

Rice. 6.

Rice. 7.

2. Chakras

Chakras are energy nodes with two vortex funnels. In fact, even some esoteric sources say that chakras

represent a purely conventional object. As it turns out, this is not the case. Although the chakras are represent an object belonging to the subtle worlds, but in our three-dimensional in the physical world they manifest themselves, and this manifestation can be recorded. Indeed, the chakras have two formations in the form of funnels, and in our world appear as a series of equipotential surfaces, the surface rotation of which has the shape of funnels (Fig. 8).

In the future, for simplicity, only internal equipotential surfaces.

Figures 9-13 show graphs of chakra measurements from the second to the sixth. The measurement technique described in [1] was used.

It is likely that early diagnosis can be made based on the shape of the chakra funnels. various diseases and assessment of the psychophysical state of a person. Diagnostics can be carried out according to the following parameters:

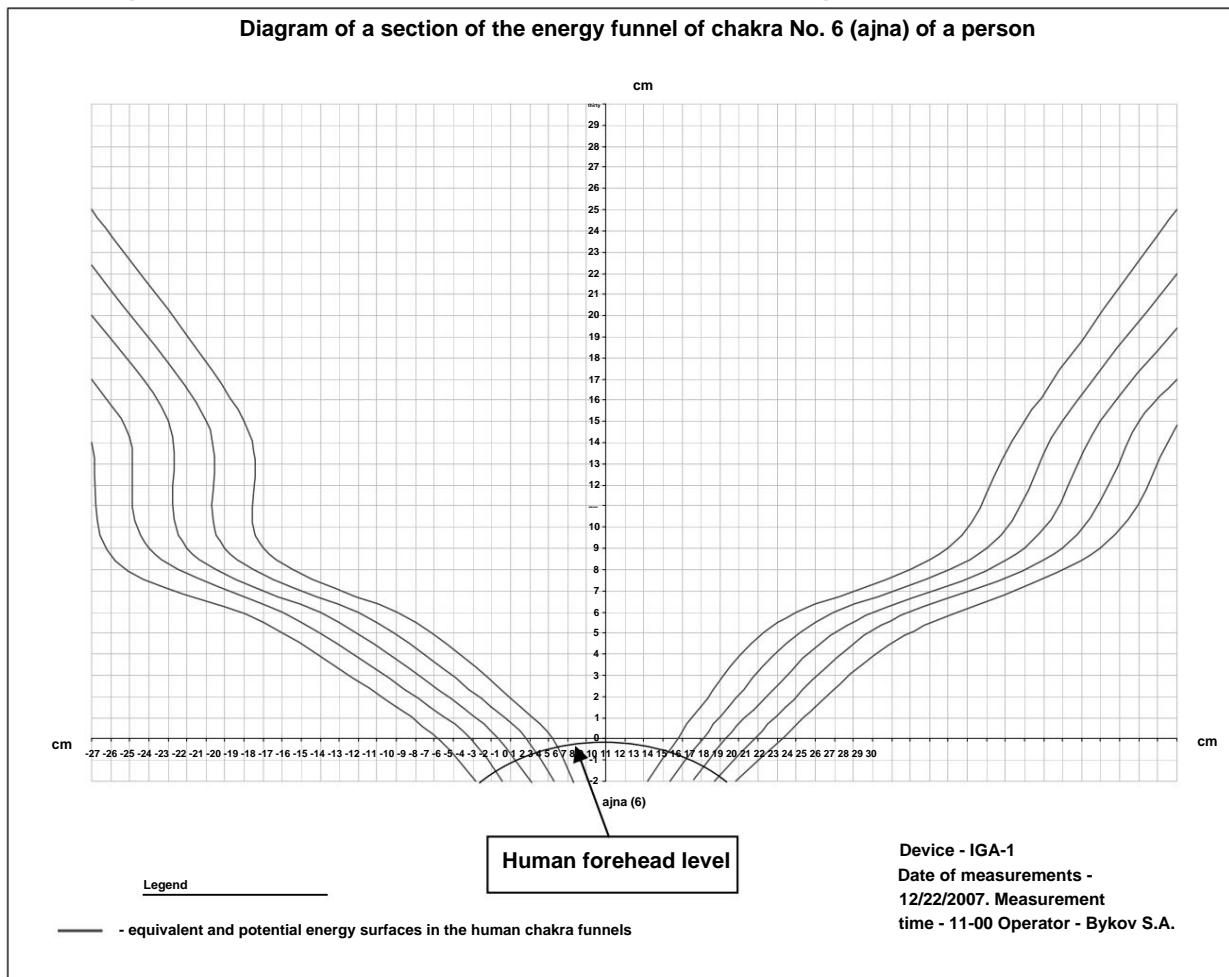
1. Funnel opening angle; 2. Distortion of the shape of the funnels; 3. Identity of the front and back funnels of the chakras.

In Fig. Figure 14 shows monitoring graphs for chakra No. 6 (ajna).

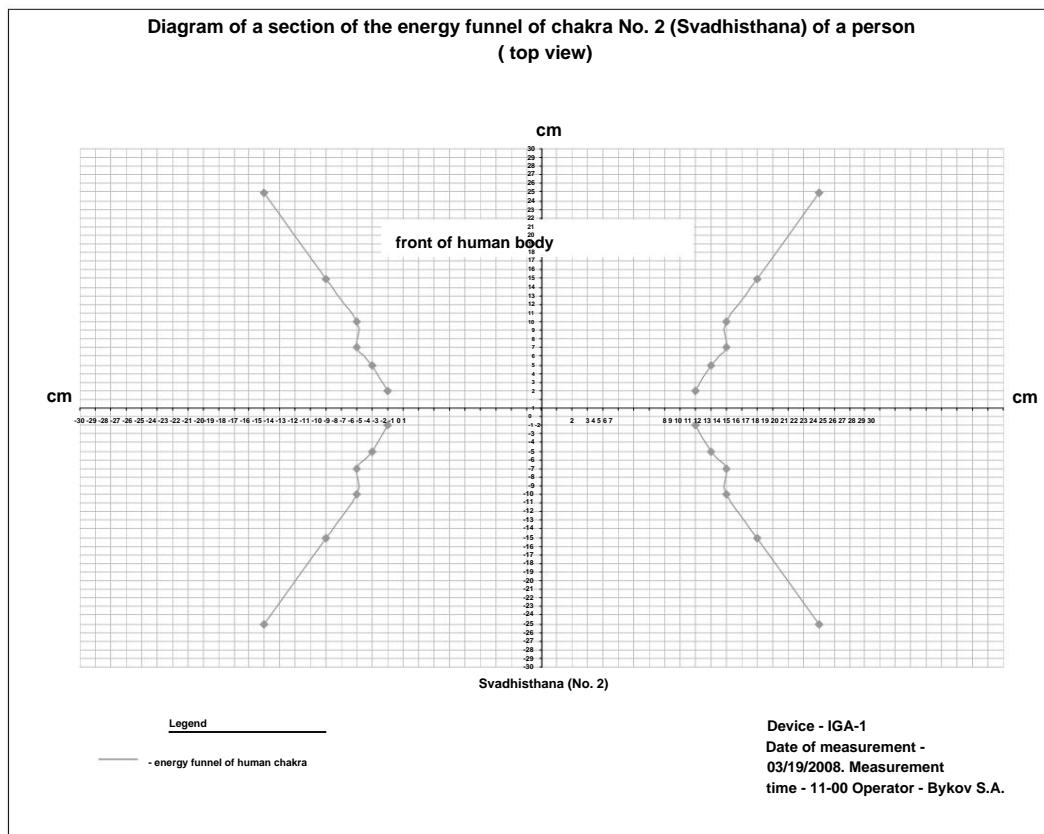
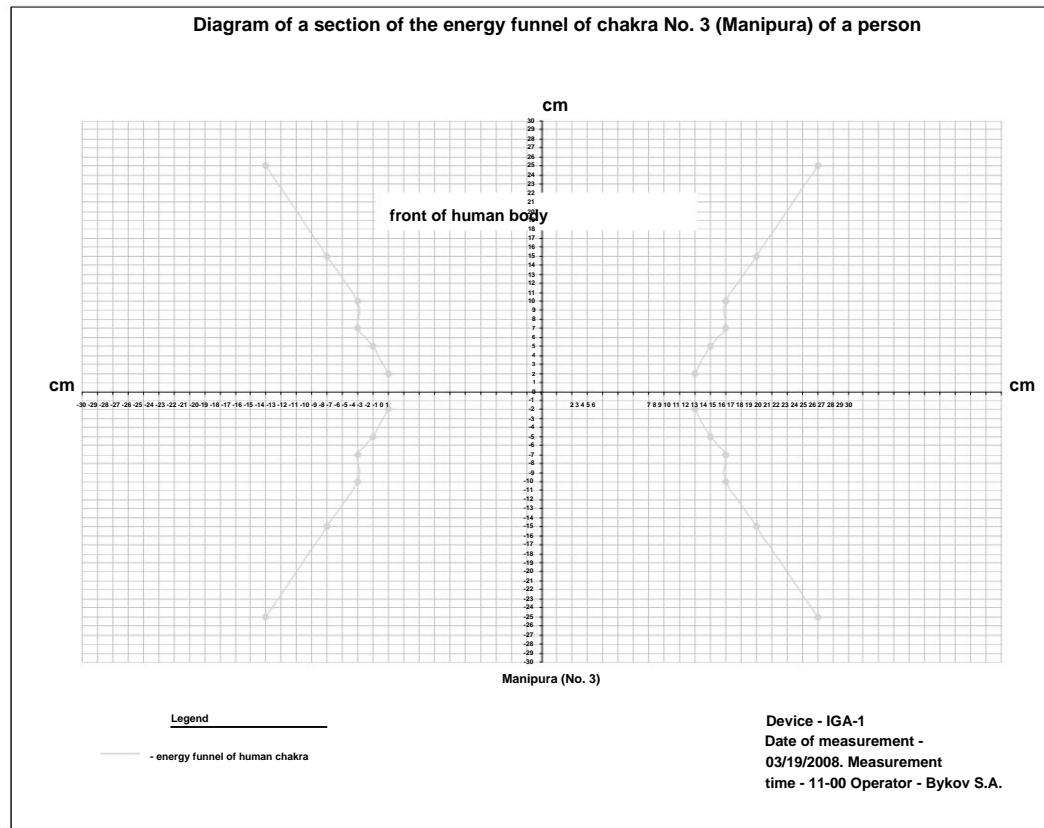
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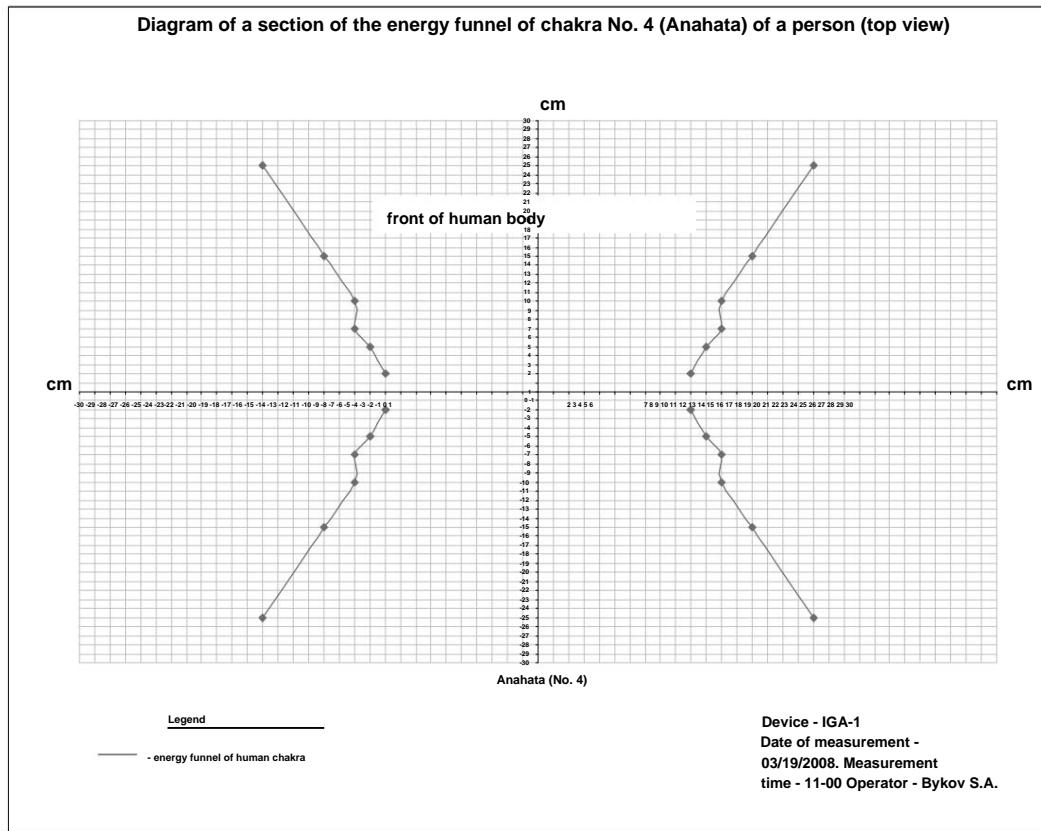
On March 19, 2008, the patient experienced severe headaches, pressure inside the skull, and short-term fogging of consciousness. The graph shows a strong distortion of the shape of the funnel from the back. By April 15, 2008, the patient felt better. The shapes of the front and rear funnels became close. The major changes in shape have disappeared. It should be noted that the subject was not taking medications. In Fig. Figure 15 shows graphs of chakra monitoring at the beginning and end of observations.

Chakra graphs for different subjects are shown in Fig. 16, 17.

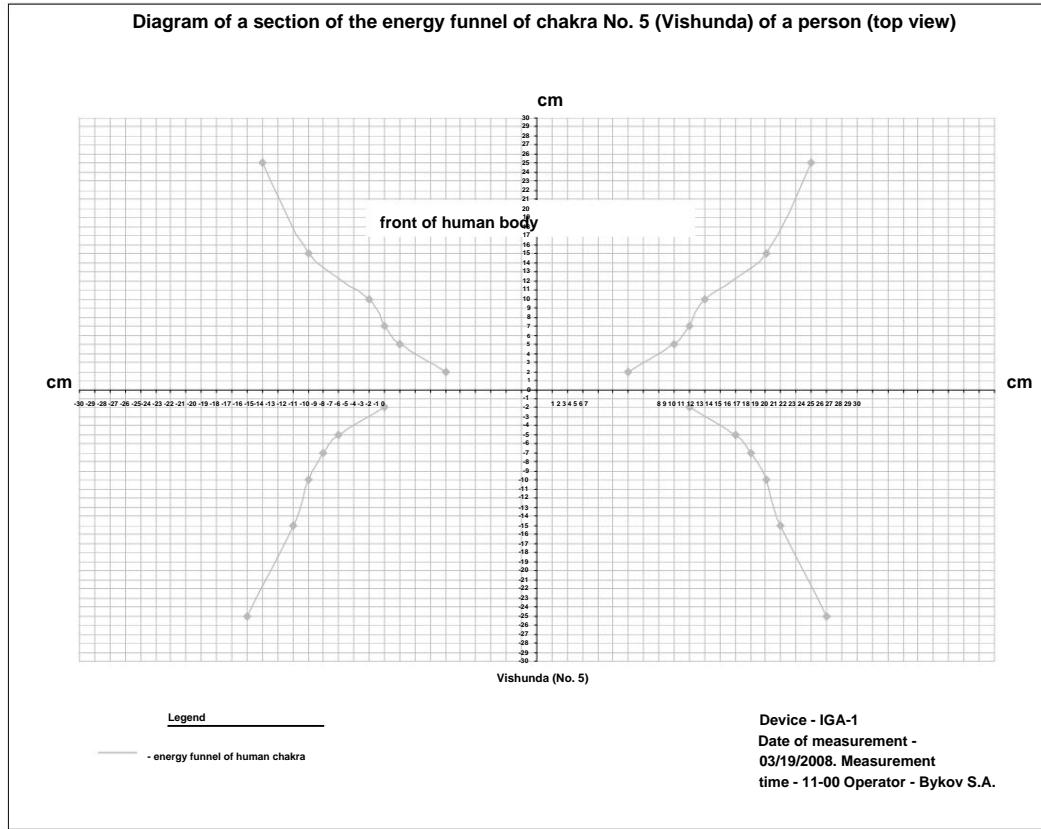


Rice. 8.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009**Rice. 9.****Rice. 10.**

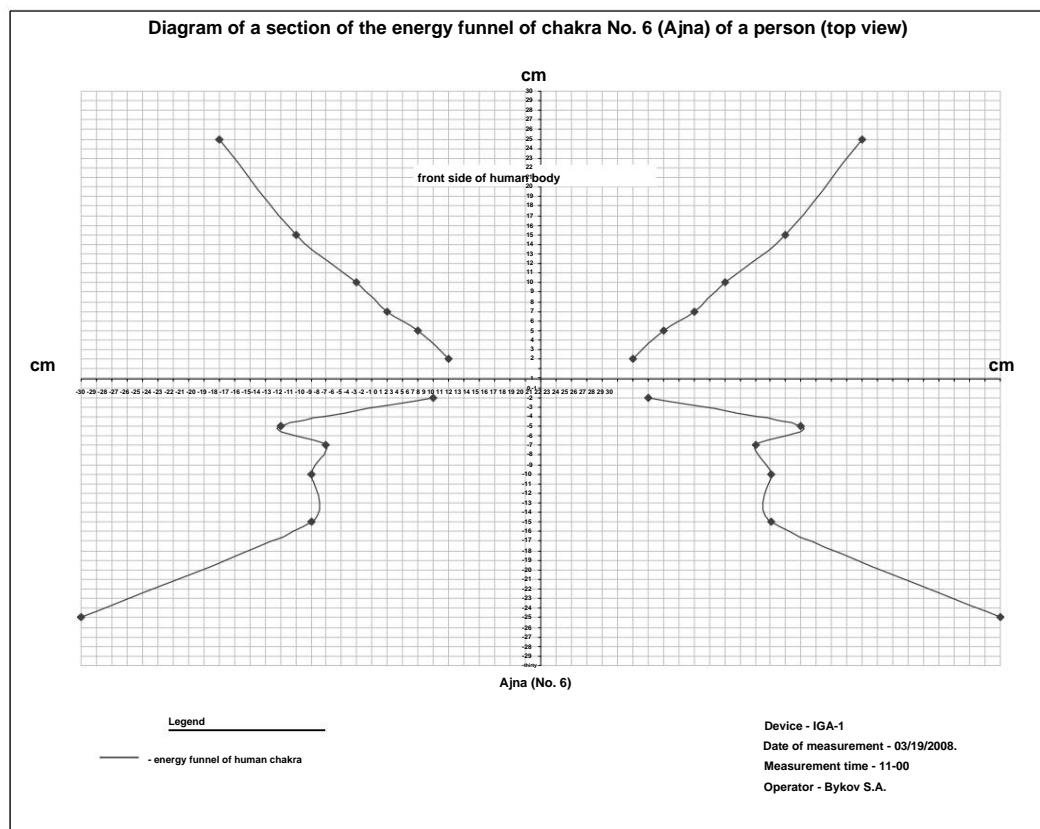
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Rice. eleven.

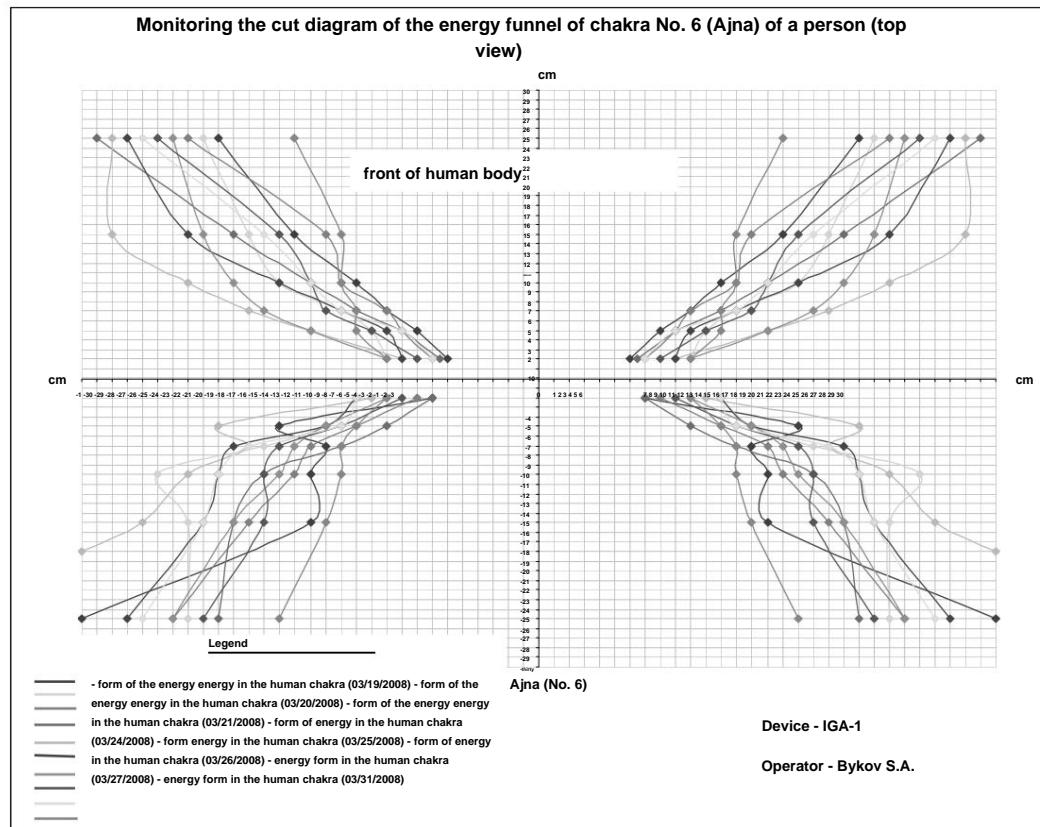


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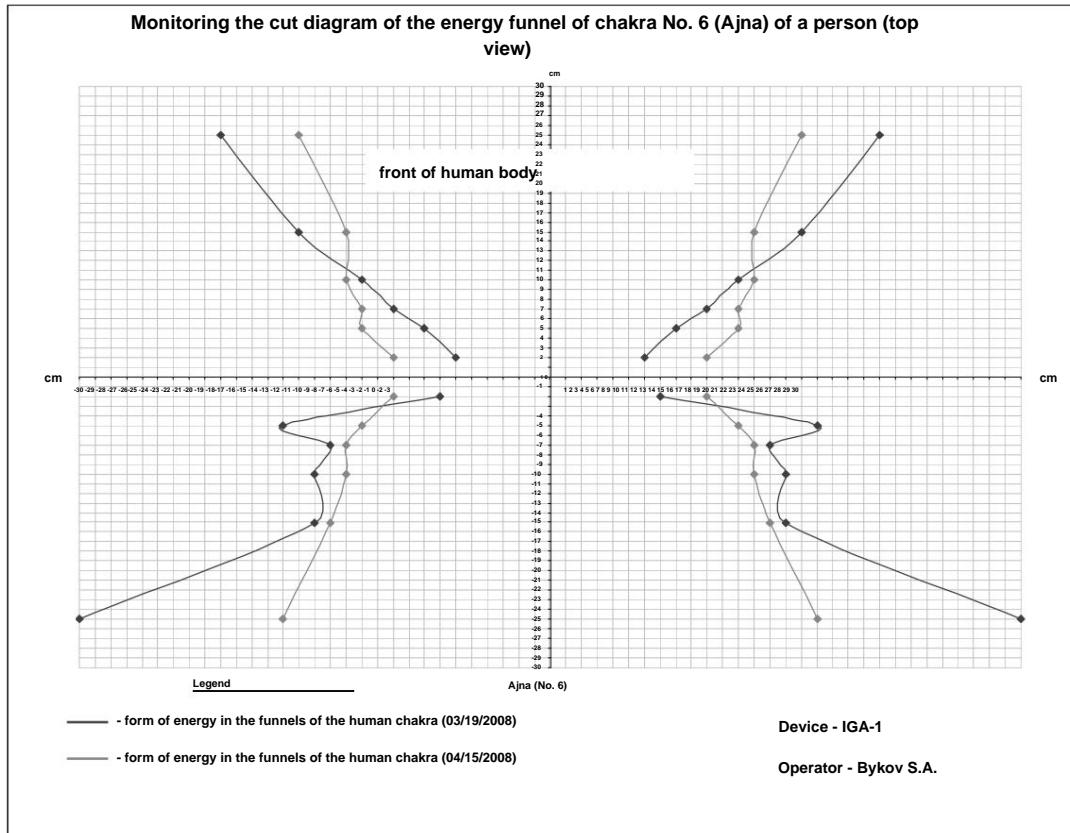
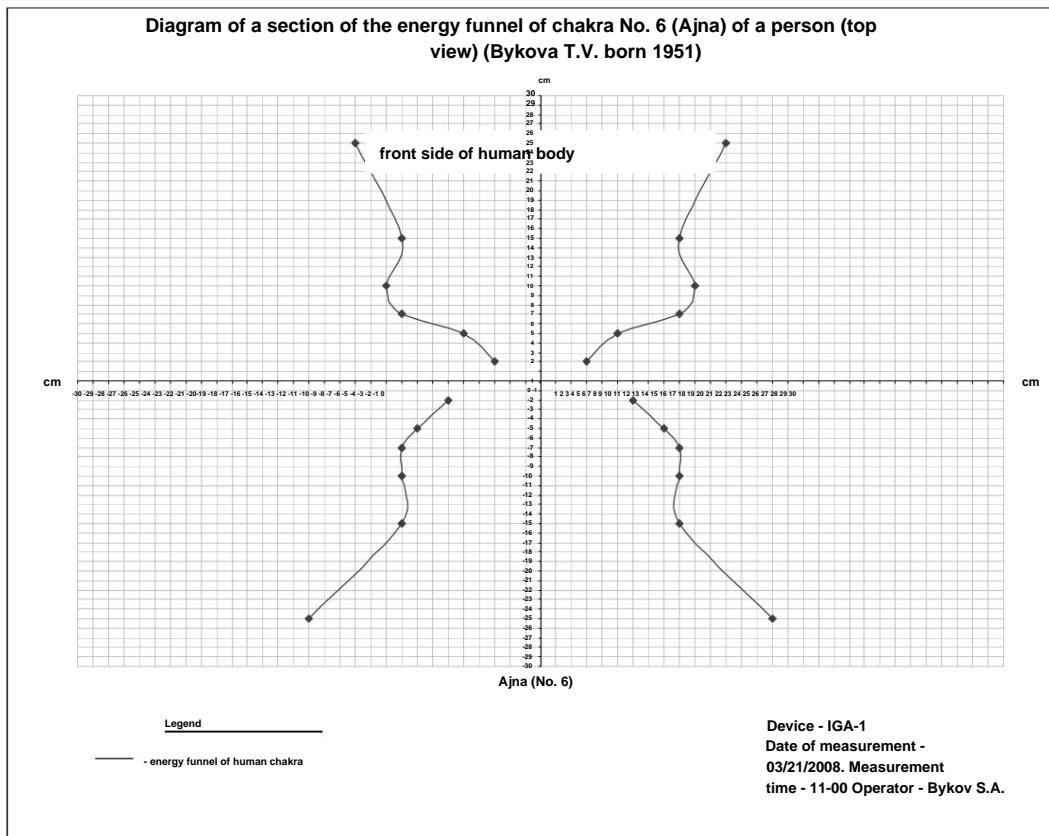
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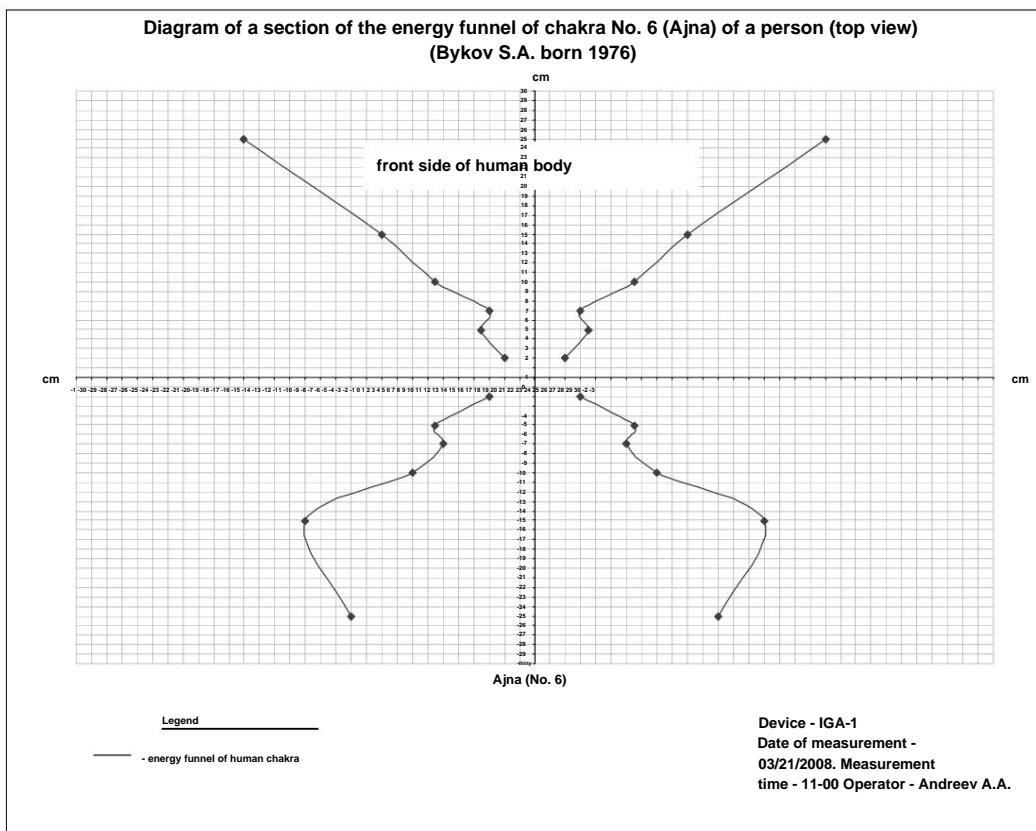


Rice. 13.



Rice. 14.

Torsion fields and information interactions – 2009**Rice. 15.****Rice. 16.**



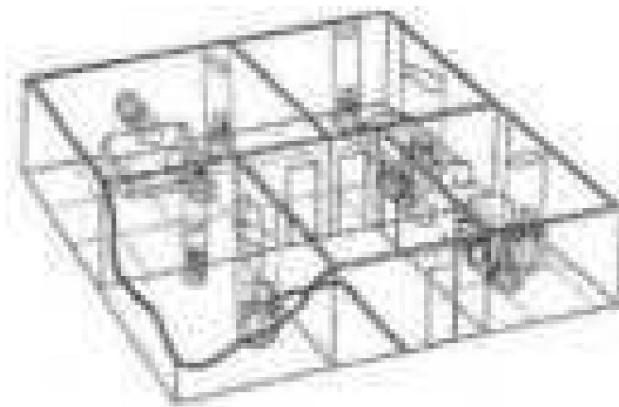
Rice. 17.

3. Phantoms

By phantoms we mean invisible, intangible objects, which, however, manifest themselves in the three-dimensional, physical world with certain physical consequences. In our case, these are equipotential surfaces accompanying invisible objects and repeating their shape.

Phantoms can have the shape of a cylinder, parallelepiped, or sphere. There are phantoms of very complex shapes, reminiscent of the roofs of hangar structures with holes of different shapes.

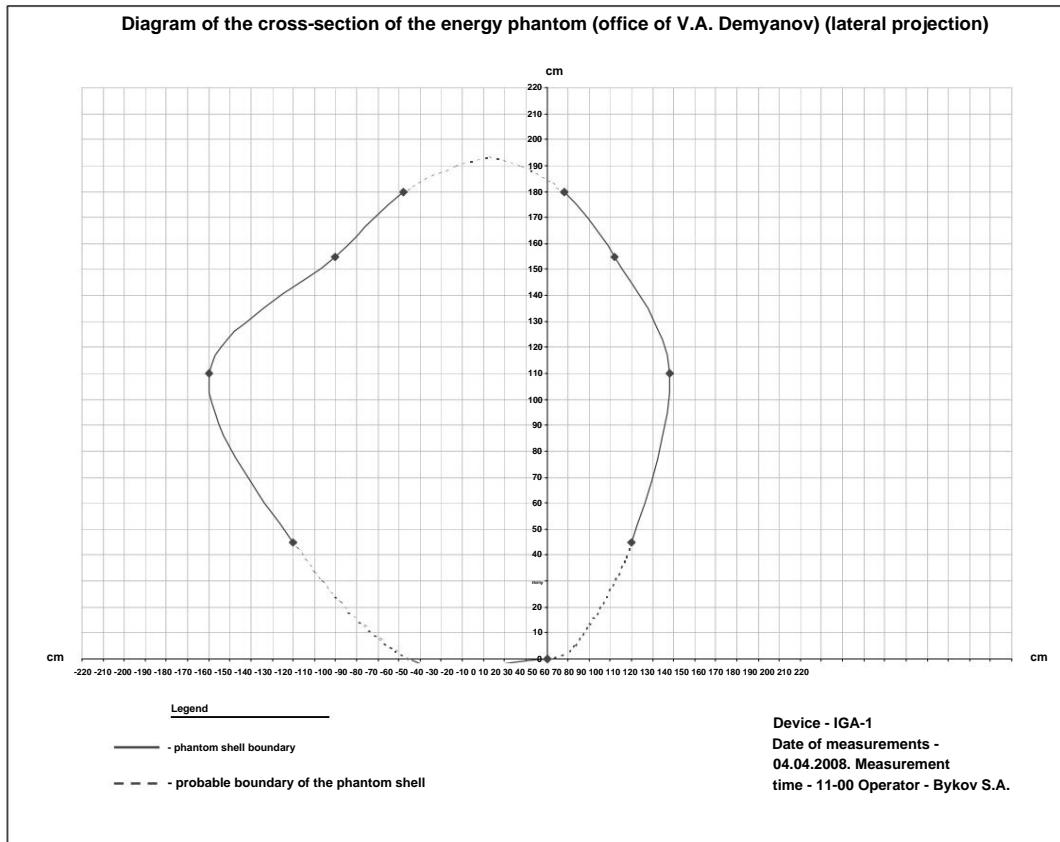
A phantom in the form of a cylinder, discovered using IGA-1, is mentioned by Yu.P. Kravchenko. in [2] (Fig. 18).

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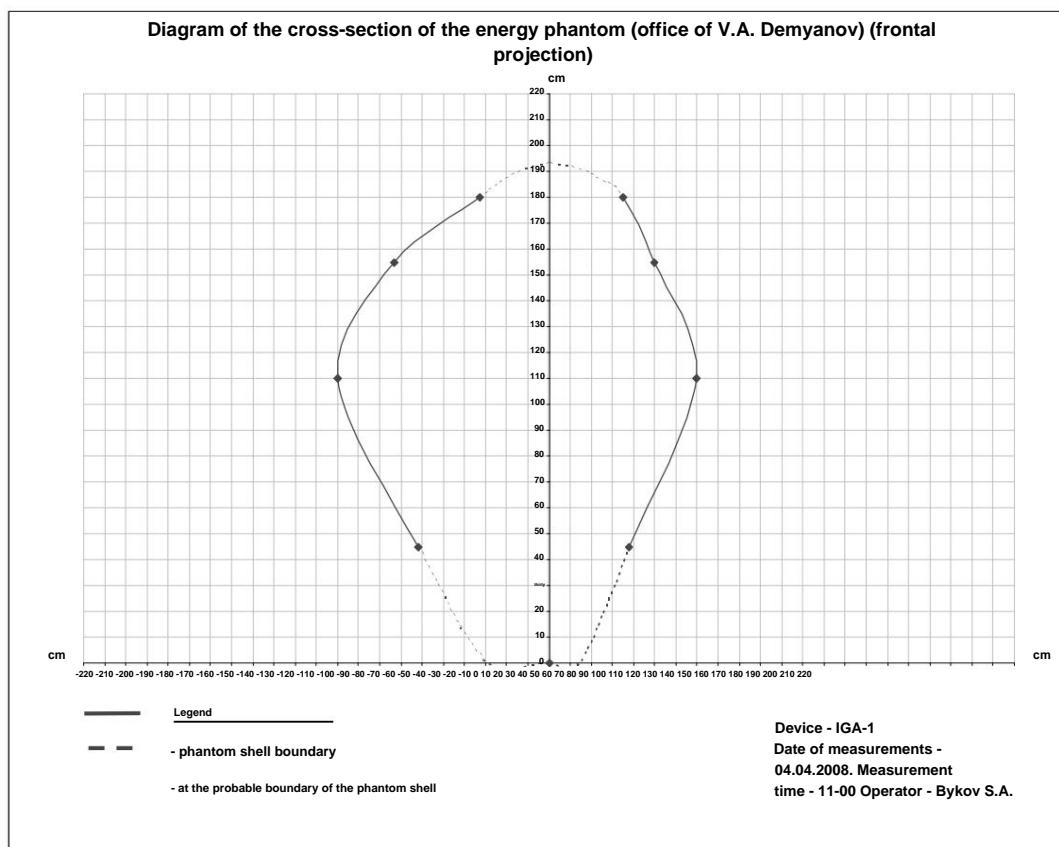
Rice. 18.

Employees of the Rivne-Surenzh Research Center discovered phantoms in people's workplaces. These phantoms continue to exist even when the workplace and the person himself no longer exist. These phantoms have the appearance of an egg-shaped sphere. It can be assumed that this phantom represents a person's information body and has the property of constantly being copied wherever the person is. The results of measurements of phantom workplaces are shown in Fig. 19-20.

Also, the employees of the Rivne-Surenzh Research Center conducted an experiment on the mental installation of a phantom in the room in the form of a round vertical column with a diameter of 1 m. The presence of a phantom was confirmed using the IGA-1 device by several operators.



Rice. 19.



Rice. 20.

4. Manifestation mechanism

Let us assume that geopathogenic grid lines represent equipotential surfaces of charged bodies (material or intangible) located at a certain distance from the Earth's surface. Each of the geopathogenic networks (Hartman, Curry, etc.), based on the above assumption, has two sources. Let's consider a room made of brick walls that have magnetic properties, with electrical wiring located in them. The voltage is connected (Fig. 21).

Electrical wiring (network), connected televisions, CRT monitors, and other electrical and industrial equipment cause ionization of the air in the room, increasing the concentration of charged particles (ions) of one sign or another, which are distributed throughout the room. Since the geopathogenic network, based on the above assumption, has potential, it begins to redistribute charged particles within itself. As a result, an additional charged plane will appear, parallel to the equipotential surface, that is, the plane of the geopathogenic grid. Most likely, two additional planes appear, to the left and to the right of the equipotential surface. We measure them with IGA-1 (Fig. 22). Although, we probably have a slightly different picture (Fig. 23).

Brick walls with a magnetic field are like a magnetic trap for charged particles (ions), that is, they contribute to their greater

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concentration in the room, which leads to an increase in the potential of the planes, and as a result, more confident measurements.

This can be confirmed by the fact that near the walls (brick) it occurs more confidently fixation of geopathogenic grids (Fig. 24).

The same effect occurs near monitors and CRT televisions, which are essentially ionizers. That is, near walls and monitors there is usually one of two measured lines of the geopathogenic grid (belonging to the same equipotential surface) is very powerful (arrow trembles).

As an example, you can also give measurements in a building made of gypsum blocks with brick fireplace. Geopathogenic grids can only be measured near a brick fireplace in radius of about 1.5 m. In reinforced concrete buildings the effect is weaker, since the magnetic field is not distributed, but actually point-like, near each fitting. Exceptions are reinforced concrete structures with fine reinforcement mesh over the entire surface.

That is, we come to the assumption that for reliable measurement of geopathogenic grids (or underground anomalies) we need:

1 - increased concentration of charged particles (ions); 2 - presence of a magnetic field of increased intensity.

Or you can do 1 or 2 separately.

The same is true for open space. Manifestation factors only points 1 and 2 – others. For underground anomalies such as underground water flow, geological fault, a factor contributing to increased concentration charged particles is the contact of two media on which a surface charge (charged plane). The same is true for karst cavities, graves and etc. It is interesting that purely theoretically, based on the above, it is possible assume that, for example, the boundaries of a geological fault, underground flow (river) can be recorded by IGA-1 not as one line, but as a series of parallel lines that will represent equipotential surfaces accompanying the charged plane at the contact of two media.

From the above it follows that in winter (dry, frosty) measurements should be carried out better (large number of charged particles). Also, in the same area, say on a dry hill, you can take measurements, and nearby, in a wet lowland, It is almost impossible to carry out measurements.

The activity of the Sun (spots) also contributes to measurements, which increases number of charged particles, magnetic storms increasing tension magnetic field, or better yet, all in combination. Also worth mentioning is the thunderstorm. City Rovno is located in Polesie, where there are a huge number of swamps, that is, very damp, which probably causes difficulties in IGA measurements.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

Purely practical suggestions also follow from the above. That is, in indoors (if it is difficult to take measurements), you can use an ionizer (preferably bipolar), placing the emitters along the walls.

Probably, the source of pathogenicity in this case should be considered a large the density of charged particles (ions) in nodes, and when nodes of different geopathogenic networks it increases greatly.

That is, geopathogenic networks are not emitters, but concentrators of high energies, and the effect on the body can be compared with the action radioactive radiation (the symptoms are the same).

Based on the above, protection methods can be developed.

Let us consider the mechanism of redistribution of charged particles in a geopathogenic network again. Oppositely charged particles move towards each other, trying to connect. However, the equipotential surface prevents this, and the particles settle on the boundaries of the equipotential surface, creating opposite charged planes (Fig. 25). That is, in the region of the equipotential surface a potential difference arises, forming the capacitor itself. In nodes geopathogenic grid we will have the following picture (Fig. 26). That is, to To eliminate this capacitor you need to short-circuit it. This is what we do when We lay metallized film or foil on the floor. In literature it is mentioned that if there is a knot in the sleeping area, then it must be placed under the bed has a mirror on it. And this is true, only the protection mechanism is different (in the literature the mirror is considered to reflect radiation). Actually metallized the surface of the mirror closes the oppositely charged planes in the node.

But with other spatial (in volume) geopathogenic zones such as spots and The phantom problem cannot be solved in this way.

It is also recommended to hang so-called rings in the nodes of geopathogenic nets Bowji (spirals of a certain size made of wire). Now their principle is clear actions. A metal spiral closes a node of the geopathogenic grid. Although in In principle, this protection does not last long and these rings are recommended in the literature change it more often (as it turns out, you can simply close the ends of the spiral).

We considered only one of the geopathogenic networks. And we have several of them (geopathogenic grid of Kurri, Hartman and others). In theory we should observe a chaotic picture of various figures on the surface when intersection of equipotential surfaces of sources of different grids. However we observe each geopathogenic grid specifically (each geopathogenic grid has two sources). We can try to explain this as follows. Sources geopathogenic grids switch synchronously with a certain frequency. That is, it is reminiscent of observing two (or more) signals on a single beam oscilloscope with a switching attachment.

Torsion fields and information interactions – 2009

It follows that our world exists in a framed (pulse) mode. Our consciousness works with the same frequency and phase, so we perceive this world as real. If the frequency of our consciousness deviates a little, then our world will seem ghostly to us, and if the difference in frequencies further increases, then for our consciousness this world will disappear altogether (death?). But this does not mean that the world will disappear or our consciousness will disappear.

In the same volume of space, an infinite number of sources with different frequencies can exist (even at a point). This means that an infinite number of worlds can exist simultaneously in the same space. That is, when we transition (switch) our consciousness to another frequency, we find ourselves in another world, which becomes absolutely real for us (but the laws there may be different). During so-called death, the switching of consciousness occurs automatically. However, you can learn to do this consciously. That is, move to another world and return back (while maintaining memory). In principle, yoga practices, and the practices of other secret closed teachings, serve this purpose. In principle, there are, let's say, many methods for getting to other planes, or worlds, while living in this world. But since these worlds exist simultaneously, then we exist in all of them at the same time. Only consciousness is tied to a certain frequency range. There is also a clear hierarchy of worlds, otherwise there would be chaos. And if we exist in all worlds, then we must have something common to all worlds (spirit).

Of course, the given mechanism is highly mechanistic. Obviously, there are many nuances of a different order, such as convection. This is when consciousness switches to the frequency of a world where it has already been (reincarnation?), and naturally manifests itself in another body (with partial or complete retention of memory).

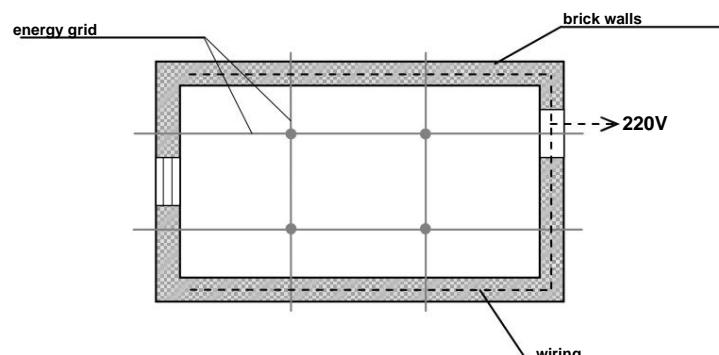
As one of the conclusions, we can say that a brick house is not the best in terms of ecology since it is a trap for ionized particles. And inside a brick oven, an increased background of radioactivity will clearly be measured, due to the high density of charged particles; if, in addition, the oven is located in a grid unit, then the food can turn out to be radioactive. The same thing should probably be taken into account when designing houses. The same applies to fireplaces. All this can be confirmed by measurements. And this is confirmed by the results of measurements carried out by Yu.P. Kravchenko. in the nodes of energy grids and in the fur

And probably, if we place a container of water in a single or double node of a geopathogenic grid (Hartman, Kurri), then the water will acquire the properties of weakly radioactive (probably like from radon sources).

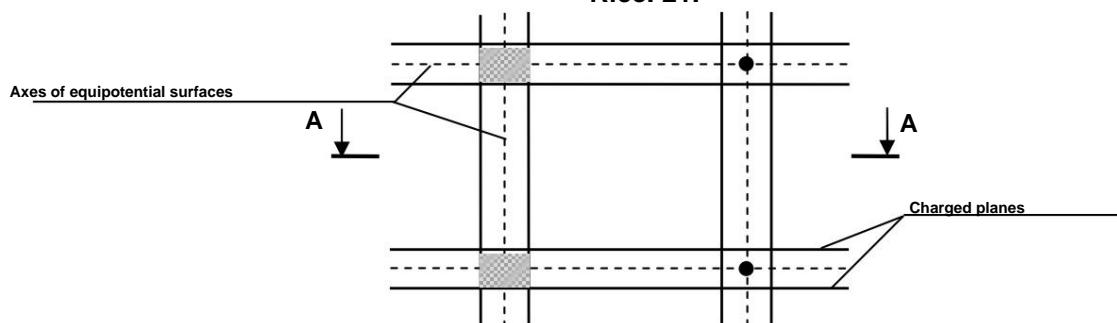
It should be emphasized that over geological faults, underground water flows and other anomalies of natural and artificial origin, due to the formation of a surface charge at the boundaries, the number of charged particles (ions) increases, which leads to an increase in their density in geopathogenic networks, leading to an increased damaging effect , that is, such a sense of danger in those places where geological faults and underground water flows accompany geopathogenic networks, and even worse if this combination occurs in

brick or reinforced concrete premises. There is a striking effect many times over increases. And if we take into account that the geopathogenic network is compressed near the borders geological faults and water flows, then in such a room (or in the open space) it is better not to stay for a long time. We'll probably get something like radiation illness, or consequences as with radiation sickness.

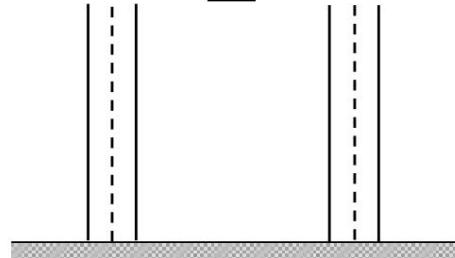
Probably, equipotential planes (planes of geopathogenic grids) are at the same time equipotential surfaces of other fields known to us - magnetic and gravitational. That is, the source geopathogenic grids are the same for all types of fields. These sources are probably They are vortex funnels, converters of general (cosmic) energy into the types of energy known to us, by analogy with human chakras. That is each system (man, planet, solar system, etc.) has its own energy centers, probably representing vortex funnels. IN confirmation can be given by Shipov's theory of physical vacuum [3]. All energy centers operate at a certain frequency for each of the worlds in the same space. Let's say for our world (conditionally material), the energy nodes of all systems work with the same frequency, therefore this world real for us.



Rice. 21.



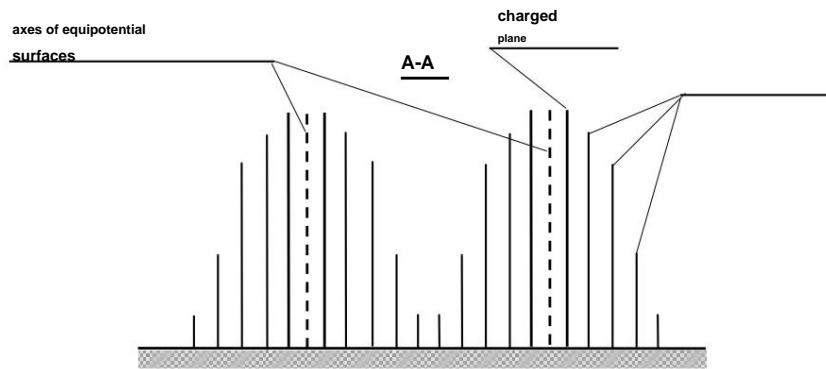
A-A



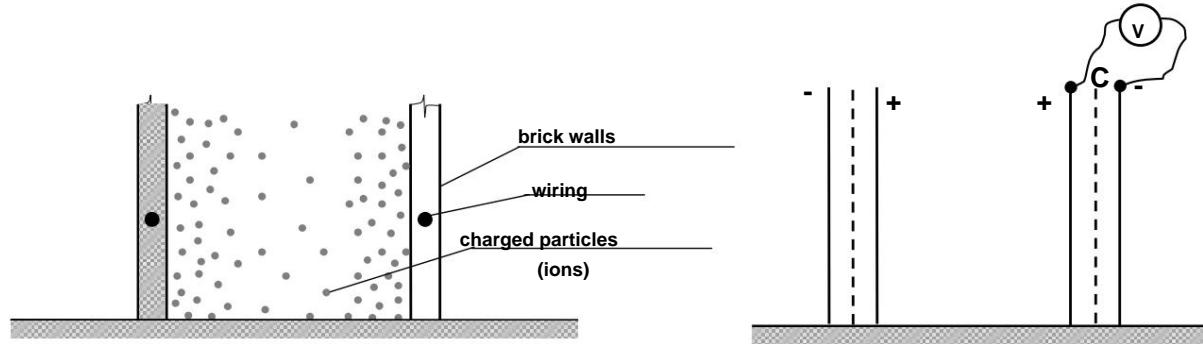
Rice. 22.

equipotential
surfaces
charged
plane

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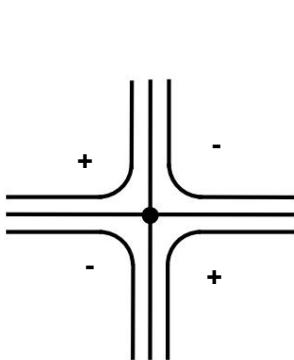


Rice. 23.

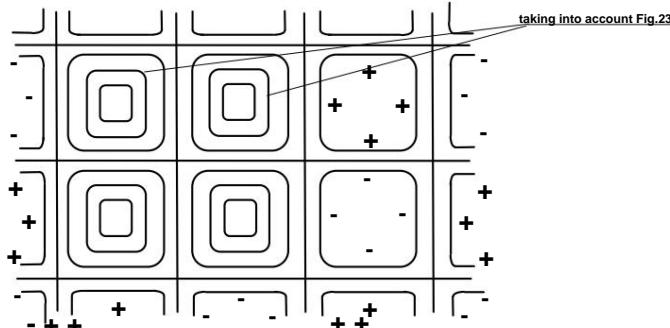


Rice. 24.

Rice. 25.



Rice. 26.



Rice. 27.

5. Conclusions and assumptions

1. The basis of human energy are chakras, as transformers (transformers) of a single universal cosmic energy (prana, etc.) in electromagnetic energy, and other types of energies manifested in three-dimensional world, including the energy of torsion fields.
2. The chakra is a vortex (funnel in shape) which is universal space converter (receiver-emitter). IN as an example - spiral galaxies; on Earth - tornadoes, hurricanes, vortex heat generators, probably torsion generators, etc.
3. IGA - 1 specifically measures energy already converted into electromagnetic energy, and the shape of the vortex is revealed as a cone-shaped (funnel-shaped) charged object (shape space) whose equipotential surfaces are measured.

- 4. Also, the boundaries of the aura shells are equipotential surfaces of the physical body, and other thinner (high-frequency bodies).**
Please note that at a distance of approximately 1 meter there are a lot of equipotential surfaces. They are located through approximately equal intervals (like a monitor). However, what follows quite a sharp jump, and the next shells are located at a fairly large distances from each other [1]. It can be assumed that neighbors frequently located equipotential surfaces corresponding to our classification, zone A corresponds to the etheric and physical (according to Cardino terminology). The following shells (B, C, D) are most likely correspond to thinner (high-frequency) bodies. Close to the body shells (equipotential surfaces) are directly adjacent to body, that is, it can be assumed that the charged space (FZP) is located inside the body (chakras as such) in the form of an energy clot. 5. We should probably introduce the concept of "Shape Charged Space" (FZP) (FZP is a part of space limited by a shape that carries a charge (like that)). Shape charged spaces are phantoms, human doubles, chakra funnels, etc.
- 6. Although it should be noted that the parameters of other fields are likely to change (magnetic, gravitational). This means in the area of these FZPs.**
- 7. It would be logical to assume that the geopathogenic grids (planes) of Hartmann, Kuri and others are equipotential surfaces of some kind energy sources (converters) located or in the Earth (in limits) or external, such as the Sun, planets or other invisible FZP.** 8. It should be noted that geological faults and underground water flows will distort geopathogenic grids as they have powerful surface charge (interface between two media).
- 9. Lines (planes) of geopathogenic grids represent equipotential surfaces. 10. The lines (planes) of geopathogenic grids (equipotential surfaces) are accompanied by two oppositely charged planes, which create potential difference.**
- 11. A necessary condition for confident measurement of geopathogenic grids is (for electromagnetic measurement methods): a) increased concentration charged particles (ions); b) the presence of an increased magnetic field tension.**
- 12. The main damaging factor in geopathogenic nets is large density of charged (ionized) particles in nodes, combinations of nodes different geopathogenic networks. The damaging effect increases sharply with a combination of nodes of geopathogenic networks, geological faults, water flows, etc., due to an increase in the density of charged particles by one area.**
- 13. Paired sources of equipotential surfaces (geopathogenic grids) constantly switch synchronously at a certain frequency.**
- 14. Our world and we ourselves exist in a pulsating (with the same frequency) mode. As a result, our world is real to us.**
- 15. An infinite number of sources with different frequencies, that is, in the same space**

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an infinite number of real worlds can exist simultaneously. Real for these worlds themselves (from the inside).

- 16. In fact, man (and not only man) is present simultaneously in all worlds. The real world for him is the world with the frequency of which he operates. at the moment his consciousness.**
- 17. The mechanism for maintaining the stability of other worlds is similar to the mechanism our world, and differs only in frequency.**
- 18. Equipotential surfaces (planes of geopathogenic grids), from the point electric field view and represent equipotential surfaces of other fields known to us - gravitational, magnetic, then there is a single source for all types of energy.**
- 19. Sources are transformers of a common (cosmic), unified energy (for all worlds), into the form of energy known in our world.**
- 20. Sources (energy centers) are vortex funnels, like chakras in humans.**
- 21. That is, each system (man, planet, Sun, solar system, Universe) has its own energy centers, identical in appearance and operating principle. For each of the many worlds (in one space) the only difference is the frequency.**

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- 3. G. Shipov, Theory of physical vacuum. - Moscow, Science, 1997.**

The ubiquitous 1.37 structure and its meaning^{*}

Kashlakov K.S.
okosfer@mail.ru

**Geometry and numbers are sacred because
they systematize the hidden order
creations. These are tools using
which the physical universe was created.**

Stephen Skinner

This material describes a very unusual phenomenon of how space or a certain order can influence our lives, putting all our manifestations into a mathematically beautiful image.

At all times, form and structure have been given great importance. After all, compliance forms causes a resonance, a magical phenomenon in which somehow incomprehensible This is how energy exchange occurs. We live in an ocean of diversity structural formations, whether coarse matter or subtle elements. They are everywhere, from all sides, and far in space, and inside us - everything is there an endless combination of spheres!

I find it very interesting that knowledge of certain relationships is some of the secret knowledge. What can any proportion have at all? What are the properties of proportionality itself?

Sacred geometry - this science was turned to when searching for places and construction buildings that are friendly to the people living in them. Geometry became "sacred" when it was pleasing to the gods. For example, the temple could be especially revered if it was built taking into account sacred proportions and had a specific orientation relative to the cardinal points.

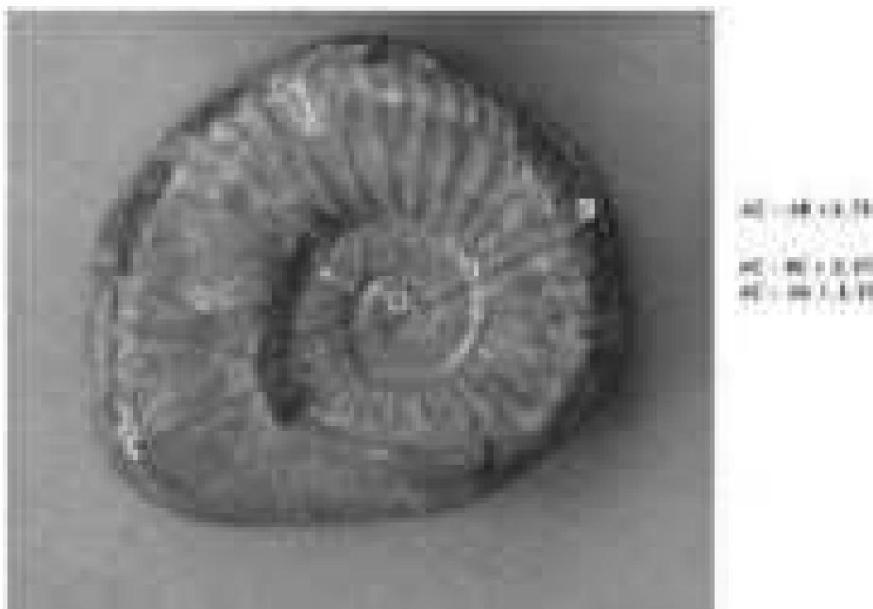
The Pythagoreans believed that by understanding the relationships between numbers they could reveal the spiritual secrets of the Universe and thereby get closer to the gods.

The first thing that comes into focus when studying this topic is the famous the ratio is 1.618..., called the "golden ratio". But the deeper it went research, the more and more it became obvious that there were other relationships describing the structure of space. Relationships that occur in nature much more often than the proportion 1.618..., and which can safely claim to the title of the "new golden ratio".

^{*} Published only in the electronic version of the collection.

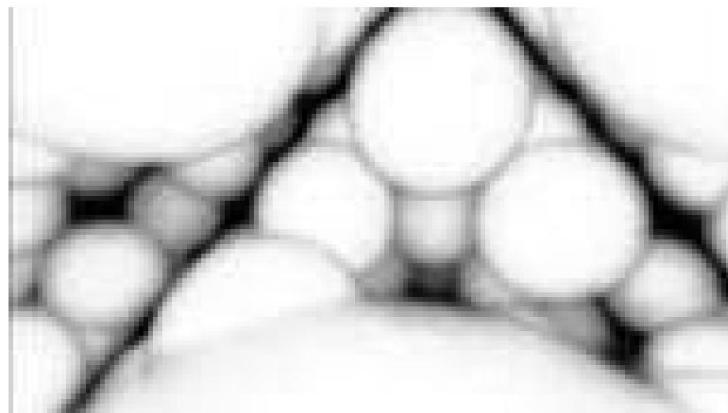
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Research began with a search for the proportion 1.618 in natural occurrences nature, and the first thing that came under observation was a fossilized ammonite shell, which is a symbol of the golden ratio. But the first measurements did not live up to expectations to find the proportion phi 1.618 in it.



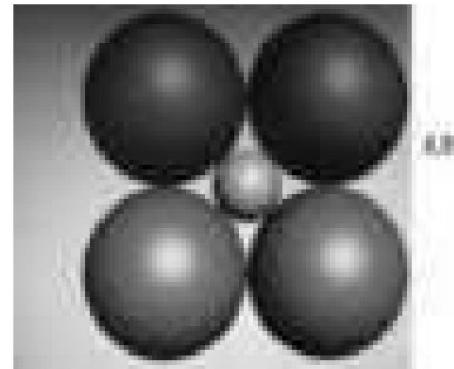
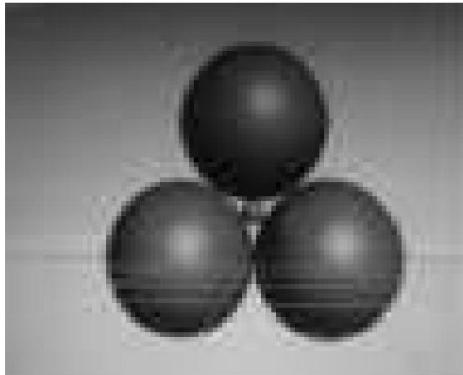
The required proportion was not there at all, which I was very surprised by. Instead of the desired phi proportion, I found a proportion in the shell equal to 1.73 (or root of three)!

In order to find the ubiquitous constant and understand how it participates in our life, one should dive deep into matter and turn to the fundamental and most exact science - geometry. Remember - everything tends to be spherical; and a drop of water and the planet (at the macro and micro level). If you look through a telescope, you will see planets and stars, and if you look at matter through a microscope with magnification several million times, then we will see the atoms (balls, spheres) that make up absolutely everything, every piece of matter. Our entire space is made of atoms! It turns out that we are surrounded by spheres at all levels: both micro and macro! Everything, that surrounds us, everything we can see, touch or feel is accumulation of balls! Countless numbers of balls, combined in various structures.



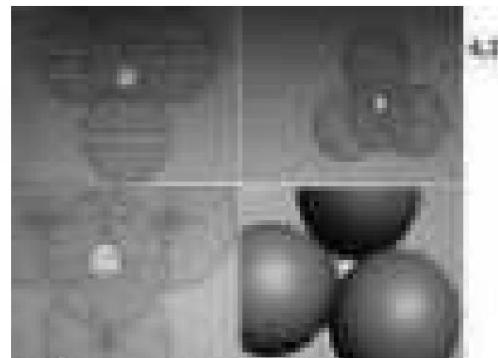
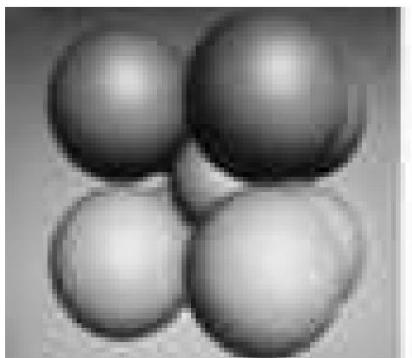
Now all that remains is to just see how everything works in the world of spheres, and the bridge to ours the middle world will be built.

Looking at a cluster of atoms, you can notice two environments at once - the atoms themselves and voids that are formed from the combination of atoms. It turns out if you take several balls, fold them into a square or triangle, then into the space between balls can only fit a smaller ball of a certain proportion. And the first elementary structures that atoms can form is a triangle and square. When the first three atoms combine, a void is formed between them certain proportionality, and a sphere of 6.37 (more than exactly 6.366) times smaller than the main spheres (forming a triangle).



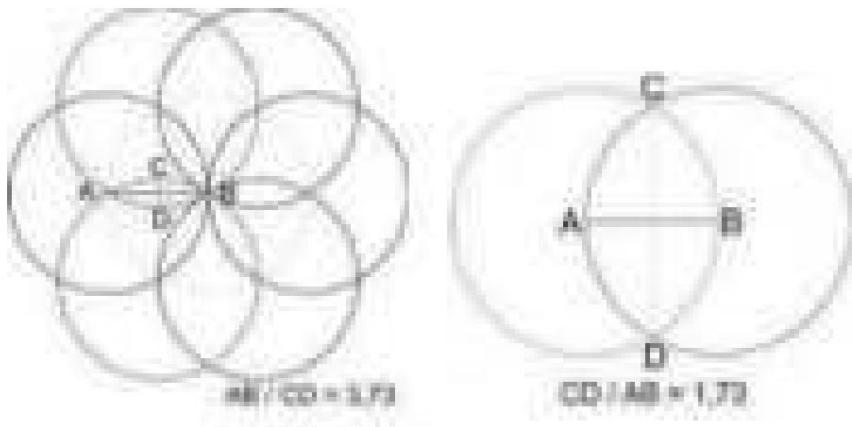
In a square, the inner sphere will be 2.37 (more precisely 2.366) times smaller.

In a cube, the inner sphere will be 1.37 (more precisely 1.366) times smaller.



