ДИСКУССИИ

УДК 530.1, 537, 539, 577

Adamenko A. A.

THE ACTUAL PROBLEMS OF MODERN PHYSICS

International Socionics Institute,
P/b 23, Kiev-206, 02206, Ukraine, e-mail: socion@ibc.com.ua

The modern physics problems are connected with development of the integrated science of nature, including the ecologically pure technologies, based on the usage of the planet nonelectromagnetic radiation. The actual phenomena occure to be the hadron ones and thus namely the nuclear physics plays the main role under the technological progress.

Key words: nuclear physics, geophysics, biophysics.

1. Introduction

The first actual problem is rather mental: it is necessary to get rid of the speculative notions (physical vacuum, torsion radiation etc.) and to perceive the obvious approach, based on the known conception: the nucleus mass possesses the 99,9% of the whole atom mass. Thus our world is the nuclear-physical one by the 99,9% and namely the hadron phenomena play the essential role in the natural processes [1-3]. The experimental observations, considered in the survey article [1], provided us to make the following conclusion: the cosmophysical nonelectromagnetic radiation has the speed, which exceeds the light speed by 10 times or more. This fact is not a reason to refuse of the known postulate about the impossibility of the light speed exceeding and to propose the speculative idea about the "superlight" radiation existence within the electromagnetic interaction. The known postulate is valid within the mentioned interaction and if the radiation is nonelectromagnetic, exactly to say, the hadron one, it can have any speed independently of the light speed.

Besides the hadron radiation the hadron magnetism is also a problem of the day. This substance plays the certain role in biophysical process; in particular, the biological memory is based on the hadron magnetism as well as the so-called "non-traditional" phenomena: telekinesis, levitation, biological transmutation of elements [1].

The mentioned hadron substances, radiation and magnetism, have to be studied in details like it was done in respect to the correspondent electromagnetic ones. The electron shell possibilities are exhausted: radio, television, laser technologies etc. Besides, the mineral sources give us their chemical energy only due to the electron transition from one orbit to another. It is time to study the natural hadron resources and thus to discover the new ways for science and technology.

2. The hadron bond formation

The essence of the problem, connected with hadron bond, is illustrated by the table 1 [4].

Table 1. Some physical characteristics of the most simplest nuclides

nuclide	bond energy, MeV	half-life period
${}_1D^2$	2,2	∞
${}_1T^3$	8,5	12 years
${}_2D^4$	28	∞

The nucleons number is increased from 2 till 4 and the bond energy, determined under the accelerated particles bombarding, is also increased. Meanwhile there is the critical nucleons number, equal to 3, when the nuclide resonantly absorbs the external hadron photon and thus the nucleus destruction has place, what was perceived till now as the "spontaneous decay" [3]. This phenomenon was considered in our work [3] on the base of the polymer model [4], which describes a nucleus like a polymer molecule, consisted of atoms, connected by the short-range covalent bond, whereas the nucleus includes the nucleons, connected by the short-range hadron bond. The binded nucleons produce

vibration along the hadron bond and it is time to describe more precisely the essence of this bond by analogy with the covalent one.

The hadron bond problem also can be illustrated by table 2 [5].

Table 2. The list of nuclides, consisted of alpha particles.

N is the alpha particles number within the nuclide structure. A is the mentioned nuclide abundance among the isotopes of this chemical element.

N	1	2	3	4	5	6	7	8	9	10	11
nuclide	${}_2He^4$	${}_4Be^8$	${}_6C^{12}$	${}_8O^{16}$	${}_{10}Ne^{20}$	${}_{12}Mg^{24}$	${}_{14}Si^{28}$	${}_{16}S^{32}$	${}_{18}Ar^{36}$	${}_{20}Ca^{40}$	${}_{22}Ti^{44}$
A, %	≈100	0	98	99	90	78	92	95	0.3	96	0

It is known that the helium nucleus serves as alpha particle, emitted by some radioactive nuclides. The two alpha particles cannot be binded and thus the theoretical nuclide ${}_4Be^8$ is absent in nature. At the same time the three and more alpha particles form the stable nuclides ${}_6C^{12}$, ${}_8O^{16}$ etc. Such nuclides as ${}_3Li^8$ and ${}_5Be^8$ are alpha-radioactive whereas the nuclides, consisted only by alpha particles, are stable and the most abundant among the isotopes of this chemical element. The only exclusion in this list is argon, which the most abundant isotope ${}_{18}Ar^{40}$ includes the 4 additional neutrons. The set of nuclides, consisted of the certain alpha particles number, is broken at N=11. The two critical values of N, 2 and 11, show some unknown property of hadron bond. We suppose that this bond is formed by the collectivization of external quarks like the covalent bond is formed by the collectivization of external electrons. This supposition is resulted from the polymer model and it can be used as a working hypothesis for the hadron bond theory development.

