

V.A. Zhigalov

zhigalov@gmail.com

Characteristic effects of non-electromagnetic radiation

**Beta version
09/03/2011**

Project "Second Physics"
<http://www.second-physics.ru>

2011

Zhigalov V.A. Characteristic effects of non-electromagnetic radiation.

The work contains an overview of experiments on the targeted production and detection of non-electromagnetic (torsion) radiation. The characteristic properties of this radiation are considered: high penetrating ability, paradoxical effect on non-equilibrium processes, biological activity, accompanying rotating masses and electromagnetic radiation, the ability to transfer information about the structure of matter, to concentrate certain geometric shapes, to form "phantoms", "activate" various substances, to manifest non-local effects. The facts of the connection between the results of experiments and the consciousness of the operator (psychophysical effects), the problems of the objectivity of the results obtained and methodological issues are analyzed.

1. CONTENTS

one.	TABLE OF CONTENTS.....	3
2.	HISTORY AND TERMINOLOGY	5
3.	DEVICE OF TORSION GENERATORS	nine
	3.1 AKIMOV GENERATORS	9 3.2
	BOBROV GENERATOR	11 3.3
	SPIELMANN GENERATORS	11 3.4
	KRASNOBRYZHEV GENERATORS	13 3.5
	KURAPOV GENERATOR	fourteen
	3.6 PERMANENT MAGNETS AS TORSION GENERATORS	fifteen
	3.7 ROTATION AS A SOURCE OF TORSION RADIATION	16
	3.8 SHAPE EFFECT AS A SOURCE OF TORSION RADIATION	17 3.9
	CONSTRUCTION PRINCIPLES OF TORSION GENERATORS	23
4.	ACTION ON BIOLOGICAL OBJECTS.....	25
	4.1 EXPERIMENTS OF V.A.SOKOLOVA'S GROUP	25
	4.2 BIOLOGICAL EXPERIMENTS OF V.F. PANOV'S GROUP	27 4.3
	RESULTS OF THE GROUP O.I. ORLOVA.....	28 4.4
	RESULTS OF V.G.KRASNOBRYZHEV.....	30 4.5
	RESULTS OF V.P.KAZNACHEEV'S GROUP.....	31
	4.6 USING ESR AS A TORSION RADIATION INDICATOR	32 4.7 RESULTS OF
	A.V.BOBROV. NON-ELECTROMAGNETIC COMPONENT OF LASERS AND LEDS	33 4.8
	RESULTS OF P.P.	35 4.9 JIANG KANZHEN'S
	RESULTS	36 4.10 L. MONTAGNIER'S
	RESULTS	38
5.	ACTION ON WATER.....	40
	6. EFFECTS ON	
	CHEMICAL PROCESSES	49
	7. IMPACT ON CRYSTALLIZATION	
	PROCESSES	56
	8 IMPACT ON RADIOACTIVE	
	DECAY	70
	8.1 RESULTS OF I.M. SHAKHPARONOV	70
	8.2 RESULTS OF A.V.KINDEREVICH	73
	8.3 RESULTS OF V.G.KRASNOBRYZHEV.....	74
	8.4 RESULTS OF THE GROUP OF V.I.LUNEV	75
	8.5 RESULTS OF M. KRINKER	77
	8.6 RESULTS OF A.G. PARKHOMOV	78
	8.7 RESULTS OF I.A.MELNIK.....	81 8.8
	RESULTS OF S.E.SHNOL.....	83
9.	SHIELDING	85
10.	THE PROBLEM OF DETECTION	90
	10.1 SENSORS BASED ON CHANGING THE PROPERTIES OF THE WORKING	
	10.1.1 MEDIUM	92 Sensors at diesel power
	10.1.2 plants	92 Sensors on
	10.1.3 microchips	96 Magnetic
	10.1.4 sensor	99 Mechanical
	10.1.5 systems	100 Shkatov
	10.1.1 torsimeters.....	112 Influence on metal
	10.1.2 hardness	116 Impact on a quartz
	10.1.3 resonator	116 Resistive sensors - Kozyrev sensor and
	10.1.4 analogues	119 Photographing non-electromagnetic
		radiation

10.2 SENSORS BASED ON CHANGING THE PARAMETERS OF RANDOM PROCESSES	126
10.2.1 Thermal sensor	126
10.2.2 Using Noise Diodes	129
10.3 DEVICES IGA-1, VEGA, SEVA	130
10.3.1 IGA-1	131
10.3.2 VEGA.....	132
10.3.3 SEVA.....	134
10.3.4 Effects.....	135
11. PHANTOM EFFECT	137
12. PSYCHOPHYSICAL EFFECTS.....	144
13. NONLOCAL EFFECTS	153
14. CONCLUSION.....	162
15. LITERATURE	163

2. HISTORY AND TERMINOLOGY

First, let's talk a little about the history of this area of research. There have been a lot of works in which phenomena were observed on a laboratory scale that were difficult to explain by electromagnetic fields and other known interactions over the past hundred years. I will designate the prehistory with separate fiducial points, which only illustrate the movement in this area.

In 1906 an article by Prof. N.P. Myshkina "The motion of a body in a stream of radiant energy" [1], where for the first time it was indicated the presence of a certain agent that accompanied electromagnetic radiation, but differed from it in its properties, and transmitted torque to a torsion balance. In further works, Myshkin studied the properties of this phenomenon, and concluded that in the space in which radiant energy propagates, *ponderomotive forces* act on material bodies, and these forces are not electromagnetic. *Ceteris paribus* (it was important to control the thermal effects that could cause the rotation of the working fluid due to convection), the effects depended on the surrounding laboratory environment, the position of the Sun, the Moon, the season, and the state of the atmosphere [2, 3].

Around the same time, A.G. Gurvich put forward a hypothesis about the need to attract a field that forms the structure of an organism in the process of morphogenesis. Initially called the embryonic field, this field was later called the *morphogenetic one*. Gurvich points out: "Our formulation of the main property of the biological field does not represent in its content any analogies with the fields known in physics (although, of course, it does not contradict them)." *Mitogenetic radiation* stimulating cell division was isolated in experiments [4].

In theoretical physics at that time, work was underway to build a unified field theory, and Eli Cartan's hypothesis expressed in 1922 about the existence of a *torsion field* near rotating masses served as the basis for theories, where along with the curvature of space-time, torsion was introduced.

After the Second World War, the superpowers intensified work on new ways of transmitting information. At the end of the 1950s, an experiment was carried out on the US Navy submarine Nautilus, in which a human recipient, who was submerged on the submarine, and a human inductor, who remained ashore, participated. With the help of Zener cards, information was transmitted over such a "telepathic channel" over a distance of 2000 km, and the result was significantly different from what was expected in the case of random guessing (70% instead of 20%).

Information about this experiment became known in the USSR and served as an impetus for experiments on "biological communication", initiated by the Minister of Radio Industry V.D. Kalmykov. One of such experiments at the Research Institute of Radio Communications (then "p/box 241") was described by A.E. Akimov [5], in those years, an employee of this research institute:

“We took rabbits of the same litter, i.e. twin rabbits, who were genetically identical, and in a laboratory room located in Moscow (literally a five-minute walk from the Taganskaya-Koltsevaya metro station), the rabbits were killed with high-voltage exposure to the brain. And at this time, a pair of rabbits, which was located outside the ring road of Moscow, were implanted with golden ones, an electroencephalogram of the brain was recorded.
electrodes and

“With a probability of 100% of cases, when a rabbit was killed in the city itself, then practically at that moment its genetic duplicate had an incredibly strong surge in the cerebral cortex.”

In the 60s, K.N. Perebeinos discovered the mutual influence of separated rotating disks [6]. In the 50-70s, the well-known experiments of N.A. Kozyrev were carried out with torsion pendulums, with gyroscopes, with the influence of stars on the resistor at the focus of the telescope [7], these experiments were repeated and developed in the 80s in Novosibirsk [149]. In the 1950s–70s, first in China and then in the USSR, Jiang Kanzhen conducted experiments on the field transmission of hereditary information between biological objects [62–66]. In the 1970s, V.P. Kaznacheev and his collaborators discovered the *mirror cytopathic effect* [8], which consists in the transfer of complex biological information about diseases between cell cultures, provided that cell populations are separated, but with an optical communication channel between them.

In the late 70s - early 80s in the USSR, several researchers independently invented technical devices that are sources of some strange radiation. The design of the generators of this radiation varied quite a lot, but the properties of the radiation were almost the same for all such devices:

- The radiation was not shielded in the usual way and was highly penetrating;
- The radiation was biologically active;
- Radiation affected a variety of physical processes and properties of substances in a paradoxical way;
- In some experiments, the radiation exhibited non-local properties, i.e. it was possible to target physical objects at a great distance; the intensity of the impact did not depend on the distance in these experiments;
- There were good reasons to believe that this radiation is of the same nature with those hypothetical agents that are responsible for psychophysical effects, when the operator's consciousness directly affects physical processes, as well as for telepathic effects.

In the future, these devices were called torsion generators, and the radiation itself was called torsion. The reasons for choosing this name were as follows. By the end of the 1980s, when a certain critical mass of the results of experiments with sources of this strange radiation had already accumulated, two Soviet physicists independently put forward two models of the physical vacuum. One model - the so-called. phytonic

physical vacuum model - was proposed by Anatoly Akimov, who was directly involved in many key experiments, and subsequently supervised this direction. This phenomenological model assumed the structure of the physical vacuum as a dense packing of Dirac pairs of virtual particles nested in each other and fully compensated in terms of mass, charge and spin (such pairs were called phytons by A.E. Akimov) [9]. The excitations of the physical vacuum in this model were represented as the polarization of these particles. It was also assumed that in addition to the mass and charge polarization, which generates the gravitational and electromagnetic fields, respectively, there is a third long-range field -

back range. This concept was inherited from the idea of the so-called A fields by Ryoyu Uchiyama, who assumed that each fundamental property of elementary particles, incl. and spin, can generate its own physical field. Long-range action along the spin was called by Akimov at first the spinor field, and then - torsion.

Another theory introducing torsion fields was proposed by Gennady Shipov in 1988 [10]. This theory has a completely different origin. Being engaged in the generalization of the General Theory of Relativity, G.I. Shipov came to the conclusion that the torsion of space-time should be included in the vacuum equations as an integral part of them, and that it is torsion that generates mass. In contrast to the Einstein-Cartan theory - the most famous theory introducing torsion of space-time, Shipov applied another mathematical way of introducing torsion - Ricci torsion. As a result, his theory did not forbid the possibility of the manifestation of torsion fields in the experiment, although at that time Shipov did not know about the results of experiments with torsion generators. Moreover, his theory predicted the existence of torsion radiation generated by the accelerated motion of particles with spin. The coupling constant of the electrotorsion interaction was estimated by Shipov as 10^{-2} of the electromagnetic interaction constant. At the same time, TEC estimated the spin-torsion interaction constant as 10^{-60} . In 1991, Akimov and Shipov learned about each other's results and subsequently worked together.

Running a little ahead and correlating these models with the results of experiments, one can see that, in many cases, the observed effects from torsion generators can indeed be interpreted as an impact on the spin subsystem of matter. Moreover, some of the experiments indicated the effect of macroscopic rotation on processes, especially in nonequilibrium rotation (for example, experiments with gyromotors and with the vortex rotation of a liquid). Therefore, this concept, which ascribes these anomalous laboratory results of experiments with technical generators of non-electromagnetic radiation to long-range spin action, was called the Akimov-Shipov concept of torsion fields.

Many experimental works of the 1990s, at a time when this concept received many new supporters, were carried out within the framework of this concept. This determines the choice of terminology in this review (*torsion* radiation, *torsion* generators), which, however, does not mean that the author does not allow interpretation of these results in terms of other concepts.

However, neither Akimov's model nor Shipov's theory can currently

explain the construction of many torsion generators and sensors, and give accurate predictions based on experimental results. The formulas of Shipov's theory as a fundamental program for the geometrization of physics are very general and need further elaboration in order to be able to test them in a rigorous experiment, while many provisions of Akimov's concept, on the contrary, are based on a generalization of experimental data. According to Shipov, experiment in this area is now far ahead of theory. At the same time, it is obvious that the experimental work is still at the exploratory stage. Moreover, these are not the only theories in which the long-range spin action is included as an integral part, and in which attempts are made to explain some of the anomalous experimental results considered below, for example, see [11, 12, 13].

3. DEVICE OF TORSION GENERATORS

3.1 Akimov generators

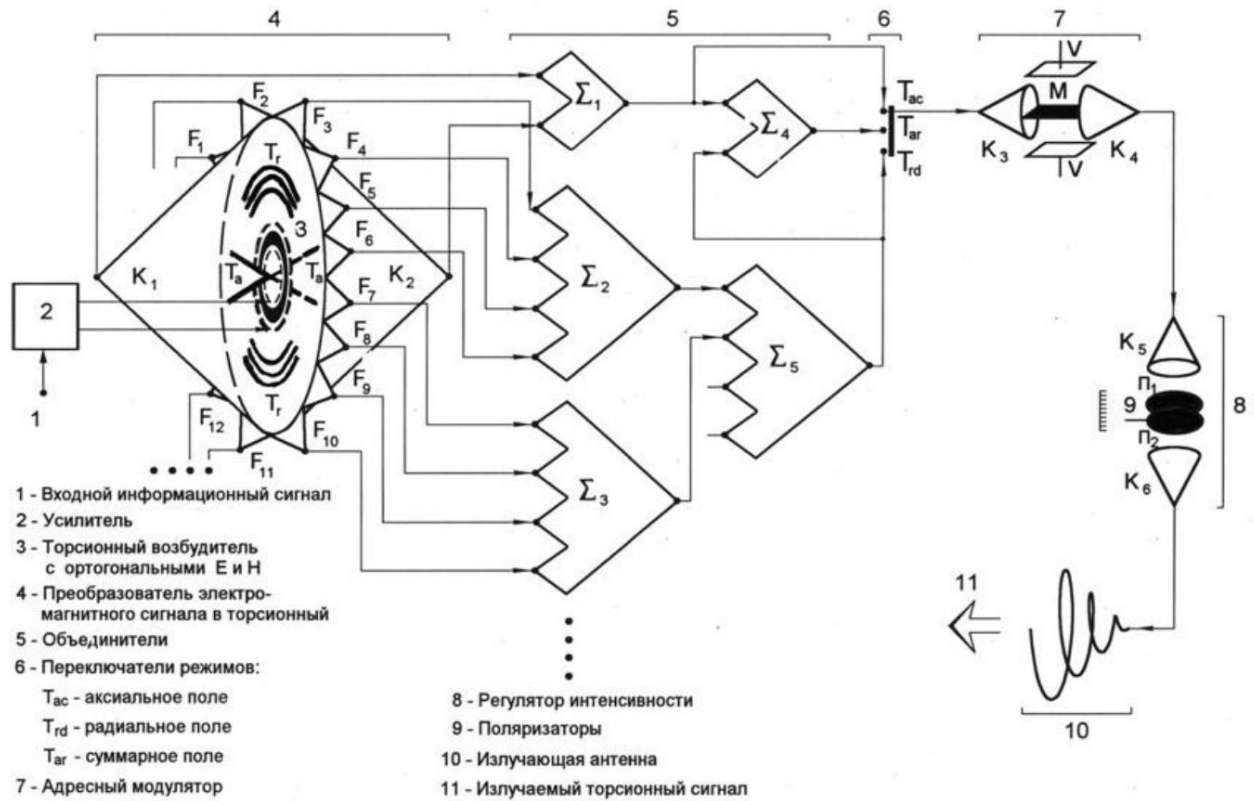
Let's start considering the designs of torsion generators with the most famous - Akimov generators. These generators were developed in the late 80s and patented in the early 90s. Most of the experiments of that period were done with A.E. Akimov's generators. Until the end of the 80s, A.A. Deev's generators were mainly used.

Akimov's small generator has a closed metal (copper) case with a protruding cone (Fig. 1). Inside there is a cylindrical capacitor, between the plates of which there is a permanent magnet, the magnetization vector coincides with the axis of the capacitor. A voltage is applied to the plates, which can be modulated by an alternating control voltage. The characteristic voltage between the plates is 100 V. The case was grounded during the experiments. The radiation pattern repeats the generatrix of the cone, continuing after its top as an inverted cone.

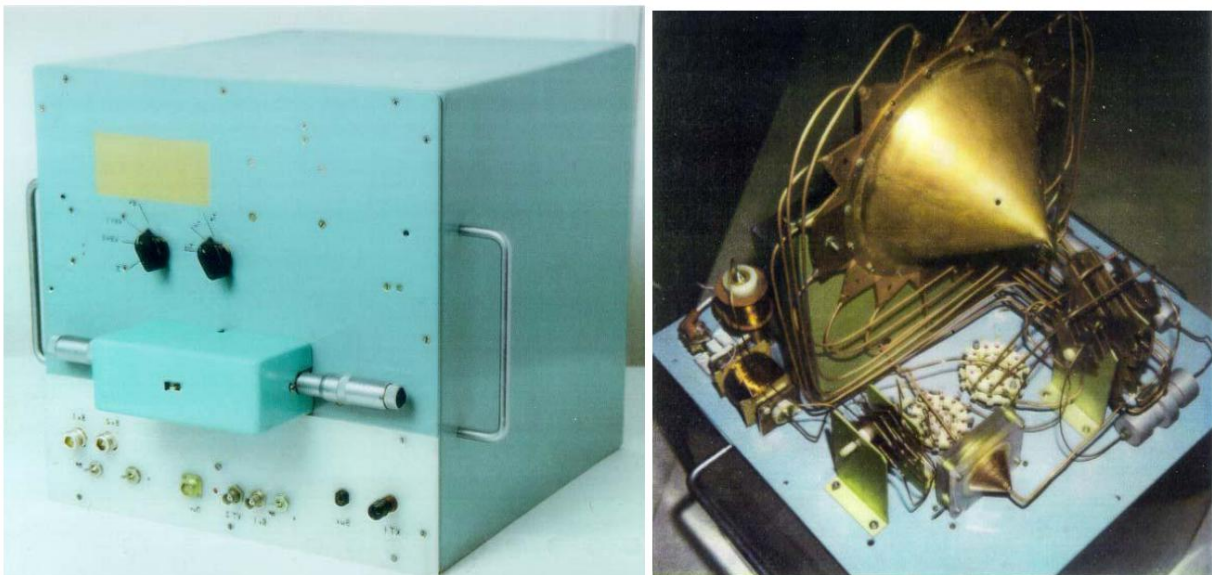


Rice. 1. Akimov's small generator.

Akimov's large generator has a more complex design (Fig. 2, Fig. 3). It has the size of a small TV and, in addition to the same emitter in the form of a cylindrical capacitor, has many additional nodes. These nodes are described in some detail in the 1992 patent [14], they form, modify and sum the torsion signal. At the same time, the nodes are connected by copper buses, the signal is fed to the output, to which a radiator in the form of a horn antenna is connected.



Rice. 2. Schematic diagram of a large Akimov generator.



Rice. 3. Appearance and internal structure of the large Akimov generator.

The most famous effects from Akimov generators: impact on the properties of metals (treatment of melts), on the crystallization of solutions, on biological objects, on physical sensors of various designs - all these effects will be discussed below.

3.2 Bobrov generator

A.V. Bobrov's generator has a completely different design [15], Fig. 4. Its emitter is a matrix of LEDs - 10x10. A pulse signal of low duty cycle and amplitude of tens of volts is applied to the LEDs. The pulse repetition rate is 3 kHz, a meander with a frequency of 100 Hz is superimposed on the signal.



Rice. 4. Generator A.V. Bobrov.

The radiation pattern of the non-electromagnetic component of the radiation of the Bobrov generator is a beam perpendicular to the plane of the emitter, along the light flux from the LEDs (the LEDs, despite the atypical power mode, shine brightly).

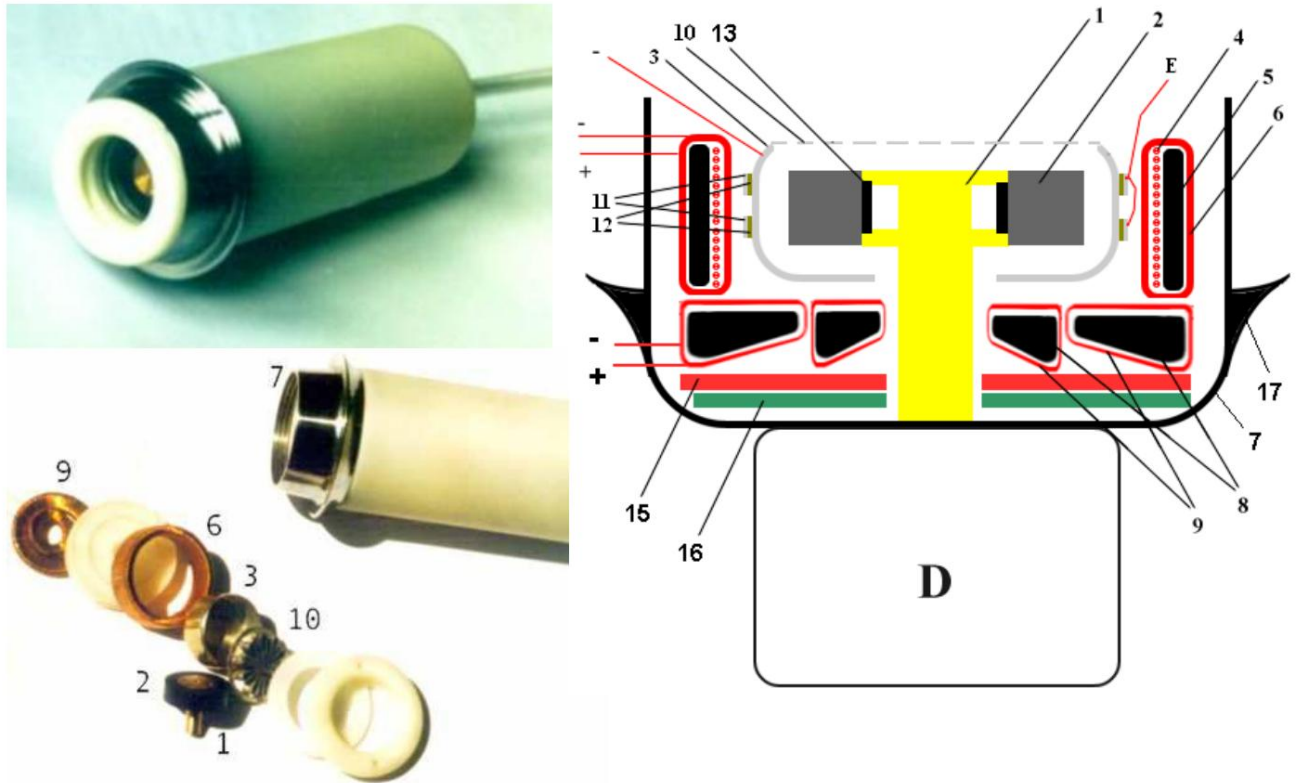
A large number of LEDs is not necessary; according to Bobrov, the generator works with one LED. Initially, Bobrov singled out the non-electromagnetic component of a helium-neon laser, then generators based on pulsed power supply of semiconductor lasers were tested, but it was soon discovered that ordinary LEDs also have an effect.

Such a generator is used in experiments on water activation, to influence biological objects, it acted on sensors on double electric layers and MIS structures. The medical application of the generator was tested, as well as technologies in the field of the food industry and agriculture. Below we will describe the results of applying the Bobrov generator with information matrices from various substances.

3.3 Spielmann generators

The generators of the engineer A.A.Shpilman from Kazakhstan have gained great fame on the Internet. The website of the inventor (maintained since the mid-90s) presents many designs (<http://spinfields.narod.ru/ALMANACH/Almanach.htm>).

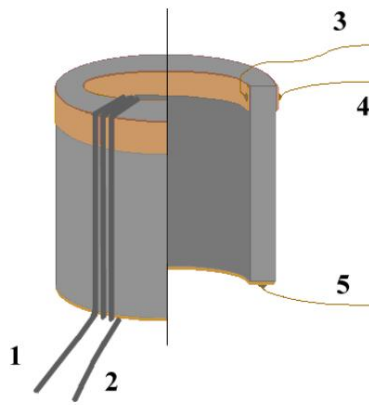
Let us describe the device of the generator "Comfort" [16] (Fig. 5). The main part in this generator is a ferrite ring rotating by an electric motor (about 50 revolutions per second), it forms a flow of non-electromagnetic radiation along the axis of rotation. Several copper coils and electrodes with an alternating voltage applied to them direct and modulate the flow.



Rice. 5. Appearance and arrangement of the "Comfort-M5" generator. Generator parts: D - engine, 1 - axis, 2 - ferrite ring, 3 - silver reflector, 4 - cylindrical coil, 5, 8 - iron cores, 6, 9 - toroidal coils, 7 - iron case / screen, 10 - silver tape mesh, 11 - aluminum coating, 12 - vertical strips of bismuth coating, 13 - thin iron tube, 15 - copper disk, tinned with Rose alloy, 16 - electret film, 17 - rim on the body, E -

contact for supplying positive voltage to coating 11 relative to reflector 3.

Shpilman also describes designs without rotating parts. For example, shown in Fig. 6, the design is very similar to the emitter of the Akimov generator, but the magnetization in the ferrite ring is not directed along the axis, but perpendicularly - it is caused by the bias coil. The third electrode serves to block the flow of non-electromagnetic radiation in one of the directions.



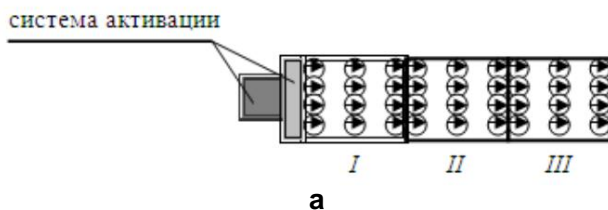
Rice. 6. Fixed emitter of the Shpilman generator.

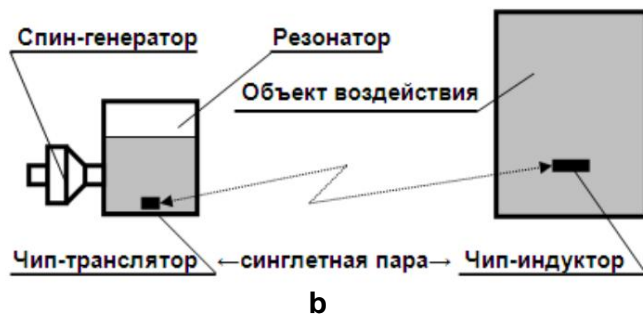
Shpilman generators are used as a therapeutic device, there are also results in changing the properties of steel and cast iron during irradiation, as well as inducing "phantoms" determined by a rotating electric vector sensor. But the main method of detecting radiation described on the site is direct perception by psychics, this is how Shpilman himself determines the effectiveness of his designs. By the way, this is typical for many authors of torsion generators: the design and operating modes are often selected using a frame or directly by hand, and only then the "successful" solutions found are checked by objective methods.

3.4 Krasnobryzhev generators

Not all generators have active elements in the form of rotating parts or sources of an electromagnetic field. There is a class of torsion generators in which radiation is caused by spin-ordered media. Krasnobryzhev generators are elements connected in series from a spin-ordered substance (for example, silicon single crystals). On Fig. 7-c shows the components of such generators. As Krasnobryzhev writes, when assembling such a generator, it is important to follow a number of principles (Fig. 7-a) [18]:

- 1) There must be several elements, and the contact elements must be made of different materials;
- 2) The connection of the next element must not be earlier than a certain time (40 hours) from the connection of the previous one;
- 3) The first element must be "activated" with another generator.





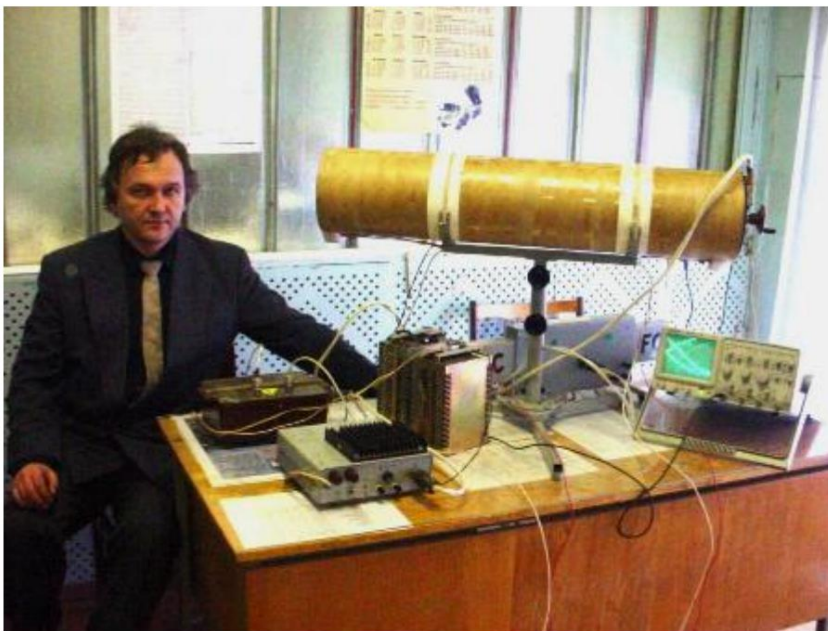
in

Rice. 7. Generator VG Krasnobryzhev: a) scheme of the torsion generator; b) scheme of installation of Krasnobryzhev's spin teleportation; c) photo of generator elements.

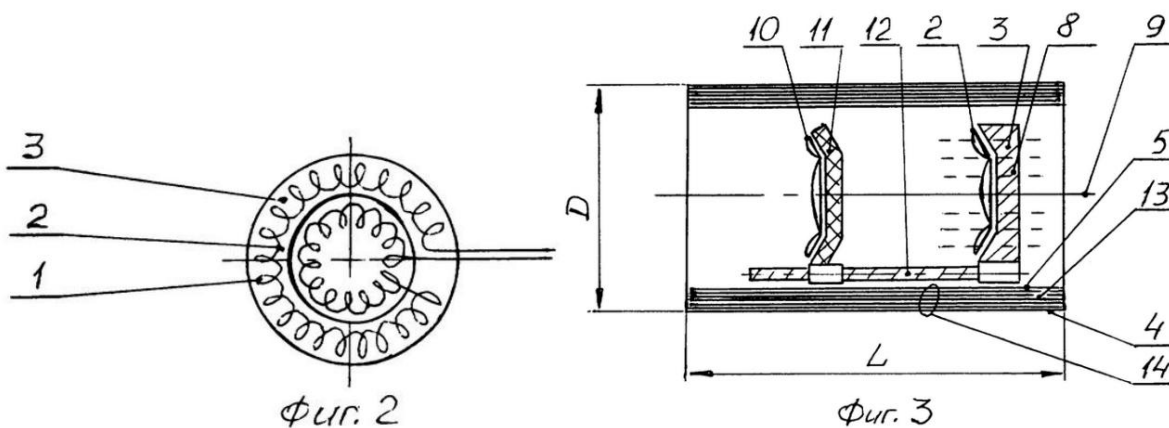
The generators themselves in the immediate vicinity have a rather strong effect on a person, according to Krasnobryzhev - to the point of pain. In experiments with these generators, the principle of non-local interaction is actively used: a "coherent state" is teleported from the generator to any distance using a pair of specially prepared metal plates, one of which ("translator chip") is located next to the generator, and the second ("chip-translator". inductor") can be located at any distance from it and affect various physical, chemical and biological processes (Fig. 7-b). These experiments will be described in detail below.

3.5 Kurapov generator

Perm group of researchers led by prof. V.F. Panova uses generators designed by S.A. Kurapov (Fig. 8) [19]. These generators are a combination of energized cylindrical capacitors and several helical coils inside (Figure 9). According to SA Kurapov, an important feature of the generator is the combination of left and right radiation in one beam. The generator is energized using nuclear magnetic resonance frequencies.



Rice. 8. S.A. Kurapov and his generator.



Rice. 9. Drawings from the patent for the generator S.A. Kurapov.

Empirically, the distance between the coils is selected so that the generator beam is parallel and does not diverge over a long distance - this gives some analogy with the focusing of light by lenses.

The Perm group developed the technology of torsion melting of metals (introduced at a number of metallurgical enterprises in the Urals), and this group also conducted experiments on the effect of torsion radiation on the kinetics of chemical processes and biological experiments. All this will also be discussed below.

3.6 Permanent magnets as torsion generators

Probably the simplest torsion generator is a permanent magnet. There are many experiments and patented technologies for the activation of fuel and water, in which the main elements are permanent magnets, sometimes of a certain shape - in the form of cones. For example, water treatment technology using

magnets was developed by N.P. Bakurov (Tver) [27, 28, 29, 30]. Treated ("magnetized") water has a pronounced biological activity, it also changes the kinetics of chemical reactions, which is used as an antiscale agent in boilers. Liquid activated fuel has increased heat transfer and burns more completely. Similar results are obtained with the processing of fuel by Krasnobryzhev generators.

According to the concept of Akimov-Shipov, permanent magnets, as spin-ordered bodies, have a static torsion field, and in this case, liquids are affected by it is this field, not the magnetic field.

Often magnets are used in combination with mechanical rotation, such as in Spielmann generators. See also [26].

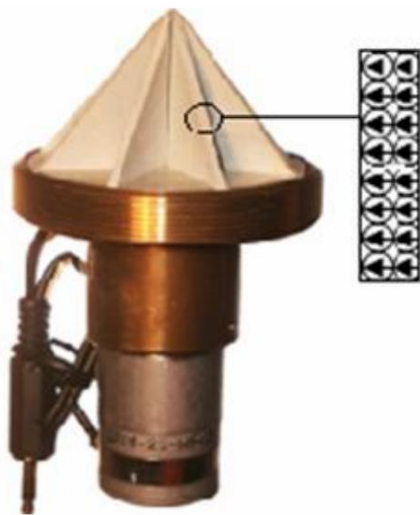
3.7 Rotation as a source of torsion radiation

The group of VI Lunev in Tomsk in 1988-1993 carried out search experiments on spin-torsion interactions, set out in the book - a collection of articles [31]. A number of experiments were carried out with generators based on aircraft gyro motors. Radioactivity counters (intensity and statistics changed), quartz oscillators (frequency changed), bacterial cultures (genetic changes) acted as sensors.

Igor Melnik (Tomsk) carried out numerous experiments on the remote influence of liquid rotation on the parameters of radioactivity, as well as on the properties of semiconductors [32, 137].

Characteristic torsion effects (biological activity, impact on the value of background radiation) are produced by vortex heat generators, mass-produced by various companies [33, 34, 35, 110].

In addition to the Shpilman generators already considered, one of the Krasnobryzhev generators was also a nozzle rotating by an electric motor made of a spin-ordered material (Fig. 10) [37].

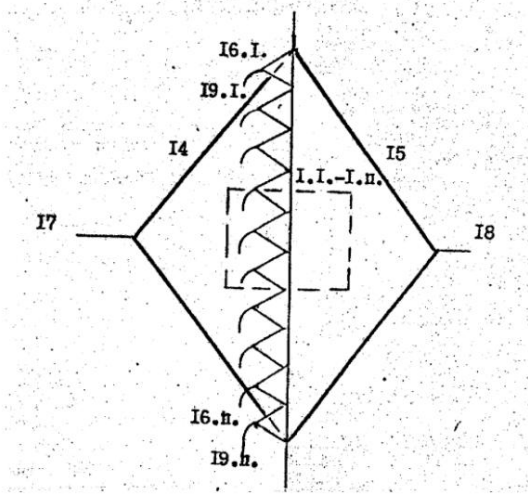


Rice. 10. Generator VG Krasnobryzhev with a "turntable" of anisotropic barite platinum.

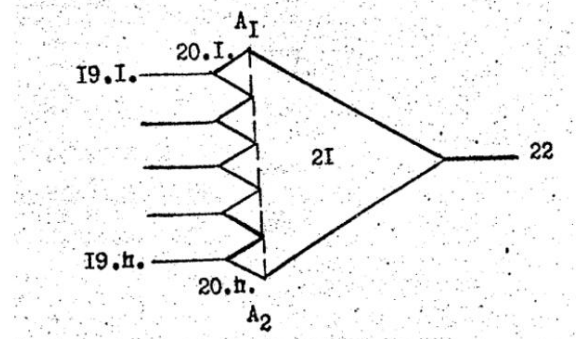
There are also torsion installations, where the object of rotation is not a liquid or solid body, but an electromagnetic field. For example, Shpilman describes a design with a fixed multi-phase coil that creates a rotating magnetic field [17]. Many anomalous effects were observed in the Godin-Roshchin setup [36]. In [38], many results (in fact, a whole line of research and technology) are described when a rotating electromagnetic field is applied to various materials - the installations are based on a conventional stator from an asynchronous motor. In the works of M. Krinker's group [134, 135], an example of the impact on the radiation sensor by a rotating electric field of a quadrupole capacitor is given, and the effect is very similar to those found by the Lunev group [131]. Many of these effects are similar to those of other torsion generators, in particular, liquid vortex heat generators.