When working with intersections of circles, proportions of 1.73 and 3.73 are also constantly observed. It should be mentioned that the image data of the intersections of circles in fish bladder and flower of life in esoteric literature are described as sources of harmonious relationships.

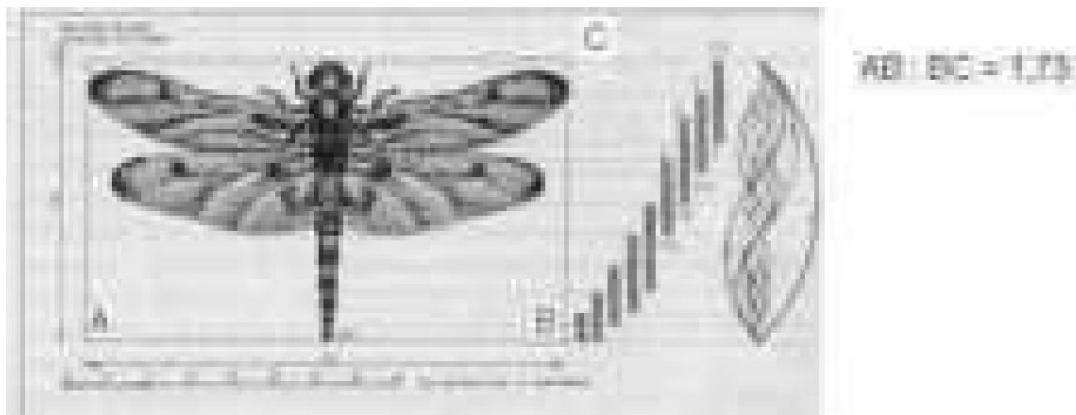
Torsion fields and information interactions – 2009



If you draw a line through the center of a shell and divide the distance between the edges shells at a greater distance from the edge to the center, we get a ratio of 1.73; if the distance between the edges is divided by the smaller distance from the edge to the center shells, you get a ratio of 2.37 (exact value = 2.366). All attention is here you should pay attention to the number after the decimal point - these are 73 and 37. Some kind of game of numbers three-seven, seven-three. And all observed ratios having decimal values of 73 37 should be combined into one group.

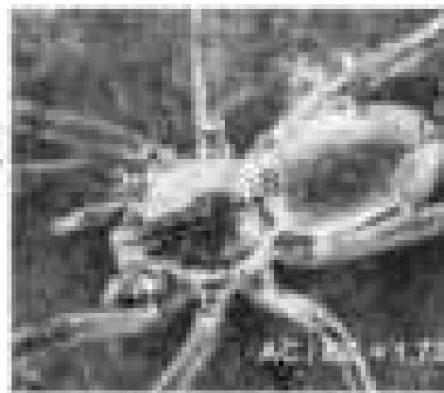
Notice the two intersecting circles - this image is one one of the most important in sacred geometry, "Fish Bladder". Height ratio and the width of this image is 1.73.

I took some pictures from books that describe the golden ratio as a proportion phi (1.618), and not a word about the proportion 1.73. Although the pictures here correspond to all the themes same proportions. Everything is said in the drawings. The first independent measurements revealed serious inconsistencies between what is written and the images.

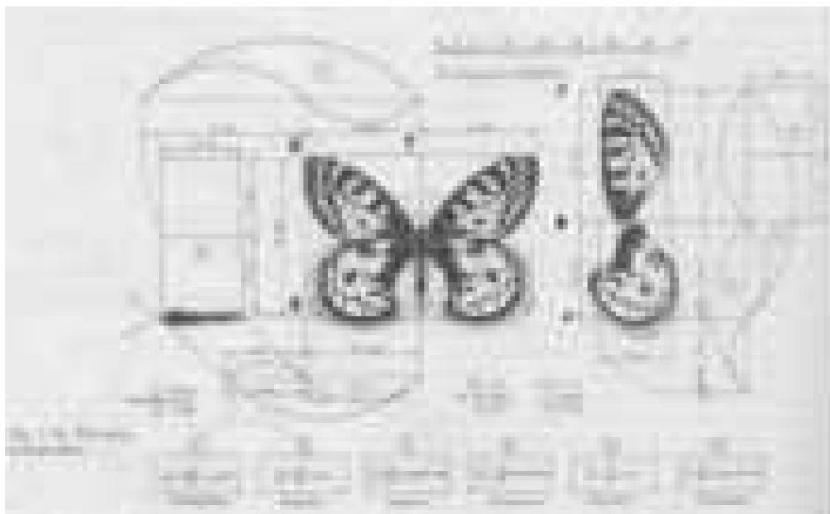


This drawing was taken from a book that describes the phi proportion. It should be noted that the book from which the pictures are taken gives conflicting information. Even there is even an opinion that this is deliberate sabotage.

Moving further in the search for the relationships that nature uses, we gained there is more and more evidence that proportions 1.73 and 1.37 occur much more often than other ratios.

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One more important point should be taken into account - each proportion has an "inverse" side", i.e. another proportion that performs the same division. At dividing a segment into harmonious components produces two unequal segments. If we, for example, take one segment and divide it by 2.37, we will get a larger one segment and smaller. And the smaller segment will be on the left, and the larger one on the right. But if we If we divide the original segment by 1.73, we will get smaller segments of the same values as and when divided by 2.37. It's just that now the smaller segment will be on the right, and the larger one will be left! So it turns out that the same division is described by two proportions.



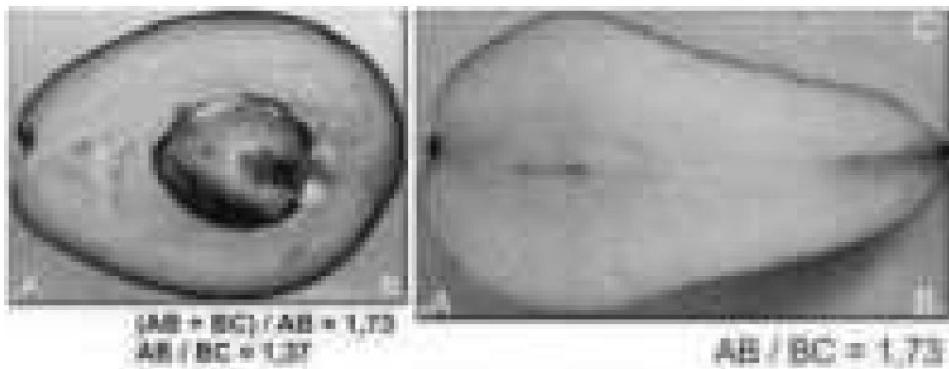
The same situation with the butterfly.



$$AC/AB = 1,73$$

Look at the daisies. And they have a proportion of 1.73.

Torsion fields and information interactions – 2009



In the observed examples, the phi proportion cannot be found again; instead, again 1.73!

All this information makes me think that knowledge about proportions and their true properties and meanings are very modest.

Here's another example. In a chicken egg there is a proportion in the ratio of protein mass to the yolk. As a result of an experiment carried out with one's own hands, it was obtained protein weighing 52.89 grams and yolk weighing 19.35 grams. If $52.89 / 19.35 = 2.73$. What if $(52.89+19.35) / 52.89 = 1.366$.

Doctors from Johannesburg (South Africa) who studied motor activity 46 pregnant women claim that the child is in the womb engages in systematic training. And the periods of his activity and rest are related to each other as 1.366. Those. a child spends 1.366 times on exercise more time than rest.

Understanding the issue more deeply, the inevitable question becomes how to use this knowledge in life, in simple life situations, in solving everyday tasks.

In order to better understand the nature of the relationships, it was decided to conduct several experiments, try to break up any action over time into correlating segments and see if this has any significance. I conducted three experiments:

1st with a game of billiards. 2nd with throwing a basketball into the basket. 3rd with throwing out the dice.

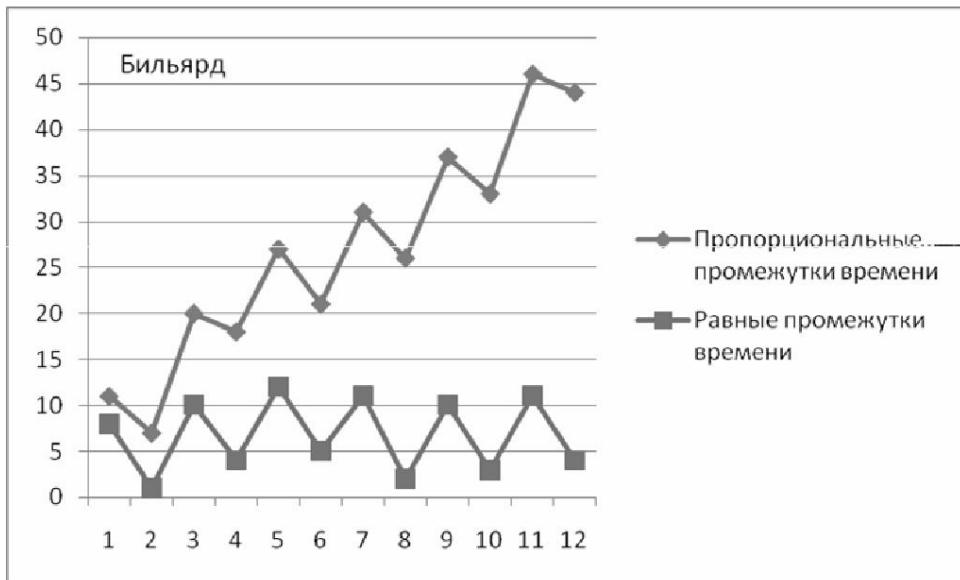
Each of the experiments was carried out multiple times.

Experiment one.

There are two points on the billiard table where the balls and all shots are placed. are produced only from these positions and for one purpose. First, all blows are made with

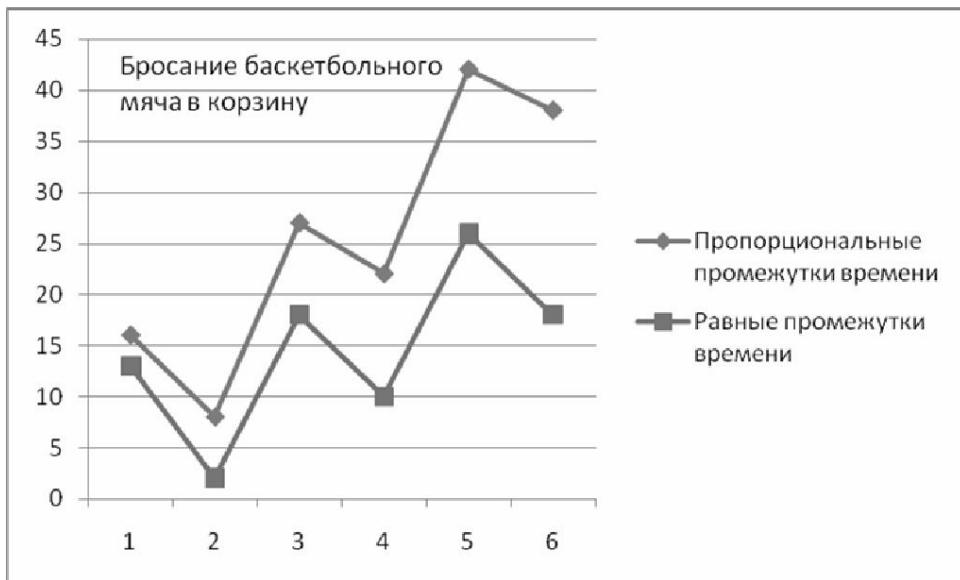
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at proportional intervals, then at equal intervals, and the experiment is repeated many times.



The table records hits first and then misses (this explains staggered graphs). The result of this experiment shows that the effectiveness of proportional strokes is more than 2.5 times higher than strokes disproportionate.

Experiment two, with throwing a basketball into a basket, carried out according to the same principle gave similar results.



In the diagram you can see an ever-increasing gap between the graphs, which indicates greater effectiveness of proportionally measured throws.

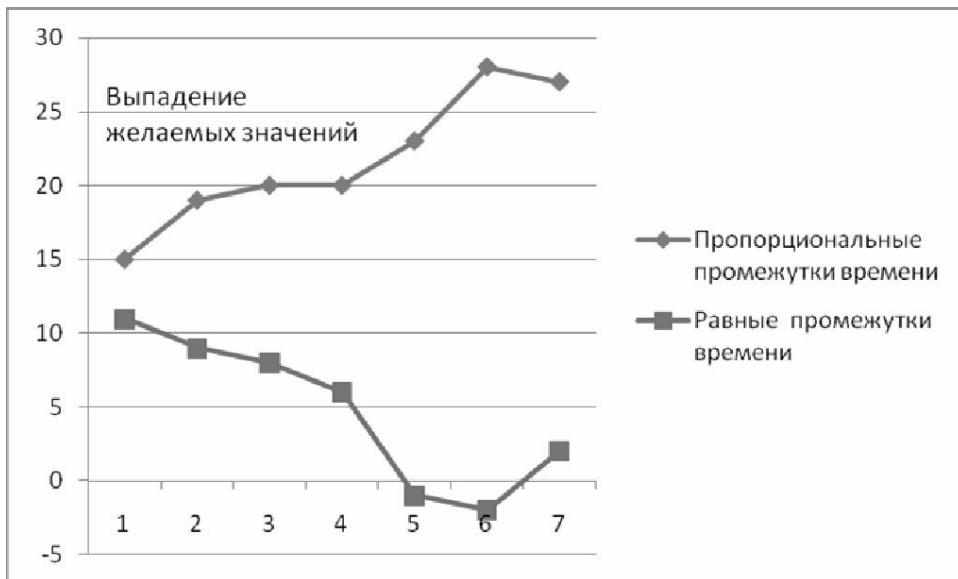
The third experiment and, in my opinion, the most interesting.

Torsion fields and information interactions – 2009

Every action we take is primarily aimed at achieving desired result through a specific method. Those. it is based on desire, but the method is already a means. Since our thoughts can have an impact influence on the course of processes, considered it necessary to conduct an experiment with throwing away the dice.

The meaning is this: the die has only 6 values, 3 even numbers and 3 odd. For comfort data display we will experiment with these two groups (even odd). Each time the die is thrown with desire whether an even or odd value is rolled, and if the number drawn matches desired, the result is recorded as positive; if the number drawn is not corresponds to the desired result, the result is negative. The experiment goes small data groups: 24 dice rolls are made in proportional time intervals, the results are recorded in the blue graph; followed by 24 throws at equal intervals, the results are entered in red schedule. This is repeated many times, and all the data is displayed on a table.



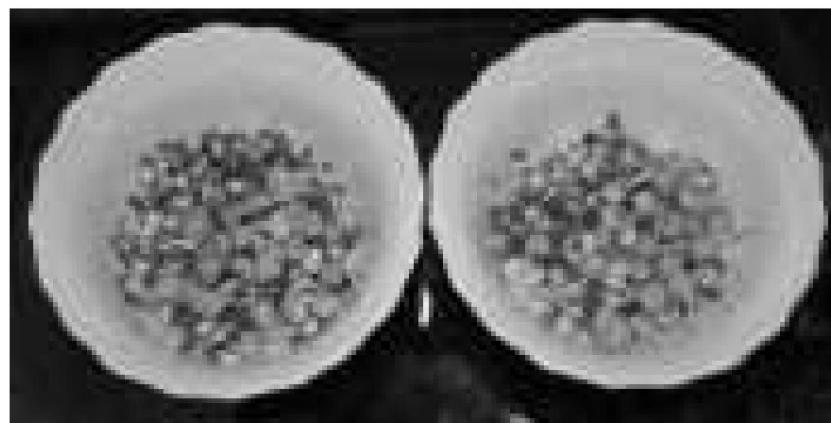
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The mirroring of the graphs relative to each other is clearly expressed here. From this we can conclude that by playing according to proportions, there is not just an improvement player's performance, but also a synchronous deterioration in the results of the surrounding players involved in the process!

Thinking about how to use knowledge of proportions in practice, I decided conduct another very interesting experiment.

Can proportion affect the yield or rate of growth and maturation of what we plant? To find out, I took chickpea and mung bean seeds. Taking two cups, I poured seeds into both, only in the first cup I poured seeds chickpeas and mung beans equally (10 grams each), and in the second cup the weight of the seeds was unequal, and proportioned it so that the weight of mung bean seeds is 1.37 times the weight of chickpea seeds!

In parallel with this, I put two more groups of seeds for germination, for accuracy experiment. Here I mixed chickpea, mung bean, dill, pumpkin and flax seeds. Everything is like this the same scheme as described above - one bowl contains seeds in equal weight shares, and in the second bowl all the weights of the seeds are correlated in accordance with the harmony of the spheres (i.e. proportions 1.37; 2.37; 4.37).



Torsion fields and information interactions – 2009

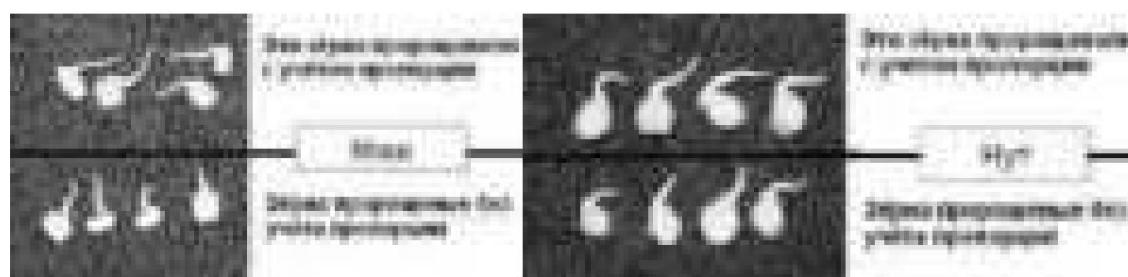
The results of the experiment showed that if we proportion the weight of the germinated seeds, their growth rate will be higher!

To get the net weight of the sprouts, I separated them from the seeds and weighed them separately. Here's what happened:



Here you can see that chickpea sprouts grown in proportional proximity to mung bean are more than one and a half times larger than those that were sprouted in equal shares! The number of weighed sprouts is the same everywhere - 20 pieces.

Here are some more examples for visual comparison:





Here you can see a very big difference in the pumpkin sprouts! In order to To calculate more accurate numbers of differences, after taking this photograph, I separated the sprouts from the seeds and weighed them on precise scales. I also weighed two sprout (as I photographed). The sprouts growing in the disproportionate cup showed a weight of 0.03 grams, and those that were under the influence of proportions showed a weight of 0.09 grams! It turns out that the difference is as much as 3 times! All these results show that any actions that are harmoniously connected with each other, are characterized by increased efficiency! Describe exactly the reasons This effect is still difficult, perhaps there is a resonance effect here. This subject of further research.

It turns out that you just need to give your actions a harmonious structure so that our actions resonate with the bodies around us. Then it happens mystical moment - we get what we want!

This phenomenon is difficult to explain, but it can be easily used.

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Rhythm and bursts in radioactivity measurements

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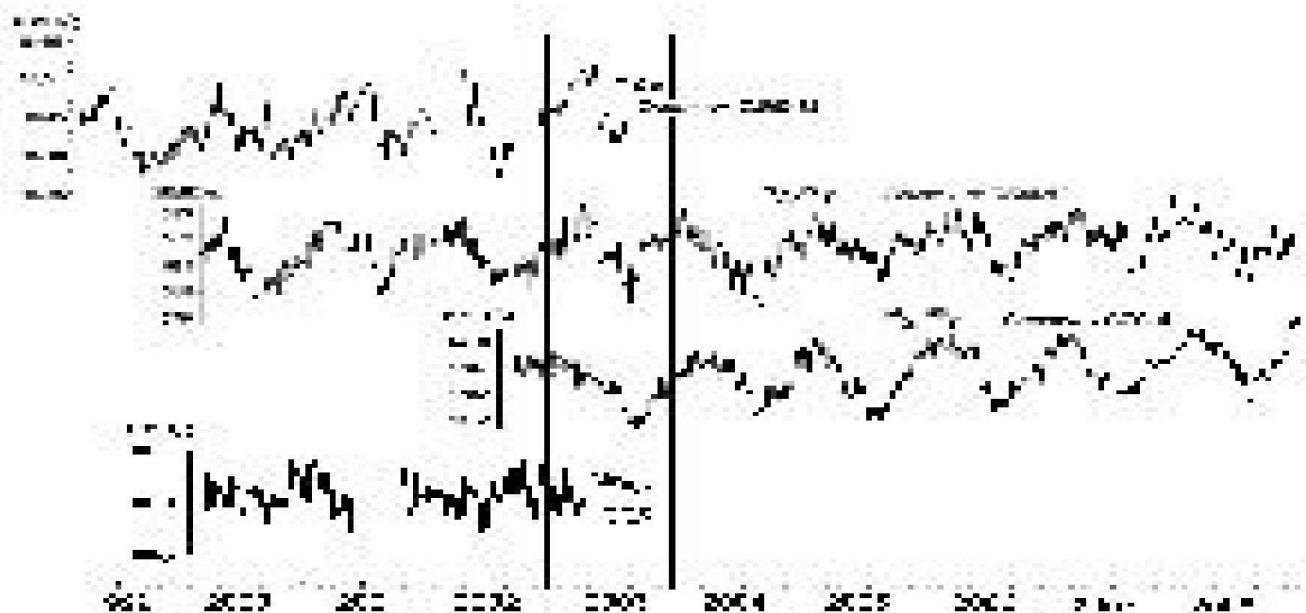
Parkhomov A.G.

Institute for Research into the Nature of Time. MSU, Moscow,
Russia. <http://www.chronos.msu.ru>

Long-term measurements of the count rate of beta sources ^{60}Co , ^{90}Sr - ^{90}Y revealed rhythmic changes with a period of 1 year and about a month. An annual rhythm was also discovered in measurements of radioactive sources ^{32}Si and ^{226}Ra . When scanning the celestial sphere with a reflecting telescope with a ^{60}Co or ^{40}K radioactive source located at the focus, bursts in the count rate reaching three orders of magnitude were recorded. A rare effect of an anomalous decrease in the count rate of ^{60}Co and ^{90}Sr - ^{90}Y sources has been recorded. Possible reasons for these effects are discussed.

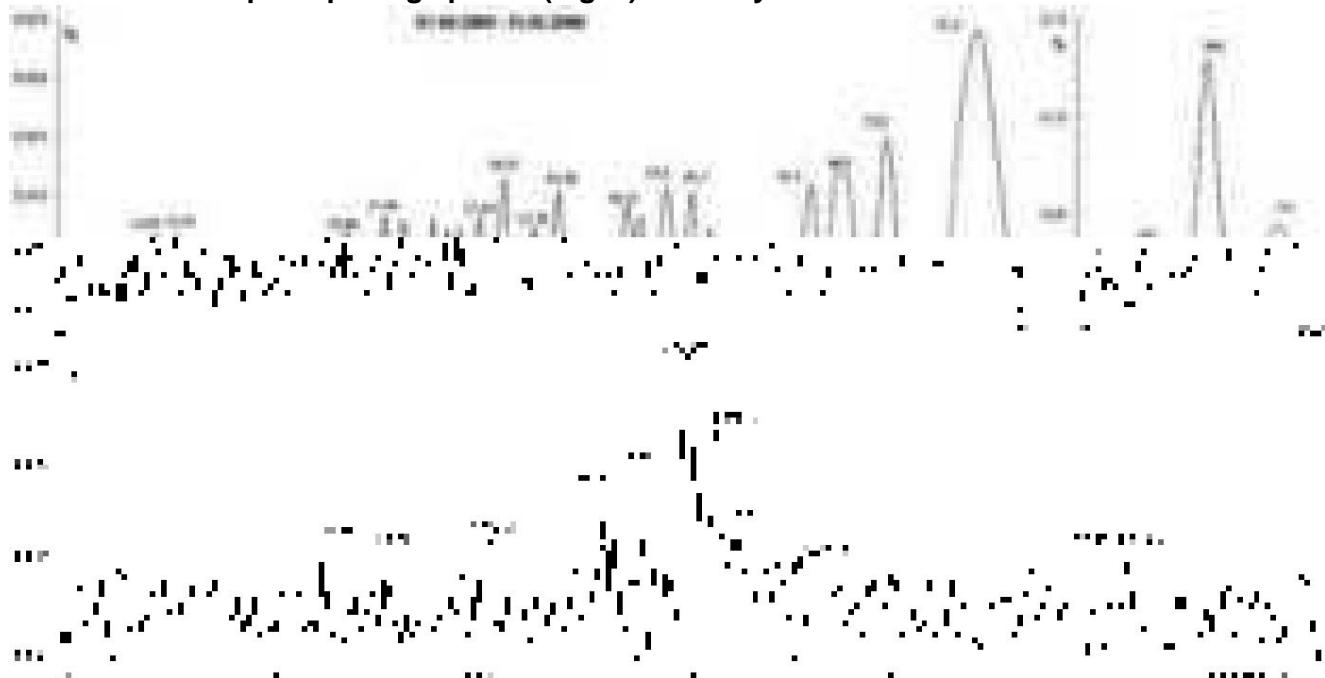
Until recently, it was believed that nuclear decays are caused exclusively by *intranuclear* processes, the course of which ordinary external influences (electromagnetic, thermal, acoustic, etc.) cannot significantly influence. Therefore, when measuring radioactivity, only an exponential decrease in the measurement results with chaotic fluctuations corresponding to Poisson statistics should be observed and indeed was observed. But recently, when it became possible to carry out long-term accurate measurements, it was discovered that the results, in addition to the exponential decline, change with cosmic rhythms. The most clearly visible rhythm is with a period of 1 year and an amplitude of tenths of a percent of the average value (see Fig. 1). The presence of an annual rhythm in measurements of radioactive sources ^{32}Si and ^{226}Ra was discovered by German and American researchers [4]. An annual rhythm was discovered in measurements of tritium radioactivity [5]. In addition, a circadian rhythm appears with an amplitude of the order of 0.01% of the average value, and, possibly, a circadian rhythm with an amplitude an order of magnitude smaller. In addition, very significant bursts of radioactivity from a beta source were discovered if it was placed at the focus of a parabolic mirror [1, 2]. The detection of variations in the radioactivity of a number of isotopes in several laboratories using different measurement techniques does not a

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Rice. 1. Count rate of beta sources ^{60}Co and $^{90}\text{Sr}-\text{90Y}$, measured by Geiger counters, s adjusted for decreased activity with half-lives of 5.26 and 27.7 years, as well as alpha count rate of a ^{239}Pu source measured with a semiconductor detector [2].

The long duration of measurements makes it possible to use Fourier analysis (Fig. 2) and the method of superimposing epochs (Fig. 3) for analysis.

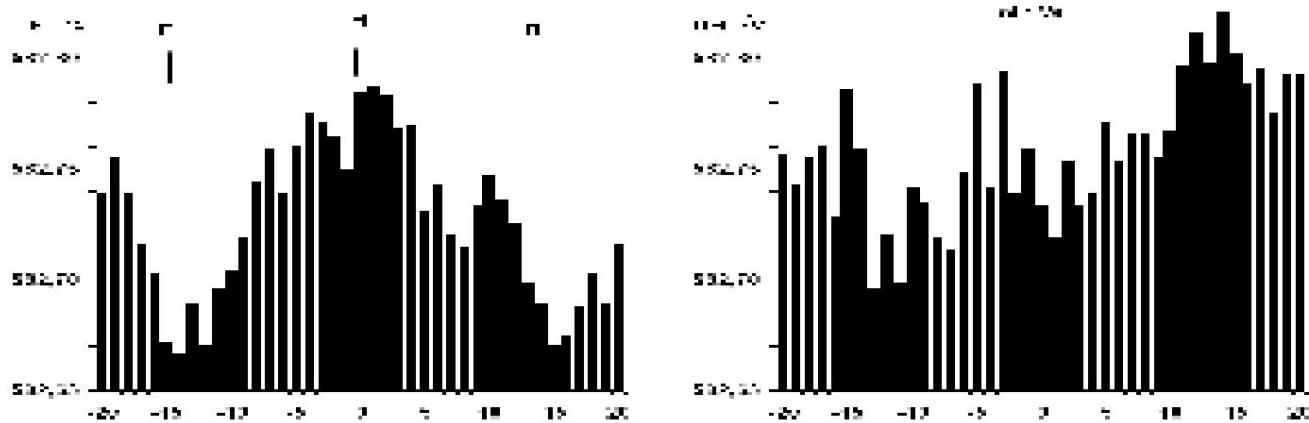


Rice. 2. Periodograms of variations in the count rate of the beta source $^{90}\text{Sr}-\text{90Y}$ with a counter Geiger SBM-12. The analyzed time period is from April 2000 to March 2006. Amplitude – as a percentage of the average counting rate [2].

In the periodograms of the count rate of the installation with the $^{90}\text{Sr}-\text{90Y}$ source (Fig. 2), the most the annual rhythm and its harmonics are noticeable (182; 122; 91.5; 61.0). Stands out clearly rhythm of the synodic lunar month (29.27 days). A similar rhythm is characteristic of temperature variations. But we can fairly confidently conclude that the lunar The counting rate rhythm is not caused by temperature changes: application of the method

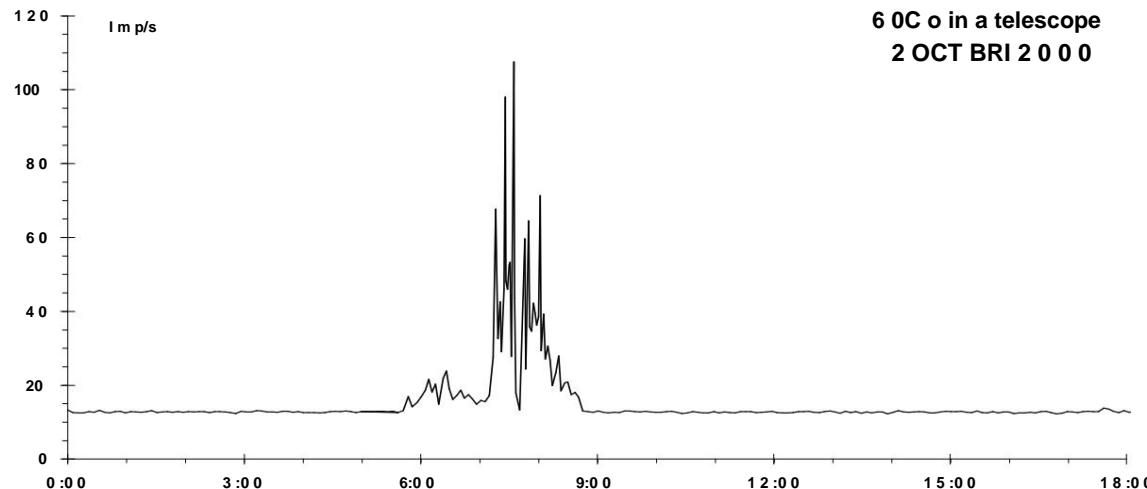
Torsion fields and information interactions – 2009

superimposed epochs (3) shows a significantly different character of the peri-monthly rhythms of counting speed and temperature. If the temperature has maximums like around new moons and around full moons [2], then the counting rate has a maximum only around new moons, and around full moons the count rate is minimal. Equally is very different from temperature rhythms and the rhythm of solar activity in results of counting rate measurements.



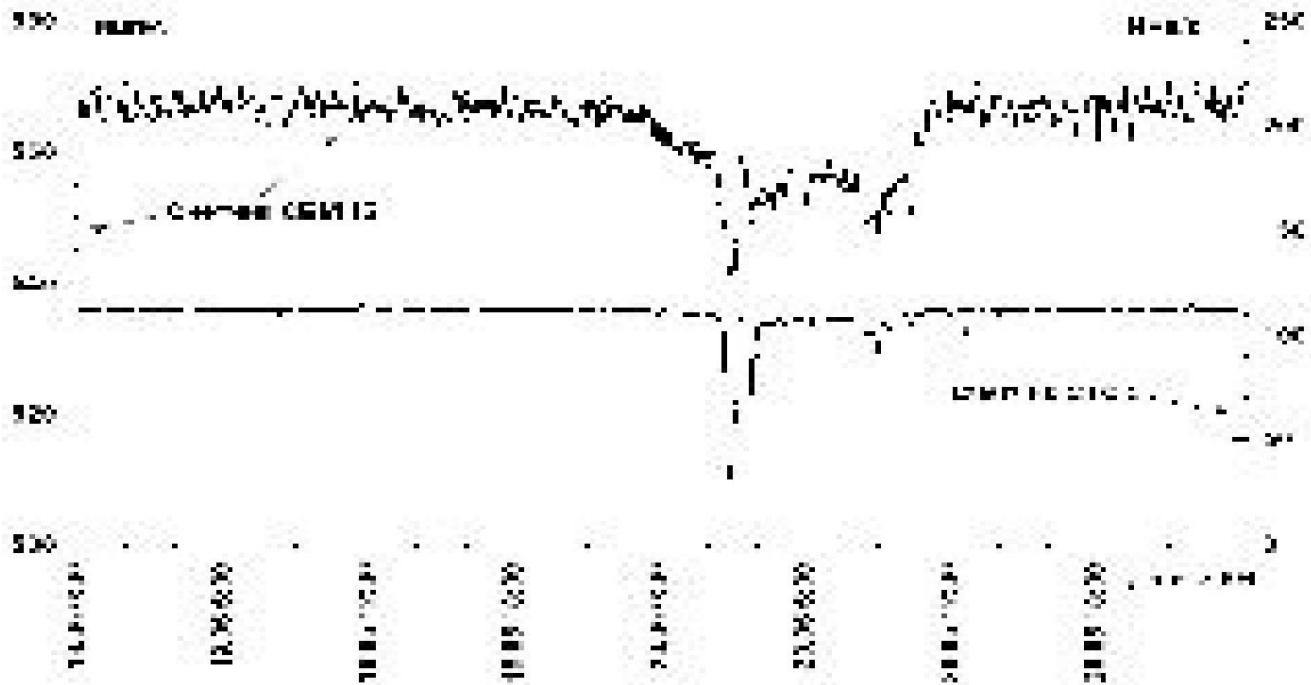
Rice. 3. Average counting rate of a ^{90}Sr - ^{90}Y beta source with a Geiger counter SBM-12 from April 2000 to March 2007 relative to new moons (on the left, averaging over 87 cycles) and relative to minima in the 27-day cycle of solar activity (on the right, averaging over 94 cycles).

Important results were obtained from experiments with beta sources located in focus of a parabolic mirror [1, 2]. These peculiar telescopes throughout have been scanning the celestial sphere for many years. The usual course of count rate measurements, which is quite consistent with Poisson statistics, was disrupted from time to time by bursts lasting from several seconds to several hours (Fig. 4). Anomalous areas occupy approximately 1/1000 of the total observation time. Bursts with more than a thousandfold increase in speed have been recorded accounts. Detailed description of these experiments and discussion of their results presented in the book [2].



Rice. 4. An example of recording a burst in the count rate of ^{60}Co located at the focus of a reflecting telescope when scanning the celestial sphere stationary relative to the Earth telescope [1]. Declension 12° closest approach to the Sun (14°) at 8:50.

Very rare events of very significant deceleration have been recorded accounts (Fig. 5). Two different Geiger counters (SBM-12 and STS-5) registered particles of one beta source ^{90}Sr - ^{90}Y . First counter registered particles of almost the entire beta spectrum, the second - only particles with energies close to the boundary energy. Sources and counters are located in thermostated vessel with quartz sand. Abnormal signal progression lasted from 23:30 on June 19 to 11:20 on June 20, 2004. In the channel of the first counter the decrease reached 5%, and in the channel of the second counter there was more than fivefold reduction in counting speed. Nothing like this for 10 years no observations occurred in these channels. In other channels of multichannel installation that records, in addition to counting speed from several alpha and beta sources, radiation background, transistor noise, frequency of quartz oscillators, temperature near the installation, nothing unusual happened at this time.



Rice. 5. Anomalous variation of the beta count rate of the source ^{90}Sr - ^{90}Y June 19-20, 2004. Published for the first time.

A similar effect was recorded from 14:00 on May 10 to 8:00 on May 12, 2002 (source Co-60, detector SBM-12). The reduction in counting speed reached 10%. Other similar anomalies for more than 10 years of multi-channel count rate recording no radioactive sources were registered. These effects cannot be related with changes in high-voltage and low-voltage supply voltage, since other meters were connected to the same power sources and continued to operate as usual.

This very rare effect differs from the continuously occurring rhythmic changes in radioactivity in that it occurs only in one of several nearby radioactive sources, possibly indicating the resonant nature of the impact leading to such an amazing result.

Torsion fields and information interactions – 2009

All of the above-described anomalies in the course of radioactivity were discovered during the study of *beta* sources. Similar studies of the radioactivity of *the alpha* source ^{239}Pu do not reveal reliable circadian, circa-monthly and annual rhythms of changes in the count rate. The observed chaotic fluctuations with an amplitude of up to 0.1% of the average count rate (see Fig. 1) are possibly associated with the noise of the semiconductor detector. The presence of an annual rhythm in the results of measurements of ^{226}Ra radioactivity [4] does not contradict the conclusion about the absence of rhythmic changes in alpha radioactivity, since in the decay chain of this isotope there are, in addition to alpha radioactive, also beta radioactive nuclei. Unlike ^{226}Ra , ^{239}Pu is an almost “pure” alpha particle emitter.

These results are remarkable in that they indicate the existence of channels of cosmic influences on earthly processes in addition to the known ones (electromagnetic and corpuscular radiation from the Sun, cosmic rays through electromagnetic, temperature, mechanical, etc. influences, the influence of which on intranuclear processes is vanishingly small). The only real way to strongly influence the course of nuclear processes is irradiation with neutral or sufficiently energetic charged particles. At first glance, the rhythmicity in radioactivity can be associated with cosmic rays, in variations of the flux density of which there is an annual and daily rhythm. But the properties of the cosmic ray flux reaching the Earth's surface are known well enough to reliably exclude a noticeable effect of this agent on radioactivity. Perhaps changes in the rate of radioactive decay are associated with changes in the position of the Earth relative to the cosmological vector potential [3]. American and German researchers believe that the annual rhythm of radioactivity they discovered is associated with a change in the flux density of solar neutrinos due to the eccentric motion of the earth around the Sun [4]. But estimates show that the effect of neutrinos arising in nuclear reactions on the Sun is vanishingly small compared to what is experimentally observed.

A reasonable explanation of cosmic rhythms and bursts of beta radioactivity that does not require radical hypotheses can be given if we assume that one of the components of “dark matter” - neutrinos, which have very low energies - is the cosmic agent causing these effects [2]. The flux density of such neutrinos is much greater than the flux density of solar neutrinos, and they interact with matter incomparably more efficiently. The variability of these flows is due to the fact that they are strongly influenced by the gravitational fields of stars, planets and other space objects. It should be noted that there is an assumption that neutrinos are quanta of torsion radiation.

Another component of dark matter that causes nuclear physical effects may be heavy stable hadrons - ersons, which can serve as catalysts for chains of nuclear transmutations [6].

Note that, in addition to rhythmic changes *in the count rate* of particles emitted by radioactive sources, a mysterious effect of changing *the type of statistical distributions* was discovered [2, 7].

Since radioactivity is present to one degree or another everywhere and affects the course of many processes, the changing flows of some components of “dark matter” can be cosmic agents, which, along with with already known ones, influence the course of biological, physicochemical and geophysical processes.

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Controlled Chaos *

Parkhomov A.G.

Institute for Research on the Nature of Time, Moscow State University,
Moscow, Russia, E-mail: alexparh@mail.ru

Experiments are described that indicate the possibility of targeted influence on the orderly behavior of elements of various systems independently from energy changes.

In the fall of 2002, Alexander Viktorovich Karavaikin invited me to try the effect of the device he invented on radioactive decay. Possessing considerable experience in various measurements of radioactivity, I'm pretty cool reacted to this proposal. I was well aware that when reliably operating recording equipment, the counting rate can be changed only by three ways: by changing the distance between the source and the detector, placing between a detector and an absorber source or by placing an object - a reflector - near the source. And yet, in February 2003 we met. I have provided many times proven equipment - a Geiger counter with an interface device computer and a radioactive source ^{60}Co , Alexander Viktorovich brought his "non-electromagnetic generator" - a small box with wires connected to a low-power power source. We took this box placed near the meter with a nearby source. The computer started Automatically measure counting rate, count by count, every two minutes.

The results of the first experiment plunged me into amazement. One would expect a slight increase in the count rate due to the reflection of beta particles from "boxes" and, perhaps, an increase in counting speed after switching on power supply to the "generator", if the device is capable of generating ionizing radiation, such as x-rays. But something unprecedented happened: then the time when the device was turned on, the counting rate practically did not change, but *the spread of the measurement results sharply decreased*. Anomalies *increasing* scatter could be explained by the influence of interference, noise or instability equipment. But *the decrease in spread is a surprising and incomprehensible fact*. This means that order emerges from chaos, independent events become interconnected.

A person familiar with radioactivity measurements will, of course, declare "this is not maybe, because it can never be." After all, the theory is based radioactivity lies in the idea that decay events occur at random moments of time and each nucleus decays independently of the others. If this is so, the distribution of the number of emitted particles (and at stable efficiency registration and distribution of measurement results of the number of registered for identical time interval of particles) cannot be anything other than a distribution Poisson [1]. The form of this distribution is uniquely determined by the average number

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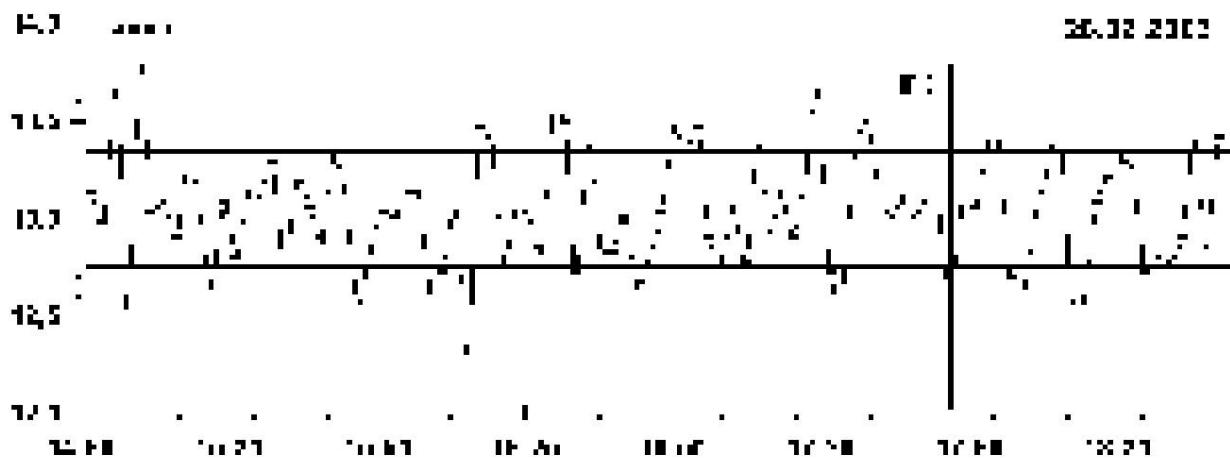
registered particles. The width of the range of values of measurement results, the probability of occurrence of which is significantly different from zero, is characterized by standard deviation. For statistical quantities that obey the law Poisson, the standard deviation is equal to the square root of the average measurement result. Difference from the average value, not exceeding one standard deviation, have 68% of measurements, and within two standard Deviations already lie in 95% of the results. For example, if on average with repeated measurements, 100 particles are recorded over the same time, 68% of the results lie between 90 and 110. And between 80 and 120 already 95% of the results lie.

A century of experience in radioactivity research has confirmed the compliance measurement results to Poisson's law, i.e. complete coincidence of the moment of departure particles. This grace was violated only by the unusual research of S.E. Shnol with co-authors [2, 3], who showed that the type of distribution of measurement results radioactivity changes naturally over time, and in these changes cosmic rhythm can be traced. For a long time these results were perceived the scientific community with distrust due to their unexplained nature, as well as the complexity and unusualness of the experimental data processing technique used to identify the effect. And only recently an opportunity of this kind effects were independently confirmed in the studies of B.V. Karasev [4] and N.G. Goleminova [5]. They found in the series of counting rate measurements radioactive sources areas with significantly reduced scatter results. But all these were effects that can only be detected with thorough analysis of huge amounts of data. The source of these anomalies incomprehensible. It seems that he is somehow connected with Space.

The device invented by Karavaykin causes effects incomparably more strong, and also manageable: can reduce the spread of results, and maybe increase by working in a different mode [6, 7].

Figure 1 shows an example of the effect of this device on the count rate of a ^{60}Co source connected to a Geiger counter. Vertical lines mark moments turning the device on and off. The difference between this area and areas without the impact is obvious. The spread of results here is 5 times less than in others places where it fully corresponds to Poisson. At the same time, a noticeable change There is no counting speed. Numerous experiments show that the effect is reproducible, and it is detected not only on beta, but also on alpha sources, as well as the effect of the device on electrical noise generators. By changing the operating mode devices, it is possible not to reduce, but to increase the spread of results.

Torsion fields and information interactions – 2009



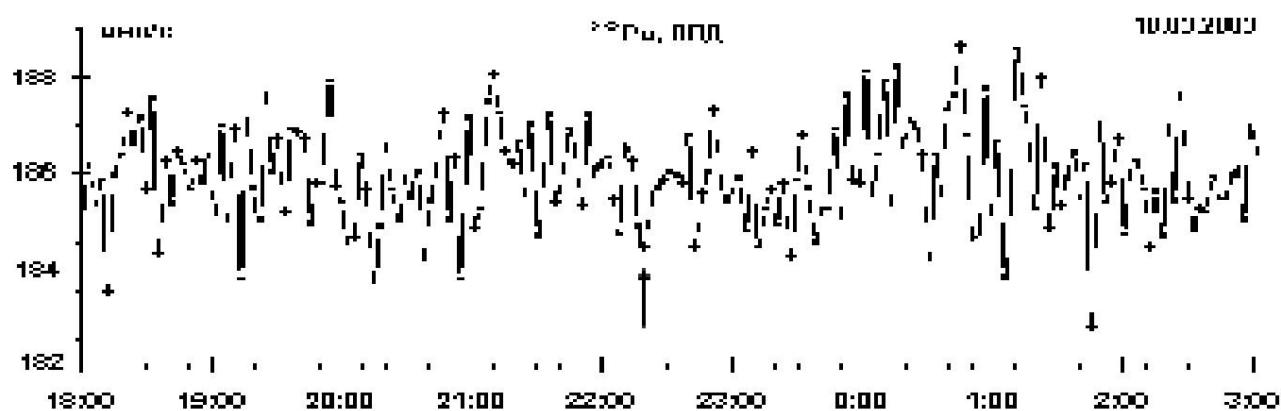
Rice. 1. An example of the influence of the Karavaikin generator on the registration of beta by a Geiger counter ^{60}Co particles. Horizontal lines indicate the average counting rate (13.05 pulses per second) and the difference from the average counting rate by one standard deviation (± 0.3 pulses per second). It can be seen that when the generator is turned on (this the recording area is marked with vertical lines), the average count rate did not change, but there was a significant decrease in the scatter of measurement results. On this site standard deviation 0.064, i.e. almost 5 times less than in other areas where it is quite consistent with Poisson.

The effect is obvious, and yet let's check how incredible this obviousness is. Let us assume that the purely random nature of the process remains in the area impact and determine the probability of occurrence of a registered population counts: 6 events in the count rate range 13.0-13.15 pulses/s. For this let's use Bernoulli's formula

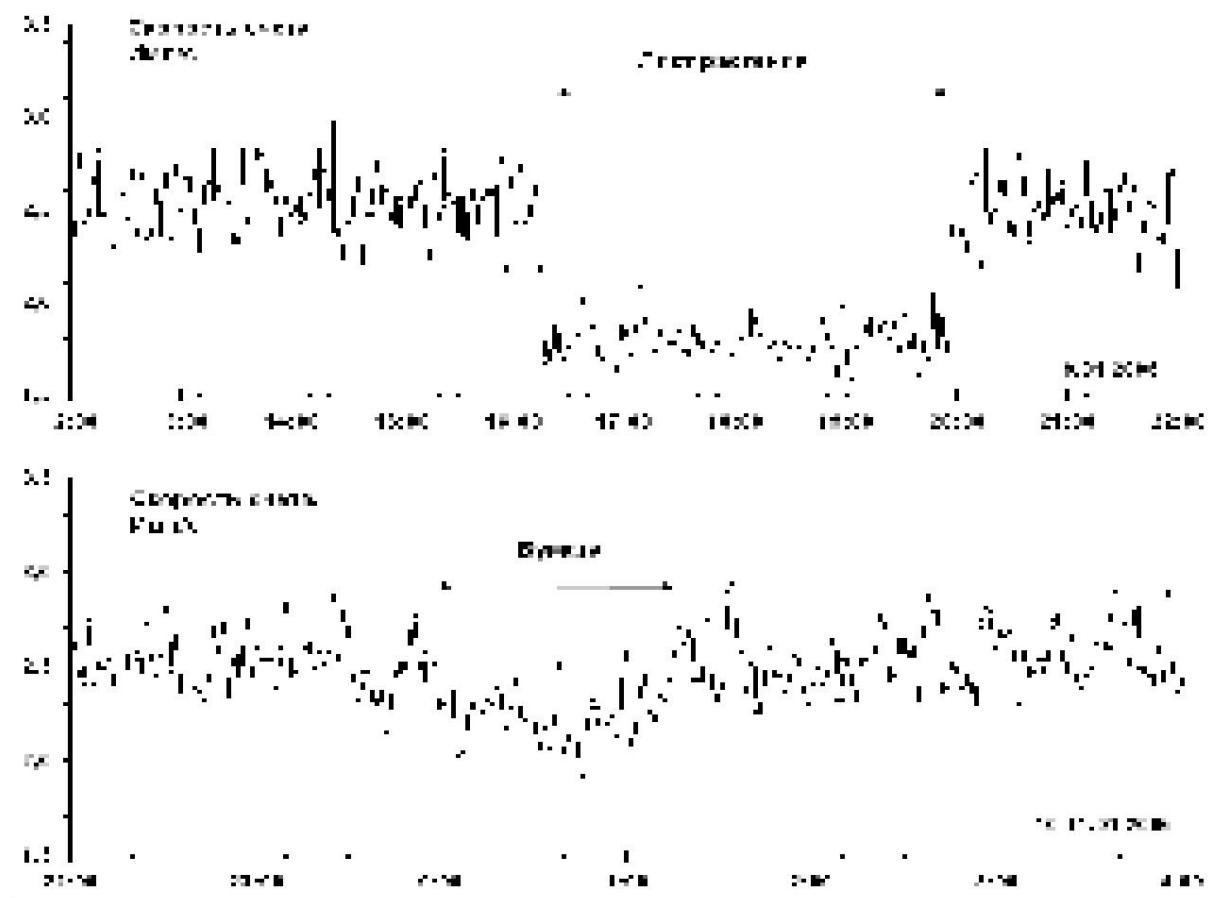
$$P_{nm} = \frac{p^m(1-p)^n}{m!n!}$$

where P_{nm} is the probability that in a series of n independent identical trials the event we are interested in will appear m times if the probability of occurrence of a random events in the interval of interest to us is equal to p . In our case, $n = m = 6$, and $p = 0.312$ we find by taking the total number of measurements (93) to the number of measurements included interval 13.0-13.15 pulses/s (29). Substituting these values into the formula, we get $P_{nm} = 0.0009$. In other words, such a set of events, if they were purely random, may appear in about one experiment in a thousand. Similar About a hundred experiments were done in 2003-2004, and such anomalies were observed in most of them. Therefore we can rightfully conclude: incredible, but true.

Similar results were obtained in experiments to study the influence rotating objects on radioactivity [9], during the dissolution of crystals (Fig. 2), as well as in experiments to study the remote influence of humans on electrical noise generators [10]. K.A. Vinogradov discovered a difference in distribution of radioactivity measurement results from Poisson statistics at the presence of a plant leaf between the source and detector [11]. This effect was found confirmation in our experiments [12, 13] (Fig. 3).



Rice. 2. Progression of the count rate of alpha particles of the ^{239}Pu source recorded semiconductor detector [8]. Around the time shown by the arrow, at 400 ml of water dissolved 100 g of sugar. Distance from a glass jar of water to the sensor about 10 cm. A section lasting 15 minutes with a reduced scatter of results.



Rice. 3. Example of the influence of the houseplant *Eucharis grandiflora* on beta registration particles using a Geiger counter compared to the effect of a paper absorber. Source - 40K in a natural mixture of isotopes (disk with a diameter of 55 mm and a thickness of 5 mm from a mixture of K_2CO_3 and epoxy resin). Detector - end-face halogen counter with mica window 10 μm thick and 34 mm in diameter, background count rate 0.3 pulses/s Distance between source and detector 7 mm .

Torsion fields and information interactions – 2009

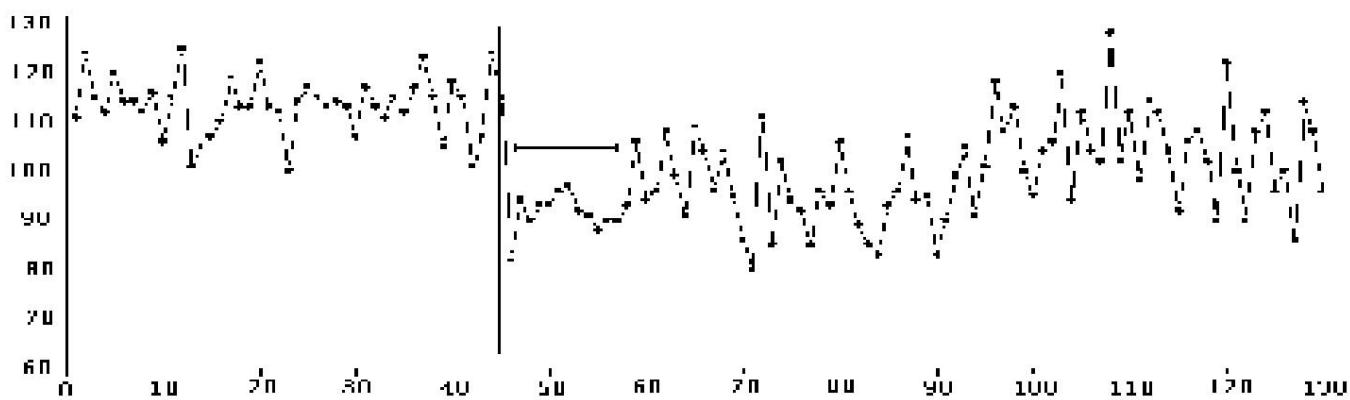
The results of the experiment, the course of which is shown in Fig. 3

	1 without plants 12:01 - 16:13	2 <i>plant plant plant</i> 16:15 - 17:08	3 17:10- 18:07	4 18:09 - 19:57	5 without plants 19:59- 22:00	6 without plants 21:01 - 23:56	7 paper 23:58- 1:12	8 without plants 1:14 - 6:00
Time								
Average	2,541	1.805	1,797	1,794	2,511	2,516	2,243	2.575
StDev	0.167	0.121	0.064	0.126	0.168	0.149	0.149	0.165
Poisson	0.159	0.113	0.112	0.112	0.157	0.157	0.140	0.161

In the table: Average - the average value of the counting rate in the area under consideration, StDev - standard deviation of the measurement results in the area under consideration, Poisson - the theoretical value of the standard deviation under the assumption that the measurement results are distributed in accordance with Poisson's law.

It can be seen that in areas without a plant leaf between the source and detector (areas 1, 5, 6, 8) the spread of results, characterized by standard deviation, is quite corresponds to the theoretical estimate made under the assumption of fairness Poisson distributions. Placing 0.2 mm thick paper between the source and detector (section 7) reduces the counting rate by 13%, but the nature of the fluctuations remains unchanged, fully consistent with the Poisson distribution. Placing a plant leaf between the source and detector leads to a decrease counting speed by 28%. Scatter of results with the sheet at the beginning, for almost hours, slightly higher than Poisson (section 2), then sharply for about an hour falls (4 times) (section 3), after which the scatter is restored, close to Poisson (section 4). Probability of site 3 appearing as a result random coincidence 4. 10-13 .

The effect of a sharp reduction in the scatter of count rate measurements radioactive source if there is a sheet between the source and the detector plants was confirmed by research conducted at the Moscow Institute of Physics and Technology by A. Kozhinov and N. Perevozchikov. Results of one of The experiments they conducted are shown in Fig. 4.



Rice. 4. On the vertical axis – the number of beta particles of the $40K$ source registered Geiger counter for 30 seconds, along the horizontal axis - the measurement number. In the moment time, marked with a vertical line, is placed between the source and the counter leaf of the *Saintpaulia Butterfly* plant . In the area marked with a horizontal line, the scatter of measurement results is significantly less than Poisson.

So, various experiments have shown the possibility of controlling not only intensity, but also *the degree of randomness* of processes. Impact on speed processes can be explained by external influences of certain physical agents, and such variability fits well into modern scientific representation. But the variability of *the type of distributions* (degree of randomness) at measurement of parameters characterizing the course of processes is surprising. This phenomenon would not be so intriguing if it were observed only in systems that fluctuate like flicker noise: in general terms it is clear how processes in systems with many interacting elements can change the amplitude fluctuations, acquire rhythm under the influence of external influences and self-organize [8]. But in recent years, experimental results indicating *the universal nature* of the variability of distributions. Manifestations of this phenomenon were found not only in flicker noise, but also in white electrical noise, alpha and beta radioactivity, where the physical mechanisms that may change the distribution of measurement results are unknown. Moreover the possibility of *purposeful control* of the degree of randomness with the use of technical devices.

We are accustomed to the fact that influencing the course of a process means changing its speed and intensity. This, in essence, is what modern technology is all about. We cool food so that it does not spoil for a long time, we burn fuel so that it quickly release the energy stored in it, we irradiate the nuclei with neutrons to accelerate their division. But, apparently, there is *another type* of variability in the course of processes, manifested in a change *in the orderliness* of the behavior of system elements, and this can occur regardless of energy changes. Perhaps here we are faced with unknown properties of information, because order is related to information. And information comes with consciousness. Maybe this is where the search lies direction will make it possible to overcome the crisis of modern natural science and open space for a new stage of understanding the World in which we live.

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Geological aspects of cold fusion and electrical discharges in the earth's crust *

Tarasenko G.V.
KSUTI named after. Sh. Yesenov
tarasenko-genadi@rambler.ru

The example of the construction of the planet Earth serves the spherical concretion, formed to account for electroplating in oilgaswater-bearing layers. During electro blasting are formed fireballs, possessing powerful electromagnetic and gravitational by floor attracting dissolved chemical elements from layers fluids. Formation to oils links with these process exactly.

The idea of a hollow Earth arose only after scientific circles
The theory of the sphericity of the Earth was established. Astronomer Edmont Halley (1656 - 1742) suggested that our planet has a hollow inner sphere. Trying to explain the movement of the magnetic poles of our planet, he suggested that several spherical shells rotate inside it, inserted one into the other (Fig. 1). But what causes the rotation of geospheres?



Fig 1. Scheme of the structure of planet Earth.

The formation of planets is associated with the “big bang” process. Dust-like nebulae observed through telescopes by astronomers at observatories around the world show their spiral structure, indicating rotation. It's a spin and leads to a dynamo effect and the accumulation of a huge electrical charge. In During the electric discharge (explosion), plasma spherical planets are formed (stars) possessing a magnetic and gravitational field due to a rotating plasma. All collected space debris is processed in it and formed primary cortex, which is also constantly absorbed due to the spiral plasma rotation, called subduction in terrestrial conditions. Plasma rotation and

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Torsion fields and information interactions – 2009

leads to the rotation of geospheres in terrestrial conditions, as well as to a decrease or compression of the planets until the plasma is replaced by metal oxides or silicon Such an example of the structure of planets is provided by the spherical nodules of Mangyshlak, to which we will return later (Fig. 2).



Rice. 2. Sectional view of a spherical nodule.

But the compression of planets leads to their death and subsequent processing in space. This means that nothing is eternal except plasma matter.

According to chemical analyzes of comets and asteroids, the presence of organic carbon, which burns only above 6000C, which indicates cold plasma, in which carbon is stored. Thus, life on the planet began precisely from this plasma brought from space.

An example of the structure of planet Earth is precisely spherical nodules (Fig. 3-4). Inside this nodule, the iron oxide content reaches 90%, which proves Astronomer Edmont Halley's assumption about the hollow structure of the inner spheres planet Earth.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009



Rice. 3. Life-size view of nodules. Ondy tract.



Rice. 4. Spherical nodules with spherical rings, similar to geospheres planet Earth.

Their origin is associated with electrical discharges in the earth's crust and mantle [1-3], in zones active tectonic faults, both horizontal and vertical directions. They produce real underground thunderstorms with lightning as long as tens of kilometers. At the end of linear lightning, their nearest

Torsion fields and information interactions – 2009

relatives - ball lightning. The bottom of the Atlantic Ocean near the mid-ocean ridges is strewn with iron-manganese nodules, which allows talk about their origin due to ball lightning, which has electromagnetic and gravitational forces that form the rotation of fluids in tectonic disturbances, as well as reservoir layers. During rotation the host rocks of the formation are attracted to the center and thus grow spherical rings (geospheres), forming spherical, cylindrical, elliptical, almond-shaped and other nodules [4]. Fluid rotation is possible only in emptiness (karst), which contradicts the "classical" understanding of the structure reservoir formation, where porosity and permeability must be present, i.e. crystal cell. The absence of the latter is proven in coal seams that come to the surface, which are products of paleo-oil, but not paleo-trees, peat, or organic matter. But oil was formed from organic matter, which transformed into the mantle due to cold transmutation of nuclei and serves as a lubricant for rotation of geospheres and radiator cooling. Rotation of the geospheres of planet Earth and leads to subduction (pushing) of lithospheric plates under each other, where organic matter in the form of carbon is drawn into the mantle.

Thus, studying spherical nodules formed in oil and gas-bearing reservoirs reservoir layers (Fig. 5) and deep seismic of the planet Earth, perhaps more deeply understand the structure of planets and their formation.

As a special group of natural bodies, spherical nodules were identified back in the 18th century, and they have been the object of special research for more than 250 years. But the the formation of nodules remains still unsolved. Long established and steel The object of special research is nodules in organisms (kidney stones, pearls, etc.), technico-concretions (so-called stones in glass, etc.), special nodules are also atmospheric formations - hailstones, etc. Artificial only pearls were obtained through this method, but hailstones, spherical concretions, created No one succeeded artificially [4]. This is due to the fact that geological representations of the formation of spherical nodules were considered from the standpoint geosynclinal theory (fixism).



Rice. 5. Spherical nodules in the reservoir reservoir of the Lower Cretaceous deposits of the South Mangyshlak.

The nodules were associated with the stages of lithogenesis of the host rocks and were separated according to the time of formation into 2 groups: syngenetic, formed at the same time as surrounding sediments, and epigenetic, which formed after deposition host rocks. Many authors noted the absence of a sharp division between these groups, because they assumed the existence of nodules in which the central part syngenetic, and external – epigenetic, formed due to growth after burial under sediments. They did not allow horizontal tectonic disturbances in the earth's crust leading to the separation of geolithodynamic complexes (scales, plates, layers) that rub under each other (effect millstones), forming basal packs, or diverge from each other, sliding along basal unit filled with fluids, forming karsts. Oil and gas bearing strata any deposits reach from a few meters to hundreds (Tengiz, Zhetybai, Uzen, etc.), where reservoirs alternate (basal packs, sandstones, conglomerates etc.) and fluid seal (clays, mudstones, etc.). Since oil is a dielectric, it turns out to be a natural electrical capacitor in which static electricity accumulates. voltage due to friction of plates, scales, or charged from the dynamo effect itself planet Earth, where the geosphere rotates from the core at a speed of 20-40 m/sec, the mantle - 1-10 m/year and the lithosphere itself - 2-16 cm/year.

During the discharge of a natural capacitor, linear and spherical electromagnetic fields (in the form of ball lightning) in voids filled with fluid and mulched (crushed) rock, which is attracted by electromagnetic field. The formation of an electromagnetic field in the form of a vortex is quite natural to the distance of the basal unit or karst, due to which there are nodules on the surface can reach 300 m in length and more than 1.5 m in diameter. Tornado formation also associated with the phenomena of turbulence (rotation) of air flow and their study can provide additional information about the occurrence of such processes.

Torsion fields and information interactions – 2009



Rice. 6. Tornado at the Kashagan field.

Studying the spherical nodules of mountain Mangyshlak (Karatau), discovered inside reservoir layers of Lower Cretaceous and Jurassic age, which are filled sandy-clayey rocks, we can state the fact of syngenetic the origin of the nodules, and the host rock - epigenetic. This means that spherical concretions formed in the void, and only then the void was filled products of mud volcanism, burying nodules and displacing formation fluid. The nodules become very dense and are destroyed only on the surface due to physical weathering, thus forming various spherical education.

The chemical analysis of Mangyshlak nodules by sphere is monotonous. In the center the content of iron oxides reaches 90% and to the surface - up to 5-6%. Big the content of iron oxides indicates constant circulation of formation fluids through the core of the concretion, which can occur due to nuclear plasma reactions inside the nucleus. The core is generally very soft compared to others geospheres, which are cemented by various rocks (clay, carbonates and etc.).