3. The hadron radiation properties

3.1. The spectrum origin and contents

This radiation is generated due to the vibration of hadron oscillator which is nothing but the two nucleons, connected by the hadron bond [3]. The analogous generation has place in molecule under the vibration of atoms, connected by covalent bond. It is known that namely the infrared radiation is generated by such a way. The covalent bond has the electromagnetic essence and thus the generated infrared radiation is the electromagnetic one. What refers to the vibrating nucleons, their bond is the hadron one and thus the generated radiation has the correspondent hadron essence. The both mentioned radiations are generated at the expense of thermal energy and we have to describe more precisely the process of this energy receipt by the nucleus. We suppose that this process can be described on the base of the polymer model of nucleus [4]. Under the thermal vibration of atom some quantity of energy is accumulated within the nucleus volume and realized by the nucleons vibration. It is obvious that we can introduce the notion about the inside nucleus temperature which is higher compared with the usual one due to the energy accumulation process.

The hadron oscillator frequency was calculated on the base of the usual vibration theory and occurred to be 10^{22} Hz (or approximately 10^{23} radian/sec) by the order of value [3]. The following step is to calculate the hadron radiation spectrum. According to the geophysical conception the high temperature planet core is consisted of such chemical elements as ferrum and cobalt. These elements nuclei consist of 58 nucleons which form the structure, similar to a polymer molecule. We suppose that the collective nucleons vibrations form the hadron radiation spectrum.

It is obvious that the observed planet structure, formed by hadron radiation and known as "Hartman network", is the projection of the surface structure of the high temperature planet core. The planet network includes the separate lots, known by their useful of harmful action on the human organism and called the "ritual" and "geopathogen" zones, correspondingly. Such a zone is mere a planet surface lot, where the hadron radiation spectrum is strongly distorted and thus the certain spectral range, useful of harmful, prevails on this lot. There are the two possible reasons for these zones origi-

nation. Firstly, the certain zone can be the projection of the correspondent lot of the planet core surface. Meanwhile, the other reason is also possible: the planet radiation passes along the certain global radius, the spectral distortion can occure in some direction and thus it is formed the separate planet zone with the changed spectral contents.

The technological concentrator really works as a spectral device in respect to the planet radiation [1, 2]. It is obvious that the concentrator action is connected not only with the hadron radiation but also with the planet hadron magnetism and we shall return to this topic in the part 4.

3.2. The separation of the hadron radiation flows

We have to consider more careful the general picture, discussed in the previous articles and presented on the fig.1 [1, 3].

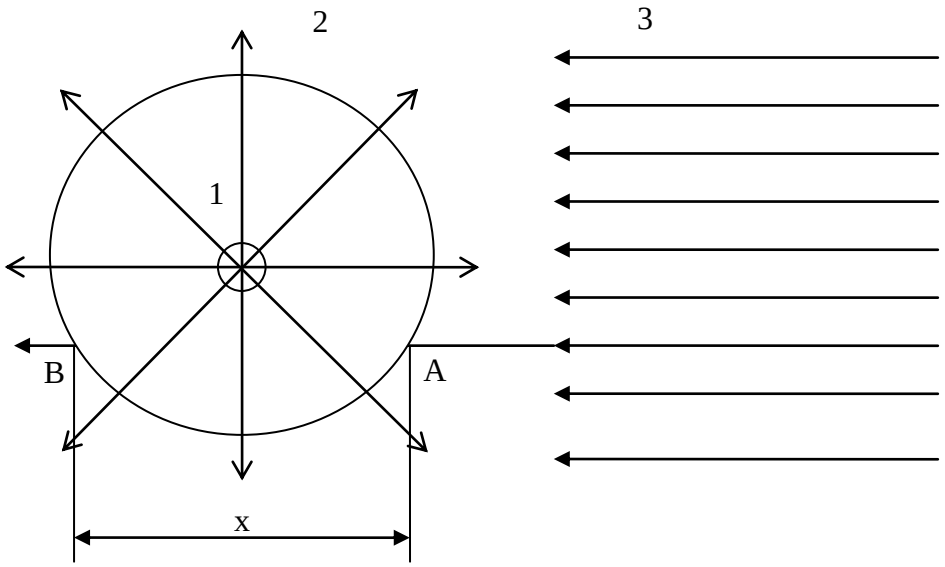

Fig. 1.

The scheme of the planet and Sun hadron radiation penetration in the Earth volume. 1-the high temperature planet core; 2,3 – the hadron radiation of the planet and solar origin, correspondingly. A, B are the points of the day and night measurements, correspondingly; X is the planet chord length.

The measured reaction R of the certain detector on the total hadron radiation flow is presented by the following expression:

$$R = S(c_1 + c_2 + c_3) \qquad (1)$$

where S is the detector sensitivity, c is the density of the hadron quanta flow, whereas the indexes 1, 2, 3 refer to the different flows: planet, solar and cosmos background, correspondingly.

The planet flow can be presented by the following expression:

$$c_1 = k\frac{m}{r^2}\exp(-\mu r) \qquad (2)$$

where k is the proportionality coefficient, m is the mass of the planet high temperature core, r is the distance from the mentioned core to the planet surface, μ is the damping factor. This expression is valid for the day and night measurements on the points A and B, correspondingly.