3.8 Shape effect as a source of torsion radiation

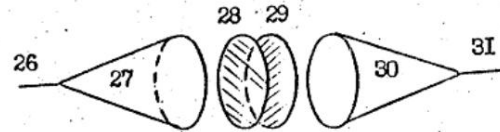
Many generators used cones, pyramids, cylinders, polyhedra as essential elements. For example, in a large Akimov generator, cones with a height-to-base ratio of 0.618 are used in the electrotorsion radiation generation chamber (paired cones), in the modulator, in the intensity controller, and in the radiating antenna. Flat figures in compliance with the proportions of the golden section are used in the adders of this generator, as well as for picking up the tangential component of radiation from the plane of the connection of the cones (the so-called "asterisk"). Metal bars are used to transmit the "torsion signal" from node to node (Fig. 11).



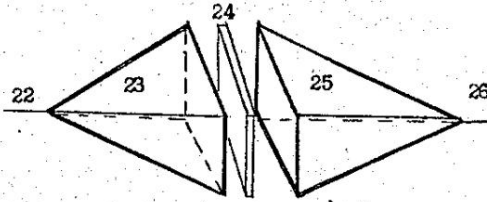
a



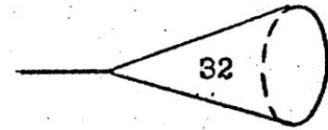
b



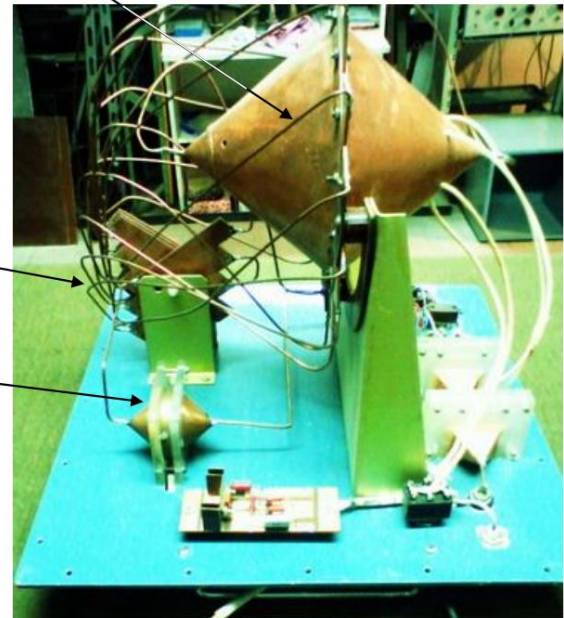
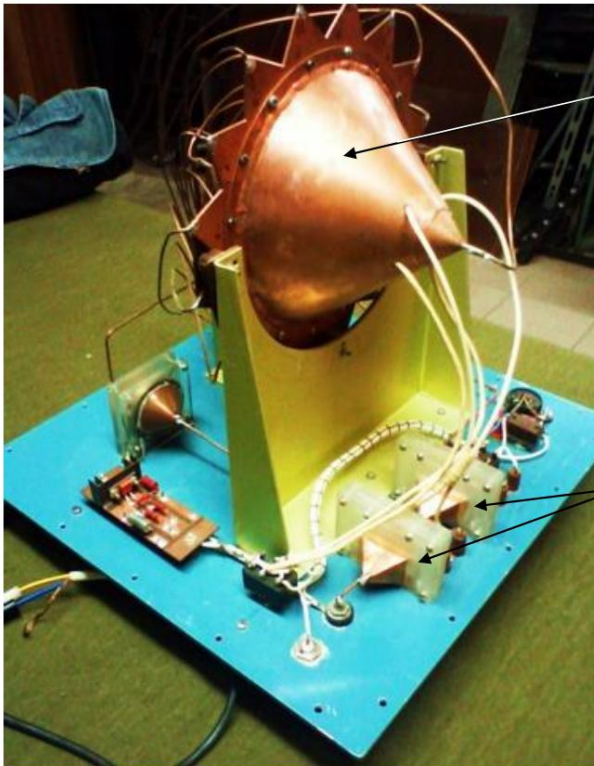
c



d



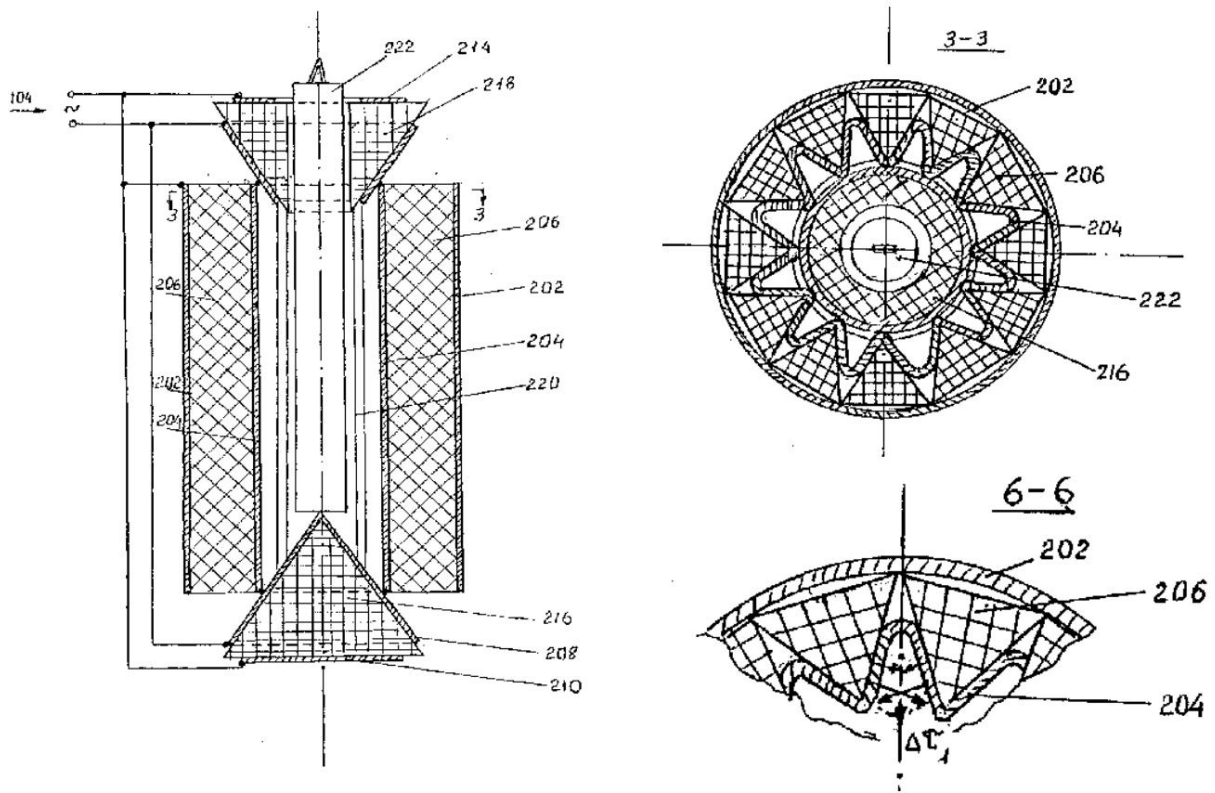
e



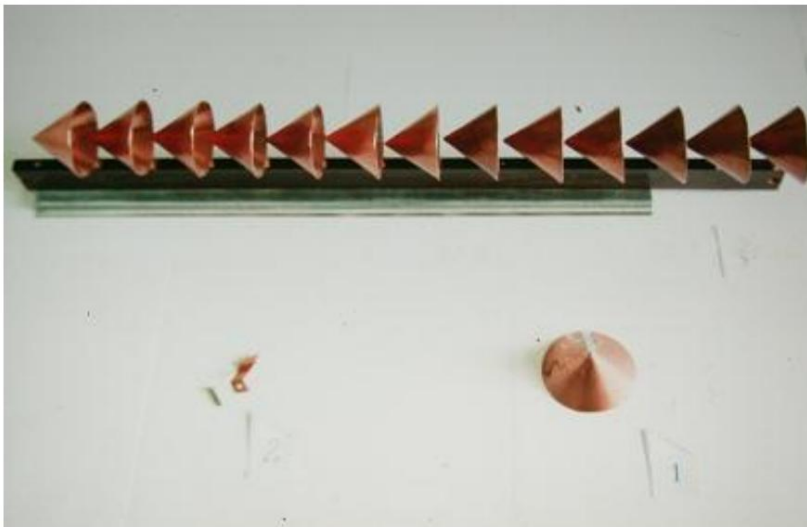
Rice. Fig. 11. Assemblies of the Akimov generator according to the patent [14] and according to the photo: a) a chamber for the formation of a torsion signal; b) adder; c) modulator (with information matrix in the center); d) intensity regulator (with polarizers in the center); e) radiating antenna (not shown in the photo).

The generator of A.V. Kinderevich [21] is a kind of "turned inside out" 18

Akimov's generator: the cylindrical plates of the capacitor enclose prisms of a specially selected material (for example, ferrite of a certain brand), the prisms look at the axis with their vertices, the inner lining repeats the surface of the prisms (in the section - an asterisk) - Fig. 12. From above and below the structure is closed with cones looking inward. A sample is placed along the installation axis, which is affected. A sinusoidal voltage at the NMR frequency is applied to the capacitor plates. Further, Kinderevich's results are analyzed in Section 8.



Rice. 12. Drawings from the patent of A.V. Kinderevich with a description of the design of the generator to accelerate radioactive decay.



Rice. 13. A.Yu. Smirnov's static generator and its elements.

In the static Smirnov generator, a number of coaxial cones (Fig. 13) are used, which act as elements of the periodic structure.

Apparently, many periodic structures themselves are shape generators, and, say, a row of ten test tubes can potentially lead to interesting effects [22, 23].

One of the variants of the torsion generator, studied by B.V. Okulov from the group of V.I. Lunev, is two nested metal cones with different angles at the top, so that the distance between the plates of the resulting capacitor decreases towards the axis [39]. This design was immersed in a liquid dielectric, a voltage of 10-12 kV was applied to the capacitor formed by the cones, as a result, an electric field strength gradient to the axis was obtained. The radiation from this generator affected the crystallization of the KCl solution in the cuvette located above the generator (Fig. 14).

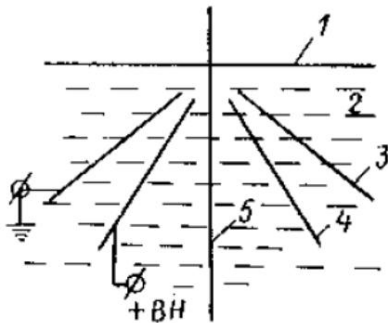


Рис. 1

Рис. 1. Схема устройства: 1 — поверхность жидкого диэлектрика; 2 — диэлектрик; 3, 4 — конусные электроды конденсатора; 5 — ось симметрии устройства

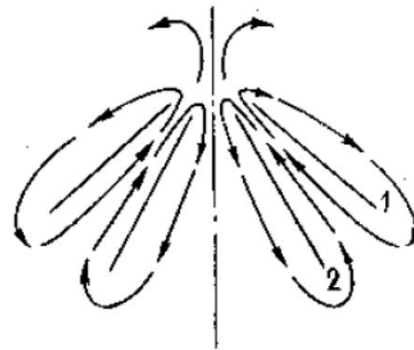


Рис. 2

Рис. 2. Схема потоков вакуумной среды: 1, 2 — конусные электроды конденсатора

Rice. 14. High-voltage generator with two cones (designed by B.V. Okulov).

The pyramids themselves are generators of torsion radiation, while maintaining the proportions of height and base, as well as precise orientation to the cardinal points, is essential for the effects. Thus, the biological effects of the pyramids are presented in [24]; For a review of the manifestations of the shape effect by I.N. Stepanov, see [25].

A specially oriented media interface acts as the basis of Al Veinik's "tangential hedgehog" [40] (Fig. 15). In this design, the plates are oriented tangentially to a common circle. An alternating magnetic field, acting on the plates, creates a moment of force, which is seen by turning the ring. The repetition of this design on a larger scale by Petr Lukin (Vitebsk) confirmed this effect: a large structure (steel sheets 1.2 mm thick, 800x1200 mm in size, the total weight of the structure is 3 tons) rotates a suspended ring made of a copper tube filled with lead (weight about 4 kg), ring diameter 400 mm, suspended on a thread 7.2 m long). The rotation of the ring lasted 15 minutes [41].

A.I. Veinik also studied the influence of periodic structures ("snakes") on the characteristics of beta decay [40].

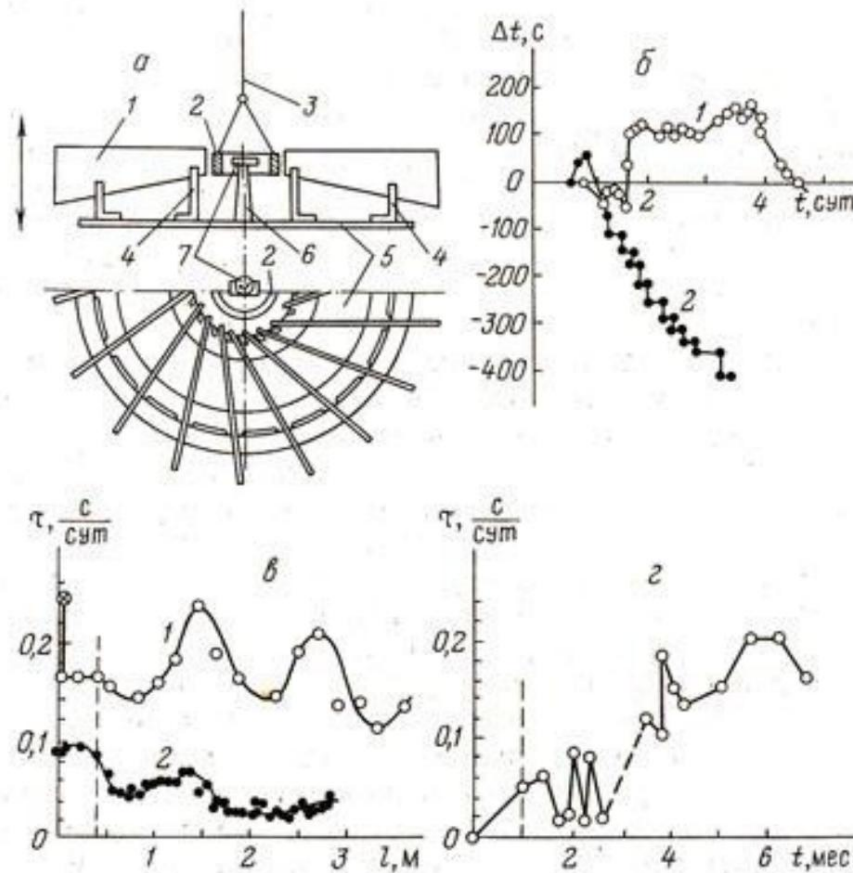


Рис. 13. Схема касательного «ежа» (а), сбои хода часов микрокалькулятора «Электроника МК 53» (б), зависимость ускорения хода наручных часов «Электроника 5» от расстояния (а) и эталонного времени (z)

Rice. 15. Veinik's hedgehog and its effects.

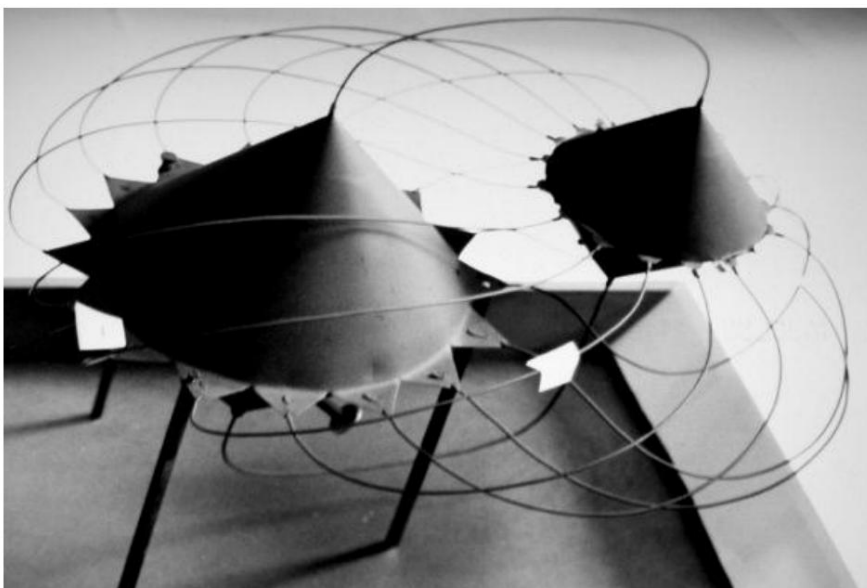
Yu.V. Jiang Kanzhen's installations are based on the effect of forms, in which he has been using since the 1950s. He set up experiments on the transfer of genetic information between biological objects and achieved extremely unusual results: when transferring information from one biological species to another, animals and plants - recipients acquired the characteristic features of donor organisms [62].

Jiang Kanzhen's installation (Fig. 16) consisted of polyhedrons connected by hollow metal pipes, and cones were mounted in some faces (pentagonal), from the tops of which the signal went to the pipes, and from them to the receiving chamber. Inside the polyhedron there was a standard signal generator, it operated at a frequency of about 11 GHz, and a matrix object. The assumption that the pipes act as ordinary electromagnetic waveguides cannot explain the results obtained (in some efficient installations, ordinary water pipes were used, which cannot work as waveguides at such frequencies).



Rice. 16. Yu.V. Jiang Kanzheng next to his installation.

A setup similar in design is shown in Fig. 17. This is A.Yu. Smirnov's installation for information teleportation (1987) [23], judging by the photograph, it has the same technical solutions as Akimov's generator, and is similar in ideology to Jiang Kanzhen's installation.



Rice. 17. Installation of A.Yu.Smironov on teleportation of information.

3.9 Design principles of torsion generators

Analyzing the structure of various torsion generators, it is easy to single out a number of basic principles of generation. Akimov in [9] identified four classes of torsion generators:

- 1) Spin-ordered systems (with nuclear, atomic, molecular spin anisotropy).
- 2) Sources of the electromagnetic field.
- 3) Rotating material and field objects.
- 4) Geometric and topological forms.

The fifth class can be considered a combination of these four principles of generation. For example, Shpilman "Comfort" generators combine the mechanical rotation of ferromagnets with the use of additional coils and electrodes powered by alternating voltage. In Akimov's generators, the primary source of the torsion field is a permanent magnet in the electric field of a cylindrical capacitor, and then this radiation is collected and transported using the shape effect. Krasnobryzhev's dynamic generator uses three of the four principles: an electric motor rotates a specially shaped impeller made of anisotropic material.

It should be noted that the method of obtaining torsion radiation as a component accompanying electromagnetic radiation (ie, class 2) covers the widest frequency spectrum. Akimov's oscillators used frequency modulation from fractions of a hertz to gigahertz. In the generators of the Smirnov group, EHF generators on backward wave lamps (millimeter waves - hundreds of GHz) were used. Bobrov generators use the optical range.

There are also quite exotic generators. So, one of the designs of the torsion generator of the Lunev group used an X-ray source. VF Panov's generator used radioactive isotopes (gamma radiation)¹ .

Table 1 summarizes some of the torsion generators and the principles they use. This section, of course, cannot claim to be complete. Many generators that served as the starting point and prototypes of other well-known designs were not described in any detail in the scientific press available to the author, for example, the generators of Sergeev, Deev, Beridze-Stakhovskiy, Yurovitskiy, mentioned in [9]. Also, quite a lot of designs of torsion generators can be found in patents, but at the same time there are practically no scientific publications on them with the results of impacts from these generators, so these designs were also not included in this review.

¹ There are disappointing statistics of an increase in the likelihood of oncological diseases within a radius of several kilometers from nuclear power plants, and there is no increase in the radioactive background at such a distance - we can talk about some radiation component that is not controlled by nuclear specialists. Pavlenko's experiments with gamma radiation sources [43] show that these sources emit a left torsion field, a similar conclusion was made by N.P. Bakurov based on the analysis of the biological activity of water from reservoirs, where water is involved in the external (non-radioactive) circuits of nuclear power plants [29].

Table 1. Principles used in torsion generators.

	Spin orderliness	Electromagnetic field	Rotation Shape	
Akimov - big Akimov	+	+		+
- small Bobrov	+	+		+
Shpilman		+		
Krasnobryzhev-	+	+	+	+
static Krasnobryzhev-dynamic	+			
Kurapov Lunev - gyro motor	+		+	+
Melnik Magnet		+		+
			+	
			+	
	+			
Smirnov - static Okulov				+
- electrostatic cone Veinik - snakes		+		+
Veinik - hedgehog				+
				+
Jiang Kanzhen		+		+

Be that as it may, the design of torsion generators is now more of an art than an engineering job, and very few generator designs are so reliable and documented that they are available for independent replication. However, to conduct experiments with the simplest torsion generators -

permanent magnets and pyramids - under the power of any researcher.

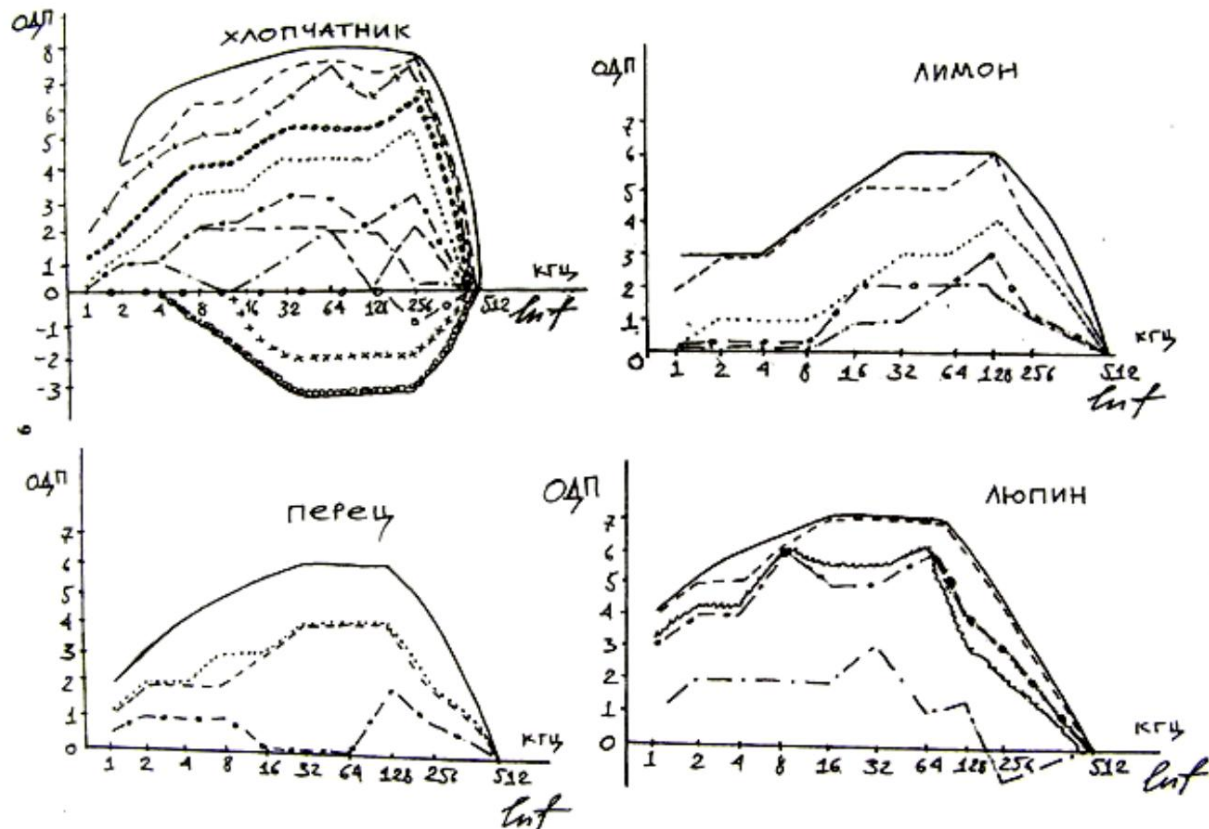
Below is a classification of effects from torsion generators of various designs. Such different ways of generating radiation of the same properties indicate that the nature of this "strange" radiation is fundamental, and all these results should be considered together within a fairly broad but recognizable phenomenology.

4. ACTION ON BIOLOGICAL OBJECTS

The biological activity of torsion generators is perhaps the first effect that researchers have directly encountered. It is generally accepted that being under torsion radiation of a person has consequences that depend on the sign of radiation - the right one increases immunity, reduces the necessary sleep time; left radiation has the opposite effect, although a long stay in the right torsion radiation also leads to negative consequences (overdose). Apparently, the picture is actually more complex, and does not come down to a simple opposition of the properties of the left and right radiations.

4.1 Experiments of the group of V.A. Sokolova

V.A. Sokolova in 1984 - 1991 apparently carried out the first purposeful experiments on the effects of torsion radiation on plants and animals [44, 45]. In a typical experiment, A.A. Deev generators were used, and plants were used as the object of influence, in which the relative dispersion of conductivity (RCD) was measured at 10 fixed frequencies - 1, 2, 4, 8, ..., 512 kHz. A low voltage (0.3 - 3.0 V) was used at these frequencies. The measured parameter in the experiment (during exposure) was subtracted from the control one, while the NDP was recorded in dynamics. The reaction of plants began in the first minute. Diagrams characteristic of various plants were obtained (Fig. 18), where the graphs were built at regular intervals.



Rice. 18. Diagrams of the relative dispersion of plant conductivity (stem).

Then, the effect of torsion radiation on plant seeds was tested in various experimental agricultural enterprises with a positive result. Successful work was also carried out to cure cows from leukemia.

The same group of experimenters (Sokolova, Deev, Grigoriev) at UDN after experiments on animals for the first time effected a blood sample of a terminally ill person (blood poisoning): the radiation was passed through a blood sample of a healthy person and was directed to a test tube with a blood sample of the patient. The man recovered and was discharged from the Blood Transfusion Institute a few days after exposure. In this experiment, two characteristic effects are visible, which will be discussed in more detail below: local information transfer - from a healthy blood sample to an infected blood sample, and the effect of non-local exposure (from a patient's blood sample - to the whole organism).

Among the search program of the Lunev group were studies on the influence of the torsion field on the reproduction and variability of enterobacteria, the gyromotor acted as a source of torsion radiation. In the work of V.K. Chernoshchekov [46] it is noted: "the torsion field contributes to the emergence of variability, destabilizing the microbial population." It also states that the gyromotor torsion field is not just a source of influence, but it creates "geomagnetic field anomalies" (GMF), and already it affects the variability of microorganisms. Such a connection between the effects of torsion generators and "terrestrial radiation" will be further elucidated in more detail.

4.2 Biological experiments of the group of V.F. Panov

When human blood is exposed to a torsion generator described in [20], the group of V.F. Panov in the 1990s obtained the following results:

"The blood of each subject was divided into 5 portions of 1 ml in a test tube. Each portion was exposed to the "torsion field" for 3, 30, 60 minutes and 24 hours, respectively, at a distance of 10 cm from the device. The 5th tube (background) served as a control.

Different exposure of blood in the "torsion field" did not significantly change the specific hemagglutination of practically healthy people (see table).

A similar effect of the "torsion field" on rabbit patients led to decrease in specific hemagglutination (see table).

Table 2. Influence of the "torsion field" on dopamine-specific hemagglutination

Groups	Dopamine				
		3 min	30 min	60 min	24 hours
Control	Background	4.2±4.2	4.2±4.2	0.0±0.0	0.0±0.0
Patients	8.3±5.3	62.5±5.6	62.5±8.5	41.7±5.3	4.2±4.2
	87.5±5.6 \checkmark 1<0.001	\checkmark 1<0.001	P1<0.001	\checkmark 1<0.001	P1>0.05
		\checkmark 2<0.05	P2<0.05	\checkmark 2<0.001	\checkmark 2<0.001
			P3>0.05	\checkmark 3>0.05	\checkmark 3>0.001
				\checkmark 4>0.05	\checkmark 4>0.001
				\checkmark 5>0.001	

Note: P1 - compared to control, P2 - compared to background, P3 - compared to 3-minute exposure, P4 - but compared to 30-minute exposure, P5 - compared to 60-minute exposure. Where \checkmark 1-P5 – reliability.»

In experiments on the effect of torsion radiation on the immune system of mice, the same group revealed an immunostimulating effect. The exposure to the torsion field was one hour, the blood for the study was taken on the 5th day after exposure, the antigen was ram erythrocytes. The authors write about "the activation of both cellular and humoral parts of the immune system. So, if in control mice the level of rosette-forming cells was 53.3%, then in animals exposed to the "torsion field" it was 71.0% ($p < 0.001$). Significant differences between the control and experimental mice ($p < 0.001$) were also found in the reaction of the humoral link of immunity. So, if in the control the antibody titer was 8.33 (log 2), then in the experiment it was 11.7 (log 2)."

VF Panov's group also conducted research on the effects of torsion radiation on mice that received a lethal dose (10 Gy) of radiation exposure. An Akimov generator powered by a constant voltage of 150 V, as well as a generator designed by Panov, was used as a source. Mice with a sublethal dose of gamma radiation were exposed to torsion radiation. AT

as a result, the survival rate of mice in the experiment increased to 33% compared to the control when irradiated with the static right field of the Akimov generator, and up to 60-80% when using the Panov generator. Control animals not exposed to torsion radiation completely died.

Similar results were obtained in the study of the effect on mice of radiation "Kozyrev-Dirac" from the generator I.M. Shakhparonov [70], as well as in the study of the biological effects of "strange radiation" from the installation of L.I. Urutskoev [71, 72]. In these works, it was also found that this radiation promotes tissue repair after radiation damage.

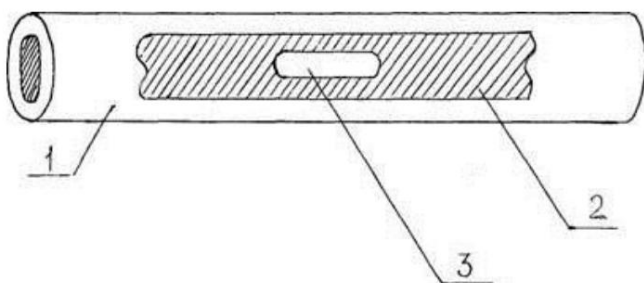
4.3 Results of O.I.Orlov's group

Research work on the biological effects of torsion radiation was done in the 90s - 2000s in many universities, and in Kazan one work was done even in the gymnasium (the supervisor of the work is the biology teacher O.I. Orlov) [73]. Here I cannot refrain from quoting extracts from this interesting work.

A torsion field source was made based on the effect of cavity structures, with modulation of the torsion field by a matrix substance (Fig. 19). The authors write:

"The production of EPS resonators was carried out on the basis of the V.Grebennikov technique. The EPS resonator is a plastic tube (in our case, the body of the marker) filled with pharmaceutical activated carbon (a resonator that captures the torsion field). An active chamber (capsule with filler) is placed in the center of the carbon rod; the filler is hidden in the chamber and cannot directly contact the detector (organism)"

The detectors were volunteers from among schoolchildren and teachers of the gymnasium, as well as rabbits in the laboratory of chemical and biological research of the Institute of Organic and Physical Chemistry. A.E. Arbuzov KSC RAS (Kazan).



Rice. 19. Scheme of the EPS device - resonator [73]. 1 - housing of the EPS resonator, 2 - activated carbon, 3 - active chamber with filler.

As an information matrix (substances in the active chamber), horse chestnut fruit powder, valerian rhizome powder, and tobacco leaf powder were studied. The authors note:

"1) In cooperation with the laboratory of chemical and biological research

Institute of Organic and Physical Chemistry. Arbuzov (Kazan), experiments were carried out on rabbits. The rabbits were fixed in special devices, after which the ears of the rabbits were photographed, and then an EPS resonator with chestnut powder was sent to one ear of the rabbit. The exposure lasted 5 minutes, after which both ears were again filmed. The photo shows that the veins on the ears of the rabbit are swollen, that is, expanded ...

2) A series of experiments involving volunteers from among students and teachers of gymnasium No. 102 confirmed the influence of the torsion field of this resonator on a person. In the experiments, the EPS emitter was directed to the wrists of the subjects. In almost all, the action of the resonator caused varicose veins, in 30% - obvious pulsation of the saphenous veins was observed, 12% had a reaction to the device, expressed in the expansion of the veins of the wrist and palm, or in the appearance of a wandering blue spot (photo 4.5). Among the subjects there were also those on whom the resonator did not have a pronounced effect (11%) "

During experiments with the rhizome of valerian officinalis, the pressure of 10 students was measured. First, pressure was measured before the experiment (stage I), then after each of the students held the resonator with valerian for 5 minutes (stage II), and then two more measurements were taken without a resonator with an interval of 10 minutes (stages III-IV). The results are shown in the table below.

Table 3. Pressure measurement results.

Порядковый номер учеников 10 кл.	Этапы эксперимента			
	I	II	III	IV
1й ученик	110\70	110\70	90\65	105\65
2й ученик	110\70	110\70	90\85	80\70
3й ученик	110\70	90\70	85\60	80\60
4й ученик	110\70	90\70	90\70	85\70
5й ученик	90\70	90\65	85\65	90\75
6й ученик	90\70	80\60	85\65	95\70
7й ученик	95\75	85\70	90\75	95\75
8й ученик	110\75	90\75	90\85	80\70
9й ученик	90\70	80\60	80\65	90\75
10й ученик	110\70	110\70	90\80	80\70
среднее значение	102\71	94\68	88\72	88\70
дельта	31	26	16	18
сумма	173	162	160	158

In the "Practical significance" section, students write:

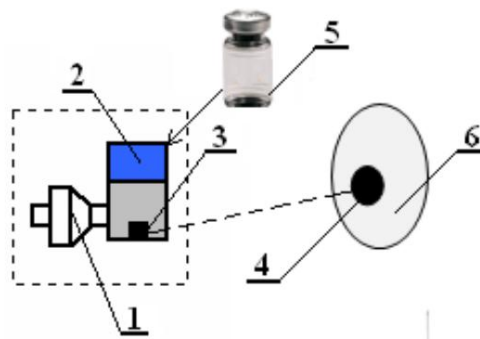
“Multiple experimental confirmation of the phenomenon of information transfer through space, as we believe, will be of some importance for science, and the options for its practical application will allow creating entire areas of use. The effect of EPS resonators with fillers from tobacco, valerian, chestnut considered in experiments makes it possible to create qualitatively new (non-contact) anti-smoking, hypertension, varicose veins, i.e., there is no need to use tablets, injections or ointments, it is enough to carry in your pocket required EPS -

resonator. I would like to note that our biology teacher O.I. Orlov, using EPS - a resonator with tobacco, quit smoking, and many teachers suffering from hypertension are happy to use EPS - resonators with valerian "...

“In addition, the high cost of drugs does not allow a certain group of the population to regularly buy the necessary drugs, in the case of using an EPS resonator, the drug is not consumed and its effect lasts for a long time. For example, the action of an EPS - a resonator with valerian lasts about two years from the date of its manufacture, and the cost of such a device is about 35 rubles. We hope that this socially significant side of our research will turn out to be important.”

4.4 Results of V.G. Krasnobryzhev

Medicine is one of the most promising areas for the use of torsion generators. Viktor Krasnobryzhev tested the technology of field vaccination [54] (Fig. 20), which consisted of the following. The test subjects (5 people and 5 rabbits) had translator chips (metal plates - receivers of non-local effects) attached to their bodies. The inductor chips were in a "resonator" under the influence of a torsion generator. The resonator was a container that, in addition to the plates, contained a sample of the vaccine. The exposure time was 36 hours. As a result, antibodies of this vaccine were found in the blood of the subjects (the vaccines Influvac for the prevention of influenza, and Twinrix for the prevention of hepatitis A and B were tested), while the time of the immune response was significantly shorter compared to the usual activation method (36 hours instead of 7-10 days).).