The same processes occur during the formation of planets, but with more powerful electrical explosions, which is confirmed by the latest research data galaxies with modern telescopes. The same ones are observed in space rotational movements of cosmic "nebulae" leading to large

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

explosions in space and the formation of new planets and stars. After the explosion it is formed spherical plasma, rotating at the speed of the planet's core and processing space debris through itself (comets, satellites, etc.). Thus begins the formation of the lithosphere and the contraction of the planet itself. This is also noted by instrumental measurements of our planet. The contraction of the planets is confirmed by the formation of spherical nodules, the plasma of which is also replaced by minerals formations and they are preserved in reservoir layers. In spreading zones There are no such conditions and spherical nodules fly out of the faults and, losing energy, are deposited on the bottom of the oceans. From submarines have been repeatedly observed spherical glows, which confirms such a process in the oceans.

Underground thunderstorms have also been recorded in continental conditions on the Kola ultra-deep well, on the coast of Ladoga in Karelia in 1996, where the land over hundreds of meters, it seemed to have been blown up from the inside, thus forming flat, shallow trench. The trees that used to grow on it turned out to be uprooted and thrown aside, and what is quite strange, the roots many of them were charred and smoking. It turned out that the fire scorched them from below, from underground!

It is interesting to note that if this incident had happened a hundred years ago, the then geophysicists would easily explain it as a consequence of an underground thunderstorm. "Earthly electricity produces storms that destroy the internal structure of our planets just as storms in the atmosphere throw the air into disorder space," Georges Dary wrote in 1903 in his book "Electricity in All its Applications." - "We mean the well-known earthquakes, the cause which is undoubtedly electricity. The earth is electrified throughout aggregates and strong electric currents constantly run through it. If the air is dry and hot or is already so saturated with electricity that it cannot accept itself of its excess released by the earth, if deposits of chalk and siliceous soils are located near places rich in metals, then the accumulation of electricity in ultimately leads to a discharge in exactly the same way as happens during atmospheric thunderstorm. You can imagine the destruction this could cause. underground thunderstorm, when it discharges over a space of several square kilometers through various deposits, crevices, depressions, etc. Such categories reverberate from ground tremors hundreds of kilometers away. The stated theory, based on irrefutable facts, was developed by us in 1885; V it is now recognized by many meteorologists and physicists who have found new facts confirming it."

But some time passed, and the theory of an underground thunderstorm was forgotten. Now light Geophysicists are trying to explain the outbreaks by the ignition of gas escaping from the depths. However, a flash of light during the powerful Tien Shan earthquake in 1976 was visible hundreds of kilometers from the epicenter!

In the early 70s, a professor risked reviving the hypothesis of an underground thunderstorm Tomsk Polytechnic Institute A.A. Vorobyov. Gathering a group like-minded young employees, he began experiments in different regions of the country. Vorobyov and his colleagues expressed the idea: during

Torsion fields and information interactions – 2009

underground thunderstorm, as during a normal thunderstorm, radio waves should be generated and if you try to register them, they can become the same harbingers earthquakes, like radio waves in the atmosphere as harbingers of ordinary thunderstorms. AND researchers actually managed to record increased tension underground radiophone immediately before earthquakes.

But attempts to present the results of this important work at the most prestigious scientific journal - "Reports of the USSR Academy of Sciences" encountered resistance opponents from the leading earthquake institute, Institute of Physics of the Earth, Academy of Sciences THE USSR. Having crushed Vorobyov's idea to smithereens, they themselves carried out similar experiments and after a couple of years articles on similar topics became a regular feature appear in the "Reports", of course, without reference to the predecessor.

Then Vorobyov and his collaborators tested another idea: ordinary lightning generates a lot of ozone, and therefore before an underground earthquake from underground free ozone should be released. This idea has also been confirmed by practical experiments. But, unfortunately, the early death of Professor Vorobyov is actually put an end to his work. The facts obtained by the professor are not rejected, but they are trying to give other explanations.

The similarities of the processes occurring in the galaxy, planets, and earth's crust are experimental data carried out at the Institute of Physics. Kurchatova under leadership of Leonid Urutskoev. The "Urutskoev effect" is associated with an incomprehensible phenomenon - a plasma object similar to ball lightning [7]. Appearance ball lightning is associated with the electric explosion of wires in distilled water. While simulating an underwater electrical explosion, they encountered an incomprehensible a phenomenon similar to ball lightning of non-radioactive radiation at a speed rotation 20-40 m/sec. After the experiment, in the explosion chambers appeared foreign chemical elements in cruising quantities – at the level several percent of the initial mass of the explosive substance (titanium, iron, lead, nickel and tantalum foil), which were not there before and according to all the laws of physics, it shouldn't be. These are gold, silver, phosphorus, antimony, iron, gallium. Thus, lead was transformed into gold, nickel into silver, titanium into lead... There are as many chemical elements as there are transformations.

The same conditions are created in the reservoir layer, which is always full fluids. If this is so, then the reservoir appears to be hollow (karst), filled with water, oil or gas. Origin of electrical explosion in the collector associated with the accumulation of electrical energy in geolithodynamic complexes (plates, scales, layers), due to horizontal tectonic movements in the earth's crust and its stratification. Examples of electrical explosions are complex accidents in coal mines or geophysical self-polarization method layers (PS).

The connection between the formation of coal from oil and vice versa has been considered in many works [5], which serves as a basis to assume the formation of voids (karsts) in the earth's crust various times, filled with oil or water. During uplift (exhumation) by horizontal movements of the obduction mechanism on

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

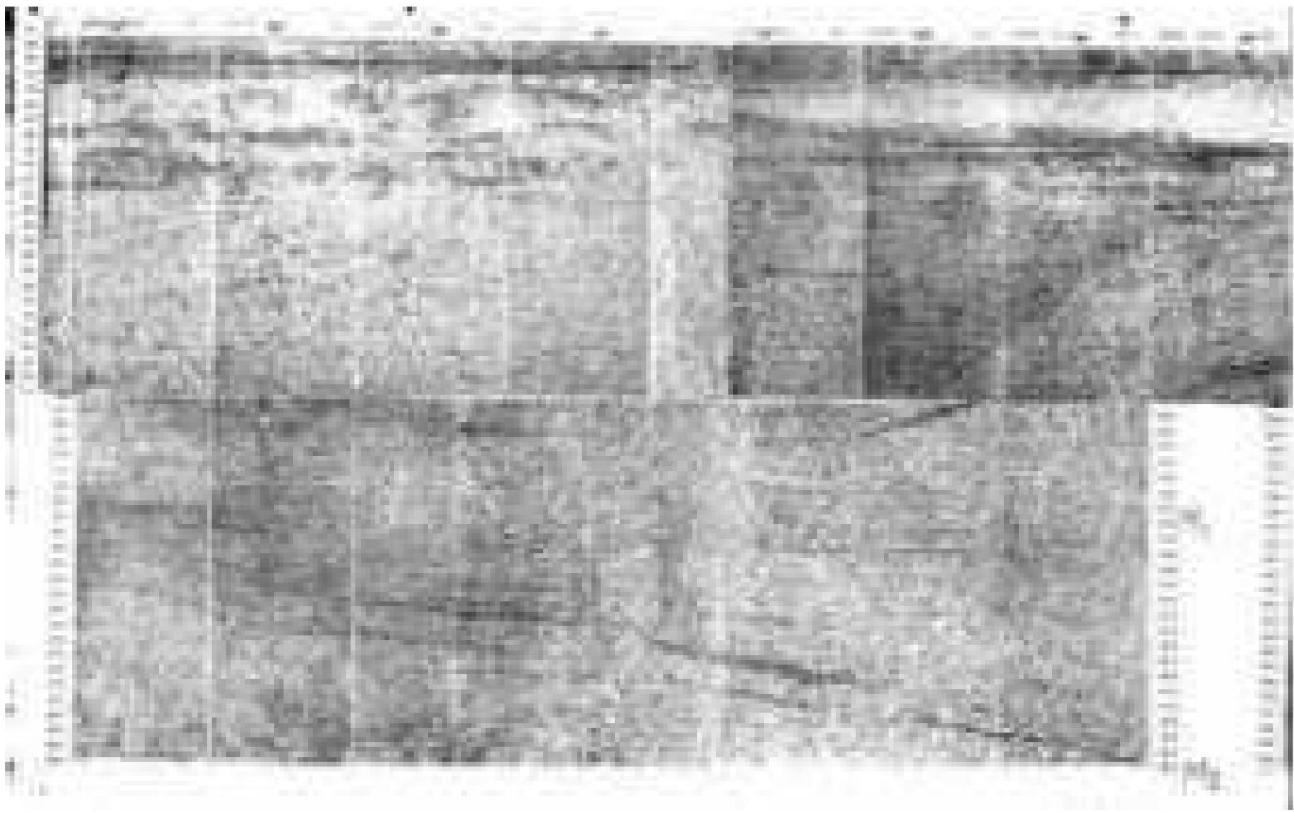
surface, subhorizontal outcrops of coal seams (Chelyabinsk, Tauchik, Ekibastuz, etc.) or kirov (Karasyaz-Taspas deposit) are observed.

The structure of planet Earth is very original and practical, knowledge of it continues to this day. It is based on the rotation of geospheres from the core to the surface. Geological study of the planet leads to constant movements noted in rock samples, cores from wells from depths of more than 10 km, where horizontal slip surfaces in mudstones, stylolite sutures in carbonates, cracks. According to deep seismic data, listric faults and tectonic stratification into geolithodynamic complexes (plates, scales) are identified, which move at different speeds, which leads to tectonic erosion and mulching of rocks carried by fluids towards discharge geodynamic processes (mud volcanism). Such a mechanism in geology serves as obduction, leading to the exhumation of rocks from the surface Mohorovicic and structure formation. Subduction serves as a mechanism fluid formation and supply of "fuel" for nuclear-plasma reactions in the mantle and core. The mechanism for driving movements in the geological sense is mechanical convection, but not thermal, in the physical sense. Thus, from rotation of geospheres it follows that there is a separation of forces along a tangent (to circle) into two components - subduction and obduction along the surface level Moho at a depth of 10-12 seconds. both in the oceans and continents, which leads to their unity.

The transmission of movements occurs on the basis of the rotational regime of the planet Earth [6], i.e. geospheres rotate from the core to the mantle and these movements reach surfaces. But the surface speed according to GPS data ranges from 2 cm/year to continents, and in the oceans reaches 16. The difference in speeds is related to the thickness lithosphere, which reaches 300 km on continents, and 5-20 km in oceans. Due to differences in the thickness of the lithosphere, different amounts of geolithodynamic complexes that slide under each other and are thus extinguished the speed of plate movements on the surface. Due to the difference in speeds, the oceanic bed is 3 times larger than the continental one, which also converges along geographical territory. Speed decay begins to occur at the level geospheres transmitted from the core, the rotation of which reaches 1 m/sec (according to Trubitsin) [6] 20-40 m/sec (according to experimental data of Urutskoev [7]), lower and upper mantle at a speed of 1-10 m/year. The rotation of geospheres brings the lithosphere into movement and creates the gravitational, geomagnetic and electric field of the planet Land where all conditions for the reproduction of mineral resources are created, due to electrical explosions [3].

The accumulated geological and geophysical material on the Caspian basin and adjacent Caspian territories allows us to come to the conclusion about the constant generation of fluids in deposits. I came to this conclusion from the standpoint theory of slip plate tectonics, where the main mechanism of fluid generation is serve as subduction zones in continental conditions (Tarasenko G.V. "Genesis of oil and gas" Moscow 2003). Subduction processes in the study area are well are identified by seismic CDP methods, such as the joint microcontinent of the Karpinsky Ridge with the Astrakhan arch (Fig. 7). This zone

refers to the Astrakhan-Aktobe island arc, on which, mainly, large deposits have been identified (Tengiz, Astrakhan, Zhana-Zhol, Kenkiyak, Karachiganak, etc.).



Rice. 7. Temporary seismic profile in the junction zone of the Kryazha microcontinent Karpinsky and Astrakhan arch. According to the Astrakhan State Examination (1994)

The chemical composition of oil from these fields is basically the same and contains different amounts of hydrogen sulfide. This indicates that fluid migration from Subduction zones occur subvertically. Subhorizontal migration leads to the adsorption of hydrogen sulfide in the host rocks of the accretionary prism and in the oil subduction discharge zone mainly contains paraffins (Mangyshlak) and rare metals (Buzachi).

Evidence of continental subduction and constant generation of fluids Seismological, seismic, palynological and geochemical data, as well as constant fluctuations in the level of the Caspian Sea, are used.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

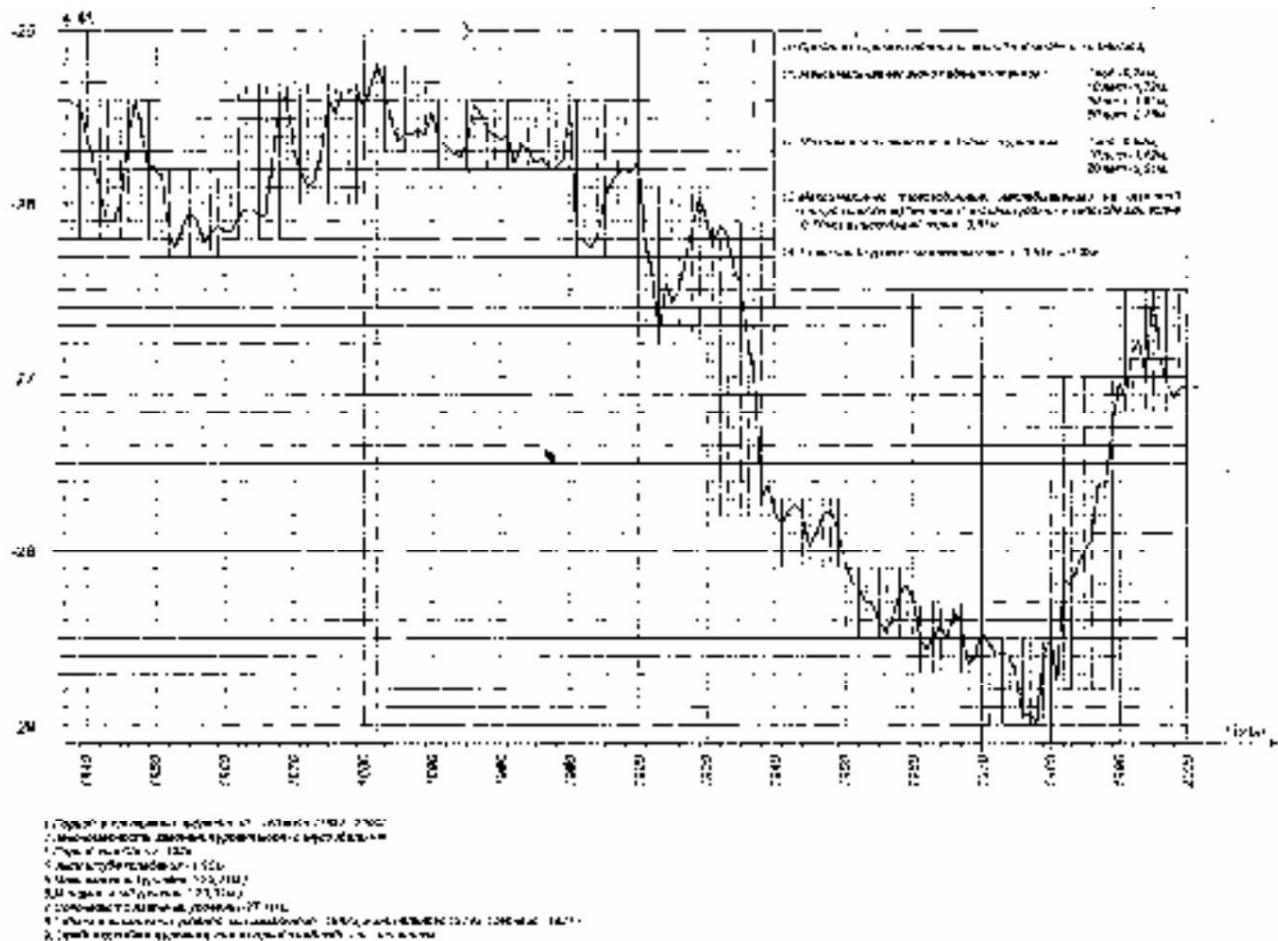


Fig.8. Graph of changes in fluctuations of the Caspian Sea from 1840 to 2000.

If the movements in the earth's crust are constant, then the process of subduction is also constant, which is the mechanism for supplying rocks to the mantle. But how fluids are formed at great depths, where large temperatures at which hydrocarbon destruction should occur? The study of meteorites confirms the presence of organic compounds that burn at temperatures above 6000C. The plasma likely formed during The Big Bang time refers to cold nuclear fusion.



Torsion fields and information interactions – 2009

Rice. 9. Laboratory ball lightning. Shooting in a darkened room.

Laboratory studies of obtaining spherical plasma due to electric discharges were carried out at the St. Petersburg Institute of Nuclear Physics. B.P.Konstantinova RAS, Gatchina (Shabanov G. 2000) [8]. At the Institute of Nuclear Physics named after. Kurchatova electric discharges of wires in water were carried out, during which spherical plasma with a rotation speed of 20-40 m/sec [7]. Probably rotation the core of Planet Earth is also 20-40 m/sec. Mantle rotation speed According to Trubitsin, it is 1-10 m/year, the speed of movement of lithospheric plates is from 2 to 16 cm/year. Rotation of ball lightning and serves as a generator of electricity the earth's crust, and the mantle and lithosphere are like a capacitor. Rotation of geospheres leads to sliding between geolithodynamic complexes (plates, layers) and creates the effect of millstones and the moving apart of plates, which leads to formation of basal units and karsts, which are reservoirs for fluids.

All of them have a cylindrical or spherical shape. To cylindrical concretions include linear lightning, and at their ends - ball lightning.



Rice. 11. Cylindrical nodules with spherical branches.

Lightning leads to the formation of plasma, which has enormous energy, which creates abnormally high reservoir pressures and cold transmutation of cores chemical elements. Cold fusion is the basis for the formation of coal. from oil, not from trees and peat.

Proof of this process is my research at MAEK-Kazatomprom LLP, where I obtained a spherical nodule from Mangyshlak oil. asphalt-resinous substances, and oil turned into pure gasoline [9-10].



Rice. 12. Photo of a disassembled reactor vessel, where a black clot is visible between electrode and the vessel wall.



Torsion fields and information interactions – 2009

Rice. 13. Laboratory for modeling geoelectric discharges in the earth's crust.

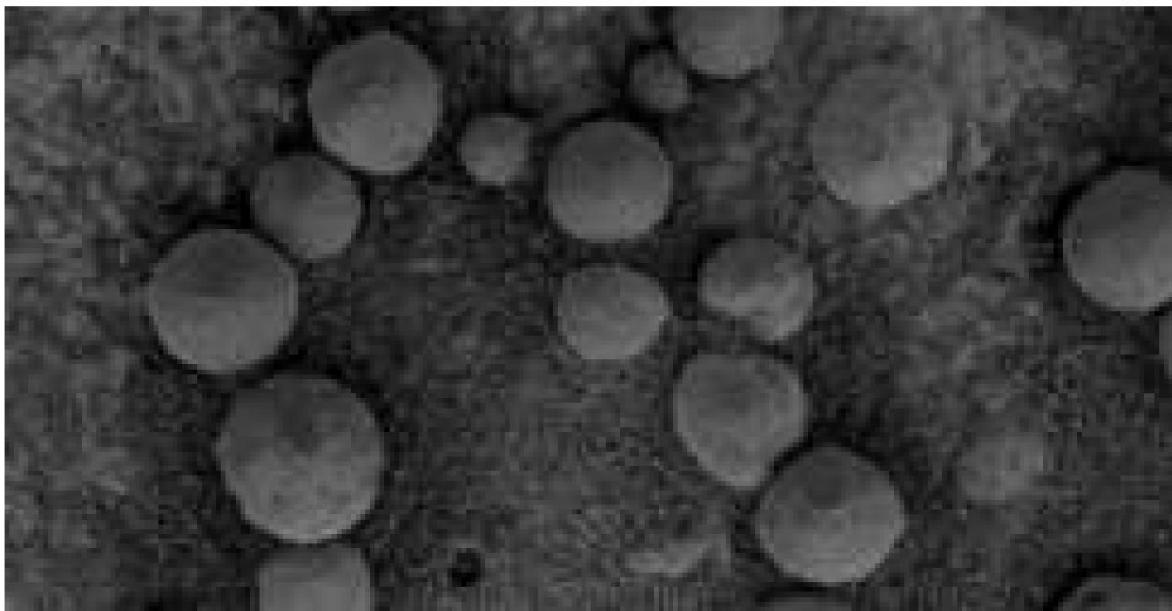
Evidence of this process is also provided by palynological data, where disputes and the pollen contained in coals and oil is of the same age, and they burn at a temperature above 600 degrees. This means that cold fusion occurs at temperatures no higher than 600 degrees. Spherical concretions were also found in the slabs of the Egyptian pyramids and dolmens of the Caucasus!



Rice. 14. Ball concretion in a dolmen, Lazarevskoye Gorge, Sochi region.

Most likely, the people who built these megaliths had such energy and the slabs were made from improvised material consisting of sand, like nodules Mangyshlak. The density of the nodules allows them to remain on the surface tens of thousands of years, and the age of the megalith is 5-6 thousand years.

Spherical concretions were discovered on the surface of the planet Mars and photographed.



Rice. 15. Spherical nodules photographed on the planet Mars.

Such a process can be cold nuclear fusion or cold transmutation of nuclei of chemical elements due to electric explosions in the earth's crust and mantle, during which oil and gas are formed from organic carbon, and water is inorganic, which is why there is ten times more water in the earth's crust. But fluids also serve to remove heat from nuclear processes and their extraction leads to devastation of the radiator-lithosphere, which leads to global climate change, and not the greenhouse effect, as is commonly believed.

The lithosphere also serves as a capacitor! Static voltage overflow and leads to electrical discharges not only in the mantle, but also in the earth's crust. Structure spherical nodules corresponds to the structure of planet Earth - from geospheres. If spherical nodules were formed due to the rotation of ball lightning, then it is possible to say unambiguously that there is ball lightning or spherical plasma formation obtained experimentally in Kurchatovsky Institute (Urutskoev L.I. et al.), rotating at a speed of 20-40 m/sec.

Based on geological and geophysical data and the theory of slip plate tectonics it can be predicted that oil will never run out, but its production will lead to global climate change and the death of earthly civilization. But further Study of planet Earth will lead to the creation of anti-gravity engines like UFOs and flying saucers.

If we consider coal seams as paleo-oil, then modern reservoirs are hollow, which is also proven by the formation of spherical nodules in paleocollectors, which were subsequently filled with mud products volcanism. Mud volcanism, in turn, is associated with the millstone effect and migration of fluids in which the mulched rock dissolves. Polymetallic deposits are mainly associated with this process. Electrical discharges also include earthquakes, not collisions.

Torsion fields and information interactions – 2009

lithospheric plates, explosions in coal mines and no technology can prevent this phenomenon.

These studies confirm the presence of cold plasma in the core and lower mantle planet Earth, and rocks supplied through subduction zones enter reaction and are transformed into various chemical elements, including hydrocarbons and water (fluid). Rotation of geospheres from the plasma core of planet Earth leads to the formation of a dynamo effect and continental drift.

Based on geological and geophysical research into the structure of the planet Earth and spherical nodules (Tarasenko G.V. 1993-2007) were carried out experimental work on creating electric discharges in natural conditions.

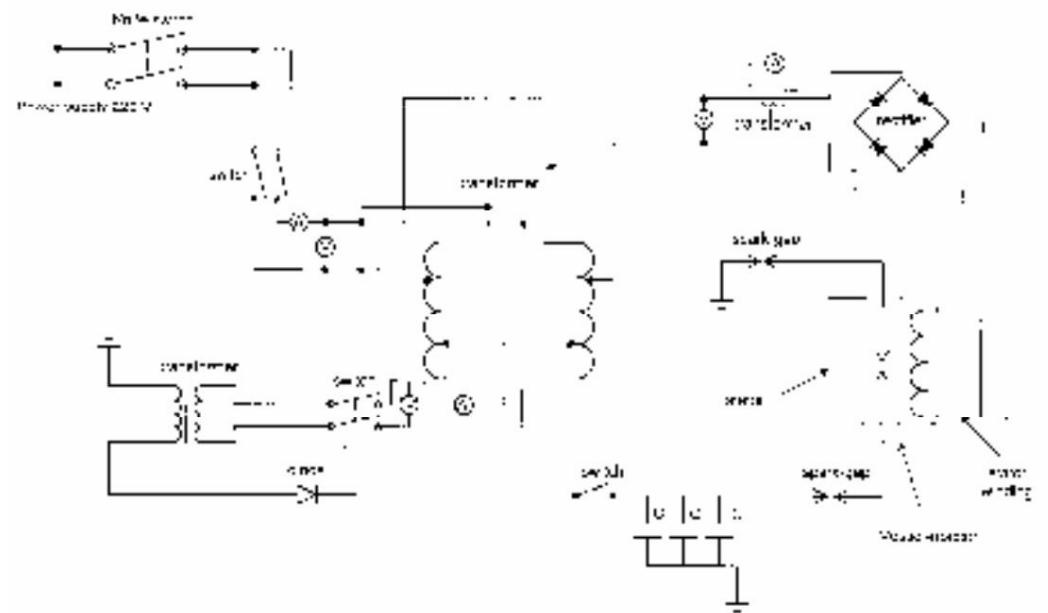


Fig. 16. Photos of the experiments being carried out.

Various components of reservoir fluids and rocks were placed in the reactor vessel. breeds The reactor vessel was placed in the stator of a 3 kW electric motor, which a voltage of 20-30 volts was supplied, the current rose to 35 amperes. At the same time on the reactor vessel was supplied with discharges through a capacitor bank with a capacity of 16 mKF for voltage 6 kV. During discharges, the reactor vessel was heated to 700C. On ball gap, there was a gradual increase in the arc, which turned into constant light (short circuit), voltage has dropped to zero. As the gap increases on a ball gap, the short circuit occurred in the reactor vessel (according to sound).

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

The pressure rose to 300 atm. After disassembling the reactor vessel and draining the fluids, spherical asphalt-resinous residues remained on the electrodes. Their education associated with cold nuclear fusion occurring due to electrical discharges and leading to the formation of fluid separation into light fractions and accretion solid minerals. These experiments confirm the formation of spherical nodules, coal, and polymetals from the products of mud volcanism and formation fluids, on basis of electrical discharges in the earth's crust and mantle.



Rice. 17. Schematic diagram for electrical discharges in a reactor vessel.

To obtain a new type of energy, it is necessary to create a mechanism in which there will be all elements of the structure of planet Earth are present.

These include:

1. Radiator.
2. Electric capacitor. 3.
- Generator core.

The last one will be ball lightning.

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PATHOGENIC RADIATION. PROTECTION

About a problem of users protection from negative influence of electronic technology

Anatoly Pavlenko

Professor, Acamedician of International Academy of Bioenergy

Technologies, Ukraine a.pavlenko@meta.ua

**This article is devoted to issues of protection against negative influence on
users of monitors of the personal computers, TVs, and mobile phones.**

**The goal of this article is to draw people's attention to a dangerous psychological
mechanism of adaptation to more than real ecological threat and to discuss concepts
of human protection from the negative influence of most radio- and electrical devices, systems,
machines etc.**

**The number of PC, cell phones users is steadily growing. Especially alarming is the
increase in the number of children affected by electromagnetic radiation. Therefore, the
study of possible harmful consequences of a wide introduction of the mentioned
electronic equipment is one of the pressing problems of these days.**

**Among physical factors affecting a user, electromagnetic fields (the EMF) generated by
a PC, mobile phones, etc. draw the greatest interest. It can be explained by the fact that
there is a significant number of data items about increasing risk of generation of some
tissues during industrial exposure of users to the EMF of various frequency and
intensity as well as abnormalities of immune and endocrine systems. As for PC users,
there are separate, not always proven statements about the rise in the risk of brain-growth, increase
miscarriages among women-operators, etc.**

**The experimental research conducted in the USA with volunteers' participation with the
goal to study the mobile phones' influence upon users revealed an extreme degree of the
risk of brain-growth generation among the latter. The data about this research can be found**

**in Although the use of special measures, such as various build-in protective means, the
use of protective filters, reduced voltage at the anodes of a cathode-ray tube, etc. allow
practically completely weaken the ultraviolet and soft X-radiation, electrostatic and
electromagnetic fields (by 98-99%), one still cannot claim that the most up-to-date
computers and so-called "bio-TV-sets" are biologically safe systems.**

Torsion fields and information interactions – 2009

A working group of the World Health Organization, which considers hygienic aspects associated with the use of the PC and radio terminals, discovered the number of health disturbances among users of the mentioned equipment.

There are more and more contradictions between precise physical measurements and biological effects whose essence cannot be explained. Many scientists consider torsion fields as an information component of any electromagnetic radiation to be one of unknown factors of the negative influence upon PC, cell phones users.

Doctors and biologists have begun to pay a close attention to the problem of torsion fields.

Let us present the facts that prove the above-said.

VPKaznacheev (the Scientific Center of Clinical and Experimental Medicine, SD of the Russian Academy for Medical Sciences, the International Research Institute of Cosmic Anthropoecology, Russia, Novosibirsk) proposed a general conception of the interaction between spinor-torsion fields and living matter, including the effects of hilarity and heliocentric imprinting. A transfer of chemical and biological information from one biochemical or biological object to another by means of torsion fields was discovered. In particular, it was shown that a cellular structure changed by a virus, poison or another factor induces its pathological condition through fields in optical range in an intact culture.

The peculiarities of cultures growth during a solar eclipse, planets parade and other cosmo-planetary phenomena prove a very deep interaction between biological systems and cosmogeophysical currents.

Scientists assume that living systems are not only protein-nucleic structures, but also structures that use spin-torsion mechanisms. Using torsion fields of opposite direction, they managed to simulate a possibility to transfer conditions that reflect the past and the future of a cellular structure to this structure.

For the last two decades the term "biological field" has been intensively used both in competent scientific sphere and in "near-scientific spheres" at the same time becoming habitual, being used almost always while explaining these or those phenomena of interaction.

The term "biological field" needs to be properly explained, since very often it is associated only with weak electromagnetic fields existing during the vital functions of these or those bio objects, which fact significantly constricts the contents of this notion.

Undoubtedly, all four fundamental types of interaction participate in its characteristics formation, within the limits of their physical competence. However, the entire accumulated empirical experience points out that a biofield interaction is multifarious and it is impossible neither to imagine it as a simple sum of four main fundamental types of interaction nor to reduce it to only one type of the interactions.

Now it is becoming clear that this specific type of interaction occurs between objects of the animate and inanimate nature.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

There is a necessity in deep and versatile analysis of the accumulated experimental materials, data, and hypotheses propounded by various researches in various times.

OG Havrysh (the Institute for Bioorganic Chemistry and Petrochemistry of the National Academy of Sciences of Ukraine, Kiev), proceeding with the works by VP Kaznacheev and AG Gurvich, developed a torsion model of a cell, in which he evolved the conception about the cell as a whole. In his works OG Havrysh emphasizes that AG Gurvich had never expressed his opinion about the physical nature of a biological field and, even more so, he had never reduced it to a mitogenetic radiation, having devoted about 30 years to the study of this radiation. A. Gurvich realized that any of the known physical interactions not correspond to the properties of the biological field discovered by him.

The principles of the “fifth” fundamental physical field – the torsion one – have been theoretically formulated and experimentally proven within the last century. The properties of torsion fields (in particular, non-energetic, axial character of their manifestation) coincides in a remarkable manner with the properties of the biological fields discovered by AG Gurvich. The works devoted to the biological field of the Monterey Institute for Study of Alternative Healing Arts (MISAHA), Carmel, California, are widely known in the USA.

In particular, Cavelly Savva, who proposed his theory of a biofield and a cybernetic model of an organism, notes that a physical carrier of the biofield must be at least one presently unknown fundamental physical field that can interact with the known fundamental physical force fields: electromagnetic and gravitational ones.

Having called this carrier of the biological field “X-interaction”, Savva gives a number of examples from well-known publications claiming that the “X-interaction” cannot be reduced to any of the known fundamental interactions. Savva points at the number of characteristics of the “X-interaction”, including: interaction with weak (intranuclear) forces; acceleration and deceleration of ^{241}Am nuclear decay (Yan Hing and others, 1998, 2002); low-temperature nuclear transmutation of lead into gold over a psi-operator (laboratory of the Texas A&M University, Bockris, Savva, 1999); interaction with magnetic fields: rotation of the polarization plane of a laser beam (Dulnev, 1995, Yan Hing, 1998); increase in adsorption and dispersion of a monochromatic laser radiation (with the wave-length of 10.6 micrometers) in the atmosphere (Volchenko, 1992); excitement of a periodical electrical signal in a piezoelectric sensor (Ye and Fan, 1983), etc. (in total – about 8 examples); displacement of a plate, the force required for this being equal to 100 mg (Dulnev, 1998).

Moreover, there were presented the publications about the operators' influence on industrial equipment, about the influence of the “X-interaction” on animate organisms.

Taking into consideration all said above, Savva comes to the conclusion that a physical carrier of the biological field and biological information is the “X-interaction”, with its characteristics being as follows: it cannot be weakened by any known screens; it influences effectively, irrespective of a distance, in contrast to the known physical fields such as the gravitational and electromagnetic ones.

Torsion fields and information interactions – 2009

The mentioned characteristics of the “X-interaction” coincide with the known characteristics of the torsion field, in which connection one may claim that the “X-interaction” is a kind of the torsion field.

The Savva's hypothesis proceeds from the ideas about an organism as a self-regulating cybernetic, thermodynamically open system, in which the biological field is a central system of the organism control operating non-locally, ie not on the basis of chemical interactions and including the fundamental life programs: development, maintenance (energy consumption and distribution, immunity, etc.), reproduction, and death. The mind that includes the memory, the set of reactions and the mechanism of sense extraction from the flow of the information being perceived is also a constituent of the bio field ensuring a behavioral aspect of the fundamental programs.

SA Evstratov and OP Resunkova (the Academy of National Security, Saint-Petersburg, Russia) introduce the following working definition into the discussion: a biological field – is a fundamental scientific metaphysical conception allowing to give on qualitative and quantitative levels model descriptions of the interactions between objects of animate nature as well as between objects of animate and inanimate nature using terms and structures borrowed from the modern theoretical physics and biology.

As it was stated above, scientists associate the attempts to scientifically explain the reasons for negative influence on a user of a PC protected by modern means with the influence torsion fields, or to be more precise, with the torsion component of the video terminal's electromagnetic radiation. It is proven that any electromagnetic field has a torsion component, or a torsion field, which can be defined as an information field transferring “torsion” information about processes occurring in physical objects.

In contrast to electromagnetic fields, which possess a central asymmetry, torsion ones possess an axial asymmetry, and the polarization created during this in the form of spatial cones corresponds in one direction to a right, and in another direction – to a left torsion field. The information structures created by topological forms are called form static torsion fields.

A video terminal is an information-field structure formed by the interfaces of material objects of various physical compositions fulfilling the transformation of information contained in a modulated cathode beam into visual information.

The bulb of a cathode-ray tube forms a specific geometrical structure of the information field, whose contours repeat its form. This field is called a background static torsion field. It is not intensive; however, its sustained influence has the negative impact on a user due to the effect of accumulation.

The very fact of artificially generated torsion influence on a human being of practically all domestic appliances, devices, personal computers, TV sets, etc. requires the introduction of new regulations ensuring guaranteed properties of a working place and a rest place.

Maximum permissible rates (MPR) underlie the hygienic criteria of the estimation of insalubrity and danger of electromagnetic radiation and accompanying torsion component.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

These rates have not yet been developed for many types of electromagnetic fields and radiation. According to the definition, MPR are the rates that during their systematic influence for the working period and following life periods do not lead to diseases caused by the EMF and discovered using up-to-date investigation methods.

The first MPR, applicable only to an electric constituent in the medium frequency range, were established in 1955. The following years saw the process of accumulation of experimental, clinical, hygienic data and formation of principle methodical approaches to MPR regulation.

The methods of hygienic standardization had been created by the end of the 70s. They

are as follows: 1. MPR cannot be calculated using specific accumulated rating (SAR), ie it is impossible to take into account the peculiarities of the interaction of the EMF exactly with a biological object; moreover, there are differences in the mechanisms of low and high levels of the EMF with various modulation parameters, resonance, etc. 2. It is medical parameters that should be leading ones during the hygienic standardization and not some technical parameters and their technical accessibility. The hygienic regulations have to disclose unknown influence factors accompanying the EMF, stimulate the development of devices and control means allowing to single out this or that constituent from total flux of radiation, promote the generation of new technical ideas aimed at the creation of really safe equipment and technologies.

Clinical research is one of the most important stages of the hygienic standardization. The functions peculiar only to a human being are studied during clinical trials.

A man-user is a complex torsion system of strongly individual torsion field carrying among others the information about his/her health condition. The complexity of the human's torsion field is caused by the huge number of chemical substances in his/her organism, complex dynamics of biochemical transformations in the process of vital activity and by other factors as well.

The investigations of the torsion generator's impact on blood were conducted in October 1996 in the Center of Energy Information Technologies attached to the Saint-Petersburg State Institute of Fine Mechanics and Optics under scientific leadership of a doctor of technical sciences Prof. GN Dulnev.

Those investigations consisted of two series of tests of torsion generator's (TG) radiation influence on blood.

The first preliminary series investigated the influence of torsion radiation on parameters of a clinical blood test: hemoglobin, erythrocytes, leukocytes, stab neutrophiles, eosinophiles, lymphocytes, monocytes and erythrocytes sedimentation rate. The second series studied the properties of fields using the erythrocytes sedimentation rate (ESR), which is the most sensitive to their influence parameter.

The researchers investigated the change in parameters of a clinical test of blood taken from fingers of two volunteers to glass capillary tubes after their following irradiation by

Torsion fields and information interactions – 2009

torsion generator (TG). Investigations were carried out in cycles. Each cycles was composed of the following stages:

a) a blood count from each volunteer (in total two glass capillary tube); b) irradiation of the capillary tubes by a TG (except for the check first cycle); c) a clinical test of the blood from the capillary tubes. In total, five cycles were conducted: - 1 - a check cycle, without irradiation; - 2 - 5 with various modes of TG operation (left and right polarization during the maximum and minimum voltage of the torsion generator).

The analysis of the obtained data allows to conclude that among the parameters of a clinical blood test the erythrocytes sedimentation rate (ESR) appeared to be the most sensitive to the TG radiation. The values of the ESR of both patients increased 4-5 times compared to the background values depending on radiation parameters. The change in other clinical blood test parameters is in the range of inaccuracy of their definition me

Only the ESR parameter was used for the following research as the most informative one, ie the ESR parameter can be used for the registration and estimation of torsion generator's radiation properties. The increase in the ESR up to 35-40 mm/h proves the fact of the negative influence of torsion fields of the used generators on a human organism. We should mention here an increasing role of Ukrainian scientists in the development of the torsion direction.

The FORPOST-1 device

At present time in the world and particularly in Ukraine were developed advanced technologies allowing to minimize the negative influence of various types of radiation, which fact has a national significance. Patents were taken for devices for user's protection from the negative impact of the torsion radiation of PC displays, TV-sets, cell phones, Earth's geopathogenic zones, radiation of electric motor-cars' equipment on drivers and passengers, etc. The decisions to grant patents for the arc welding method and metal microstructure correction method were obtained.

The FORPOST-1 device for PC user protection from the negative influence of torsion fields generated by a PC is far-famed in Ukraine.

The protective technique uses the idea of the deflection of the left torsion field affecting a human being on 180 degrees and its superposition with the right torsion field, which is behind the PC display, resulting in mutual compensation of the mentioned fields. As a result, a safe area in front of and behind the display is formed. In other words, the principle of the interaction between left torsion fields and the proper torsion field of the protective device is used.

The FORPOST-1 device went through the number of medical-biological trials in medical institutions of Kiev, Kharkov and Dnepropetrovsk with the aim to establish the presence of a harmful influence of PC displays' torsion fields on users and to determine the effectiveness of protection of the latter from the mentioned negative impact with the help of this protective device.

In particular, in the Ukrainian Kyiv Scientific Hygienic Center the trials were conducted with the help of a GDV-Camera hardware complex, which registers the luminescence of human fingers in a high voltage field (gas discharge visualization method, Kirlian effect).

These devices save information – bioenergograms - as images in a computer after corresponding processing by a fiber-optics system and a digital videoblast. Special programs mathematically process the obtained bioelectrograms (BEO-grams) allowing, on the basis of quantitative evaluation of images' parameters, to conduct an express diagnosis and monitoring of a psychosomatic condition of a human being in general as well as of the energetics of him /her internal organs.

The GDV-Camera complex is successfully used in the research practice in medicine for the estimation of various influences on a human organism, including the influence of allopathic and homeopathic remedies, psycho and physical therapy.

In particular, the GDV-Camera is used as a complimentary diagnostic device for determination of functional conditions of the Russian Federation Army highly-maneuverable planes pilots.

All investigation showed that the use of a FORPOST-1 protective device provides a medical-biological protection for a person against the torsion radiation of displays and TV-sets, liquid crystal displays, control equipment, mobile phones, etc. as well as prevents the following: the negative influence of the mentioned torsion fields on the immune, endocrine and reproductive systems, and genetic apparatus; disorder of the nervous and cardiovascular systems; abnormality of cerebrum operation, pathology of a visual analyzer, and upper respiratory tract, and fatigue and tension of a PC operator.

The FORPOST-1 protective device can be used: by students in computer classes of high and secondary educational institutions; at work places of operators PC of enterprises in different spheres of management and service; by operators of machine-tool which equipped with computer; by drivers of transportation utilities, by machinists of railways and underground; by machinists of industrial electro transport facilities; the car drivers; in computer gaming automatons and systems of data processing, intended for public use; the type-writers of classical design and cash devices, equipped with displays. It can be used in army subdivisions (radar, communications), in security services (the systems of

The FORPOST-1 device is also absolutely essential to workers of that professions, which spend the most of their work time in contact with office equipment: to accountants, economists and workman of banks; to employees of security services; to journalists and employees of television, editorial offices, publishers and agencies; to programmers, designers, constructors, IT workman; to traffic managers, tram and trolleybus conductor, workman of enterprises of communications, workers of trade network; to office employees, secretaries and managers.

Torsion meters

Torsion fields and information interactions – 2009

Instrument measuring complex TSM-030, having differential torsion input and orthogonal torsion outcome, has allowed to lead metrological works on measurement torsion fields. Gauges specified above devices of series FCM are elements on the basis of substances with a high level of the internal structural organization: ferrite and ferroelectrics. In the further the gauge on the basis of structural instability of material (W) has been developed.

This gauge is used in device SADAF-08LC which now is in pre-production operation, it has two laser beam contacts to objects, an output on LPT-port of a computer, and also the corresponding software allowing independently, without participation of the operator, to spend various measuring works, including of monitoring torsion field object. In comparison with previous development TSM-030, complex SADAF-08LC has the built in double laser contact to object of measurement which can be presented in the form of the electronic image.

The complex has the new resistive gauge of thin fields where the effect of change of volumetric resistance to a direct current due to reorientation free electrons in metal or the semiconductor is carried out, with increased approximately in 10 time sensitivity and approximately in 20 times the speed, the built in operative memory, system of automatic control.

An IGA-1 device (indicator of geological abnormalities) reacting to torsion fields has recently entered the Russian market. In particular, one can determine areas safe to PC users when using this device.

Mobile phones

In spite of the fact that producers categorically denied the possibility of the negative influencing of mobile phones on users and keep silence in relation to known them to the factors of the negative influencing, radiations of mobile phones remains an important problem. Researches of the European scientists showed that the negative took a place at gene level. Don't accept the industry denials that mobile phones are safe. Your cell phone is a microwave transmitter and it should bear a cancer warning. Brain cancer and cell phone risk is real. Microwave promotes rapid cell aging.

The “SPINOR” offers practical and convenient protection against the harmful effects of a torsion (information) fields emitted from devices such as cell phones, cordless phones wireless routers and electrical office and household equipment and appliances. The technology protects the entire body no matter where the device is held.

An especially large risk is presented by mobile phones for children. Newest device “SPINOR” substantially reduces the negative impact of mobile phones. It is scientifically proven that talks on protected mobile phone are safe.

Tests of devices, conducted in Ukraine, Russia, France, Switzerland, Belgium confirmed protective properties of device. Guarantee term of action – 7 years.

A device is simple in the use. Stick the “SPINOR” on the body of cell phones and cordless phones or behind the speaker on flip style phones or on the electrical source body which

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

using computers, photocopying machines, microwave ovens, or any electrical household appliance. Safe "SPINOR" is scientifically designed to eliminate biological effects induced by the torsion (information) fields.

Check of effectiveness of protective properties "SPINOR" has been lead in October 2005 in France. In experiment took part firm of France "SARL TELLUS" (A.Rusanov, manager), firm of Russia "Equaldor Center for innovations and advanced" (A.Kosov, manager), firm of Ukraine "Spinor International" (A.Pavlenko, manager).

Conclusion

Device "SPINOR" neutralizes the torsion component of electromagnetic emission of mobile phones; protective properties are transferred from the protected phone to the unprotected one; the transfer of protective properties does not depend on the distance between subscribers.

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Torsion fields and information interactions – 2009

Geoactive zones as a source of EMF and ultra-low EMF intensity causing cancer and other pathologies

Kosov A.A., Yaroslavtsev N.A., Prikhodko S.V.

**LLC TsIPK "Ekvator", Russia, Omsk, ave. K. Marx, 34,
e-mail: ekvator@omskmail.ru**

Introduction

Both positive and negative effects on the human body are known. electromagnetic radiation (emission) of low and ultra-low intensity of natural and man-made origin (EMIN), associated, as a rule, with significant changes in gradients of constant and variable components magnetic induction of the Earth's magnetic field [Belova, Lednev, Kulikov, Serpov, Kochmar, Melnikov, Rudnik, Prokhorov]. The presence of EMINI may be local, and manifest themselves in the form of anomalies of varying hierarchy and intensity on biota [Gridin, Gak, Serpov]. For example, the rather weak Kursk magnetic an anomaly in which the intensity of magnetic induction can fluctuate to a level from 1 to 48 mT [Serpov]. It can cause different effects on the body person, including negative ones. The degree of such impact is related to its biotype [Kulikov, Serpov]. It also depends on various characteristics EMINI, for example, frequencies, amplitudes, phases, polarizations, etc. [Burlakov, Kosov, Pavlenko, Dubrov].

Prolonged stay in areas affected by such anomalies, which can be called geoactive zones (GAZ), with different types of effects on living systems, leads to changes in metabolism in the human body and can manifest itself in functional disorders, diseases associated with excessive mitotic activity of cells in the human body and the development of oncological and other pathologies [Kaznacheev]. Such pathological processes (up to 50%) is often associated with the presence of local electromagnetic anomalies with low intensity radiation (LEMANI), which appears on the surface The earth and the ground layer in the form of three-dimensional formations, which in cross section can appear in the form of "spots", "stripes" and their combinations that can be worn by systemic character [Dubrov Lugovenko, Drozdovskaya, Pavlenko, Kravchenko, Kosov]. For example, to These include the so-called "Hartmann networks" and "Curie networks", the existence of which is often questioned. In our opinion, this is connected, on the one hand, with the absence or insufficiency of high sensitivity measuring instruments for identification of such anomalies and, on the other hand, the need to change or the formation of new approaches in understanding the nature or mechanism of their occurrence. For example, it is possible to build on processes that are studied in geology and which can be assessed as processes of self-organization of complex nonequilibrium dynamic systems [Salnikov]. One can assume [Yaroslavtsev] that the source of such system anomalies may be two or more coherent EMINI sources that are in the area

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

Earth's core. Overall, they form a three-dimensional interference formation ("cells" or "cellular structures") in all geological zones, the biosphere and wear global systemic nature. They can be compared to the system (structure) of cells living organism, for example a person, which is consistent with the idea V.S. Vernadsky about the geological structure of the Earth and dynamic structure biosphere like a living organism.

The presence of such "cellular structures" can be indirectly confirmed by assessing, for example, the GTR of woody plants (pine, birch, etc.), which manifests itself in the idea changes in the direction of growth of these plants with some cyclicity (1...2 meters) and intensity. Such changes can be observed starting from the surface Earth along the entire height of the plant. This may serve as indirect confirmation the existence of horizontal components that are global in nature, since such GTR is present on all continents.

A characteristic feature of such zones, according to P. Schweitzer [3], is the presence of centimeter-wave EMR in them. To the effects of such EMR account for up to 50% of registered oncological, cardiovascular and a number of other diseases [1, 3]. To this day, the mechanism of this effect remains unclear. But there are estimates according to which the leading role is given to information interactions.

Thus, according to A.S. Presman [1], "... the energy absorbed by the system is not significantly increases its level, (but) is at the same time a carrier of information acting as a signal that causes a response due to its own energy resources. In this case, it is possible to sum up low-intensity signals leading to changes in regulation (processes) and the formation depending on the parameters of EMR responses."

Also, according to A.B. Burlakov et al. [1], "... any electromagnetic radiation (EMR) of low and super-low intensity can exert its influence on biological objects, thanks to the ability to change the supramolecular, cluster structure of water, especially those found in liquid crystalline state, that is (in) the cytoplasm, other cell structures and intercellular liquids. Moreover, if the parameters of EMINI or other ultra-weak radiation coincide with the frequencies and intensities of their own EMR, biologically active substances and cell (organism) structures, then we can expect positive (organizing) the effect of these radiations on biological objects. Otherwise case, negative (disorganizing) and even toxic effects (actions) of EMINI on cells and the body, up to the formation pathologies and developmental anomalies."

As a working hypothesis, it was accepted that a living cell is a universal "energy information matrix" and actively responds to exposure to low-intensity EMR [6]. Such EMR of a local nature contain an "information component" and may cause different speeds mitotic cell division in test objects of plant origin. This

Torsion fields and information interactions – 2009

influence may be a factor initiating cancer and other diseases.

The purpose of the study was:

- 1. Establishing a connection between the development of cancer and other pathologies in humans and the presence of GAS in places where it is located for a long time (recreation);**
- 2. Establish the possibility of changing the physical properties of water using bioenergy device; 3. Checking the developed method (method) for compensating for the negative impact GAS on plant test objects.**

Materials and research methods.

- 1. Computer program "Ivolga X3", "Method of transmission in a single holographic field of digital and text information, torsion bar form generator to any point in space to any object and activation of the bifurcation point in a given time interval." Registry of NOU TITT and P, No. 10.07.2006 A 02 dated July 10, 2006 (Authors: Kosov A.A. and Prikhodko S.M.), hereinafter – "Program". 2. Bioenergy device created on the basis of the "Program". Manufacturer: TsIPK Ekvator LLC. 3. Indicator of geophysical anomalies IGA-1, which allows you to determine local changes in weak natural and man-made EMR origin, manufacturer - Light-2 company, Ufa, (Author - Kravchenko Yu.P.), hereinafter referred to as "Indicator".**
- 4. Method of phytoindication of electromagnetic anomalies of a local nature and method for estimating their sizes (Authors: Yaroslavtsev N.A., Kosov A.A.) hereinafter referred to as "Method".**
- 5. Test object: wheat seeds of the Pamyati Aziev variety, hereinafter referred to as "Seeds". Level germination rate 93%.**
- 6. Test object: a group of patients of different ages with confirmed diagnosis - oncological and other pathologies of various localizations, then - "Sick."**

Progress and results of research

To achieve these goals, the work was carried out in three stages:

- 1. Establishing a connection between the development of oncological pathologies of various localization and presence of electromagnetic anomalies of local nature (hereinafter referred to as "anomalies") in places where diseases develop, for example "Sick" studies. 2.**

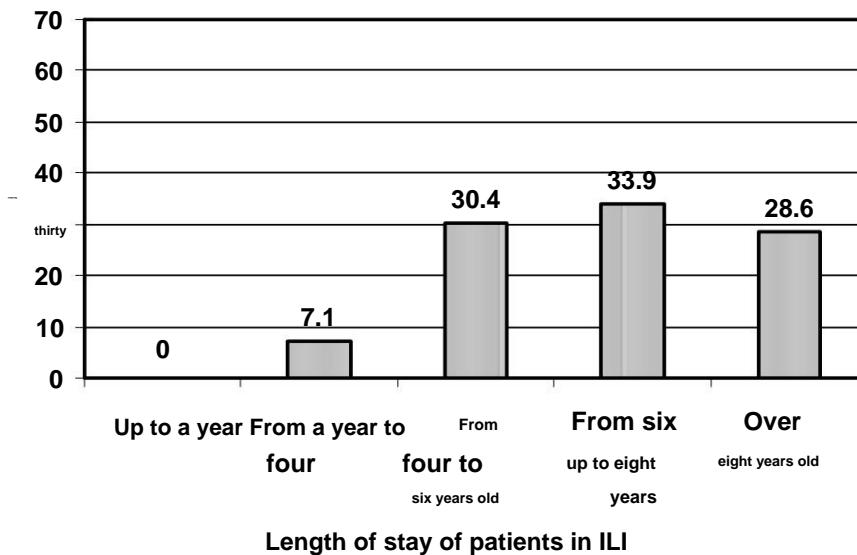
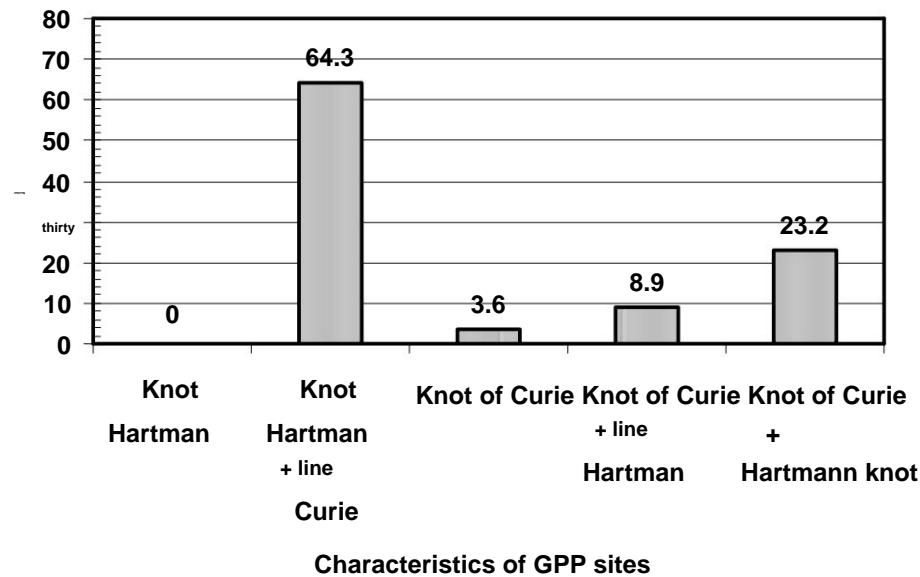
Confirmation of the presence of low-intensity natural EMR origin, manifested in the form of "stripes" and "spots" on the surface land, and determining the nature of their influence on plant test objects.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

3. Testing a method for compensating for the negative impact of anomalies on the growth and development of test objects in the form of wheat seedlings.

P.1

Using the "Indicator", the location of the "Patients" resting places was investigated. Data were obtained on the coincidence of the sites of tumor formation in patients and the locations of "Anomalies" (Fig. 1). The largest number of diseases (64.3%) was noted with a combination of the Hartmann "node" and the Curie "line" (Fig. 1). Local anomalies were "stripes" with a width of 20 to 50 cm or "spots" of round or indeterminate shape, with a diameter of 30 to 50 cm and a length of up to 1.5 meters (Fig. 3).



Rice. 1 Dependence of the level of oncological diseases on the "nature" of radiation that forms GAS and the period of stay of "Patients" in them.

P.2

Torsion fields and information interactions – 2009

It is known that in biological objects "bound water" (Water II) has its own special structure and carries a large amount of individual information about the object and its functioning [2], which, according to [4], can be represented as "biocomputer", that is, the information structure "responsible" for maintaining connections both between cells and systems of the body, and maintaining its homeostasis. And, if we take into account the fact of the existence of a wide electromagnetic spectrum of water, changes in which lead to changes in its physical properties, the ability to control such properties by correcting such a spectrum in the direction of its harmonization or restoration to the fullest, especially in the UV range. Structurally bound water may be subject to irreversible changes due to the influence of weak EMFs in the low-frequency part of the spectrum, which may be an explanation for the influence of such fields on biological objects [1 – 4].

Also, the studies of V.P. Kaznacheev, L.P. Mikhailova, F. Popp [6, 7, 10, 11] show the most important role of weak and ultra-weak electromagnetic radiation in the UV range as a control information signal in distant intercellular interactions. Developing ideas about "biophotons" [6, 7], how the main information carrier in the light channel of the UV range at interaction between cells, they note that when metabolic energy is expended on cell $1.7 \cdot 10^{-3}$ Erg/s you can transmit information in the amount of 5×10^9 bits/s. This approximately equal to the number of all biochemical reactions occurring in the cell during just a second. At the same time, according to [10, 11], in the UV range of the EM spectrum the speed reactions can increase 1040 times. This means that the cells are located an ideal channel of communication between each other, where each quantum contains values signal and energy donor [6, 7]. This suggests that superweak the radiation of "biophotons" is capable of regulating metabolic processes in billions cells of a living organism and allows it to function as a single whole.

The "loss" of individual frequencies or sudden changes in their amplitude, especially in the UV range of the spectrum, indicate a change in the state of its quality and, accordingly, biological activity. The state of water in which the electromagnetic spectrum expressed over the entire frequency range without "dips", with a certain value amplitude is the most harmonious. If water has a "ragged" spectrum, then when it is consumed by humans, there is a need to mobilize internal reserves of the body to change its state (structure), which is not typical for bound water of living organisms. Discovery of existence near water information-phase states [3, 4] suggests that changes such states cause changes in the physical properties of water, through changes structures of clusters and associates of various hierarchies. Specified prerequisites formed the basis for the development of a special computer program based on which produced the WIS "A-Vita X3", which has special properties.

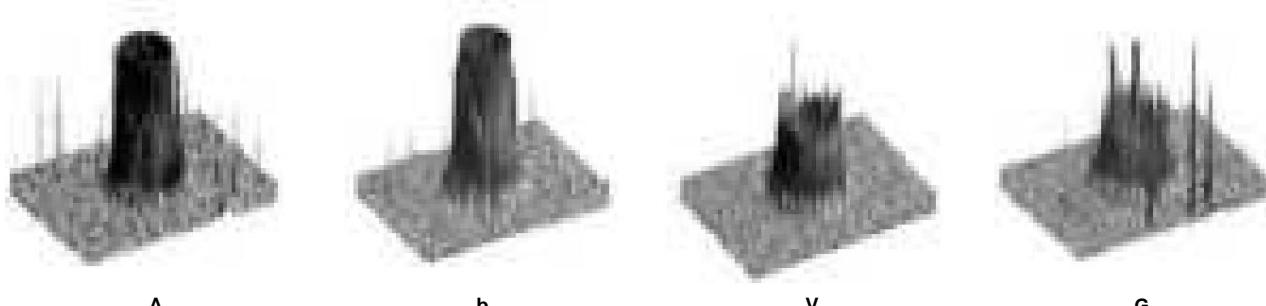
The purpose of the work is: comparison of the electromagnetic spectrum of the WIS "A-Vita X3" with spectra of various water samples; use of WIS "A-Vita X3" as a means protection from EMR and identification of its possible medicinal properties.

Materials and research methods

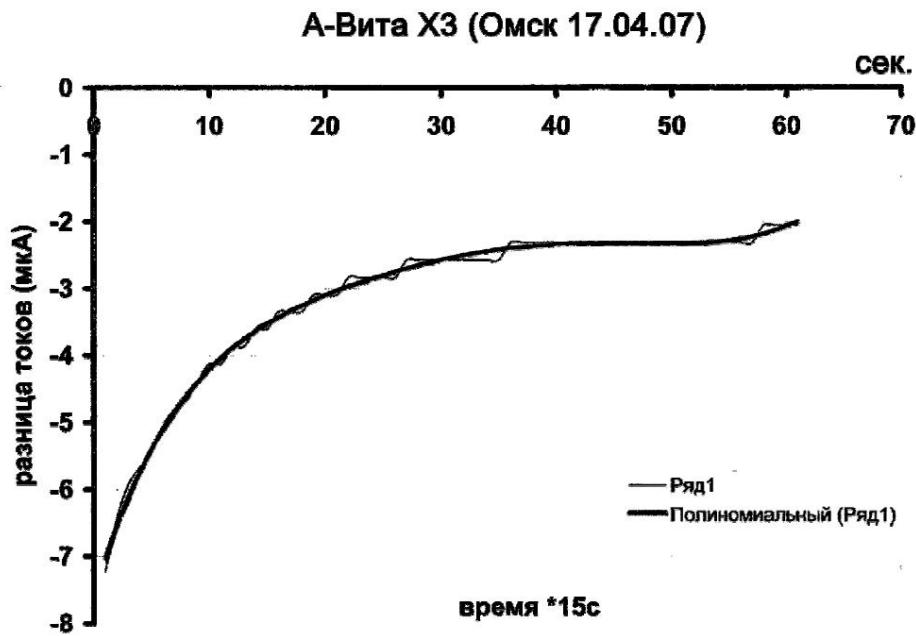
1. Special computer program "A-Vita X3" information-structured hologram of water", author's work No. 01/31/2007 A
02, dated January 31, 2007, authors - Kosov A. A., Prikhodko S. M., - further "Program".
2. Bioenergy device created on the basis of the "Program". Manufacturer: TsIPK Ekvator LLC. 3. GDV camera (computer Kirlianography method according to Korotkov), with GDV software Shaper", the water carrier is a quartz glass, then - "Method".
4. Water: WIS "A-Vita X3", hereinafter - "Water 1"; "Holy Three-ringing", Barnaul, hereinafter - "Water 2"; Tap water, Omsk, hereinafter referred to as "Water 3"; Water bottled drinking water, produced by Clean Water Company LLC, Berdsk, further - "Water 4".

Electromagnetic spectrum data of water samples were obtained at a voltage 210 V and frequency 3 kHz. Water samples for research were obtained by sampling. "Water 1" was obtained using a special bioenergy device developed on the basis of the "Program" from standard water treatment without direct contact, remotely. An independent assessment of the physical properties of "Water 1" was carried out in [5] (Fig. 3). "Water - 3" was accepted as "Control".

Progress and results of research. As a result of studying water samples, according to "Method", the following results were obtained according to their state electromagnetic spectra and properties (Fig. 1, 2).



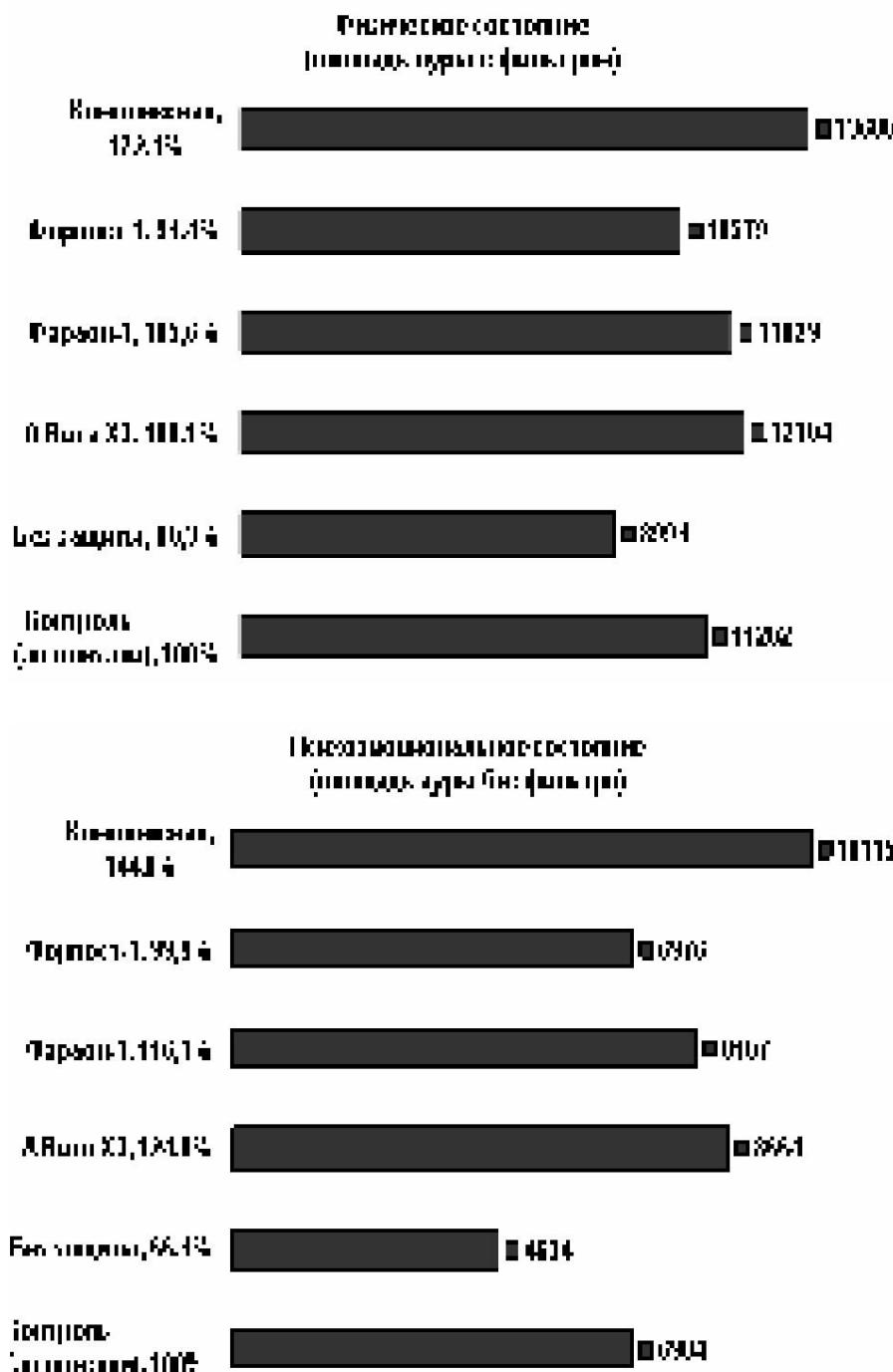
Rice. 1. Graphic display of the electromagnetic spectrum of water samples: a - "Water 1", b - "Water 2", c - "Water 3", d - "Water 4".