The expression for the solar flow has the analogous form:

$$c_2 = k\frac{M}{l^2}\exp(-\mu x) \qquad (3)$$

where M is the Sun mass, l is the Sun-Earth distance, x is the planet chord length , shown on the fig. 1 and introduced due to the solar flow attenuation during its penetration through the Earth volume. In particular, for the day point A x=0. One has to note that the M is the total Sun mass whereas the m in (2) is only the mass of the high temperature planet core.

By substituting (2) and (3) in (1) we obtain:

$$R = S\left(k\frac{m}{r^2}\exp(-\text{м}r) + k\frac{M}{l^2}\exp(-\text{м}x) + \text{c}_3 \right) \qquad (4)$$

Besides the known values (m, r, M, l) this expression includes the three unknown quantities (S, k, м, c_3), which can be supposed as the parameters of the experimental function R=R(x). The measurements on the day point A and on the three different night points B provide us the equations system for the unknown quantities evaluation.

3.3. The estimation of the usual radiation parameters

The known experimental observations provide us the approximate value of the hadron radiation speed: it exceeds the light speed by 10 times or more [1]. Such a value makes us to put the following question: is it possible to substitute this value in the well-known expression $E = mc^2$ (E is energy, m is mass, c is light speed)? On the base of the mentioned observation we can substitute in this expression the hadron radiation speed, equal to 10 c, and then the energy will increase by 100 times.

We suppose that this problem is related to the modern explanation of the so-called "beta-decay", presented in our previous article [3]. According to our conception the neutrino is nothing but the hadron energy quantum, which possesses the energy, produced under the reaction, which was erroneously considered as "beta-decay" till now.

The similar problem has arisen in connection with another well-known expression $E = h\text{н}$ (h is Planck constant, н is frequency). If we use the known electromagnetic h value and the above mentioned calculated н value, we obtain the hadron quantum energy 65,8 MeV. This value cannot be accepted because it is obvious that the hadron radiation has its own magnitude of Planck constant.

It is interesting to use the mentioned values of speed and frequency in order to calculate the hadron radiation wave length by the known expression $\text{л} = G/\text{н}$ (л is wave length, G is speed, н is frequency). By substituting the mentioned experimental value G=10 c and the calculated value $\text{н} = 10^{22}\,Hz$ we obtain rather reasonable magnitude $\text{л} = 10^{-11}\,cm$, which is within the atom scale: it is greater than the nucleus size and smaller than the atom one.

4. The hadron magnetism operation

The experimental evidences of the hadron magnetism existence were considered in our previous article [3]. Besides, we have to note the communication, referred to metal concentrator action on biological objects [6]. It was observed that the mentioned action was broken under the concentrator heating till 62,5 ^{o}C. It seems that the metal construction possibility to concentrate the planet radiation and thus to act on biological object is connected with hadron magnetism, whereas this temperature looks like the Curie point.

The hadron magnetism conception provides us to explain the known paradox, connected with the ancient pyramids. It was not clear how the ancient people produced the lift of the heavy stone blocks on the height about 100 metres. First of all we have to point out that these blocks had not the natural but the artificial origin, something like to modern concrete. These blocks were produced technologically and thus there was no problem, connected with their transport. And what refers to the lift, it was mere the levitation, i.e. the gravity force compensation by the hadron magnetic field, directed in opposite to the Earth one [3]. The ancient engineers were able to produce the hadron magnetization of matter and we have to recover this useful technological method.

5. Conclusion

The modern science situation is like to one, which had place at the beginning of the XX century. It was the introduction of quantum mechanics and the mentioned innovation was considered as a revolution in physics. Now we have introduced the improvement of the fundamental interactions struc-

ture [1] and this time it is not a revolution but the reconstruction of physics. The achieved level of knowledge provide us to recover the ancient technologies, including those ones, which were known till now in the form of Bible legends [2].

R e f e r e n c e s

1. *Adamenko A. A., Gorchev V. F., Levchook Yu. N.* The development of the improved structure of fundamental interactions. — Physics of consciousness and life. 2003, № 3, p. 20-30.
2. *Adamenko A. A., Kostiuk A. N.* The perspectives for the planet technologies development. — Physics of consciousness and life. 2004, № 4.
3. *Adamenko A. A.* The improved conception of nuclear physics. — Physics of consciousness and life. 2005, № 1.
4. *Frauenfelder H., Henly E.* Subatomic physics. Prentice-Hall. New Jersey. 1974.
5. The nuclear handbook. Edited by O. R. Frisch. — London. 1958.
6. *Pagot S.* Radiesthesie et emission de forme. — Paris. 1978.

Адаменко А. А.

Актуальные проблемы современной физики

Проблемы современной физики связаны с развитием интегрального природоведения, включая разработку экологически чистых технологий, основанных на использовании планетарного неэлектромагнитного излучения. Актуальные явления оказались адронными и поэтому именно ядерная физика играет основную роль в технологическом прогрессе.

Ключевые слова: ядерная физика, геофизика, биофизика.