Rice. Fig. 20. Vaccine information teleportation scheme: 1 – spin field generator, 2 – resonator of vaccine spin configurations, 3 – chip-translator of spin states, 3 – chip-inducer of spin states, 5 – vaccine, 6 – object of action – Patient.

VG Krasnobryzhev explains this result as follows. A molecule of some substance, getting into an aqueous solution, changes the spin configuration of the protons of the water molecules surrounding the molecules of the substance. The complexity of such configurations can be quite high, so that water can absorb information about the structure of a wide variety of substances, including the spatial configurations of macromolecules. Water thus serves as an information matrix, and the number of molecules of the substance itself in solution no longer plays a role: biological systems are affected by the structure of spin copies, and the task is to convey only information about the substance. It is this transmission of complex information about the vaccine in some semblance of a hologram that is apparently carried out in Krasnobryzhev's spin teleportation system. Faster vaccination with the field method is explained by the fact that the water system of the body is transferred to a coherent state, while such a system is sensitive to the transmitted information, and instead of sequential cloning, a parallel reaction of all B lymphocytes occurs at once.

Section 5, devoted to the activation of water and other liquids, will also describe other results of Krasnobryzhev with coherent states of substances, incl. related to biology.

4.5 Results of the group of V.P. Kaznacheev

Under the leadership of V.P. Kaznacheev, studies of the effect of torsion radiation on the cell culture of KN (human kidney) in vitro (cell monolayer) were carried out [47]. The cell culture was kept for 20-24 hours in a thermostat at a temperature of 37.2°C, then placed for 2 hours under the radiation of a torsion generator, then the cells were again placed in a thermostat. After a certain incubation time (24, 48, 72, 96, 168 hours), glasses with a monolayer of cells grown on them were removed, fixed and stained according to Romanovsky, and then morphological studies were performed. The density of the monolayer and mitotic activity (MA), as well as the amount of total protein were studied

monolayer.

The research results are shown in tables 4-5.

Table 4. Effects of the left torsion field on the mitotic activity of cells.

No.	Time	MA%	MA%
Esperi-fence	menta sample	(cont (experience)	(experience)
		troll)	
1	1.5	24	4.6
2		72	5.1
3		24	1.5
			4.9

Table 5. Results of determining the total amount of protein in the studied cell monolayer under the influence of torsion fields

No. exp. *	Left-handed torsion field		Right-rotating torsion field	
	Amount of protein (%)		Amount of protein (%)	
	control	experience	control	experience
--	70.5	44.1	36.0	75.0
2	67.4	18.0	23.0	43.0
3	24.0	20.0	11.2	93.0

The authors come to the conclusion that the left torsion field leads to the activation of mitoses (cell divisions) and to a sharp inhibition of protein synthesis. The right torsion field produces the opposite effect. The authors write:

“However, we assert (Kaznacheev V.P.), on the basis of our experimental data, that intercellular connections are realized not through electromagnetic fields, as A.G. Gurvich claimed, that there are other flows in which electromagnetic fields are only elements of a more complex information space...

In our work, it was shown that the behavior of a cell in a hypogeomagnetic environment or torsion flows is anomalous, and this is not related to electromagnetic fields. The affected cell can transmit information to another cell, and the secondarily affected cell, in turn, can transmit it further, and so on. -

there is reproduction, disease (epidemic), and this is not a resonant process. It has been shown that a cell can transmit its information to an erythrocyte, while the erythrocyte does not change, but the same pathogenic information can be read from it...”.

In the mirror cytopathic effect previously discovered by Kaznacheev's group, one feature was found that indicates that the transmission of pathogenic information between groups of cells does not occur via an electromagnetic channel: in the studies of Lupichev's group, when shielding with a screen made of iron and other materials, pathogenic information was still transmitted [48].

4.6 Use of ESR as an indicator of torsion radiation

The effect of torsion radiation on the blood has been confirmed by several researchers.

The erythrocyte sedimentation rate (ESR) turned out to be a fairly good test that responds to torsion radiation.

G.N.Dulnev and A.P.Ipatov in the preprint "Investigation of the phenomena of energy-information exchange: experimental results" [49] write about experiments on the effect of radiation from Akimov's small torsion generator on blood, conducted in October 1996

G.:

"Analysis of the data obtained allows us to conclude that among the indicators of a clinical blood test, the most sensitive to torsion radiation

generator turned out to be an indicator of erythrocyte sedimentation rate (ESR). The values of ESR changed compared to the background by four to five times in both patients, depending on the radiation parameters (supply voltage). The change in other indicators of the clinical blood test is within the error of the methods for their determination. For further studies, only the ESR indicator was used as the most informative.

This is also evidenced by the data obtained in 2001 by V.N. Anosov and N.F. Kvartalnov and N.F. Perevozchikov when studying the non-electromagnetic component of the radiation of a helium-neon laser of the LG-75 type (632 nm, 25 mW) in the Elektron Design Bureau through various filters [50, 51, 52, 53].

4.7 Results of A.V.Bobrov. Non-electromagnetic component of lasers and LEDs

Apparently, A.V. Bobrov was the first to study the non-electromagnetic component of the laser. In the work "Information torsion fields in medicine" [56], A.V.Bobrov considers a common method of therapy: laser therapy. This method consists in illuminating a certain area of the body with a low-intensity laser. As far as one can judge, laser therapy devices are widely used in medical practice. The author draws attention to the paradoxical properties of this method:

- With the help of a laser, they even affect the internal organs, while the laser beam penetrates only fractions of a millimeter in the skin;
- The effect is observed when exposed to a laser beam through clothing and even plaster bandage
- The effect increases when a drug is applied to the irradiated area (laserophoresis).

A.V.Bobrov points out that the existing methods of explaining the mechanism of laser therapy cannot explain these paradoxes, and concludes that the torsion component of laser radiation operates here, the existence of which was predicted by A.E.Akimov in the early 90s, and experimentally found by A. .V.Bobrov in 1997 when exposed to current systems on double electrical layers.

The above results were obtained mainly with gas lasers. But there are also results that testify to the non-electromagnetic component of semiconductor laser emitters (LI), which has biological activity and the ability to transfer information about a substance. Here are the results of one of the experiments:

"Three groups of bean seeds of the same variety (12 pieces per group) were soaked simultaneously under equal conditions. Before wetting, the seeds in group "A" were not exposed to any irradiation. In group "B", the seeds were exposed to unmodulated radiation emanating for 10 minutes from LI In group "B" the seeds were subjected to a ten-minute treatment with radiation,

passed through the information matrix - UPSA aspirin and vitamin C."

"A day later, 11 seeds germinated in group C (about 92%); in group B - 60%; in group A - 25%. All seedlings in group C had the same size and were larger than seedlings in the other two groups. Seed germination in the group And it lasted for 3 days. [57]

These results are also due to A.V. Bobrov. In 1997, he also experimentally recorded the biological effect of the non-electromagnetic component of conventional LEDs when pulsed. The author points out that the use of conventional LEDs is no less effective than the use of laser emitters (infrared and in the visible range). A 10x10 matrix of 100 LEDs was used as an emitter, giving a light spot of 100 cm².

A.V. Bobrov tested the use of LED emitters in veterinary medicine [56], and trials have shown the effect to be substantially positive:

"So, when treating a wound with a diameter of 12-15 cm on the surface of the animal's body, approximately 20 minutes after the first information impact, we observed significant changes in the exposed tissues over its entire area. Pus, which completely covered it before exposure, remained in a narrow strip along the perimeter; in the exposed muscle tissue over the entire area of the wound, a significant blood flow was noted, which caused its significant swelling. This reaction can be considered as the result of a local effect on the vascular system. levels -

genetic and tissue.

When testing the method in medicine, a positive effect was also obtained [56]. The results obtained by the iridologist V.A. Fateev using the Bobrov technique (irradiation with a therapeutic laser with overlapping of the electromagnetic component) indicate:

"The method of exposure corresponded to the method of laser stimulation according to A.M. Kotlyarsky. The skin zones of Zakhariev-Ged were exposed to radiation (7 patients in total); the total duration of exposure was 1 minute. The results of exposure were determined by recording response reactions using video iridology. patients was the appearance (in one case - strengthening) of the hypius of the pupil.

In another series of tests, pulsed radiation from a laser and LEDs was passed through information matrices - drugs. The impact was carried out on patients with arthritis, acute respiratory infections, sinusitis, hypertension, pneumonia, mastitis and other diseases. The drugs used were the same as those used in traditional medicine for these diseases - indomethacin ointment, aspirin, vitamin C, Adelfan and others.

"The results of the experiments testify to the high efficiency of a previously unknown method of field introduction of information into a diseased organism - torsion (information) therapy. Judging by the results of the very first experiments, the effectiveness of the method of drug information therapy, which consists in exposure to radiation modulated by information about the spin structure of a therapeutic drug, is higher existing method of drug therapy.

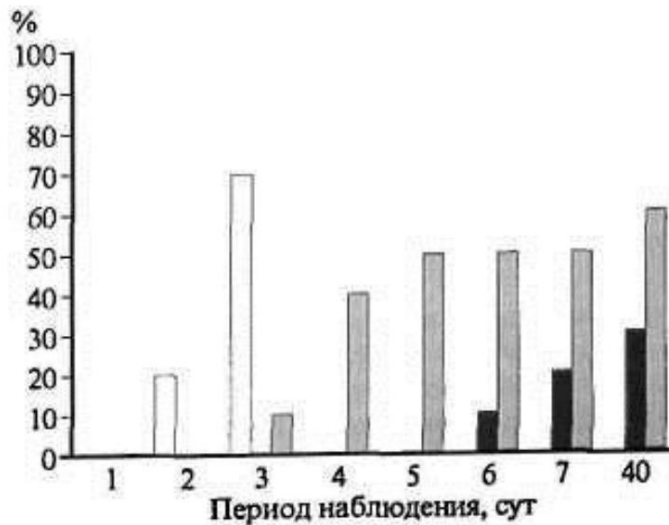
A.V.Bobrov also points to the torsion nature of the effect of homeopathy and the FOI testing technique. In recent works, A.V.Bobrov came to the conclusion that it is the near spin fields that are responsible for the phenomenon of biological "induction", which has been known for more than a hundred years, but still does not have an acceptable explanation of the mechanism, and it is torsion fields that have a significant impact on the formation of multicellular living organisms [58].

4.8 Results of P.P. Garyaev

Here it is also necessary to mention the results of the group of P.P. Garyaev on the treatment of artificial alloxan diabetes mellitus in rats [59]. His installation included a laser with preparations of the pancreas and spleen applied to a translucent mirror, the laser control circuit had a feedback loop. In this case, the laser device generated broadband electromagnetic radiation (BEI), which, as expected, contains the information of preparations [61].

Different groups of rats were positioned differently in relation to the laser:

- 1) the first group, the control group, was without exposure,
- 2) the second group was at a distance of 70 cm from the laser,
- 3) the third - at a distance of 20 m, in a partially shielded (basement) room.



Rice. 21. Graph of lethality of rats in three groups [59].

SEI, "modulated" by drugs, significantly influenced the course of diabetes mellitus (Fig. 21): in the second, "near" group, the level of glucose in the blood significantly

decreased in 80% of animals after exposure to SEI. Changes in comparison with the control were also observed in the third, "average" group in terms of distance: in it, mortality on the 4th day after the administration of alloxan was 50% of the control. In this paper, the authors make an assumption about the mechanism of action associated with the quantum entanglement of photons of laser radiation and SEI. In other works and interviews, Garyaev explains the results of the impact on biological objects by torsion fields.

Other results of Garyaev are a distant effect on DNA preparations taken from the thymus of a calf. The drug was divided into two parts, one was affected using the "effect of shapes" (Garyaev indicates the presence of know-how), and the second part, 30 km away, measured the parameters of light scattering. As a result, the autocorrelation function of the light scattering of the receiving sample reacted to the impact on the transmitting sample [60].

The totality of phenomena with a field effect on DNA was taken by Garyaev as the basis for the concept of the "wave genome". In these experiments, as well as in the experiments of Sokolova and Krasnobryzhev, a non-local effect is observed: at a distance of 30 km it is impossible even to assume a targeted effect on the DNA preparation by electromagnetic radiation, especially since the shape effect mentioned by Garyaev directly refers us to torsion phenomenology and makes us assume that the source of influence was a torsion generator.

4.9 Jiang Kanzhen's results

Speaking about the impact of non-electromagnetic radiation on biological objects, it is impossible not to mention the results of Jiang Kanzhen on the transfer of genetic information to biological objects.

These results are very striking and have been covered in the press more than once (see, for example, [62]): genetic information from some biological objects was transferred to the embryos of others by the field method. As a result, the organisms that developed from the embryos appeared signs of donor objects, and the signs acquired in this way were subsequently inherited. Here is a description of three experiments [65]:

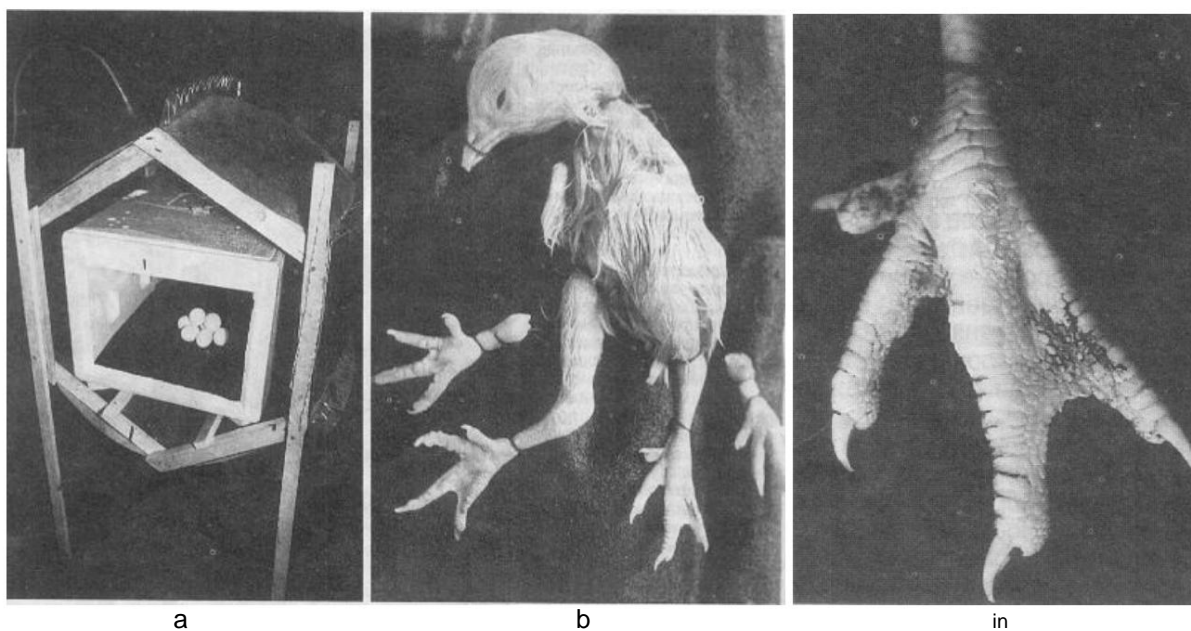
“Ducks as donors were placed in the receiving part of the biotron, while hatching chicken eggs, as recipients, were placed in the affected part of the biotron. As a result of these experimental eggs, the hatched chicks had certain characteristics of ducks; chickens with a flat head, a wide lower jaw and duck-like webs between the toes. A total of 500 eggs were used in the experiments, of which 80% of cases hatched into flat-headed chicks and more than 25% of cases were observed to have webbing like ducks between the toes ($P < 0.001$). This change was not observed in 600 eggs of the control groups...” (Fig. 22, PRC, 1961)

“Wheat seedlings, as donors, were densely planted in pots with a total area of 3.6 sq.m., placed in the receiving part of the biotron, while the germinated grains

corn, as recipients were placed in the affected part of the biotron, Of the 7,000 seedlings, more than 55% had lateral stems, more than 23% - special panicles, in addition to the normal corn panicle, a special ear has formed with grains similar to corn and some grains like wheat on top of the plants, the yield increased by 30%. Moreover, all acquired changes were inherited by subsequent generations (observations were carried out for 10 years from the beginning of the experiment) ($P < 0.01$) ... "(Fig. 23, USSR, 1979)

"In collaboration with Professor Zheng Qiang and other experts, an experiment was again conducted to study the field control and achieve the effect of rejuvenation using mice as an experimental animal. Adult mice were exposed to microwave frequency BP emitted from various seedlings of edible plants. Biochemical analysis showed that the DNA synthesis of corneal cells increased by 50% ($P < 0.05$); division of pathological cells decreased by 41% ($P < 0.05$); myelocyte DNA synthesis

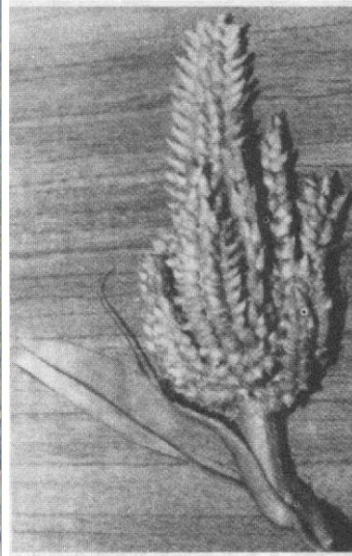
increased by 73% ($P < 0.001$); and DNA synthesis of thyroid cells increased by 66% ($P < 0.01$). Therefore, it is easy to conclude from this that the rejuvenation of experimental animals in general is based on a more increased DNA synthesis of all visceral cells of the individual, on increased modernized abilities of physiological cells, as well as on a reduced level of division of pathological cells after they have been exposed to BP emitted by plant seedlings. (Russia, 1992).



Rice. Fig. 22. Results of the experiment on the irradiation of chicken eggs in the Chiang Kanjen facility: a) chicken eggs before the irradiation session; b) "kuroutka"; c) a chicken foot with a membrane absent in the control group.



a



b

Rice. 23. Effects of irradiation of corn seeds with information from wheat: a) numerous lateral stems in corn; b) ears in place of stems with seeds.

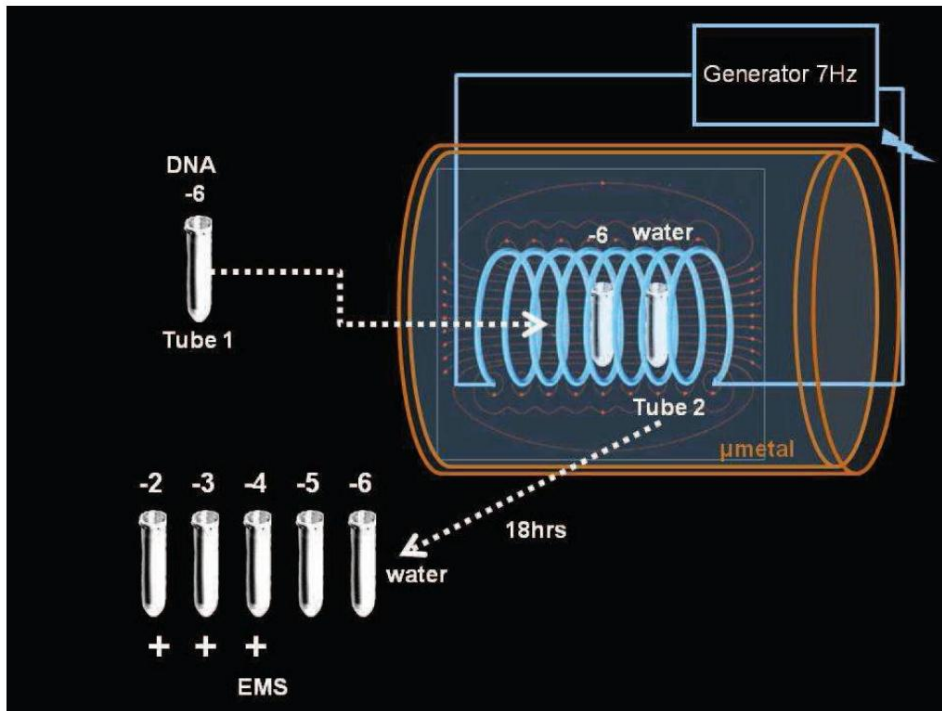
At present (2011), Jiang Kanzheng continues to develop his method, for example, in his installation they effectively treat (rejuvenate) people with information from plant seedlings [64].

As mentioned above, Kanzhen's original explanation of the electromagnetic mechanism of information transfer contradicts the design features of his installation. The nature of the impact (complex informational transfer of genetic information) and the design of the installation suggest that the information is transported by a torsion component excited by an electromagnetic generator, modulated by a donor object, and transmitted from one chamber to another through the effect of forms.

4.10 L. Montagnier's results

At the end of 2010, Nobel laureate L. Montagnier "shaken" the world scientific community with a preprint [67], which describes results that are largely similar to those of Garyaev, Krasnobryzhev, and Kanzhen. In the work of Montagnier, two hermetically closed

test tubes (Fig. 24). One was with a diluted DNA preparation (10^{-6}), the second was with distilled water. After 18 hours of operation of the installation, building components for DNA were added to the water from the second test tube - nucleotides, primers, polymerase. AT as a result, DNA was synthesized in it, 98% identical to the donor drug. The authors of the work explain this effect by the transfer of information from an aqueous solution by electromagnetic waves, as a result of which the same structural configurations of the coherent phase of water appear in pure water in the second test tube (the authors refer to the theory of coherent states of water [68]).



Rice. 24. Scheme of L. Montagnier's experiment on the field transfer of the DNA structure to water.

This work served as a kind of searchlight, indirectly illuminating many of the biological studies considered in this review, as well as numerous works on information transfer to water. And, although it is the electromagnetic radiation from DNA that is studied in it, these results can also be interpreted within the framework of the torsion concept: the solenoid serves as a source of not only an electromagnetic, but also a torsion field, and it is already transferring information to water.

5. ACTION ON WATER

The impact on water deserves separate consideration, although it is closely related to biological research, since most of the researchers here used biological objects to assess the effects.

The effects themselves can be divided into two main groups:

- 1) Transfer of water to an active, or coherent state;
- 2) Information transfer to water.

Let's continue with the biological effects first. It should be noted that the effects described in the previous section can also be attributed to the effect of torsion radiation on water, which is part of living organisms.

VG Krasnobryzhev studied the biological properties of coherent water [55]. The water was brought into a coherent state by a system of spin teleportation (it was described in Section 3). The effectiveness of inhibition of the production of HIV - in vitro and in vivo, viruses of vesicular stomatitis (in vitro) and herpes (in vivo) was studied.

The herpes virus was injected into mice inside the brain in a volume of 0.03 ml, coherent water was injected intraperitoneally in a volume of 0.2 ml (12 mice), the control group was injected with saline instead of coherent water (14 mice). The control completely died, 50% of mice survived from the experimental group.

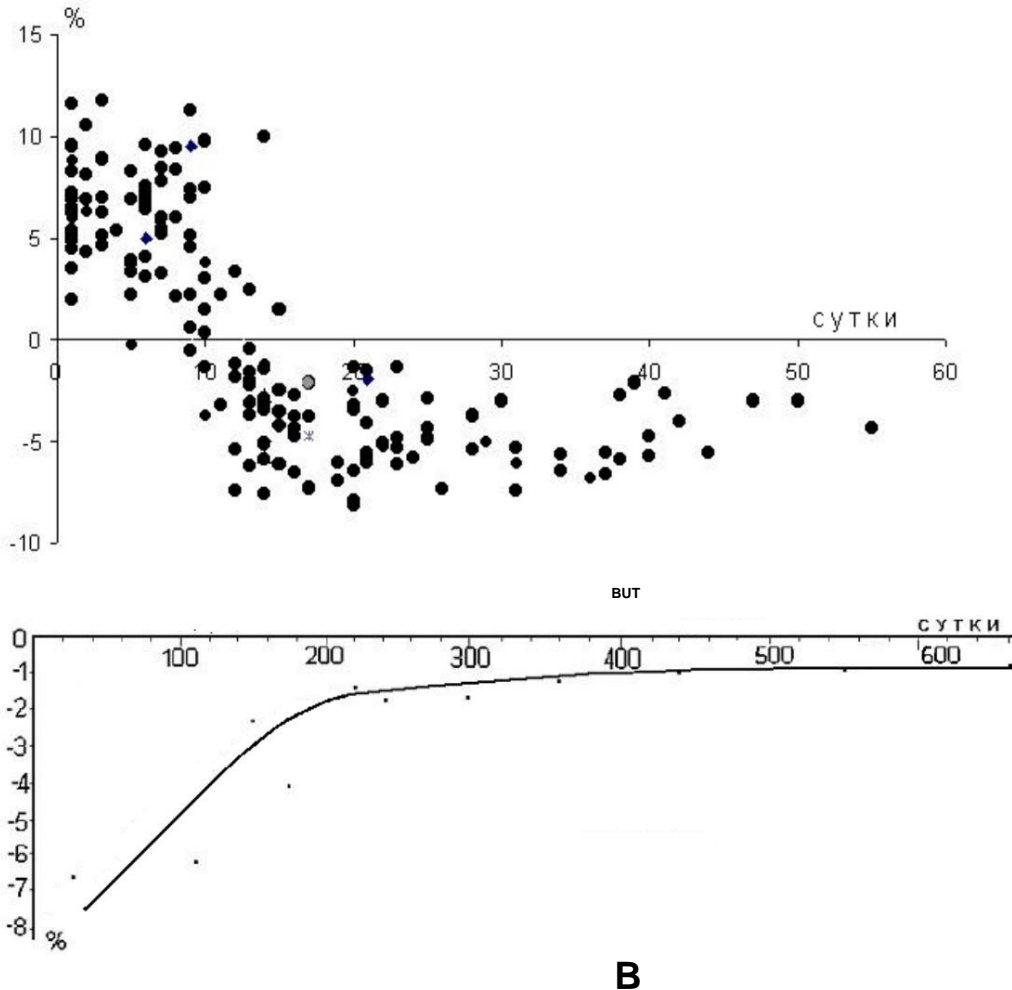
Vesicular stomatitis virus was introduced into a culture of L41 cells grown in test tubes. The cells in the experiment were treated with coherent water; in the control, there was no coherent water. As a result, the inhibition of virus reproduction was 2 lg ID50.

The study of HIV inhibition was carried out both in vitro and in vivo. In the first case, a monolayer of COS cells was infected with HIV and treated with coherent water, the control was only infected with HIV. Inhibition of HIV reproduction was 1.6 lg ID50.

In a pilot experiment on the treatment of HIV-infected patients in South Africa, the measurement of the number of CD4+ T-lymphocytes in the blood was used - work [55] provides data on 6 volunteer patients. The content of CD4+ increased, as well as the condition of patients improved in the first 10 days - clearing the skin of eczema and herpetic manifestations, clarifying urine, improving sleep, weight gain.

Toxicity studies (performed on mice), as well as cytological and cytogenetic studies of coherent water, showed that this water is non-toxic, does not significantly affect the mitotic activity of cells, and also does not affect the cell karyotype and does not lead to chromosome breakdowns.

The effect of activated water on yeast culture was studied by A.V. Bobrov [75]. Water activation was carried out by an LED generator. On Fig. 25 shows graphs of biological activity of irradiated water depending on time. The biological activity of water was determined by zymase activity (carbon dioxide release by yeast in a nutrient medium) in relation to the control.



Rice. 25. Dynamics of biological activity of water (Fig. 5.1 in [75]):
 A - B - 20 samples of activated water with a shelf life of 53 days;
 activated water with a shelf life of 660 days

In addition, Bobrov's experiments show that the dilution of activated water affects its biological activity, and this effect is non-linear:

"Experiments in 1998 on broilers showed that undiluted activated water can have a detrimental effect on one-day-old broilers, and with "therapeutic" (when diluted 1:50-1:60) the body's ~~immunity~~ resistance. - raise

Experiments 2000-2001 on microorganisms and plants confirmed the main conclusions obtained in experiments on broilers: with some parameters of water activation, its use without dilution can reduce germination and suppress

plant development. The effectiveness of the impact increases relative to the control with a 4-5-fold dilution or with the use of undiluted water for 4-5 days after its activation.

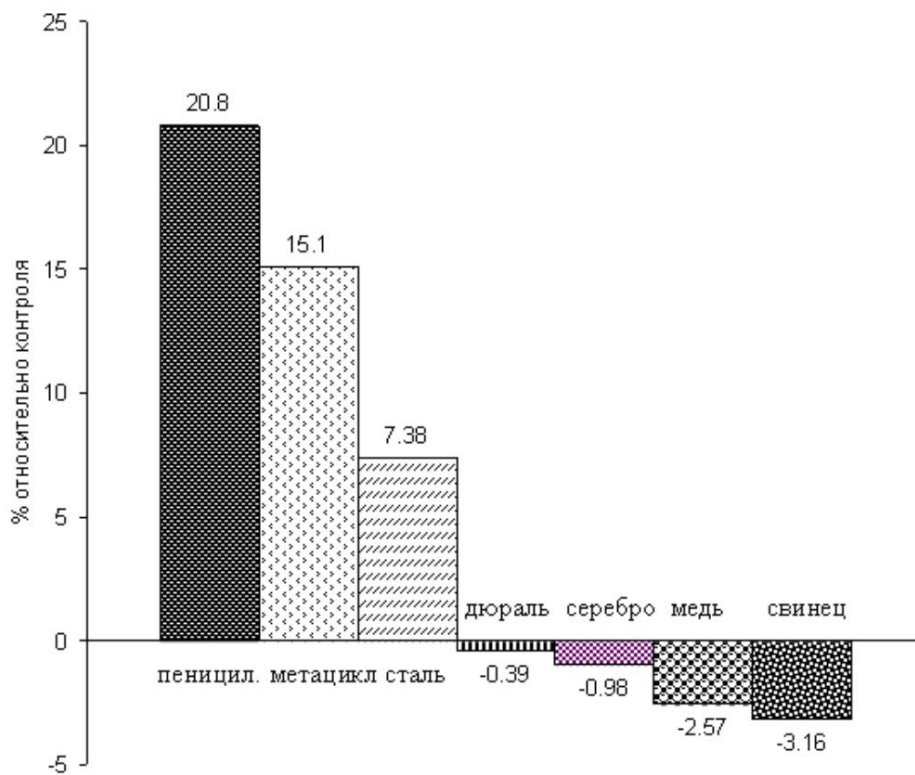
Boiling water, as a rule, sharply changes its biological activity towards inhibition. Moreover, the memory of the effect on water, which consists in irradiation with a torsion generator through any substance, is also preserved after boiling, in the negative region of activity: the difference in the indicators of zymase activity (CAP) during torsion activation by various substances remains statistically significant.

These results were tested by A.V. Bobrov in practical applications in medicine, agriculture and the food industry. The use of activated water in the treatment of trophic ulcers was tested with a positive result [56]. Experiments were also carried out on the germination of rye and wheat.

[76], as well as testing the method of using activated water in the production of bread [77] and cheese [78], and positive results were also recorded here (these effects are protected by patents).

Many experiments were carried out by Bobrov with information transfer to water. The scheme of experiments here was as follows: torsion radiation from a source "shone" through an information matrix from some substance onto water, and this water was used to influence biological objects - yeast, plants, animals, humans. Control samples of water were also used - they were not affected by torsion radiation.

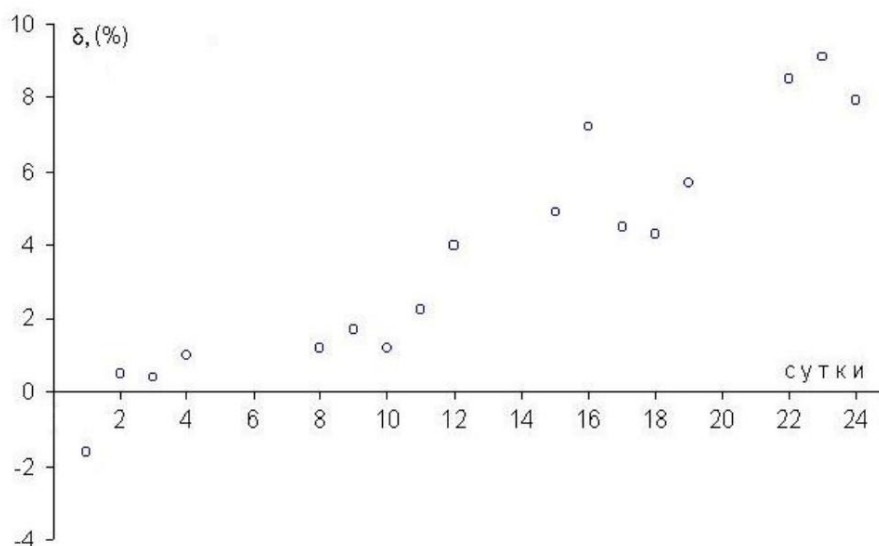
Penicillin, metacycline, steel, duralumin, silver, copper, and lead were used as information matrices. It is shown that the biological activity depends on the substance of the information matrix **(Error! Reference source not found.)**.



Rice. Fig. 26. Dependence of the efficiency indicator of mediated information impact on the substance of the information matrix used in water activation.

In addition to biological activity, some physical parameters were studied water:

"To determine the optical density, a photometer of the KFK-3 type was used. Figure 27 shows the results of recording the transmittance of water activated using a penicillin matrix. Observations were carried out for 24 days from the moment of activation. In the specified time interval, the transmittance of activated water increased continuously".

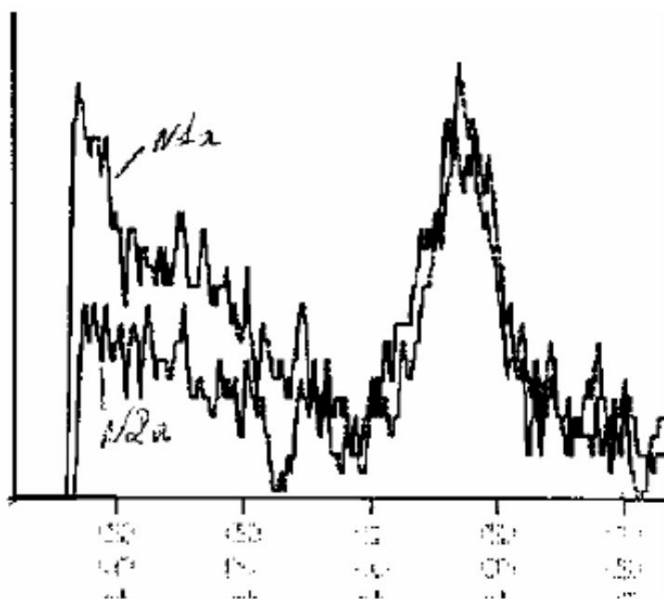


Rice. 27. Dynamics of changes in the transmittance of activated water (Fig. 18. from [76])

Studies of water hardness have shown that activated water has a reduced hardness, and the hardness is also affected by the substance of the information matrix through which the radiation was passed during activation.

V.N. Anosov at the Department of Biophysics of the Moscow Institute of Physics and Technology recorded a change in the absorption spectrum in the ultraviolet region (185-200 nm) of a weak solution of EDTA (10^{-6} mol) when exposed to a non-electromagnetic laser component, and N.V. Zakrevskii, Research Institute of Applied Problems, St. Petersburg - a change in the absorption spectrum in the region of 220-250 nm for extremely pure water under the same effect [50, 53].