Rice. 2. Graph of changes in the electrical conductivity of "Water 1" to a level of 2...3 μ A, after application of the "Program", which corresponds to the indicators of the best images of spring water taken as the standard [5].

Samples "Water 1" and "Water 2" had a full spectrum of EMR. For samples "Water 3" and "Water 4" was practically "cut off" the frequency range in the UV range of the spectrum, which is considered to control the biological activity of living cells organisms. Has the lowest spectrum harmonicity indicator sample "Water 4".

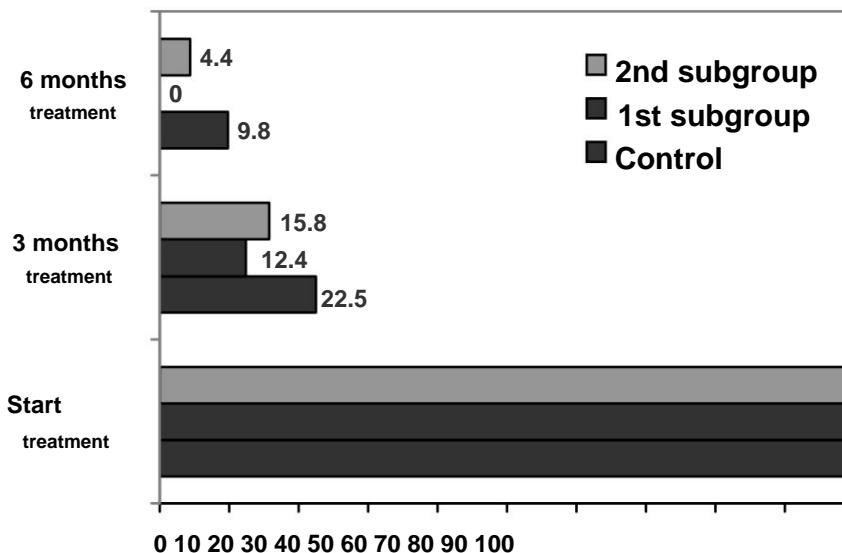
The possibility of using "Water 1" as a means of protection against EMP was tested high intensity for railway rolling stock drivers and their assistants [8]. More than 300 measurements were taken over 3 months, according to "Method". Measurements were taken before the shift and at the end of work. "Water 1" was used internally in an amount of 1.5...2 liters per shift, as an individual means, and in combination with special protective devices ("Forpost-1" and "Pharaoh-1") (Fig. 3).

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

Rice. 3. Results of studies of physical and psycho-emotional state of drivers and their assistants in railway transport, carried out on a "GDV camera", according to the indicator "luminosity area of the object".

"Water 1" was used to treat the viral infection "genital herpes" in patients in clinical settings [9]. 60 women participated in the study of reproductive age, for whom standard treatment of the specified disease is for 6 or more months did not lead to positive results. 30 patients constituted the experimental group, the control group received traditional treatment.

Torsion fields and information interactions – 2009



Rice. 4. Efficiency indicators (%) of treatment of patients with genital herpes traditional method, traditional method and "Water 1" and "Water 1" (monotherapy).

The experimental group was divided into two subgroups of 15 people. The first one received traditional treatment and "Water 1", and the second - only "Water 1", as monotherapy. "Water 1" was consumed daily, on an empty stomach, in the amount of 0.8...1.0 liters per day, in several doses. Observation was carried out for 6 months. The following results were obtained (Fig. 4).

The discussion of the results

The condition of those examined on the railway who worked without protection from EMP showed a decrease in the level of their psycho-emotional and physical condition by 33.6% and 19.7% respectively. This is assessed as a deterioration of the condition health. Drinking "Water 1" according to the "after work" and "during work" did not reveal a significant difference in the results of exposure. The overall result was an improvement in the psycho-emotional state after working at 24.0%, and physical condition by 8.1%. Conducted research on integrated protection show an improvement in psycho-emotional and physical condition on 44.8% and 22.1%, respectively.

This suggests the possibility of a significant improvement in the general condition subjects working under conditions of intense exposure to EMR, which can be assessed as health-improving. "Water 1" activates protective properties body, due to the restoration of the electromagnetic spectrum of water to "normal". The subjects noted a significant improvement in their general condition and lack of fatigue. Indicators of immune response in the treatment of patients genital herpes allow us to evaluate the mechanism of action of "Water 1" as immunomodulatory and as a result it is an antiviral a long-acting product that can be used in combination with traditional means and as monotherapy. There is a therapeutic the effect of other diseases, such as cardiovascular, gastrointestinal tract, etc.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

Negative side effects of chemoradiotherapy are reduced oncological diseases.

conclusions

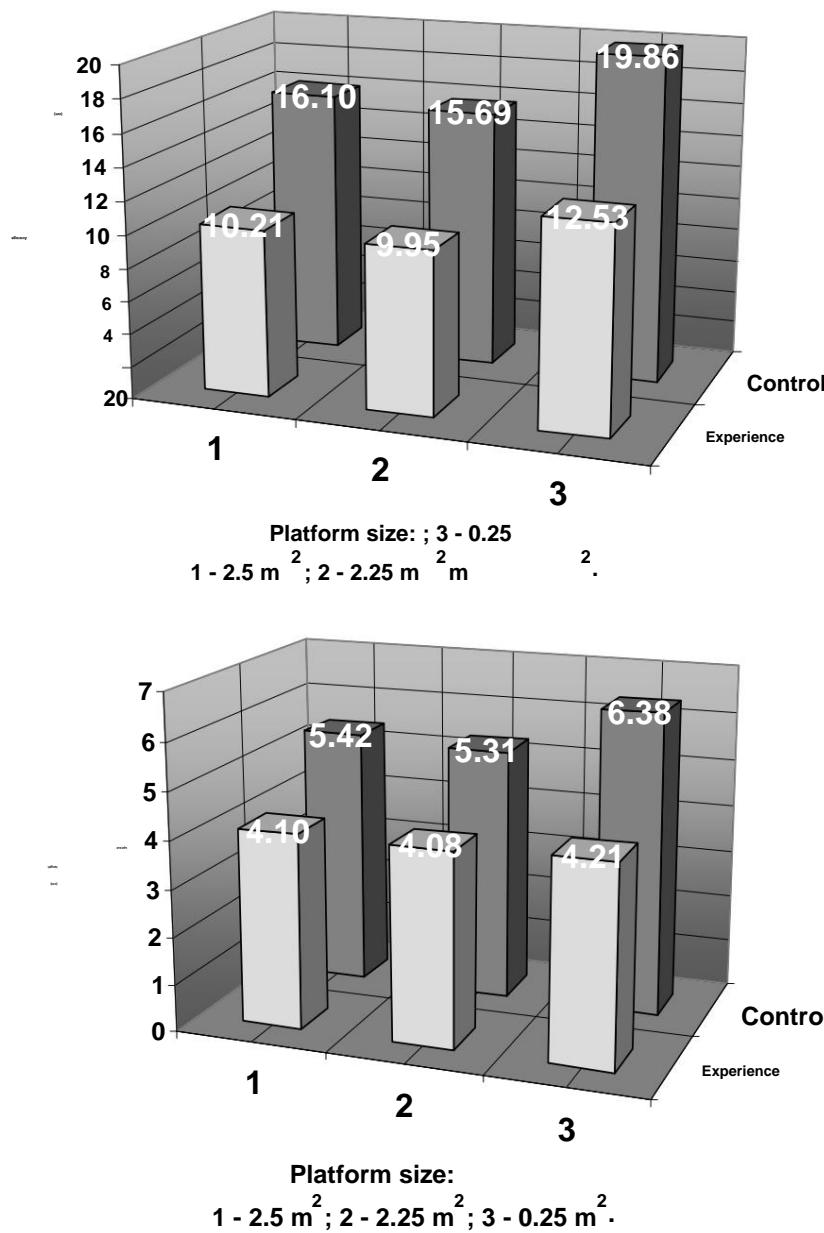
1. ISV "A-Vita X3" has a harmonious electromagnetic spectrum throughout frequency range and corresponds in terms of electrical conductivity to the best spring water samples.
2. The effect of WIS "A-Vita X3" on the aquatic environment of the human body allows compensate for intense EMR exposure and maintain high the level of psycho-emotional and physical condition of a person in conditions heavy loads.
3. ISV "A-Vita X3" has pronounced medicinal properties in the treatment patients with genital herpes, both in the form of monotherapy and in combination with traditional means. She has proven herself to be effective antiviral immunomodulator.
4. There is a way to restore the "destroyed" electromagnetic spectrum of water to a harmonious state or "norm", remotely, with the help bioenergy device created on the basis of computer "A-Vita X3" program.
5. It can be assumed that the state of the electromagnetic spectrum of water is one of the most important characteristics that should be taken into account when assessing its quality.

P.3

In the field, a model site with a total area of 2.5 m^2 was selected (Fig.3). The level of EMR recorded by the "Indicator" on an area the size of 2.25 m^2 was 2...2.5 times higher (with device sensitivity $1\ldots100 \mu\text{V}$), 0.25 m^2 relative to the site 2.25 m^2 . According to the "Method", the site was divided into 250 cells, measuring $10 \times 10 \text{ cm}$. "Seeds" were germinated in polyethylene rolls films with damp filter paper inserted inside. The cells contained 3 rolls each and they were located in containers with water. Each roll contained 20 pcs. wheat seeds. The number of grains at the stages "Control" and "Experiment" amounted to in the amount of 30,000 pcs. The grains were located at a distance of 16...18 cm from the ground. The length of the sprout was measured as a part of the plant that actively responds to changes AMY. The "Control" and "Experiment" phases were carried out in June and August 2007 with the same weather conditions. The "program" was activated by bioenergetic device remotely, from a distance of 10.34 km.

The average length of sprouts at the "Control" and "Experiment" stages on the site is 2.19 cm and 16.10 cm and 10.21 cm , respectively, and decreased by 5.89 cm (37.0%). Changes along the average length of the sprout in zone "K" (0.25 m^2) amounted to 7.33 cm (36.9%). Changes average amplitude of oscillations along the length of the sprout on a site of 2.25 m^2 and 0.25 m^2 respectively were 1.32 cm (24.4%) and 2.17 cm (44.1%) (Fig. 3).

Torsion fields and information interactions – 2009



Rice. 3. Indicators of changes in the average length of the sprout and the average amplitude of oscillations before and after the influence of the “Program”.

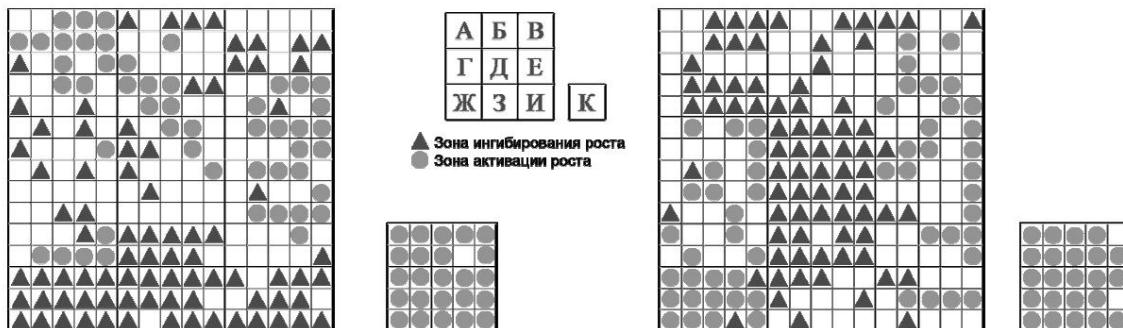
The use of the “Program” made it possible to: reduce the length of the sprout and reduce the average amplitude of oscillations along its length by a significant amount; change the location of growth zones based on “activation”, “inhibition” or relative “norm”. A base interval of 2 cm was chosen relative to the average length of the sprouts (16.10 and 10.21 cm). Its excess means activation of growth, a smaller value means inhibition, and compliance with the interval means the norm. For example, the sign of growth in zones “A” and “B” changed from activation to inhibition; in zones “G”, “I”, “G” – from inhibition to activation, in zones “E” and “I” – to “normal”; in zones “B” and “K” the sign of growth remained unchanged. This means that there have been changes in the growth and development of plants by at least 80% in terms of qualitative indicators and 100% in terms of quantitative indicators (Fig. 3). The dimensions and shape of the activation and in-

КОНТРОЛЬ

Базовый интервал 2 см. 15,10 < 16,10 < 17,10
18-25.06.2007

ОПЫТ

Базовый интервал 2 см. 9,21 < 10,21 < 11,21
02-09.08.2007



Rice. 3. Location of zones of activation, inhibition and growth rates, the "Control" stage and their changes after applying the "Program" at the "Experience" stage.

The physiological state of plants at the "Experiment" stage was better. Especially this manifested itself in zone "K", and was expressed: in a significant decrease in the length of the sprout with increasing stem thickness; increase in the length and diameter of the coleoptile; increase in the length and diameter of roots, which led to an increase in area absorption by the root system is 2...2.5 times relative to the control.

The discussion of the results

P.1. 26 people were diagnosed with lung cancer. Of these, 5 people smoked, 7 people lived in zones of chemical contamination, i.e. in 14 patients (54%) the cause of the disease was different. This gives reason to believe that pollution air and smoking are not the exclusive causes of cancer lung. In all cases of oncological pathologies (100%) of various localization, the location of the tumor corresponded to the presence of GAZ, with intensity of radiation similar to that observed in the "K" zone at phytoindications. GAS are a kind of triggers that initiate synthesis telomerase in the adult body, leading to the proliferation of malignant cells tumors. This can be associated with the presence in EMR of an "information component" of natural and man-made origin, according to [1].

According to [4, 7], the cells of the human body, its organs and systems, as well as the body in general, as non-equilibrium dynamic systems, they have their own "attractor". IN our view, energy it can be spatiotemporal information complexes (PVEIC), similar to the graphic expression mathematical models in the form of "attractors" existing in the universal information space (VIP) and is the basis of information interactions, which is put forward as a hypothesis [5].

It is logical to extend such ideas to plants. It is assumed that in the aboveground part of the plant, PVEIC with left rotation predominates, and in the underground part parts of the plant - with right rotation. Influencing in any way the "right" or the "left" component of the PVEIC, as the "information component" of the EMR, can be

Torsion fields and information interactions – 2009

control the growth and development of plants. This way is to use "Programs".

Phytoindication of GAS showed the possibility of identifying zones of activation and inhibition and growth rates of indicator plants. This corresponds to the ideas [2, 3] about the existence of high unevenness of geophysical fields, which can represent local entities. Using the "Program" allows enter the VIP and influence indicator plants through it, optimizing them condition and bringing the rate of mitotic cell division back to "normal". Such changes in plant objects suggest the possibility of such influence of the "Program" on objects of animal origin, including person.

conclusions

- 1. Under natural conditions, there are electromagnetic anomalies of local low intensity character, comparable to the size of a person. They may cause activation, inhibition or normalization of growth and plant development at different rates.**
- 2. Coincidence of locations of local electromagnetic anomalies low intensity, causing intense mitotic division in plant test objects, with places of long-term human stay, can cause oncological and other pathologies with a high degree probabilities. This occurs in those organs or parts of the human body that fall within the range of such anomalies.**
- 3. It is possible to compensate for the negative impact of such anomalies on plants by influencing them with the "Program" remotely. This allows spread such a positive effect on the human body for its protection from local electromagnetic anomalies.**

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Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

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Urban planning taking into account geopathogenic factors

Miracle I.G.

Architect, dowsing specialist

Address: 02121, Ukraine, Kiev-121, st. Verbitskogo, 11, apt.

214 Tel.: (+38-044)

560-61-71 e-mail:

info@ecodesign.kiev.ua chudo_ig@i.ua

The article discusses the problems of the negative influence of tectonic zones violations on human health and the design of buildings and structures in modern urban planning. The author recommends new approaches and gives optimal decisions on zoning of territories in pre-design surveys during development master plans of settlements.

In the article the author is considering problems of negative influences that tectonic zones make on people's health and building's constructions in modern city building. The author is recommending new point of view and giving reasonable salvation due to zoning area in designing investigations when general plans are elaborating.

Relevance of the task

Considering man as a social and biological being, of course, every architect thinks about filling the space with objects of a residential, industrial and service complex, harmoniously combining them with

conditions of cultural and natural layers. However, today the architect, as a rule, decides mainly only social and aesthetic task.

The issue of home ecology is dealt with by special services that conduct research into the admissibility of using certain materials in construction of buildings and structures. Therefore, an architect can only refer to SNiPs and special provisions limiting or recommending the use of certain materials in **designing buildings and structures, and consciously apply this knowledge in their practice.**

As you know, the restrictive norms of SNiPs contain clear instructions regarding the standards for designing settlements taking into account geological factors. But, alas, not a word is said there about the influence of tectonic fault zones on biological objects and structures.

Meanwhile, numerous studies in this direction conducted scientists from Austria, Russia and Ukraine over the past 20 years already give every reason to revise design and construction standards and introduce new ones restrictions when designing settlements in tectonic fault zones.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

Therefore, a serious architect cannot stand aside from these facts. The relevance of ecology has recently become increasingly important in society. One of the subdivisions of this problem is pathogenic influences geological nature.

Only statistics on cancer incidence among residents of St. Petersburg and Kiev speaks eloquently for itself. Because the level of cancer patients in tectonic zones violations increases by 1.75-4.1 times (depending on the level of exposure fault zones and other geological features).

Also, research from the Institute of Geological Sciences of the National Academy of Sciences of Ukraine and the Ufa state NTU give every reason to assume an increased influence corrosive factors due to the release of various gases from the bowels of the earth to pipes and structures of buildings and structures located geographically in the region tracing fault zones.

All this data, collected together, poses new challenges for humanity as a whole. horizons of understanding the integrity and harmony of nature, architecture and life person.

That is why an attempt is now being made to implement the already accumulated data on pathogenic influence of tectonic faults on biological and non-biological facilities in order to minimize losses in the national economy and health care during long-term operation of buildings and structures.

For our researches are not new, but long-forgotten old ones.

The study of the issue of choosing favorable places, it seems to us, worried humanity since ancient times. Scientific approach to developing design rules ecological settlements cannot be complete without a retrospective look into past.

And although it cannot be said that previously used methods for determining pathogenic sites for people's lives were strictly scientific. Nevertheless, the rich experience collected by our ancestors, in our deep conviction, is the basis for developing scientific ways of knowing and identifying the properties of nature in terms of designing ecological settlements.

Thus, summarizing our work experience in Kiev, I would like to note that at one time, when when designing old Kyiv, places were probably taken into account at different times passage of geological faults, popularly called "black spots".

Without knowing exactly what forces of nature are involved in such a destructive influence, our ancestors, however, saw the consequence of the influence of these forces and, rather, In total, they could record the boundaries of influence of such places using visual diagnostics (sickness of tree forms), according to indirect data (increased soil moisture, poor health) and the dowsing method. Co

Torsion fields and information interactions – 2009

Over time, for sure, this knowledge became more accurate and was preserved in in most cases in the priestly environment.

After all, everyone knows from the history of urban planning that all majestic cultures East (from India, Mesopotamia, South America to Egypt and its younger sister – Greece), as well as Trypillians, Celts, Etruscans and later Slavic cultures used, to one degree or another, knowledge related to the search for favorable places for life and especially the construction of temple complexes.

For example, it is known that in Greece special places that were in most cases on hills - they were called "temenos". An example of this is the Acropolis of Athens and Lycabettos Hill.

Taking a look at the history of Kyiv, we find many surprising things, including the fact of how the settlements were conceived. Our observations are based on mapping fault zones and comparing these data with the history of the city's development. For example, if we look at the fault map of Kyiv, we will find that all the ancient sacred objects (part of the Pechersk Lavra complex, Kitaevskaya Monastery, Vyubitsky Monastery, St. Michael's Golden-Domed Cathedral, Florovsky Monastery, Krestovozdvizhenskaya Church and the remains of the Tithe Church) stand on favorable places. Moreover, many pagan temples, on the site of most of which later Orthodox shrines were built (Mikhailovskaya, Desyatinnaya Church and Vyubitsky Monastery) are located in favorable places. One of the famous temples - Serpentine Caves - for example, is located in an ancient cave, which was used in even earlier times by the ancient Trypillians (about 3 thousand years BC) as a dwelling and sacred place. This place is also, according to our research is located away from fault zones, i.e. in a favorable zone.

One cannot close one's eyes with prejudice to such “strange” ones from the position modern facts, as outlined to builders by the recommendations of Etruscan priests regarding the development features of their chosen landscape or specific ornaments on Trypillian pottery associated with intuitive perception of the world.

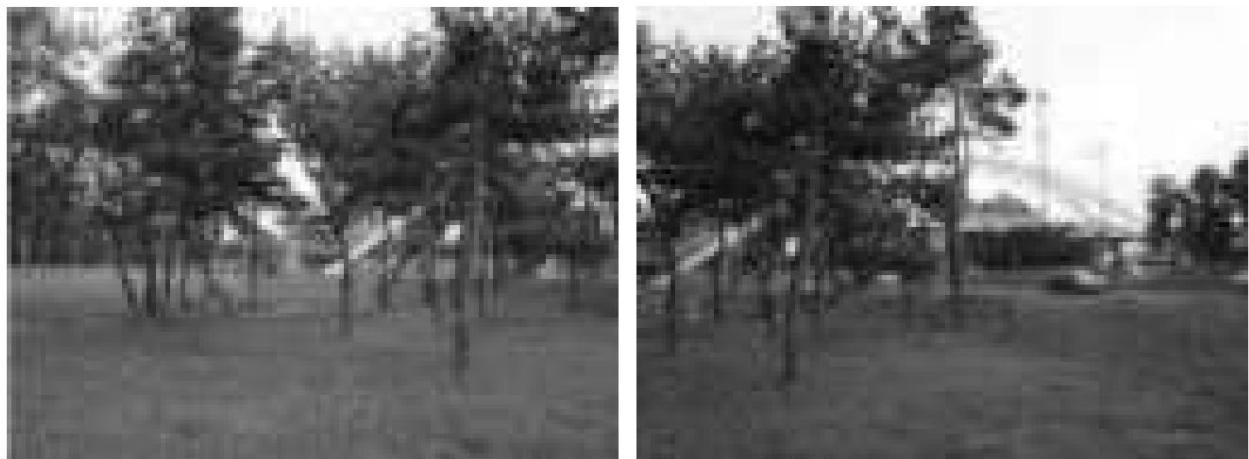
As for Chinese and Indian culture, you can find remnants here too knowledge, well hidden from prying eyes and until now, which relates to principles of construction and the influence of various properties of nature on man and his creations. Thus, in China we find the still living tradition of Fang Shui (Feng Shui), and in India - Vaastu. These traditions, in their main provisions, naturally coincide, differing only in symbolism and features of the presentation of material. Tradition Fang Shuei, for example, defines symbolically bad places as the Dragon's Teeth, which devour the life force of humans, animals and trees. Other symbols such as Phoenix, Tiger, Turtle and Dragon typically represent certain types of terrain and their relationships. So the masters of China, studying properties of nature, they try to build their settlements, especially sacred ones, in harmony with the surrounding world, firmly and forever.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

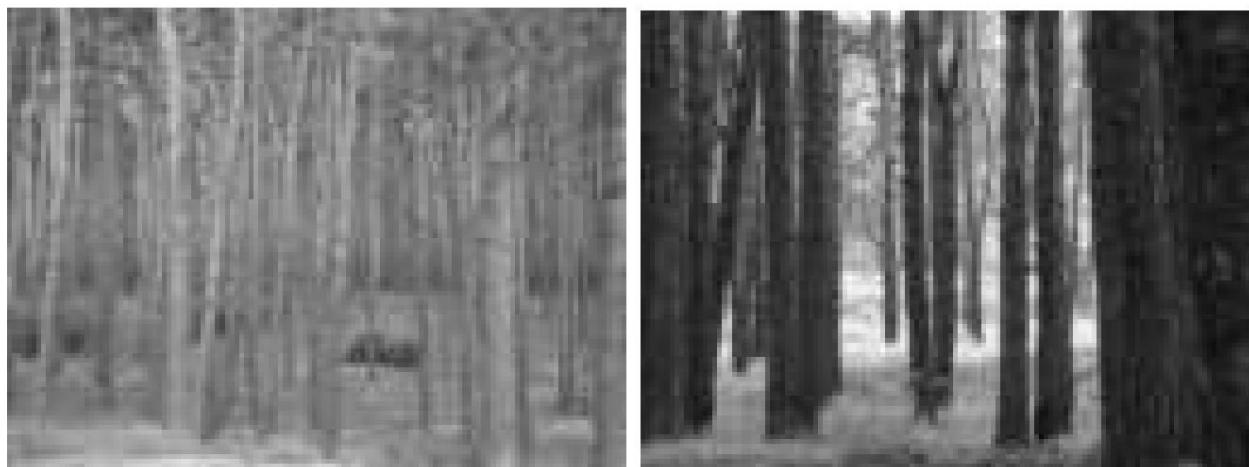
Comparing our experience of exploring the area by external signs (by degree curvature and morbidity of trees, according to the nature of the relief) and the mentioned recommendations of ancient cultures, one general pattern emerges: whenever we find an array of severely twisted and diseased trees, this is the place turns out to be extremely difficult for biological organisms to remain in it for a long time creatures, and therefore for designing settlements in such places. On the other hand, with difficult terrain, we often found favorable places on hills.



Torsion fields and information interactions – 2009



Rice. 1. Deformation of a group of trees at the location of the tectonic fault.



Rice. 2. A group of trees growing near a tectonic fault zone in good location.

Therefore, considering the theory and practice of urban planning in the tendency of all the growing role of material culture, not only problems of forming an aesthetic environment, solving social problems, but also say, environmental design of cities taking into account the studied stress factors. In addition to the already known and normalized pathogenic factors, there are those that require detailed research, analysis and further implementation already in soon.

One of these factors includes the factor of the pathogenic influence of tectonic faults.

And who knows, if this factor is included in the restrictive norms in designing settlements, maybe this will help solve another problem of modern urban planning: distribution of building density terrain and associated air pollution, housing comfort and many another that requires urgent rethinking.

Main part

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

The study of the geopathogenic factor is of not only scientific, but also, above all, practical interest, which in the future will have a qualitative impact on life activity of people.

Thus, in recent decades, studies have shown that existing norms and stereotypes of development of large urban conglomerations [9] lead to unjustified losses of the natural landscape, that is, the green zone is reduced, water bodies are polluted. And at the same time it happens catastrophically quickly air pollution in cities, the quality of air aeration decreases, as well as the noise absorption barrier decreases due to a decrease in green spaces. Compaction of biomass (all living organisms - animals and humans) to limited territory leads in turn to an increase in the number positive air ions in the air and reducing negative air ions. All this and much more is the key to the accelerated development of viral diseases, to the emergence of an increasing number of people who suffer from depression and other mental and physical illness.

Reducing the number of stress factors that negatively affect the condition public health is one of the most urgent problems today.

Therefore, the emphasis in this work is on the factor that will, on the one hand, be the cause of many qualitative changes in the theory and urban planning practice, and on the other hand, will give quick positive results, since this factor can easily be avoided by carrying out pre-design site surveys, and therefore introduced into urban planning practice.

In addition, an analysis of the literature [4], which contains studies of the influences tectonic faults on human health, gives grounds to assert that Most authors agree on a more or less clear position regarding the terrible consequences of the influence of geopathogenic radiation, as well as the need to work out precise methods for studying geopathogenic zones to achieve unbiased results.

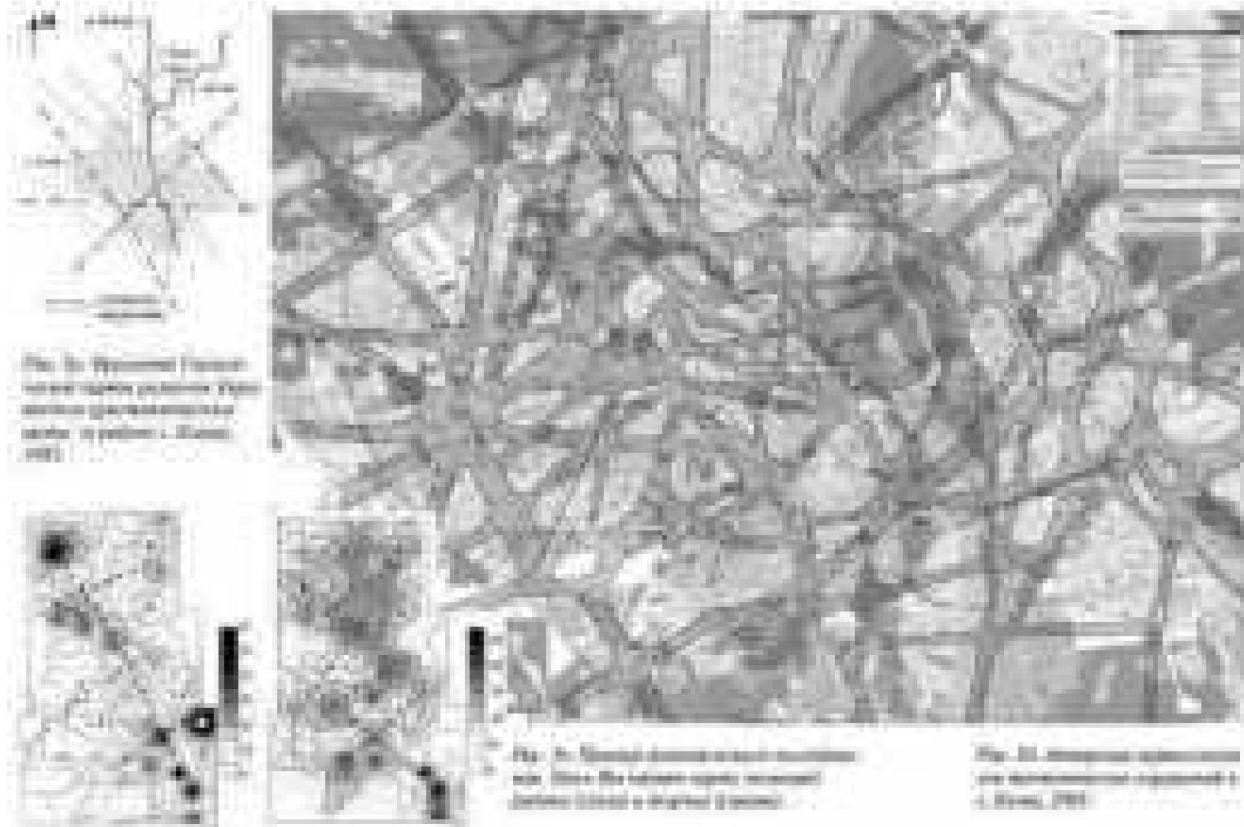
Until recently, science did not have sufficient equipment to studies of radiation and emanations from fault zones. Today, thanks to persistent During the search, a new range of instrumental methods for identifying fault zones appeared.

For example, Ufa engineer Kravchenko Yu.P. developed and put into production IGA-1 device, an indicator of geophysical anomalies that allows you to record electromagnetic radiation from the Earth's geomagnetic field and distinguish the background radiation from geopathogenic.

The second example is a set of instruments for emanation-gas and thermometric surveys (NC-482B device, SHI-11 gas analyzer, TET-Ts11 thermometer). These devices were created on the basis of the Institute of Geological Sciences at the National Academy of Sciences Ukraine and are now used to record gas emanations when determining fault zones.

Torsion fields and information interactions – 2009

The use of instrumentation makes it possible to conduct research to determine fault zones and their mapping. For example, studies in Kiev and St. Petersburg showed that the influence of gas emanations and geopathogenic radiation in boundaries of fault zones have no less serious consequences than the influence technogenic factors. This encourages greater responsibility when settlement design. After all, it is still on the territory of Ukraine legislatively at the level of regulatory documents in the field of urban planning is not this formidable factor and all associated mapping, zoning and design techniques are taken into account.



Rice. 3. Map of tracing fault zones in Kiev and an example of geochemical research.

Let us give several examples of studying the relationship between the influence of fault zones on people's health.

1. Gustav von Pohl [14] officially in 1973-1975. examined Bavarian city of Wilsbiburg for the presence of underground water flows. He marked them on the city's official map. At the same time in the Department health records recorded all 54 people who died of cancer during last few years, and also plotted the places of residence of these people on city map. Surprisingly, the places of water flows and places of residence people who died from cancer were completely the same.
2. Doctor of Medicine Dieter Aschoff was the first to use electromagnetic fluctuations in blood that are physically measurable in tests drops of blood [12]. It was found that all people without exception "electrically vibrating" blood is constantly located above

geopathogenic zones. And those people whose blood is "magnetically vibrated" were not exposed to geopathogenic influences and did not get sick. So Thus, this method proved to be particularly good at recognizing cancer at an early stage, and therefore, with its help, people have a chance to be cured of cancer.

3. Candidate of geological-min. Sciences Melnikov E.K. and other employees of the RGEC GGP "Nevskgeology" at the Russian Academy of Sciences was held on the territory St. Petersburg, detailed medical and geological studies [6] concerning the influence of fault zones on the morbidity of the population and on life trees and plants.

Detailing the data obtained, Melnikov E.K. notes: "The results The conducted research indicates that within the GPZ (geopathogenic zones) the number of cancer diseases increases compared to homes located outside them, 2.8 times, and at intersection nodes multidirectional GPZ – already 4.1 times.

The degree of soil contamination with heavy metals affects the frequency Oncological diseases have a much smaller impact than ILI. Compared with in uncontaminated areas, the incidence of cancer is within geochemical limits "polluted" areas increases with moderately dangerous pollution by 1.3 times, and when dangerous, it is only 1.5 times.

The study of such morphoses of tree forms of plants in park areas of St. Petersburg as a dichotomy showed that in the gas reserves identified according to the data dowsing surveys and linked to fault tectonics and channels buried water streams, percentage of trees with forked trunks increases 2.5-5.0 times, and in the central parts of the GPP and, especially, in At the nodes of their intersections, the number of such trees often reaches 20-60%.

Observations carried out jointly with agronomic service workers joint-stock farm of St. Petersburg "Ruchi" showed that in greenhouses with with bulk soil within the GPP, the height of cucumber stems decreases on average by 10-20%, and their productivity decreases by the same amount. At the same time, the quantity ugly - "non-marketable" forms of cucumbers, so-called "hooks", in the GPP increases 4 times.

A large volume of observations was carried out in the vicinity of St. Petersburg and beyond germination of seeds of radishes, beets, cucumbers within the limits of the GPZ, controlled by drilling data, faults and buried water flows. IN GPZ and outside them under conditions of equal illumination were installed peat pots with soil identical in composition. Each of them contained 30 seeds of one of the indicated vegetable crops. For a month, the number of sprouted seeds was counted every 5 days. The calculation results showed that in the GPP the germination rate of all these crops decreased by 2-4 times. Received results, despite their preliminary nature (work required biologist to conduct a statistically based experiment),

Torsion fields and information interactions – 2009

allow us to recommend for practical use such a parameter as seed germination indicator as one of the methods of ecological and botanical filming..."

1. Also Landa V.E. after conducting similar studies in Siberia in scientific report [5] reports: "...biopathogenic zones [geopathogenic zones] can intersect, condense and discharge in accordance with the structural pattern of tectonic disturbances and faults in the earth's crust. These zones, according to medical and environmental aspects and the results of the authors' research, data biodiagnostics, are an extremely unfavorable environmental factor, leading with a high probability to the occurrence of various diseases when long-term stay of animals and people in them (damage to the cardiovascular system, nervous, digestive and other systems; arthritis, sclerosis, rheumatism, osteochondrosis, asthma, neuritis, benign and malignant tumors). In rooms where biopathogenic zones and their intersections pass through, patients with mental disorders, brain tumors, stomach cancer, lung cancer and others organs..."

Presence of biopathogenic zones in workplaces in institutions, industrial enterprises, along with other reasons, leads to increased fatigue, a decrease in labor productivity and, possibly, a deterioration in quality products".

Scientist Landa V.E. quite rightly notes that "erroneous and vicious is the opinion that one can expect human adaptation to conditions biopathogenic zone due to its long stay in the zone. Also scientifically the opinion about the possibility of successful selection of pathogen-resistant action of individuals. It is unacceptable to take the risk of such selection."

2. On the territory of Kiev, we [11] together with oncologists of district clinics (Darnitsky and Desnyansky districts) a number of studies were carried out to study risk of cancer due to place of residence. As a result of these research, we came to the conclusion that the risk of cancer in people who live in zones of tectonic disturbances, increases by 1.75-2 times in comparison with those microdistricts that are outside the zones of influence of the geopathogenic factor. In this case we are talking about cancer patients with metastases. All excluded possible options related to the movement of patients from one area to another and living in one place for less than 4 years, as well as diseases associated with benign cancers and skin cancers associated with working and living in a hazardous production area.



Rice. 4a. Plan of a cottage located in a favorable location. Density example geopathogenic zones in relation to human scale.

3. Center for Innovative Technologies "Equator", together with the Department of Oncology OMGA under the patronage of the Ministry of Health of the Omsk region, on the basis Omsk Regional Oncology Dispensary, conducted medical and biological research [7] to study the degree of influence of geomagnetic and man-made radiation on the human body as one of the main causes of oncological pathology.

A) The data obtained show a direct cause-and-effect relationship between the fact of the location of the patient's place of rest or work and the development of oncological diseases.

B) Geopathogenic zones are a powerful nonspecific factor, the impact which leads to serious violations of various levels of regulation of organs and body systems. Their influence slows down reparative processes, increases percentage of complications and relapses after cancer treatment diseases of various localizations.

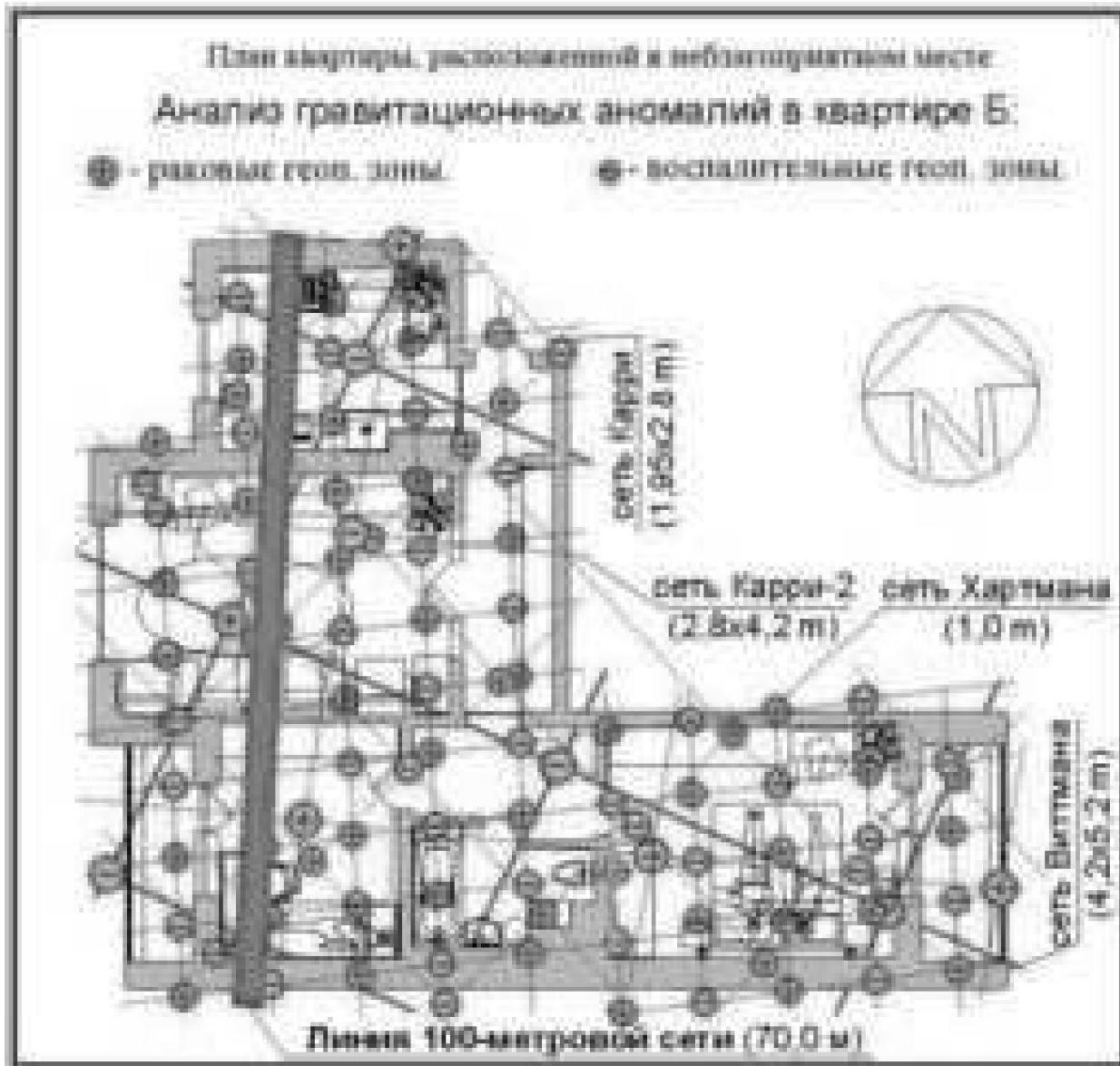
C) Long-term stay of a person in ILI, on average from 6 to 8 years, can lead to to the development of oncological diseases of various localizations, disruption cerebral and coronary circulation. The most dangerous for humans should be

Torsion fields and information interactions – 2009

consider his long stay in the GPZ projection of the Hartman node and the Curry network (64.3%) and in the gastrointestinal tract projections of the Hartmann node and Curry node (23.2%).

D) The impact of GPZ in the form of only Hartmann lines and nodes, in our opinion, is not leads to the development of serious pathological processes, but their negative the influence of natural origin can increase significantly when they are high density against the background of increasing technogenic influence in the form of electromagnetic radiation (basic mobile communication stations, power lines, etc.) [38].

4. Carefully conducted research [13] performed by Dr. O. Bergsman in a rehabilitation center in Vienna in the 1990s, revealed serious violations in health status of 985 volunteers who were studied in 24 different functional indicators for two years. The authors of this fundamental studies have shown that even with a short-term stay of a person in an ILI serious changes in its functional state occur. They manifest themselves primarily in increased excitability and unexplained nervousness, recurring insomnia and depression, since the nervous system is the first to react to the adverse effects of the so-called “earthly radiation.” As a result of 6943 experiments, it was shown that ILIs cause changes regular systems of the human health body: serotonin levels, speed blood flow and erythrocyte sedimentation rate (ESR), electrical resistance of skin integument, bioelectrical activity of the brain and immune response systems. According to the authors of this comprehensive study, ILIs are cause specific diseases, since they enhance the effect of pathogenic factors affecting human health. The further course of the disease depends on many reasons - the duration of a person's stay in ILI, hereditary burden, characteristics of the immune system and the degree of its damage, individual type of response to stress, etc.



Rice. 4b. Plan of an apartment located in the tectonic fault tracing zone. An example of the density of geopathogenic zones in relation to the human scale.

According to his data, geopathogenic influences change surface stress fluid structures of the cell, leading to destabilizing processes in the structure of its DNA. It is assumed that the interaction of right- and left-handed electromagnetic fields leads to a "beating" effect, which in turn destroys the genetic matrix of DNA and RNA [53].

5. Also a naturopathic doctor, Ph.D. A.V. Fedorich cites the following from his experience in Ukraine, Russia and France [10]:

"The high concentration of people in megacities further densifies people into their dwellings, because they increasingly end up in geopathogenic zones that cause tuberculosis and cancer..." And one more thing: "...first of all, you should make sure that your body does not fall into the projection of geopathogenic zones. If a person constantly, day after day, falls into a geopathogenic zone, then this is a trigger most fatal diseases. It is the intention to get rid of tuberculosis and

Torsion fields and information interactions – 2009

cancer among thinking people and became the fundamental conviction for writing books" [11].

6. Research by Associate Professor Rafikov S.K. and other employees of Ufa State Petroleum Technical University and State Public Institution "Fundamentproekt" showed [8] that "...on the main oil and gas pipelines in the north of Western In Siberia, 58% of accidents are confined to the boundaries of modern tectonic blocks, and the percentage of coincidence of major accidents is higher and amounts to 88%..."

Configuration of geodynamic zones [tectonic fault zones] covering an emergency section of a gas pipeline of relatively short length indicates the possible influence of these zones on the stress-strain state and intensity of gas pipeline stress corrosion. This is explained by geodynamic blocks are in continuous motion under the influence various forces, including those caused by the orbital and axial rotation of the Earth. In addition to the fact that areas of increased mechanical stress arise (extensions, compressions, shifts), changes significantly in geodynamic zones composition of the gas phase of soils, because various gases are actively leaking from the depths origin - CO₂, CH₄, H₂S, O₂, SO₂, Cl, F, etc... Thus, the increase stress levels and an increase in the content of aggressive gases in geodynamic zones lead to activation of underground corrosion, stress corrosion, crack growth and an increase in the number of failures of underground pipelines, wells and equipment."

7. Glikman A.G. and other employees of the Scientific and Technical Foundation "Geofizprognoz" of St. Petersburg proved [3] that due to the orbital rotation of the Earth, soils in the area tectonic faults have certain fluctuations, which leads to rapid aging and destruction of buildings.

In his work "Geoecological Factor of Home Safety," the author writes: "The soil in zones of tectonic disturbances behaves like quicksand. This is facilitated, on the one hand, by the reduced bearing capacity of the soil in these zones, and on the other hand, the presence there of significant (amplitude up to 10 cm) pulsation, which was discovered relatively recently by scientists from the Ural Academy of Sciences. As a result, the total impact of these two factors causes simultaneous destruction and suction of structures into the ground.

Rocks (soil) in the zone of tectonic disturbance are in such a ruined state that they cannot even be recovered during exploratory drilling. High disturbance of rocks in zones of tectonic disturbances can be traced from crystalline basement (granites, gneisses, etc.) for the entire thickness of the sedimentary cover, without reaching, however, the day surface of approximately 20-50 m.

A fractured rock column above a tectonic fault has increased permeability. This is both good and bad. Good - because by drilling a well in this place, we can extract water. In other words, there will be an artesian well was implemented. It's bad - because at the same time with water in these zones, deep gases emerge - radon, thoron, CO, methane, heavy vapors

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

metals, and this leads to the formation of geopathogenic zones. Moreover, if in the zone of tectonic disturbance will be a cesspool, a garbage dump, or some other If there was no storage of harmful substances, then their liquid fractions will penetrate from top to bottom, deep down to crystalline rocks, and along tectonic faults will spread as far as desired, in accordance with location and configuration of violations. Naturally, this will cause contamination of the water, which we could extract with an artesian well."

8. Also in the scientific work of Bagria I.D. [1] it is shown that within the boundaries of fault zones increased emanations of radon and thoron in soils are observed. Emanations of gases in fault zones exceed background emanations tens of times, which is certainly negatively affects the biological beings that live there, many months and years. The author also proved that surface and underground waters, as well as various water canals locally connected to fault zones, most likely generally contribute to the removal of radionuclides (and therefore other waste) from groundwater into surface water bodies.

Thus, the need to determine tectonic fault tracing zones when drawing up master plans for settlements, it also becomes clear from the point of view vision of a healthy way of life for society and the harmonious development of cities in surrounded by natural environment.

9. Regarding the issue of researching zones of tectonic disturbances and determining them borders, we would like to separately say that in 2004-2005. in connection with data research, we developed and conducted experimental studies [2] of an express method for determining the boundaries of the influence of tectonic disturbances using IGA-1 device. This method allows you to survey 2-7 sq. km. one day a day person.

Since March 2005 this method has been tested at the Institute of Geological Sciences NAS of Ukraine, after which the Institute recommended using it to solve geoecological tasks.

And now, using various methods, it is possible to carry out zoning territories of future settlements due to the degree of influence of tectonic faults, and within the existing planning restrictions - in the section where it is we are talking about karsts, landslides, seismic activity, etc., which are specified in SNiPs, it is necessary to add restrictions regarding the development of residential complexes in tectonic disturbances.

To solve this problem competently, you need to clearly define the boundaries of the building. residential, children's and medical institutions outside zones of tectonic disturbances. At approaching geopathogenic zones, it is possible to design sparsely populated areas permanent residence complexes (such as exhibition centers, industrial centers and service institutions). In the zones of influence of faults there are only green spaces, power lines and partly roads.

Torsion fields and information interactions – 2009

Thus, zoning of the territories of future settlements must be carried out primarily due to the degree of influence of tectonic faults, and in existing planning restrictions - in the section where we talk about karsts, landslides, seismic activity, etc. - it is necessary to add restrictions regarding construction of residential complexes in zones of tectonic disturbances.



Rice. 5. An example of the layout of the city center of Skadovsk in connection with the routing faults and photographs of favorable places.

The step-by-step approach in the new concept is:

- 1) Processing data on the tracing of fault zones in the territory, i.e. V carrying out pre-design surveys to identify fault zones, as well as elaboration of data on the geology of the upper layers and relief profiling; 2) Analysis of the existing urban planning situation (if there is one) place and we are talking about the development of the settlement, or its reorganization territory);
- 3) Development of a functional zoning scheme for the territory (its administrative centers, residential zones, industrial zones, recreational zones and zones of service centers and transport hubs); 4) Development of a master plan diagram and its detailed elaboration with development prospects (approximately 50 years).

To competently solve this problem, you need to clearly identify the main development zones. territory in connection with the tracing of fault zones. From our many years of experience Three main zones can be distinguished.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

The first includes the boundaries of the development of residential, children's and medical institutions outside the zones tectonic disturbances.

The second - when approaching fault zones - sparsely populated in terms of constant residence complexes (such as exhibition centers, production centers and service institutions).

The third - in the zones of influence of faults - only green spaces and water areas, power lines, and in some cases other engineering structures and partly roads, as well as, of course, cemeteries (although we personally We are inclined to posthumous burning of the dead in crematoria due to sanitary, hygienic and spiritual reasons).

When using the author's method of studying the territory by density spatial structures of geophysical anomalies, zoning of the territory will be fulfilled according to the following indicators:

The first restrictive zone used to form the boundaries of residential, children's and other institutions, as well as for detached industrial enterprises, according to our observations, may be within the limits of the step indicators Hartmann mesh from 2.0 m or more.

Second restrictive zone used for low-density development complexes, may be within the limits of the Hartmann grid step from 1.5 m and more. This zone can certainly partially extend into the area of the first restrictive zone depending on architectural and planning solutions

environment.

And the third restrictive zone used for routing engineering structures and for green spaces and water habitats may be located within the boundaries Hartmann grid pitch indicators from 0.9 m to 1.5 m. This zone can also partially enter the area of the second restrictive zone.

As for the future design of the architectural environment of cities, it seems to us that in connection with the identification of zones of tectonic disturbances, it will be possible to work out a new method of planning settlements depending on natural and socio-economic features. Here you can use already developed schemes: the "finger method" of the Scandinavian capitals and the "rectangular grid method" of the Hippodamian system, as well as methods of centric, island and radial-concentric development of territories.

The main thing we pay attention to is designing settlements in such a way in such a way as to ensure in the future even at the design research stage the possibility of a healthy lifestyle for the population. At the same time, approaches to the functional zoning of territories and their density will certainly be revised. developments. Also, the gas contamination factor will become less relevant if you increase the amount of green space in zones of tectonic disturbances. This will also allow reduce the level of road noise affecting nearby residential areas.

Torsion fields and information interactions – 2009

conclusions

Conducted research work regarding negative impact fault zones on public health, gives every reason to recommend the development and the introduction of new restrictive provisions in SNiPs regarding the section pre-design geological surveys.

Thus, the increased risk of cancer incidence among people living in areas tectonic disturbances, within 1.75-4.1 times, increased coefficient emission of gases harmful to the stability of structures and to human health within several tens of times, reduced soil density - all this indicators of the negative impact of stress factors arising in the zones tectonic disturbances. They cause rapid aging, like biological organisms and structures of buildings and structures.

Geopathogenic factors that require rethinking the role of science in architecture and the future of humanity, with modern trends in dense development of territories will now remind themselves more and more strongly. Today you should approach designing settlements so as not to leave fault tracing zones built up. After all, this would allow many to avoid terrible diseases. At In this case, it is obvious that funds for restoration will be better redistributed national health, air purity and other life indicators will improve.

It has long been said that prevention is better than cure. And this statement is now refers to the principles of architecture and construction.

Therefore, using the accumulated experience, scientists from Austria, Ukraine and Russia it is recommended to carry out zoning of the territories of future settlements taking into account degree of influence of tectonic faults. And in the existing planning restrictions it is necessary to add restrictions regarding residential development complexes in zones of tectonic disturbances.

Thus, the best proposals for the use of territories located directly in zones of influence of tectonic faults, for parklands, for power transmission lines, fencing and protective green belts, and partly for roads. It is recommended that the territories located in close proximity to fault zones be equipped with consumer service centers, exhibition complexes and environmentally friendly, uncrowded production facilities enterprises. It is recommended that territories located outside the zones of influence of tectonic faults be developed with residential, educational, scientific and medical institutions.

Only this approach will provide harmony of architecture in the living environment of the planet.

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Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

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Identification of geopathogenic zones as places of anomalous manifestations physical properties of the Earth, on the territory of the Volgograd region

Startsev V.N., Likholtov S.M.

Volgograd regional public scientific organization

"Ecological Academy", Volgograd
ecostas@rambler.ru

Data are presented on the search for geopathogenic zones on the territory of the construction site in Volgograd region mining and processing plant using biosensory abilities of a dowsing specialist, a physical device IGA-1 and other methods for detecting Earth radiation. Analysis of received materials made it possible to make adjustments to the construction plan for residential and production premises of the Plant, as well as when laying roads and technical water supply pipeline.

From the standpoint of science, geopathogenic zones (GPZ) should be considered as areas anomalous manifestation of the physical properties of the atmosphere, hydrosphere, lithosphere and deep spheres of the planet. The impact of geo-anomalous factors on humans and environment is carried out through completely material manifestations: electromagnetic, electrostatic and gravitational fields, which can be recorded and studied using modern instrumental methods, as well as sensory dowsing methods.

Since geopathogenic zones are associated with faults in the earth's crust and other tectonic processes, then the anomalous phenomena that arise, including including electromagnetic ones, can be dangerous both to human health and industrial facilities and processes. The place where such effects occur is very it is important to know especially when operating underground facilities, such as the mining and processing plant being built in the Volgograd region.

The location of geoanomalous zones can be established with greater degree of accuracy, the more diverse the complex of techniques used for such indications (electromagnetic measurements, sensory dowsing, cartographic landscape study, aerospace photography, biotesting of terrain, vegetation, etc.).

This paper presents materials studying the negative impact physical and electromagnetic radiation from the Earth's interior on environmental conditions key sections of the territory under construction in the Kotelnikovsky district Volgograd region mining and processing plant for the production of potash fertilizers

We have used the following methods of detection and manifestation in conjunction: geoanomalous, including geopathogenic zones:

- **biotesting** (observation of plant development, animal behavior and insects according to indicator characteristics);
- **dowsing** (using the abilities of a dowsing specialist, in particular using a pendulum) on the ground and on a geographical map;
- **physical** through the IGA-1 geophysical anomaly indicator device (author Kravchenko Yu.P.) [1, 2];
- **medical and demographic** (by identifying relationships between indicators tectonic tension of the Earth and data on morbidity and mortality rate of the settled population) [3, 4, 5];
- **landscape-geographical** (based on landscape observations from using aerial photographs of the study area).

The science of energy-information exchange (eniology) and practice have established that on the surface of the Earth and in space there are zones of concentration and rarefaction of energy, so-called geoanomalous zones. Some of them are harmful affect human health and are called geopathogenic zones (GPZ). Staying in them for a long time can lead to disruption functioning of organs of both humans and animals, as well as to an abnormal regime operation of mechanisms and devices [6, 7]. Ignoring the presence of anomalous zones leads to situations of unpredictable damage to buildings and structures, increased accident rates on roads, decreased land fertility and etc.

To identify anomalous areas, a sensory dowsing method is used with using specially trained operators [8] and various instrumentation methods eniosurveys. The latter include the PTI-1-GP torsion measurement device, the gravitational wave detector, the IGA-1 geophysical anomaly indicator [1, 2] and other.

GPZs were discovered by dowsing operators in ancient times, however They have attracted the attention of science only recently. Modern researchers divide all energy anomalies into 3 main groups:

- GPZ proper, caused by geological faults, tectonic processes of the earth's crust, ore deposits, groundwater and other phenomena.
- Technogenic geoanomalous zones caused by industrial activities human: the use of electromagnetic energy, underground works (boreholes, dumps, slurry reservoirs), laying pipelines and so on. •

Energy fields of different nature – we mean heterogeneous manifestations of energy-informational phenomena in nature.

These geophysical anomalies are an integral significant component of the environment our habitat, therefore actively influence the health of humans, animals and plants. Energy anomalies make themselves felt by some secondary signs: causeless deformation and destruction of walls, subsidence, local

destruction of roads, communications, unmotivated failures of electronic equipment, the presence of stable foci of pathologies in people and animals (the so-called "cancer entrances", where tumors are detected in residents on different floors one at a time vertical line), etc.

To identify ILI, some indicator signs are also used, including features of plant growth and animal behavior. We collected and analyzed such test signs, which were then successfully used in work. Some of These signs of ILI are shown in Fig. 1 and 2.



Rice. 1. Identification of a geopathogenic zone (GPZ) on the territory of the station. Thunderous. On the back In terms of plan, a typical sign of GPZ is a tree with a forked trunk (dichotomy).

Bioteesting of anomalous zones has been used for a long time by monitoring development of plants, insects, as well as characteristic reactions in sensory sensitive people - dowsers. Dowsing consists in the fact that the test object there are some geosensitive people. About 10% of people have these makings. An indicator frame held in the hand serves as an indicator device. (pendulum or forked branch, etc.), which characteristically deviates (or rotates) in space in geoanomalous places. For example, where there are underground water flows, veins, ore deposits, karst caves, foreign objects, including treasures, large objects, pipelines.

For a long time, dowsing was considered an unscientific method. Currently she gains recognition, as evidenced by the creation of national societies dowsing specialists in many countries. The dowsing method reveals both point anomalous phenomena and nodes of intersection of electromagnetic lines

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

Earth, the so-called global frame grids of Hartmann and Kurri, as well as major phenomena associated with geological faults [6], etc.

The modern dowsing method includes the so-called mental types: remote field, information, cartographic and intuitive [8]. IN sensory dowsing specialist Morozova took part in this work V.B., having a certificate.



Fig. 12. Geopathogenic zone (GPZ) in the area of st. Thunderous, with thickets of indicator plants - false butterbur Petasites spurius (synonym Podbel). Diagnosed by extrasensory dowsing method.

When searching for minerals in geological science, they are widely used physical methods, incl. electromagnetic, which consist in the fact that from the outside a physical impact on the earth's thickness is initiated and then recorded response to it. For the purposes of this work, the indicator was used geophysical anomalies IGA-1, developed at the Ufa State Aviation Technical University. The author of the device is Kravchenko Yu.P. It has patents and inventions [1, 2]. IGA-1 highly sensitive selective meter electromagnetic field in the range 5 – 10 kHz. Sensitivity 10-12÷10-10 V, i.e. V range 10-100 picovolts.

After analyzing the environmental situation using all the above methods We obtained the following results.

1. The correlation dependence on tectonic tension in areas of the Volgograd region adjacent to the Caspian region, medical statistical characteristics of population health (level

Torsion fields and information interactions – 2009

stillbirths, perinatal mortality, cancer morbidity and congenital malformations) [3, 5]. This is consistent with the hypothesis about the presence of ILI on boundaries of salt dome structures and on faults of the Earth [4, 5]. Generally The Kotelnikovsky district of the Volgograd region belongs to a zone with “quiet” salt-dome tectonics, therefore the indicators in the region are low stillbirth or perinatal mortality. At the same time, it was revealed the most dangerous zones and point areas in geoanomalous terms on territory of the plant, which will be taken into account during the design.

2. A dangerous section of the Volgograd-Kotelnikovo highway in the area of the bridge has been identified across the river Aksai Kurmoyarsky on the northern outskirts of Kotelnikovo.

3. An extensive geoanomalous zone was discovered in the northern part of the village and station Gremyachaya, including the railway, grain collection point and surrounding area. IN A fault at a depth of 300 m is diagnosed as the cause. Geographically the territory is located on the southern edge of the watershed plateau between the upper reaches of the Aksai Kurmoyarsky and Aksai Esaulovsky rivers, and geologically - above the central part of the Gremyachinskoe potassium salt deposit. Recommended refuse to build housing on the territory of Art. Rattling, susceptible geo-anomalous influence, monitor the health of those constantly working in geopathogenic zone of personnel, limit the number of workers in the anomalous zone.

4. An emergency-hazardous section of the technical water supply pipeline has been identified plant in the place where it is laid under the highway “city. Kotelnikovo - Generalovsky village (15 km from the regional center). Reason: a geological fault is diagnosed at a depth of 40 m and the presence of groundwater at a depth of 25 m, presumably the bed of an underground rivers up to 40 m deep. When designing and laying a water pipeline under On a highway, for safety reasons, it is necessary to provide a safety margin design and material in case of uneven soil subsidence, anti-corrosion protection of the pipeline (electrochemical or coatings), and also measures in case of emergencies and emergency destruction of a pipeline under a highway, for example, local duplication of a pipeline, etc.

5. When inspecting the construction site of dormitories in Kotelnikovo a geoanomalous zone has been identified. Reason: a geopathogenic zone is diagnosed and karst phenomena at a depth of 60 m. It is recommended to place it in the anomalous zone non-residential part of the building and carry out an appropriate layout of the premises with with the help of a dowsing specialist.

6. Along with this, a salubriogenic (health-promoting) zone was discovered on southern outskirts of Kotelnikovo. It is recommended to use it for health and recreational activities.

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Torsion fields and information interactions – 2009

**Transdisciplinary prerequisites for information science
architecture**

Notkin A.V.

**Head of the scientific center "Gamma",
member of the Union of Architects
of the Russian**

Federation, KBR, Nalchik. tel. (8662) 420 407, (8662) 740 992 e-mail alnoirs3@mail.ru

Mokiy V.S.

**Doctor of Philosophy, Professor,
Director of the Institute of Transdisciplinary Technologies.
KBR, Nalchik.**

vmokiy@yandex.ru, tel: +7 866 2 976 792

**Basic concepts and definitions of transdisciplinary
approach that forms the basis of informationological
architecture**

**In contrast to the systems approach, which implies an initial division
object into parts and interactions between them, transdisciplinary approach
is aimed at studying the object in its indissoluble integrity, internal unity.**

**The conceptual reflection of unity is the transdisciplinary term
"orderly environment". In relation to architecture directly operating
with the environment or in close interaction with the environment, this term allows us to expand
traditional understanding of its essence.**

**Firstly, the orderliness of the environment is formalized by introducing it
transdisciplinary quantitative parameter - "unit of order". Role
units of order is played by a "practically useful" geometric construction
space (volume) of the environment. The need for a unified order
(orderliness) in each fragment of the environment determines fractality
geometric design.**

**Secondly, the presence of order in the environment indicates the presence in it
common meaning (goal).**

**Thirdly, the realization of meaning (achieving a goal) is possible only if the
generalized concept of "ordered environment" is associated with a specific
the concept of "functional ensemble". According to this concept, everyone
a fragment of the geometric structure of an ordered environment is predisposed to**

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

implementation of only that main function (out of many possible ones) that is required from it with the meaning of a specific functional ensemble.

