, which really are the nonelectromagnetic ones. All the mentioned phenomena are joined to the fundamental physics and there is no necessity to put forward any speculative models (bi-vacuum, psi, etc).

It should be noted that the proposed fundamental interaction structure contradicts to the known electroweak interaction conception, which was marked by the Nobel prize. We suppose that the mentioned conception is wrong because it is not able to include the nonelectromagnetic effects into the modern physics fundamental classifying. The science history knows the refutation of the Nobel prize works and we propose to make the addition to this list.

#### 4. Conclusion

The planet radiation is used now in the following branches: agriculture (treatment of seed) and health service (curing of patients). The preliminary investigations proved the perspective of the planet technologies usage in the set of branches: food and oil industry, nuclear and alternative energetics.

It is known that any natural radiation can be reproduced by a hand-made device and one can predict the appearance of the new generator which will imitate the planet radiation like the searchlight

or laser imitate the sun light. Such generator will find its technological application but at the same time it can be used as a new weapon. Thus it is necessary to accelerate the planet technologies development in order to provide the forestalling of the peaceful planet radiation application in comparison with its military usage.

We suppose that our publication will attract the scientific community attention to the perspective problem, connected with the planet radiation application.

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### **Развитие расширенной структуры фундаментальных взаимодействий**

Экспериментальные наблюдения, проведенные независимыми авторами, доказывают существование неэлектромагнитных феноменов, которые не могут быть поняты на основе известной структуры фундаментальных взаимодействий. Необходимо подчеркнуть, что недостатком известной структуры является отсутствие симметрии. Расширенная структура фундаментальных взаимодействий обладает симметричной формой и в ней находят свое место наблюдаемые неэлектромагнитные феномены. Нами получены фундаментальные основания для формирования интегральной науки и новых технологий.

*Ключевые слова:* неэлектромагнитные биологические феномены, биологический объект, космофизическое неэлектромагнитное излучение.