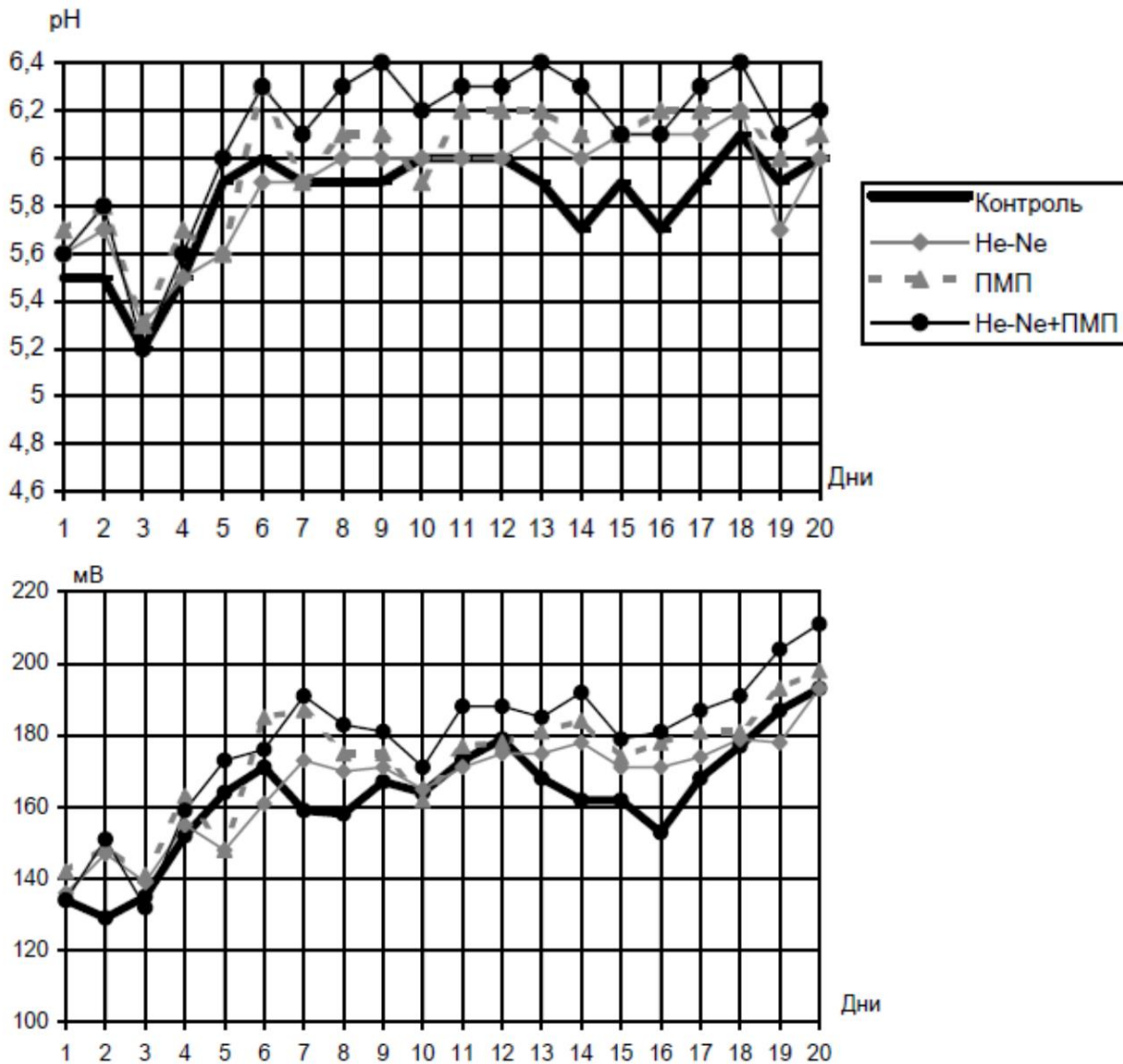
A.Yu.Smirnov's group [23] showed the effect of torsion radiation from an EHF emitter at a frequency of 42 GHz on the spectrum of Raman scattering of water (Fig. 28).



Rice. 28. Effect of torsion radiation on the Raman spectrum of water 2 Mj/cm (the excitation wavelength of the Raman spectrum of water is 450 nm - along the abscissa). On the y-axis, the scattered light intensity in rel. units The spectrum shows areas related to "heavy" (unidentified interactions of water molecules) clusters (left).

Also, V.V.

Studies of water activated by He-Ne laser radiation, a constant magnetic field, and their combination were carried out at the Novgorod State University [79]. An example of the change in pH and redox potential of tap water for various treatments is shown in Fig. 29.

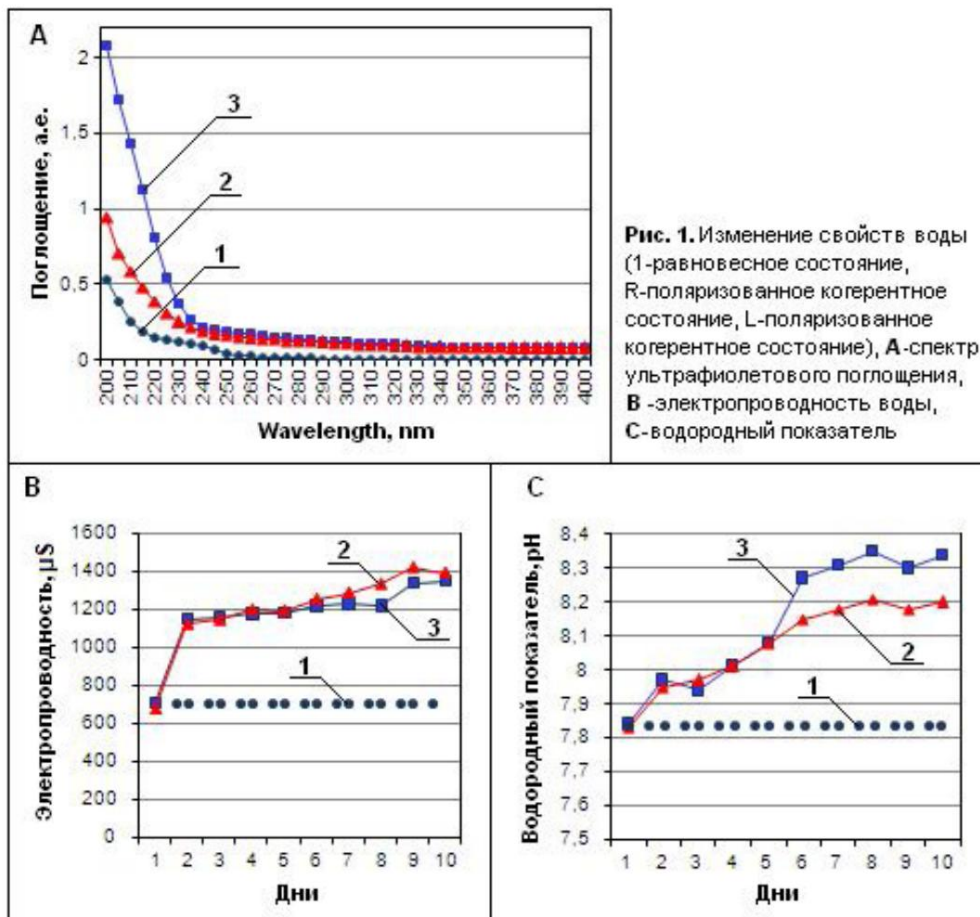


Rice. 29. Changes in pH and ORP upon activation of tap water.

The physical properties of activated water have been studied by many researchers. So, in the work of M.V. Kurik and V.G. Krasnobryzhev [82], data on the measurement are given:

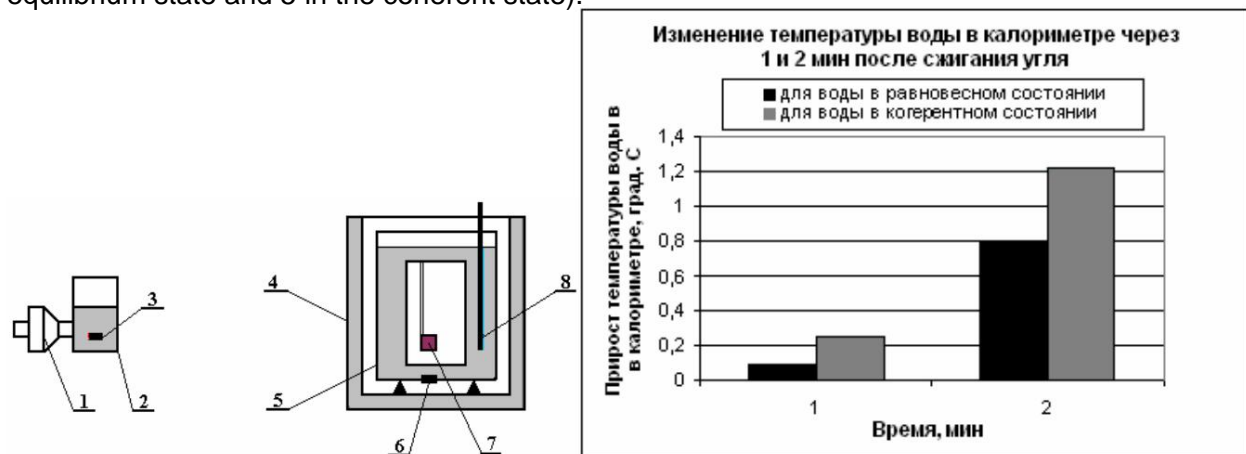
- acid-base balance (pH), • electrical conductivity (\dot{y}), • optical absorption spectra.

On Fig. 30 shows the measurement results. The authors point out that the indicators for the so-called. L-water and R-water differ not only from the indicators of equilibrium (ordinary) water, but also from each other: L-water is more ordered. It is also said that the biological activity of L-water is higher. The dynamics of the properties of L- and R-coherent water is also given in [83].



Rice. 30. Results of measuring the properties of coherent water.

The work [84] provides a study of changes in the heat capacity of coherent water (Fig. 31, Fig. 32). The result obtained here by Krasnobryzhev is absolutely amazing: the heat capacity of coherent water is approximately 2 times less (5 measurements of water were made in the equilibrium state and 5 in the coherent state).



Rice. 31. Installation scheme for measuring the heat capacity of coherent water. 1 - generator spinor field, 2 - spin resonator states, 3 - translator chip, 4 - calorimeter KL-10, 5 - container with heated water, 6 - chip inductor, 7 - coal sample in

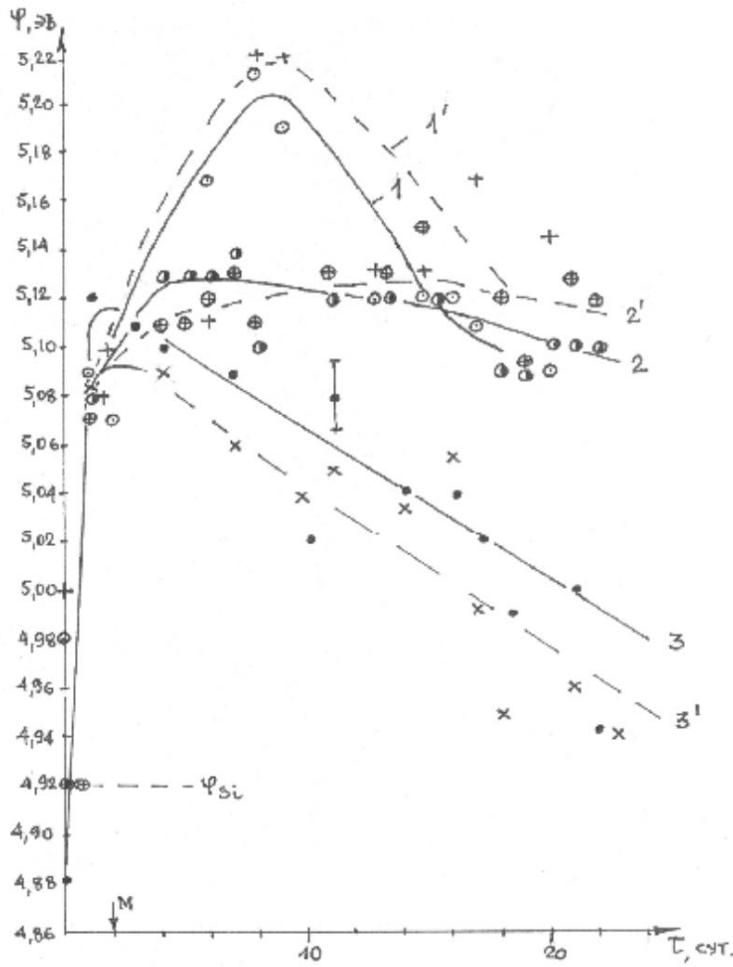
Rice. 32. Results of temperature measurement.

calorimetric bomb, 8 - temperature sensor.

Approbation of the use of the water activation system in the conditions of a city boiler house equipped with 4 boilers with a capacity of 12 MJ each showed an increase in the efficiency of boilers from 75% to 85% in the experimental season 2000-2001, compared with the seasons 1997-2001. 2000s.

In 2009, the group of S.N. Novikov from MIET published the work "Remote transmission of information on the supramolecular structure of water" [85], which describes the effect of non-contact transmission of the sorption characteristics of water vapor from one sample to another. The experiment consisted in taking the kinetic curves of the electron work function $\bar{\gamma}(t)$ of single-crystal silicon in saturated vapors of aqueous solutions.

For $ZnCl_2$, $CuCl_2$, $NaCl$ solutions of various concentrations (1.0M; 0.1M; 0.01M) kinetic curves (dependence of the work function of electrons on time) have a certain form, which depends on the substance and concentration. To control the purity of the experiment and the equality of conditions for all samples with solutions, the authors also took kinetic curves from the so-called. "witnesses" - containers, where instead of a solution there was water, from which the solution was prepared. "Witnesses" stood next to the samples of solutions, and all the containers were sealed. It was found that the kinetic curves of the "witnesses" repeat the kinetic curves of the solutions next to which they stand (Fig. 33). The authors note that the effect of transferring information about the structure of the solution to pure water is maximum at a distance of about 2 m, and is not detected at a distance of more than 4.5 m.



Rice. 33. Changes in the work function of the electron Si (100) \bar{y} on exposure time \bar{y} in saturated vapors over solutions of zinc chloride and water.

Designations:

- one molar solution of ZnCl₂;
- eleven' + "witness", pure H₂O;
- 2- ◐ decimolar solution of ZnCl₂;
- 2'- ⊕ "witness", pure H₂O;
- 3-3'- ● centomolar solution of ZnCl₂;
- × "witness", pure H₂O;

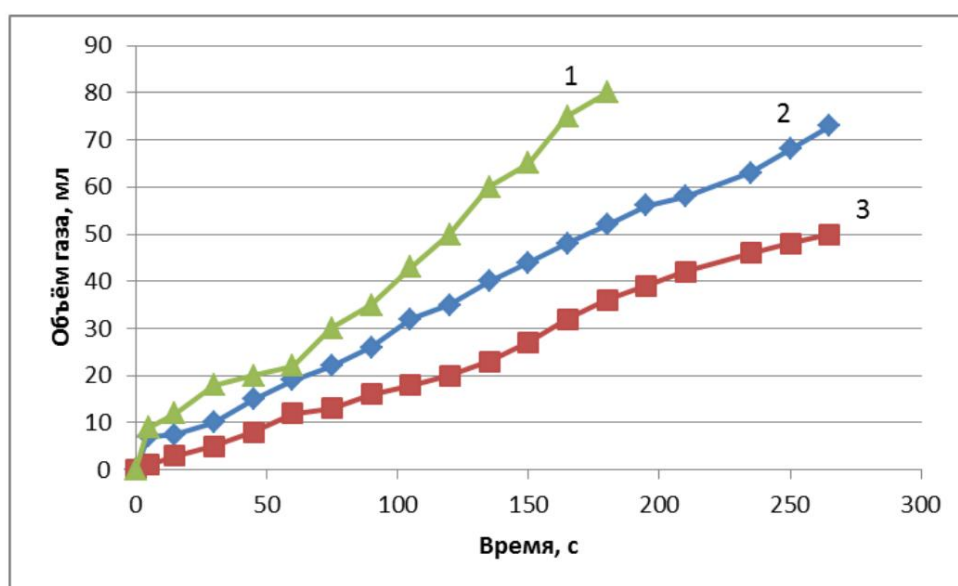
M is the approximate area of monolayer filling on the Si surface.

The agent responsible for such transmission is not shielded by metal (glass vessels in some experiments were completely shielded by iron shields), from which the authors make an assumption about non-electromagnetic interaction between the samples.

6. IMPACT ON CHEMICAL PROCESSES

Let us illustrate by several studies the influence of non-electromagnetic radiation on the course of chemical reactions. N.P. Bakurov studied the effect of radiation of a constant magnetic field of 2000 Oe from a flat magnet (neodymium-iron-boron) on the kinetics of hydrogen peroxide decomposition (see Fig. 34) [28]. This effect is explained by Bakurov's influence of the spin field, although no measures were taken to shield the magnetic field itself. The fact that it is the non-electromagnetic component that works in this case is evidenced by the fact that the measurement of the decomposition rate of H₂O₂ was carried out after the treatment of the substance, and is also confirmed by the water activation technologies developed by Bakurov [27].

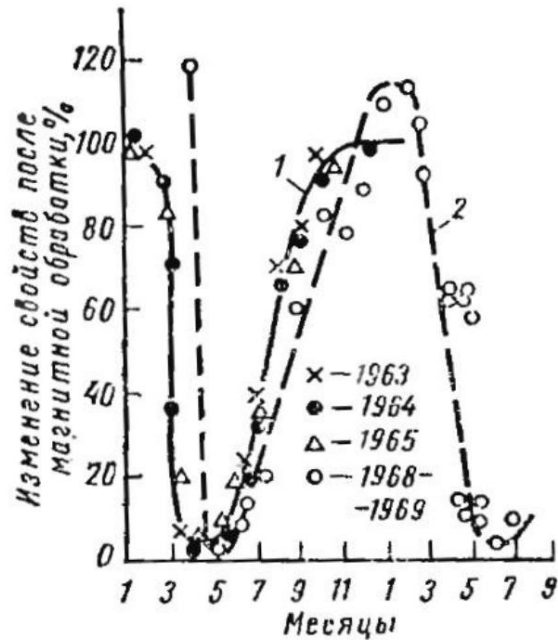
"magnetized" water, for example, makes it possible to descale boilers and has a pronounced biological activity. At one time, this phenomenon was given enough attention in the scientific and popular science literature [80, 81], however, to explain it electromagnetic influence is difficult, so that with all the evidence of such results and the extreme simplicity of their reproduction by "big science", this is still considered "impossible".



Rice. Fig. 34. Kinetic curves for the decomposition of hydrogen peroxide: 1 - right-hand spin-treatment of the H₂O₂ solution; 2 - untreated H₂O₂ solution; 3 - left-sided spin-treatment of the H₂O₂ solution.

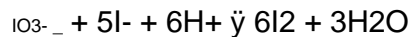
On Fig. 35 shows graphs of seasonal changes in magnetic susceptibility magnetized solution of nickel sulfate obtained by F.I. Kukoz, M.F. Skalozubov and G.K. , obtained by P.V. Denisov and S.L. Reprischeva based on the results of research in 1968-1969.

[80]. Such reliable fluctuations with a minimum in May-June can hardly be due to electromagnetic or some other trivial reasons.

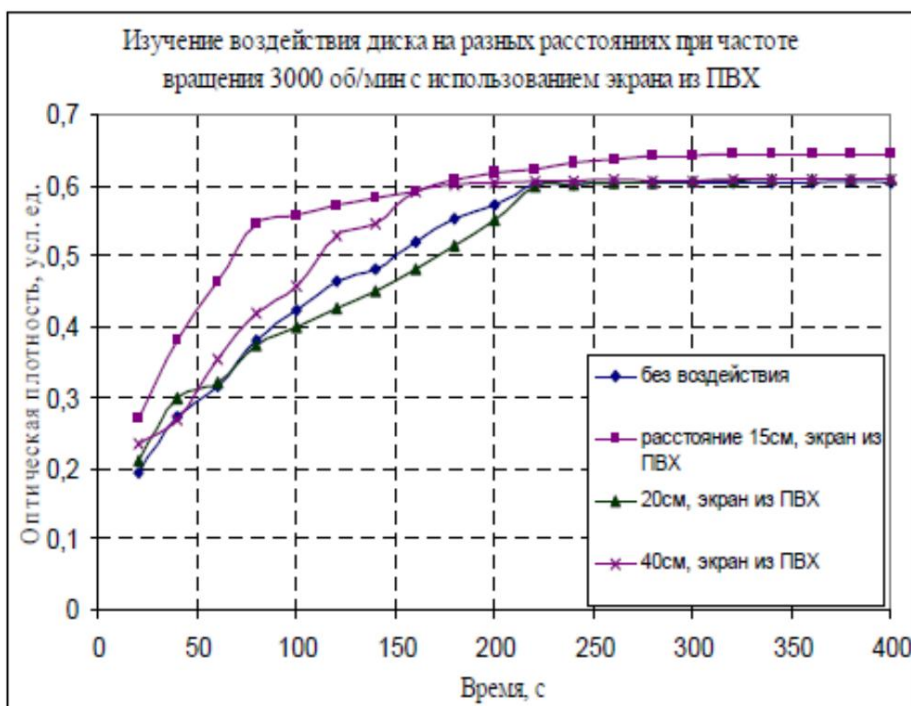


Rice. Fig. 35. Change in the properties of aqueous solutions after magnetization depending on the season: 1 - change in the magnetic susceptibility of the nickel sulfate solution; 2 - change in the density of the sulfuric acid solution.

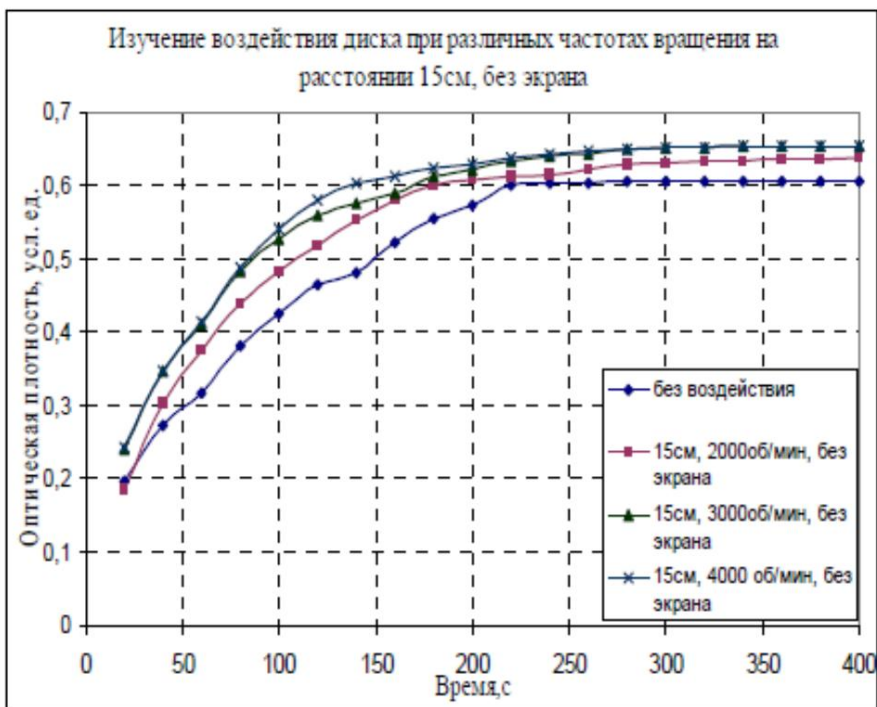
In the work "Impact of rotating ferromagnetic disks on the hydration reaction of acetic anhydride" [26], Yu.V. Tkachuk, S.D. Yaremchuk and A.A. Fedotov showed that radiation from rotating magnets affects this chemical process, a whole "bouquet" of typical torsion phenomena. The source of the rotating magnetic field was flat magnets fixed in a rotating cylinder. The magnetization of the magnets was perpendicular to their plane, so that the magnetization vector rotated perpendicular to the axis of rotation of the cylinder. The course of the chemical reaction of the formation of acetic acid was observed by an additional reduction reaction of molecular iodine:



It was shown that the reaction rate depends non-linearly on the distance from the generator: it is observed at a maximum of 15 and 40 cm, and at least 20 cm.). The speed of the reaction also depends on the speed of rotation: the higher the speed of rotation, the faster the reaction proceeds (Fig. 37).

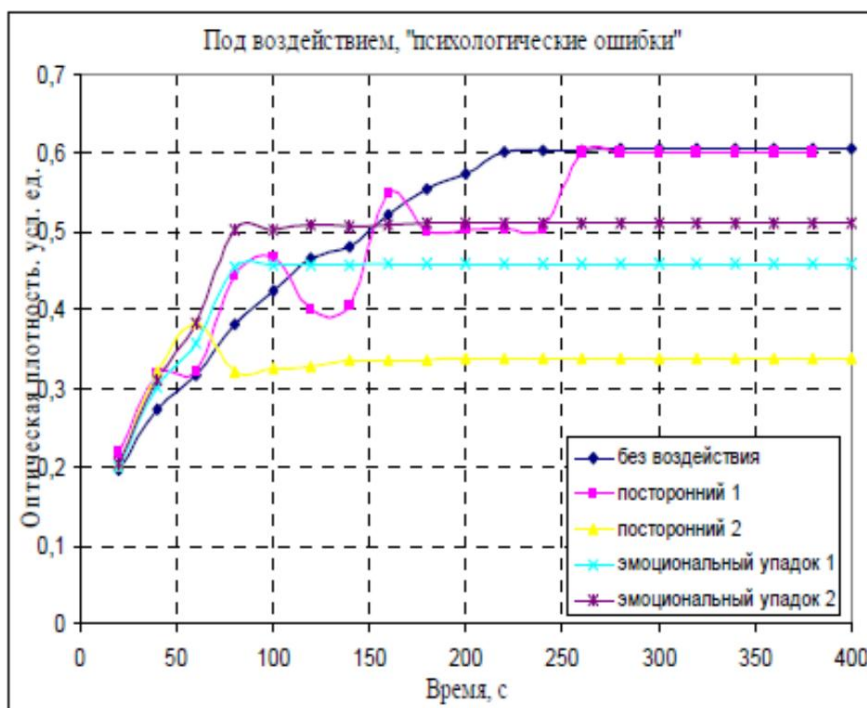


Rice. 36. Change in the kinetics of a chemical reaction depending on the distance from the source of rotation.



Rice. 37. Influence of rotation speed on reaction kinetics.

It is quite possible that the results of these experiments were strongly influenced by the phantom effect (see Section 11). This may explain that the reaction rate differed from the initial control when the generator was removed 300 m to another building, and that the effect was preserved when the magnets were removed from the rotating cylinder. Psychophysical factors also intervened in the results (Fig. 38).

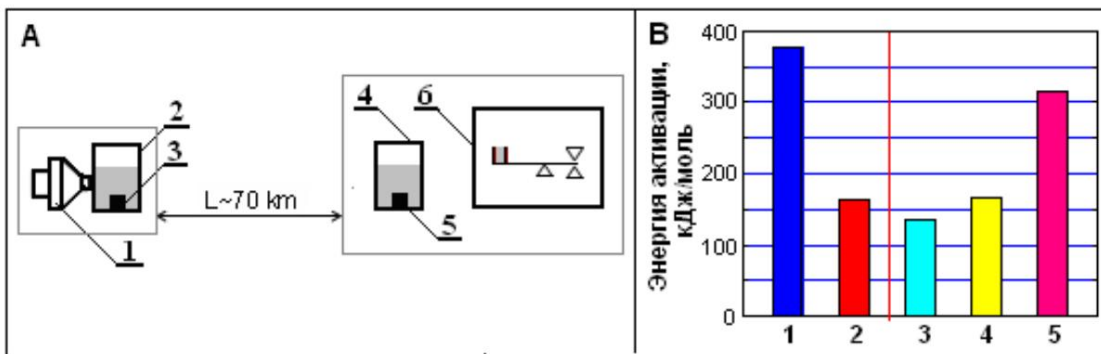


Rice. 38. Psychophysical effects of influence on the kinetics of a chemical reaction.

G.V. Khaldeev and V.I. Kichigin, together with the group of V.F. Panov, studied the effect of Akimov's torsion generator and generators of their own designs on electrochemical processes at the metal-electrolyte interface [169]:

“For the electrode of the 1st kind (copper electrode in solutions of xM $CuSO_4 + 0.5 M$ H_2SO_4), the following change in potential E was typical: after turning on the generator directed to the electrode under study, the potential shifted towards more negative values (maximum by 0.35 mV at $x = 1$ mol/l), and then E began to change in the opposite direction with reaching a certain stationary value, which, depending on the conditions, can be both more negative and more positive compared to the equilibrium potential of the electrode before the impact of the "torsion field". The minimum E was reached 3–8 min after the generator was switched on. A decrease in the concentration of $CuSO_4$ led to a weakening of the observed effects. In the case of redox electrodes, the changes in E were negligible.”

VG Krasnobryzhev obtained quite a lot of results on torsion (spin) activation of fuel - liquid, solid and gaseous [86, 87, 88]. Experiments on the effect of coherent (activated by torsion generators) fuel were carried out at the Czestochowa Polytechnic Institute (Poland). For ground brown coal with a grain size of about 1 mm, the activation energy was measured using a thermogravimeter. The measurement results are shown in Fig. 39. It can be seen that the activation energy of coal in the coherent state has decreased by more than 2 times. Moreover, after turning off the source of coherent states, the coal was in an activated state for more than a week.

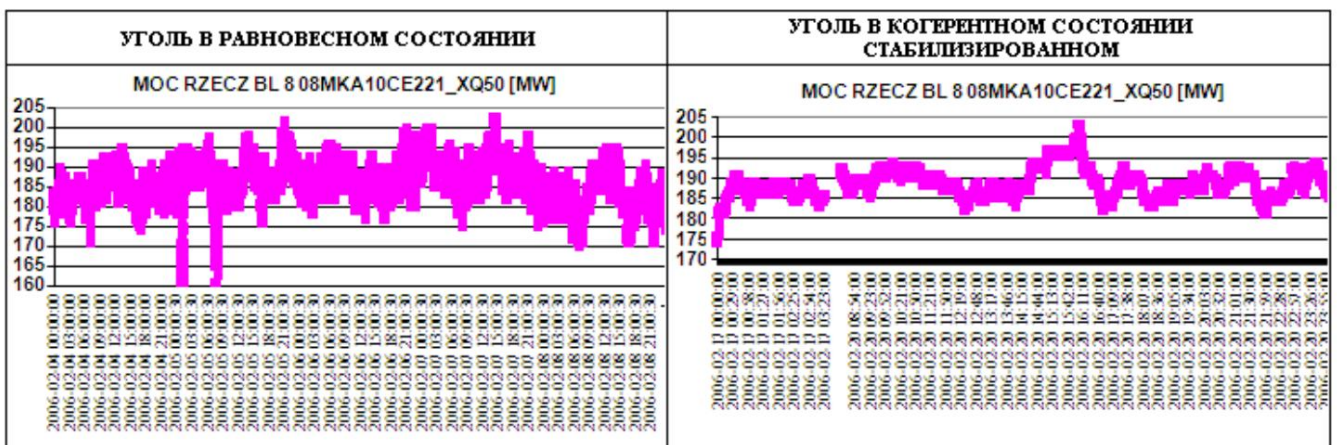


Rice. 39. Thermogravimetric studies of coherent coal: A - scheme of the experiment; AT - change in the activation energy of brown coal: 1 - in an equilibrium state, 2 - in a coherent state and in a state of decoherization: 3 - after 2 days, 4 - after 7 days, 5 - after 10 days.

These results were verified in the coal-fired boilers of the Turov power plant, where, as part of the experiment, about 220,000 tons of coal were burned in a coherent state maintained through a spin teleportation system from a distance of 180 km. The generated electric power and emissions of CO₂, NO_x, SO_x were measured. CO₂ emission decreased by 13%, NO_x and SO_x - by 16%. With a direct dependence of combustible coal on CO₂ emissions, this means that coal consumption has decreased by 13%. Dependence of CO₂ emission from the generated power is shown in Fig. 40, and the nature of power fluctuations - in Fig. 41.



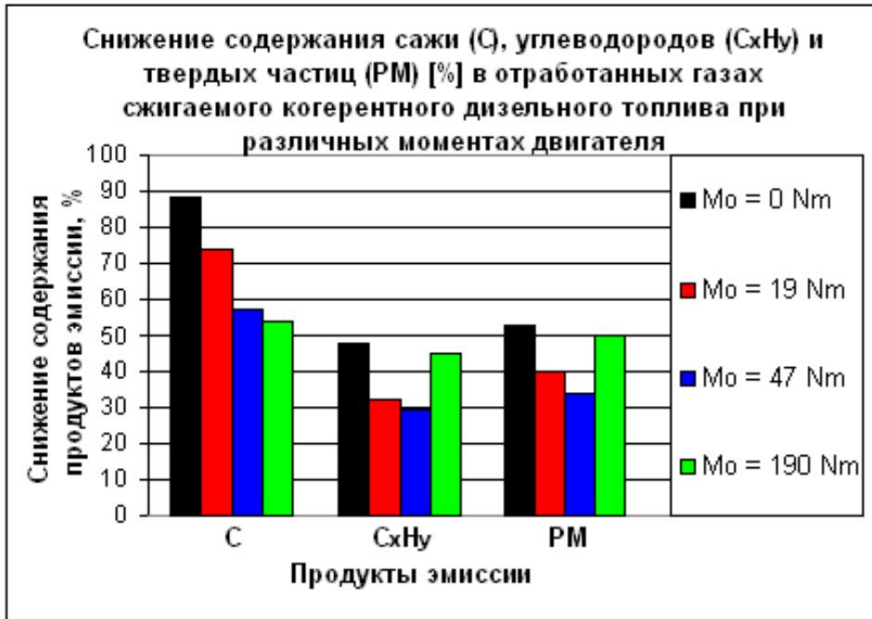
Rice. Fig. 40. Dependence of CO₂ emission on the generated power during coal combustion for equilibrium and coherent states.



Rice. 41. The nature of fluctuations in electric power during coal combustion in equilibrium and coherent state.

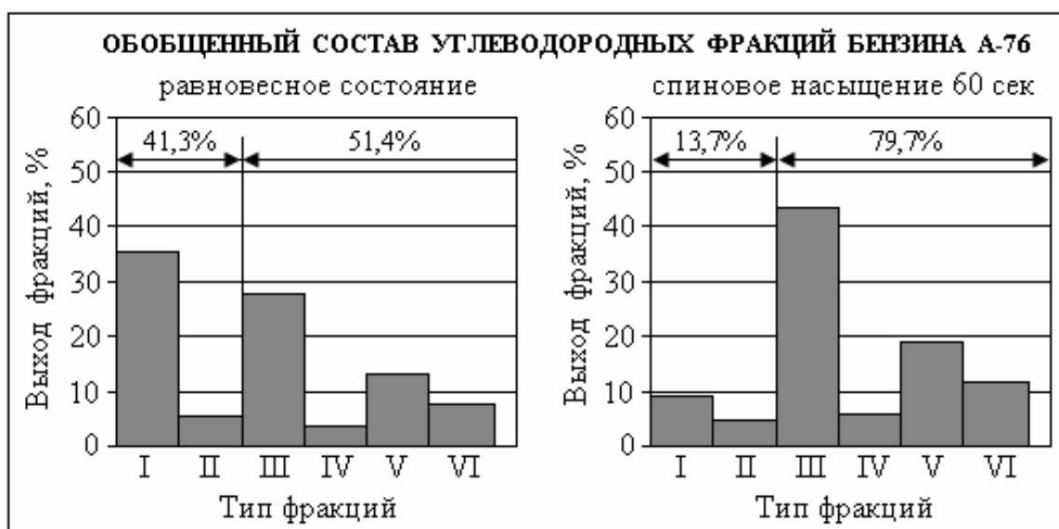
Tests of the same method at the Rybnik power plant confirmed its effectiveness - the reduction in coal energy consumption for electricity generation averaged 16%. The coherent state of coal weighing 500 thousand tons was maintained from a distance of 240 km.

When studying the effect of the coherent state of diesel fuel on the composition of exhaust gases, the following data were obtained (Fig. 42). A decrease in unburned gases and particles by tens of percent confirms the thesis about a decrease in the activation energy of the fuel. The work was carried out on the test bench of the Laboratory of Internal Combustion Engines of the Poznan Polytechnic Institute.



Rice. 42. Reducing the content of soot (C), hydrocarbons (CxHy) and particulate matter (PM) [%] in the exhaust gases of burned coherent diesel fuel at various engine torques [Nm] in a relatively equilibrium (incoherent) diesel fuel.

Analysis of changes in the hydrocarbon composition of activated oil and gasoline is given by Kranobryzhev in [89]. On Fig. 43 shows the generalized composition of the A-76 gasoline fractions in the equilibrium and coherent state.