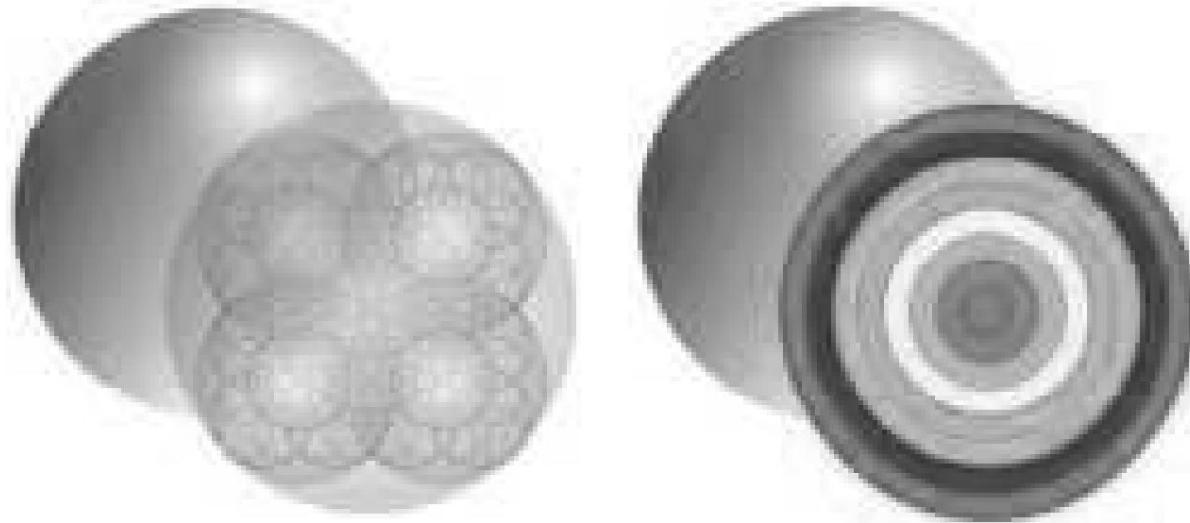


Fig.1. Geometric model of space structure

In accordance with the above, the natural environment, as a natural functional ensemble is a geometric structure made up of fragments that perform a strictly defined function in it. This modeling principle

environment is closer to the image of the environment in quantum physics, where the world is represented by a single fluctuating environment than the image of the system in the systems approach, in which the elements systems initially do not have an objectively expressed main function. IN in the context of this statement we can say that the transformation natural environment through the means of architecture will be harmonious with provided that it is carried out taking into account the preservation or use of the main functions of each of its spatial fragments.

In turn, the artificial ecosystems themselves (parks, squares, etc.), as well as construction objects for various purposes, built into the natural environment, becoming its fragments, must acquire the properties of its fragments functional ensemble. To do this, their "technological space" must realize in oneself a semblance of the geometric structure of nature orderly environment, and the objects themselves must combine their functional purpose with the functional purpose of fragments of the natural environment.

The term "information," which came to the humanities from technology in the mid-20th century, has a more pragmatic and obvious meaning in transdisciplinarity. IN concept of transdisciplinarity, "information" is understood as "general state" of an ordered environment. In such a context, "information interaction" between the natural environment and the artificial object included in it is nothing more than a *change in the general state of an object through the dominant influence of the state of the natural environment* and vice versa. From this example an important conclusion follows - the combination of the functions of objects and fragments of natural environment in the process of development of a specific territory will support and strengthen them, just as mismatch will contribute to their extinction or blocking.

Torsion fields and information interactions – 2009

It is important to note that the use of a transdisciplinary model of geometric environmental design does not interfere with the use of traditional methods and means architecture. In this case, architects have the opportunity to purposefully plan a change in the state of people in an architectural object, object architecture in the natural environment, as well as the natural environment itself in the presence of architectural objects, virtually eliminating the possibility of force majeure and unpredictable situations.

Artificial ecosystems within the natural environment

“Land of the Narts” - a new type of arboretum

It is proposed to create a dendrological park “Land of the Narts” in a suburban area Nalchik near the village of Urvan on the Nalchik-Vladikavkaz highway. On the territory of the landscape park with an area of about 200 hectares it is planned to place a number of complexes of cultural, scientific and entertainment facilities, united by a common idea aimed at organizing the International Cultural Center of the Peoples of the North Caucasus. This center may include an ethnographic settlement, a village craftsmen, children's play and entertainment complex, cafes and restaurants.

The main objectives of the projected international North Caucasus center are to revive national culture, show its origins, create preconditions for its better understanding and continuity.

**The location for the cultural center was not chosen by chance. This area has its own historical roots and age-old traditions, as convincingly evidenced by the surviving to this day, mounds and names of nearby settlements: Nartan, Nartkala. If every resident and guest of the republic plants a tree, it will soon be here
The beautiful groves will rustle with their leaves. If every Kabardian, Balkar, Ossetian, Dagestan or Chechen puts his stone here, a wall made of them will tell about the greatness of these peoples, about the places of their settlement.**

The main tasks of the 1st stage of construction of the arboretum “Land of the Narts”:

- 1. Creation of a multifunctional integrated infrastructure of ethno-tourism in the minimum volume necessary to harmonize the optimal spaces based on natural and artificial factors**
- 2. Research and experimental confirmation of the feasibility of the new approach in the direction of environmental architecture and landscape design.**
- 3. Solving environmental problems of the region in the shortest possible time with minimal costs.**
- 4. Finding ways to naturally improve the health of the population**
- 5. Formation of prerequisites for:**

- a) attracting tourists and vacationers,**

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

b) creating an interdisciplinary scientific and experimental center, c) uniting the peoples of the North Caucasus on the basis of cultural exchange, further development and strengthening of relations, d) providing the population of the republic with jobs, e) boosting the economy and well-being of the republic.

General provisions of the scientific concept of the arboretum "Land of the Narts"

To substantiate the concept of the first stage of construction of the arboretum "Earth Nartov" and the selection of sites for priority construction is expedient take advantage of the latest scientific developments in the field of information technologies.

The most promising method in this direction seems to be transdisciplinary approach, based on the analysis of basic natural patterns and confirmed by practical results. Calculations and geometric constructions made using this method served as the basis for choosing the optimal architectural and planning solution, determining the structure of the entire recreational complex, as well as the sequence and timing implementation of individual stages of design and construction.

As a result of comprehensive research and comprehensive analysis, it is proposed division of the arboretum into 9 functional zones, each of which, having a certain structure will allow creating an integral ecological system, close to natural, which has a positive impact on the harmonization of the environment a significant area adjacent to the park. Most significant In this case, the role is assigned to four zones enclosed in a circle with a radius of 800 meters.

The most important of them seems to be the south-eastern sector (sector 4), limited circle with a radius of 400 meters. On its territory it is planned to place International North Caucasus Cultural Center, the first stage of which, which includes a complex of buildings for hotel, scientific, information, cultural and entertainment purposes, as well as open landscaped areas with natural landscape will occupy relatively a small area of about 3 hectares (with a total area of the park of about 200 hectares.)

At the same time, it is necessary to develop the southwestern sector (sector 7), the main the purpose of which is history, ethnography and archeology. Here also on the site with an area of about 3 hectares, it is proposed to place a campsite for autotourists, a "village of craftsmen", an exhibition and information center.

Here you can get acquainted with the national crafts of all nationalities North Caucasus, taste national cuisine, play national games, watch archaeological excavations, take part in ritual and festive ceremonies. Northwestern sector (sector 6) is intended for scientific research in the field of plant growing, dendrology and gardening

Torsion fields and information interactions – 2009

architecture. The north-eastern sector (5) is allocated for an entertainment and gaming area "Nart Land".

In the territories of the ninth and eighth zones it is proposed to establish a "grove of Druids", where every guest and resident of the republic will be able to plant their own tree as a symbol universal solidarity and unity with nature.

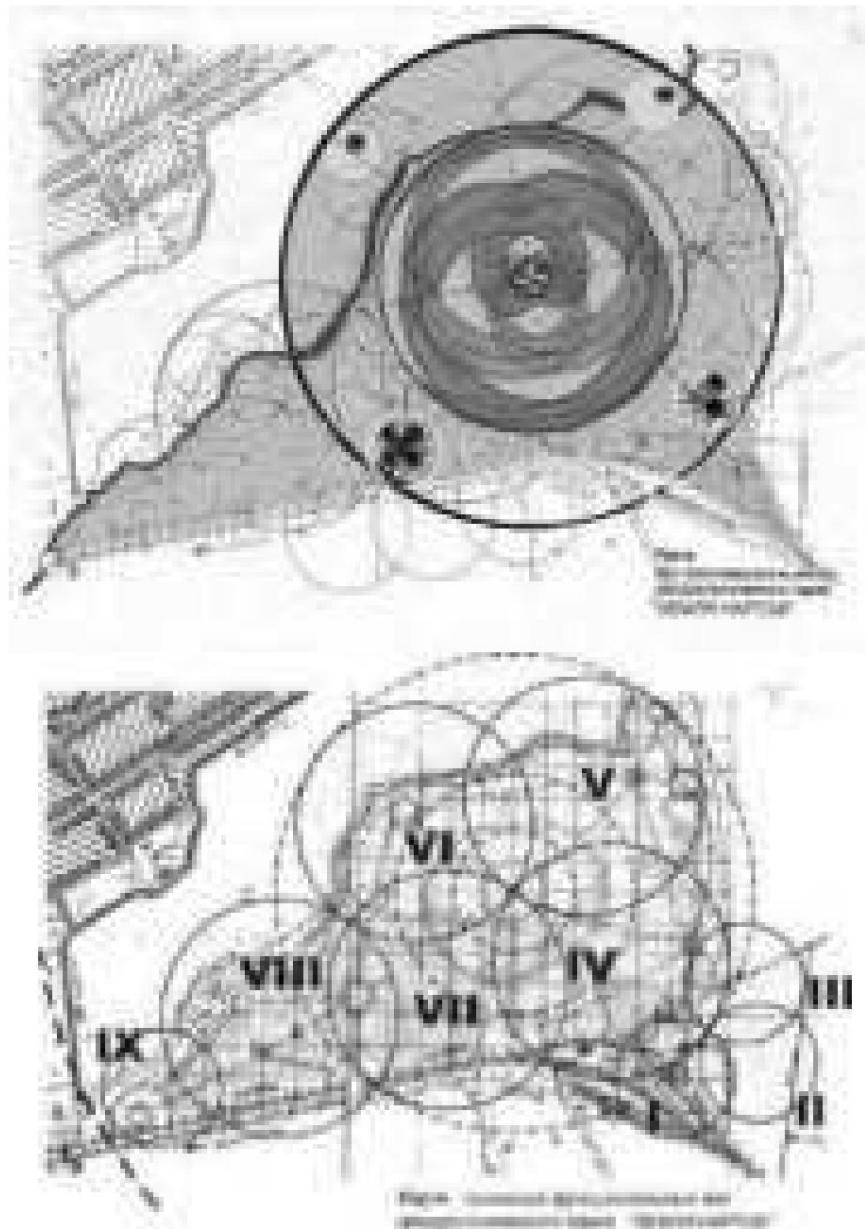


Fig. 2 Map of zones of complex influence of the arboretum "Land of Narts"

Initial business idea for an arboretum park "Land of the Narts"

Target

Create a new specially protected natural area - Dendrological Park
"Land of the Narts" in the suburban area of the city of Nalchik and the village of Urvan, which

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

would personify the natural complex endemic to the Caucasus and the International Center for the Peoples of the North Caucasus

Initial business idea concept

Dendrological Park "Land of the Narts" (hereinafter referred to as the Park) is a natural territory, the organization of which is specially formed to solve environmental, economic and socio-cultural objectives assigned to it tasks.

In accordance with preliminary calculations, the standard duration Transformation of the park's original business idea is 32 years. Due to Given the expected long-term duration of the park's operation, the general tasks facing it are divided into three groups - long-term, medium-term and short-term.

Long-term goals include:

I. Use the organized environment of the park as a natural factor stabilization of the environmental and socio-political situation adjacent to park, regions of Kabardino-Balkaria, as well as the city of Nalchik.

II. Give the park the status of an International Cultural Center, activities which should be aimed at developing among citizens of Kabardino-Balkaria and other peoples of the North Caucasus living abroad, economically oriented worldview, the formation of a new ethics based on the idea biosphere, ecological culture and national identity.

Medium-term objectives include:

I. Create and put into operation the park infrastructure, allowing carry out activities under the Ecotourism program in full.

II. To form and put into operation the infrastructure of the Park, allowing carry out activities under the "Population Health Improvement" program in full volume.

III. To form and put into operation the infrastructure of the Park, allowing carry out activities under the "ecology and culture" program in full.

Short-term goals include:

- Scientifically substantiate the initial predisposition of individual zones of the general the territory of the Park to meet the requirements of long-term and medium-term objectives. - Search for the best options for the manifestation of this predisposition according in the following areas: •

- Functions**
- Shaping**

Torsion fields and information interactions – 2009

- Materials
- Equipment
- Organization
- Formation of the environment
- Symbolism
- Propaganda

- Form a working concept for the Park, including the following positions: •

Drawing up a script and legend. •

Choice of name and symbols. •

Territory zoning. • Development

of communication schemes. • Definition

of style and form. • Compiling a list of plants of the

North Caucasus that will

used in shaping the Park environment.

• Search for optimal organization and economic ways to implement the first stage.

• Formation of public opinion using the media information.

• Development of artistic concept. •

Development of preliminary designs of zones, taking into account modular (fractal) principle.

• Drawing up a business plan for the first stage.

- Develop a concept for the order of commissioning of individual functional areas of the Park.

- Clarify the artistic concept of the first functional zone of the Park, with which will begin its actual construction. -

Develop a business plan for the construction of the first functional zone of the Park.



Rice. 3. General view of the arboretum "Land of Narts" in the Nalchik area

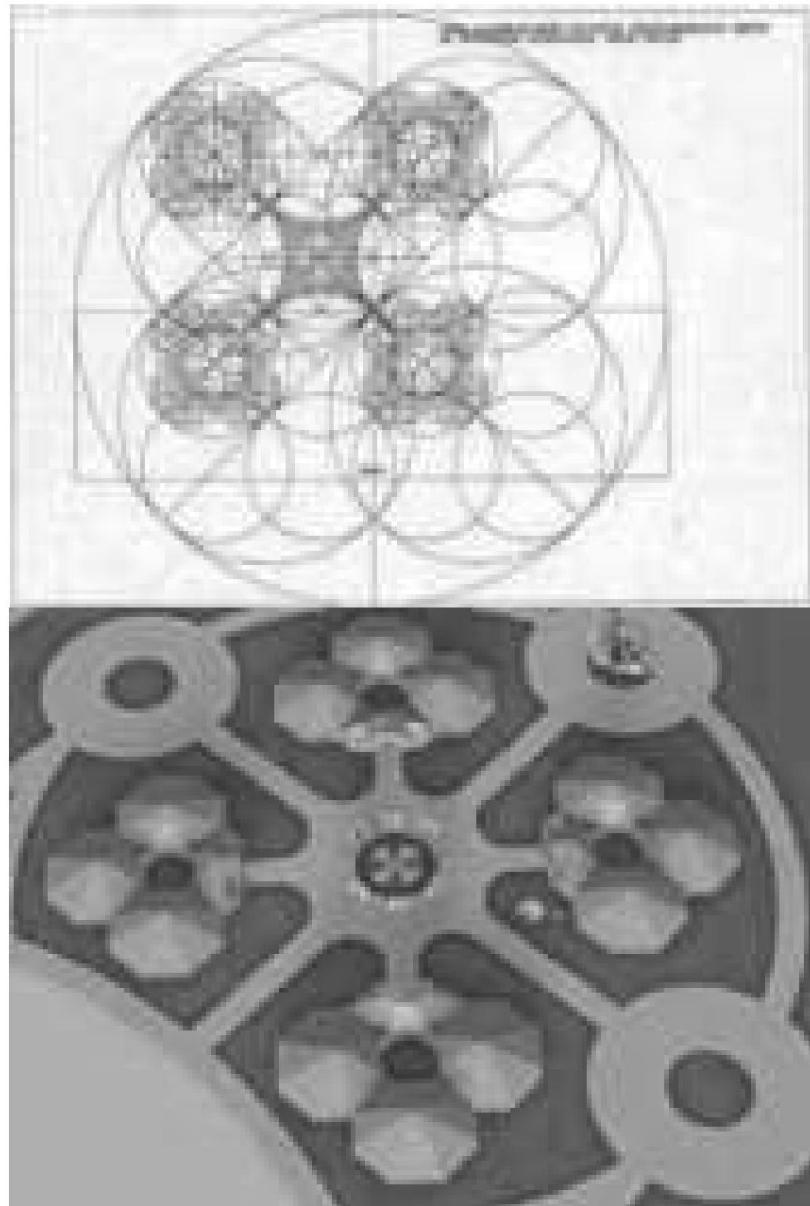


Fig.4. Ethnographic complex in the park



Torsion fields and information interactions – 2009

Fig.5 Layout of the arboretum “Land of the Narts”

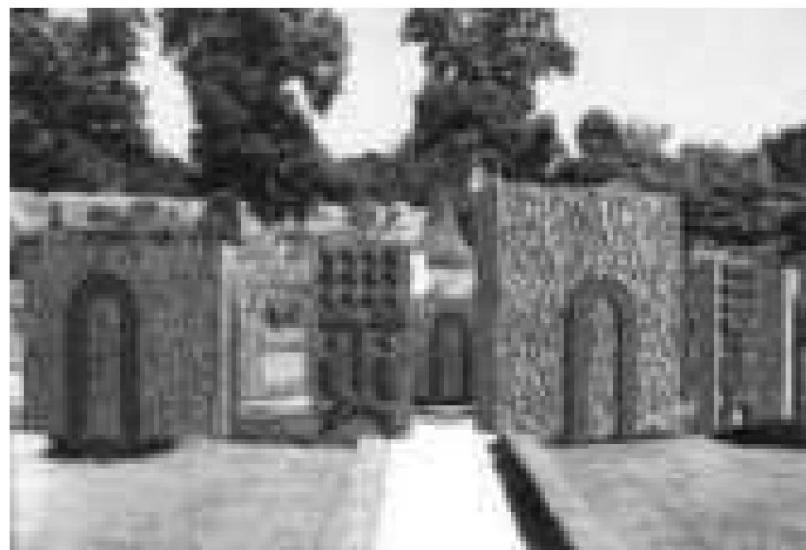


Fig.6. One of the energy centers on the territory of the arboretum



Fig.7. The building of the International Cultural Center of the Peoples of the North Caucasus

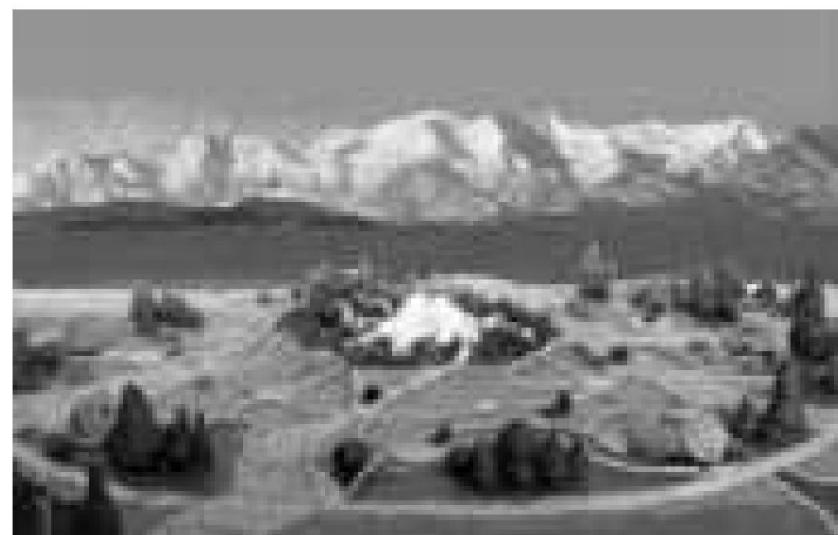
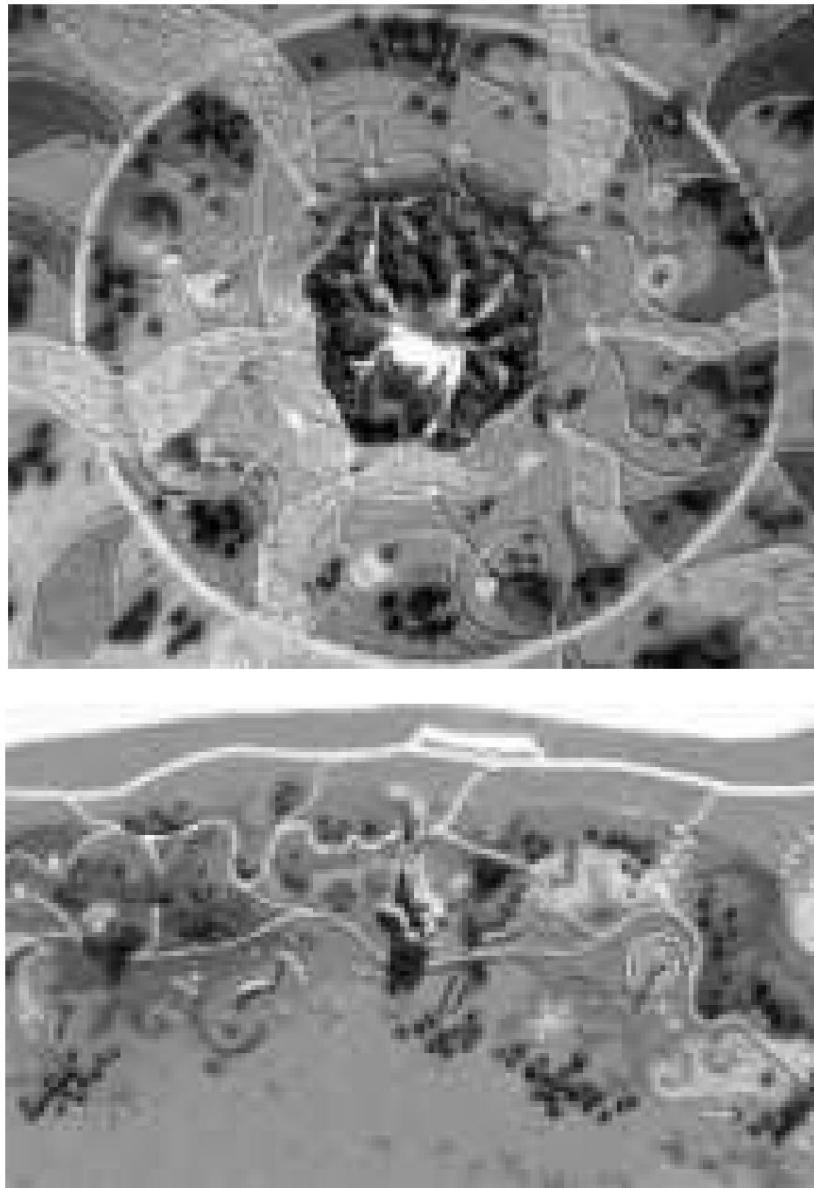


Fig.8. Supermarket of the Elbrus region in the central part of the park

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009



Rice. 9.Layout of the children's amusement park "Nartland"

conclusions

To effectively solve problems related to environmental restoration balance in nature and in society requires an integrated scientific approach with attracting the achievements of modern technologies.

One of these approaches is the transdisciplinary approach, the methodology of which developed and tested in practice by the International Institute transdisciplinary technologies. This technique is based on identifying basic natural patterns, according to which there are certain zones for each type of process, limited by quantitative and qualitative parameters and subject to strict regularity, allowing with a sufficient degree of probability determine both their spatial and temporal parameters.

Torsion fields and information interactions – 2009

The creation of artificial ecosystems in urban and natural environments can have positive impact on the improvement of nature and society. Promising directions in this regard are those proposed by the scientific center "Gamma" conceptual developments, one of which is the creation in the vicinity of the city of Nalchik multifunctional dendrological park "Land of the Narts"

Unlike geographic information systems (GIS) methods, which can systematize the flow of factual information and transform it into three-dimensional spatial image of a *randomly selected area localities*, the transdisciplinary technique for isolating PFA allows initially give this site the status of *an object* with individual properties. In turn, knowledge of these properties allows us to reasonably accompany the complete a set of measures from the development of concepts for initial development territories to forecasting and management of natural, man-made and social events.

Results of practical and research work using transdisciplinary approach are obvious. They do not require complex evidence and therefore, they are equally understandable to specialists and administrative decision makers. The results of these works can be used as an important component of information and advisory support specialists solving urban planning problems at any stage of its solution.

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Torsion fields and information interactions – 2009

Energy-information interaction of artificial ecosystems and natural environment

Notkin A.V.

**Head of the scientific center "Gamma", member
of the Union of Architects of the
Russian Federation,
KBR, Nalchik. Tel.
(8662) 740992 e-mail alnoirs3@mail.ru**

Energy information aspects in architecture and urban planning

**In the conditions of modern destabilizing processes occurring in society and
affecting almost all spheres of life, increasingly
Targeted solutions to environmental environmental issues are becoming increasingly
relevant. Achieving significant results in this area is impossible without scientific
understanding the relationship between Nature and Man.**

**Recent studies have convincingly proven that all processes causing
This relationship is based on an energy-information structure.**

**For the successful practical implementation of basic scientific ideas related to
restoration of the natural environment, a comprehensive conceptual
approach, where, along with traditional methods and techniques of landscape
architecture, it is advisable to use advanced developments in the field of creating
artificial objects that form a space favorable for humans. The correct choice of
location and size plays a significant role in this.
site, as well as its infrastructure and zoning.**

**The desire to know the laws of the universe and live in accordance with them can be traced in
of all peoples since ancient times. Teachings on choosing a place to live, taking into account
natural and cosmic factors have survived to this day. Significant value
has an area covered by the frame, so the capacity of any battery
associated with its size (2.Article 117).**

**Chronal or microlepton radiation coming from space can be detected from
using various geometric shapes, using them as batteries. The most widely used
shapes are the spiral and the pyramid. To the spectrum
the energies of these figures include radiation from all healthy human organs and
cells (3rd article 27). The strength of a form depends not only on its orientation in volume space
mass, but also on time and location (3 Art. 28).**

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

According to modern nonlinear physics, certain geometric shapes play a big role in our world, are the universal language of the universe. Practical experiments conducted by St. Petersburg scientists under the leadership of E.A. Faydysh convincingly proved the positive impact certain forms on the ecology of the environment. Greatest effect achieved by using spiral shapes, mandalas, labyrinths and placing them in certain energy centers. The material can be ordinary river pebbles.

Any physical object is a volumetric resonator. This applies to everyone architectural structures. The shape of a building, like a musical instrument, enhances and colors the energy of the area in harmonic vibrations.

In the past, the location for building a house was carefully chosen. For example, they observed where domestic animals would spend the night. Then this place tested for the presence of groundwater. People have long noticed that if underground there is a crossroads of water channels, then it is impossible to live in this place: everything in the house is above. This kind of "crossroads" will make people sick. Therefore, on the site selected for development put an earthenware jug upside down. This was usually done in August. If it's early in the morning droplets of water appeared on the walls of the jug, this indicated the presence of land of the watercourse.

Already in our century, concepts such as the Hartmann grid, pathogenic zones and other negative health factors. Basically these factors were determined by biolocation methods. Considering that the Hartmann grid has the size 2 meters in the north-south direction and 2.5 meters in the west-east direction, knots intersections of the Hartmann grid will necessarily fall on resting places. It has been noted that these nodes have a strong negative impact on health.

The intersection nodes of Hartmann lines can be easily found in garden plots and gardens according to the location of anthills of small red ants. plant something on This place is a waste of time and money.

In the past centuries, a religious building was always built in the clean entrance area "energy" and the settlement was built in circular trajectories around the church. Temple designers determined the energy entry zone, saw how it should be the building's cavity resonator. First, a drawing of a cavity resonator was made, and then a construction project. Therefore, all places of worship are required were different from each other. The metocode of each area determined the uniqueness of the form volumetric resonator.

Currently, in many countries, the area planned for development undergoes mandatory enioexpertise and correction. They undergo such an examination and the construction projects themselves, because the dimensions, shape, and proportions of the building determine energy information spectrum that has a beneficial or, conversely, negative effect on health.

Torsion fields and information interactions – 2009

Architectural and construction prerequisites for environmental dwellings

When designing buildings, structures, cities and city systems, the architect takes decisions on which the degree of harmonious human relationships largely depends and its habitat. Therefore, all human ecological systems that are included in the field of architectural research and design, are mixed systems containing both natural and anthropogenic elements. In interaction between the demoecosystem and nature, it is man who determines the tactics and strategy, being the so-called motivator link in this system, therefore, the leading criteria here should be different from the generally accepted ones technological criteria.

Any architectural system has its boundaries and exists within a certain external" world, which is located outside the set of elements of the system under study and influences her. This influence is external factors perceived corresponding elements of the system - is integrated by the system into internal factors that cause one or another reaction of the system or its individual groups components to external "stimulants".

In his home, a person strives to find coziness, comfort and protection from stress. However Modern housing does not in any way contribute to a healthy lifestyle. In stone in the jungles of modern cities, people find themselves increasingly isolated from natural habitat and are increasingly exposed to a variety of harmful influences affecting his physical and mental health.

Modern development causes environmental damage to the environment as directly and through the engineering infrastructure and those serving it manufacturing sector. Essentially industrial era housing anti-ecological.

Is it possible to somehow reduce the negative impact of a modern city on environment? Finding an answer to this vitally important question for humanity led to the emergence of the concept of an ecological house, which has evolved over the course of last decades, incorporating all the latest achievements in the field of ecology and high technologies.

Currently, new houses are spontaneously appearing in various countries around the world. type, usually called environmental. Such houses have every reason to become the standard of housing for the post-industrial era. Moreover, eco-housing can play a role key, system-forming role in the transition to environmentally sustainable civilization.

What is an eco-house? It is energy efficient, non-aggressive towards natural environment, a low-rise house that combines modern comfort with autonomous life support systems that make maximum use of renewable resources and processes. All this is achieved mainly the use of autonomous or small collective engineering systems

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

life support and rational building design of the house. In an eco-house alternative energy sources are used for lighting, heating and other household needs. Organic waste processed into compost is used for improving the biological productivity of soil in a personal plot.

That is, the fundamental difference between an eco-house is that it is based on natural infrastructure: sun, wind, soil fertility. Therefore, eco-settlements are highly sustainable in terms of both natural and man-made disasters.

Eco-house solves the most pressing problems of our time: providing for people cheap, comfortable housing, built and operated on the basis of resource- and energy-saving technologies using local materials, and greening the public utility sector. Eco-home technologies allow revolutionize the concept of settlement and solve the problem environmentally sustainable urban development. Eco - houses do not cause harm environment, and in disturbed conditions they even restore it. In concept eco-house includes the house itself, outbuildings, garden plot with biobotanical site, vegetable garden, water storage system, place recreation. An eco-house can provide a quality of life in which the family will be able to raise a healthy next generation. With mass in the construction of eco-housing, one can hope for high-quality reproduction human population as a whole and restoration of damaged ecological resource in populated areas.

Mass construction of eco-houses can make housing construction a means of solving many environmental problems facing humanity. When operating a house, a person with his life activities must contribute to converting solar energy into living biomass more efficiently than this occurs during the natural development of the ecosystem, exceeding the value natural reproduction of the environment in its natural state.

The role of building materials and new technologies

Among the numerous factors that have a significant impact not only on comfort of living in the building or long-term stay in it, but also on well-being and human health, *the material, shape and schematic diagrams of planning and urban planning solutions*.

It is well known that being in a wooden or brick building is much more nicer than panel or monolithic concrete. It has been proven that metal frame of reinforced concrete panels, interacting with high-frequency radiation from electrical household appliances, greatly enhances their negative impact on human health, reducing his vitality and performance.

What else can be offered as an alternative to what has been said? This is, undoubtedly, "*Eco - timber*" - a new building material with remarkable properties.

Torsion fields and information interactions – 2009

The beginning of the construction of houses made of eco-timber dates back to 90m. years of the twentieth century, but due to the complexity of technology has been virtually eliminated. 15 years of living experience in our houses indicates the uniqueness of this building material. People living in houses made of eco-timber forget about many chronic diseases, their efficiency increases, asthmatic diseases go away, and their health improves. cardiovascular activity.

Living for 2-3 months in a house made of eco-timber gives a boost of energy for half a year. A person experiences incomparable sensations while in the steam room of a bathhouse built from eco-timber. As a result, 10 baths using bischofite solution have improvement of human physiological capabilities.

Today, the question of a person's presence in an ecologically clean environment is at the forefront. place, so the use of eco-timber in construction solves all problems, and indeed: consists of natural minerals that even warn against X-ray radiation, the timber does not burn, is not subject to rotting, is not afraid of moisture and does not absorb it, is not afraid of rodents and insects, does not shrinkage, has low thermal conductivity - timber thickness 150 mm (replaces brickwork 650 mm thick), the presence of bischofite has has a healing effect on humans and the timber retains its properties and breathes like a tree.

Timber consisting of environmentally friendly components - pine sawdust, caustic magnesite (crystalline rock - fire-resistant material), bischofite (natural salt solution). Obtained by pressing the listed components, a beam with a cross section of 250x150mm is formed. arbitrary length. Each of the three components gives the timber its own properties. Bischofite (mineral salt is a medicinal product) - gives the timber antiseptic properties, so the timber does not susceptible to rotting, bacteria and mold do not develop in it and in the house from this materials will not attract any insects.

Houses made from eco-timber are easily and quickly assembled from individual elements according to any project, thanks to the tongue-and-groove design of the timber, it is mounted according to the principle children's construction set (a 6x6 house can be assembled in 5 hours). Installation is quite simple the crest of the timber is coated with a solution of bischofite and magnesite, and connected (it is possible to use cement mortar). After setting the joints the structure achieves the strength of monolithic concrete. Smooth side surface timber is such that it does not require plastering work.

Form and basic diagrams of planning and urban planning solution

The shape effect is still the subject of theoretical research, but from practice it has long been known that such forms as a circle, spiral, ball, pyramid provide a powerful harmonizing and healing effect.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

To a large extent, the ecology of a home also depends on space-planning and urban planning solutions. Architects at all times preferred symmetrical constructions using proportions Golden Section.

We have all had to think more than once about why Nature is capable of create such amazing harmonious structures that delight and delight eye, why artists, poets, composers, architects create amazing works of art from century to century. What is the secret and what are the laws? lie at the basis of these harmonious creations? For thousands of years, many thinkers, starting with Pythagoras and Plato and ending with Losev and Florensky, searched for an answer to this question. And most of them came to the conclusion that in the Universal Harmony reigns, based on symmetry and the Golden Ratio.

In October 2003, the International Conference "Problems of Harmony, Symmetry and the Golden Section in Nature, Science and Art. In progress The conference was attended by more than 50 outstanding scientists from the CIS countries, representing such world-famous scientific centers as Moscow, St. Petersburg, Kiev, Minsk, Rostov-on-Don, Saratov, Kostroma, Vinnitsa, etc. As a result of the conference, a Collection of Conference Proceedings was published, including about 80 articles.

Symmetry is perceived by a person as a manifestation of a pattern, which means internal order. Externally, this internal order is perceived as beauty. Symmetrical objects have a high degree of expediency - after all symmetrical objects have greater stability and equal functionality in different directions. All this led the person to the idea that For a structure to be beautiful it must be symmetrical. Symmetry used in the construction of religious and domestic buildings in Ancient Egypt. From then to the present day, symmetry in human consciousness has become objective. a sign of beauty. Maintaining symmetry is the first rule of an architect when designing any building.

The patterns of "golden" symmetry are manifested in energy transitions elementary particles, in the structure of some chemical compounds, in planetary and space systems, in the gene structures of living organisms. These patterns, above, exist in the structure of individual human organs and the body as a whole, and also manifest themselves in biorhythms and the functioning of the brain and visual perception.

People have long paid attention to the correct shape of crystals, geometric rigor of honeycomb structure, consistency and repeatability arrangement of branches and leaves on trees, petals, flowers, plant seeds and reflected this orderliness in their practical activities, thinking and art.

Torsion fields and information interactions – 2009

The concept of "symmetry" was used in two meanings. In one sense symmetrical meant something proportional; symmetry shows that way coordination of many parts, with the help of which they are combined into a whole. Second The meaning of this word is balance.

The symmetry of the forms of natural objects as an expression of proportionality, proportionality, harmony suppressed ancient man with its perfection, and this was used by religion, various ideas of mysticism, So, in In the teachings of the Pythagoreans, symmetry, symmetrical figures and bodies (circle and ball) had mystical meaning, were the embodiment of perfection.

Practical proposals of the scientific center "Gamma"

One of the latest developments of the Gamma scientific center is proposals for short-term recreation centers based on universal structures made of easily prefabricated structures made from modern environmentally friendly building materials.

Such structures can be light panel houses for rest. Having traditional triangular shape with minimal overall dimensions, designed for 2-4 people, they can be placed in hard-to-reach areas, on summer cottages, on slopes, on stilts or on a group of large stones, very economical and functional. They can be placed in rows or around the fire pit sites.

With their mass industrial production, it is possible to achieve sufficient high quality at relatively low costs. For more comfortable living conditions for a group of 20-40 people, a one-story building is offered about 20 meters in diameter with 7 residential blocks arranged in a semicircle around a central multi-purpose hall with overhead lighting. IN Each block includes a living room with an area of 20 square meters, a small kitchen-dining room, a toilet with shower and an entrance hall with built-in wardrobes.

Another type of structures based on similar structures is designed for maximum comfortable living conditions and the possibility of gradually increasing the number of floors with three to five floors. It provides the ability to create multi-level spaces with central circular galleries and natural upper lighting through the glazed roof.

All six apartments on each floor are the same as in the previous one-story buildings are placed in a semi-ring, forming a symmetrical layout structure with a full set of all necessary premises for housing.

It is proposed to place a greenhouse or winter garden on the top floor level. IN level of the first floor, it is advisable to design a spacious hall and small storage rooms for bicycles, strollers and equipment. It is possible to use this constructive solution for cottages, hotel-type houses or office buildings buildings with retail space below.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

With a selected symmetrical compact layout with large spaces flowing into each other in addition to efficiency and durability a significant harmonizing and healing effect of the form is achieved building, which as a whole will be a kind of energy vessel with uniform distribution of energy in each apartment.

At the same time, thanks to the features of the proposed enclosing structures in the form environmentally friendly sandwich panels, the effect of a thermos will be achieved. in winter the building will require minimal heating costs, and in the summer it will kept cool.



Rice. 1. Superior hotel in the Elbrus region.



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Fig.2. Easy-to-assemble houses with a frame closed along the contour.



International Center for Ecological Tourism "Golden ball"



Fig.3. Structure of the ecotourism center



Rice. 4. Mount Yutsa in the vicinity of Pyatigorsk and the site for the complex facilities of the International Center for Eco-Tourism "Golden Ball"

Torsion fields and information interactions – 2009



Fig.5 Agricultural eco-village for 46 families at the foot of Mount Yutsa

Concept

Using the unique natural conditions of the area for the development of all types tourism, effective sports training and recreational work with various groups of the population.

primary goal

Creation of an ecological environment with modern infrastructure for classes tourism, extreme sports, recovery from stressful stress and psychological trauma, for the prevention and treatment of pulmonary and allergic diseases, for short-term, family and other types recreation.

Ways to solve main problems

- 1. Formation of separate zones for short-term stays or long-term accommodation with the creation of comfortable conditions in accordance with functional purpose**
- 2. Creation of an international center for extreme sports with training bases for hang gliding, grass skiing, skateboarding and roller skates.**
- 3. Construction of an agricultural ecological village 4. Construction of an experimental children's year-round sports - a new type of tourist health center.**
- 5. Construction of short-term recreation centers for trans-republican tourism.**

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

- 6. Creation of scientific centers for the study and introduction of innovations in the field sports, tourism, recreation, health improvement, education and ecology.**
- 7. Construction of an international ecological tourist-type village with developed infrastructure to promote tourism and attract investments.**
- 8. Construction of luxury homes for the elderly and creative cottages for writers, poets, artists and musicians.**

By planning and implementing phased construction, it is possible as demand for regulating the development of a particular zone, introducing innovations, and conducting research.

Combining the process of relaxation with sports and training will increase overall efficiency of solving all identified problems and create the most favorable conditions for the development of all types of tourism, quick payback costs and stable high profitability.

In accordance with preliminary calculations performed using the methodology Institute of Transdisciplinary Technologies diameter of the main zone of the DOC and ethnic guest village will be about 800m, the diameter of the plot experimental crop production - 400m, agricultural diameters. village and scientific Ecocenter – 200m.

Shape, color, construction and finishing materials must ensure environmental cleanliness, contribute to the harmonization of the surrounding space. Each stage of construction must involve the formation of an equilibrium structure with all its components, the possibility of further development and improving fundamental ideas, active participation of children in all functional processes at all stages, starting from conception and design.

Bank of ideas

- 1. Creation of a universal complex for year-round operation as an experimental center for research in the field of learning, improving education. Study and practical application of new technologies and**
- 2. materials. Refusal from metal and reinforced concrete**
- 3. structures. use of modern technologies and materials for construction (Izolux panels. reflective mirror and film, awning and inflatable structures)**
- 4. Use of reeds for roofing, use in landscaping and decoration braids of twigs and masonry. 5. Circular compact structural and planning structures. 6. Limiting the types of development to low-rise buildings**
- 7. Placement of storage rooms for bicycles and inventory.**
- 8. Organization of summer terraces under residential buildings on the 1st floor level. Roller and bicycle paths, health paths.**

Torsion fields and information interactions – 2009

10. New type playground complexes, obstacle courses, slides. 11. Playgrounds for the peoples of the North Caucasus and other peoples of the world. 12. Mini golf courses in combination with recreation areas. 13. Energy structures - pyramids, spirals, labyrinths. 14. Use of environmental transport: bicycle, roller skates, carts with donkeys.
15. Cable and air transport and attractions. 16. Universal halls for mass sports and entertainment events, training
17. Use of multi-level underground space under central multipurpose hall. 18. Application of dome spherical coverings for the hall. 19. An open amphitheater for holding celebrations and shows.. 20. Sign system - "Golden Ball". 21. Use of the principle of similarity in the planning structure of the complex. 22. Creation of subsidiary farms and mini-factories, a souvenir factory. 23. Partial or full self-sufficiency through excursions around the territory center and subsidiary farms, landscaping and decoration works. 24. Assigning a minibus with a driver to each group of 12 people
25. Possibility of living with parents.



Figure 6. Year-round children's health center "Golden Ball"

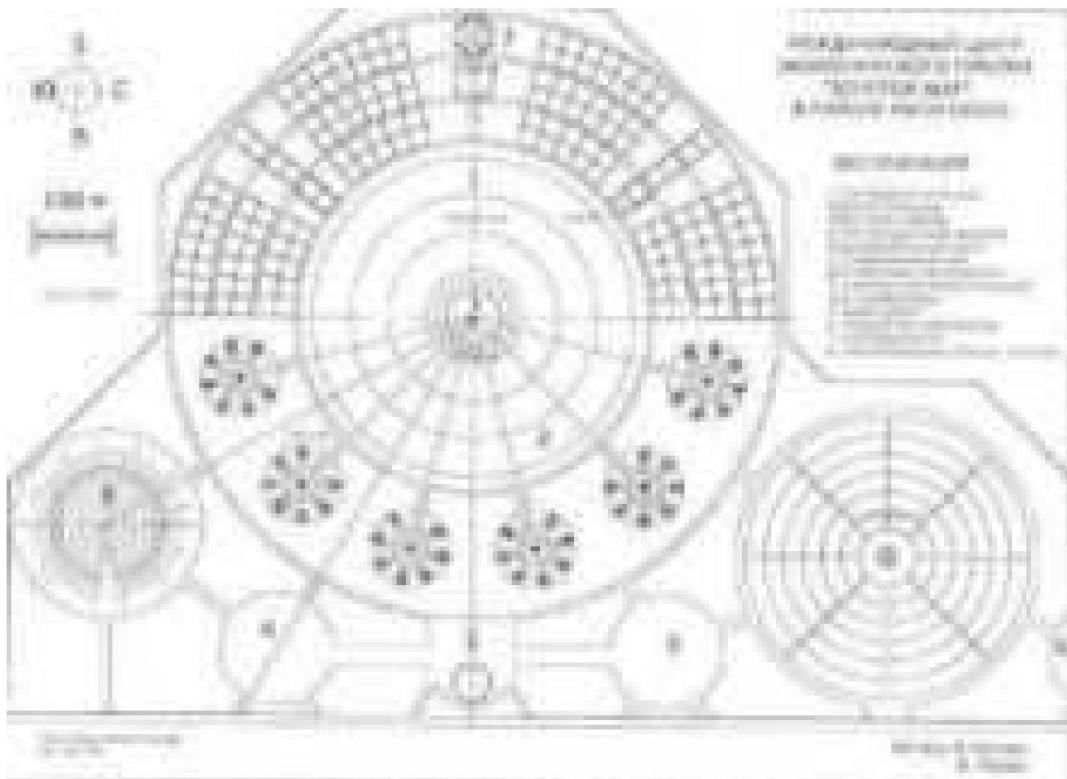


Fig.7. Planning diagram of the eco-tourism center "Golden Ball"

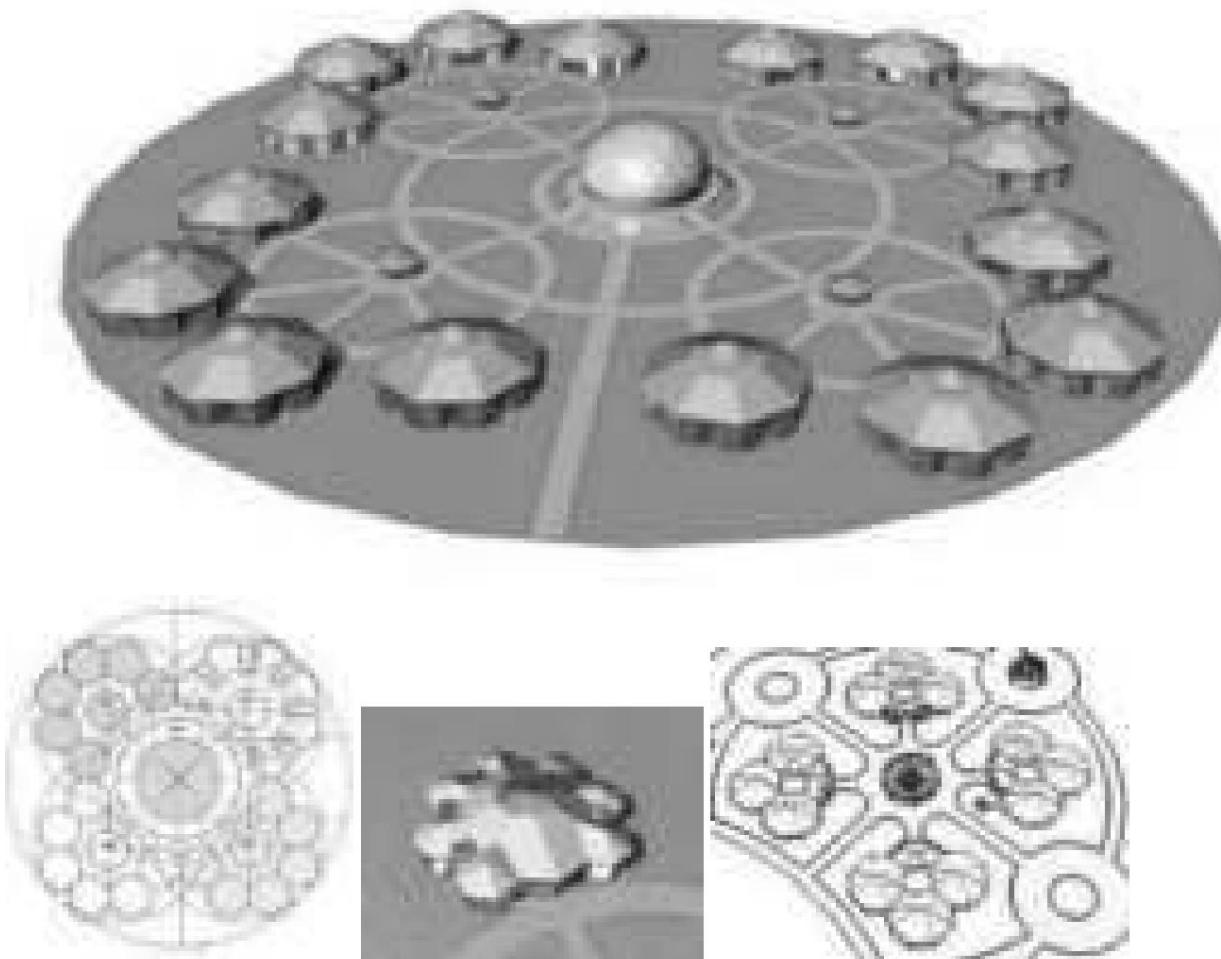


Fig.8. Residential modules for year-round recreation centers

Torsion fields and information interactions – 2009



Rice. 9. Residential modules for year-round recreation centers



Rice. 10. Residential 7-room module for 14-28 people for recreation centers

Conclusion

Each time leaves its mark on the way of life and the human psyche. All this is reflected in architecture.

It has long been noted that the living environment, a house, an apartment, a block, a village, a city, a country, is a reflection of the soul of both an individual person and the entire society as a whole.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

The Eurodesign style that is now fashionable in the West strives for maximum simplicity, while maintaining sophistication and perfection in the combination of shapes and colors.

Beauty lies not in pseudo-artistic plaster modeling and not in "cool" wallpaper, trellises and fences, but in the unity and harmony of the overall stylistic space-planning and architectural and artistic solutions. Correct forms, well chosen and arranged, are beautiful in themselves and

emit streams of positive energy that have a beneficial effect on all living things, then as incorrect ones, being anti-natural, on the contrary, charge negatively and are kind of destroyers of life.

Disharmony in architecture can become an indirect cause of various ailments and even diseases, since it subconsciously acts through visual perception on the human psyche.

Therefore, the work of an architect is no less responsible than the work of a doctor, and a frivolous attitude towards professional requirements is fraught not only with amateurism and bad taste.

One of the most important aspects of creating a healthy environment besides correct scientific reasonable selection of a site for construction and taking into account the shape and material of the building is taking into account temporary factors. Reducing construction time and correct breaking it down into separate stages can be achieved when used in the process of designing effective modern scientific developments of the institute Transdisciplinary technologies.

Using the methodology of a transdisciplinary systems approach allows determine the calendar dates of the main periods of life activity artificially created ecosystem, from the preparation of the initial business idea to achieving the goals set by its creators.

Thus, the use of a transdisciplinary systems approach allows significantly strengthen the regulatory component of artificially created projects ecosystems, organize information support for specialists involved in their development and construction, as well as to prevent unjustified material costs that may arise during construction and operation artificially created ecosystems.

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Torsion fields and information interactions – 2009

Artificial ecosystems based on integrated farming farms

Notkin A.V.

Head of the scientific center "Gamma", member
of the Union of Architects of the
Russian Federation KBR, Nalchik

Dynamic (deterministic) chaos and fractals are concepts included in the scientific picture of the world relatively recently, only in the last quarter of the twentieth century. WITH Since then, interest in them has not faded not only among specialists - physicists, mathematicians, biologists, etc., but also among people far from science. Research related to fractals and deterministic chaos is changing many of the usual ideas about the world around us - even the most ordinary objects: clouds, rivers, trees, mountains, grass. Fractals force us to reconsider our views on geometric properties of natural and artificial objects, and dynamic chaos makes radical changes to the understanding of how these objects can behave in time. The theories developed on the basis of these concepts open up new opportunities in various fields of knowledge, including information and communication technologies.

One of the conditions for the existence and vital activity of organisms is their interaction or symbiosis. When creating an effective functional ecosystems require interaction between man and nature and, above all, on energy information level. Man must complement nature in what it deprived: in dynamics, while activating the vital activity of the entire system as a whole.

An equally important component in the energy aspect is energy positive emotions. This energy can be obtained naturally in account of new interesting information, harmonious music, pleasant combination colors and shapes, as well as - through passive or active participation in sports and spectacular events. The biggest positive impact of all known forms have a circle, a ball and a spiral, symmetrical compositions based on mandalas, as well as labyrinths and fractals.

Water, as a carrier, occupies a special place in the complex of harmonizing factors information and a source of potential energy.

Artificial ecosystems based on integrated farms

Prerequisites:

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

- 1. the need for high-quality environmentally friendly agricultural products farms.**
- 2. searching for ways to increase productivity and reduce losses during assembly, processing and storage of agricultural products.**
- 3. practical use of discoveries in the field of quantum physics and others Sci.**
- 4. introduction of innovative technologies for waste processing. 5. creating conditions for comfortable living and activity population.**

The concept is the creation of natural resonators to harmonize the environment based on geometric shapes and fractals.

Goals:

- 1. improving living conditions and living conditions of the population. 2. obtaining environmentally friendly food products while reducing their costs production and processing**
- 3. development of eco-tourism.**

Ways to solve a set of problems:

One of the natural ways out of the economic and environmental crises is the solution to food question provision population quality products. International experience has shown in this industry significant advantages of specialized farming.

Therefore, it is advisable to create a new type of united farms, where intensive crop production would be combined with the possibility of organizing recreation and general improvement of residents' health at minimal cost and quick payback.

According to research conducted by the institute's staff Transdisciplinary technologies, the natural environment represents an ordered system or functional ensemble, individual elements which perform strictly defined functions.

They can be characterized quantitatively or qualitatively indicators. Each functional fragment of the environment is enclosed in a circular sector in the middle part of which processes that have a more pronounced predominance quantitative nature.

As you move away from the center, the influence of quality processes increases. Moreover for each artificial ecosystem the optimal parameters confirmed by numerous experiments. For residential formation, the optimal diameter of such a circle is 192 meters, and for the site intensive crop production - 384 meters.

Torsion fields and information interactions – 2009

Quantitative processes are characterized by dynamics and intense movement, while qualitative processes are calmer in nature. Considering these It is advisable to place circumstances in the center of the proposed ecosystems domed winter garden building, with a greenhouse and a swimming pool or a universal hall for cultural and entertainment events.

Together with the underground part, where utility rooms and a storage tank will be located water, such a structure will be a spherical volume with a diameter of 24 meters. Thanks to its shape and correctly calculated distribution qualitative and quantitative zones, as well as selection of plants and functional saturation, such a sphere should play the role of a generator of harmonizing energy, resonator of energy information fields.

An important role will be played by the energies of positive emotions of visitors, acting as a kind of transformer.

It is proposed to provide a platform for various spectacular events around the eco-sphere. and sporting events and six concentric rings for landing fruit-bearing plants or trees of a certain species.

For the southern zone of Russia, the following composition of plants for fruit and berry garden, starting from the inner ring: strawberries in cylindrical or ball containers, currant bushes, blueberry trees, dwarf apple trees. All these plants, being local endemics, contain valuable vitamins and minerals are in high demand among the population.

Along the perimeter in the forest park area it is proposed to create conditions for active and passive rest. Pedestrian and bicycle paths and an outer ring track for roller skates and skateboards serve this purpose.

Conifers are recommended as the main planting material in this zone. trees and walnuts.

In addition to the ring paths, there are also radial pedestrian paths dividing farm for 8 sectors. Each of them can accommodate a cafe with tasting juices and other drinks or a tea room where you can relax and get healthy information. The eco-farm is bordered by flower lawns and flower beds. For option flower farm planting flowers or medicinal herbs can be selected according to color and ripening time in such a way that they form a unique a giant decorative flower bed. It is proposed to plant decorative flowers along the contour Brussels sprouts, which can serve as an indicator of field energy-informational influence. At the second stage, the size of the eco-farm can be increased 8 times according to the principle of proportional similarity. Wherein the central part will be the already formed farm, and the filling of the surrounding territory is proposed to be implemented according to the fractal principle with a predominant bias in the development of forest parks.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

The diameter of such a farm will approach three kilometers, and its total area will be about 650 hectares versus 12 hectares of the original site.

Along the perimeter of the nine-kilometer ring road it is proposed place an eco-village for 5-8 thousand inhabitants, recreation centers for 4000 people, sites for tent camps and short-term recreation areas.

All infrastructure buildings, visitor center and parking lots must be moved outside the ring road and located in the entry area.

When conducting scientifically based economic, marketing and social research in combination with advertising monitoring has the prerequisites for quick payback and further demand for such artificial ecosystems A clear example and confirmation of this is the park "Eden" in England.

Recreation centers for 600 people can be built like small eco-villages for 46 families, the layout of which is given here.

Minimum size of an experimental fruit and berry eco-farm for planting strawberry, currant, blueberry and apple trees can be as little as 24 meters.

Can be used half as a field source a recessed spherical container with water with a diameter of about 3 meters.

Conclusion

This paper outlines the path to an effective integrated solution multifactorial tasks of nature and society in the field of ecology based on the latest scientific discoveries and innovative technologies.

The proposed concept of an artificial ecosystem is based on orientation towards the symbiosis of man and nature, aimed at harmonization environment and achieving the most favorable conditions for life activity in all its manifestations.

In this case, the determining factors will be such as the correct choice places, shapes and dimensions of sites and structures, types of materials and plants, reasonable functional zoning and interaction of individual, related systems among themselves.

Along with proposals for the rational use of existing agricultural lands and the development of previously unsuitable for agriculture land management, an attempt has been made to outline new opportunities for the development of eco-tourism and the organization of recreation and health improvement for the population.

It would be very relevant to create a working group from among scientists and specialists in various fields of knowledge for complex, systemic and

Torsion fields and information interactions – 2009

**consistent scientifically based analysis of problems at all stages of work
on the economic recovery of our region.**

The Gamma Science Center has a significant amount of information about new technologies and approaches to solving problems in the environmental and economic sphere and together with the Institute of Transdisciplinarity offers everyone interested ministries and departments, administrative workers and entrepreneurs, residents of the southern region and those living beyond its borders to combine efforts, knowledge and opportunities to outline the most effective ways to transform the Northern The Caucasus is a rich and prosperous region.

We have all the prerequisites for this.

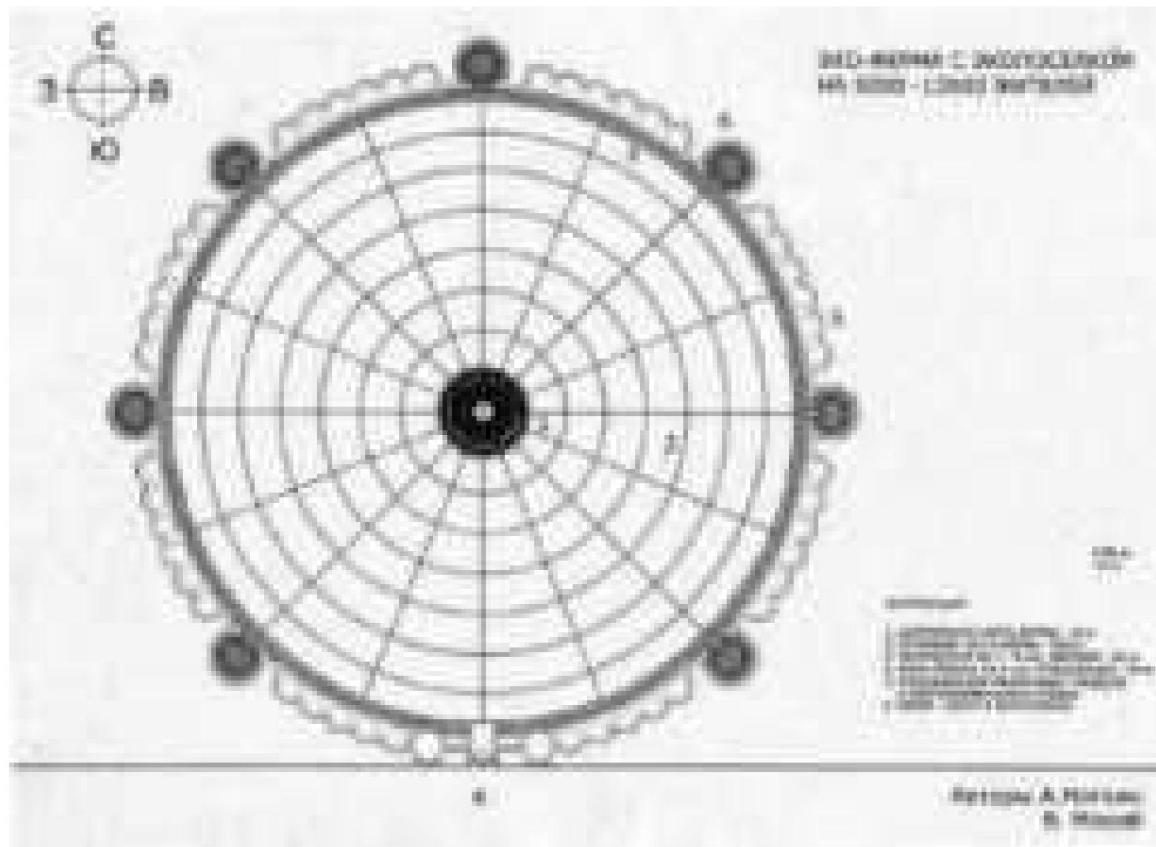
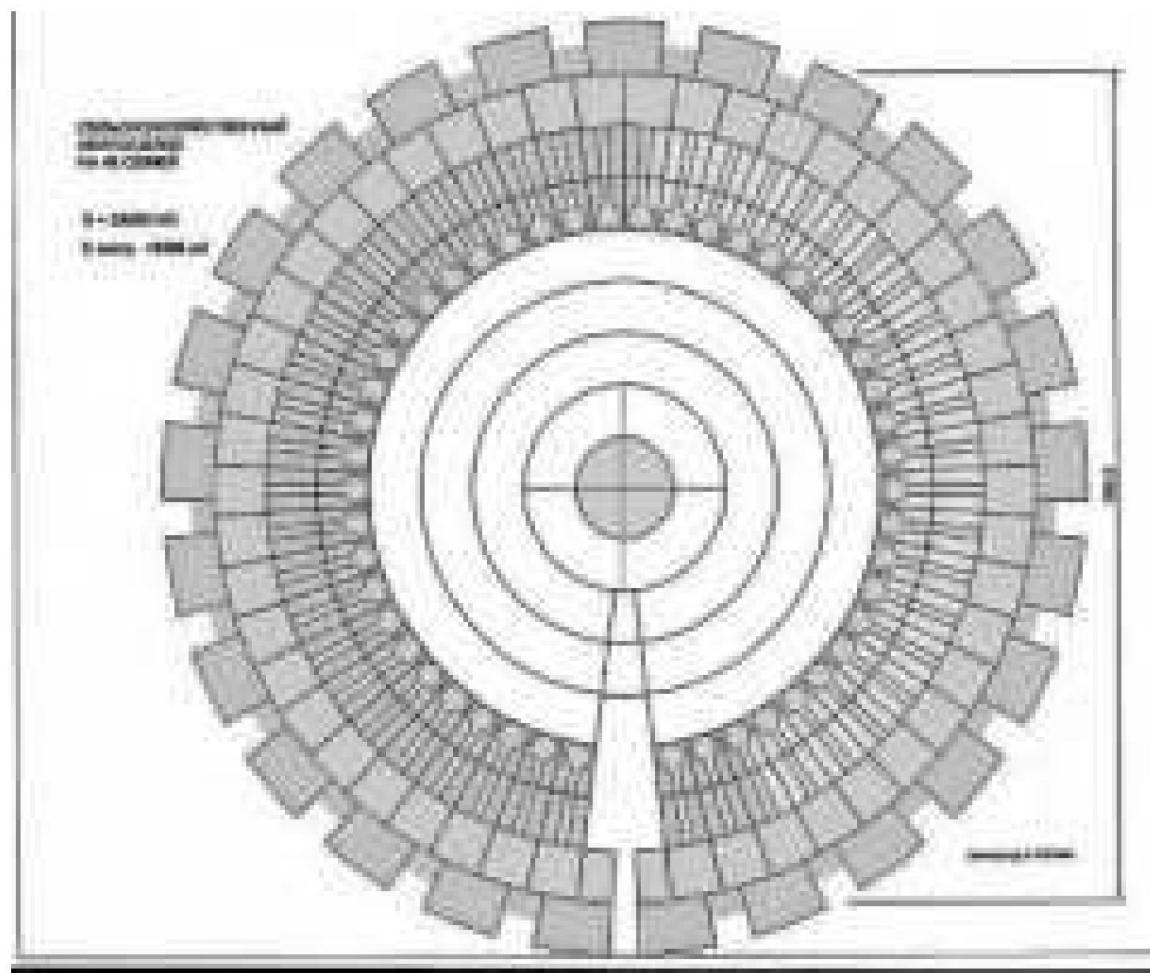
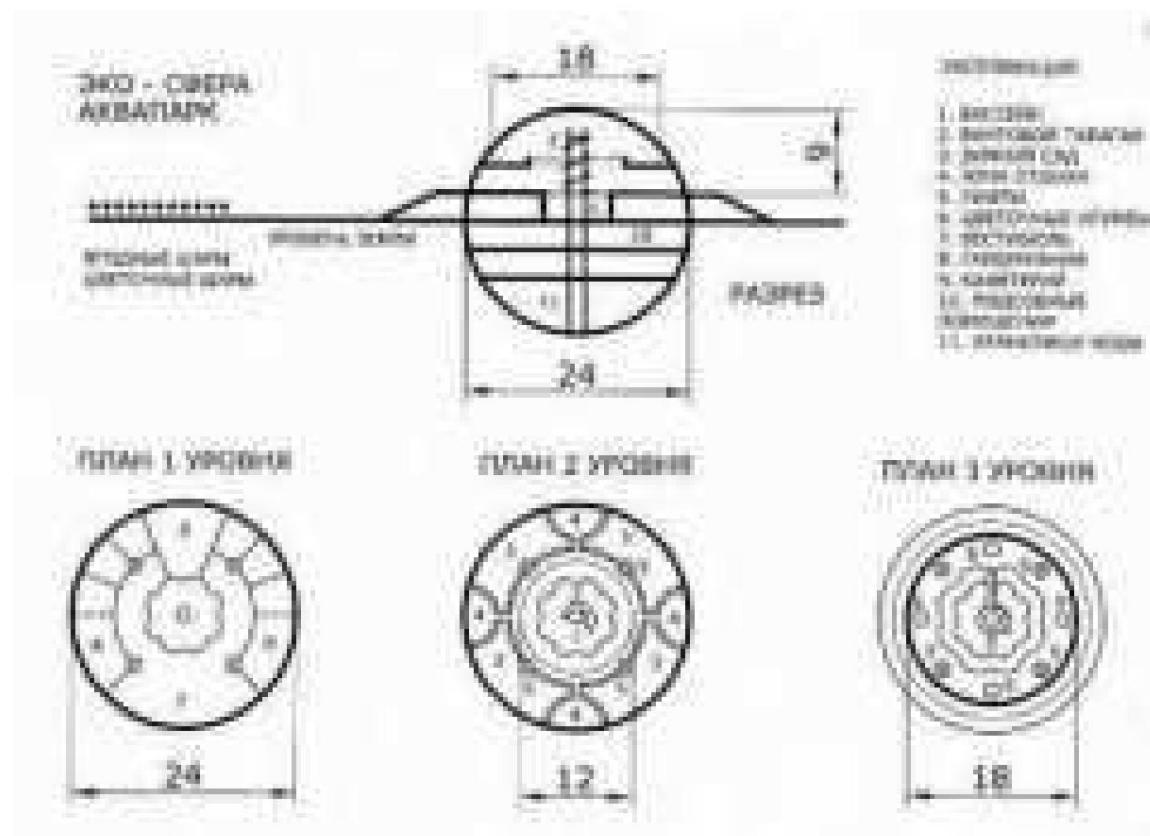


Fig. 1 Zoning diagram of the complete ecological complex.