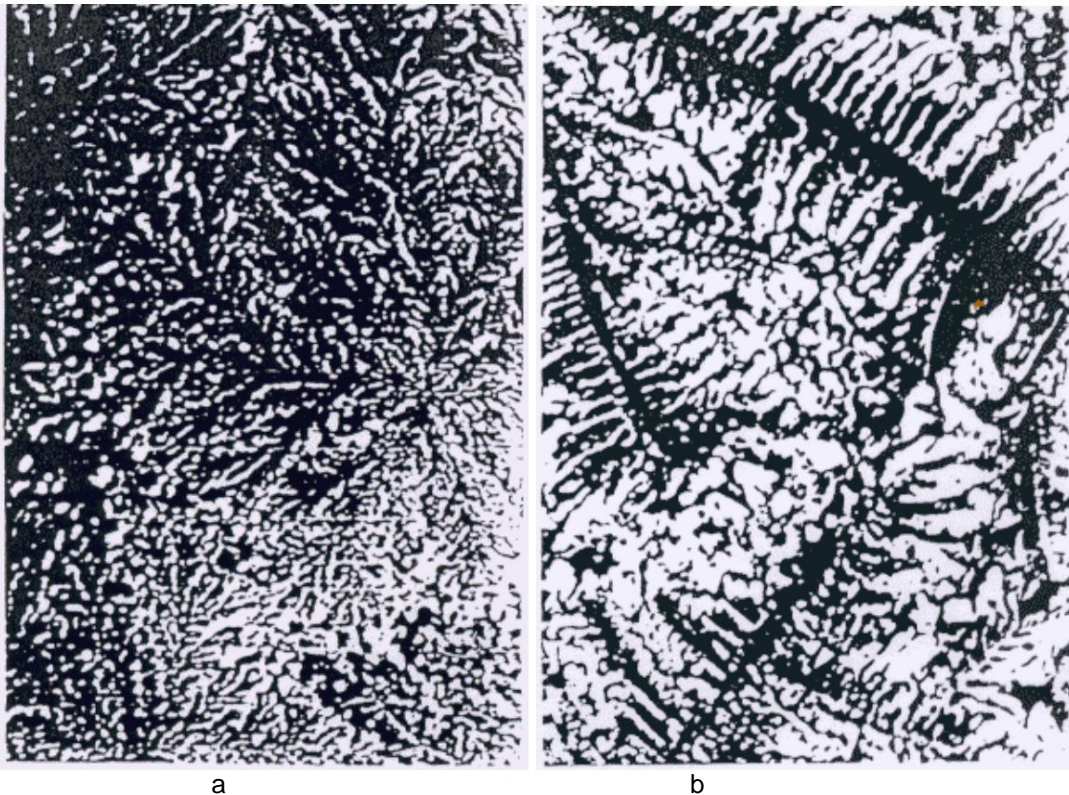


Rice. 43. Generalized composition of hydrocarbon fractions of A-76 gasoline. Fraction type: I – butane...n hexane, II – 2,4-dimethylpentane...benzene, III – methylhexane...methylpentane, IV – lower than methylheptane...n octane, V – lower than n-actane...dimethylheptane, VI – lower than dimethylheptane...n- nonan.

7. IMPACT ON CRYSTALLIZATION PROCESSES

Effects on crystallization processes were the first published results of experiments with torsion generators, they were obtained in the late 80s, and published in the early 90s. The first experiments were carried out at the Institute of Physics of the Academy of Sciences of the Ukrainian SSR (Kiev) prof. M.V. Kurik [90]. The object of the study was the process of crystallization of bile, which from a chemical point of view is a mixture of cholisters.

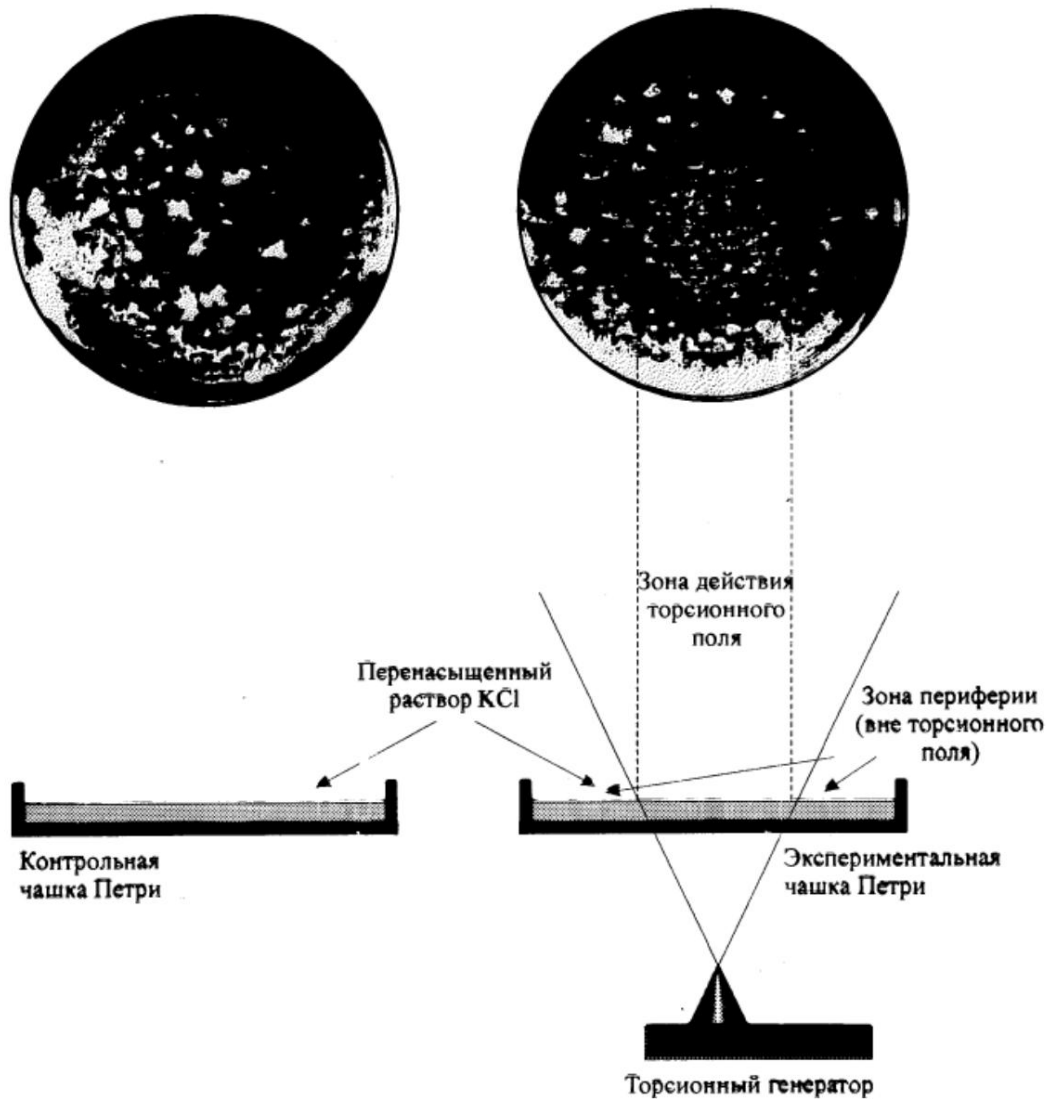
With the natural evaporation of a solution of cholesterics, crystals form in a Petri dish. On Fig. 44 shows the structure of crystals in the control and under conditions of irradiation of the solution with radiation from a torsion generator. Under the action of torsion radiation, micellar structures are formed, while the step of the crystal lattice has increased by 2.5 times, and the size of fractals - by 3 times.



Rice. 44. Photos of micellar structures: a) - control, b) - crystallization under the action of a static torsion field.

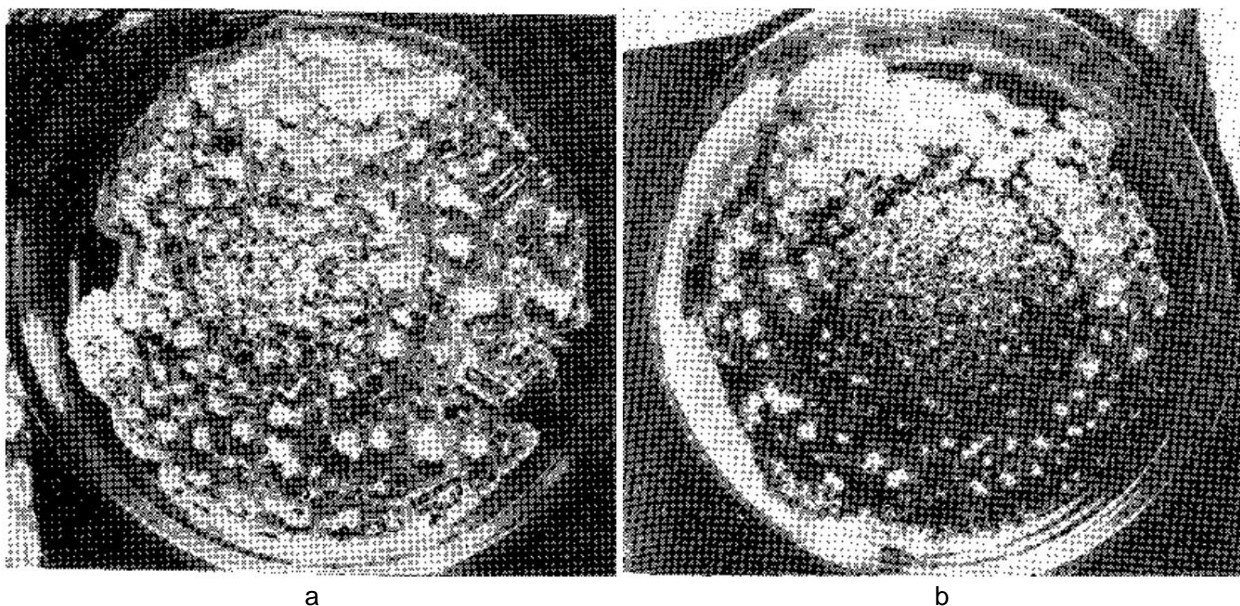
In the Scientific Center of the Tomsk Polytechnic University, V.I. Lunev conducted experiments on the effect of radiation from a torsion generator on the process of crystallization of a KCl solution. On Fig. 45 shows the scheme of the experiment. In the control groups of crystals were formed on average evenly at some distance from each other; along with transparent crystals, opaque crystals were also observed. In the center

of the irradiated sample, densely spaced transparent crystals were observed. In the rest, where, apparently, there was no torsion radiation, the structure of the crystals was similar to the control.



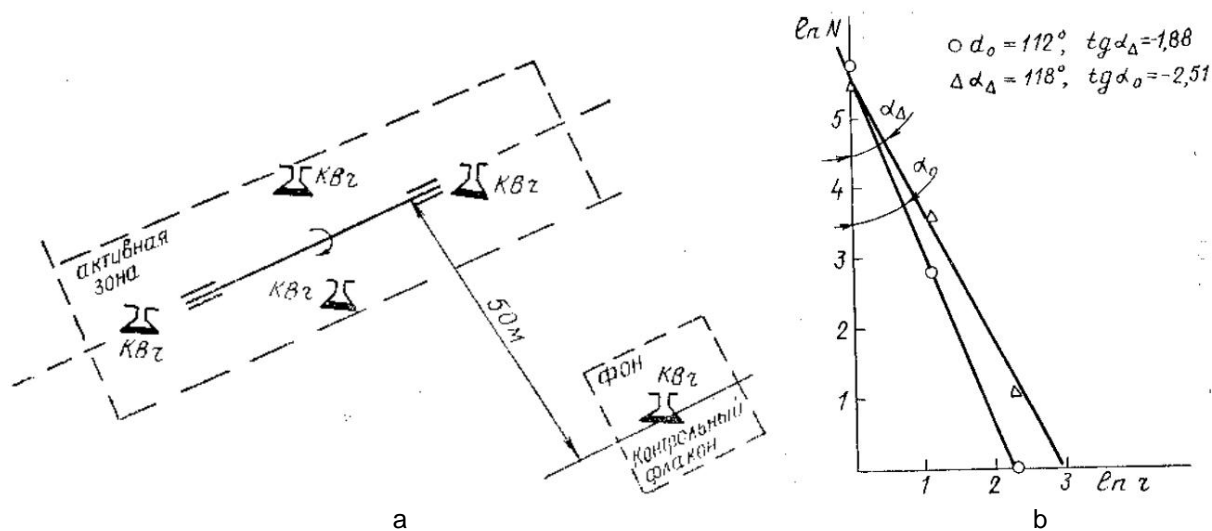
Rice. 45. Scheme of the experiment on the effect of torsion radiation on the KCl crystallization process.

Later, in Lunev's group, work was carried out to study the properties of crystals formed under the influence of torsion radiation. In the work "Radiology of spin-torsion fields" [91], the results of studying the processes of crystallization of a 30% solution of KBr are presented. Similar results were obtained (see Fig. 46): a uniform uneven distribution of crystals in the control, and a clear zonal distribution of crystals with a different density when exposed to radiation. An electrostatic generator with two nested cones was used. These results are considered preliminary by the authors.



Rice. 46. Structure of KBr crystals. a) the generator is not working; b) the generator is running.

In the work "Theoretical-experimental studies of the features of the influence of the spin-torsion field on fractal objects" by V.I. Lunev [92], the results of the impact of the radiation of the GMV-254 gyromotor on the KBr solution, which already after the impact was subjected to crystallization, are presented. The exposure time of the vials with the solution to the radiation from the gyro motor was from 5 to 30 minutes, then the solution was poured into crystallization cuvettes, and the crystallization process proceeded under general controlled conditions for all samples. The scheme of the irradiation process is shown in Fig. 47-a.



Rice. 47. a) the scheme of the experiment on radiography of spin-torsion action, b) the results of the assessment of the scaling dimension at the side surface of the gyro motor.

The impact results were evaluated by the scaling dimension of the resulting crystal size distribution. The scaling dimension shows the rate of decrease in the number of elements with their size. Illustration of scaling calculation

dimensions are shown in Fig. 47-b. For samples located on the axis of rotation of the gyro motor (near the end), this parameter turned out to be equal to 2.5. For samples located perpendicular to the axis near the side wall of the generator - 1.9. For control samples, the crystal structure turned out to be non-fractal. The authors point to the prospects of further development of evaluation criteria for spin-torsion interactions from the standpoint of fractal geometry.

The group of V.F. Panov describes the effect of a torsion field from a generator of its own design [20] on the crystallization of a copper sulfate salt in an aqueous solution:

"When studying the influence of the "torsion field" on the crystallization of copper sulfate, a saturated (at 20°C) solution of $\text{CuSO}_4 \cdot 0.5 \text{H}_2\text{O}$ in water was used. Crystallization was carried out in a Petri dish 10 cm in diameter and 1 cm high, the volume of the working solution was 50 ml. Zone propagation of the "torsion field" had the shape of a circle with a diameter of 5 cm. Irradiation was carried out for 83 hours (until complete drying). The cup was located directly on the outlet of the device.

As a result of the experiments, it was found that crystallization occurs mainly in the zone of propagation of the "torsion field". An average of 95% (by weight) of all crystals was located in the distribution zone of the "torsion field". It has been established that the size of crystals in the zone of propagation of the "torsion field" is 3-5 times larger than outside it. A slight reduction in the evaporation time of a saturated aqueous solution was also registered compared to the standard not subjected to the influence of the "torsion field" (the effect is ~ 10%).

V.I.Gurdin and V.V.Sedel'nikov from the Omsk State Technical University in the article "Control of the properties of solutions and melts when using torsion fields" [94] write about experiments with the MTG-2 generator designed by Akimov:

"... Studies have been carried out on the change in viscosity and mechanical properties of metal phosphate binders and phosphoric acid treated with left- and right-handed torsion fields modulated by frequencies from 0.1 Hz to 3 GHz.

As a result of the experiments, it was found that with a change in the frequency modulation of the torsion field, a change in viscosity occurs on all metal-phosphate binders, as a rule, these changes are of a multi-extremal nature. Synchronously with a change in viscosity, a change in the structure of crystals occurs and, accordingly, a change in mechanical properties.

When torsion fields act on solutions, a remote connection is noted between solutions located in the zone of action of the torsion field generator and outside it. The initial solution of calcium phosphate was poured into two cuvettes of fused quartz, 50 ml each, then the cuvettes were placed in different rooms at a distance of 20 meters. One of the cuvettes was exposed to a torsion field. Approximately 60 min. in the second control cell were recorded

fluctuations in the viscosity of the solution, similar to fluctuations in the viscosity of the solution under the influence of a torsion field.

Samples of the solution taken from both cuvettes after crystallization showed the identity of the structure of the crystals, which differed from the initial one and was determined by the frequency of the torsion field modulation. The experimental results show that torsion fields affect interatomic, intermolecular and supramolecular bonds."

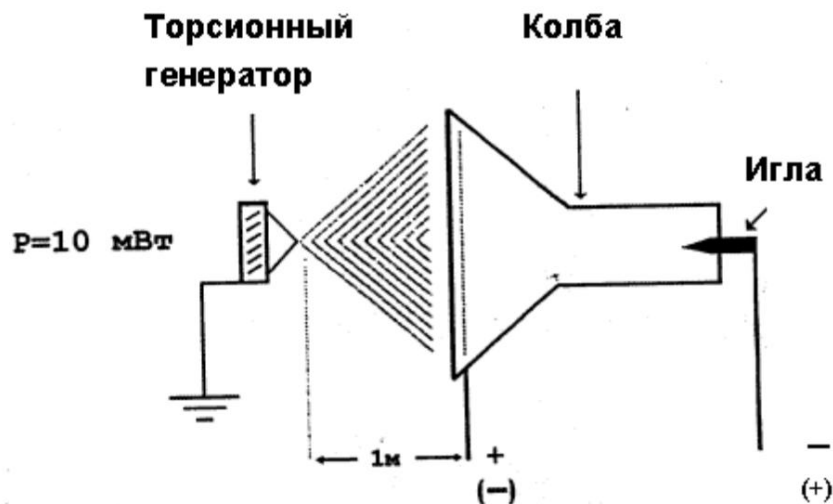
Abramov A.A., Akimov A.E., Bulatov E.I., Mayboroda V.P., Finogeev V.P., Chernov S.P. the article "Physical foundations and experimental results of the study of torsion technologies in the production of materials" describes the history and results of studies when melts are exposed to radiation from torsion generators [95].

Preliminary search works demonstrating the change in the crystal lattice under the action of a torsion field on a metal melt were obtained in works led by the director of the Research Institute of Electrophysical Surface Problems in St. Petersburg, Academician of the Russian Academy of Natural Sciences, Doctor of Physical and Mathematical Sciences, Professor G.N. Fursey [96, 97, cited at 95].

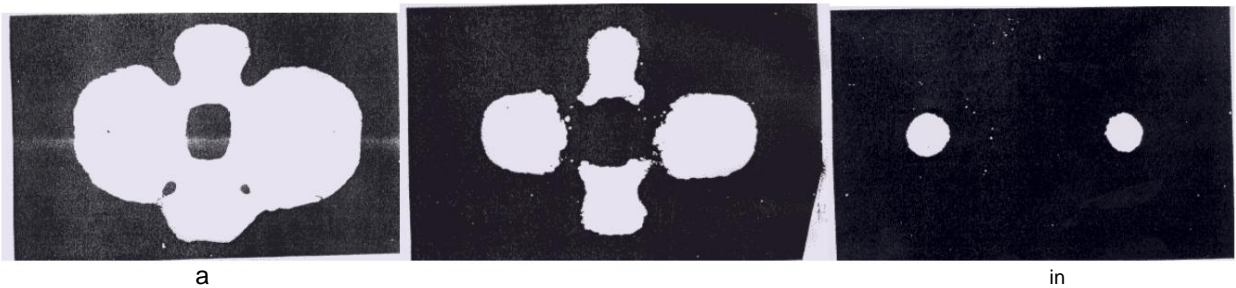
The main element of the installation was a field emission projector with a resolution of $\sim 20\text{\AA}$, a magnification of 2.3×10^5 , operating vacuum 10^{-9} Torr, with a constant voltage source 0..50 kV (Fig. 48). The setup also included a tungsten cathode heating source.

First, an emission image of the cathode was obtained (Fig. 49-a). Then changed the polarity of the high-voltage power supply, and due to cold emission from the anode, the cathode was heated up. With such heating of the cathode for 10 hours, the structure of the cathode surface practically does not change (Fig. 49-b).

But if the cathode is heated for only 1 hour with the simultaneous action of torsion radiation at a frequency of 0.1 MHz, then the cathode emission pattern changes dramatically (Fig. 49-c). Under the action of the torsion field, two brightly emitting regions appear on the cathode in the $\langle 001 \rangle$ direction. Variation of the modes of the field emission projector and the time of exposure to the cathode by torsion radiation did not change the observed picture. It was suggested that "the torsion field can affect the transfer processes during the decay of submicrostructures grown on the surface of a microcrystal in an electron field after high-temperature heating" [95].



Rice. 48. Scheme of an experiment to study the change in the crystal lattice of a metal as a result of the action of torsion radiation.



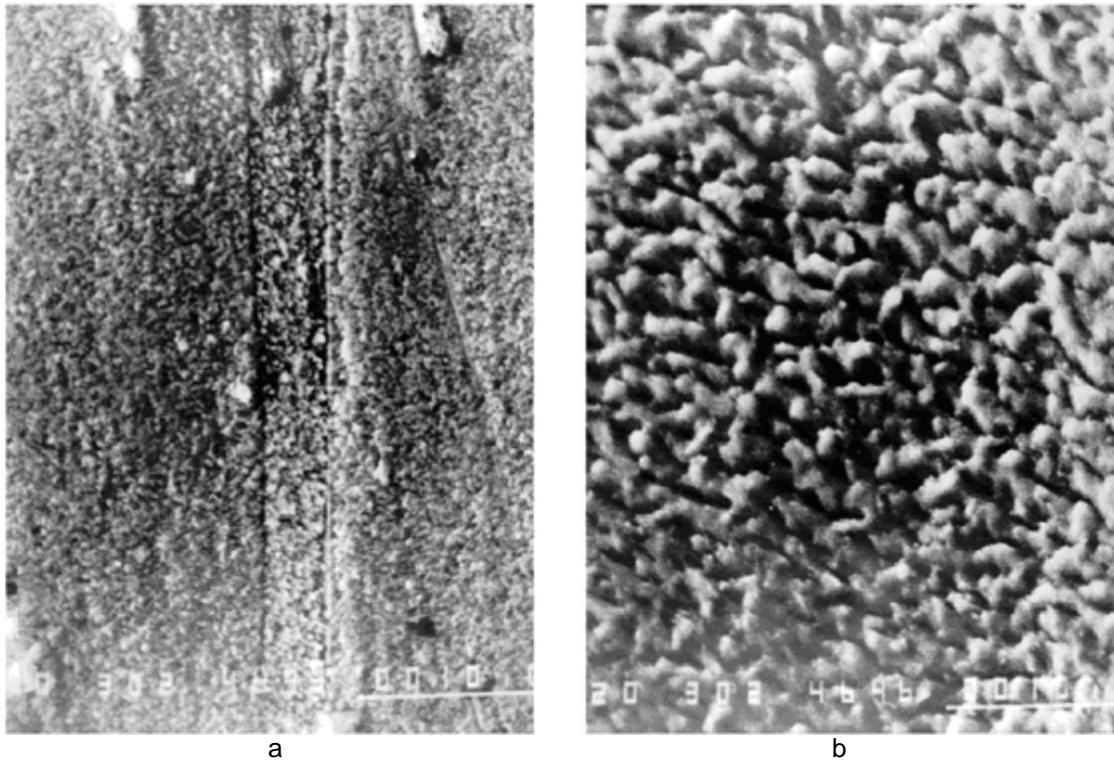
b Fig. 49. The structure of a metal crystal: a) - control, b) - during overheating for 10 hours, c) - under the action of a torsion field against a background of overheating for 1 hour.

In 1989-1991, numerous experiments were carried out at the Institute of Problems of Materials Science of the Academy of Sciences of the Ukrainian SSR (Kyiv) under the guidance of Academician V.I. Trefilov. The torsion generator acted on melts of tin and copper. The structure of metal samples frozen in torsion radiation was studied in comparison with the structure of control samples.

Experiments on tin in a film showed that exposure to a right-handed torsion field at a temperature of 450-650° leads to the appearance of an fcc-like packing of atoms in the liquid phase (which is surprising for tin), and left-handed radiation leads to the restoration of the original tetragonal-like packing. The authors indicate that the most probable cause of such changes is the effect of torsion radiation on the electronic subsystem of the melt: one of the paired electrons at the K-levels, changing the direction of the spin, in accordance with the Pauli principle, passes to the free K-level, this changes the nature of the valence band of the electron energy, which in turn changes the properties of the material structure.

V.P. Maiboroda obtained results on the impact on tin and copper melts in the Tamman furnace, which was a vertical cylinder ~600 mm high and ~350 mm in diameter made of low-carbon steel, closed with water-cooled covers; case was grounded. Those. the body of this furnace was a Faraday chamber in relation to external radiation.

During 15-minute irradiation of molten tin with a torsion generator from a distance of 1 m, a change in the structure of tin grains was noticed (Fig. 50). Sections of samples of control melts showed inhomogeneities and a large scatter in grain size. Sections of ingots obtained by irradiating the melt showed a more uniform structure, the grain sizes were much larger and had the same size.



Rice. 50. a) grinding of tin (x 6000) of the control melt, b) grinding of tin (x 6000) with exposure to a torsion field.

The irradiated samples were examined by a scanning electron microscope with a magnification of 450,000. It was found that in each grain there is no single crystal lattice, the atoms were combined into groups of 8-12 atoms. That is, the metal had an amorphous structure during slow (natural) cooling, in contrast to the ultrafast cooling technology, which produces amorphous metals. The hardness of tin increased 1.4 times [98].

In experiments with copper melt, the furnace was irradiated by a torsion generator from a distance of 400 mm from the axis of the furnace cylinder; an alundum crucible with copper was placed in the furnace. The authors of [99] write that copper treated with a torsion generator solidified in a porous form, and the pore size depended on the frequency of the voltage applied to the generator and changed from a few millimeters to zero when the frequency changed by one and a half orders of magnitude. A photo of samples of porous copper is shown in Fig. 51. Transmission electron microscopy has shown that copper treated with torsion radiation has a pronounced microdispersity.

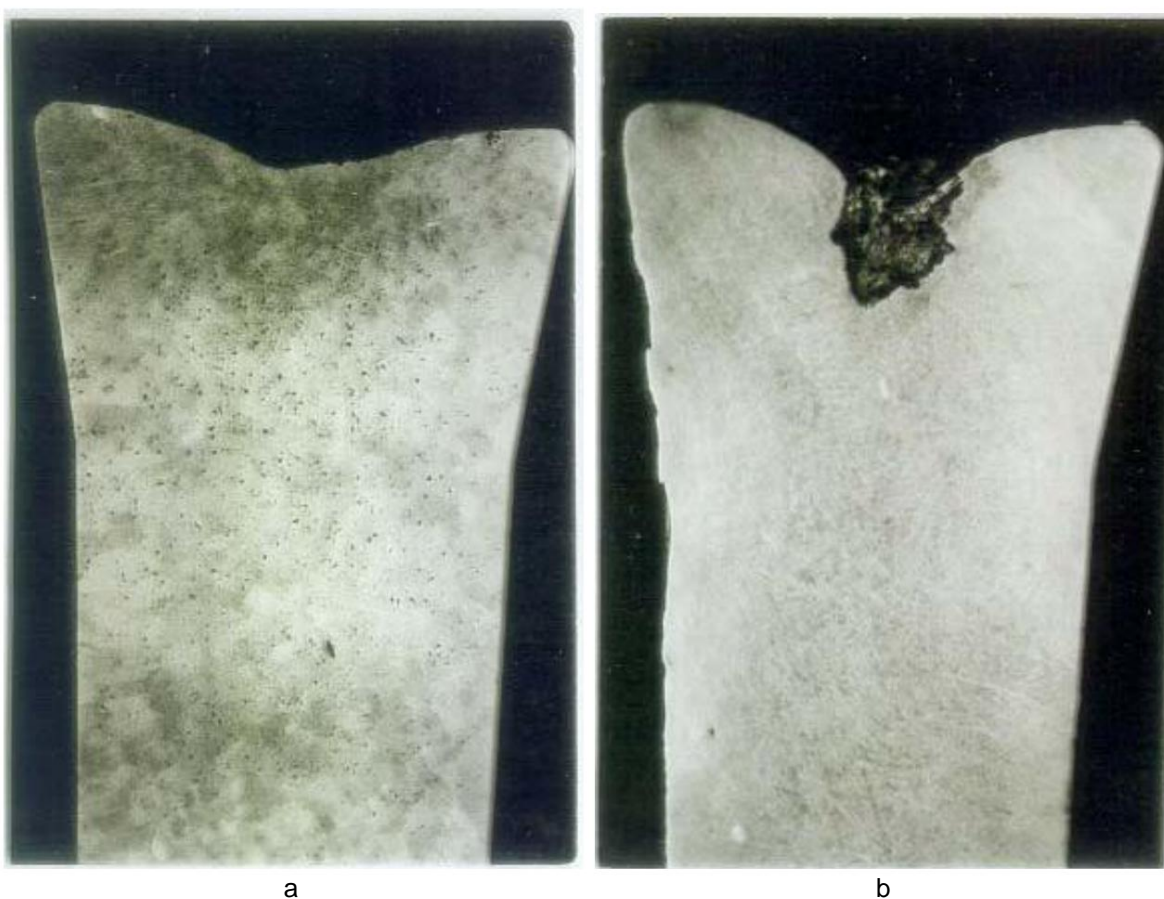


Rice. 51. View of porous copper ingots obtained by processing a copper melt with torsion radiation at various frequencies.

Experiments were continued at the Central Research Institute of Materials (St. Petersburg) in the early 90s. Studies of the strength characteristics of treated copper (factory induction furnaces were used) showed an increase in ductility by 2 times, and strength by 15%. Corrosion resistance of copper increased 200 times.

In the same place, steel melting was carried out in factory induction furnaces. With prolonged exposure of the steel melt to torsion radiation, an intergranular structure of the casting fracture was observed, and not transcrystalline, as usual. The radiation was carried out at a frequency of 8 Hz. The effect of exposure in non-optimal temperature conditions of melting and in various modes of operation of the generator was shown.

In joint studies of the Central Research Institute of Materials, ISTC VENT, JSC "Special Engineering and Metallurgy" of the Ministry of Defense Industry, experiments were carried out on the effect of radiation from torsion generators on silumin melts. Torsion generators were developed with a special spatial structure of radiation and a complex spectrum of torsion frequencies from fractions of a hertz to 100 GHz. Melting of silumin was carried out on the factory induction furnace. On Fig. 52 shows photographs of sections of ingots (diameter 60 mm and height 120 mm) - control and processed by torsion radiation. Melts were carried out without additives. On the control section, pores (black dots) are visible, as well as an uneven structure of silicon distribution in the melt. On a macroscale, a crystallite structure is noticeable. In the "torsion" sample, the pores disappeared, the structure became finer, and the crystallites disappeared. Strength studies have shown an increase in strength by one and a half times, and plasticity by more than 3 times. In addition, the silumin melt after torsion treatment had an increased fluidity compared to the control.



Rice. 52. a) - a cut of the casting of the silumin of the control melt; b) - a cut of the casting of the melting silumin with the influence of the right torsion field with the optimal spectrum of torsion frequencies.

In patent RU-2151204 (authors Akimov A.E., Bulatov E.I., Finogeev V.P., Chernov S.P., Nikitin V.B., Zapunyako A.M., Radchenko A.A.) [100], says:

“As studies have shown, in the case of steel processing, the use of monofrequency as a signal in a torsion generator does not lead to significant satisfactory results, since there is a change in the influence of only one of the melt components on the structure. When exposed to monofrequency, either the effect of this component on the overall structure of the ingot is enhanced or weakened. In addition, in the melt there is a spread in the values of the natural frequencies of oscillations of atoms of one chemical element or the same type of molecules of chemical compounds, associated with an uneven distribution of the energy of thermal motion. As a result of the experiments, it was found that achieving a more effective change in the structure during the torsion processing of the melt is feasible in the case of using a spectrum of certain characteristic frequencies for a torsion generator.

In the same place, the claims state:

"one. A method for correcting the structural characteristics of steel, including processing the steel melt until the formation of its solid phase during crystallization by torsion radiation, characterized in that the steel melt is processed

torsion radiation with a spectrum consisting of at least three characteristic frequencies.

2. The method according to claim 1, characterized in that each of the mentioned characteristic frequencies is selected in one of the intervals: 1 Hz - 20 MHz and / or 20.1 - 200 MHz, and / or 200.1 MHz - 2 GHz, and /or 2.1 - 200 GHz.

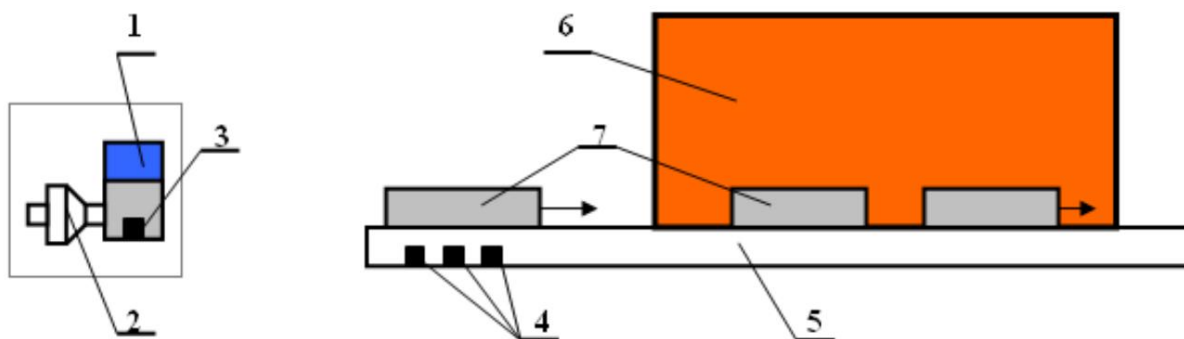
3. The method according to claim 1, characterized in that at least two of the mentioned characteristic frequencies are simultaneously selected in one of the intervals: 1 Hz - 20 MHz, or 20.1 - 200 MHz, or 200.1 MHz - 2 GHz, or 2.1 - 200 GHz.

VG Krasnobryzhev developed a technology for steel annealing when steel is brought into a coherent state using non-local transfer of spin information (Fig. 53). The prerequisites for this work are described as follows:

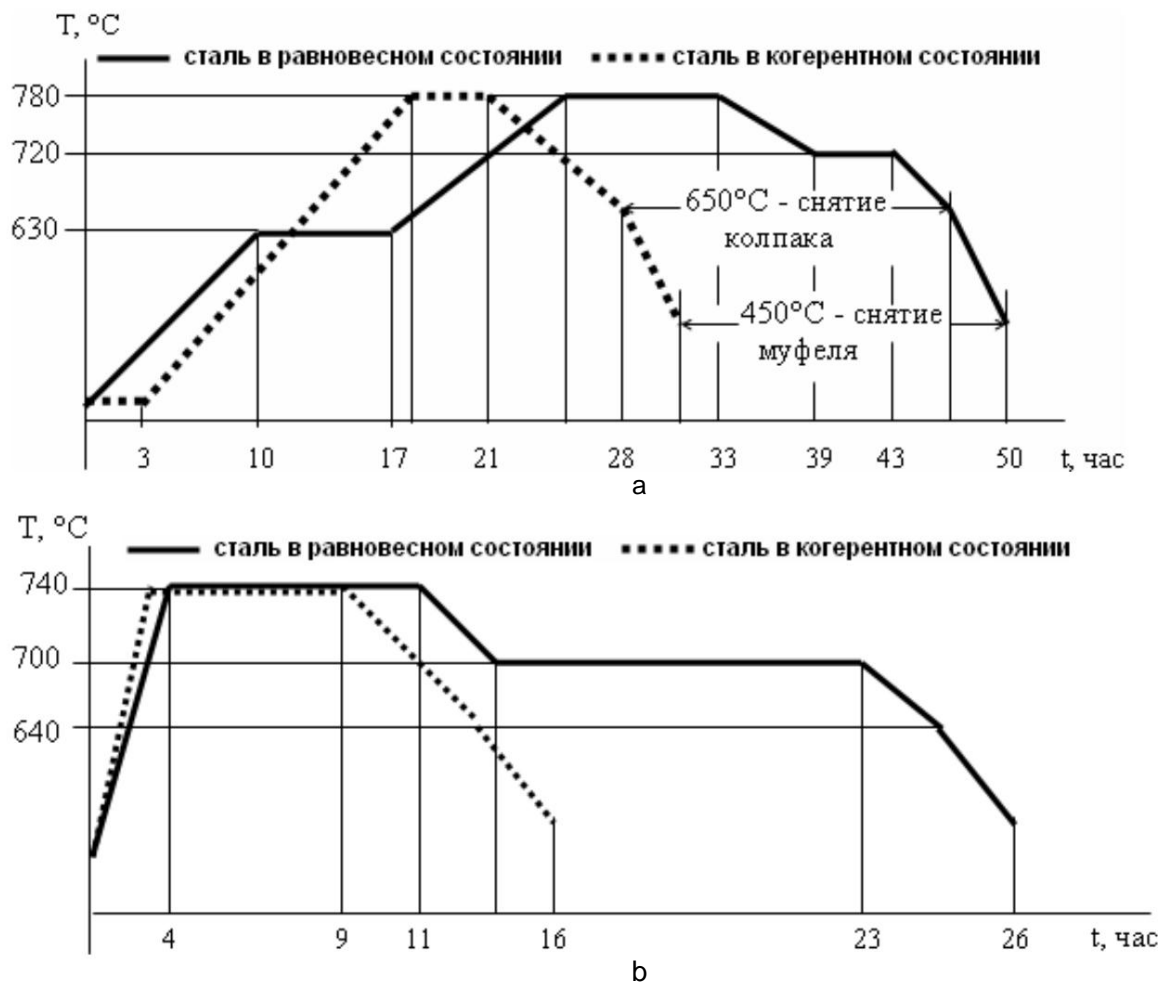
“The recrystallization of steel during annealing processes is associated with the potential energy of the crystal lattice, and the rate of its rearrangement is associated with a change in the spin state of atomic nuclei.