Rice. 2. Layout diagram of a small ecological village.



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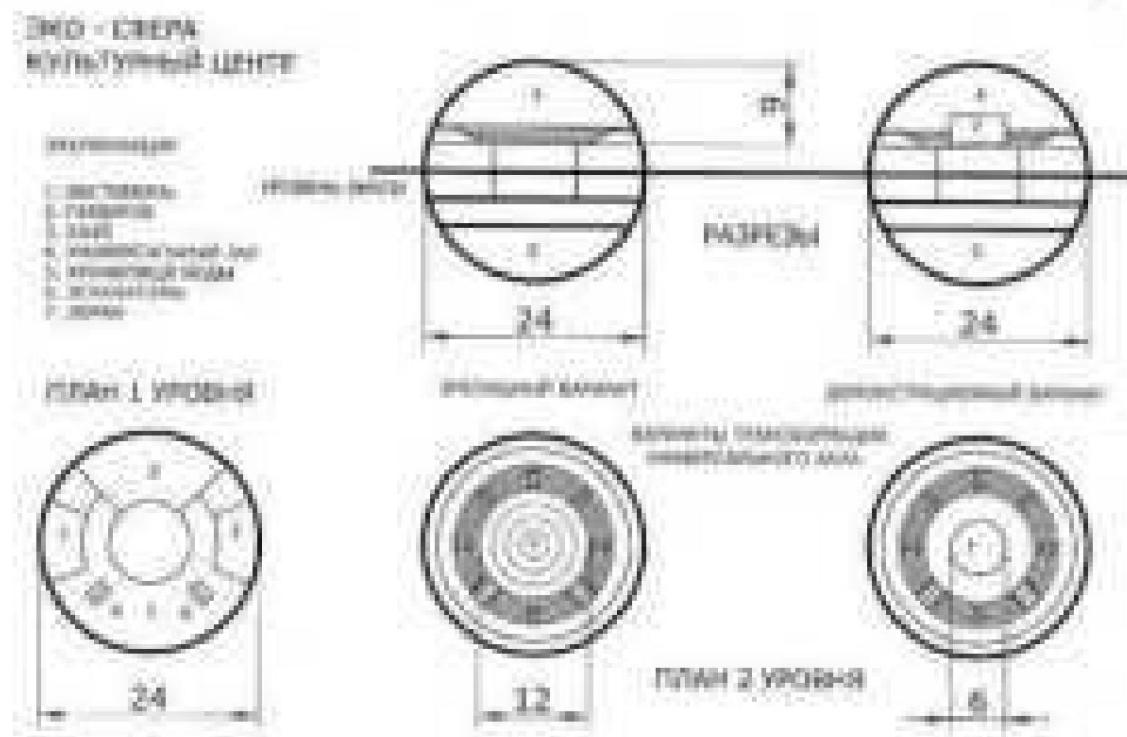


Fig.3. Functional zoning of volumes
eco-spheres

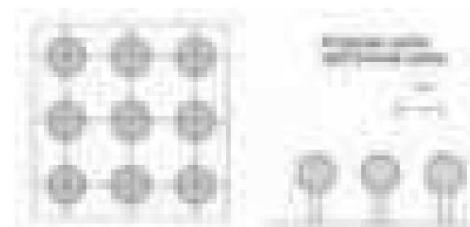


Fig.4. Layout of berries or
flower balls.

Fig.5 Composition options for various eco-farms.



Fruit and berry eco-farm with an area of 12 hectares

Eco-farm with forest park – 650

ha



Flower farm with an area of 600 m²

² up to 12 hectares

Torsion fields and information interactions – 2009



Rice. 6. General types of various livestock farms and small eco-village

Geomagnetic surveys of premises using the IGA-1 device and measurements of relative radiation levels using digital display

Rubtsov I.A.

ivanr@gpzone.ru, www.gpzone.ru

Rubtsov A.A.

alex.rub@bk.ru, otsnsk.gpzone.ru

Kolyshkin V.V.

**Doctor of Biology, Professor Head of Department
psychology and psychophysiology NSUEU, kvv99@mail.ru**

The main problems and difficulties in mastering localization methods are briefly described geoactive zones using the IGA-1 device. The classification method is described detected nodes of networks of geomagnetic lines, conditional designations for different types of nodes. The results of complex surveys (localization of geoactive zones and measurements of the intensity of the total electromagnetic radiation), brief conclusions are drawn about the relationship between the state health of people and places of their long stay from the point of view of natural geomagnetic and man-made electromagnetic radiation.

Introduction

The problem of exposure to geomagnetic and electromagnetic radiation is becoming increasingly more relevant in the modern world. Negative effects on human health (loss of strength, chronic diseases, oncology) during prolonged stay person in a geoactive zone (a node of the Hartman or Kurri network, i.e. a zone of natural geomagnetic radiation) or technopathogenic zone (zone of increased electromagnetic radiation) has been noted by researchers from different countries.

Having started studying this problem in the summer of 2008 (searching for ways to protect against radiation, comparison of different devices for localizing geoactive and technopathogenic zones), in November 2008 we purchased the IGA-1 device in execution for inspection of premises. Due to the distance of Novosibirsk from Ufa and Moscow and the lack of specialists working with the device in our city IGA-1, mastering and acquiring skills in working with the device for the purpose of localization We had to create geoactive zones ourselves. When conducting trials surveys, the main problems we encountered were electromagnetic interference, which, as a consequence, led to a partial absence reproducibility of results. Subsequently, we managed to find contact and start collaboration with one of the practicing dowsing specialists in Novosibirsk with more than 10 years of experience in this field.

Using the digital display

Torsion fields and information interactions – 2009

Considering the fact that a geomagnetic network node is a place with increased intensity of geomagnetic radiation, after localizing geoactive zones in indoors, we began to measure the level of relative intensity radiation using a digital display in order to classify these zones.

In the spring of 2009, we carried out repeated examinations of several premises previously surveyed by dowsing using the device IGA-1 and measured the relative radiation intensity using digital display in localized geoactive areas. With repeated inspections of premises until the end of the inspection we were not given any information about previously localized areas of natural geomagnetic radiation. As a result, we obtained the following results: - correspondence of the location of Hartman network nodes determined by two methods localization; - correspondence to the localization of the geopathogenic zone (the fact of junction of nodes was revealed Hartmann networks and Kurri networks); - correspondence between nodes with positive, neutral and negative level of geomagnetic energy radiation intensity measured using digital display of the IGA-1 device, and “giving”, “weak” and “taking” nodes in terms of dowsing.

The essence of the method proposed and applied by us is as follows: using digital display of the device and measuring the level of relative intensity radiation in localized geoactive zones, we calculate the obtained data on personal computer and obtain the average value of the relative intensity. Next, comparing the relative intensity values of each nodes, we carry out a classification based on the following principle: a node whose radiation level exceeds the average level by 15% or more is considered node with a positive level, and with radiation below the average level by 15 and more than percent, a node with a negative level, nodes that fall into range from -15% to +15%, relative to the average value, classified as neutral.

Ways to display information obtained during inspections of premises

During the first two months of work, we developed a scheme of conditional notation that is easy to use and understandable to almost anyone person. Figure 1 shows the layout of the room at the time of the survey and recommended layout. Hartman network nodes with positive, neutral and negative level of geomagnetic energy radiation intensity are displayed in orange, yellow and blue respectively. Network nodes Kurri with positive, neutral and negative intensity levels radiation of geomagnetic energy corresponds to purple circles with red, white and blue filling. The corner in the room marked with the numbers “0, 0” - like this called “zero room angle”, relative to which we determine

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

coordinates in width and length from a given angle to each of the localized geoactive areas of the room.

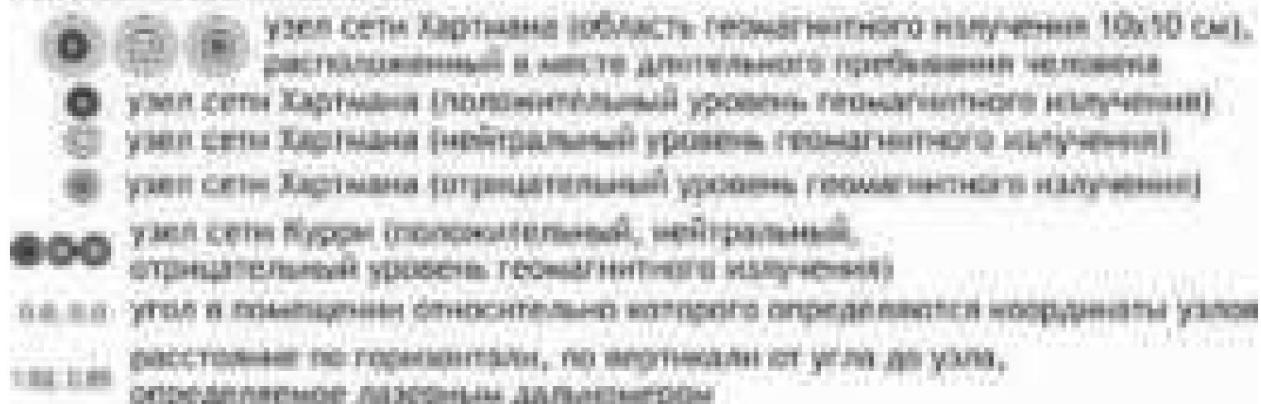
Условные обозначения:

Figure 1. Symbol diagram.

To display information from survey results based on measurements of aggregate intensity of natural geomagnetic and technopathogenic electromagnetic radiation we use a diagram obtained on a personal computer on based on a matrix of measured intensity values. Example of an electromagnetogram premises is shown in Figure 2.

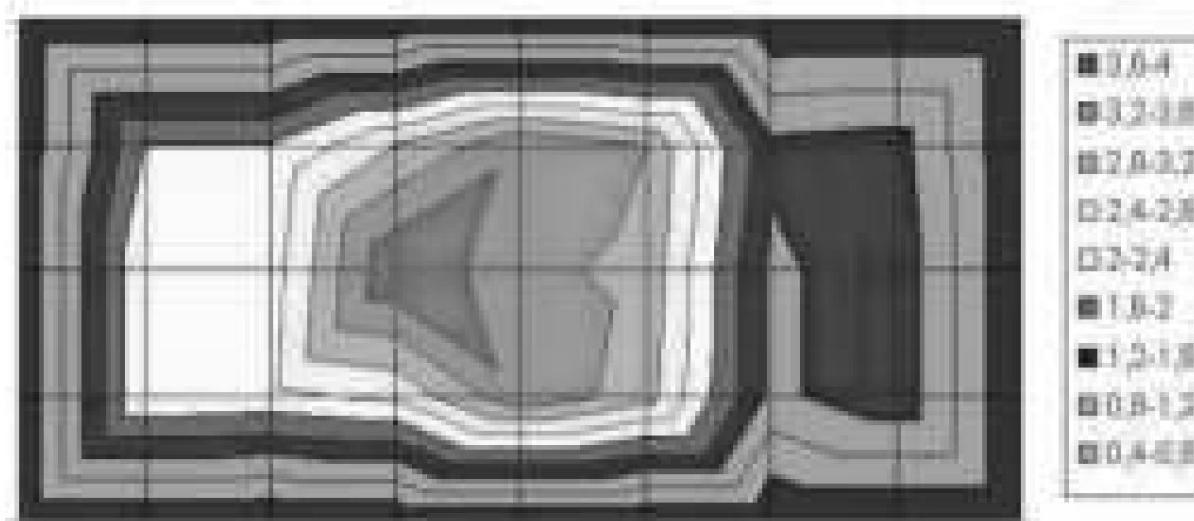


Figure 2. Electromagnetogram of the inspected room.

Survey results

Below are examples of current (former) and recommended (current) room layouts taking into account the pattern of geomagnetic radiation, as well as a brief description of reviews of people living (working) in these premises.

- 1) Three-room apartment, standard layout, in a 9-story panel building.

Torsion fields and information interactions – 2009

**Moving beds in bedrooms improved sleep and relieved insomnia
a man aged 50 years, reduced fatigue when working at a computer
girls aged 21.**



Figure 3. Results of a geomagnetic survey of a three-room apartment.

2) Four-room apartment, in a full-sized house.

Long-term placement of the bed in a geoactive zone with a positive level radiation intensity, combined with the overlay of the Kuri network line passing through the sleeping place was one of the factors contributing to the development cancer in a woman aged 50 years.



Drawing. 4 Results of geomagnetic survey of a four-room apartment

In addition, during the work, surveys were carried out of office premises located in multi-story business centers with a large number of

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

computer and telecommunications equipment. Analyzing the results surveys to localize geoactive zones and measure the total intensity of geomagnetic and electromagnetic radiation, we note the following pattern. Employees of companies whose workplaces were outside geoactive zones, but at the same time in a zone of increased electromagnetic radiation, they felt increased fatigue and loss of strength while at work throughout the day (example in Figure 5).



Figure 5. Results of a comprehensive inspection of the premises.

In addition, we recorded an interesting fact: employees who have Hartmann network node with a positive radiation level 50-80 cm behind the back chair in the working position, a period of increased fatigue at the end of the first half of the working day; while working outside the office or in another room, a person feels comfortable all day. Having analyzed this fact, we came to the conclusion that, rolling back from computer desk to relax, a person enters a zone of increased geomagnetic radiation, and, as a result, the human body does not replenish its strength.

Conclusion

Over 6 months of intensive work, we developed a classification method detected nodes of geomagnetic lines and developed a diagram of conditional designations for conclusions based on the results of geomagnetic surveys premises.

Analyzing the survey results and people's feedback, we came to the conclusion that comprehensive geomagnetic survey of premises, including: localization of geoactive zones indoors with their classification by level radiation intensity, as well as measurements of the total intensity of geomagnetic and electromagnetic radiation is the only way to create safe layout of premises for residential or office purposes in modern multi-storey buildings.

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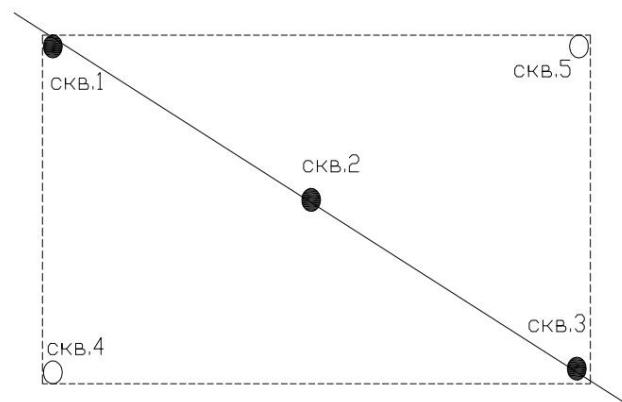
Davletov M.I.

Aquabur LLC; 450009 Ufa, st. Komsomolskaya 23/3 JSC FII BGVH - office
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tel.89872532349 mara-d@yandex.ru

Geological exploitation facts accumulated to date engineering structures on the territory of Bashkiria require clarification current SNiPs of the Russian Federation. For example: 1) on the territory Bashkiria by the Institute of Geology of the Ufa Scientific Center of the Russian Academy of Sciences determined areas of territory that have undergone 10-point damage in the recent past earthquakes, but so far these data are not taken into account during construction structures. 2) according to the Far Eastern Institute of Geology, the Urals zone is experiencing compression, which has not yet been reflected in the methodological literature construction organizations.

In 2006, by order of the administration of the Uchalinsky district, engineering and geological surveys at the site of the designed school in the village. Kurama. But a year later during construction, cracking of the foundations occurred - a emergency situation. A commission of administration representatives was created district and construction organizations. It was concluded that the reason destruction - uneven loads caused by boulders at the base foundation. But the geological factor was not taken into account.

Firstly: when carrying out geological work on such critical objects, it is necessary to delineate (drill out) the entire area of the object's foundations - 5 wells (Fig. 1). But due to cost savings in the district administration, design The organization was given a task for only 3 wells. Therefore, the boulders did not hit geological section.

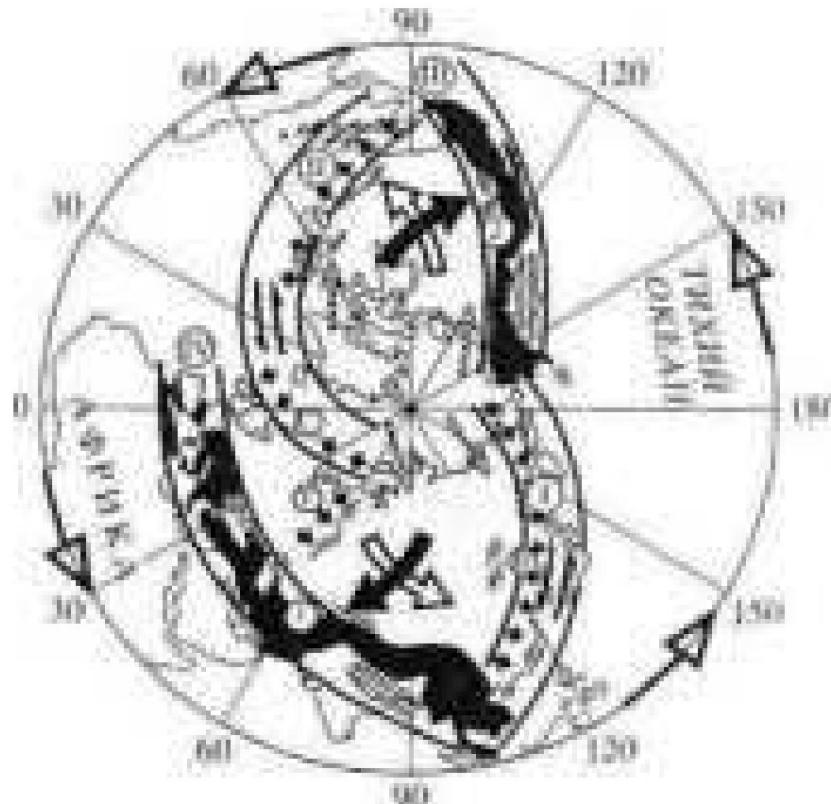


Rice. 1. Scheme of engineering-geological surveys.

Torsion fields and information interactions – 2009

Secondly: the current SNiPs classify the territory of Bashkiria as seismically stable areas. But according to the latest works of the Ufa Institute of Geology scientific center of the Russian Academy of Sciences, 2 areas have been allocated on the territory of Bashkiria (Aslikul lakes and Kandrykul), where there were tectonic movements of 10 points.

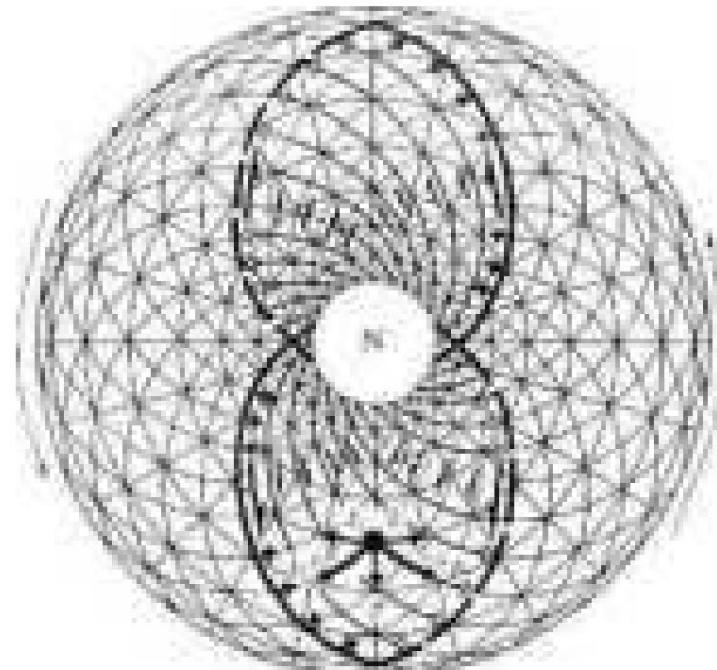
Based on geophysical data obtained at the Far Eastern Institute of Geology [9], maps of shear zones and frontal compression belts of the Earth were compiled (Fig. 2).



Rice. 2. Global shear zones (GSZ) and reversible transformation of geodynamic regimes of continental margins. 1 - direction of rotation of the Earth; 2 - left and right GPS: I - East Asian. II - European-American, III - North American. IV - Eurasian; 5 - directions of continental displacements under conditions of rotation acceleration Lands in the Mesozoic-Cenozoic (filled arrows) and slowing in the Paleozoic (hollow arrows); 4.5-frontal compression belts (1 - Alpine-Himalayan, 2 - North American), formed in the Mesozoic-Cenozoic under conditions of acceleration of the Earth's rotation (4) and in Paleozoic (B - East Asian, U - Ural, A, C - Appalachian-Scandinavian) - in rotation deceleration conditions (5); 6 - rear tensile structures (TSR).

As established, the Eurasian Global Shear Zone (Fig. 2) significantly veiled by Mesozoic-Cenozoic thrust-thrust structures Alpine-Himalayan Frontal Compression Belt, characterized by the development predominantly right shifts [9]. Of those preserved from those superimposed by dislocation right-lateral strike-slip faults are known, for example, the North Pyrenees, the displacement along which (at several hundred kilometers) occurred at the end of the Hercynian era. Bias Eurasia in the Paleozoic to the southeast is confirmed by the synchronous formation Ural and East Asian FPS, oriented normally to the DSS (Fig. 2). *The formation of the Ural FPS (frontal compression belts) was expressed in subduction of the crystalline East European platform under cover structures of the Western Urals. East Asian Frontal Compression Belt*

manifested itself, perhaps, by the thrust of the continent onto the Pacific plate in zones Benioff, which is confirmed by the development in the Paleozoic on the eastern edge of Asia folded system of submeridional strike, the structures of which, like found to be significantly destroyed and veiled by superimposed Mesozoic-Cenozoic left-lateral strike-slip dislocations of the East Asian Global Shift Zone.

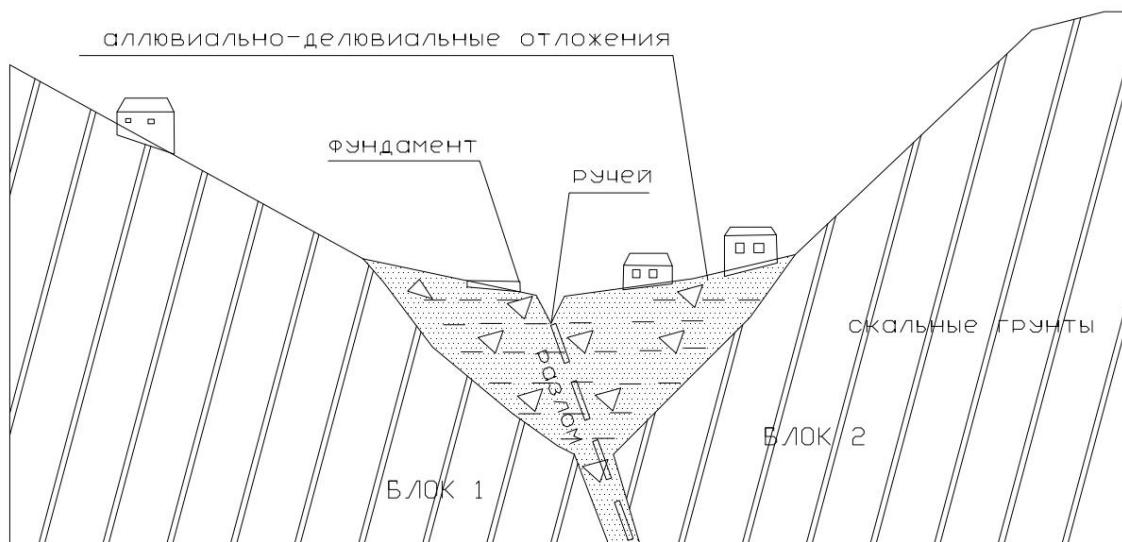


Rice. 3. Physical model of the formation of planetary fracturing in uneven rotating ball [2, 3] and the development of DSS and FPS in these geodynamic conditions. / - planetary systems of diagonal and normal fracturing; 2 - continental-margin DSS and the directions of continental displacements along them depending on acceleration ($72 + P$) or deceleration ($U] + P$) of the Earth's rotation; 3 - inland shifts, synchronous activation of marginal-continental DSS identical orientation; 4 - marginal-continental frontal compression belts (FCBs), formed under conditions of acceleration (filled arrows) and deceleration (hollow arrows) of the Earth's rotation; 5 - an elementary unit of continental mass, the direction of displacement of which is determined by the total effect of pole-contiguous ($I \rightarrow$) and inertial (I) forces (Y) - vector of inertial forces under conditions of deceleration and 1[^]-acceleration rotation of the Earth).

Thirdly: at the Institute of Mining of the Ural Branch of the Russian Academy of Sciences, professor Sashurin A.D. [5, 6], when measuring trigopoints using GPS on fault zones, recorded vertical displacement of blocks up to 10 cm/day. This is evidence of the continuation of tectonic movements in the Ural zone Frontal Compression Belt (Fig. 2, 3).

Fourth: as a result of research into the 1960 Chilean earthquake, there was found: on alluvial soils the fluctuations are 2 points higher than on rocky soils [2,3]. This was confirmed by seismic measurements across the territory of the USSR in the Tien Shan, Kyrgyzstan, Uzbekistan, and Kazakhstan.

Torsion fields and information interactions – 2009



Rice. 4. Layout of the designed school for 80 students.

The site of the designed school was located in an intermountain depression 300-400 meters wide, in a wetland (Fig. 4), on alluvial-deluvial sediments. After interviewing local residents, it turned out that the village of Kurama is located in a seismically active area. Moreover, seismicity is especially clearly manifested on alluvial deposits. Half the village is in the valley, and there House doors are constantly being warped. According to the school director, in One of the metal garages had to have its hinges re-welded 4 times over the course of a year, as they were constantly jammed. In houses located on slopes, no distortion was observed. *It would be more expedient to build a school building on at the top of the mountain - on rocky soils (diorites with jasper veins).*

But such a proposal did not find support from the head of the LLC prospectors. Designers will immediately reject our work: they don't like comments from prospectors' side. I had to remain silent. But the result of this error manifested itself through 6 months.

Unfortunately, the commission revealed only the construction component of the destruction: the impact of boulders on the foundations during settlement.

In fact, most of the problem is in seismic, the project included construction on a seismically active area: *the Ural frontal compression belt* – on a fault-thixotropic zone [4, 7, 9], where possible vibrations of earth's blocks surface up to 10 cm/day. In addition, the chemistry of the area has not been studied: when rubbing rocks, the metamorphosed white feldspars are crushed and washed away their water. Which also gives a change in the volume of load-bearing soils, followed by drawdown. Approximately the same physical and chemical phenomena are observed on the building Children's House of Creativity in Uchaly.

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

Recently, new devices have begun to appear in construction that allow confidently identify anomalous zones: voids, karsts, heterogeneous layers. To This includes IGA-1.

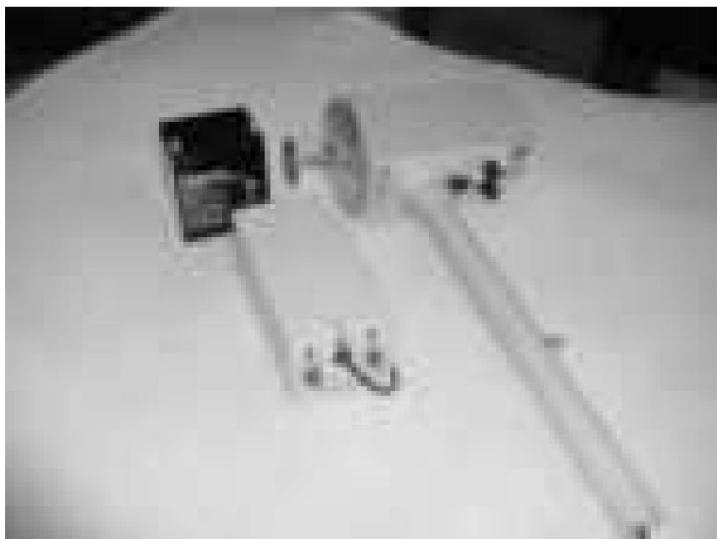


Fig.5 Device IGA-1

Its advantages include portability, customizability, speed measurements, clear identification of the contours of anomalous zones located deep under the earth's surface (Fig. 6, 7, 8) such as the Petrovsk-Chelyabinsk gas pipeline, the Ufa springboard, etc. Undoubtedly, the use of IGA-1 would significantly simplified the work to identify zones of complex geological structure, similar to those in the village of Kurama.

Unfortunately, the heads of construction organizations in Bashkiria ignore data accumulated at the Institute of Geography, USC RAS, and the emergence of new technologies and devices based on torsion fields [11]. What leads to unjustified risk when construction of complex, critical structures, which include schools.

conclusions

- 1. In order to determine the impact of tectonics, it is necessary to create a network seismic stations across the territory of Bashkiria, which is still a “blank spot” for geophysicists.**
- 2. It is necessary to introduce devices based on torsion fields into engineering research on the territory of Bashkiria. Moreover, some of the devices are manufactured on the spot, at UGATU.**
- 3. Carry out work by the IG UC RAS to adjust SNiPs in the Urals zone.**

Torsion fields and information interactions – 2009**Fig.6 Determination of the contours of karst zones.**

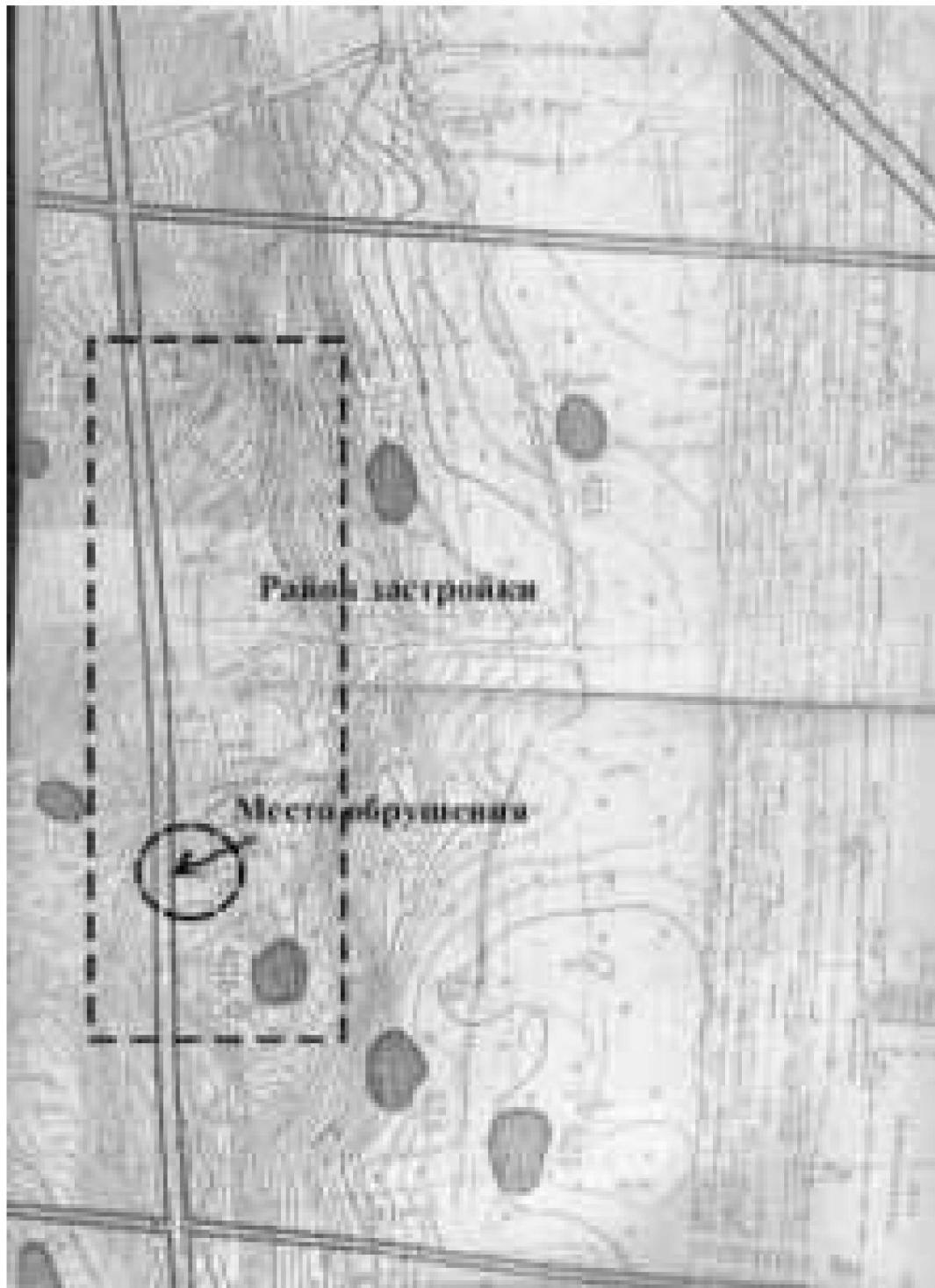


Fig.7 The site of the collapse of the Ufa ski jump.

Torsion fields and information interactions – 2009



Fig.8 Reviews on the use of the IGA-1 device.

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Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

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Torsion fields and information interactions – 2009

Development of methods and study of geopathogenic zones in production premises of the State Research Center "KB named after Academician V.P. Makeev"

Bulaev V.V., Obukhov N.A.

CJSC "Aerocosmos", State Rocket Center "KB named after. Academician V.P. Makeeva"

Currently, the environmental component of health together with lifestyle occupies a leading position and continues to increase its weight in the structure main factors influencing the level of human health and duration his life.

Many applied sciences have accumulated a number of empirical data confirming unconventional, as yet completely inexplicable, ideas about purposeful, intelligent organization of the Universe. So science knows that There are numerous types of radiation, the effect of which in relation to living organisms are neutral, but a certain part of them has a negative exposure, especially during prolonged stay in the area of this radiation. To them include cosmic radiation, geopathogenic radiation, radiation of form and materials, point radiation, reflected radiation, etc.

In the middle of the 20th century, a scientific explanation was found for such situations. Was it has been proven that in such situations a person finds himself in the so-called anomalous zones of pathogenic influence that generate a powerful field component [1, 2]. The action of this component leads to a disruption of our invisible shell, the aura.

It has now been established and proven that any biological object is not only material body, but also has other types of materiality, fixation which eludes not only our five senses, but also modern devices, and also recognizes the presence of field forms of life in the Universe, which play a leading role in human life.

Today, humans have three “bodies”: material (physical), energy (aura, biofield), information (bioenergy field). The harmony of all three interconnected materialities of the body is the criterion quality of human health.

Particular attention should be paid to the impact of geopathogenic zones (GPZ) on human health, because they exist in the entire space of our Existence and man is daily in their zone of influence. GPZ are geophysical anomalies that exist in the near-Earth space, as well as at a certain depth in the earth's mantle, emit electromagnetic fields that negatively affect (especially pervasive

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

torsion component as an indispensable companion of any electromagnetic radiation) on the human body and leading to prolonged exposure to pathological changes in it. GPZ are present everywhere: indoors, in the forest, in city, etc. They are especially pronounced at the intersection of natural underground streams, geological faults, as well as in areas heavily altered anthropogenic destructive activities of humans.

It has been established that not the entire area of geopathogenic zones affects health, but called geopathogenic nodes and the stripes themselves. Numerous studies a relationship has been established between the presence of ILI and the development of cancer, vascular, neuropsychiatric, and musculoskeletal diseases in people apparatus. Moreover, the manifestation of certain diseases depends on the duration stay in the ILI, type of source, human condition, availability of appropriate diseases, hereditary predisposition, and lifestyle. Influence ILI, along with a difficult socio-ecological situation, can be "the last straw" that overflowed the fragile "vessel of health" of a person. A person's stay in geopathogenic emitting zones increases the frequency of:

oncological diseases by 2 -

3.4 times; diseases of the cardiovascular system by

1.9 - 2.5 times; diabetes mellitus

by 1.3 - 1.5 times; immune system

disorders by 1.5 - 2 times; mental disorders by 1.3 - 1.5 times.

The so-called power frame makes its contribution to the formation of geopathogenic zones Earth - system of global distribution of tectonic stress in the lithosphere planets. It turns out that a subtle energy force has been thrown over the globe. net. This is some kind of conventional meridians and parallels, only with that the difference that exists really and is perceived in different forms by all living things. Fragments of such a world system, but on a smaller scale, are revealed in each room in the form of bioenergy grids.

The most studied and generally accepted is the Hartmann grid (G-net), the geopathogenic effect of which is a proven scientific fact. Net Hartman is taken by many researchers as a structural basis space. It is considered as an information-energy framework plasma of the Earth.

The Hartmann grid is called rectangular, global, general, since it covers the entire earth's surface and has a fairly regular shape lattice structure. It is also called coordinate, due to the exact orientation along the geomagnetic meridian. The grid is oriented from north to south and from west to east, and consists of rectangles (cells) with sides of 2 x 2.5 m and a stripe width of about 0.20 m. But the size of each grid cell, like the width stripes are dynamic and fluctuate depending on many factors (weather conditions, solar activity, season of the year, etc.). Cells can have parameters of 1.6 (2.1) x 1.8 (2.6-3.0) m with strip widths from 0.18-0.19 to 0.27 m.

Torsion fields and information interactions – 2009

At the intersection points of the stripes, nodes with a size of about 0.25-0.30 m are formed: right-, left-polarized and neutral. Vortex-like structures are formed at the nodes structures. Every 10 m in the grid grid there are strips of larger intensity and width.

When inspecting the premises of the enterprise and the Neptune Hotel, it was carried out determination of the contour of the Hartmann grid.

The geopathogenic zone (GPZ) is understood as the zone of pathogenic influence electromagnetic fields or radiation on living organisms. Electromagnetic radiation from the earth's surface may be due to the presence of underground rivers, deposits of metal ores, minerals, coal, etc. as well as movements earth - dislocations on its surface, and underground dislocations, crustal fractures, cracks, and underground voids.

Geopathogenic load can be caused by the so-called global geoenergy grids (Wittmann-Curry, Hartmann) formed by force frame of the Earth. It is essentially a global distribution system tectonic stress in the lithosphere of the planet.

The geoenergy network is similar to conventional lines of meridians and parallels, only with the difference that it really exists and is perceived in different forms to everyone living. Fragments of such a network, but on a smaller scale, are identified in each room in the form of stripes. These bands differ in their intensity, structure, linear dimensions and orientation. Clusters are recorded in them electrons, ions and active radicals of gas molecules. And in the crosshairs of similar stripes, local zones are formed in the form of spots, a high level radiation concentrations in which are especially harmful to humans. As a result it turns out a grid consisting of a number of individual intersecting vertical walls about 20 - 60 cm wide (for a grid Hartman) and pillars - at intersections (at nodes).

Technopathogenic zones arise, as a rule, due to their occurrence underground technical communications, such as water supply, sewerage, electrical cables, and as well as other underground technical structures. Indoors, in addition, small technopathogenic zones exist near various electrical devices: TVs, refrigerators, microwave ovens, computer displays; on radios and cell phones. Technopathogenic zones can also be created as a result re-radiation of fittings of buildings, metal products and communications from electromagnetic interference from radio stations, transmitting and receiving antennas relay transmitters.

In addition to the known geopathogenic zones (Hartmann, Kuri, etc. grids), as a result conducted by Nekrasov V.A. [4] long-term studies of geological anomalies associated with various types of radiation in the biosphere at different latitudes and altitudes, many places in the biosphere of fine-field radiation of a negative nature were discovered, having a round shape of various diameters (0.5-15 m). The result of the research was certificate No. 0017 on deposit and registration

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

radio of a work of intellectual property (www.antipole.ru), where _____
it is indicated that along with rectangular and diagonal cellular matrix
structures of fine-field radiation in the biosphere there are many areas
(zones) having a round shape of limited size and having pathogenic
nature - cause "onco" or "Crohn" diseases. In such areas on the trunks
trees and "cancerous" or "Kronovsky" growths (tumors) form on the branches, trees
stand out for their "ugly" shape, tree trunks twist into
in accordance with the vectoriality of the radiation of the "onco" or "crown" zone to the left or
right side. Indicators of a person's residence in the "onko" or "krona" zones can be:

- diseases of many people, for example, in the entrance of one house, and especially young people, cancer or Crohn's disease, diabetes diabetes and/or thyroid diseases, tuberculosis, pneumonia, hypertension, etc.;
- manifestation in people of a constant feeling of inexplicable discomfort.

Protection from the "onco" and "crown" zones is carried out by special field modulators forms. The neutralization method is called the "fine-field umbrella" (see the method of using special Nekrasov matrix modulators www.antipole.ru).

The examination was carried out using the IGA-1 device [3]. The IGA-1 device (indicator of geophysical anomalies) was developed at the Ufa State Aviation University Technical University presents a highly sensitive selective electromagnetic field meter. Device tested at the Bashkir State Medical University, Republican Hospital (Ufa), Ministry of Health of the Republic Bashkorstan and is used in many cities of Russia and abroad.

In 2005, according to the terms of reference for carrying out research and development work to develop a methodology and examination of the premises of the State Missile Center were carried out work in the production premises of the Neptune Hotel (700 m²) and production premises of the GRC - 1300 m².

The purpose of the work is to develop a methodology and conduct research on identification of geopathogenic and technopathogenic zones that negatively affect human body (fatigue, decreased performance, destruction immune system and, as a consequence, the appearance of headaches, cardiovascular, cancer and other diseases) and the development of recommendations for preventive measures (moving workplaces to safe areas, installing neutralizing devices).

Main tasks of R&D:

1. Determination of geopathogenic lines and zones (places of their intersection) in production premises of the GRC, as well as technopathogenic zones and spots created by electromagnetic fields, heat and water communications.

Torsion fields and information interactions – 2009

- 2. Research in the premises of the Neptune Hotel GPP and TPZ, density flow of electromagnetic fields created by antenna emitters located on the roof of the Neptune Hotel.**
- 3. Drawing up a plan of dangerous and safe areas in the inspected premises with drawing zones and lines with negative energy. 4. Development and issuance of recommendations for the relocation of those workplaces that fall into unfavorable GPP or TPZ, or for installation neutralizers such as the protective and preventive pyramid "Bionega" produced at the State Research Center.**

As a result of these studies, the results of a survey of the premises are presented enterprises, geopathogenic lines and zones and technopathogenic zones were identified, a plan of dangerous and safe zones of inspected premises was drawn up, recommendations for preventive measures.

Based on the results of the survey, plans were drawn up for dangerous and safe zones in inspected premises.

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Geopathogenic zones and energy information exchange in architecture *

**Tsallagov S.F.
Professor SKGMI (GTU), Vladikavkaz**

The most ancient world cultures, and especially Chinese, Indian and Japanese, paid considerable attention to subtle, almost imperceptible influences artificial and natural environment on the human body. Capabilities some people were considered to perceive and understand these influences divine. This area of knowledge of the ancients is known as geomancy.

Eniology (bioenergy informatics) - the science of energy information exchange in nature and society (ENIO - energy information exchange), which took shape in recent years, as an independent branch of modern science, reveals evidence of the impressive knowledge of the ancient masters of geomancy. Operating functional and aesthetic categories, art has on a person informational influence on a subconscious level. And this is one of the manifestations of energy-information exchange. The architectural environment affects We are constantly and not always favorably influenced by our health, lifestyle, and actions. We are tied to our environment by invisible threads energy information exchange. Hence the great role and responsibility of those who creates and shapes the environment around us.

Eniology, as a science about the phenomena and processes of energy-information exchange in living and inanimate nature, is a complex and not yet quite common area knowledge. Today, thanks to the efforts of enthusiasts (scientists and practitioners), it literally coming out of hiding. Eniology is formed, emerging from a millennium chaos of intuitions, subjective assumptions and ideas. Today it is "ripe" enough to be understood from the standpoint of strict natural science approach. In our studies related to architecture, we will consider eniology mainly from the standpoint of the habitat, its appearance and means of communication with us, the base on which it is created and functions.

The crystalline structure of the Earth has been known for a long time, as evidenced by ancient written sources and archaeological excavations. Were found objects depicting the structural-crystalline model of the Earth in the form icosahedron-dodecahedron, that is, a figure consisting of 12 regular pentagons and 20 triangles. Researchers have shown that in the nodes of this giant frame There are centers of world culture, places with unique flora and fauna, and major mineral deposits.

* Published only in the electronic version of the collection.

Torsion fields and information interactions – 2009

It should be noted that geomorphologists and geophysicists are quite skeptical about the idea of the crystalline structure of the Earth, the energy frame and the global grid. The fact is that large frame cells are calculated using a geographic map by simply connecting particularly significant places on the globe - Rome, Istanbul, Mecca, Kyiv, Jerusalem, etc. Fine Hartmann and Kurri grids are determined by the method dowsing, which scientists are not inclined to trust, since it does not yet have of proper scientific justification and too subjective.

Human energy information system

All processes in nature occur on the basis of information exchange. Not an exception and a living organism in whose cells metabolic reactions occur. Molecule protein is a chemical source of electricity and a kind of oscillatory system: ultra-small vibrator that emits and absorbs vibrations certain frequency An individual cell is characterized by one frequency, an individual another organ. For example, the pulsation frequency of the liver field is 300-400 Hz, the kidney field is 500-600 Hz, hearts 700 - 800 Hz.

The body functions through metabolic processes. And they are carried out in as a result of the exchange of information between cells using electromagnetic, acoustic waves and even, as recently discovered, laser signals, and all this occurs against the backdrop of a huge flow of information from our planet, which itself itself is a powerful oscillatory system.

The energy information field of the Earth and the biosphere is the sum of many fields individual objects, including space ones, and fields of living beings inhabiting planet. Leningrad scientists proved the phenomenon of telekinesis. Dowsing (dowsing) is no longer considered a miracle and is used in practice. Undoubtedly, other parapsychological phenomena will find their explanation the works of progressive scientists.

When the body's own energy-informational radiations are consistent with external fields, the body functions normally. But it happens that this consistency is violated, external fields change their frequency and fall into resonance with certain cells and organs, strengthening or weakening them radiation. This causes changes in physiological processes and can cause both improvement of health, as well as its deterioration and even death. It all depends on the frequency which external fields pulsate.

Science has revealed enough examples of natural bioresonance processes affecting the human body, for example, geopathogenic radiation, which are formed over underground geophysical anomalies. Such areas of the earth surfaces are called zones of biological discomfort.

Geoactive zones

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

The modern history of research into "holy" and "sacred" places began, perhaps, as early as in the 19th century, when German doctors drew attention to the existence of the phenomenon so-called "cancer houses", the residents of which died one after another from oncological diseases. The main surge of interest in this phenomenon in general falls on the 20-30s of the 20th century. One of the first to become interested in the problem German scientist Gustav von Pohl, who published the results of his research in a prestigious medical journal for cancer research. Analyzing his observations made in Bavaria, Gustav von Pohl came to

The conclusion that all 58 people who died of cancer in the studied city had in common was that their sleeping places were located in geopathogenic zones. results he described the research in detail in his book "Terrestrial Radiation as a Pathogenic factor" which was published in 1932. In the study of the problem of geopathogenic zones a significant turning point occurred in the 1960-1970s, when organizations for the study of scientific foundations were created in England, Germany, the USA, France and other countries dowsing.

In 1964-1976 the fundamental work of E. Hartmann was published in Germany "Disease as a problem of location", which summarized the long-term results of the author's work, under whose leadership he carried out his most interesting research society for geobiology in Munich. One of the main goals society - studying the causes of geopathogenic zones and global frame energy grid, as well as the creation of a new architectural direction - "construction biology". This direction develops the foundations future architecture, house design taking into account the latest scientific achievements and technology, optimal from the point of view of human ecology and taking into account the danger geopathogenic zones. In 1994. North Ossetian organization of the Union of Architects Russia, at the personal workshop of the architect S.F. Tsallagov was organized department of eniology, the main task of which was to study the causes the emergence of pathogenic zones of natural and technonatural origin and searching for ways to neutralize their harmful effects on people.

In 1994-2000 a large number of dowsing studies have been carried out in residential and public premises, as well as on construction sites in Vladikavkaz and other cities and villages of North Ossetia to identify geopathogenic zones. Together with doctors from the 4th city clinic and oncology clinic, we compiled: medical and geographical maps geopathogenic zones of the 35th microdistrict of Vladikavkaz, in which we showed the connection severe oncological, cardiovascular, gastrointestinal and other diseases with location; geopathogenic zones. In 1997, Vladikavkaz The City Duma approved the "Development Rules for the City of Vladikavkaz", paragraph 15.4 of which states: "Permitting documentation for new construction, reconstruction and major repairs of buildings must contain requirements for the development of measures as part of projects that prevent harmful effects on health human geopathogenic factors, vibrations, radiation, noise and other negative phenomena."

Geopathogenic zones

Torsion fields and information interactions – 2009

Geopathogenic zones (GPZ) are local geophysical anomalies. They are formed over deep tectonic faults, underground

voids, underground water flows and their floor intersections, ore

bodies, etc. GPZs also occur where global energy regimes overlap

Hartmann and Kurri networks. It is precisely the places where nodes and lines of networks and waterways intersect flows create particularly dangerous areas in the form of spots and stripes with a diameter of several centimeters to several meters or even tens of meters. Exactly these areas pose the greatest danger to people in their area actions.

For a long time, geopathogenic zones were considered homogeneous formations.

Subsequently, it turned out that GPZs have a rather complex structure. Was

It was discovered that on Earth there is a diverse system of lines, stripes, zones, and networks. The main one among them was a global rectangular lattice network oriented to the cardinal directions. Each cell of this network consists of two strip lines - one is directed north-south (with an interval of 2 m), and the other is directed east-west (2.5 m). From the surface of the Earth, stripes of a rectangular network go vertically upward in the planes formed by various kinds of electromagnetic processes occurring between the earth's surface and the ionosphere.

In addition to the rectangular lattice network (Hartmann), a diagonal

Kurri grid, which is a component of a rectangular network and arises as

would be secondary due to the complex superposition of fields and nodes, and hence its other name - second order network. The stripes of this mesh are usually located at an angle 40-50° in the north-south direction and the distance between them is 3.75 m, 7.5 and 15 m, but there are other lines running at an angle of 20-35°. But all this is only fair for flat areas. In the foothills and mountainous regions of North Ossetia we

rectangular mesh structures with longer intervals between lines were recorded.

Thus, in the Tseytsky Gorge, in the area of the SKSTU recreation center, the lines of the rectangular network run in the north-south direction with an interval of about 10 m, and in the east-west direction with an interval of about 15 m. In the village. Upper 3aramag fixed rectangular mesh with cell sizes of 4x5 m.

The width of the lines of the rectangular Hartmann grid is about 20 cm, the width of the lines Kurri diagonal grid - about 10 cm, at certain intervals (20-40 m) Hartmann grid lines about 40 cm wide are fixed. In mountain and foothills areas, we recorded sections of rectangular networks with a strip width from 1 to 4 or more meters, apparently this is due to the special geological conditions of mountainous districts.

Geopathogenic zones that form over various geophysical

anomalies, such as karst voids, fracture zones, underground

water flows and lenses filled with water, ore bodies, huge boulders brought by glaciers, etc., are recorded on the surface of the earth in the form

extended wide stripes and spots. Such areas pose a danger to

construction projects. Here phenomena such as getting wet are usually observed walls, destruction of masonry, cracking of structures, settlement of entrances, plinths,

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

subsidence of parts of buildings and buildings as a whole, etc. It has been noticed that technical devices installed in powerful gas processing plants very often fail.

Earth's radiation has a number of physical features - like a laser beam it propagates strictly vertically upward without scattering, without being shielded conventional means of anti-radiation protection. This allows him to penetrate without weakening through multi-story ceilings to the upper floors of the building. Throughout visibility, the greatest danger to living organisms and technical devices represent the frequency-field characteristics of terrestrial radiation, significantly different from the background (4000-6000 Hz).

Geopathogenic zones and health

Observations show that the influence of geopathogenic zones on human health, such as usually unfavorable: people complain of general weakness, headaches, increased excitability. A long stay in the ILI can lead to very serious consequences. Under the influence of terrestrial radiation, depending on its duration, place of projection on the human body, immunity stability and other factors, nervous disorders, diseases of the musculoskeletal system, cancer, strokes and heart attacks may develop. By various sources, about 50% of diseases are caused by these earthly radiation from geopathogenic zones.

To verify such information in 1991-1993. within the city of St. Petersburg Detailed medical and geographical studies were carried out, which showed that ideas about the negative impact of geological structures of the earth's crust, such as tectonic fault zones and underground water flows, on health of man is not a myth, but a reality that cannot be ignored. This impact is its negative results are often superior to anthropogenic ones. Yes, analysis the obtained data showed that within the geopathogenic zones recorded as zones of dowsing anomalies and associated with geological heterogeneities, the number of cancer diseases increases in different areas of the city by 2.8 - 4 times compared to residential areas located outside the GPP.

At the same time, and within the ILI, the distribution of cancer incidence is quite uneven. So, if outside the geopathogenic zones of the house, in which during not a single case of cancer has been registered for two years, is about 60% of all residential buildings, then within the GPP there are only about 20% of such houses, and in at the intersection points of linear gas protection zones - only 10%. At the same time, houses with an indicator cancer incidence of more than 8 people per 1000 people/year outside ILI is only 3% of of the total amount, in the GPP - 21%, and in the intersection nodes - about 46%, i.e. almost every second house is characterized by this indicator, and in 18% of houses in such nodes the number of cancer diseases increases to 15-50 per 1000 people/year. In one of central districts of St. Petersburg, a building located partly on a linear geopathogenic zone formed above the river paleobed, where cancer incidence rate of employees whose workplaces are located in within this GPZ is 70 per 1000 people/year, while for employees of this institution, located outside the GPP, is only 11 per 1000 people/year.

Torsion fields and information interactions – 2009

Researchers have noted changes over geopathogenic zones behavioral functions of a person, leading to an increase in injuries and accidents on motor vehicles. So, using the example of 3,500 road transport accidents, an increase in the number of accidents was recorded over geopathogenic zones from 30% to 1000%. In 1998-1999 by the efforts of the Architectural-Ecological Dowsing Center of the North Ossetian Union of Architects, City Clinic No. 4, and the Republican Oncology Clinic dispensary, research institute of medical and biological problems and North Ossetian branch MAEN conducted medical-geographical studies confirming harmful effects of earth radiation on human health. Object of research became one of the "dormitory" areas of Vladikavkaz - the 35th microdistrict.

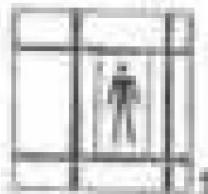
The research was carried out in three stages:

- 1) Dowsing survey and drawing on the plan of the microdistrict the most powerful dowsing anomalies - local and linear geopathogenic zones. Global the energy networks of Hartmann, Kurri and others were not taken into account, according to Based on the research materials, a map of geopathogenic zones was compiled microdistrict and transferred to clinic No. 4;**
- 2) Collection and analysis of long-term statistical data on cardiovascular, gastrointestinal and cancer diseases in the study area;**
- 3) Compilation of a medical-geographical map of the 35th microdistrict of Vladikavkaz by point-by-point application of address statistical data on a map of geopathogenic zones**

As a result of the research, an obvious connection and spatial coincidence of foci of increased incidence with location in the studied territories of local and linear geopathogenic zones.

The Austrian researcher of this problem N. Bahler cites a number of reliable signs that a person's bed is in a geopathogenic zone: antipathy to your sleeping place, long time to fall asleep (hours), poor sleep, anxious condition, tiredness and tiredness after waking up, rapid heartbeat and leg cramps. In children, this is added to by a feeling of fear, screams, creaking teeth, chilliness in bed, desire to leave bed, loss of appetite. Some years ago, during an inspection of a residential building in Digore, it was discovered that one of the sleeping places are located at the intersection point of the Hartmann grid lines. Geopathogenic a zone with a diameter of 40 cm was located in the abdominal area of a sleeping person. On this An elderly woman, the mother of the owner of the house, had been sleeping in this place for more than 30 years. For for a long time she complained of pain in the kidneys and was treated in clinics in Kyiv and in Moscow, she was operated on, but the pain in the kidneys did not stop. In three Weeks after rearranging the furniture, the pain went away. For long stays of a person in a geopathogenic zone, diseases of various organs occur and disruption of the functioning of various body systems. Most frequently noted oncological, vascular, neuropsychiatric diseases and musculoskeletal disorders

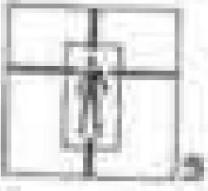
motor apparatus. If the entire human body is in the danger zone, then all joints are affected and multiple sclerosis often occurs, non-healing trophic ulcers, blood clotting is impaired.



Применение различных методов показано на рис. 1. Несорванные - те рис. 2-4, которые можно применять в следующем заражении:



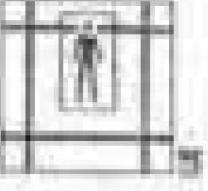
Более широкий в зону, что неизбежно приведет к опасности и опасности.



общие нарушения обмена веществ, инфаркт миокарда, болезнь почек, почек, хроническое течение болезни почек, почек, почек, почек, почек, почек.



затруднения, воспалительные процессы, гнойные раны, гематомы, кровоизлияния, укусы насекомых, скрытые.



гематомы, нарушения обмена веществ, инфаркт миокарда, тромбозы вены, тромбозы, тромбозы, тромбозы, тромбозы, тромбозы.



Более широкий в зону, что неизбежно приведет к опасности и опасности.

Different animal species also react differently to the presence of ILI. Most domestic animals, with the exception of cats, try to avoid ILI, which, apparently, was used by our ancestors when determining

optimal locations for housing construction. So, dogs never lie down on the ILI and even in cold weather, the dog will not go to sleep in a booth located above such zone. In some villages of the Digorsky district of North Ossetia there are still The ancient method of checking the suitability of a site for building a house has been preserved. A donkey is released into an area of his choice and his behavior is observed. Areas that the animal avoids, despite the lush grass growing there, are considered unfavorable and even dangerous.

Torsion fields and information interactions – 2009

To search for underground, groundwater and ore deposits has long been and successfully The dowsing method is used. Dowsing is based on the ability of some people to develop a reflexive reaction, expressed in deviation squeezed in in the hands of the operator of a forked branch of a vine or a wire frame. In our country and Instrumental methods have been developed abroad. However, within cities and large settlements where the use of devices that represent highly sensitive radio receivers, limited to high level industrial interference, dowsing takes on the role of the main method, the metrological parameters of which can be adjusted using special testing sites up to 95% confidence level. The very possibility of mapping geological disturbances in the form of linearly elongated zones of dowsing anomalies indicates that the human body, regardless of possible explanations, to this kind of geological heterogeneity is not only not indifferent, but also responds quickly to them.

Neutralization of geopathogenic radiation

A special place in the study of the problem of geopathogenic zones is occupied by the search for funds protection from their harmful effects. It is known that our ancestors tried protect against the harmful role-related effects of ILI in a variety of ways. So, in antique times in Ancient Rome for protection from earth radiation under foundations The buildings were covered with straw mats. Many peoples of the Caucasus have preserved the custom put open scissors in the child's bed so that the child does not get scared during dream. Sometimes, for the same purpose, an ordinary twig broom is placed under the bed.

Interesting work was carried out by candidate of technical sciences O.A. Isaeva. On based on an analysis of 130 patents issued in different countries of the world for devices and devices that neutralize terrestrial radiation, she divided them into the following groups:

1. Absorbent materials (synthetic films, minerals, wax, felt, paper, cardboard, etc.).

2. Reflective coatings made of metal films on insulating substrates made of synthetic materials. 3.

Protective clothing made from fabrics containing metal threads or foil in the form stripes, stitching, etc.

4. Protective elements worn by a person, made of conductors of various shapes with properties of antennas (bracelets, belts,

necklaces). 5. Diffraction gratings of various types for selective reflection of radiation (nets, rings, hooks, brackets, etc.).

6. Deflection devices made of metal pins and rods. 7. Devices that capture harmful radiation and change it; parameters and re-emitting in a neutralized form (spirals, tubes, cones, pyramids, crystals, organic substances, etc.).

Positive geoactive zones

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

In addition to coordinate grids and local geopathogenic zones formed over underground water flows and geological faults, there are zones coordinate grids formed by their interaction; they are distinguished as geomantic (telluric) zones. Geomantic zones are characterized by complex structure and oriented to the cardinal points.

Such areas of the earth's surface have long been considered blissful, sacred in some places. Most of the ancient religious buildings are dedicated to them, and later and Christian temples, often built on the site of pagan sanctuaries.

In 1935, the English archaeologist and dowser (dowser operator) Captain Boothby in an article "Stone Age Religion" reported that under every sanctuary he examined (that is, a sacred place) accumulations of groundwater or underground sources. The same information was obtained by French scientists L. Merle (1933) and S. Dio (1935).

Many reports from other dowsers that followed these publications confirmed the results obtained by K. Boothby. It followed from them that literally everything mounds, cromlechs, henges and other sanctuaries, including free-standing stones - menhirs are located above the intersection points of two or more underground waterways streams that lie at great depths or above voids filled with water. The same specific picture is typical for Christian churches in territories of Europe. First of all, this applies to those who were built before the Reformation, a classic example is the famous cathedral in Chartres (France), where water flows were used for creating the necessary permanent telluric effect. Until now time remains a mystery how and why the builders of the cathedral laid the at a depth of 37 m there are fourteen intersecting water channels and why at the same time the height of the central dome above the ground also reaches 37 m. S. Ermakov, leading expert of the Association "Ecology of the Unknown" in the article "Sacred places from the point of view of a dowser" (Internet), reports that dowsing studies carried out on the territory of several Orthodox churches of various ages built in Stanislavl, Luzhki, Davidova Hermitage, etc., confirm the presence of all surveyed temples of underground water streams.

Detailed studies have shown that there are usually two or more flows per floor intersect under the place where the altar stone is located. One thread usually flows under the asps of the temple, and two or three more - in the main room or under the belfry, if there is one. The direction of water flow is most often determined by the terrain, and the channels are usually almost perpendicular to the walls. The depth of underground flows averages from 2-3 to 8-10 m. More often In all cases, the streams passing under the altar lie closest to the surface. stone.

Torsion fields and information interactions – 2009

Artificial biological discomfort zones origin

Zones of biological discomfort may be of artificial origin, then there can be created by man in the process of life. Yes, places former landfills, cemeteries and cattle burial grounds have always been considered among all nations unsuitable for housing construction.

Indeed, in these places the density and continuity of the soil is disrupted. The direction and concentration of underground water flows changes. Serious Industrial burials may pose a threat to public health.
waste. In Moscow, on Shchelkovskoye Highway, a residential building was inspected regarding mass cancer diseases. The fact of localization of increased incidence (up to 80% of the total number of residents) in one of the entrances of the house. The cause was a pathogenic zone resulting from burial radioactive waste from enterprises. Previously, during the sanitary-epidemiological During the survey, this territory was not considered harmful because it exceeded the maximum permissible limit. radioactivity was insignificant, only from 16 to 25 $\mu\text{R/h}$. As a result Carrying out additional environmental surveys revealed that slight excess of radioactivity in combination with other technogenic and geopathogenic factors caused morbidity. Technopathogenic zones (TPZ) can arise at intersections of technological pipelines, cable power supply and communication lines, underground heating and sewerage communications, etc. Particularly powerful zones biological discomfort are formed in places where technopathogenic and geopathogenic factors. For this reason, it seems appropriate to when designing residential and public buildings, take these factors into account when placement of highways and nodes of pipelines and cable lines under places long stay of people.

In modern cities, people can be exposed to various electromagnetic fields created by television and radio transmitters, industrial installations, household and medical devices, power lines (power lines), etc. Back in 1973, Assistant Director U.S. Environmental Administration Quarles, speaking at a meeting of the environmental council, said that "we may soon be confronted with new social problem: environmental pollution with electromagnetic radiation."

EFFECTS OF ROTATING MASSES

Rotation is a source of non-electromagnetic influence on nonequilibrium semiconductor charges and radioactive decay

Melnik I.A.