Management of these processes is possible due to the transfer of the working environment to a coherent state. The ability of the spin field to impart coherent properties to the material medium was used by us in technologies to accelerate steel annealing processes in order to reduce the energy costs for their implementation.”

In [101], the results of testing the technology at the Dneprospetsstal plant (ShKh-15 and 65G steel) and the SKF-Poznan plant are described. On Fig. 54 shows graphs of technological processes of annealing. As a result, the annealing time is reduced by 35% while meeting the requirements for metal quality in terms of microstructure and hardness. The consumption of flared gas (36% for Dneprospetsstal) or electricity (40% for SKF-Poznan) is reduced by about the same amount.



Rice. 53. Scheme of spin teleportation of coherent states for the steel annealing process: 1 - resonator, 2 - spin generator, 3 - translator chip, 4 - chip inductor, 5 - furnace frame, 6 - annealing furnace, 7 - steel products.

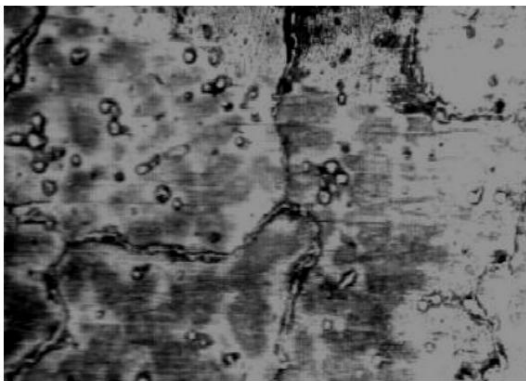


Rice. 54. Annealing processes for ordinary and coherent steel: a) in bell-type gas furnaces with a protective atmosphere, b) in chamber gas furnaces.

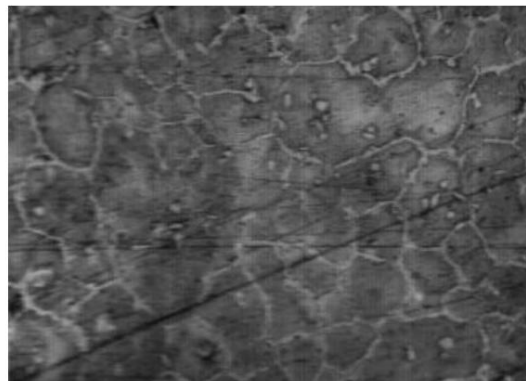
In the early 2000s, V.F. Panov's group, based on experiments with torsion generators, developed a technology for industrial steelmaking [93, 102, 103, 104, 105]. With the help of S.A. Kurapov's generator, a metal melt in a volume of 150 kg to 120 tons is exposed through the wall of a metallurgical furnace (Fig. 55). In this case, the ingots acquire a crushed structure, the cessation of precipitation of carbides in high-carbon steels is observed (Fig. 56, Fig. 57). The increase in impact strength in this case is up to 200%.



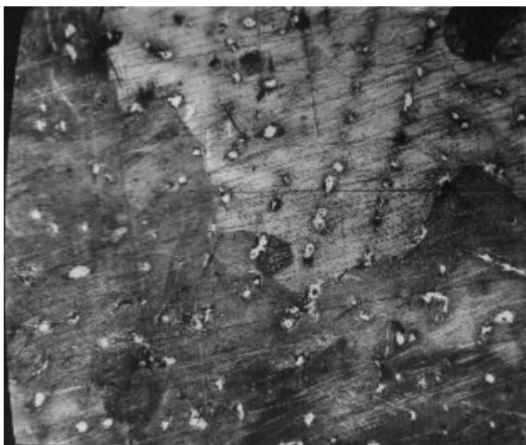
Rice. 55. Treatment of the melt according to the SVM technology of the V.F. Panov group with the generator of S.A. Kurapov. The impact is made through the wall of the metallurgical furnace.



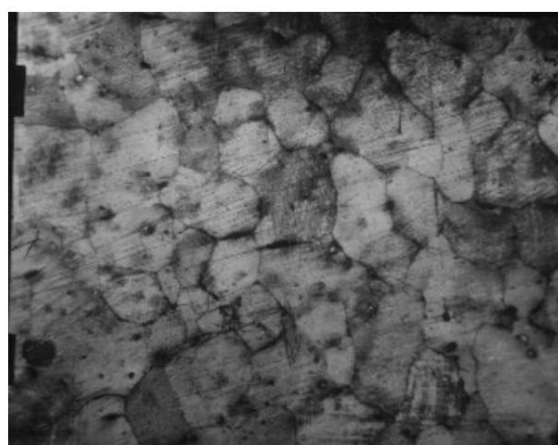
a



b



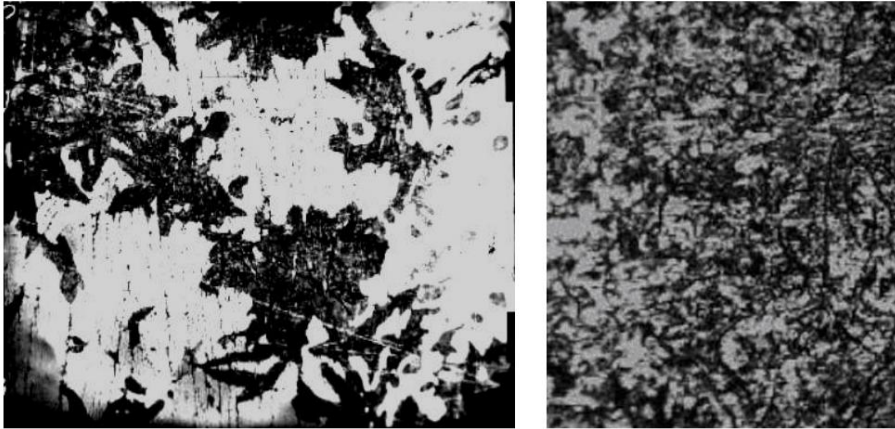
in



G

Rice. 56. Microsections of cast steel 110G13L on a scale of 100x in the control and in various modes of irradiation with a torsion generator S.A. Kurapov.

- a) Control sample (standard structure). The structure of the metal consists of large austenite crystals with inclusions of carbide grains both inside the crystals and along its boundaries. Point - 0.5γ1. b) Torsion treatment, mode 1. The structure of the metal consists of small crystals of austenite and carbides along the boundaries and inside the crystals. Score - 4γ4.5.
- c) Torsion treatment, mode 2. The structure of the metal is large austenite crystals 1γ1.5 points. Carbides precipitated in the form of separate inclusions, not connected with the boundaries of the crystals. The carbide mesh is broken.
- d) Torsion treatment, mode 3. The structure of the metal is small austenite crystals. There is no separation of carbides along the boundaries. Individual rare inclusions of carbides are observed. Score - 4γ4.5.



a

b

Rice. 57. Cast iron in a chill mold. a) without treatment, structure - ledeburite, characteristic of white cast irons; b) microresonance treatment; structure - gray cast iron with lamellar graphite. Corresponds to the brand Sch25.

Table 6 shows the characteristics of steels without generator processing and with processing. In total, the group carried out about 1,500 heats with a total weight of more than 9 thousand tons.

Table 6. Mechanical properties of some steels without wave processing (without SVM) and after wave processing (SVM), with normalization and tempering.

brand become	Treatment (qty swimming trunks n)	σ_t	σ_{in}	δ	δ	BUT, J	KCU, J/cm ²	
		MPa		%			+20°C	-50°C
10HN3MD L (RG115- 95TU)	Without SVM	883	940	10	20	-	38.3	19.6
	SVM (n>200)	900-1120	950-1180	13-	18-	42-58	65.0-90.0	29.0-55.0
35L (GOST 977-88)	Without SVM	350	550	16	20	-	30.0	-
	SVM (n>40)	620-660	830-890	16	35-44	-	50.0-69.0	29.9- 43.0
40HL (GOST 977-88)	Without SVM	650	500	12	25	-	40.0	-
	SVM (n>30)	700-730	790-900	14-	18-	36-52	70- 105.0	25-57

In torsion melting, Panov's group uses modified radiation irradiation. For example, a torsion generator beam is passed through nickel plates, and 68

steel treated with such radiation, when solidified, reveals the properties of alloyed steel in the actual absence of alloying additives in its composition.

From the speech of V.F. Panov and S.A. Kurapov at the seminar "Metaphysics" on November 29, 2004 at the Faculty of Physics of Moscow State University (the head of the seminar is Professor Yu.S. Vladimirov) [105]:

"Regarding the presented experimental materials, V.F. Panov noted that the effect of Kurapov's generators cannot be explained by the action of either electromagnetic fields or ultrasound ...

The management of the plant set the task for the development team - decarbonize this steel. It is known that a lot of carbide precipitates at the grain boundaries of the crystal. Now it is removed in a rather laborious way: by heat treatment in the presence of, for example, magnesium.

The experimenters took a plate of magnesium, placed it in the path of the beam of a torsion generator, and already in the first experiments the continuous carbide mesh was broken into separate elements, and then, in subsequent experiments, "we practically eliminated the carbide inhomogeneity." "Recently, I received a metal completely devoid of carbide inclusions," said S.A. Kurapov. Thus, according to him, it turned out that with the help of a torsion beam, the physical and chemical properties of magnesium were transferred to the melt in a virtual way. "This virtual metal managed to enter into a chemical catalytic reaction with the alloy components, and after the alloy cooled down, it disappeared," the co-speaker said. Moreover, he emphasized that at the moment of metal cooling, the ladle with metal was removed from the beam area, and for 4-5 minutes it was out of the field. However, the effects persisted.

In addition, the effect of metastability (phantoms) was discovered: after the generator is turned off and moved to another place, the beam remains in the same place and continues to act on the metal in the furnace. All this, indeed, speaks of the non-electromagnetic nature of radiation.

8. EFFECTS ON RADIOACTIVE DECAY

Most of the works in this section are exploratory in nature, the purpose of the researchers was to demonstrate the very possibility of influencing the parameters of radioactive decay, and many managed to do this.

There are works related to the field of LENR (Low Energy Nuclear Reactions), in which the effects of non-electromagnetic radiation are manifested. The effects of transformation of chemical elements, distortion of the isotopic composition, acceleration of the decay of radioactive elements - these are the main properties of impulse actions in the work of L.I. Urutskoev's team (electric discharge in water and air). But, in addition to these purely nuclear effects, during the operation of installations, the so-called. "strange radiation" - biologically active [71] and passing through metal screens [107]. Another interesting effect from this radiation is the metastable Mössbauer effect when a strange radiation acts on a ^{57}Fe foil in a magnetic field. After a few days, the effect in the irradiated sample disappears [106]. By the way, Akimov writes about the change in the Mössbauer spectrum under the influence of a torsion generator on Fe-II and lecithin compounds in [34].

There are works in which a solution with a salt of radioactive isotopes rotated in vortex devices, and in which a change in radioactivity after the operation of the device is noticeable [108, 109]. There is also evidence of a decrease in background radiation near vortex heat generators [110].

In most works, the method of field exposure to radioactive samples is used, which are placed under a stream of non-electromagnetic radiation from generators.

8.1 Results of I.M. Shakhparonov

There are patents for ways to change the rate of radioactive decay. One of them belongs to I.M. Shakhparonov [116]. It is worth mentioning separately about his vacuum polarization device [111] - quite a lot of characteristic effects of non-electromagnetic radiation - "Kozyrev-Dirac radiation", or magnetic monopoles, in the terminology of Shakhparonov himself, as well as completely strange effects, whose analogues can hardly be found somewhere else (see the researcher's website <http://www.chakhparonov.ru>).

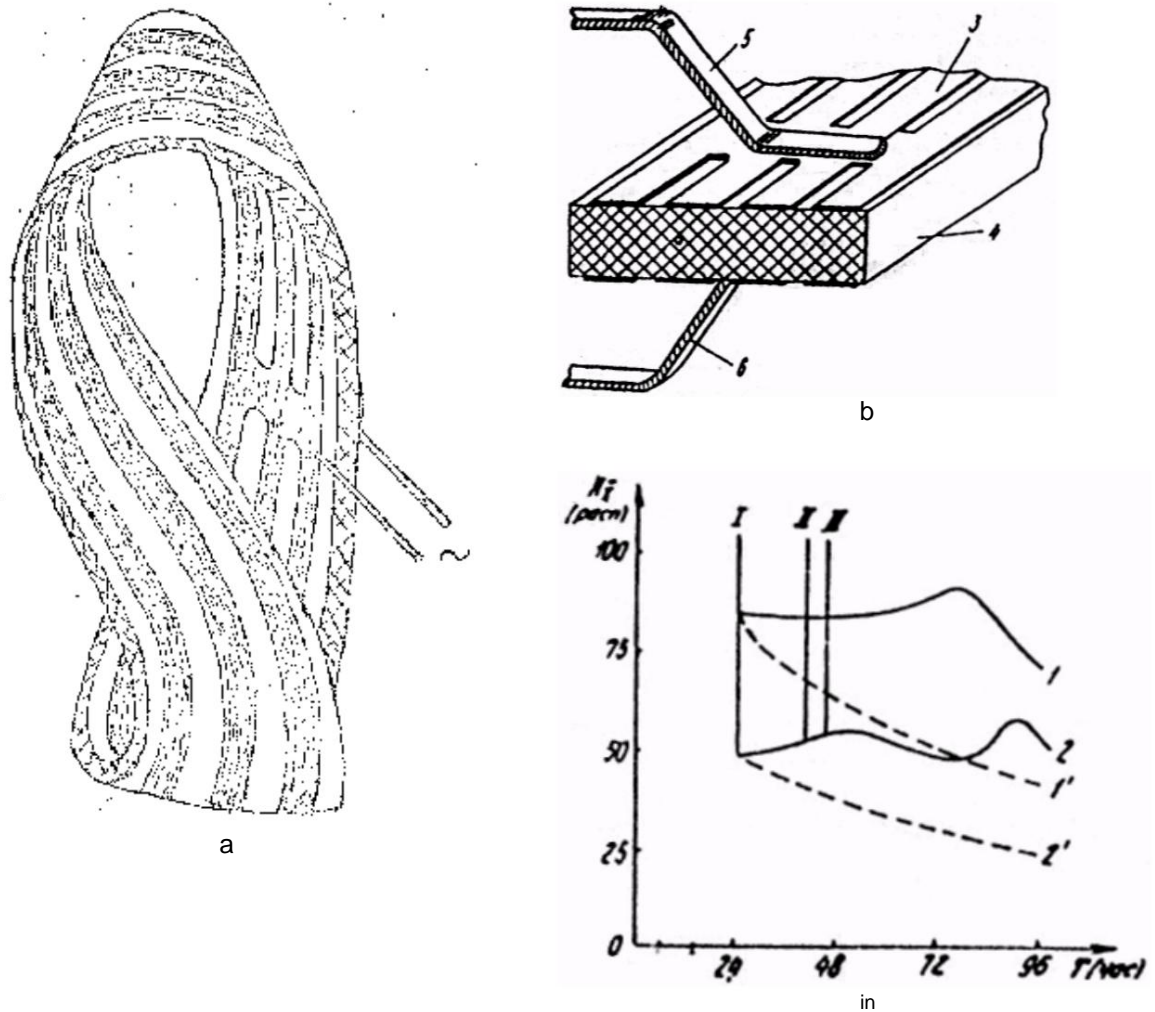
The main element of Shakhparonov's device is a Mobius strip, where a layer of aluminum or copper is deposited on a dielectric substrate (Fig. 58-a, b). Voltage is applied to the "plates" of such a closed capacitor; in many experiments this construction was still rotated. I will just list some of the effects of this "miracle generator": changing the elemental

composition of oil [113], already mentioned biological effects (exposure to mice) [70], magnetization of non-magnetic materials [112], appearance of plasma formations [115], cooling effects of bodies under radiation [114].

In the article "Guide to Action" [115], Shakhparonov describes the circumstances of the discovery of the wave process of changing the activity of a ^{60}Co sample as follows:

"... With one's own eyes, on the screen of the spectrum analyzer, it was clear that the decay of the radionuclide accelerated, then, after a few minutes, it slowed down, then returned to its original state. Then it accelerated again, slowed down, returned, etc. ... The repetition period of the oscillations was very large - 3-5 minutes ..."

This process continued even after the cessation of exposure, so that the sample, originally a reference, was unsuitable for use as a reference.



Rice. 58. I.M. Shakhparonov's generator design (a, b) and the effect of changing the radioactivity of ^{131}I samples (c).

But let's get back to Shakhparonov's patent "Method of decontamination of radioactive materials". It contains graphs of changes in the radioactivity of iodine-131 (Fig. 58-c). Description of the experiment from the patent:

"In the experiment, the studied ampoules with the ^{131}I radionuclide are irradiated for 15 minutes 3 times. One of the ampoules was installed at a distance of 1.5 m from the emitter

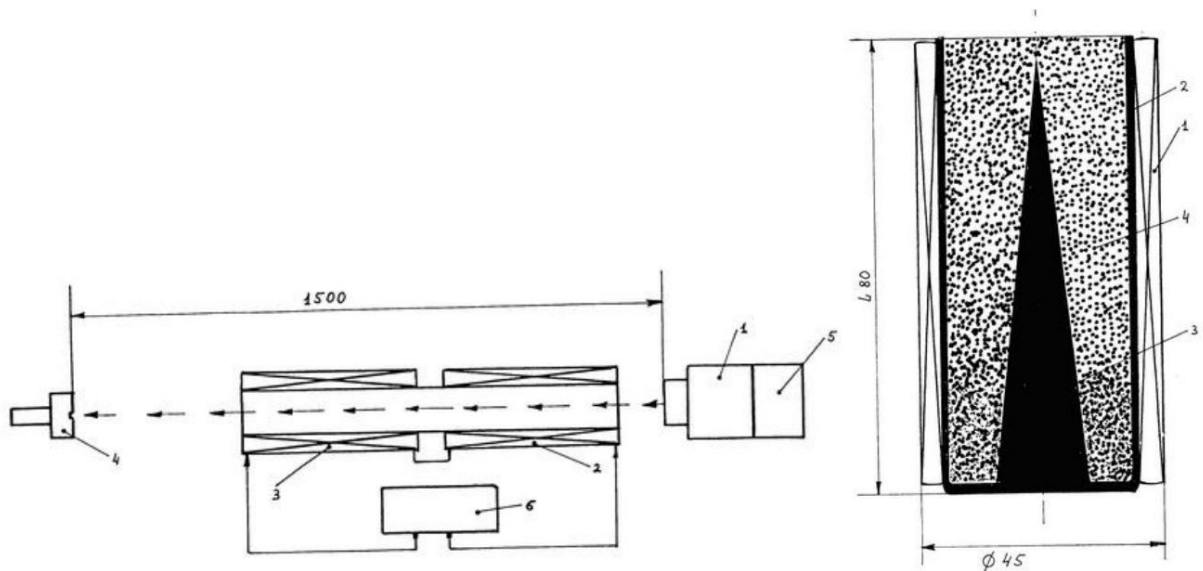
monopoles, the other - at a distance of 7 m. The activity of both ampoules was measured with an RKSB-104 boron. The background was measured before and after the main measurements. The results of the experiment are shown in Fig.3. where solid curves 1 and 2 correspond to the results of studies at distances of 1.5 and 7 m, respectively. dotted curves - calculated decay curves of the radionuclide without exposure.

According to the results of measurements (the arithmetic mean for 5 minutes of measurements is taken) after 15 minutes of exposure to magnetic monopoles on a source with radionuclide ^{131}I , the number of decays was 70. After 45 minutes of exposure, the number of decays was also 70. As can be seen from curve 1 (Fig. 3), 72 hours after exposure, the number of decays was 82, - 75 decays. Frictional influence by a stream of magnetic monopoles was carried out in time positions I, II, III.

Curve 1 (figure 3) shows that without the impact of monopoles on the source of radionuclides, the number of decays was 50.

waste, as well as contaminated areas.

In the article "Interaction of Kozyrev-Dirac radiation with radionuclides" [117], Shakhparonov describes the results of irradiation of a uranium sample with a flux of magnetic monopoles with the removal of a gamma spectrum. The setup (Fig. 59) consisted of an emitter, a magnetic accelerator and a sample - a uranium bolt from a mixture of ^{235}U , ^{236}U , ^{238}U isotopes. The experiment used a different type of emitter (Fig. 60), which, apparently, uses the effect of shapes and electromagnetic excitation.

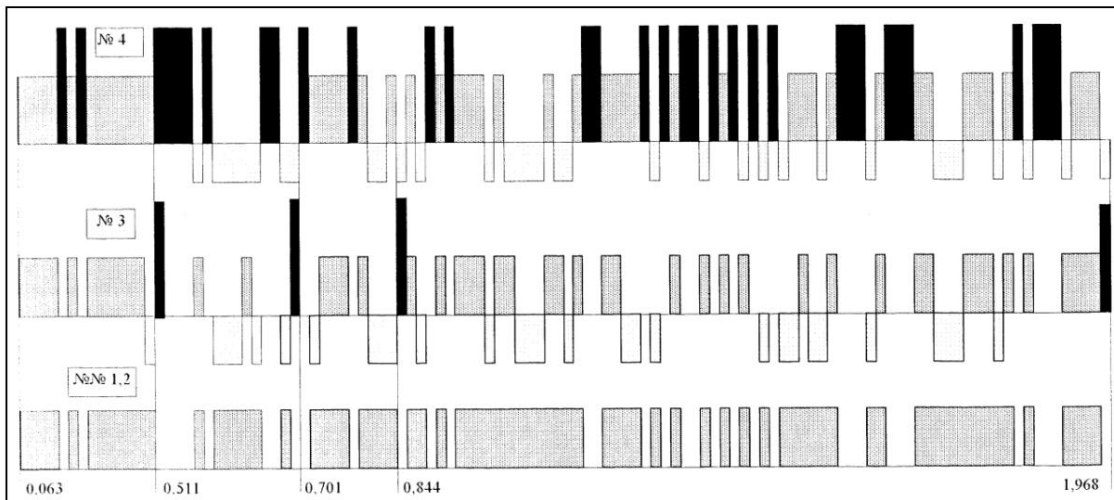


Rice. 59 (left). Installation for irradiation of a uranium sample with fluxes of magnetic monopoles:


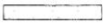

1. Concentrator and beam shaper of magnetic monopoles (CD radiation).
2. 1st accelerator section with an induction of 628 G/cm; 29 cm long.
3. 2nd accelerating section with an induction of 1000 G/cm; 39.5 cm long.
4. Target in the form of a M12 L22 uranium bolt, consisting of a mixture of isotopes (^{235}U , ^{236}U , ^{238}U) of uranium, which underwent intensive neutron processing followed by five years of exposure.
5. Power supply of the shaper. The average electric power is 10 mW.
6. Stabilized power supply for accelerating sections 0-30 V; 0-10A.

Rice. 60 (right). The emitter of magnetic monopoles from [117]: 1 – excitation winding, to which pulses of nanosecond duration with a frequency of 20 kHz are applied, 2 – metal glass, 3 – conical central guide, 4 - "non-oriented superlattice with a total number of elements of the order of 1010 pieces."

The results of the experiment in the form of a gamma spectrum are shown in Fig. 61. No. 1 - control measurement, No. 2 - exposure to ICD without accelerating coils, No. 3 - ICD exposure with coil 2 on, #4 – ICD exposure with coils 2 and 3 on. The exposure of the sample in each series lasted 4 hours, then it took another 4 hours to obtain the spectrum.



Изменение распределений линий гамма-спектра от 0,063 до 1,968 МэВ в зависимости от энергий ИКД.
 №1 и №2 - гамма-спектр исходный и спектр после воздействия неускоренным пучком ИКД.
 №3 - гамма-спектр после воздействия пучка ИКД с энергией $\approx 0,37$ ГэВ.
 №4 - гамма-спектр после воздействия пучка ИКД с энергией $\approx 1,17$ ГэВ.

 - линии, оставшиеся без изменения.
 - исчезнувшие линии.
 - новые линии.

Rice. 61. Results of an experiment on the irradiation of a uranium target with a flux of magnetic monopoles.

It is noteworthy that the tracks of "strange radiation" on photographic films and photographic plates from the installations of Urutskoev and Shakhparonov are very similar [72, 121, 118]; the same or very similar tracks were also observed in the experiments of Solin [120], Ivoilov [122, 123], Adamenko [124] – see Section 10.1.4.

8.2 Results of A.V. Kinderevich

Somewhat similar results were obtained on A.V. Kinderevich's setup, the design of which was described in Section 3. In a control experiment in 2005 with the participation of employees of the Kurchatov Institute, the following results were obtained [126]:

1. Sample 1, Sr-90, Cs-135 - control, not processed, change no activity found.
2. Sample 2, Sr-90, Cs-135 - processed for 96 hours, activity decreased by 46%.
3. Sample 3, Sr-90, Cs-135 - short-term (2 hours) exposure; during the operational control, an increase in activity by 12% was found, but by the time the control measurements were taken, the activity had fallen by 1.8%.
4. Sample 4, Sr-90, K-40 - treated for 62 hours, activity reduced by 54%.
5. Sample 5, Am-241, treated for 50 hours, activity reduced by 14.2%.

Radioactive samples were placed in a generator in a metal container with a wall thickness of 10 cm. According to A.V. Kinderevich, the radiation from his generator is extremely biological actively.

Similar results were obtained by Krasnikov's group [129, 130].

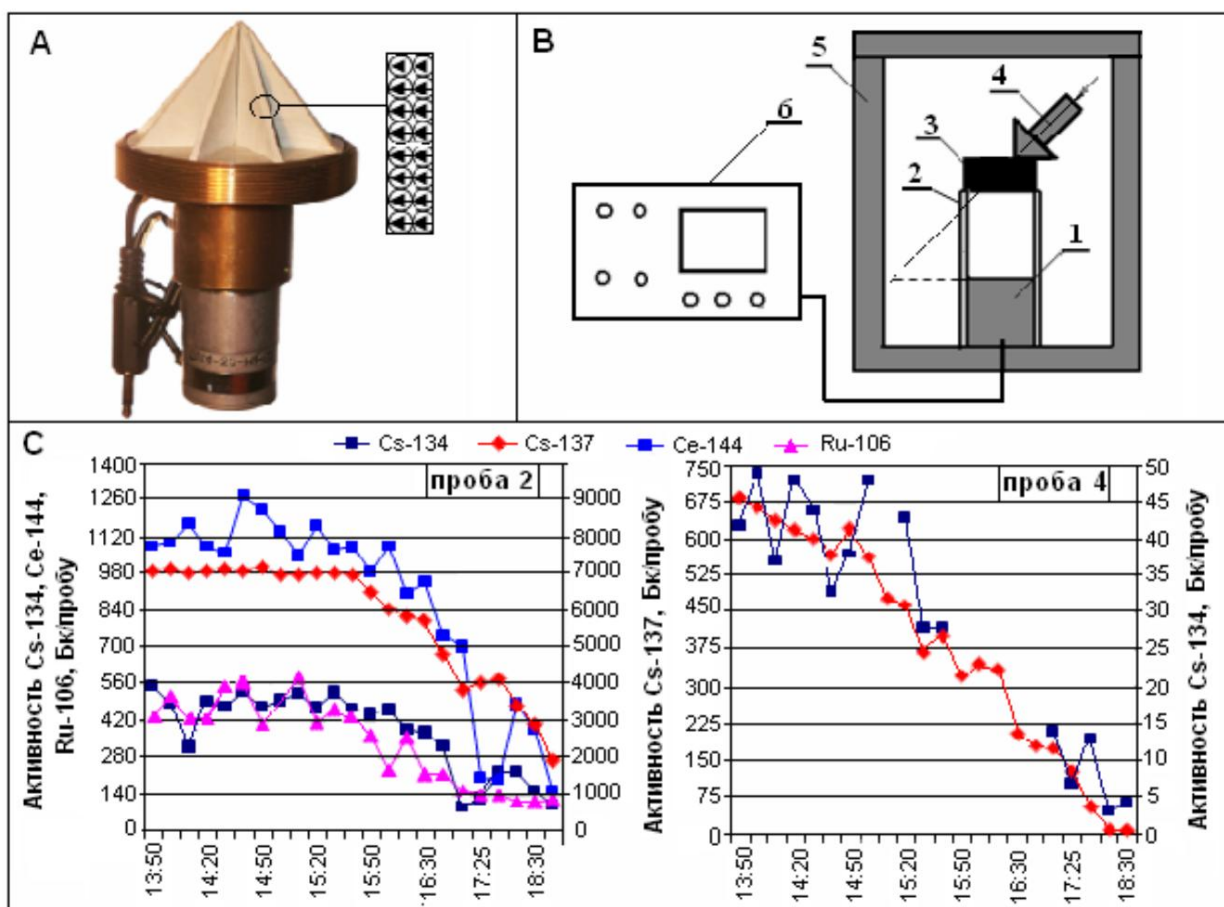
8.3 Results of V.G. Krasnobryzhev

Using the generator shown in Fig. 62-A, VG Krasnobryzhev carried out experiments to induce a strong anisotropy of gamma radiation from radioactive samples [37]. The samples were made on the basis of samples from the Chernobyl zone, the activity of ^{134}Cs , ^{137}Cs , ^{144}Ce , ^{106}Ru was measured in them using an Ortec detector and a Nokia spectrometer. In this case, the sensor was located at some distance relative to the samples, and inside the limiter (Fig. 62-B), which, apparently, served as a rough collimator. The axis of rotation of the generator was located at an angle to the axis of the limiter. After exposure to the first sample for 5 hours, its measured activity dropped several times, and the activity of cesium isotopes of the second sample dropped to almost zero (Fig. 62-C). Sixteen hours after the generators were turned off, the radioactivity of the samples recovered to its original level.

About the design of the generator, V.G. Krasnobryzhev writes:

"In Fig. 62-A shows a spin field generator in which an ensemble of classical spins is implemented using anisotropic barite plates shaped as right triangles with an angle of 50° at the base. The plates are fixed on a round rotating platform. The rotation of the platform is carried out by means of a DC motor; number of revolutions -

6000 rpm, voltage 6 v. In this case, the orientation of the spins in the plates coincides with the direction of rotation."



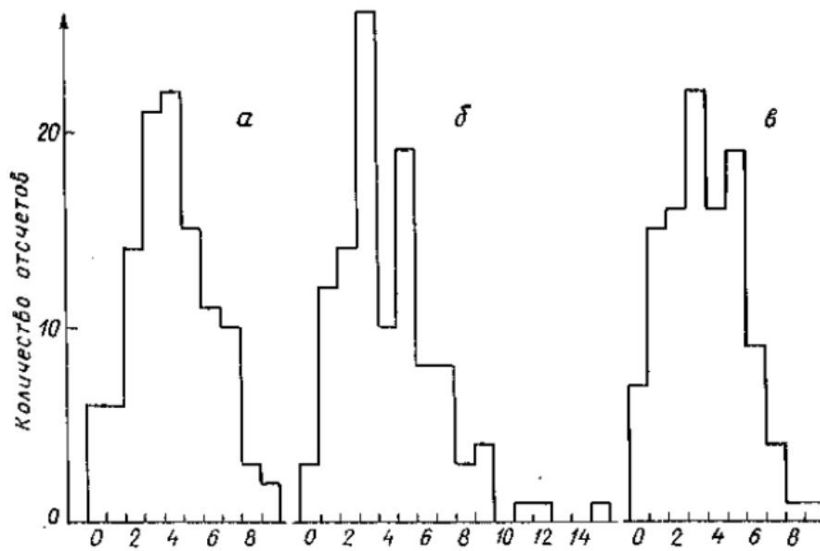
Rice. Fig. 62. Influence of the spin field on the anisotropy of the radiation of radionuclides: A - generator of the spin field; B - scheme of the experiment: 1 - "Ortec" sensor, 2 - limiter, 3 - radioactive sample, 4 - spin field generator, 5 - screen, 6 - "Nokia" spectrometer; C is the change in the activity of radionuclides in the direction of the detector under the action of a spin field.

8.4 Results of the group of V.I. Lunev

Several experimental works indicate changes in the parameters of radioactive decay under the influence of rotation near sources and sensors of radioactivity.

The article by S.G. Yekhanin, B.V. Okulov, G.S. Tsarapkin, V.I. Lunev "Experimental detection of the influence of the gyromotor flywheel torsion field on the readings of a gas-discharge detector of ionizing radiation" [131] describes the following effect: when analyzing distributions of the counting rates of the radioactive background by the Geiger counter SBM-20 in small samples, it is found that the histogram becomes multi-extremal. On Fig. 63 shows histograms built on 60 4-

second readings (rotor speed 9000 rpm). The background here was the position of the sensor at a distance of more than a meter from the gyro motor, the impact was in the immediate vicinity. It was also noticed that the effect of histogram splitting continued after the gyro motor was stopped (the effect of metastability).



Rice. Fig. 63. Background histogram (a), impact histogram (b), aftereffect histogram (c) (Fig. 2 from [131]).

Measurements with the RSP-110M scintillation detector based on sodium iodide (Fig. 64) showed that the counting rate decreases when the gyro motor is operating [132]. Moreover, the decrease in speed is more noticeable in the mode of rotation of the gyro by inertia (Fig. 65).

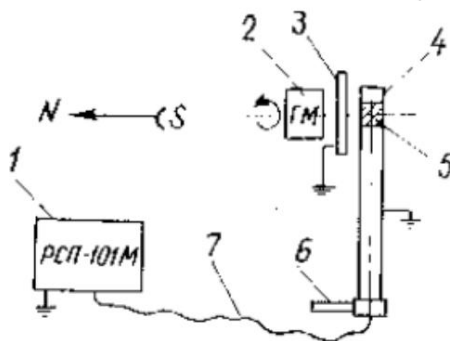
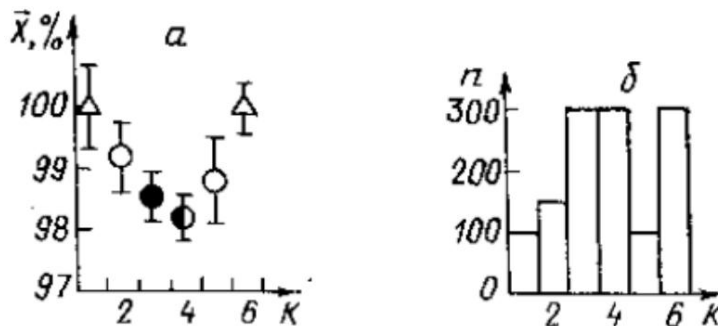


Рис. 1. Схема эксперимента: 1 — радиометр ионизирующего излучения типа РСР-101М; 2 — гиromотор типа ГМВ-524, диаметр ротора 60 мм, вес 0,5 кг; 3 — алюминиевый экран толщиной 5 мм; 4 — металлическая трубка датчика радиометра; 5 — сцинтиллятор датчика (кристалл йодистого натрия); 6 — ручка датчика; 7 — соединительный кабель

Rice. 64. Scheme of the experiment from [132].