Federal State Unitary Enterprise Tomsk branch of the Siberian Research Institute
Institute of Geology, Geophysics and Mineral Resources (TF FSUE
"SNIIGGiMS"), 634021, Russia, Tomsk, Frunze Ave. 232.
migranis@mail.ru

Results based on semiconductor nuclear spectrometry
experimental studies on the remote influence of rotating
objects on the rate of decay of atomic nuclei and nonequilibrium charges
semiconductor detector.

Introduction

It has long been assumed that rotation can be a source of non-electromagnetic influence. Back in the twenties of the last century, E. Cartan connected density of angular momentum of rotation with torsion (torsion) of space-time in within the framework of the gravity model of general relativity [1]. Experimental The works of N.P. Myshkin were essentially the first experimental data confirming the existence of certain forces transmitting angular momentum [2]. In in the second half of the twentieth century, experimental studies indicating the generation of non-electromagnetic influence rotating flywheel of the gyroscope and its remote influence on the moment impulse of a macroscopic object [3, 4, 5].

Rotation refers to fundamental motion. To be more precise, it is possible to say that there are no linear movements in the World. Any movement in the gravitational field can be characterized by a certain turning radius. Naturally, if this radius is relatively large and the angle of rotation is insignificant then the described arc (in the limit) will tend to a straight line. Only in this In this case, we can talk about quasi-rectilinear and uniform motion.

In the case of rotation, the source of non-electromagnetic influence can be moment of forces, and centrifugal (inertial) forces. Currently there are several theories connecting these forces with such generated non-electromagnetic fields such as torsion field [6, 28], cogravitational [7], massodynamic [8], microleptonic [9], chronal [3, 5], etc. In every case based on the theory, possible manifestations of the properties of the listed

Torsion fields and information interactions – 2009

fields. These properties can be identified experimentally and compared with theoretical conclusions.

In recent decades, a number of researchers have conducted experiments on remote influence of rotating objects, as on angular momentum test object, and on the readings of various instruments [10-18]. Regardless no matter how the generated fields are defined, when generalizing the results of these works, the main properties of the generated impact were identified. Let's list discovered properties of this phenomenon:

1. The generated field transfers the angular momentum to the test macro-object.
2. The test object in this field experiences precession.
3. If the sizes and masses of the test and leading objects match, the rotating test object is a source of non-electromagnetic fields acting in antiphase on the leading object and braking it rotation. Here self-heating of both objects occurs.
4. The degree of impact on test objects depends nonlinearly on speed rotation of the leading object.
5. Dependence of the manifested effects on the direction (clockwise and counterclockwise clockwise) rotation. This fact may be related to education right - and left-handed field.
6. The field in the space of the rotation axis is non-uniform. Impact level depends on the location relative to the rotating object.
7. After turning off and stopping rotation, non-electromagnetic influence remains in a quasi-stationary state for a long time (the phenomenon memory).
8. The non-electromagnetic field affects the fluctuation of nonequilibrium quantum systems (charges) of radioactive radiation sensors.
9. The field generated by a rotating object changes (mainly reduces) the rate of decay and fluctuation (dispersion) of the nuclei of radioactive isotopes.
10. The degree of influence of this field depends on the organization (entropy) of the internal structure of the rotating object. The more organized structure, the greater the influence on the trial quantum system.
11. Precession and uneven rotation increase the impact on the test quantum system.
12. The field absorber is a material made from twisted lavsan and polyethylene threads. Moreover, material made from right-handed thread is mostly absorbs the field when the object rotates clockwise (view from top, material between the rotation object and the test object). And vice versa, when rotating counterclockwise to absorb the impact You must use a left-hand twist thread.

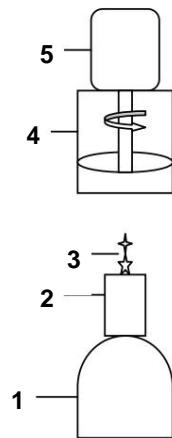
Thus, the listed properties of non-electromagnetic influence generated by a rotating object make it possible to associate this field not only with force component (transfer of angular momentum), but also with information influence (transfer of entropy and influence on it in the test object). Let us consider the results of some experimental studies obtained in

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

as a result of the remote influence of rotating masses on nonequilibrium quantum semiconductor spectrometry systems.

Instruments and experimental techniques

At the end of the eighties of the last century, using semiconductor gamma spectrometry, in multi-element neutron activation analysis, the author was the effect of decreasing the activity reading of an isotope source of gamma rays in the presence of a rotating liquid was noticed [19]. Subsequent experiments (already in our century) fully confirmed the effect of rotation on the decay of the nucleus.



Rice. 1. Fundamental experimental design, where 1- Dewar flask; 2-PPD; 3- radioactive sources; 4-glass with liquid; 5- electric motor

The measuring equipment used was semiconductor, Ge(Li) detector (DGDK-63v); preamplifier (PUG-2K); amplifier (BUI-3K) and analyzer (AMA-02F1). Semiconductor detector, gamma radiation source and rotating the rotor shaft is located on the same vertical axis (Fig. 1). Used in various experiments electric motors, both asynchronous (AIR type) and collector, power 150-200 watts, fixed to the counter. The electric motor stand was attached to massive steel table (~60 kg) and a Dewar flask semiconductor detector (SPD), filled liquid nitrogen (31 kg), located on soft platform, prevented transmission slight vibration from the electric motor to detector.

Effects not only on beta-active nuclei, but also on alpha radioactive isotopes. IN

A semiconductor epitaxial sensor was used as an alpha particle sensor.

GaAs – GEF detector, with gold contact. Detector size 4x2 mm

^{2.} IN

The measuring complex used a PUG-01 pre-amplifier, a UIS-04 amplifier and a BPA-02 ADC produced by NPC Aspect.

The motor shaft without attachments, rotating at angular speeds from 2000 to 8000 rpm in increments of 1000 rpm, both counterclockwise and clockwise (view above) was located above the radioactive isotope source. Distances from radioactive source to the end of the shaft were specified by the experimental conditions.

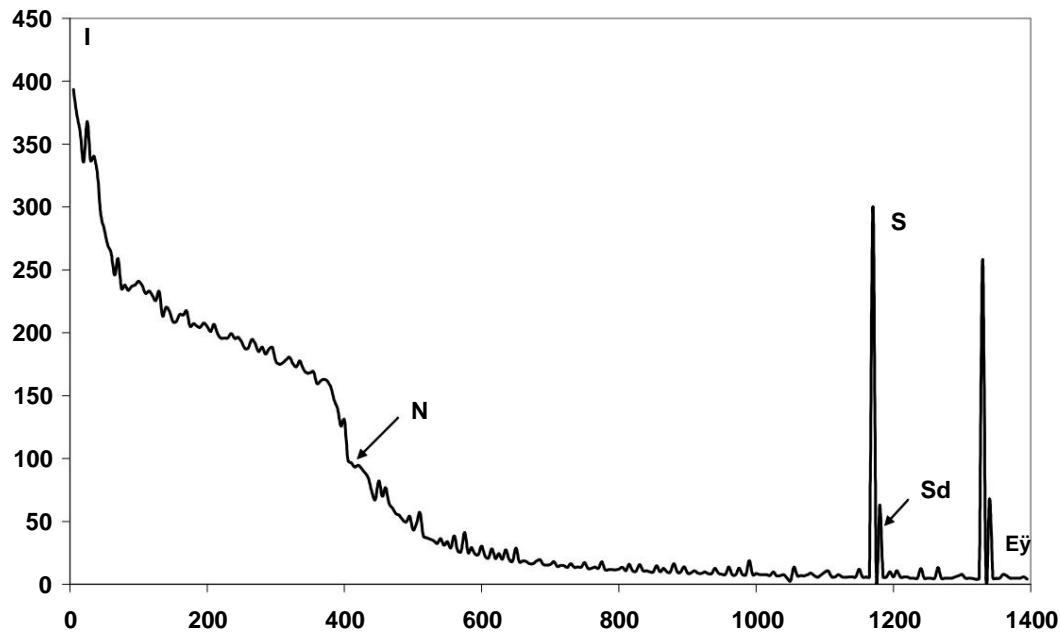
The area of the total absorption peak (peak) was measured, proportional to the amount registered gamma quanta (PPD pulses) of a given energy and the general integral. Processing of the analyzed spectrum was carried out by the "Search" program developed by in Dubna. This program, for calculating the peak area, automatically places marks at the "inflection" point of the Gaussian distribution, which allows you to comply identical conditions in the process of calculating the next measurements. Width The energy resolution of the studied peaks did not exceed 3 keV. In one hour

Torsion fields and information interactions – 2009

measurements of the drift of the center of gravity of the peak towards increasing or decreasing are not exceeded 0.5 keV.

Peak and integral measurements took place in two modes, 60-100 measurements during operation engine and 60-100 measurements after stopping it. "Live" measurement time was 30-60 s, spectrum processing time 35 s. Peak area, depending on measurement points were from 4000 to 10000 pulses.

In the experiment, the total integral spectrum I was recorded, starting from the first channel of the analyzer scale, i.e. the lower limit of the discriminator was equal to zero (Fig. 2). The figure shows the spectrum of gamma rays of the Co isotope ^{60}Co , where possible manifestation of noise peaks.



Rice. 2. Pulse-energy spectrum of gamma quanta of the Co^{60} isotope , where Sd – peak – double

In [20], a theoretical analysis of this situation is given and it is determined that taking into account integral spectrum (the entire energy scale of the analyzer) in the experiment, allows you to avoid the main unaccounted influences of the electromagnetic field on statistics. This is due to the fact that the generation of electromagnetic pulses is usually manifests itself in the first channels of the scale and a significant increase in these peaks in turn, reduces the peak area of the useful signal.

To the input stage of the preamplifier, in addition to the useful signal from the PPD internal noise signals are received, formed by the reverse current of the detector, the input gate current of the field-effect transistor, and resistance leakage currents connected in parallel to the detector. In addition to internal noise signals at the input preamplifier can be supplied signal, generated by external electromagnetic sources, in this case it is an electric motor and a system rotation speed control. In turn, the input load resistance circuit is inversely proportional to the cyclic frequency of the external alternating current

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

noise signal. All this leads to fluctuations in the load time constant and increasing the area of the integral spectrum.

In this case, the noise current is represented in discrete form in the form of γ -pulses. In Fig. 2, at the beginning of the energy scale (25 keV), a noise peak is visible, generated by an external electromagnetic source and increasing the overall integral. And due to the fact that the “dead” time of the amplitude-digital converter t_m , this is the “dead” time of the extension type, then the peak area the useful signal will decrease. Dead time is processing time spectrum, i.e. the time of transformation of the analog signal into a digital one and, accordingly, the termination of registration of the useful signal. Let us define the integral as $N = I - S$, where S is the peak area of the useful signal (for the Co60 isotope, the energy of gamma quanta is 1173 keV and 1332 keV). The quantity N is mainly the sum of the background momenta, Compton-effect and noise signals. In this case, the difference of interest is peak areas in rotation mode S_{rot} and average peak value in static mode \bar{S}_{st} . Ratio $(S_{rot} - \bar{S}_{st})/\bar{S}_{st}$ determines the relative fluctuation of the area peak expressed in units of standard deviation σ_{st} . But here it is necessary take into account the influence of noise signals on the spectrum, so you can enter relative value q , the value of which reflects the fluctuation of the peak area (i.e., the decay rate of the nucleus) normalized to electromagnetic noise impulses, i.e.

$$q = (S_{rot} - \bar{S}_{st})\sigma_{st}/(|N_{rot} - \bar{N}_{st}|)^{1/2}, \text{ where module } |N_{rot} - \bar{N}_{st}| \geq \sigma_{st}(1)$$

If $|N_{rot} - \bar{N}_{st}| < \sigma_{st}$ then we equate the module to σ_{st} . This condition is statistically justified, because modulus value is less than σ_{st} is within error limits measurements. To assess the closeness of samples N_{rot} and N_{st} , you can apply the criterion Fischer, respectively, find out what is the proportion of external noise pulses (if they are present in the spectrum) and the degree of their influence on the S_{rot} statistics.

The proposed experimental design makes it possible to exclude the influence of trivial reasons for the experimental results, due to the emerging research opportunity behavior of two samples – S and N , since fluctuations in the decay intensity affect primarily the shape of the S distribution and, to a much lesser extent, N (Compton effect). And the device's own noise and external electromagnetic interference will appear in the integral N . Therefore, the value of $q \sim S_{rot} - \bar{S}_{st}$, reflects change in the activity of a radioactive source and, accordingly, the degree of influence non-electromagnetic component of the field generated by rotation to the excited atomic nucleus.

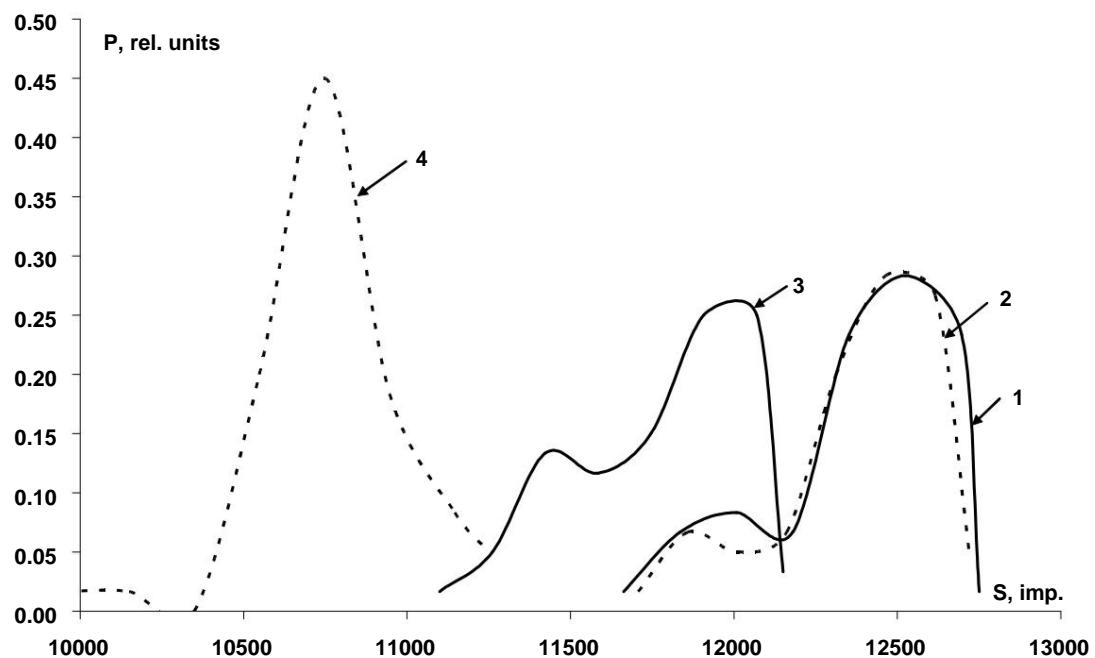
Statistical analysis of experimental results was carried out with a 95% power reliability. When constructing histograms, the analyzed series was divided into intervals with step $h = (X_{max} - X_{min})/(n)^{1/2}$, where n is the number of members of the series (sample).

Analysis of the results of exposure to radioactive decay

Torsion fields and information interactions – 2009

By studying the dependence of the magnitude of the shift in the average value of the peak area on spatial arrangement (along the axis of the electric motor shaft) of the system "source-detector", a change in this value was noticed, up to a full coincidence of distributions when measuring in rotation modes and without rotation. We can say that at some points in space the effect of influence disappeared. There is a need to experimentally confirm the impact non-electromagnetic field specifically to the radioactive source, and not to the system "source-detector".

The following experiment was carried out: in the no-rotation mode, sequentially the intensity of photons from two isotopes of Cs137 was measured at distances from detector surfaces 29 mm and 25 mm. Moreover, the distance was chosen as follows so that the load on the detector from two sources is the same (in static mode). At the beginning, 60 measurements of the first source were carried out ("live" measurement time $t_g=50c$), then the second source ($t_g=50c$). Research repeated when the engine was rotated counterclockwise (Fig. 3). Rotation water in a steel glass was created by uneven (decentred) rotation of the disk at a speed of 6000 rpm.



Rice. 3. Histograms of the distribution of gamma radiation pulses from two Cs137 sources in various spatial positions, in static mode (1 and 2) and in mode rotation counterclockwise (3 and 4).

The following results were obtained, for the first source the average area value peak in static measurement mode (1) – Sst $^1=12308$ imp., standard deviation $\bar{y}=268$ pulses, in counterclockwise rotation mode (3) – Spr $^1=11734$ imp., $\bar{y}=297.4$ imp.; for the second source (2) – Sst $^2=12314$ imp., $\bar{y}=200.6$ imp., (4) – Spr $^2=10688$ imp., $\bar{y}=254.8$ imp. Fisher coefficients between distributions of two isotope sources in different measurement modes: Fst 1-2=0.01 and Fpr 1-2=425.5 (q4-2= -8.1).

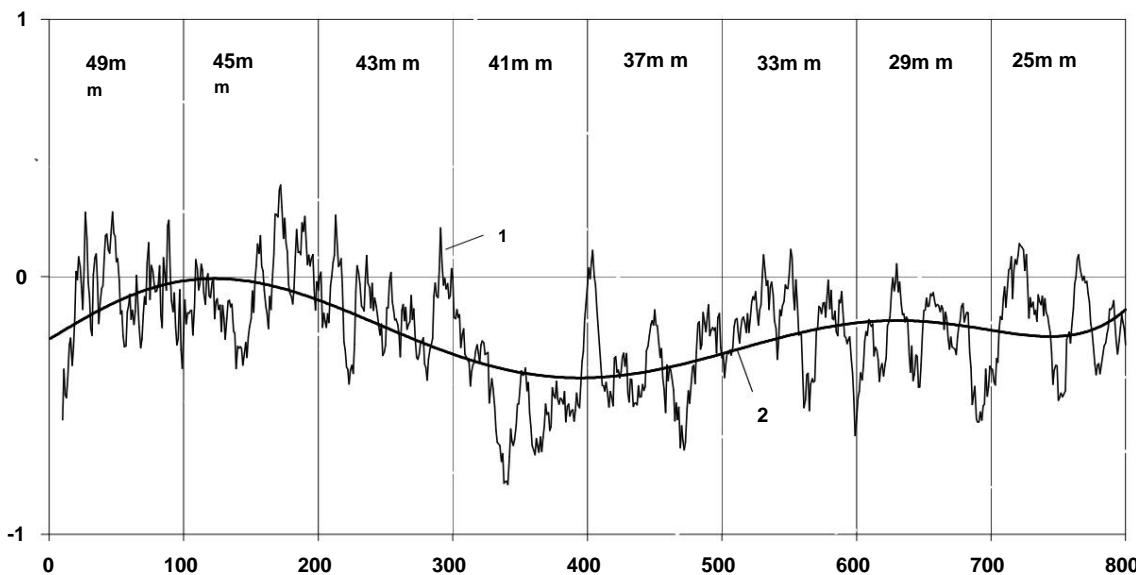


Fig.4. Distribution of cesium peak area fluctuations depending on the point measurements where, 1 is a moving average of ten measurements, 2 is a trend line. (By x-axis - number of dimensions).

The experimental results confirm the presence of an impact field associated with rotation and the potential of this field, at each point in space, is different. Throughout Apparently, the field generated by rotation affects the quantum states of the internal structure of the excited nucleus. When this experiment is repeated, the results were confirmed up to the preservation of the distribution forms.

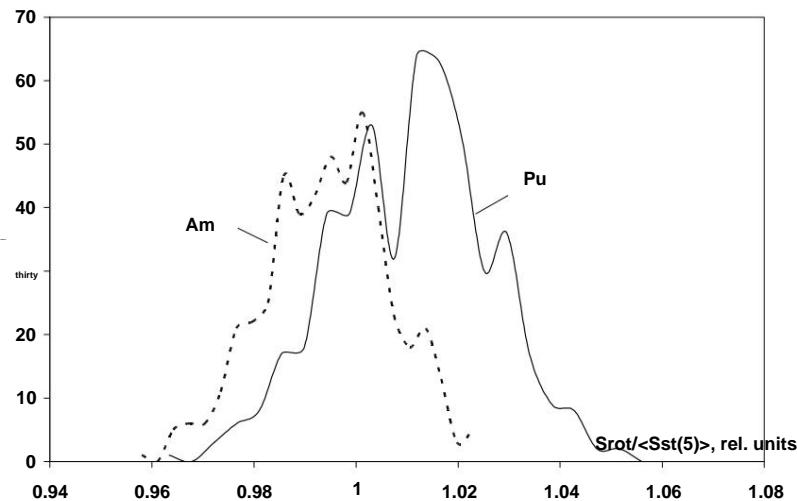
In the case of uniform rotation of the electric motor rotor, without precession, and with constant angular velocity in the absence of water in the glass, the degree of influence on the decay of atomic nuclei decreased significantly. Distances from radioactive source (Cs137 , standard OSGI type) to the shaft end were as follows; 25 mm, 29 mm, 33 mm, 37 mm, 41 mm, 43 mm, 45 mm, 49 mm. At rotor speeds of 7000 rpm and 8000 rpm in comparisons of q values (for Cs137), with different rotor rotation speed (7000 and 8000 rpm), the following are noted patterns, firstly, the maximum value $\bar{y}_{q8000}=-0.46$ acquires at distance 41mm (Fig. 4 (the number of measurements is given along the abscissa axis)), at the same time $\bar{y}_{q7000}=-0.48$ at a distance of 33mm. Secondly, at distances of 45 and 49 mm the effect there is almost no shift, but the distribution (histogram) of the peak area takes the form of a doublet and the difference between the vertices of the histogram is 500 imp. The standard deviation has doubled, relative to

Torsion fields and information interactions – 2009

points 41 mm. In this case, the difference between the vertices of the distribution double ⁴⁹ equal to 1.08 rel.unit Statistical analysis of the integral sample showed the following result \bar{N}_{tot} , which indicates the absence of noise influences on the spectrometer reading.

When comparing the results of experiments with uneven rotation of water and uniform rotation of the electric motor rotor, where the relative magnitude of the two measurements $q_4-2/q_{7000}=16.8$ can serve as an indicator of an increase in the degree effects associated with uneven rotation.

In our case, the effects were carried out not only on beta-active isotopes, but also on alpha decay. At the Siberian Institute of Physics and Technology, on the basis semiconductor detector registering alpha particles, were carried out independent (test) experiments on remote influence rotating liquid on a mixture of isotopes Am241 and Pu239. Peak areas were measured pulse-energy spectrum of alpha particles, energy 5485.6 keV (Am241) and 5155 keV (Pu239). The motor shaft with a nozzle, rotating at an angular speed of 8000 rpm counterclockwise (top view), rotated the liquid in a steel glass.



Rice. 5. Histograms of relative measurements of the peak areas of the isotopes of americium and plutonium

Before conducting the experiments, the influence of electromagnetic noise on registered equipment. A possible source of noise was identified, it turned out to be device for switching motor rotation speeds. All carried out additional measures to eliminate noise impacts. Temperature remained constant throughout the entire measurement period. Moreover, with simultaneous measuring two peaks, any noise impact affects proportionally both peaks. Consequently, the direct correlation of the sample values of these peak areas may indicate extraneous noise influence. IN No such effects were observed in the experiment.

The distances from the radioactive source to the bottom of the glass were as follows; 1 cm, 2 cm, 3 cm, 4 cm, 5 cm. The detector and alpha source were rigidly connected to each other, and the source was attached to the detector from above. All measurements were carried out at distance L1 = 5 cm, subsequently raising the detector with the source along the axis of rotation, in steps of one centimeter. At each distance peak measurement

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

took place in two modes, one hundred measurements while the engine was running and one hundred measurements after it is turned off.

Works [15-18] show that after turning off the electric motor, sufficiently long relaxation of the changed distribution of source activity at every spatial point. In other words, the field generated by the rotation is in a metastable state for more than a week and, at a given point space continues to influence the decay of the nucleus, which, in turn, leads to a changed distribution of the sample of impulses (from the usual Poisson distribution, to multiplet distribution with increasing dispersion). Therefore, statistical analysis must be carried out in comparison with the first sample obtained before the first measurement in rotation mode. In our In this case, this is possible, because the radioactive source is rigidly attached to the detector. Therefore, the intensity reading at each measurement point should not be change (in the absence of impact on the excited nucleus).

Constructing a histogram of the population of all relative samples Srot/ÿSstÿ convincingly showed that rotation affects the alpha decay of the atomic nucleus, and the distribution of alpha particles becomes multiplet and intensity americium decreases, and the plutonium isotope increases (Fig. 5). Single factor dispersion analysis of these distributions determined the Fisher coefficient $F=98$, with a critical value $F_k=3.8$.

Statistical analysis of the results revealed; *first*, rotation liquid remotely affects the rate of decay of excited nuclei; *secondly*, the magnitude of changes in decay and dispersion depends on the distance relative to a rotating object and, *thirdly*, the intensity of the Am241 peak decreased, and the intensity of the Pu239 peak increased in the rotation mode, relative to the static measurement mode. Testing statistical hypotheses was carried out according to certain values of the Student and Fisher tests.

Using the phenomenon of quantum nonlocality (entangled states of quantum ensemble), it is possible to influence one radioactive source, and measure the rate of decay of another source previously representing the same structure. In the experiment under consideration, the effect on the Zn65 isotope was studied registration of another similar isotope with a gamma ray energy of 1115 keV [21].

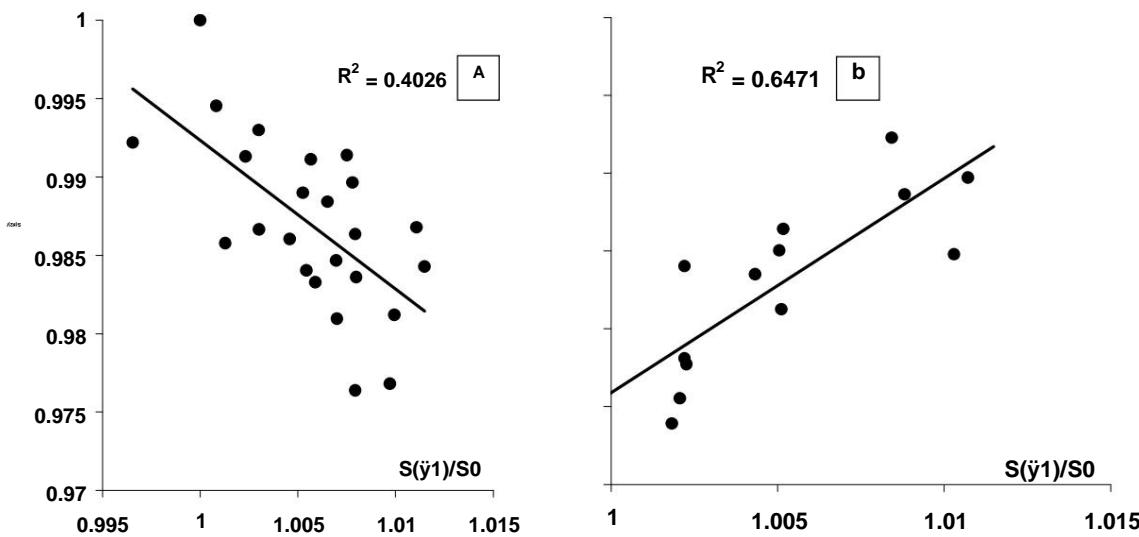
And

The essence of the experiment lies in the following reasoning: firstly, when formation of molecular bonds of zinc salts, zinc atoms also enter into interaction with each other. Electronic shells of an atom interacting with the nucleus, in turn, interact with the shells of other atoms, which and leads to entanglement of certain nuclear states of different quantum systems [22]. Nonlocal correlations are formed between excited nuclei zinc Consequently, with a sufficient degree of entanglement of excited quantum states, in the case of external influence on these systems, leading to changing their states (let's say, to sample No. 2) in another system (sample No. 1) the quantum states of excited nuclei will also change. In this case a correlation will appear in the rate of nuclear decay. Secondly, this property

Torsion fields and information interactions – 2009

(nonlocal correlations) of quantum systems allows you to spread them across space impact and measurement, which accordingly allows the change to be interpreted in readings as a change in the rate of decay of atomic nuclei.

The peak and integral (the entire spectrum, starting from the first channel) were measured in three modes, 60 measurements with uniform rotation of water by the rotor nozzle electric motor with an angular speed of 8000 rpm clockwise (top view), 60 measurements after it stops (the electric motor is turned off) and 60 measurements with rotation counterclockwise. Peak area corresponded to one sample ~ 7000 imp., for the other ~ 9000 imp. Each sample for all modes was measured 2160 times. The “live” measurement time was 25 s, the spectrum processing time was 60 s. The average detector load was ~3000 pulses/s. The source was rigidly attached to detector, and the glass with the electric motor moved upward along the rotation axis from 1 cm (from the radioactive source to the bottom of the glass) to 12 cm in steps of 1 cm.



Rice. 6. Correlation dependencies of relative average values areas of zinc peaks No. 2 and No. 1 where, measurements in clockwise modes and static (a), measurement in counterclockwise mode (b).

In Fig. 6 (a and b) presents the results of correlation analysis of relative average peaks ($\bar{y}S_i\bar{y}/\bar{y}S_0\bar{y}$) for zinc. Measurements in clockwise rotation modes arrow and with the electric motor turned off (static mode) can be attributed to one group due to the fact that the static measurement mode follows the rotation and, accordingly, this space (down from the bottom of the glass) contains residual signs and aftereffect properties (Fig. 6(a)). For these modes correlation analysis determined the coefficient $k = -0.63$.

In the case of counterclockwise rotation mode, the correlation coefficient the average peak values of zinc samples No. 1 and No. 2 are equal to $k = 0.8$ (Fig. 6(b)). Obviously, the change in the sign of the correlation may be associated with a change in the orientation of the influence (left or right) when changing the direction of rotation. Statistical analysis sample of the integral showed the following result $\bar{y}N_{st}\bar{y} > \bar{y}N_{rot}\bar{y}$, which indicates absence of noise influences on the spectrometer reading.

Thus, the results of the studies show that a rotating macro-object is a source of non-electromagnetic influence, causing both changes in the decay rate of radioactive nuclei and their variances.

Analysis of the results of impact studies on semiconductor detector

In long-term measurements of gamma activity of radioactive isotopes semiconductor spectrometric complex in the hardware spectrum gamma rays, peaks were detected that were not identifiable with photon energy of the isotope being studied, but on the energy scale they were always located approximately 1% above the total absorption peak (they were given the name peak-double, see Fig. 2). It turned out that in experiments with rotating objects, in depending on the experimental conditions, the average values of the areas of peak-doubles could change its value several times (Fig. 7). In Fig. 7 shows dependencies differences in average values of total absorption peaks and double peaks in modes measurements during rotation and non-rotation (i.e. $dS = |\bar{y}S_{rot} - \bar{y}S_{st}|$). It's clear that The dependence is nonlinear.

Further studies showed that the appearance of a peak-double is associated with the influence

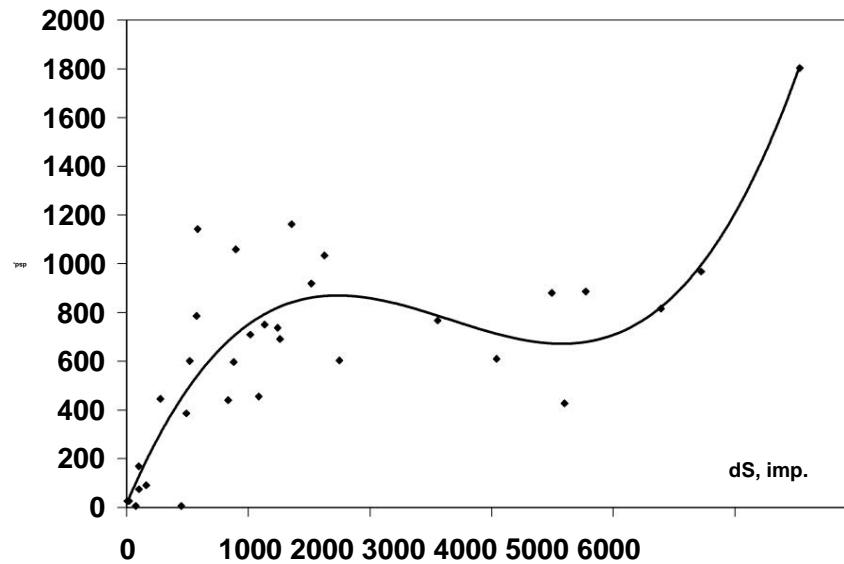


Fig.7. Dependence of the peak-double area difference on the peak area difference total absorption during rotation, relative to no mode rotation.

amplifier In case of using a different amplifier (with a different time characteristic reaching the maximum amplitude (t)), the peak-double disappeared.

Significant peak-double sensitivity to changes in conditions and geometry measurements in experiments with rotation served as an incentive to understand the physical meaning of the formation of this peak.

Torsion fields and information interactions – 2009

The kinetics of nonequilibrium charges during the photoelectric effect in semiconductors was studied in detail in [23]. It is shown here that in the band gap of a semiconductor there are levels of temporary recombination of drifting charges, the so-called. adhesion zone. In turn, in a semiconductor device, when generating the signal amplitude at the output of the amplifier, the adhesion process may be decisive, and the resulting pulse will represent a superposition of two signals - drifting nonequilibrium charges and temporarily recombined in the sticking zone [24]. In this case, the probability of the appearance of the resulting signal (peak-double) is influenced by the ratio of such time parameters as the charge collection time (t_{cob}) on the input capacitor of the pre-amplifier and the retention time in the sticking zone.

It is also known that the temporal characteristics of the detector are affected by defects in the crystal structure of the semiconductor and, accordingly, the average retention time in the sticking trap zone $t_{pr} = N/[\dot{\gamma}N_p(N-nz)]$ depends on the number of defects N , the charge concentration in sticking traps nz and the constant recombination $\dot{\gamma}$. In this case, N_p – the density of free hole states “reduced” to the trap level depends on the depth of the hole demarcation level of the traps [23]. The position of this level is determined by the same probability of thermal overshoot and the probability of recombination.

If the time to reach the maximum amplitude of the amplifier output signal is $t \approx t_{cob}$, then at $t_{pr} < (t - t_{cob})$ the pulse amplitude component caused by the release of previously captured carriers will increase the output amplitude by ~1% (a peak-double appears). When $t_{pr} \gg (t - t_{cob})$, the output amplitude will correspond to the amplitude of the absorption peak. In this case, the pulse amplitude of the temporarily recombined signals will not be recorded by the equipment, since its value is less than the discrimination level. If $(t - t_{cob}) \ll t_{pr}$, then the peak-double is not realized in the hardware spectrum (this is also possible with a significant reduction in the time to reach the maximum amplitude of the amplifier's output signal).

Thus, the probability of the appearance of a peak-double will depend on the ratio of the average values t , t_{cob} and t_{pr} , and if the ratio

$$(t - t_{cob})/t_{pr} \sim 1, \quad (2)$$

then the sensitivity of the sensor to the remote influence of rotating objects will be maximum. Consequently, changes in the collection time and the retention time in the adhesion zone of nonequilibrium charges of the semiconductor (i.e., change in energy) change the average value of the peak-double area, which accordingly leads to a change in the average value of the total absorption peak.

Let us give the following example of simultaneous measurement of ^{137}Cs and ^{60}Co in static mode (St) and clockwise (Po) and counterclockwise (Pr) rotation modes. One hundred measurements were carried out in one geometry. When measuring the ^{137}Cs isotope (gamma quantum energy 661.6 keV), another peak with an average energy of 669.6 keV may appear. Moreover, the frequency

its appearance V in the sample is different for different measurement modes and geometries. This is a peak-double Sd. Simultaneously with cesium, ^{60}Co peaks with an energy of 1173 keV and, accordingly, the areas of peak-doubles with energies of 1183 keV and 1343 keV. The average area of a peak-double, taking into account the frequency of occurrence in the sample of hardware spectra is determined by the formula $\text{sd}=\text{SdV}/100$. The results of the experiments are recorded in table 1.

	S ₆₆₁	S ¹¹⁷³	S ¹³³²	⁶⁶⁹ SD	¹¹⁸³ SD	¹³⁴³ SD
St	10123	9505	8886	1829	120	0
Pr	5536	4742	3988	687	710	522
Po	7085	6386	5769	1331	1543	1173

Table 1. Measurement results
the impact of rotation on the average
gamma peak area values
radiation from radioactive isotopes.

Thus, reducing time collection and retention time in the zone semiconductor charge sticking increase the likelihood of occurrence pike-double. Changes in statistical peak-double area distributions in depending on the experimental conditions with rotation confirms the remote fact influence of rotation on

nonequilibrium quantum systems. Using relation (2) in photorecording semiconductor devices, it becomes possible build a highly sensitive sensor of frequency-phase characteristics non-electromagnetic field.

v

Conclusion

Specialists - experimenters in the field of atomic nuclear physics with distrust and are skeptical about the results obtained. Extremely difficult, within traditional concepts, recognize the fact of the remote influence of rotation macroobject on the decay rate of excited atomic nuclei. Even agreeing with possible generation of a non-electromagnetic field, the question arises about the constant interactions of this field and about the processes in excited nuclei leading to change in decay constants.

Recognizing the very fact of its existence, and relying on the discovered properties of this field it is possible to make a number of assumptions and hypotheses that allow, at a formal level, identify possible approaches to solving the issues raised.

Based on the analysis of the listed properties of this field, two can be distinguished: main qualities: *information-power*, transmitting moment of force and orienting vector of moments of test objects; *informational*, transmitting entropy (organization) and influencing the information entropy of the surrounding space. Moreover, the information-force field spreads in space with a finite speed, and information the impact is immediate. It is possible that rotation is simultaneously source of two types of influences.

From the point of view of the synergetic approach, an ensemble of excited atomic nuclei represents a nonlinear structure in the blowup mode [25]. State open structure in this mode is extremely sensitive to microfluctuations external environment. If we take the physical vacuum under the external environment with its

Torsion fields and information interactions – 2009

microfluctuation “boiling”, then modulated (spin-polarized) by a non-electromagnetic field fluctuations of quantum states of the vacuum, in their in turn, modulate the magnitude of the fluctuation of the potential energy of the nucleus, respectively, both the fluctuation and the decay constant of excited nuclei.

Another explanation could be the hypothesis that a rotating object generates non-electromagnetic field with torsion, orienting the vectors of test spinors systems [26]. In this case, precession of the spins of weakly relativistic particles in an external torsion field, as well as the splitting of energy levels in spectrum of particles. These processes lead to changes in the energy of quantum objects. Naturally, if in the registered device, or in a radioactive source If these effects appear, they can lead to the formation of doublets and other phenomena in the distribution of the flux of registered particles.

According to the presentation of A.N. Kozyrev et al., the pace (course) of time of organized system depends on the entropy flows of surrounding systems and on rotating objects influencing the pseudo-vector value of the passage of time [3, 27]. Move time (respectively the speed of processes) of the surrounding space trial quantum system can change, which will lead to a change in the internal energy of the system itself.

Apparently, all three processes in a system with rotation can occur simultaneously, but the degree of their influence on each quantum object is different. IN In conclusion, it should be noted that the listed properties of the studied effects based on experimental results suggest the emerging need for the integration of various ideas when constructing theoretical models of generated impact.

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Experimental study of the interaction of rotating dynamically unbalanced thin disks

Samokhvalov V.N.

Samara State Transport University, samohvalov_vn@mail.ru

The results of experimental studies of non-electromagnetic interactions in a vacuum of closely spaced, mechanically unconnected, rotating disks. It has been established that at high angular velocities interaction forces arise between the disks, causing precession and elastic deformation (helical twisting) of disk surfaces during their joint rotation. In this case, energy is transferred from the rotating disk initially stationary disk, leading to its rotation, as well as mutual braking and heating of the disks during their simultaneous rotation.

Experimental equipment

For research, a device was used (Fig. 1), consisting of two DC electric motors D-14FT2s 1 and 2, having electromagnetic brakes mounted on steel plates 3 and 4 with a thickness of 18 mm. To the rotors electric motors, two disks 5 and 6 with a diameter of 165 mm were attached from ferromagnetic materials (Fig. 1a).

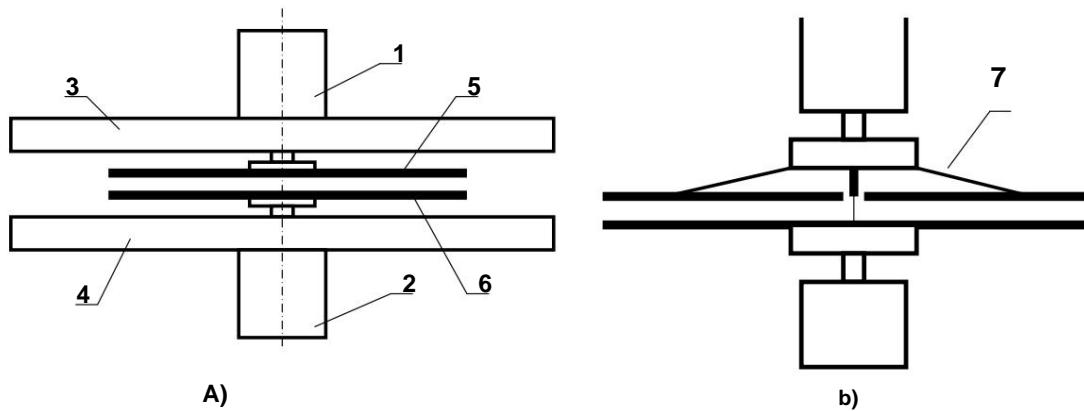


Fig. 1. Schematic diagram of a device for studying dynamic effects: a) rigidly mounted disks, b) the upper disk suspended on threads

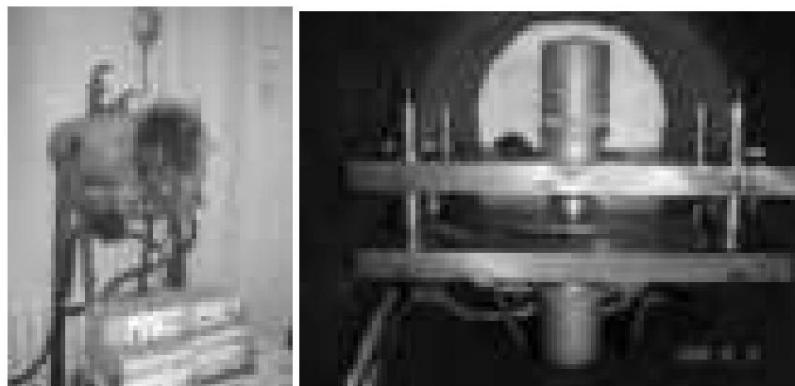
In the experiments there were three options for combinations of disk materials: 1) "metal - metal" - both disks were made of AMg3M aluminum alloy; 2) "dielectric - dielectric" - both disks are made of thick cardboard 2.5 mm thick; 3) "dielectric - metal" - lower the disk is made of cardboard (2.5 mm) or thick paper (0.25 mm), and the top one is made of aluminum alloy AMg3M 0.9 mm thick. Also, in the last episode experiments, the upper disk with a central hole was suspended in the rotor electric motor on six strong synthetic threads 7 (Fig. 1b), and had possibility of axial movement along a rigid axis.

Torsion fields and information interactions – 2009

The electric motors were connected to V5-48 DC power sources located outside the chamber, which made it possible to maintain a given stable voltage. To enable and disable electromagnetic brakes electric motors used separate power supplies.

The distance between the disks was set by parallel movement of the plates mounting electric motors on four steel columns, with their subsequent rigid fixation. The distance from the disks to the plates was at least 20 mm. At the same time, in experiments were set as a deliberate misalignment of the disk axes relative to their axes electric motors (dynamic imbalance) created when the disks rotate variable quadrupole moment, and ensured the maximum possible parallelism of disks and their balance. Initial gap between disks was set from 1 to 6 mm. The possibility of mechanical contact was excluded disks at the initial moment of rotation, taking into account their dynamic imbalance.

The device was installed in a vacuum chamber (Fig. 2) with an internal diameter 300 mm and a wall thickness of 15 mm and was rigidly fixed. Air from the chamber pumped out with a fore-vacuum pump to a residual pressure of about 1 Pa (vacuum 10^{-4}).



Rice. 2. General view of the experimental equipment and research device dynamic effects.

Photos and videos were taken of the processes of interaction of disks during their rotation. Some blurriness in the photographs below is due to taking photographs through a flange at the end of the vacuum chamber made of plexiglass 40 mm thick, and reflections on it from the flash of a digital camera.

Experimental results

The material presented below is a summary of a large number of studies conducted experiments [1-6].

In the first series of experiments (scheme - Fig. 1a), the disks were deliberately unbalanced - a slight misalignment of the axes of the disks and the axes of their rotors is specified electric motors. This created, at the initial moment of rotation, an axial runout along

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

the ends of the disks are about 0.5 - 1 mm. At maximum acceleration the runout is significant decreased due to the action of centrifugal forces, due to low rigidity used thin disks.

It has been established that with an initial gap between the disks of 1 - 3 mm and simultaneous applying a voltage of 30 V to both electric motors to rotate them in opposite sides (counter rotation), first they accelerate to maximum rotation speed is about 100 - 120 1/s. Then periodically I started strong vibration of both disks occurs simultaneously (Fig. 3b). Oscillation frequency disks was about 10 - 20 1/s. When vibration occurs, the speed disk rotation sharply decreased by about 2 times (to 50 - 60 1/s).



Rice. 3. Excitation of high-amplitude vibration of disks with simultaneous, opposite rotation in a vacuum chamber: a) initial position of the disks, b) vibration during rotation

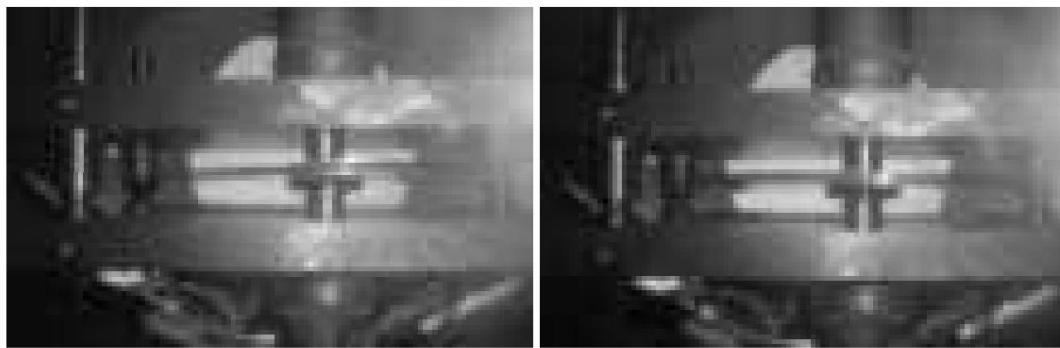
In this case, a fairly large curvature of the disk surfaces and their elastic deformation (Fig. 4). The oscillations of one disk were chaotic relative to the other. The gap between the surfaces of the disks, in different zones, was variable over time. In this case, there is no mechanical contact between the disks occurred even if the initial gap between the disks was 1 mm. The disks seem to repelled each other, as can be seen in the photographs, and each of the disks continued to rotate in his direction. When vibration stops, rotation speed disks increased again. The process was repeated with some frequency.



Rice. 4. Curvature of disk surfaces during high-amplitude vibration.

Torsion fields and information interactions – 2009

At some points in time, chaotic oscillations of the disks turned into relatively stable shape - helical twist of disks, rotating with frequency of the order of 1 - 3 1/s (Fig. 5).



Rice. 5. Bending and twisting of disk surfaces in the process of simultaneous counter rotation in a vacuum.

In this case, synchronous distortion of the plane of both disks occurred. As seen in the photographs obtained and when viewing video footage of the process in slow motion, the surfaces of the deformed disks remain practically equidistant. That is, disks with helical-shaped surfaces, rotating in opposite sides with a frequency of the order of 90 - 100 1/s, flow around each other, not coming into mechanical contact. Thus, the wave is mechanical, elastic deformation of the disks moves along their surface with the angular velocity of the same of the same order as the angular velocity of rotation of the disks themselves. In this case, the rotation screw twist was observed in the direction of rotation of the disk having more high rotation speed.

Significant dynamic imbalance of the discs contributed to their intense vibrations and the above-described effect of the interaction of disks: the excitation of vibration, and then the appearance of a bending wave, were observed with gaps between the disks up to 3 mm. In experiments under the same conditions, but in the absence of vacuum (normal atmospheric pressure in the chamber) the above effects did not appear. Strong vibration of the disks was not excited, and a bending wave was not even observed when the initial set gap between the disks is less than 1 mm.

In this case, when one of the electric motors is turned off (rotation in a vacuum), and stopping its disk, the second electric motor spun up to maximum revolutions are about 180 - 200 1/s. When the first motor is turned on again The rotation speed of the second engine again decreased significantly. Rotation frequency for both disks was again about 90 - 100 1/s. Thus, with multiple repeating the experiments, it was experimentally established that in the process of joint counter rotation in a vacuum was observed quite strong non-contact mutual braking of disks.

At the same time, it was established that with long-term (3 - 4 minutes) simultaneous non-contact rotation and interaction, the discs heat up to a temperature of 60 - 70 °C. For longer continuous operation of the device (6 - 7 minutes) -

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

The heating temperature of the disks reached 80 - 90°C. Disk temperature measurement was carried out 1 - 2 minutes after stopping the electric motors and opening vacuum chamber.

When simultaneously applying a voltage of 30 V to both electric motors for rotation their disks in one direction (co-rotation), after full spin-up it was observed only strong vibration of both disks and their mutual braking, if available differences in rotation speeds. Deformations in the form of bending of the disk plane are not observed.

The rotational speed of the electric motors was also significantly lower here. maximum. During the process of simultaneous rotation in this case, the disks also heated to a temperature of 50 - 60 °C. When the power to one of the electric motors, the second electric motor spun up to maximum rpm When the electric motor is turned on again, all effects are completely were repeated.

With an initial gap between the disks of 1.5 - 2 mm, if one electric motor was turned off and inhibited, then after applying a voltage of 30 V to the second electric motor and its full spin-up, a slight vibration of its disk began, and then A small vibration of the stationary disk was periodically excited. At the same time, in moments when vibration of the stationary disk began, a slight decrease was observed revolutions of the rotating disk. However, even after prolonged operation of the device No significant heating of the disks was detected in this case.

Thus, as a result of multiple repetitions of experiments, it was established that heating of the disks occurs only when they interact and simultaneously rotation in a vacuum. Heating of the discs is a consequence of their non-contact interaction and mutual non-contact braking.

In the second series of experiments (diagram - Fig. 1a), the supply voltage was supplied only for one engine, and the second was disconnected from the power supply, but was released.

It was experimentally established that (in a vacuum) if one (driven) electric motor was turned off but released, then after applying to the second (leading) electric motor voltage 30 V and its full spin-up began forced rotation of the first disk together with the rotor of its electric motor. It was revealed that the effect of excitation of forced rotation and frequency forced rotation, other things being equal, depend on the degree dynamic disk imbalance.

As experiments have shown, at a sufficiently high degree of dynamic Since the disks were balanced and there was no vibration at maximum rotation, forced rotation of the driven disk with a gap between the disks of more than 2 - 3 mm was not excited at all.

With a gap between the disks of 1.0 - 1.5 mm, with maximum rotation of the drive disk, there was a slow rotation of the driven disk with a rotation speed

Torsion fields and information interactions – 2009

less than 0.05 1/s. However, when vibration of the drive disk occurred, rotation of the driven disk with a rotation speed of 5 - 10 1/s. If the vibration of the leader disk increased, then the rotation speed of the driven one increased to 20 - 30 1/s.

At the same time, it has been established that if there is already a relatively small dynamic imbalance of the disks (initial axial runout 0.5 – 1.0 mm), forced rotation of the disks was excited when the gap between the disks was up to 3 mm. The frequency of forced rotation, other things being equal, depended on the value initial gap between the disks, the smaller it was, the higher the rotation speed higher. With a gap between the disks of 1.0 mm and the supply voltage of the master electric motor 30 V, the forced rotation frequency of the driven disk reached 40 - 50 1/s at a rotation speed of the driving disk of about 130 - 150 1/s.

When the gap between the disks is more than 4 mm, even strong vibration of the disks, in the carried out experiments, did not lead to the excitation of forced rotation of the driven disk, when drive disk rotation speed 100 -120 1/s.

Thus, the force action in a vacuum with sides of the drive disk rotating at high angular speed on not mechanically connected to it, initially a stationary (driven) disk, causing it to rotate.

The amount of torque created in this case is large enough to rotate the disconnected electric motor together with the driven disk. Opposition this torque - to stop the forced rotation of the disk, required supply to the associated driven electric motor a voltage equal to 0.2 - 0.8 of the voltage to the electric motor of the driving disk, depending on the gap between disks and the degree of their imbalance. At master supply voltage electric motor 30 V, to stop the forced rotation of the driven electric motor with a gap between the disks of 1.5 mm required power supply to it voltage for counter rotation is 12 - 18 V, and with a gap between 3 mm disks from 5 to 11 V. With a further increase in supply voltage of the driven electric motor, its disk began to rotate in its direction (opposite to the drive disk).

The same experiments were carried out without vacuum (at normal atmospheric chamber pressure). At the same supply voltage of the electric motors, the speed rotation of the drive disk was slightly lower. At the same time, the vibration of the disks is not got excited. Forced rotation of the driven disk practically did not occur even with a gap between discs of less than 1 mm. At the same time, only slow rotation of the driven disk with a rotation speed of less than 0.1 - 0.3 1/s, those. two orders of magnitude lower than in the case of forced rotation of the driven disk in vacuum, all other things being equal.

In the third series of experiments (scheme - Fig. 1a), both disks were made of thick cardboard 2.5 mm thick. Upper disc is good dynamically balanced, the lower disk had a significant dynamic imbalance. The gap between the disks is about 1.5 mm.

As experiments have shown, when using both cardboard disks, i.e. dielectric material, all the effects of power are qualitatively repeated interaction of disks made of aluminum. The differences were due greater rigidity of cardboard discs, due to their significantly greater thickness than aluminum disks, their greater mass and, as a result, lower rotation speed at the same supply voltage electric motors. This is due to the low power (14 W) used in experimental design of electric motors D-14FT2s.

When a voltage of 30 V is applied to both electric motors to rotate the disks into one side there was strong vibration of both electric motors, loud noise bearings, but no significant vibration of the disks themselves was observed. When a voltage of 30 V is applied to both electric motors to rotate the disks in opposite sides there was significant, visually observable vibration both disks. However, the amplitude of the oscillations was much lower than with using aluminum wheels. The rotation speed of the cardboard disks was about 80 - 90 1/s, which is significantly lower than, at this voltage, for aluminum disks – 100 - 120 1/s.

At the moments of excitation of the maximum amplitude of vibration of the disks, it was observed strong braking of both electric motors due to the disks touching each other each other's peripheral parts. This led to a slowdown in rotation and stopping disc vibration. After this, the electric motors spun up again to maximum speed, strong vibration of the disks again arose, and the whole process repeated.

When a supply voltage of 30 V is applied to the lower electric motor, with with the upper electric motor switched off but released, after maximum spin up of the lower disk, forced rotation of the upper disk began (together with the electric motor turned off) in the direction of rotation of the lower disk. For braking of forced rotation on the upper electric motor was necessary supply voltage 9 V, for its rotation in the direction opposite to the bottom electric motor.

When the gap between the cardboard disks increases to 2.5 mm, forced rotation and vibration of the disks were not observed. At the same time, in the case of aluminum disks, due to the higher rotation speed, with the same gap, the speed of forced rotation of the disks was significant.

The same experiments, but carried out in air (at normal atmospheric pressure in the chamber) showed that forced rotation in this case is practically no, even with a minimum gap between the disks. It was only barely noticeable turning the upper disk in the direction of rotation of the lower disk, i.e. result was similar to that in the case of aluminum wheels.

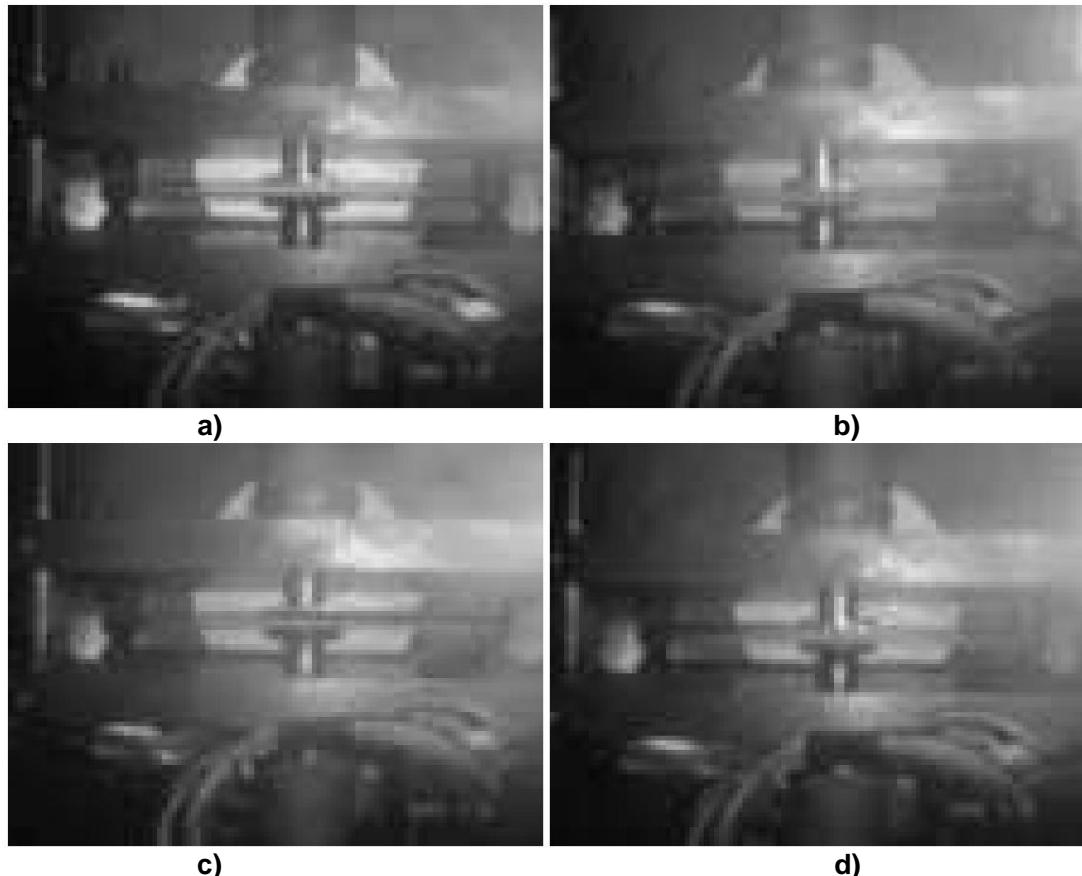
In the fourth series of experiments (scheme - Fig. 1a), the upper disk was aluminum (0.9 mm thick), well dynamically balanced, and the bottom is made of cardboard

Torsion fields and information interactions – 2009

(2.5 mm thick), with large dynamic imbalance. Initial gap between discs about 1.5 mm. The above-described force interaction of the disks was repeated, taking into account the fact that the lighter aluminum disk was spun to a greater number revolutions than cardboard.

When a voltage of 30 V is applied to both electric motors to rotate the disks in opposite sides, after maximum rotation of the electric motors strong vibration of both disks began (Fig. 6). Particularly pronounced vibration was at the top, thin aluminum disk (Fig. 6b). As can be seen in the photographs, the upper disk seemed to be pushed away from the more rigid lower disk - its deformation was mainly away from the lower disc. Flexural amplitude vibrations of the ends of the upper disk reached 2-3 mm. Amplitude of oscillations of the lower disk (harder) was many times lower, but it was clearly observed that especially clearly visible when watching video. At moments of maximum vibration the discs were sharply, briefly braked due to mechanical contact along the periphery of the disks and the vibration stopped. The process was then repeated again, similar to that described above, as in the case of two cardboard disks.

The oscillation frequency of the disks was about 10-20 1/s. At some moments time, the chaotic oscillations of the upper disk turned into relatively stable shape - helical twist of the disk surface, rotating with frequency order 1-3 1/s (Fig. 6c, 6d), with the rotation frequency of the disk itself being about 70-80 1/s.



Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

Rice. 6. Excitation of high-amplitude vibration of aluminum and cardboard disks and bending of their surfaces with simultaneous, opposite rotation in a vacuum camera: a – start of rotation; b – vibration of the upper disk; c, d – bending deformation top disk

When the power to the lower electric motor is turned off and the rotation speed decreases lower disk, upper electric motor together with aluminum disk spun up to a maximum speed of about 140-160 1/s. Thus, here there is also the effect of mutual braking of the disks when they simultaneous rotation (without any mechanical contact), as with rotation of two aluminum disks.

Temperature measurement after a large number of experiments and long-term operation device (after opening the chamber) showed that the temperature of the aluminum disk reached 80 °, for a cardboard disk - about 60 ° - over its entire area. Plates the devices were also hot (50 - 60 °).

When a voltage of 30 V is applied to both electric motors to rotate the disks into one side there was strong vibration of both electric motors, a loud noise was heard in the bearings, but at the same time, no strong vibration of the disks themselves was observed.

With a gap between the disks of 2 mm, the lower electric motor was supplied supply voltage 30 V, with the top switched off but uninhibited electric motor After maximal unwinding of the lower cardboard disk forced rotation of the upper aluminum disk began (along with with the electric motor turned off) in the direction of rotation of the lower disk. The same was when power was supplied to the upper electric motor, when it was turned off, but disengaged lower electric motor, i.e. forced rotation of the lower disk. Stopping the forced rotation of the driven disk required feeding it electric motor voltage 8 - 9 V, to rotate it in the opposite direction master disk. Thus, it has been established that the excitation effect forced rotation does not depend on the type of material (electrical conductivity), as master and driven disks.

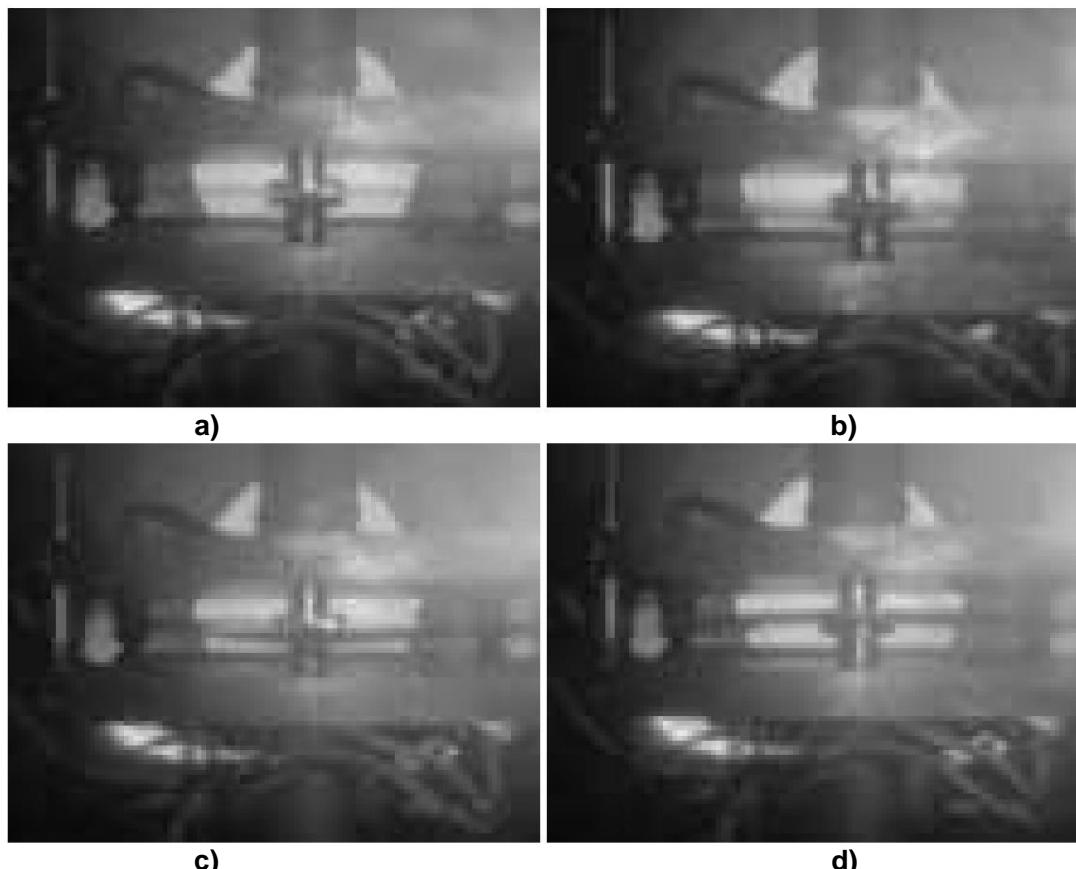
When the gap between the disks is more than 3 mm, at the same supply voltage electric motors and forced rotation excitation were not observed here.

In the fifth series of experiments (scheme - Fig. 1a) the upper disk was aluminum (0.9 mm thick), and the bottom one is made of thick paper (0.25 mm thick). Elementary The gap between the discs is 1.5 mm. The above-described force interaction of the disks repeated, taking into account the fact that the lighter paper disk spun up to significantly higher number of revolutions (about 200 1/s) than cardboard (about 80 - 90 1/s).

When a voltage of 30 V is applied to both electric motors to rotate the disks in opposite sides, after maximum rotation of the electric motors strong vibration of both disks began (Fig. 7b). When rotating only one of disks, this effect was not observed.