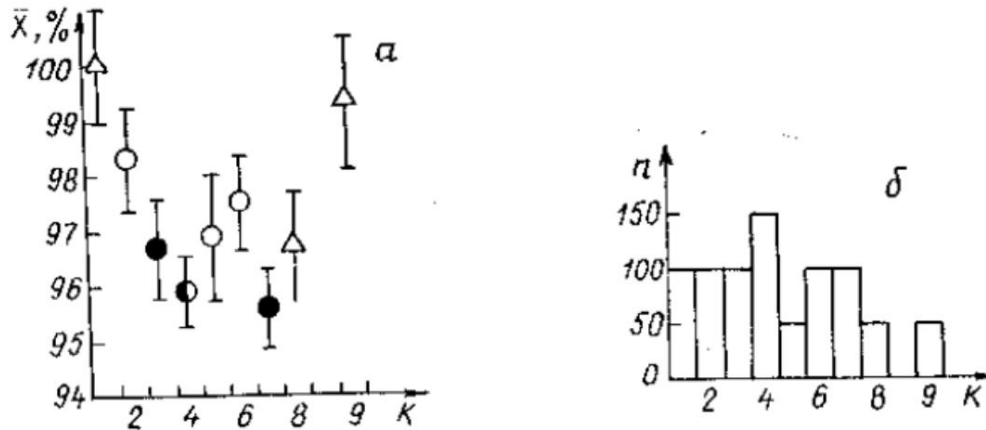


Rice. 65. a) - changes in the count rate: of a ○ - near the resting gyro motor, ● - near working gyro motor, - near a gyro motor rotating by inertia, compared with the background

△)

(b) - the number of readings in each experiment (Fig. 4 from [132]).

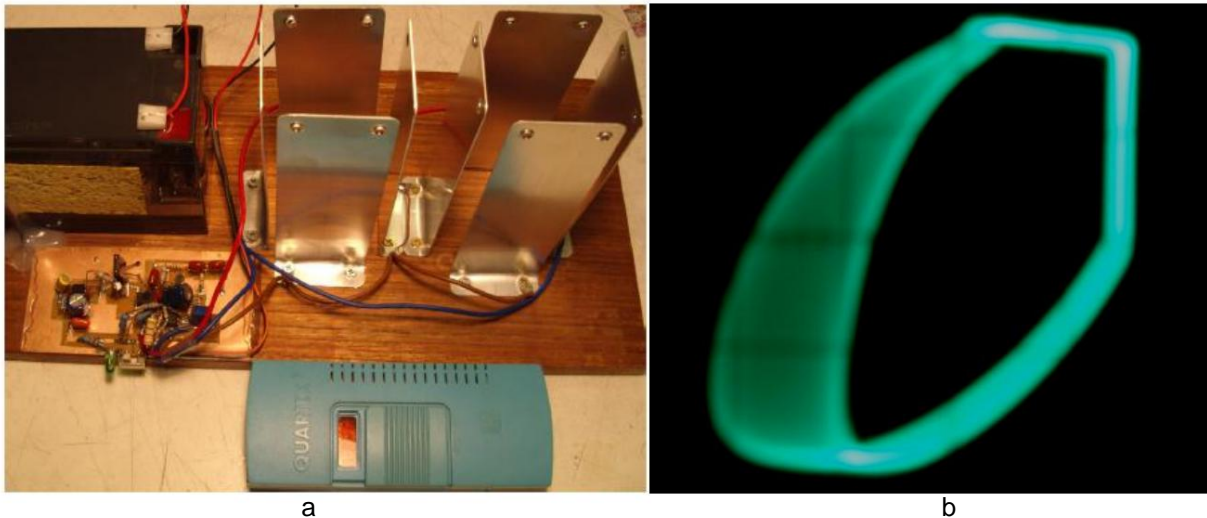
In the work of B.V. Okulov "The possibility of increasing the sensitivity of a scintillation detector of ionizing radiation to torsion fields" [133], the results of similar experiments are described, but the sensor is placed in an additional ferromagnetic screen with a wall thickness of 2 mm. In this case, there was a greater difference in values from the operating gyro motor compared to the background (Fig. 66).



Rice. 66. Changes in the counting rate with the installed ferromagnetic screen (Fig. 2 from [133])

8.5 M. Krinker's results

Mark Krinker's group (USA) is conducting experiments within the concept of field gyroscopes. In one such experiment, the influence of a rotating electric field on the readings of background gamma radiation (Geiger-Muller sensor QUARTEX) was investigated [134, 135].



Rice. 67. a) a photo of M. Krinker's installation with a rotating electric field vector, b) the trajectory of an electric vector in a quadrupole capacitor during non-stationary rotation.

Two quadrupole cells were powered by a circuit that generated non-stationary rotation of the electric vector (Fig. 67). Average, standard 77 were compared

deviation and histograms in the background and when the vector is rotated left and right. Each measurement took 38 seconds, such measurements were made sequentially by 10 for the background, left and right rotation, and then the whole cycle was repeated 12 times. The total number of values was thus 120 for background, left and right rotations. With an electric field of 100 V / m and a rotation frequency of 6 kHz, the average count in the sensor decreased, the standard deviation also decreased and began to diverge from the mean square root (Table 7). M. Krinker notes the aftereffect in violation of the Poisson distribution.

Table 7. General results of the low-drive experiment

$\ddot{\gamma}R/h$	reference	Counterclockwise	Clockwise
Average	9.78	8.43	8.82
standard deviation	3.16	3.09	2.42
Square root of the average	3.13	2.90	2.97

8.6 Results of A.G. Parkhomov

Also of interest are the results of many years of research by A.G. Parkhomov [136], who state the existence of a certain component of cosmic radiation, which affects the rate of beta decay. Long-term observations of the rate of beta decay with parallel fixation of other indicators (temperature, atmospheric pressure) revealed pronounced annual and monthly fluctuations in the average decay rate (0.3% in an annual cycle, 0.02% in a monthly period; no correlation of these rhythms with temperature and other rhythms was found that may affect the results).

Noteworthy is the setup that Parkhomov used to test the hypothesis about the nature of such rhythms. A radioactive source with a Geiger detector was brought into focus steel parabolic reflecting mirror. In a situation where the mirror did not change direction with respect to the Earth, but simply rotated along with the daily rotation of the Earth, sharp but rare bursts of radioactivity appeared, when the decay count rate increased many times over.

In a situation where the optical axis of the mirror made a scanning motion along the celestial sphere, compact areas on the celestial sphere with bursts were found. However, these areas were short-lived - it was not possible to map the "anomalous zones" on the celestial sphere.

Parkhomov, among other things, notes:

"3. The dynamics of bursts in time is very diverse. The simplest type is single bursts lasting several seconds with an increase in the count rate by more than 3 orders of magnitude. Longer events (lasting up to several hours) consist of short bursts of various amplitudes, distributed in a complex way in time .

4. In the presence of continuous cloudiness, no statistically significant bursts were registered.
5. Placement of the telescope behind a window pane and screening with aluminum foil does not noticeably affect the effectiveness of the experiments.

Parkhomov then also subjected these results to a comprehensive critical analysis, indicating the additional checks he made to make sure that the results obtained were not measurement artifacts. Omitting part of the author's reasoning, I will immediately give the conclusions:

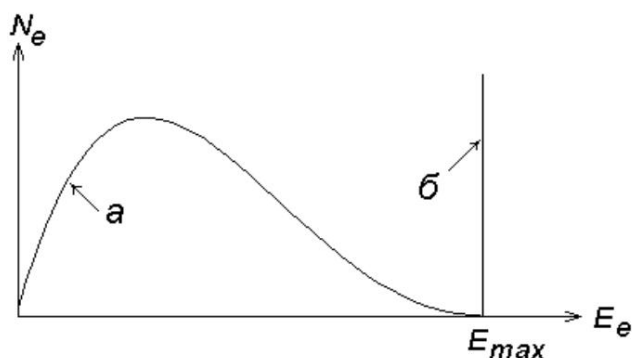
"The totality of the data obtained gives grounds for the conclusion that the occurrence of bursts is associated with the presence of a focusing mirror, concentrating the flows of some agent coming from the Cosmos. To be registered by the described installation, this agent must have the following properties:

1. The ability to influence beta radioactivity.
 2. The ability to specularly reflect from smooth surfaces, as well as monodirectionality, which allows reflection by a parabolic mirror.
- The information obtained during the experiments allows us to draw conclusions about other properties of the agent. It is characterized by:
3. Strong variability in time and direction.
 4. Uneven distribution of the probability of recording bursts over the celestial sphere.
 5. Inability to pass through clouds.
 6. Ability to pass through glass and aluminum."

Then the author hypothesizes that ultralow energy neutrinos with a nonzero rest mass can have such characteristics. This conclusion is also confirmed by Parkhomov's earlier experiments using spark chambers [136]. In the early 1990s, he studied the phenomenon of diffraction of an unknown cosmic component by periodic structures assembled from parallel thin plates of various materials, as well as concentric annular grooves in metal, etc. This cosmic component led to spark discharges, which were fixed on a photographic emulsion placed between two closely spaced flat electrodes under a constant voltage of about 2 kV.

Experiments with spark chambers, and then with counters of ionizing particles, showed that the cosmic component has wave properties, is subject to refraction and reflection in various media, and has a very strong penetrating power. The wavelength range calculated from the diffraction patterns turned out to be quite wide - from micrometers to millimeters. Parkhomov then suggested that the ultra-low-energy neutrino component of dark matter satisfies these characteristics, it should be focused by astronomical objects (the effect of gravitational lenses), have a wide range of velocities (from 8 to hundreds of km / s) and manifest itself in the experiment as strong fluctuations in the change in the intensity of the inverse beta reaction -neutrino/antineutrino decay by emission

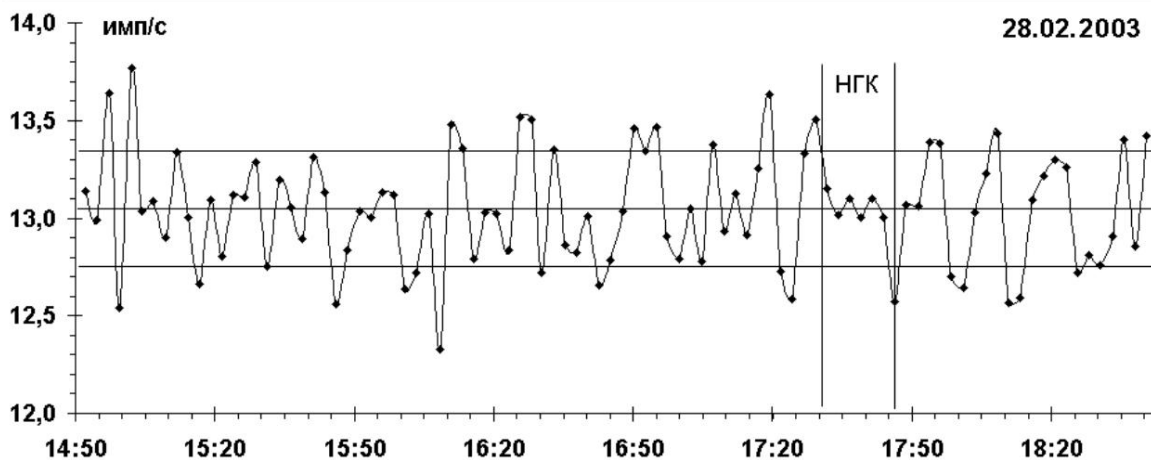
with takeover and electrons/positrons. Fluctuations should appear as periodic fluctuations due to the rotation of the installation together with the Earth, and also give the effect of bursts.



Rice. 68. Spectra of electrons (positrons) of direct (a) and reverse (b) beta decays. N_e - number of emitted electrons (positrons), \bar{y}_e - energy of electrons (positrons), \bar{y}_{max} - maximum energy of the beta spectrum (illustration from [136]).

This has been shown experimentally. The $^{90}\text{Sr} + ^{90}\text{Y}$ beta source was used as an ultra-low energy neutrino detector. Assuming that beta particles from reactions of direct and reverse beta decay have a significantly different energy spectrum (Fig. 68), Parkhomov singled out a component corresponding to the maximum energy of beta particles - 2.27 MeV. The experiment showed that in the presence of diffraction gratings, the magnitude of the fluctuations in the output of such beta particles really increases, and with changes in the position of the diffraction gratings, a change in the intensity of the inverse beta decay occurs.

A.G. Parkhomov, together with A.V. Karavaykin, obtained effects on the parameters of radioactive decay of ^{60}Co using a generator of non-electromagnetic radiation designed by A.V. Karavaykin. A Geiger counter was used. An example of influence is shown in Fig. 69.



Rice. 69. An example of the influence of the Karavaikin generator on the registration of ^{60}Co beta particles by a Geiger counter. The horizontal lines mark the average count rate (13.05 counts per second) and the difference from the average count rate by one standard deviation (± 0.3 counts per second). It can be seen that when the generator was turned on (this section of the record is marked with vertical lines), the average count rate did not change, but there was a significant decrease in the scatter of the measurement results. In this section, the standard deviation is 0.064, i.e. almost 5 times less than in other areas, where it is quite consistent with Poisson (Fig. 1.18 in [136]).

A.G. Parkhomov notes:

"Numerous experiments show that the effect is reproducible, and it is found not only on beta, but also on alpha sources, as well as when the device acts on electrical noise generators. By changing the operating mode of the device, it is possible not to reduce, but to increase the spread of results.

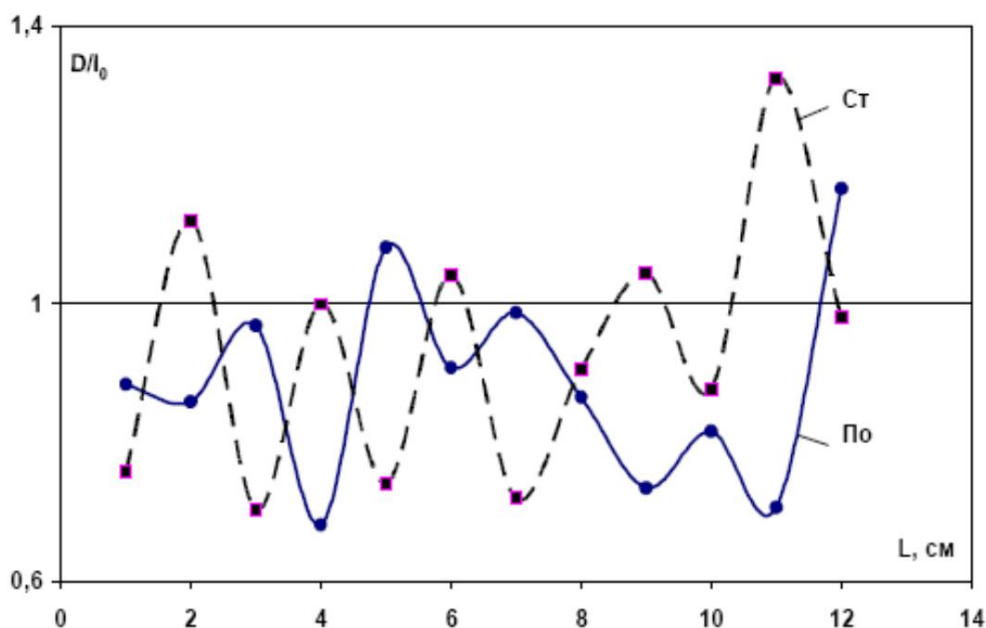
... Such a set of events, if they were purely random, could appear in approximately one experiment out of a thousand. About a hundred such experiments were made in 2003-2004, and such anomalies were observed in most of them. Therefore, we can rightly conclude: unbelievable, but true."

8.7 Results of I.A. Melnik

Studies by IA Melnik from Tomsk [137, 138, 139, 140] indicate that a rotating body affects the rate of decay of radioactive elements. During the experiment, the integral area of the peak of gamma radiation of various radionuclides (^{137}Cs , ^{60}Co , ^{239}Pu , ^{241}Am , ^{198}Au , ^{65}Zn). Melnik carried out quite thorough studies on the influence of electromagnetic interference from the operation of the engine, and the contribution of the non-electromagnetic component was highlighted.

The results showed that in the case of ^{60}Co (beta decay), the rotation of bodies near the sample reduces the intensity of decay, and also splits the shape of the intensity histogram into two-hump and three-hump, depending on the distance to the rotating body. For alpha decay (plutonium and americium), the following picture was obtained: the intensity of the ^{241}Am peak decreases, while that of ^{239}Pu increases. The speed and direction of rotation also affects the magnitude of the effect. After the rotation stops, the effect remains for some time - the effect of metastability. It has been shown that this effect is not electromagnetic in nature, and that nearby non-rotating objects also influence this effect.

On Fig. 70 shows the change in the ratio of dispersion to the measured value of the gamma-ray peak area from ^{65}Zn as a function of the distance of the radioactive sample from a rotating steel beaker of water.



Rice. Fig. 70. Distribution of the relative dispersion of the first stage of measurements depending on the coordinates in the clockwise rotation mode (Π_o) and the static mode (St) (Fig. 8 from [139]).

Here you can see the effect of the inversion of the dispersion change pattern when rotation is turned off: the already known metastability effect manifests itself in such a way that it seems to compensate for changes in the signal dispersion that occurred during rotation, repeating the dependence on distance, but with the opposite sign.

But the most original results were those obtained by Melnik on ^{198}Au samples [139]. Two samples were irradiated with the same neutron source (in a nuclear reactor). Then these samples were divided. One sample (working) was exposed to a rotating body, the second was a control, and was not subjected to such an impact, being removed from the first. The decay intensity was measured simultaneously in both samples, and the decay correlation in them was analyzed.

The result is surprising: with an increase in the time of exposure of the rotating body to the working sample, the decay correlation between the samples increased to 0.66, and the decay fluctuations of the control sample decreased significantly. The author writes:

"Interestingly, the exponential value of the dispersion of the first [control] sample differs from the theoretical value by 10.8%, and for the second [working] sample value difference is less than 1%. Thus, the decrease in fluctuations in the decay of the gold isotope in the control sample, apparently, is associated with information dependence on the second sample, which is currently being affected.

Further in the conclusion, the author writes:

"Statistical analysis of the results obtained from the measurement of the isotope of gold, revealed a correlation of independent measurements and a significant decrease in the fluctuation of the peak area for the control sample. Throughout

Apparently, this phenomenon is associated with the effect of quantum nonlocality. If we consider the nuclei of the gold isotope as quantum systems that were in interaction with each other (i.e., in an entangled state) at the atomic nuclear level in salt crystals or in its solution, then a change in the state of one of the systems will instantly manifest itself accordingly in the other system. In this case, "modulated" vacuum fluctuations affecting the state of the quantum system of the atomic nucleus of the second sample cause a correlation in the decay rate of the control sample. Correspondingly, the dispersion of the active nucleus also changes. After the exposure is turned off (static measurement mode in another room, in the absence of any rotating objects), the dispersion returns to its original state.

A similar effect was obtained by Melnik in experiments with ^{65}Zn and ^{137}Cs [139].

8.8 Results of S.E. Shnol

For several decades, S.E. Shnol (Moscow State University, Institute of Biophysics, Russian Academy of Sciences, Pushchino) and his colleagues have been studying the phenomenon of macrofluctuations of random physical processes [141]. He showed that in all physical processes on the Earth (from the noise of a piezoelectric sensor of a gravitational antenna to alpha decay), the effect of nonrandomness of the shape of histograms in small samples is observed. Nuclear reactions are no exception. For a number of years, the main setup for studying macrofluctuations was ^{239}Pu samples with an alpha-particle counter, including collimators.

The effect of macrofluctuations can be illustrated as follows. If we take any two physical processes, measure their speed once per second, and construct histograms of their flow rate, for example, 60 measurements in each histogram, and then compare these histograms in pairs, it turns out that the histograms corresponding to the moments of equality will have the greatest similarity local time of processes (the so-called local time effect). For adjacent histograms of one process, there will be a higher probability of meeting similar ones than for any other interval between histograms. There are periods of appearance of similar histograms, equal to sidereal days, solar days, 29-day period and annual.

Experiments with collimated sources of radioactivity have shown that if the collimator is directed to the North Star, then the daily cycles of histogram similarity disappear. If you rotate the collimator in the direction from east to west, then periods appear corresponding to the joint rotation of the Earth and the collimator. Another interesting result: if you point one collimator to the west and the other to the east, then the western one will show histograms similar to those shown by the eastern one 718 minutes (i.e., half a sidereal day) ago.

The similarity period of histograms of one physical process of 718 minutes also appears during the spring and autumn equinoxes. During solar eclipses on the entire surface of the Earth, physical processes show similar histograms. A similar effect occurs during new moons. When approaching the poles

The Earth's daily period of histograms disappears. At the moments of sunrise and sunset, characteristic histograms also appear.

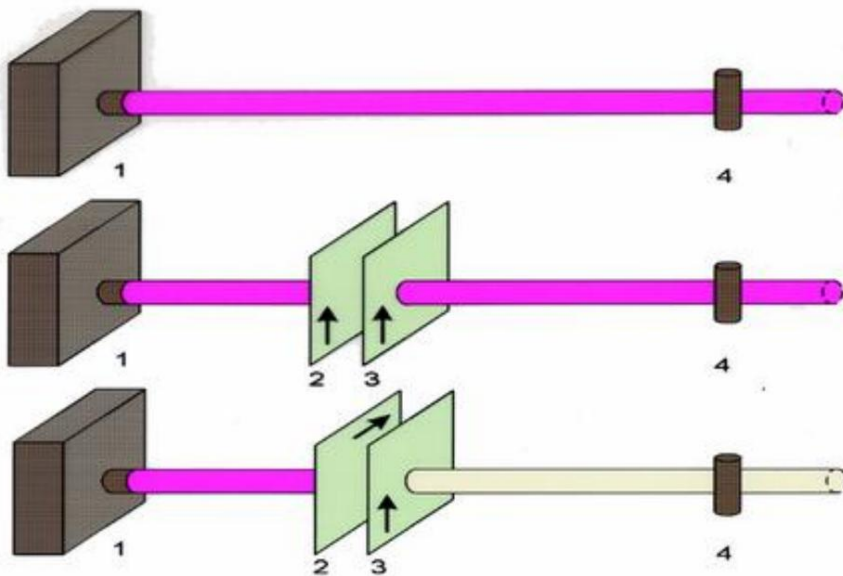
These results imply the existence of a certain cosmophysical agent acting on completely different physical processes (for example, the same effects were obtained by Shnol's group when analyzing noise diode current fluctuations). But this effect seems to be the most interesting for this review in the light of the experiment carried out by S.E. Shnoll and V.A. Panchelyuga in 2006 with a rotating centrifuge and two stationary collimated ^{239}Pu sources [142]. In this experiment, a rapidly rotating centrifuge was periodically switched on and off - with a period between complete switching cycles of 10 minutes. One collimator was directed coaxially to the rotation, the second was directed perpendicularly (that is, looked at the centrifuge). The perpendicular collimator showed a period of 5 minutes for similar histograms (i.e., a half-cycle on/off cycle). In this case, the axial collimator did not show such periods. The authors suggest that the histograms show the similarity of processes during braking

and acceleration of the centrifuge.

The similarity of histograms by the Shnol group is determined by an expert method (i.e. manually). Attempts to create a machine algorithm that reliably reproduces the same effects as with the expert histogram comparison method have not been successful so far.

9. SCREENING

In [9], A.E. Akimov describes the effects of shielding radiation from torsion generators. The shielding structure consists of two polyethylene films stretched in a certain direction. According to Akimov, the stretching of films creates spin anisotropy (polymer molecules with spin are oriented in some preferential direction). In a situation where the direction of this anisotropy of the films is perpendicular, the radiation from the torsion generator is attenuated to the greatest extent, until the effects disappear (Fig. 71).



Rice. 71. Screening of torsion radiation by spin-polarized materials.

However, in this work, Akimov does not give details of the work with films - what detectors and generators were used. I was able to find descriptions of experiments with crossed polyethylene films in three groups - A.V. Bobrov, G.N. Dulnev and V. Reddish.

In the work "Reaction of double electrical layers to the action of a torsion field" [144], A.V. Bobrov describes the reaction of double electrical layers to the action of an Akimov generator using various screens. Experiments have shown that wood, steel, reinforced concrete wall do not present an obstacle to the radiation of the generator (as well as to the volitional influence of a person). In this case, the distance from the generator to the sensor was 5 m. The polyethylene screen (PE), developed at the ISTC VENT, turned out to be a good barrier to impact. A.V. Bobrov checked two shielding options: either a generator or a sensor was wrapped in PE. When the screen was on the generator, the sensor signal was clearly expressed, in addition, there were noticeable current jumps on the detector, which the author associates with possible structural rearrangements of the screen material (Fig. 72-A, B, C, D). AT

in the case when the sensor turned into a screen, the signal-to-noise ratio did not exceed 1 (Fig. 72-F, G, J).

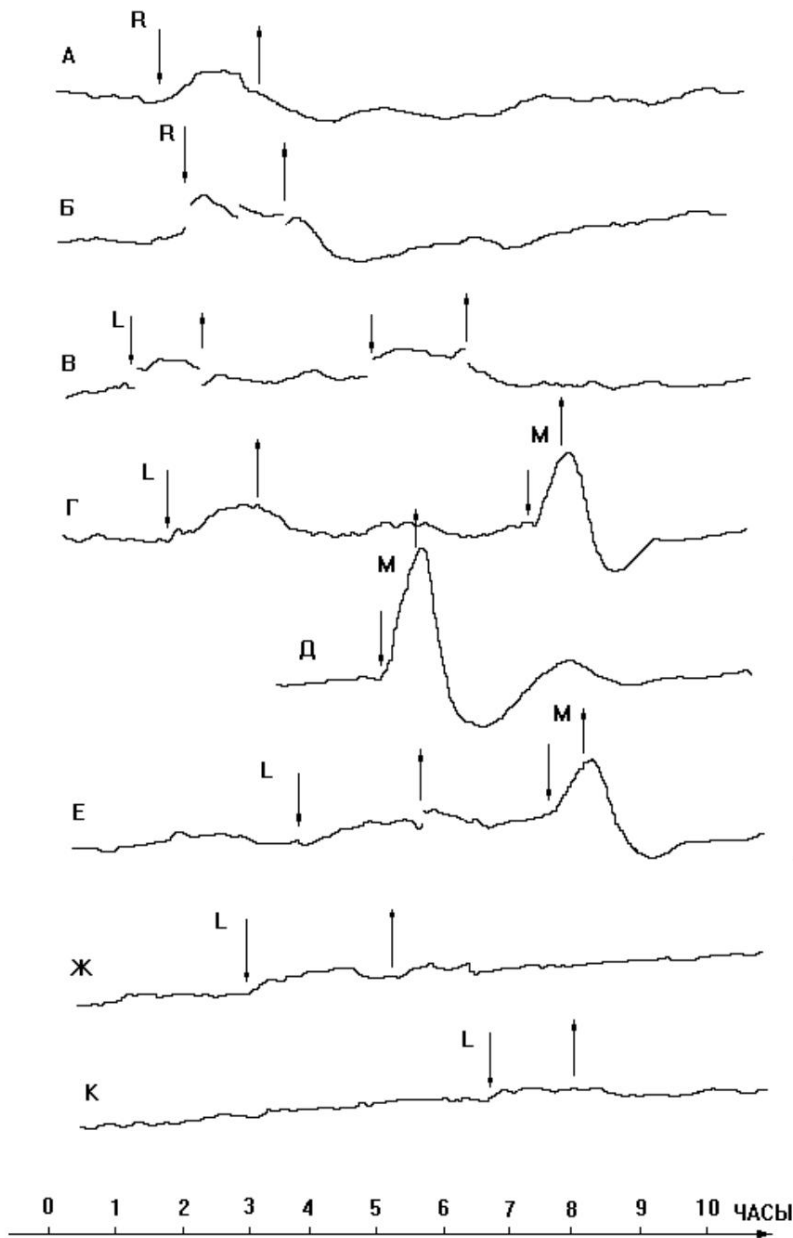


Рис. 72. The reaction of the current electrode system to the impact of the TP generator: A, B, C, G - the TP generator is wrapped with a shielding film; F, G and K - the current electrode system is wrapped with a shielding film. R - torsion right field; L - left margin; M - volitional influences of a person.

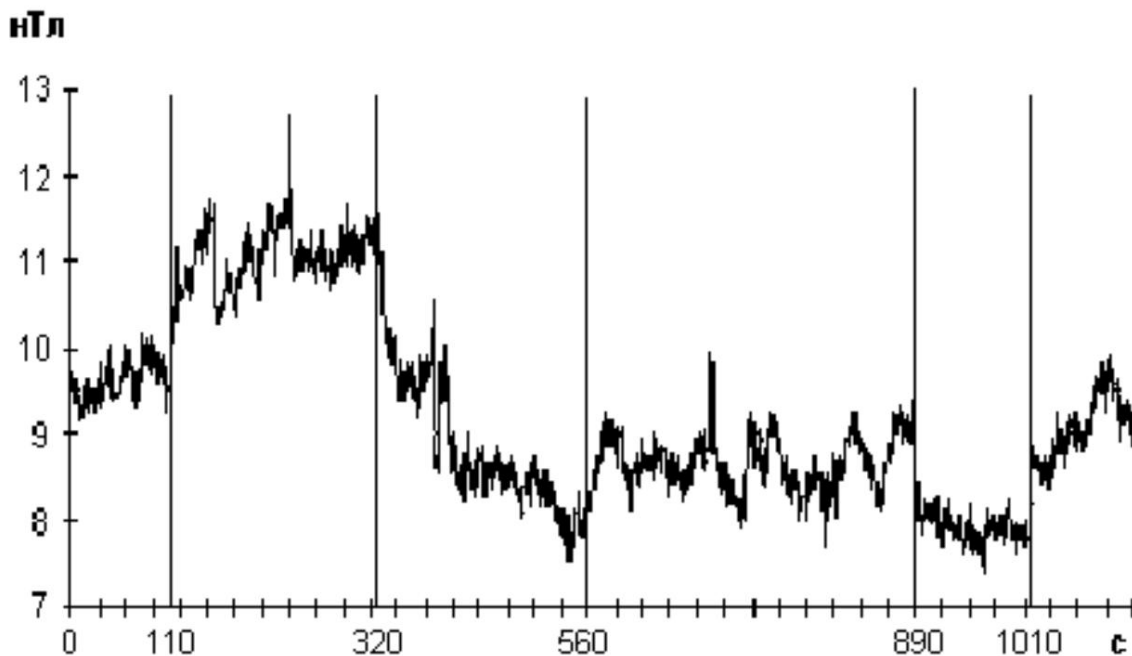
In the same experiments, the influence of PE on the volitional influence of a person on the sensor was tested (section M in Fig. 72-D, E, F). A.V. Bobrov writes:

"An important result of the experiments is the detection of the screening effect of the film on radiation coming from a person. Thus, in experiments with a sensor wrapped in a film (curve E), the amplitude of the response to the impact of VNKCH (highly penetrating non-thermal component of human radiation) is reduced by 40-

70% relative to the response amplitude of the sensor not protected by the film (curves E and D)".

G.N.Dulnev's works describe experiments with the effect of Akimov's generator radiation on thermal sensors - the "Gerashchenko heat meter", as well as on a magnetic sensor placed in a steel screen for shielding from the electromagnetic component. Changes in thermal noise parameters in these experiments are studied in relation to torsion radiation, and for a magnetic sensor, the studied parameter was the magnitude of the derivative of the magnetic flux. The experiments also included the impact of a person (psychics) on physical sensors. In the preprint [49], the authors write:

"In some cases, the use of a special polyethylene screen from the torsion field had a positive effect - the operator could not cause a reaction in the sensor wrapped in this polyethylene. It should also be noted that many operators successfully used the following technique: they mentally imagined the sensitive element in front of them and on this image. In this case, as a rule, neither distance nor various screenings affect the result."



Rice. 73. Registration of torsion radiation using a magnetic sensor.

Start (zero second) - start of the data acquisition program. The background is being removed.

110th second. TG is on. The polarization of the emitted field is left. The graph shows that the signal amplitude has increased.

320th second. The polarization of the TG radiation is switched from left to right. The graph shows that the signal amplitude drops to the background level. A further change in the signal amplitude can be associated both with a change in the background value of the magnetic field and with processes in the torsion field (effects of the "aftereffect" type).

560th second. Installing a polyethylene screen from the torsion field. As can be seen from the graph, this action also leads to a change in the signal amplitude.

890th second. Removing the screen. The operation is also accompanied by a change in amplitude signal.

1010th second. Turning off the TG is accompanied by a change in the signal.

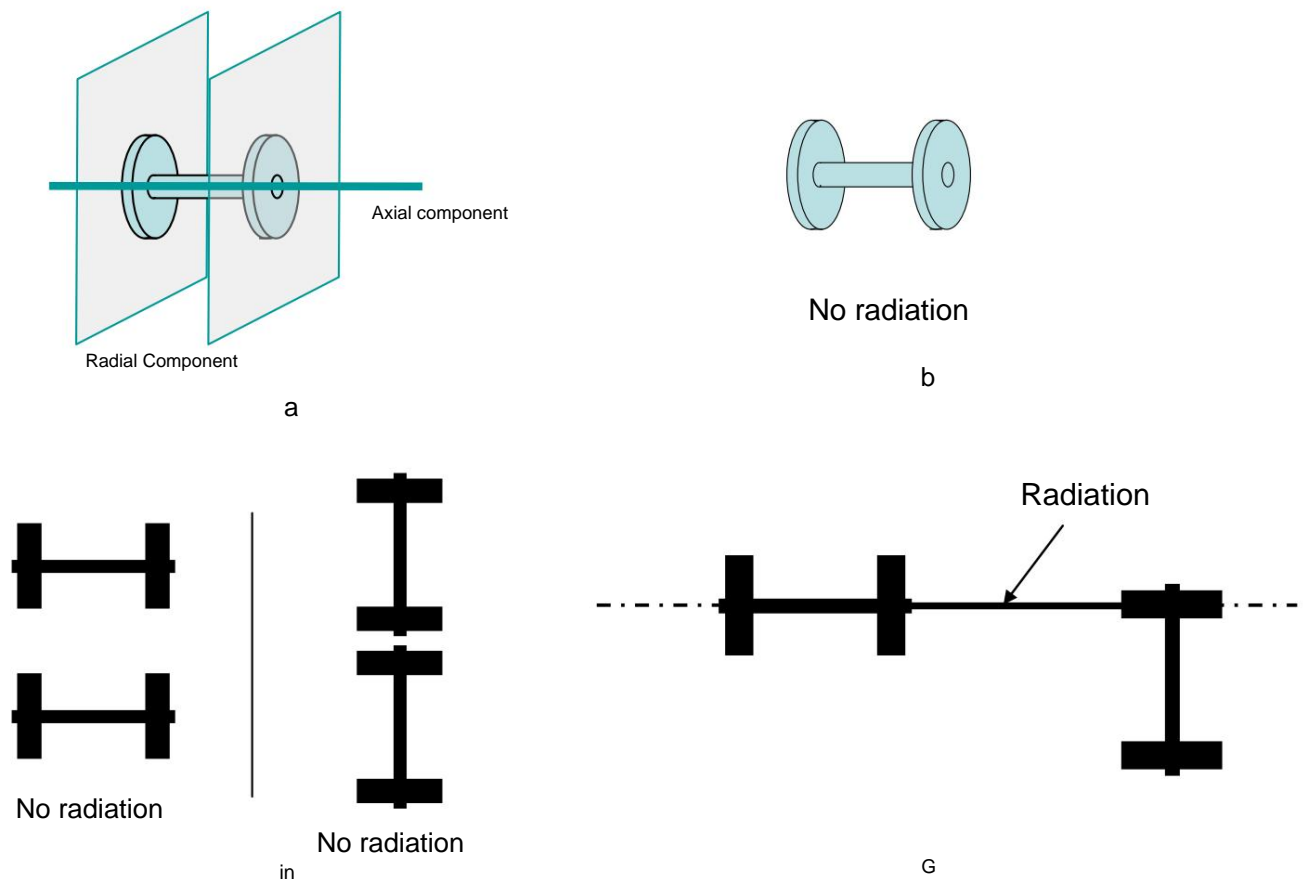
1180th second. Stopping the data capture program. Completion of the experiment.