Torsion fields and information interactions – 2009

When varying the speed of rotation of the disks (by changing the voltage power supply or a short-term disconnection and subsequent switching on of one of electric motors) achieved the translation of chaotic oscillations of the disks into their synchronous deformation during rotation (flexural wave). Wherein strong curvature of the surfaces of both aluminum and paper was observed disks. This can be seen in the photographs obtained (Fig. 7c and 7d) and is especially clear visible when viewing existing video footage of the process. At the same time, despite large amplitude of vibration of the disks, no mechanical contact between the disks arose. Discs with a curved surface, rotating in counter direction, as if flowing around each other.



Rice. 7. Excitation of high-amplitude vibration of aluminum and paper disks and bending of their surfaces with simultaneous, opposite rotation in a vacuum camera: a – start of rotation; b – vibration of disks; c, d – bending deformation of disks

Vibration amplitude and bending wave amplitude of the upper aluminum disk in this case were significantly larger than in the previous scheme - with cardboard disk, which is due to higher disk rotation speeds. Amplitude vibrations and amplitude of the bending wave of the lower paper disk in this case were significantly more than that of an aluminum disk, which is due to its smaller stiffness (Fig. 7c).

When a supply voltage of 30 V is applied to the lower electric motor, with the upper electric motor switched off but released, after maximum spinning up the paper cardboard disk, forced rotation of the upper aluminum disk (together with the electric motor turned off) in the direction of rotation lower disk. Stopping forced rotation of the driven aluminum disk

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

required a voltage of 10 - 12 V to be supplied to its electric motor in order to rotate it in the side opposite to the leading paper disk. To start its rotation in its side (opposite the drive disk) required voltage supply supply to its electric motor is more than 16 V. The described interaction, but more weak, was also observed with an initial gap between the disks of 4 mm.

No reverse effect was observed, i.e. when unwinding the upper aluminum disk the lower paper disk did not begin forced rotation. This is due to the fact that the lower (paper) disk, due to low rigidity, sagged due to own weight and the gap between the surfaces of the disks was more than 4-5 mm. However, if the lower (driven) disk was previously briefly untwisted in the direction of rotation of the upper (drive) disk and it straightened due to the action centrifugal forces, then (after turning off its electric motor) it continued its forced rotation, due to mass-dynamic interaction with the upper disk.

A particular effect was noted when the lower disk was made of plastic 0.2 mm thick. The interaction during counter rotation was completely repeated disks. However, after some time, the plastic disk (in the process of rotation) began to tighten around the flange on which it was attached and dropped down, increasing the gap with upper disk from initial 1.5 mm to 5 mm. Moreover, due to the action centrifugal forces, it remained horizontal. Supposedly this could be explained by the action of repulsive forces that arise between the disks when rotation. The action of repulsive forces also explains the absence of mechanical contact with a large amplitude of oscillations (vibration) of the disk surfaces when they counter rotation.

In the sixth series of experiments, the upper disk was suspended on threads (diagram - Fig. 1b), the lower disk was rigidly fixed to the rotor flange of the electric motor and had slight dynamic imbalance. The upper electric motor was originally inhibited, i.e. the upper disk had no possibility of rotation, except for a small twists due to the elasticity of the threads. The lower electric motor was supplied voltage 30 V.

With a large gap between the disks (2.5 - 3 mm) after acceleration of the lower disk strong precession of the upper (non-rotating) disk began. At low at the initial gap between the disks (1.5 - 2 mm), the precession of the upper disk began almost from the moment the lower disk began to accelerate. When watching video footage it can be seen that the lower disk vibrated.

As can be seen in the photographs obtained, when precession is excited, the center of mass the upper disk rises. In the initial position, the lower surface of the disk coincides with the end of the central axis (Fig. 8a).

Torsion fields and information interactions – 2009

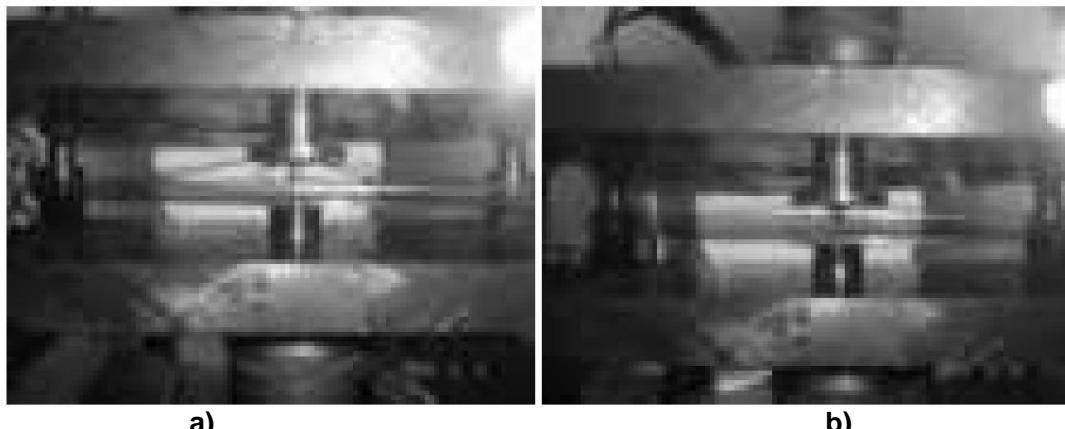
Rice. 8. Precession of the upper non-rotating disk suspended on threads:
a) initial location, b) precession of the upper disk after unwinding of the lower disk.

When precession occurred, the upper (non-rotating) disk rose to contact with the flange to which the suspension threads are attached, and the central axis protruded beyond the thickness of the disk (Fig. 8b).

There was no mechanical contact between the disks even at maximum precession amplitude. Raising the center of mass of the upper disk, in its absence rotation, and the constant presence of a gap between the surfaces of the disks indicates the action of repulsion force from the rotating lower disk to the lower disk during precession.

When the upper electric motor was released, after some time (1 - 3 s) the forced rotation of the upper disk began. As the frequency increases forced rotation of the upper disk, the rotation frequency of the lower disk also increased electric motor, which was audible by the frequency of the sound. Upper rotation speed the disk reached 20 - 30 1/s, at the lower disk 100 - 120 1/s. Those. after forced acceleration of the upper disk, the driving lower disk also accelerated (while same supply voltage). Thus, the strong precession of the driven (upper) disk significantly slowed down the rotation of the leading (lower) disk in the absence mechanical contact between them.

With forced rotation of the upper disk, with increasing rotation speed, the amplitude the precession of the upper disk decreased to minimum values (Fig. 9b). At In this case, the gap between the disks exceeded the initial gap (before the start of rotation of the lower disk - Fig. 9a) and the end of the central axis protruded beyond the thickness of the disk (Fig. 9b), but less than during precession in the absence of forced rotation top disc (Fig. 8b).



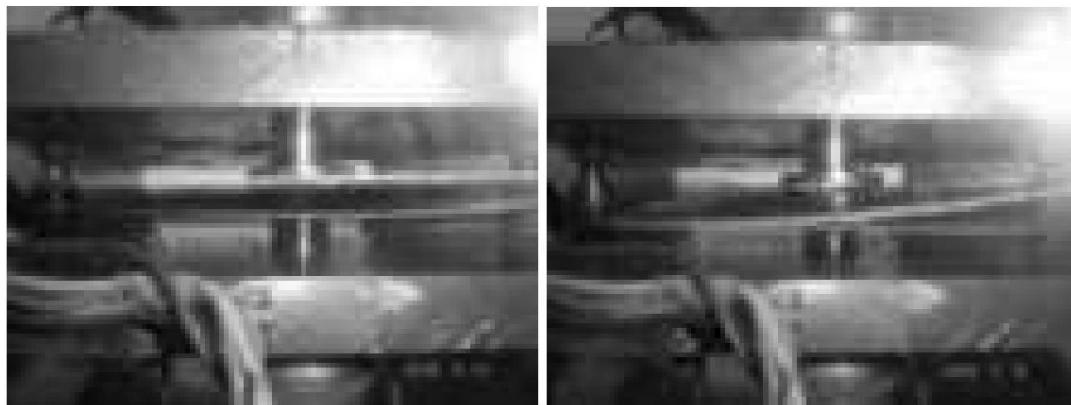
Rice. 9. Forced rotation of the upper disk suspended on threads: a) initial arrangement of the disks, b) with forced rotation of the upper disk

The increase in the gap between the surfaces of the disks, in this case, was due to twisting of the disk on the threads around the central axis, due to the action described higher, torque from the rotating lower disk. In addition, the repulsion of the disks described above could partially remain, because remained slight precession of the upper disk.

When the upper disc is braked sharply (electromagnetic brakes are activated) upper electric motor), the precession of the upper disk instantly reached the initial magnitudes (as when its electric motor was initially inhibited).

These effects in air, other things being equal, were not observed. It was only small (with a frequency of 0.05 - 0.1 1/s) forced rotation of the upper disk. Moreover, this was only with a minimum gap between the disks, which arose due to bringing the disks closer together under the influence of aerodynamic forces - due to a decrease in pressure in the gap between the disks when the lower disk rotates. Precession of the upper disk at this was not observed.

All the above-described effects of mass-dynamic interaction were repeated when suspension on the threads of the upper disk made of cardboard (1.0 mm) and rotation of the lower disk made of cardboard aluminum alloy, dynamically unbalanced, with initial clearance between disks 2.5 mm. After spinning up the lower electric motor (voltage 30 V) and the aluminum disk, a strong high-amplitude precession and it rose until it contacted the flange (Fig. 10). At When the upper motor was released, forced rotation began the upper disk together with the rotor of its electric motor. Upper rotation speed the disk was 25 - 35 1/s. In this case, the precession amplitude of the upper disk significantly decreased, and the rotation speed of the lower electric motor increased with 70 – 80 1/s to about 100 – 120 1/s.



Rice. 10. Interaction of the lower, non-rotating, cardboard disk (1.0 mm) with lower aluminum rotating disk (0.9 mm).

When replacing the lower aluminum disk with a paper disk 0.25 mm thick, and a cardboard disk suspended on threads, a high-quality result was obtained similar result (Fig. 11). At a motor supply voltage of 10 - 12 V, after spinning up the flexible paper disk to a rotation speed of 30 - 50 1/s, its high-amplitude and wave-like deformation began, as a result of which in the photograph (Fig. 11b) it looks translucent. At the same time, strong precession of the upper cardboard disk was excited (Fig.

11b), similar to the precession described above, for other combinations materials of the driving (lower) and driven (upper) disks.



Rice. 11. Interaction of the lower, non-rotating, cardboard disk (1.0 mm) with lower paper, rotating disk (0.25 mm): a) beginning of interaction, b) precession of the upper disk and high-amplitude vibration lower disk

At high rotation speeds (motor supply voltage 30 V), due to the action of large centrifugal forces, wave-like deformation paper disk practically disappeared, but when the upper brake was released the electric motor caused forced rotation of the upper disk.

Explanation of the disk communication mechanism

The phenomenon of polarization of disks in the radial direction, rotating with high angular velocity due to the action of centrifugal force. In metals it is possibly due to the rejection of conduction electrons to the periphery of the disk. IN dielectrics - due to the polarization of bound charges or deformation polarization of ferroelectrics. However, an attempt to document the occurrence electric field near the ends of the disks during their rotation in the experiments performed, with the above indicated rotation speeds during their interaction, using a simple electrostatics, gave a negative result. Thin strip Mylar film suspended on a thin long thread inside a vacuum chamber at a distance of 5 - 6 mm from the ends of the disks, did not react in any way to rotation and interaction of disks in a vacuum, although it was easily attracted to any offered electrified object (in air).

Installation near the disks of a magnetic compass that responds to very weak Earth's magnetic field showed the absence of any significant magnetic field caused by the rotation and interaction of the disks. Using an inductive sensor (150 turns, winding diameter 8 mm, length – 16 mm) connected to a Mastech MY-62 multimeter (range 0 – 200 mV), the alternating magnetic field strength near the end was measured and above the plane of the disks. Measurements showed the absence of EMF induction in inductive sensor when spinning disks, their vibration and interaction, i.e. the alternating magnetic field in the process of interaction of disks under study does not was excited (within the limits of measurement accuracy), which completely coincides with results of other studies [7].

Thus, experimentally established interactions: excitation vibrations or precession, repulsion of disks, mutual braking and heating, excitation of forced rotation - occur regardless of electrical conductivity of materials, both driving and driven disks, and do not cause induction of electric or magnetic fields. That is, this is the interaction of disks clearly not of an electromagnetic nature.

In the absence of dynamic imbalance of the driving (rotating) disk, excitation of vibration and forced rotation of the driven disk, there is practically no observed. Presence of dynamic disk imbalance causing variable the quadrupole moment, during its rotation, is a necessary condition intensive disk interaction. As shown in [3], variable The quadrupole moment of the master disk results in the emission of energy causing precession (vibration) of the driven disk, its forced rotation and force interaction of rotating disks. When hanging a non-rotating disk on threads, this energy causes its precession, and when the disk is released, its forced rotation. In turn, the intense precession of the driven disk leads to the emergence of its own massodynamic field, the interaction of which with the massodynamic field of the leading disk leads to its braking and simultaneous heating of both disks [3, 4].

The nature of the observed interaction is determined by the dynamics of mass movement: the mass and rotational speed of disks that have a dynamic imbalance (variable

Torsion fields and information interactions – 2009

quadrupole torque), i.e. This is a mass-dynamic interaction. Thermal effects (heating of disks during their interaction) are caused by the action of mass-dynamic fields, interactions at the atomic (molecular) level. Manifestation mass-dynamic interaction at the atomic (molecular) level also lies in basis of the disk interaction process itself [2, 4].

It should be noted that the above-described effects of massodynamic interactions of disks are most clearly manifested at low relative thickness of the disks. With a large relative thickness of the disks, due to their high rigidity, flexural deformation of the disks (flexural wave) is difficult. At the large mass and relatively large thickness of the driven disk makes it difficult excitation of its high-amplitude vibration (precession) and its associated forced rotation, when interacting with the drive disk having dynamic imbalance.

When rotating disks of large mass and thickness, mass-dynamic interaction between them will manifest itself, first of all, in the form of additional load on bearings, increased vibration of the disks themselves and their drive. At the same time, with high drive power, a clear effect of mass-dynamic interaction can be implemented for thick and massive disks with suspension of the driven disk on threads (strings), as in the experiments presented above. The drive disk, in this case, must have a significant dynamic imbalance.

conclusions

1. The transfer of energy in a vacuum from one (driving) disk, rotating at a high angular velocity, to the second (driven) initially stationary disk, which is not mechanically connected to it, was experimentally established. At first precession (or vibration) of the driven disk is observed, and then its rotation in direction of rotation of the drive disk. It has been established that the initial precession of the disk or its vibration is a necessary condition for the intensification of its forced (with the electric motor turned off) rotation.
2. A significant force effect in a vacuum with sides of the drive disk rotating at high speed on a closely located driven disk that is not mechanically connected to it. Magnitude the torque generated is large enough to rotate electric motor together with the driven disk. With small gaps between the discs, counteracting this torque requires applying to the associated electric motor voltage value 0.3 - 0.8 of the voltage to the electric motor drive disk, depending on the size of the gap between the disks and the dynamic imbalance of the drive disk.
3. With simultaneous high-speed rotation of closely spaced thin disks, regardless of the materials of the disks, their non-contact power interaction leading to strong vibration and joint deformation of the disks - bending of the disk planes. The intensity of vibration depends on the hardness of the disks and

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

their rotation frequency. The vibration amplitude increases with decreasing disk stiffness and an increase in their rotation frequency. During counter (opposite) rotation, repulsive forces arise between the disks, preventing mechanical contact of disk surfaces during their high-amplitude vibration and joint bending deformation

4. Force interaction and mutual braking of disks with simultaneous prolonged non-contact rotation in a vacuum leads to their significant (50 - 70 °C) heating. When only one disk rotated, no heating was observed. The force interaction in a vacuum of disks rotating at high speed manifests itself regardless of the electrical characteristics of the disk materials, not associated with the excitation of any significant magnetic and electrostatic fields. Thus, the established effects are not electromagnetic nature, but are caused by relative motion (rotation) wt.

5. All the above effects appear only when the disks are rotated in vacuum. When the disks rotate at normal atmospheric pressure in the chamber high-amplitude vibration of the disks does not occur, spinning of the disk planes in during the process, their simultaneous counter rotation does not occur. Also in air environment) the forced rotation of one disk is not excited when maximum rotation speed of the second disk. Minor effect excitation of forced rotation with a frequency of less than 0.05 - 0.1 1/s was observed on air only when the gap between the discs is less than 1 mm.

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The influence of rotation of large masses on the relative motion of bodies and moving media

Samokhvalov V.N.

Samara State Transport University, samohvalov_vn@mail.ru

The physical processes resulting from the action are considered mass-dynamic forces on moving media and moving bodies. Based analysis of experimental data shows the effect of mass-dynamic Earth's rotation fields on water flows, processes of free fall of bodies and oscillations of a short pendulum.

Introduction

It is believed that the Coriolis force (the deflecting force of the Earth's rotation) introduces decisive contribution to the dynamics of the atmosphere, determining the direction and strength prevailing winds, the direction of rotation of cyclones, tornadoes, tornadoes, and hydrosphere - direction of ocean currents, rotation of the water funnel (whirlpool). The action of the Coriolis force explains the eastern deflection of bodies at falling, rotation of the Foucault pendulum. However, the Coriolis force is a force of inertia.

Due to the rotation of the Earth, the inertial Coriolis force causes deflection horizontal air and water channels from their original direction movement, for example to the right of an updraft in a low pressure area in northern hemisphere (Fig. 1a). As a result, it forms a general movement air masses (Fig. 1b). But, like centrifugal force, the Coriolis force deflects flows from the center of rotation. Therefore, the Coriolis force cannot cause twisting air flows with decreasing vortex radius and their rotation with increasing wind speed, for example, in the middle part of a typhoon.

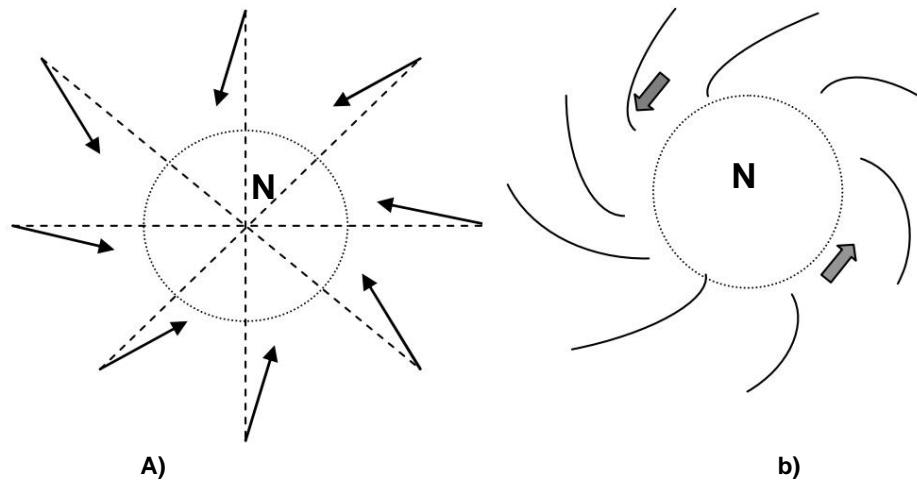
For circular (vortex) rotation of flows and counteracting centrifugal force, the action of a dynamic force is necessary, i.e. forces of interaction of flows with other bodies or physical fields. Such a field, for air and water flows, moving bodies, is the mass-dynamic field of the Earth's rotation around axis [1, 2].

It is believed that the gravitational field of the rotating mass of the Earth creates a vortex field leading to the emergence of additional, so-called. gravimagnetic forces (Lense-Thirring effect, geodetic precession effect). It is believed that these forces are extremely small and practically do not appear in nature.

However, studies [3, 4] have shown that the mass-dynamic forces caused by the mass-dynamic fields of large rotating masses are quite large, and therefore they can influence the dynamics of the atmosphere and

hydrosphere. However, their effect on air and water flows is entirely erroneous. attributed to the Coriolis force, because in some cases they coincide in direction.

Let's consider some physical processes that result from the action massodynamic forces on moving media and moving bodies, proving them reality and a fairly large value.



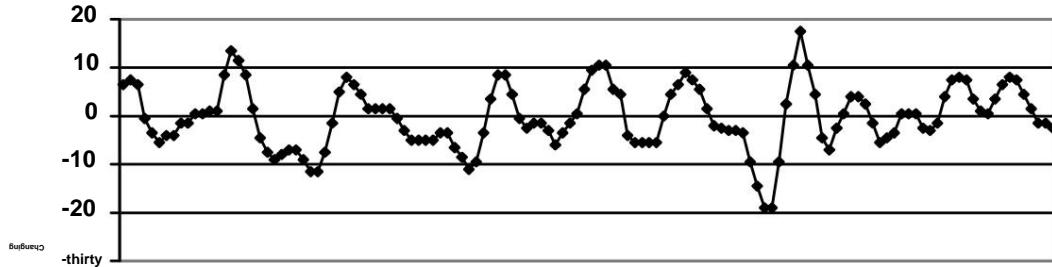
Rice. 1. Scheme of air movement in a low pressure zone
a - deflection of the flow by the Coriolis force, b - movement of air masses, relative to low pressure zones

Short-period tidal phenomena on reservoir

One of the phenomena that in principle cannot be explained by the action of force Coriolis or the gravitational action of the Moon, Sun, etc., are short-period tidal phenomena on the Zhigulevskoye Reservoir, discussed in detail in [5]. These are constantly observed (for many years) fluctuations in water level with an amplitude of up to 40 cm and a period of 5 - 7 minutes near the northern coast, near the city of Togliatti. The results of a number of measurements are presented in Fig. 2 - 4. Water level measurements were carried out using a float rod 1.5 - 2 m from the shore, with an accuracy of 0.5 centimeters every 30 or 20 seconds. For zero the mark was taken as the average value of measurements as indicated in the figures period of time of day.

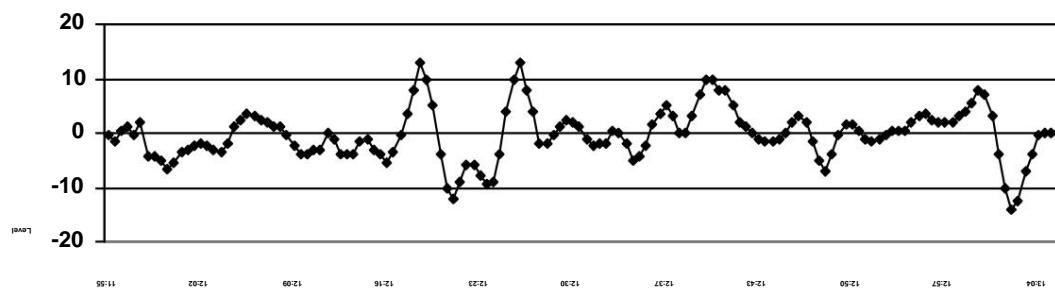
During the measurements, in July and August 2008, the maximum speed the tide reached 21.5 cm/min, and the maximum ebb speed was 15 cm/min. There is no longitudinal water flow in the northern part of the reservoir (20 km above the hydroelectric station) observed.

Torsion fields and information interactions – 2009



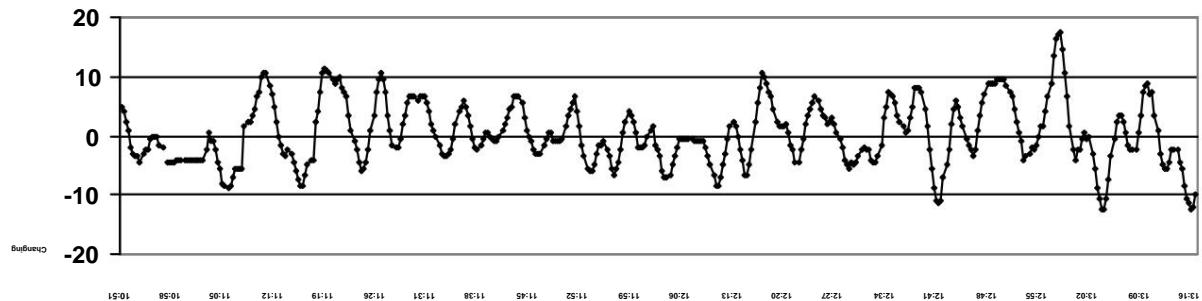
Time of day, h:min.

Rice. 2. Change in water level July 18, 2008 in the time period from 15:26 to 16:31 (measurements after 30 s).



Time of day, h:min.

Rice. 3. Changes in water level July 28, 2008 during the time period from 11:55 to 13:07 (measurements after 30 s).



Time of day, h:min.

Rice. 4. Changes in water level on August 18, 2008. in the time period from 10:51 to 13:19 (measurements after 20 s).

The deep-water part of the reservoir (the former bed of the Volga River) runs near the opposite (southern) shore, and the width of the reservoir in this place is about 12 km.

Near the measurement area there is a small bay, which is about 200 m wide, protrudes into the shore for about 100 m, and then turns into a narrow, deep ravine. There is no noticeable longitudinal (in the direction of the channel) water flow away from the shore. But in the area adjacent to the bay, in

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in the immediate vicinity of the shore, there are reversible (changing direction) longitudinal and transverse water currents - towards the bay at high tide, and away from the bay at low tide

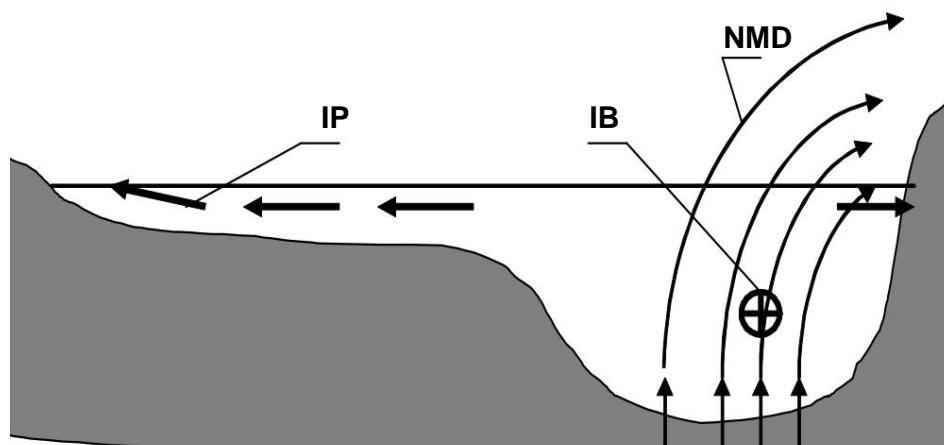
The length of the zone of flooding of the ravine bottom with water is about 150 m with a width of 5 - 8 meters and a water depth of less than 0.5 - 1 m (at the average water level in the reservoir). The ravine is located approximately perpendicular to the shore, has slight high steep banks protecting its bottom from the wind. This allowed make observations of tidal phenomena in large wave conditions on water area of the reservoir. Observations have shown that in the ravine, due to the surge effect, high tides begin with a rapid flow of water with a small altitude, but with a fairly steep wave at the front (like a bora). Level difference the highest ebb and flow at the top of the ravine reached 0.8 m. Tidal currents in the ravine are observed at any time of the day, as during a long period of full calm, and with strong waves on the reservoir, with winds from all directions.

Thus, there is a fluctuation in water level in the shallow zone near coast, due to the occurrence of horizontal movements of water masses (tidal currents perpendicular to the direction of the river flow), caused by the action of mass-dynamic forces on the water flow of the river. Mechanism excitation of tidal currents in the reservoir, by the action mass-dynamic forces from the mass-dynamic field of the Earth, is presented in [5].

The action diagram of mass-dynamic forces leading to the emergence of tidal currents is presented in Figure 5. Due to the operation of the hydroelectric power station, in the area deep-sea channel there is a continuous flow of water along the channel to the hydroelectric power station - from west to east. In this case, the massodynamic force acts on the water flow

$$\mathbf{FMD} = \mathbf{NMD}$$

$\times \mathbf{IB}$, where NMD is the vector of the total mass-dynamic field strength, IB is the vector gravitational current - the product of the mass of a water flow and its speed.



Rice. 5. Scheme of the occurrence of tidal currents in the shallow part reservoirs

Since the density of water is significantly lower than the density of materials in the earth's crust, then when the river bed is deep, there is a significant deviation from the vertical NMD vector (curvature of the force lines of the massodynamic field). It leads to

Torsion fields and information interactions – 2009

the appearance of a significant horizontal (meridional) component of the vector
the intensity of the total massodynamic field of NG and the emergence
vertical component of the mass-dynamic force $F_y = \ddot{y} \times$
 $\dot{I}\ddot{y}$.

This force acts vertically downwards, creating pressure on the water flow in deep-sea channel. Since in the wide shallow part of the reservoir (far from the channel) there is practically no current, then $F_B = 0$ there. This leads to the fact that the water mass is squeezed out from the zone of the deep-sea channel onto a wide shallow northern part of the Zhigulevskoe reservoir. Because width shallow zone is several times larger than the width of the channel, and the depth is small, then this leads to the emergence of a significant tidal current (IP) directed to the northern shore. This process manifests itself in the form of small waves moving towards the shore even in conditions of long-term complete calm, as noted as a result of observations.

After the water level in the shallow coastal zone rises to a certain maximum level, relative to the water level in the riverbed area, action gravitational forces begin to exceed the pressure of the tidal current and the water rolls towards the riverbed - the tide begins to ebb. The process is then repeated, which leads to the cyclical nature of the above tidal phenomena (Fig. 2 - 4). The period of water level fluctuations (high and low tide cycle) is mainly determined by the natural frequency of oscillations of the mass of water, defined as the width of the water area and the ratio of water depths in the channel and shallow part reservoirs.

Massodynamic force from the vertical component of tension massodynamic field:

$$F_M = \ddot{y} \times \dot{I}\ddot{y}$$

directed along the meridian to the south, i.e. presses the water flow in the channel to the steep south coast. But it does not work in the shallow part of the reservoir, because there there is no longitudinal flow of the river, and does not interfere (like the Coriolis force) with the formation of a tidal current.

The observed change in the duration of the ebb and flow cycles is due to the superposition of a number of oscillatory processes due to the complexity of the coastal line and heterogeneity of depths in its various parts, as well as reflection cross flows from the steep opposite bank. In addition to this the process was influenced by the strength and direction of the wind on the days of observation. These processes, as a consequence, also determine changes in the amplitude of tides and low tides

In addition, the magnitude of the mass-dynamic force F_B is not constant, because Not the total mass-dynamic field at the earth's surface is a constant [1, 2], which will be shown below. May change during the time of day and days of the week the amount of water released through the dam and hydroelectric power station, i.e. the speed of water flow along the riverbed. This also leads to a change in time in the magnitude of the mass-dynamic force acting on the water flow and, consequently, tidal currents, height ebbs and flows.

Eastern and southern deviation of bodies when falling

Another proof of the existence of the Earth's mass-dynamic field is large discrepancy between experimental data obtained nearby researchers who measured the amount of deflection of a freely falling body to east of the vertical, and calculated data obtained when solving the problem of falling heavy point, taking into account the rotation of the Earth with angular velocity $\ddot{\gamma}$ as geometric system (Table 1) [6, 7]. The calculated value of the deviation of the point of impact of a body from a height h to the east of vertical $\ddot{\gamma}B$ at latitude, due to the rotation of the Earth as a geometric object, with angular velocity equal to [1, 6]:

$$= \ddot{m}gh\ddot{\gamma}\sqrt{\cos^2/2}$$

A comparison of the results of experiments and calculations shows that in all experiments the observed values of the eastern deflection of the falling body were 1.4 - 2 times less than calculated values. Such a discrepancy between the results of calculation and experiment cannot be explained in any way by errors in experiments or calculations methodology, built on the assumption that the Earth rotates around its axis simply as geometric object. The results obtained can be explained by the fact that a freely falling body, in addition to gravitational and inertial forces, acts massodynamic forces arising when a body moves in massodynamic field of the rotating Earth.

Table 1. Experiments to measure the deviation of a falling body from the vertical

Observer	Latitude $\ddot{\gamma}$	Height falls h, m	Eastern deviation		$\ddot{\gamma} / \ddot{\gamma}B$	South off mm
			experience $\ddot{\gamma}, mm$	calculation $\ddot{\gamma}V, mm$		
Benzenberg, 1802 53° 33' 76.34 Benzenberg,			9.0 ± 3.6	13.0	0.692 3.409	0.714
1804 51° 25' 85.1 Reich, 1831 50° 53' 158.5			11.5 ± 2.9 16.1	28.3	+ 0.685	
Hall, 1902 42° 23' 23.0 Flammarion, 1903 48°			± 4.0 41.3 1.5	± 0.05	4.374 0.562	0.521
51° 68.0			2.67 6.3 12.1			

In this case, from the results obtained (Table 1) the following conclusion can be drawn. Since the experimental values of $\ddot{\gamma}$ are less than the calculated $\ddot{\gamma}B$ (i.e., the massodynamic force reduces the value of the eastern deviation), then this means that the direction of the massodynamic force vector:

$$FMD(g)=m\ddot{\gamma}V\ddot{\gamma}\times H\ddot{\gamma},$$

acting on the falling body, is opposite to the linear velocity vector rotation of the globe around its axis (i.e. the FMD vector is directed to the west), and, accordingly, the horizontal component of its own mass-dynamic Earth's field NG(W), directed from north to south.

Torsion fields and information interactions – 2009

According to the magnitude of the deviation caused by the action of massodynamic force (difference calculated and experimental data) $\ddot{y} = \ddot{y} - \ddot{y}$, it is possible, to a first approximation, to determine the value of the horizontal component of the total voltage massodynamic field H_g (the vertical component does not affect the process falls, because its vector coincides with the vector of the vertical component of velocity body falls). Since the massodynamic force is defined similarly to the force Lorentz [1, 2, 6], then

$$FMD(g) = m\ddot{y}V \times H\ddot{y},$$

where $V = g\ddot{y}$ is the vertical component of the fall velocity, $H\ddot{y}$ is the horizontal component component of the total mass-dynamic field at the earth's surface, m – mass bodies.

Massodynamic acceleration: a_{MD}

$= V\ddot{y}H\ddot{y} = g\ddot{y}\ddot{y} HG$, and on the other hand $a_{MD} = 2\ddot{y} / t^2$, then, equating the two expressions for mass-dynamic acceleration, we ultimately have

$$H\ddot{y} = \sqrt{\frac{g}{2h}}.$$

Tension component calculation horizontal

massodynamic, in accordance with the height of the fall in the latter, obviously more exact experiments are given in table. 2. The calculated values are also presented here the total component of the mass-dynamic field strength in the places where experiments and maximum intensity of vortex gravitational (mass-dynamic) field of the Earth, located at the equator.

The action of mass-dynamic forces also explains the southern deflection of bodies at fall [7], recorded in the above experiments (Table 1), which can be explained the action of the Coriolis force or simple rotation of the Earth is in principle impossible.

Table 2. Processing the results of experiments and calculations of free fall bodies

Observer	Horizontal component tension massodynamic fields $NG \times 10^{-5}$, 1/s	Tension mass dynamic fields $\ddot{y}MD \times 10^{-5}$, 1/s	Tension massodynamic fields at the equator $\ddot{y}MD \times 10^{-5}$, 1/s
Hall	2.35 ± 0.1	3.18	4.30
Flammarion	2.28	3.47	5.27

Deviations from Foucault's law of rotation of the pendulum

Foucault's experiments proved the rotation of the Earth in the 18th and 19th centuries. However, in subsequent years, many researchers identified serious and unexplained deviation in the rotation of the pendulum plane from Foucault's law [8].

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

The pendulum, making cyclic movements, is capable of accumulating even small constant influence of external forces, summing them up and making their effect noticeable impact.

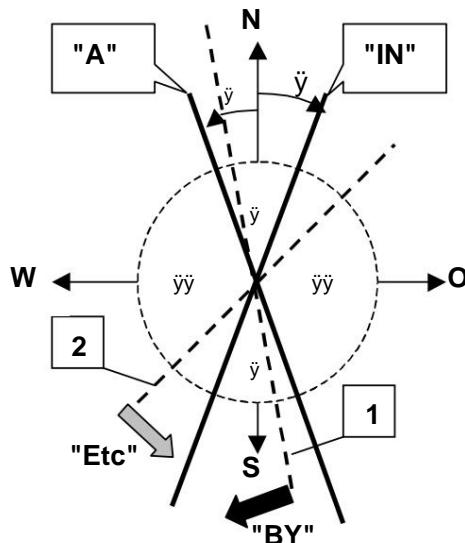
In the experiments carried out, a heavy pendulum of small relative length. Pendulum length 2400 mm, maximum initial amplitude 1100 mm. With these parameters, unlike the classical Foucault pendulum, it had a large vertical component of speed during oscillations. The pendulum used in the experiment: a lead cylinder with a diameter of 55 mm and a mass of 2.9 kg, suspended on a thin string. String: thin bunch of untwisted synthetic fibers (loose thread) 120 mm long, one end embedded in a die at the suspension point, and fastened with wire at the other end made of nichrome with a diameter of 0.4 mm, which is connected through a thin thread to lead cylinder. Embedding a thin bundle of fibers into a spinneret made it possible to practically exclude differences in the influence of the suspension on the process of oscillation of the pendulum in any of possible planes.

The experiments were carried out in Samara ($53^{\circ}13'N$, $50^{\circ}9'E$). The pendulum was suspended indoors on the second floor of a wooden building.

The experiments showed that with a large initial relative amplitude of the pendulum, in the range of large current amplitudes of the pendulum oscillations there are two sectors “ \ddot{y} ” and “ $\ddot{y}\dot{y}$ ” (Fig. 6), in which the behavior of the pendulum, in the process its fluctuations are qualitatively different from each other and from Foucault’s law [1, 9]. In Fig. 6 line “NS” - meridional plane (north-south), line “WO” - west-east.

If the initial plane of oscillation of the pendulum was specified in the “ \ddot{y} ” sector, i.e. between lines “A” and “B” (position 1, Fig. 6), then in the process of its oscillations, a turning the swing plane of the pendulum clockwise “PO”. Also, in a number cases, a noticeable ellipse of the pendulum’s motion was excited in the horizontal planes with rotation in the same direction.

If the initial plane of oscillation of the pendulum was set in the sector “ $\ddot{y}\dot{y}$ ” (position 2, Fig. 6), then a fairly rapid rotation of the swing plane of the pendulum was observed counterclockwise “Pr” and a significant ellipse of the pendulum’s movement also counterclock-wise.

Torsion fields and information interactions – 2009

Rice. 6. Zones of opposite directions of rotation of the pendulum plane

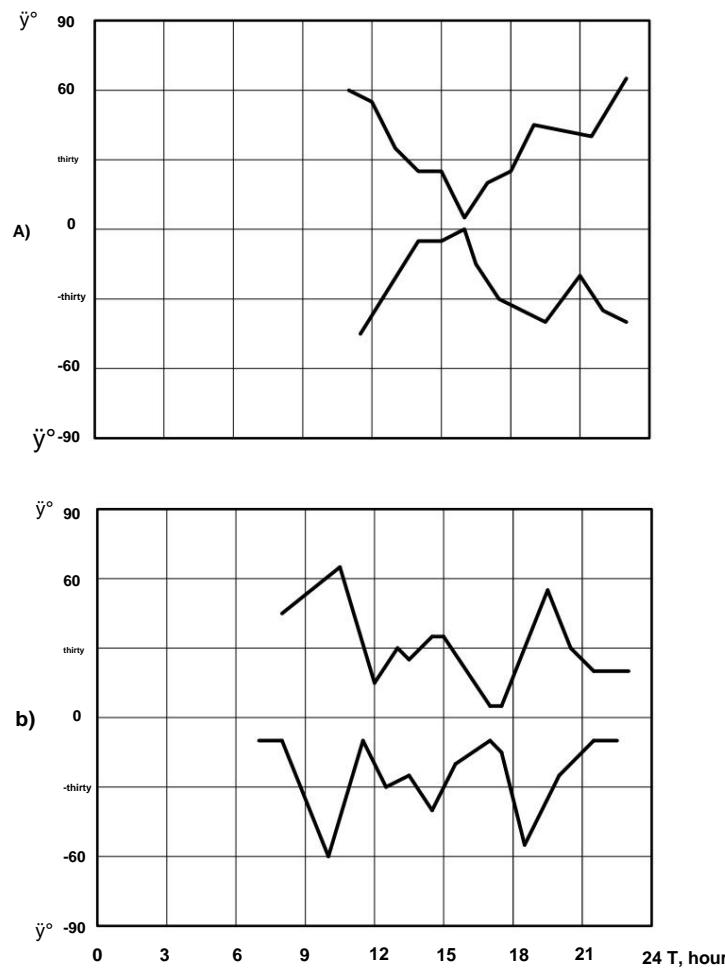
When the initial plane of oscillation of the pendulum was set on the boundary of sectors “ $\ddot{\gamma}$ ” and “ $\ddot{\gamma}\ddot{\gamma}$ ” (along line “A” or “B”), then there was relatively long-term stability given initial position of the swing plane of the pendulum (absence of an ellipse movement of the pendulum during its oscillations and the absence of rotation of the plane rocking).

In this case, line “A” was the plane of “unstable” equilibrium. Even small the deviation of the given initial plane of oscillation of the pendulum from line “A” led to an increase in this deviation. The appearance of an ellipse was observed movement of the pendulum and rotation of its swing plane from line “A”. Line “B”, on the contrary, was the plane of “stable” equilibrium. With slight deviation the initial plane of oscillation of the pendulum from line “B”, the plane of swing of the pendulum turned towards it, reducing the initial deviation. Wherein a slight transition of the equilibrium point and a reversal of the swing plane were observed pendulum to line “B”.

Based on the results of a large number of experiments, it was found that angles $\ddot{\gamma}$ (the angle between meridian and line “A”) and $\ddot{\gamma}$ (the angle between the meridian and line “B”, Fig. 6) are constants, i.e. will change over time. Experiments have shown very significant change in angles $\ddot{\gamma}$ and $\ddot{\gamma}$ that determine the position of the planes relative stability of pendulum oscillations “A” and “B” over time days, days of the lunar cycle, etc.

Analysis of the experimental results showed the following:

1. The magnitude of the angles $\ddot{\gamma}$ and $\ddot{\gamma}$ changed simultaneously (Fig. 7). In this case, the change in angles had one sign - at the same time a decrease or an increase. However, the angle $\ddot{\gamma} = \ddot{\gamma}\ddot{\gamma}\ddot{\gamma} - \ddot{\gamma}\ddot{\gamma}\ddot{\gamma}$ changed over time, i.e. the rate of change of angles $\ddot{\gamma}$ and $\ddot{\gamma}$ was slightly different and the center of sector “I” did not always coincide with the meridian ($\ddot{\gamma} = 0$ at $\ddot{\gamma}\ddot{\gamma}\ddot{\gamma} = \ddot{\gamma}\ddot{\gamma}\ddot{\gamma}$).



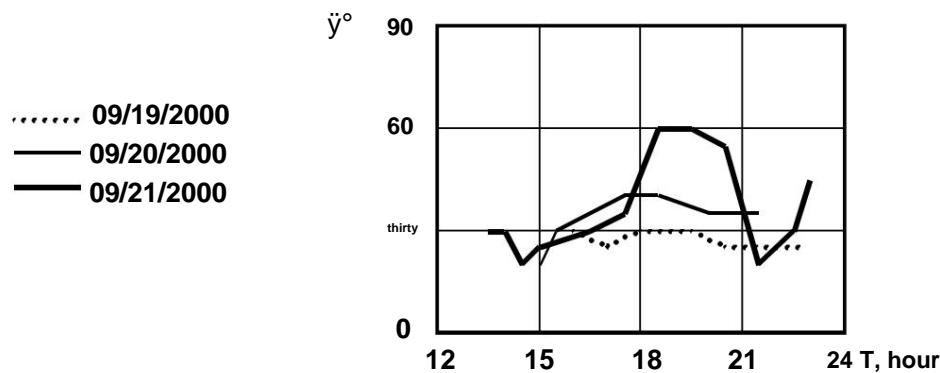
Rice. 7. Change in angles $\ddot{\gamma}$ and $\dot{\gamma}$ during the time of day: a) 08/30/2000, b) 08/31/2000.

2. The magnitude of the change in angles $\ddot{\gamma}$ and $\dot{\gamma}$ during the day reached 60 degrees or more. IN At some points in time, the rate of change in angles reached 40 and more than degrees per hour.
3. Dependence of the magnitude of angles $\ddot{\gamma}$ and $\dot{\gamma}$ on the time of day on each subsequent day changed significantly compared to the previous day (Fig. 7, 8).
4. During the day, on different days, periods of sharp changes in angles $\ddot{\gamma}$ were observed and $\dot{\gamma}$, as well as periods of relative stability (Fig. 9). At certain moments time, there was "instability" in the process of rotation of the swing plane pendulum (thick line) and the "uncertainty" of the angles $\ddot{\gamma}$ and $\dot{\gamma}$ (dashed line).

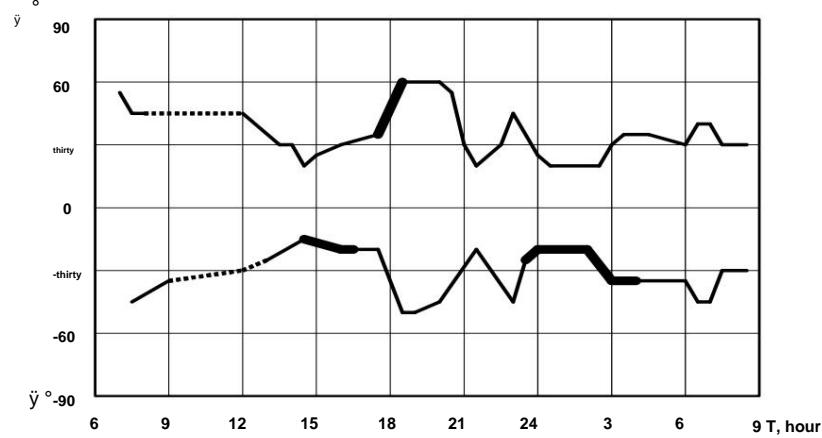
During periods of "instability", small errors occur at the moment the pendulum is launched had a decisive influence on the subsequent rotation of the swing plane pendulum. During periods of "uncertainty" there was a change in direction turning the swing plane from the initial "PO" at a large amplitude to "Pr", with its reduction. This effect was observed in the range of 5...10° for both $\ddot{\gamma}$ and $\dot{\gamma}$.

Torsion fields and information interactions – 2009

5. When the amplitude of the pendulum oscillations decayed, in a number of cases, a change was observed sign of rotation of the plane of oscillation of the pendulum: the appearance of rotation "PO" in zone II (Fig. 6) and vice versa.



Rice. 8. Change in angle \ddot{y} during the time of day



Rice. 9. Change in angles \ddot{y} and \ddot{y} from September 21 to September 22, 2000.

A mechanism that describes the recorded patterns of plane rotation oscillations of a short pendulum caused by the action of a vector sum mass-dynamic forces from the mass-dynamic fields of the Earth's rotation around an axis, the Moon around the Earth, the Earth around the Sun, the rotation of the Sun around an axis, set out in [1, 7, 9]. These fields on the earth's surface are variable over time due to changes in the relative positions of the Earth, Sun and Moon. Due to this changes both the magnitude and direction of the field lines of each of these mass-dynamic fields relative to the swing plane of the pendulum. It leads to the emergence of a complex law of rotation of the pendulum plane.

Earth's gravitational field, with a fixed position of the suspension point pendulum relative to the surface of the earth (due to the relative smallness of both vertical and horizontal components of the vibration amplitude), is practically constant for the system under consideration and cannot influence changing the parameters of rotation of the pendulum plane at different times.

The influence of the gravitational fields of the Moon and the Sun on this process is also practically excluded. This is due to their significant smallness compared to the Earth's gravitational field (for the system under consideration). In addition, their impact can, in principle, only change the position of the equilibrium point

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

pendulum (in a coordinate system rigidly connected to the surface of the earth), but cannot influence the process of rotation of the swing plane of the free pendulum, because these forces are not depend on the magnitude and direction of the pendulum's velocity vector. The resulting gravitational force acting on the pendulum does not depend on magnitude and direction of the pendulum speed vector and direction vertically down (along the plumb line). Therefore, the influence of gravitational forces on the appearance of the effect of changing the direction and speed of rotation of the plane pendulum swing is eliminated.

The influence of Coriolis and centrifugal forces on the process of free oscillation pendulum (with its parameters unchanged) is constant and does not depend on time of day, phases of the moon and time of year. Based on this, Coriolis and centrifugal force, influencing the process of pendulum oscillation and rotation swing planes of the pendulum cannot be the causes causing the effect changes over time in the magnitude of angles $\dot{\gamma}$ and $\ddot{\gamma}$. Therefore, the reason changes in angles $\dot{\gamma}$ and $\ddot{\gamma}$ can act on the pendulum only massodynamic forces that change over time.

The magnitude of massodynamic forces acting only on a moving pendulum depends (all other things being equal) not only on its mass (as for a Coriolis and centrifugal forces), but also from the mass of objects generating the corresponding massodynamic fields, i.e. masses of the Earth, Moon, Sun [1]. Moreover, these forces depend on the distances to these objects, the speeds of their relative movement and their relative position in relation to the Earth, because tension changes total massodynamic field [1].

Since the parameters of the Earth's rotation around its axis are practically unchanged, then the intensity of the Earth's mass-dynamic field at a specific point on its surface is constant. In this case, as shown above, horizontal (meridional) component of the tension of its own massodynamic The field of the rotating Earth is directed from north to south, and the vertical component is from bottom to top. As a result, the mass-dynamic force from the vertical component massodynamic field strength is directed in the same direction as the Coriolis force, and the component from the horizontal component is against it.

However, the total massodynamic field in the space where it is located The pendulum also includes the mass-dynamic fields of the rotation of the Moon around the Earth, the rotation of the Earth around the Sun, and the Sun's own rotation around its axis [1]. The strength of these fields at a specific point on the earth's surface varies in the passage of time, due to changes in the relative position of the Sun and Moon, and, consequently, the magnitude and direction of the field lines of these mass-dynamic fields relative to the swing plane of the pendulum.

In this case, both the magnitude of the meridional and vertical components changes intensity of the total massodynamic field, and this is how its latitudinal component. The consequence of this is a change in time in the magnitude and direction of the massodynamic force acting on the pendulum during its hesitation. As a result, at each moment in time, for certain positions

Torsion fields and information interactions – 2009

plane of oscillation of the pendulum (lines “A” and “B”), the action of massodynamic forces balances the action of Coriolis and centrifugal forces and takes place stable position of the plane of oscillation of the pendulum (without its rotation during certain time).

At the same moment in time, for other positions of the initial plane of oscillation pendulum, these forces are not compensated and the swing plane rotates pendulum. The direction of rotation of the plane of oscillation of the pendulum or coincides with direction of rotation from the action of the Coriolis force, or becomes opposite to it - if the force effect from the action of massodynamic forces exceeds the force effect of the Coriolis force. As a result of changes in over time, the intensity of the total massodynamic field, the value angles $\ddot{\gamma}$ and $\ddot{\delta}$, which determine the position of planes “A” and “B”, as well as the magnitude sectors “I” and “II” also continuously change over time, which recorded in the experiments performed.

Conclusion

The results of observations and experiments give reason to believe that the action mass-dynamic forces on moving bodies and moving masses in many ways is determined by both the mechanism of formation and the peculiarities of the processes associated with the movement of air and water masses: typhoons, cyclones, ocean currents and whirlpools, latitudinal winds, etc.

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Once again about the movement of the Shipov inertial

Zhilalov V.A.

Project "Second Physics", zhigalov@gmail.com

The experimental data obtained are discussed in detail G.I. Shipov in Thailand at a laboratory installation for the study of motion inertoids. The contradiction between experimental data and mechanics is shown Newton, and the formula of uncompensated forces of inertia by G.I. Shipov.

Introduction

The problem of inertial motion has a long history, but currently far from being resolved. With the launch in May 2008 of the Yubileiny satellite with inertoid as an experimental mover stirred up the public interest in the phenomenon of unsupported movement. Heated discussions resumed Internet forums.

Yes, inertoids move, but how exactly? Is their movement explained only forces of interaction with support, or the phenomenon of unsupported movement does it really exist? To answer this question, it is most interesting to study results of rigorous scientific experiments. The author knows of two groups experimenters who studied the movement of inertoids according to Tolchin's scheme: a group led by V.A. Menshikov at the Research Institute of Space Systems (experiments with Tolchin's inertoids since 2002), as well as a group under the leadership of G.I. Shipov, who conducted experiments in 2000-2004. V Thailand.

Works that describe the experiments of G.I. Shipov's group [1, 2] contain mainly the results of experiments that are presented as confirmation of the theory Shipova. This "from theory" approach is characteristic of theoretical physics. However experiments that claim to revolutionize basic ideas into such well-studied areas such as theoretical mechanics require more detailed descriptions of the experimental methodology, comprehensive analysis of possible errors, etc. In other words, what is needed first of all is work in the style of experimental physics, in which, perhaps, the actual theoretical justification may not be given a lot of attention, while the measurement technique, data processing technique, and the most complete presentation of the experimental results obtained is published in first plan.

This work examines in detail the experimental data obtained in Thailand on the laboratory installation of G.I. Shipov. This data is kindly provided to the author by G.I. Shipov (the author himself did not take part in experiments in Thailand). The purpose of this study was to answer next questions:

- 1. Do experimental data contradict mechanics?
Newton?**
- 2. Is it possible to find an explanation of motion within the framework of
Descartes' mechanics, developed by G.I. Shipov?**

If the available data is insufficient to answer these questions, then the third question arises: what further experiments need to be carried out to answer the first two questions?

A group led by V.A. Menshikov also published in 2007 the results of their laboratory experiments in the book [3]. These results require are not analyzed separately and are not analyzed in this work.

Description of Shipov's experimental setup

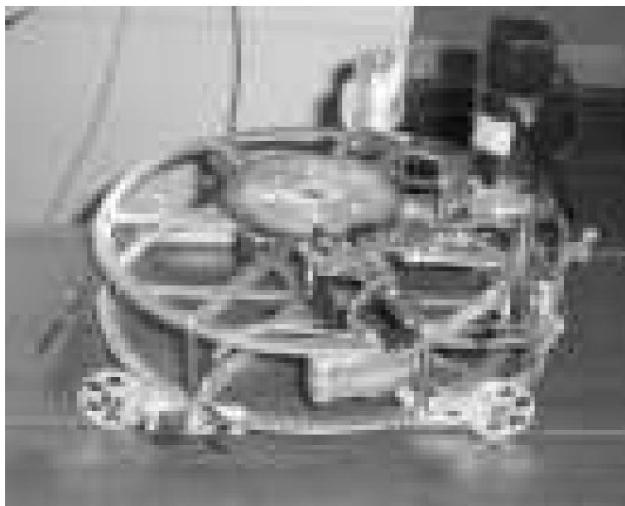
The experimental stand was an inertiod that moved freely horizontally along one linear coordinate along the support along the guides, with this carried out a controlled change in the speed of rotation of the loads using servomotor, and the linear and angular coordinates of the trolley and cargo. Signals from the sensors entered the computer, where they compiled series experimental data. These series were saved to disk in the form of binary files. It is these files, containing more than two hundred episodes, as well as video recordings of experiments and were transferred to the author G.I. Shipov for analysis.

Cart

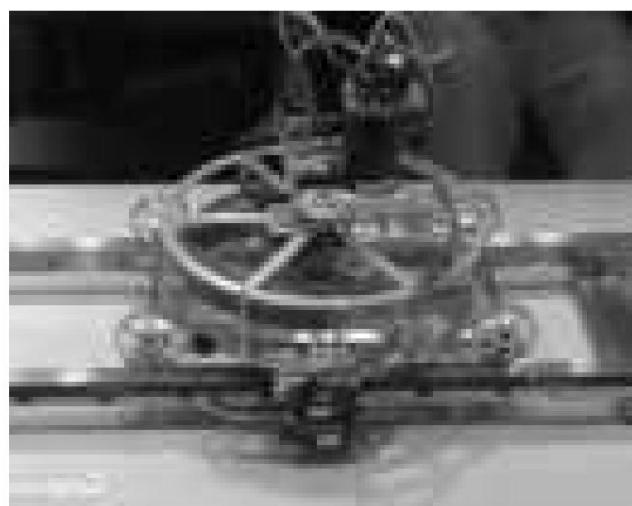
The trolley is a prefabricated rigid structure with a servomotor, servomotor control circuit, kinematics transmitting torque moment from the servomotor to the weights rotating towards each other synchronously around a vertical axis. Linear sensors are also mounted on the trolley coordinates (three photopairs) and angular coordinate sensors (also three photopairs). To axis of rotation of one of the weights is attached a circular ruler with evenly marked marks, and another ruler is connected to a support for fixing the linear movement. A light flexible cable runs from the cart to the computer.

The trolley stands on lightweight aluminum wheels with a diameter of 40 mm, mounted on ball bearings. The wheels have a machined groove on the outer (cylindrical) surface, thanks to which the cart can move strictly along the support guides (Fig. 1).

Torsion fields and information interactions – 2009



A



b

Rice. 1. G.I. Shipov's inertiods of the 2000 (a) and 2004 (b) model.

The weight of the trolley with the engine without loads is about 1.2 kg, the weight and shape of the loads varies in different series.

Support

The support is a horizontal surface with steel guides. The degree of horizontal support is discussed further in section "Analysis of interaction forces with support." In various experiments the inertiod tested on different supports: on steel guides, on glass surface (including oiled), on the table surface. In the experiments analyzed in this article, the inertiod moved along steel guides shown in Fig. 1a.

Weights, their drive and rotation control

Judging by the video recordings, the experiments used loads of various masses and forms. The length of the levers was fixed and amounted to 100 mm. Along with data series, a parameter was recorded characterizing the ratio of the masses of the loads and the cart and lever length: 2m r

$$B = \frac{M}{2m} r$$

where r is the radius of the levers, m is the mass of one load, M is the mass of the trolley.

Data collection and processing

The linear coordinate of the cart relative to the support was fixed as follows: way. Three photo pairs were rigidly connected to the cart, which could record transitions from dark to light areas and back on a ruler attached to a fixed support. The marks were located evenly on the ruler and were printed on a laser printer. Rulers were used in various series

Proceedings of the international scientific conference. Khosta, Sochi, August 25-29, 2009

with the number of marks per meter being 978 and 1310 (this number was recorded in the data files). WITH Using two photopairs, movement was recorded, as well as the direction of movement; the third photopair was triggered at point 0 - the beginning of the linear coordinate.

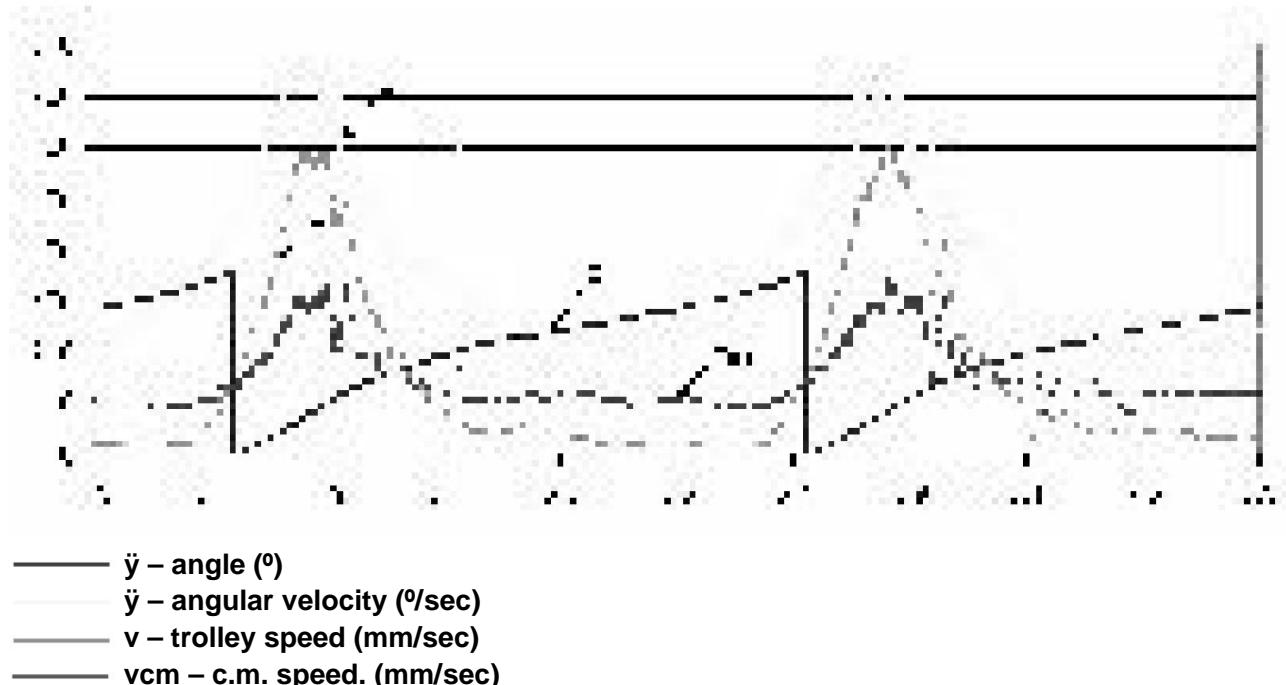
The angular coordinate of the loads was fixed in a similar way: on a circular marks were evenly applied to the ruler (in different series two rulers - with 360 marks and 720 marks), and three photo pairs read the movement from taking into account the direction, as well as the passage of the zero point.

Two photo pairs fixing the direction were shifted relative to each other approximately half the distance between the risks. As a result there are four transition events in one direction of movement, and four in the other, these events constitute a kind of finite machine and are used in the calculation program linear and angular coordinates. Zero coordinate sensors are used for control of sensor response errors.

Signals from six photopairs were fed to the serial port of the computer, one a photopair corresponded to one bit. The first two bits are linear motion photopairs, the third is 0 along the linear coordinate, the fourth and fifth are angular motion photopairs movement, the sixth bit is 0 in the angular coordinate.

The response time of photocouples was recorded using a computer timer with set frequency of approximately 10-5 seconds (exact value of the timer frequency recorded in files along with data series).

Example of experiment results



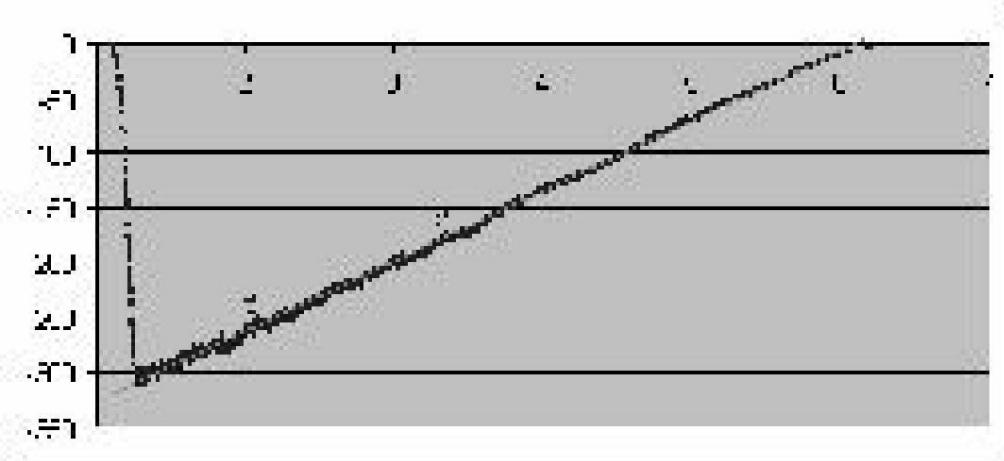
Rice. 2. Graphs of inertial motion.

In Fig. 2 shows graphs of the cart speed, center of mass, angular velocity and angular coordinates of the loads. It can be seen that the center of mass periodically changes its speed, while the cart moves only in one direction, without rolling away back and without stopping. This indicates the forces that act on inertiod. What is the nature of these forces is a central question in motion research inertiods. The following sections provide an analysis of various hypotheses.

Estimation of measurement error

Before considering hypotheses about the reasons for the movement of the inertiod, based on available data, we will estimate the measurement errors. In the experiment in Fig. 2 used a ruler with the number of marks per meter 978, and an angular ruler with a price divisions are 1 degree. The computer timer generated ticks with a period of 0.000010057 seconds. At speeds of the order of 600 mm/sec (peak speeds in Fig. 2), the response time sensors between two line marks will be $1/600/0.978 = 0.0017$ sec, with time measurement error of one tick (i.e. approximately 0.6%).

Uneven marking on the ruler will appear as “noise” in speed graph (assuming that the average distance between risks is not changes). Let's try to evaluate this unevenness. For this we will use series of free movement of the inertiod along the support: the loads were secured motionless, the inertiod was pushed, and it drove until it came to a complete stop. In Fig. 3 shown a schedule for such a movement. Standard deviation of speed from linear The dependence here is 5.9 mm/sec. At an average speed of 150 mm/sec standard deviation is 4% of the speed value, which can be taken as a reasonable estimate of the linear velocity measurement error ¹.



Rice. 3. Graph of speed under the influence of friction force.

¹ This is an upper estimate: deviations of speed from linear may well be caused by real uneven movement of the inertiod along the support.