"To answer the same question "What does the torsion generator radiate?" another series of 5 experiments was carried out. At the beginning of the series, the conditions of the experiment of 10.01. 3, similar to the graph shown in Fig. 18. After that, in two experiments between the TG and the thermal glass (at a distance of 15 cm from the generator) a special polyethylene screen was installed from the torsion field of a square shape 30x30 cm in size and the experimental conditions from 10.01.1998 were again completely reproduced. In both cases, the sensor did not record any signs of the impact of TG radiation. Since polyethylene does not prevent the propagation of electromagnetic radiation in a given wavelength range (sound), the results of these experiments allow us to assert that thermal cup No. 3 registers precisely the torsion field emitted by TG. In addition, our past judgment about the low reproducibility of air. The action of the torsion field on the sensors is probably correct only for cases when they are affected by operators (psychics), but not by a torsion generator.

In another experiment, without the use of screens in the torsion generator, the radiation coil was switched off while the control circuit was operating. As a result, the thermal sensor showed the complete absence of the influence of the torsion generator, although this influence was reproduced when the coil was connected.

Perhaps the most extensive experiments with crossed drawn films were carried out by Vincent Reddish, an astrophysicist from Edinburgh, they are described in the book "Rotating Mass Fields" [145]. On the advice of Russian researchers, he made such screens and glued shields with them, with which it was possible to completely enclose the wooden walls of the laboratory. After that, the interferometer, composed of two parallel tubes, ceased to show the interference pattern, which was noticed in the absence of screens by frame deviation at a distance of 2 meters from the interferometer (Reddish used a conventional dowsing frame as an indicator of radiation). Reddish connects this with the fact that the screens prevent the passage of radiation from the Earth and the Sun. He used artificial sources of radiation in such a shielded chamber, which were rotating disks in two grinding machines. If only one rotating mass (one machine) was switched on, no interference pattern would arise. When two machines were turned on, an interference pattern appeared, and the distance at which the frame deviated depended on the angle between the axes of rotation of the disks.

In cases where rotating disks were pasted over with such films, no screening effect was observed. In experiments without an interferometer, V. Reddish with a dowsing frame noticed radiation fluxes in the axial and radial directions from rotating masses (see Fig. 74-a) only in the absence of shielding. In order for a rotating mass to radiate in a shielded room, one more rotating mass is needed, and the relative position of the sources should be as in Fig. 74-g.



Rice. 74. Radiation of rotating masses in an unshielded (a) and shielded (b, c, d) laboratory.

Another method of shielding torsion radiation was used by I.A. Melnik [138, 140]:

“As confirmation of the reality of the influence of a non-electromagnetic component, between the rotor shaft and the radioactive isotope, a spool of left-handed nylon thread was placed. In [1], experiments showed that a left-handed thread is a field absorber in the case of counterclockwise rotation. In this variant, in the experiment with the coil, at rotation speeds of 7000 and 8000 rpm, the average value of $\dot{\gamma}_{Srot}/S_{sh\ rot}\dot{\gamma}$ approached unity. Student's test for the means showed the difference between the two samples (with and without a coil).”

10. PROBLEM OF DETECTION

The complexity and unusualness of the object, codenamed "torsion field" is a serious challenge for experimenters. Sometimes you can hear that the researchers here seem to have fallen into the times of Volta and Galvani in the history of the study of electromagnetism: a lot of disparate facts, plus rather naive attempts to systematize them, speak of a "preliminary" stage of research. At least, it is already clear now that this object is much more complicated than electromagnetism for studying by conventional methods, and the experimental base accumulated over the course of two centuries on the basis of all familiar instruments is not always suitable here.

The main difficulty in detecting a non-electromagnetic field (or fields) is that they are usually weaker than electromagnetic and thermal factors. The first thing that is necessary from the point of view of a rigorous experiment is to shield the detector from these factors, or else use as test processes those that are obviously not affected by these well-known phenomena.

The second interfering factor is the experimenter's directly working intention. This phenomenon, perhaps for the first time in the history of science, comes to the fore in an experiment, and in Section 12, devoted to psychophysical research, I will touch on some interesting results on the impact of operators on the same sensors that respond to the radiation of torsion generators. Moreover, the non-local nature of such an impact, especially in the non-shielded version, makes the experimenter's work extremely difficult - it is necessary to take into account not only physical, but also purely informational factors.

And the third factor is the all-encompassing nature of phenomena, where "everything affects everything", the shape of objects in the immediate environment can strongly and unpredictably affect the results of the experiment, and the effects of aftereffects and phantoms, if they are not taken into account, can deliver many unexpected moments to the explorer.

Here are some recommendations of experimenters who have been working on the detection of the torsion field for many years. In the work "Method of registration of torsion radiation", A.V. Bobrov gives the following recommendations when working with electrode sensors on double electric layers [146]:

- "- converters (sensors) are placed in a room with the lowest possible daily temperature variation, away from electromagnetic and acoustic and other sources of interference of natural and anthropogenic origin;
- the experimental room (EP) should be located away from crowds of people; the number of people in the EP should be reduced to a minimum (in the limit - only one experimenter);
- the stay of the experimenter in the EP is permissible within 1 minute;

- sensors are placed in a shielding chamber;
- synchronous registration of the reaction of two or more independent sensors;
- before and after the end of exposure, a long-term registration of background changes in the current of the sensors is carried out;
- judgments about the results of research are made on the basis of generally accepted methods of statistical processing of experimental material.

In the work of G.S. Tsarapkin "Problems of metrological support of experiments in the field of spin-torsion interactions" in the collection SibNITSAYA [147], the features of the method for detecting torsion fields are indicated, using quartz resonators as an example.

"We have found that the entire environment of the sensor (i.e., structural elements of the measuring space and a person near it) can cause additional SFI (spin-torsion interaction - V.Zh.). In this regard, the orientation of the mentioned STI sensors (spin-torsion radiation - V.Zh.) should, as far as possible, be recorded. It is also necessary to take into account the effects associated with the likely impact of STI on environmental objects in order to avoid temporary instability. polarization (left-, right-hand twisting). In this case, the STI vector must be aligned with the diameter of the quartz lens of the resonator itself (i.e., according to the maximum sensitivity)."

"An alternative method for assessing PTS has recently been proposed to use the measurement of the radioactive natural background by some type of ionizing radiation sensor. When a pulse counting sensor (Geiger counter or solid-state scintillation counter) is placed in the STI area, an appropriate assessment of PTS can be made. All other provisions remain valid here, mentioned above, with the exception of magnetic field calibration. The sensitivity of the ionizing radiation sensor is several orders of magnitude higher than the quartz one, but the latter is more stable than all other types of sensors."

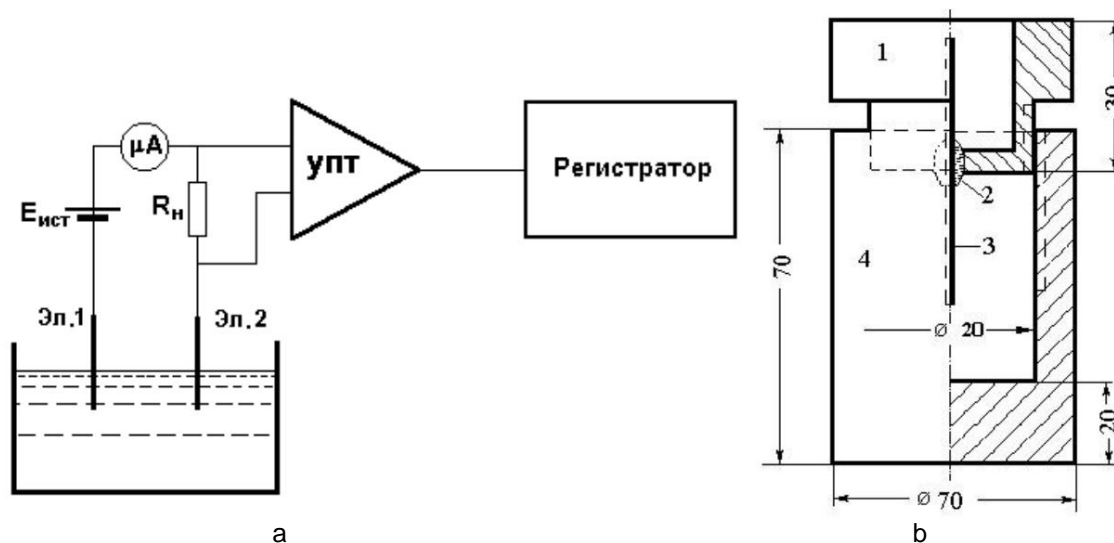
Torsion field detectors and indicators can be divided into three groups². In the first one, there is an impact on some working fluid, as a rule, shielded from electromagnetic and thermal factors. In the second group, the statistical parameters of some (in the control, considered random) process are measured. And in the third group, the parameters of the background electromagnetic signal are measured in a certain spatial area.

² Although biological systems are most sensitive to non-electromagnetic radiation, in this section, they are not considered as sensors due to their low manufacturability.

10.1 Sensors based on changes in the properties of the worker body

10.1.1 Sensors at DPP

Bobrov sensors on double electric layers (DEL) [144, 146] are arranged as follows. In a steel glass with a wall thickness of 25 mm, there is bidistilled water, into which an electrode, a platinum thread, is lowered. The cell becomes a sensitive element if there is an inequality in the parameters of near-electrode double electric layers. Then the external action on these layers leads to asymmetric reactions, and this is reflected in the change in the potential difference. In addition to sensitivity, the parameter of sensor relaxation time after exposure is very important here.



Rice. 75. Current sensor on double electrical layers. a) schematic diagram, b) sensor device. The material of the glass is steel, the central electrode is platinum.

Asymmetry can be created by applying a constant voltage to the electrodes. As a result, a weak current (of the order of microamperes) passes through such a cell, which is the measured parameter. This current is due to ionic conduction; ions of different charge and number rush to the electrodes, and it is apparently ionic asymmetry that works here. Moreover, as A.V. Bobrov points out, such a system, strictly speaking, is an indicator, but not a sensor - it can only show the presence of an impact, but it is difficult to measure the absolute quantitative characteristic of the impact with it. Some information is provided by characteristics such as the rate of rise of the reaction and the relaxation time.

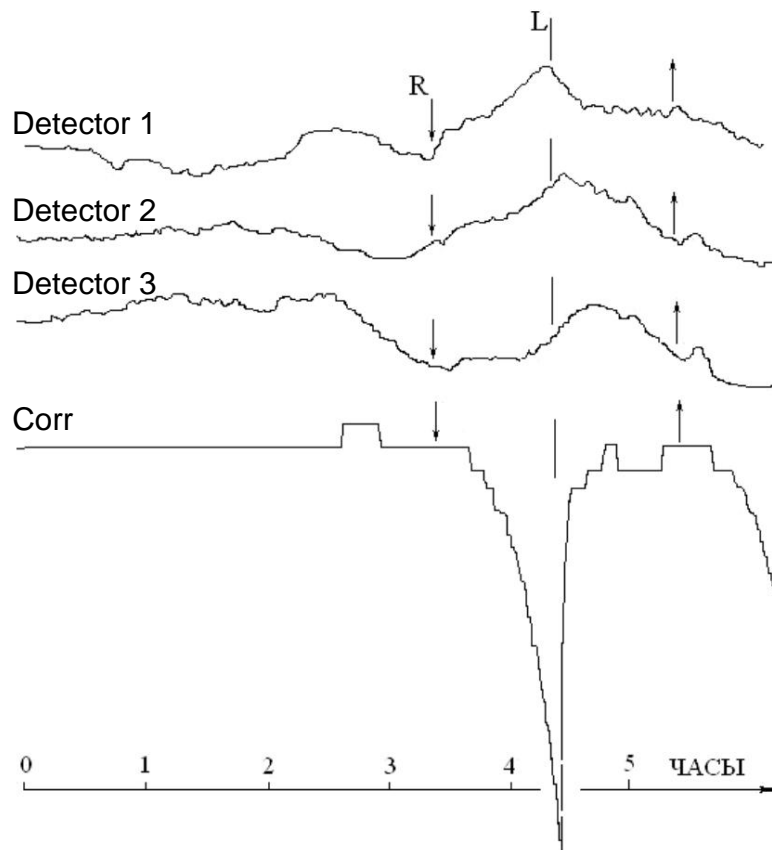
A.V. Bobrov writes:

"The main distinguishing features of the Current ES reaction that occurred in response to the beginning of the impact or its end (immediately or up to 30-40 minutes later) are the appearance of a "hump", as well as the appearance of a trend curve, or changing its direction. The reaction of the detector that occurs after the cessation of exposure is often more pronounced than the response to the beginning of exposure, which may not occur at all.

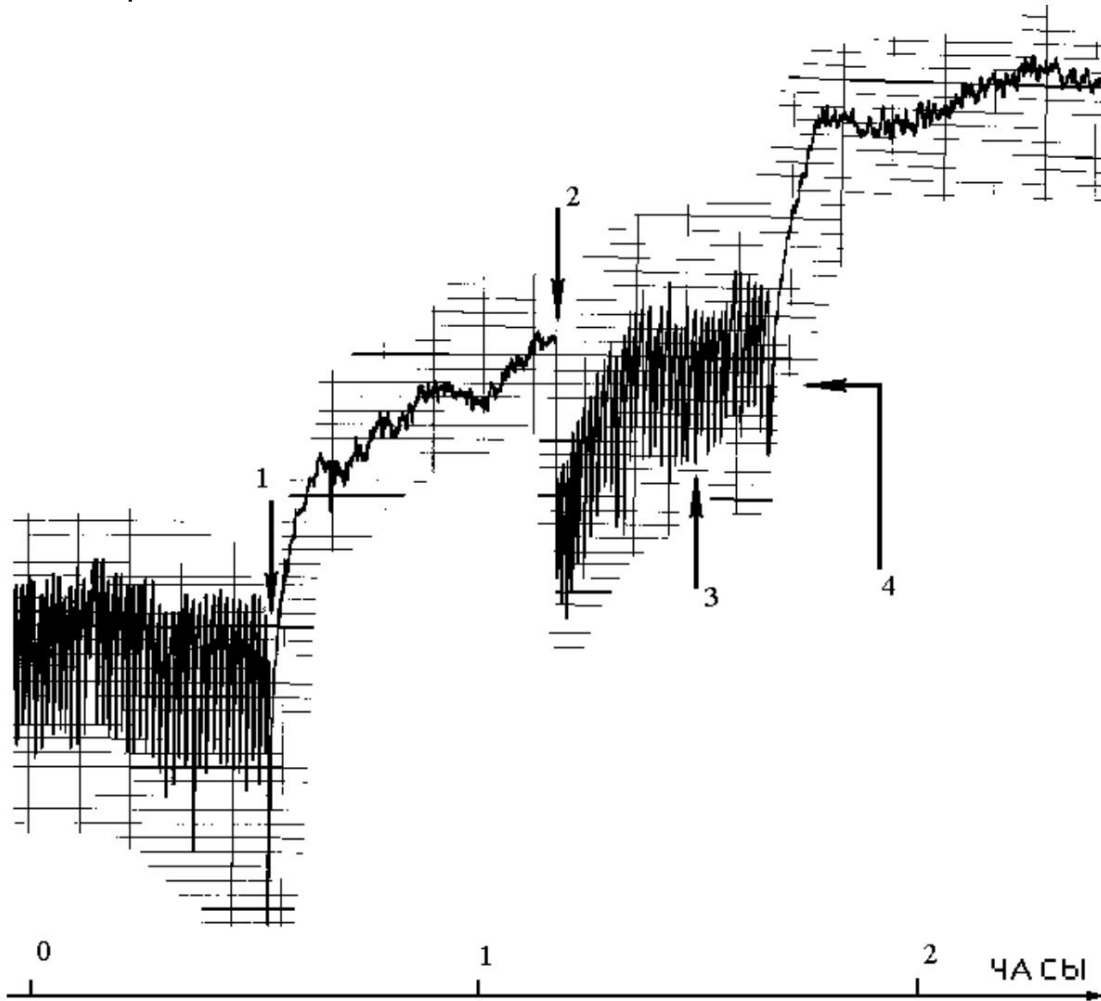
Distinguishing features of the response to a weak impact also include a change in the electrical activity (intrinsic noise) of the detector, and a change in the parameters (frequency and amplitude) of the oscillatory process when the detector is operating in the self-oscillation mode.

Another feature of the reaction of Current detectors is the ambiguous direction of its development (polarity). The change in the direction of the trend of the curve, as well as the polarity of the "hump", which occurred after the start or removal of the impact, depends both on the state of the ES itself (on the ongoing process of polarization of near-electrode DESs) and on external factors that continuously affect it, like an open system. Relaxation of the ES state can last more than 1.5-2 hours.

On Fig. Figure 76 shows an example of a synchronous response of three sensors to the radiation of Akimov's torsion generator. On Fig. 77 - reaction of the self-oscillatory process in the current sensor to the non-electromagnetic component of the laser.



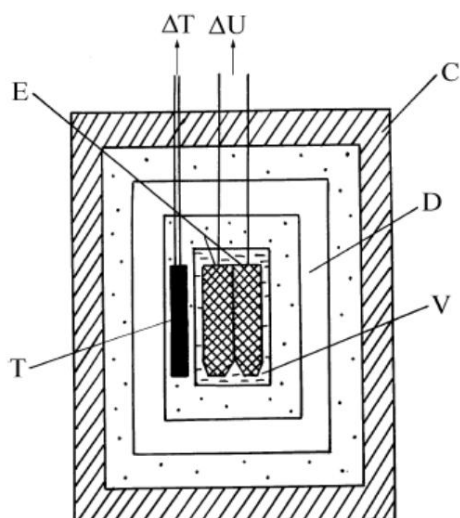
Rice. 76. Response of detectors 1-3 to the impact of the right (R) and left (L) torsion fields. Corr. - correlation curve for sensors 1 and 2. The arrow facing the curve indicates the beginning of exposure; from the curve - its end. The straight line indicates the change in the impact of the right field R on the impact of the left field L.



Rice. 77. As a result of exposure to laser radiation with a wavelength of 630 nm on one of the electrodes in the current electrode system, a stationary self-oscillatory process arose. 1 - the laser is off, the AK process is terminated; 2 - the laser is on, the AK process has resumed; 3 - the light beam is blocked, the electrode is not illuminated, but self-oscillations continue; 4 - turned on laser turned by 90°.

Also interesting are the results of the group of S.M. Korotaev, presented in [158] - they measured the intrinsic potential difference of the electrode pair, i.e. double electrical layers also acted as the receiving part. The design of the sensor (Fig. 78) included both multilayer insulation from external influences (changes in temperature, pressure, electromagnetic fields) and internal temperature control. The impact was carried out by a non-equilibrium process - water boiling.

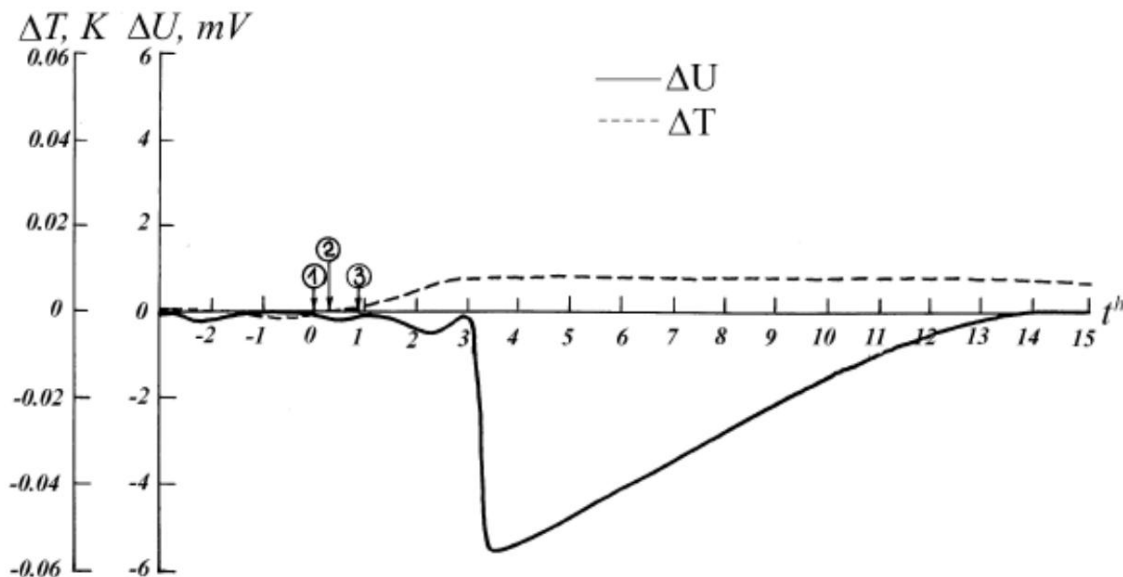
Two identical sensors were located at different distances from the nonequilibrium process, the parameters of the potential difference and temperature between them were subtracted, and this final difference was already recorded by the recording system.



Rice. 78. Scheme of the device of the detector. C - deep-sea container body, D - dewar, V—vessel with electrolyte, E—electrodes (internal arrangement not shown), T—temperature sensor. Materials: hatching—caprolon; double hatching—ebonite; dots—air; unshaded gap—vacuum.

The authors write:

"In Fig. 79 shows an example of an experiment log. It can be seen that 2 h 10 min after the source is turned off, a sharp decrease in $\dot{\gamma}U$ ($\dot{\gamma}U_m = -5.5$ mV) occurs, followed by many hours of relaxation to the initial level. Parallel recording of $\dot{\gamma}T$ shows that the beginning of the detector reaction approximately coincides with the time of arrival of the heat wave, but quantitatively the temperature change is negligible: $\dot{\gamma}T = 0.008$ K. This would correspond to a decrease in $\dot{\gamma}U$ due to the classical local mechanism by 0.0011 mV, which is disproportionately small compared to the registered signal. The relaxation time of the temperature disturbance $\dot{\gamma}T$, as can be seen from Fig. 79, disproportionately longer than the relaxation time $\dot{\gamma}U$. The coincidence of the time of arrival of a thermal diffusion wave and the onset of a nonlocal reaction was predicted in [8] from theoretical considerations (nonlocal correlations are associated with the Wheeler–Feynman electromagnetic field, and the interaction at the microlevel occurs along interparticle chains). On Fig. 79 also contains a subtle detail observed in about half of the experiments – a small undulating decrease in $\dot{\gamma}U$ before the start of the main decline. The nature of this harbinger is unclear.



Rice. Fig. 79. An example of an experiment record: ΔU is the difference signal of the detectors (in millivolts), ΔT is the difference in the internal temperatures of the detectors (in degrees), t is time (in hours). 1 - the moment of turning on the heater in the source, 2 - the moment of boiling, 3 - the moment of switching off heater in the source $\langle t_2 \rangle = (149 \pm 47)$ min. The relaxation time constant is estimated at ~ 360 min. The time of the practical end of the effect is determined the least accurately. Approximate time recovery (from $\Delta U = \Delta U_m$ to the practical end of the effect) t_2 turned out to be on average $\langle t_2 \rangle \approx 8 \langle t_1 \rangle$, where t_1 is the fall time ΔU ($t_1 = t_2 - t_1$).

The authors note the long relaxation time of such sensors, which makes it difficult to perform large series of experiments with them.

10.1.2 Chip sensors

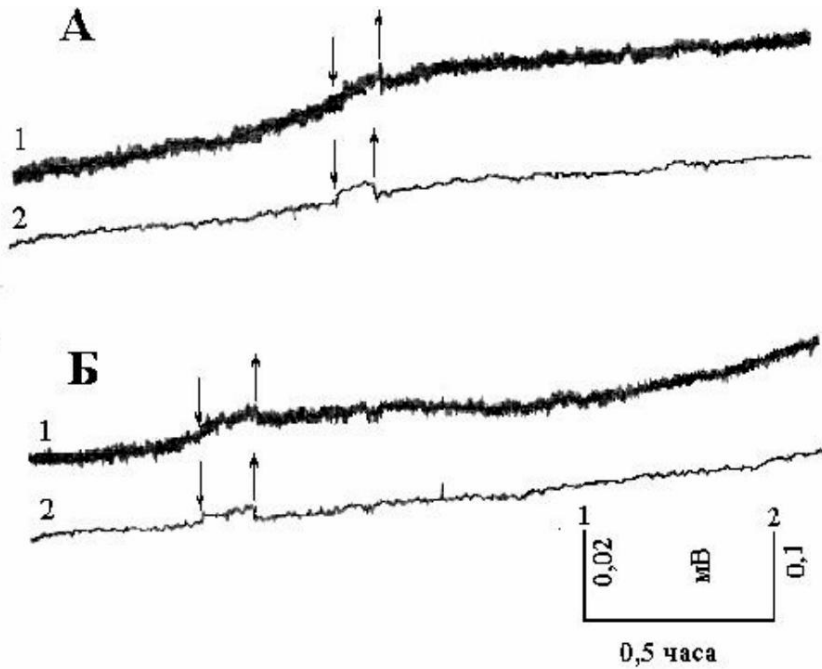
As another system that responds to a non-electromagnetic component emitted by operators and torsion generators, A.V. Bobrov tested operational amplifiers (op-amps) on integrated circuits (ICs). In this case, pn junctions act as sensitive elements, and the sensitivity of the system as a whole is determined by the mode in which the junctions operate, where in the circuit (how close to the input) they are, and what functions they carry. When using the op-amp as sensors, the non-inverting and inverting inputs are grounded, and the changes in the output voltage of the op-amp are measured as common-mode interference due to the impact on the pn-junctions of the microcircuit; in this case, it is the interference that acts as a useful signal at the output

sensor.

A.V. Bobrov points out: "Experiments of the 80s showed that with a decrease in the voltage of bipolar power sources (3-4 times relative to the nominal value, but while maintaining the equality of their values), at least 20% of K553UD1A type ICs acquire the ability to respond to remote influence of man.

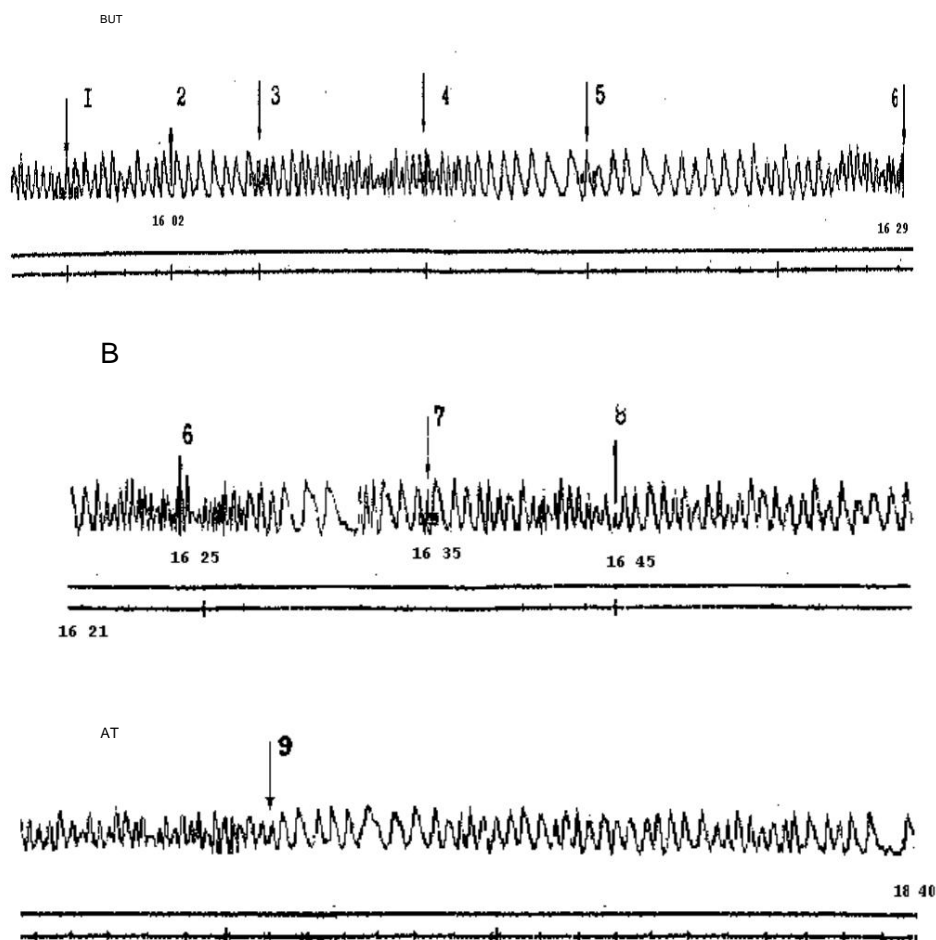
In these experiments, microcircuits, together with power sources, were placed in a steel grounded shield, the signal after the integrating RC circuit was read using a DC amplifier and a recorder. Also performed well

sequential connection of two ICs, when the inputs of the first op-amp were grounded, and the signal from its output was fed to the input of the second. On Fig. 80 shows an example of the impact on such a double sensor: if the signal-to-noise ratio at the output of the first stage does not exceed one, then at the output of the second it is 2-3.

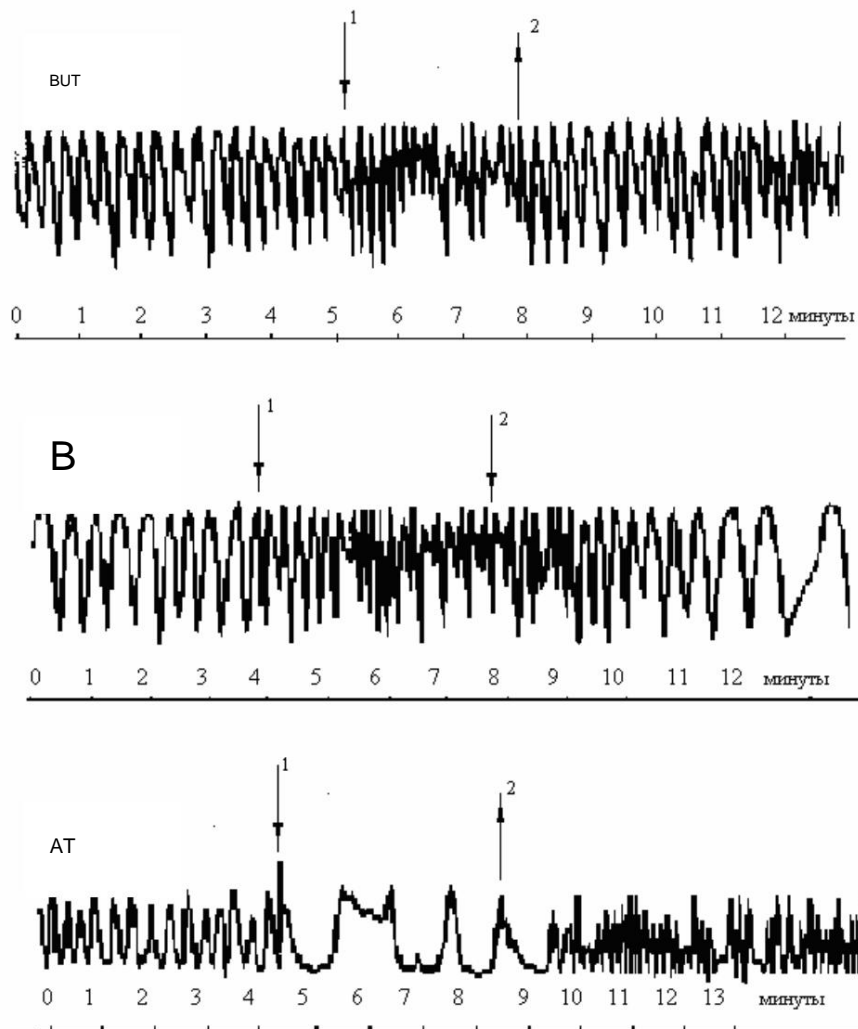


Rice. 80. Reaction to a volitional influence at the output of a detector on an IC with two microcircuits connected in series.

Bobrov also assembled a circuit for an ultra-low frequency generator based on a semiconductor microcircuit [57]. The generator was placed in a shielding chamber made of duralumin 1.5 mm thick and was used as a torsion radiation sensor. It was affected by a small torsion generator Akimov, as well as a torsion generator Bobrov on LEDs from a distance of 40 cm. 81 and fig. 82 shows the results of these experiments.



Rice. 81. Change in the frequency of oscillations at the output of a semiconductor integrated microcircuit, which arose when it was exposed to a torsion generator of the ISTC VENT. Curve B – continuation of curve A: A(1, 3, 5), B(7) – exposure to the left field; A(2, 4), B(6) – exposure to the right field. B(8) - screen installed. B(9) – exposure to a pulsed semiconductor laser LI.



Rice. 82. Changes in the frequency of oscillations at the output of a semiconductor integrated circuit that occurred when it was exposed to radiation emanating from the direct and reverse sides of the emitter on LEDs. Position 1 in fig. A - the beginning of exposure to the front side of the emitter; position 2 is its end. With the beginning of the impact, the frequency of the detector increased sharply, and after its completion it recovered to its original value.

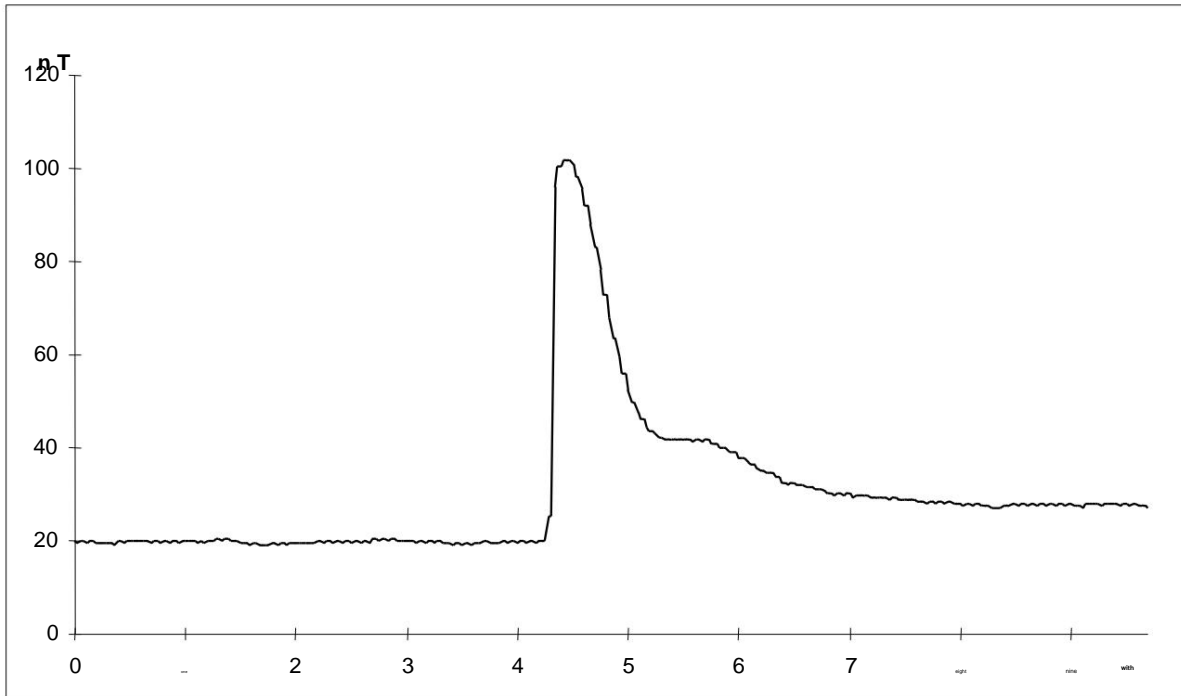
Position 1 in fig. B - exposure to the front side of the emitter; position 2 - impact with its back side. As in the experiment in Fig. 4A, when exposed to the front side of the emitter, the oscillation frequency of the generator increased. When exposed to the back side, the oscillation frequency became lower than the original.

In the experiment in Fig. The impact was made in the reverse order - first with the back side of the emitter (position 1), and then the front (position 2). As a result, the opposite picture arose: when exposed to the back side, the generator frequency fell below the original; when exposed to the front side, it exceeded the initial one.

10.1.3 Magnetic sensor

G.N.Dulnev's group from LITMO in the 90s carried out work on finding ways to instrumentally register the psychophysical impact of a person, as well as the radiation of torsion generators. A standard G-79 magnetometer was used as one of the sensors. It was placed to reduce impulse electromagnetic interference in

a steel pipe with a wall thickness of 11 mm (in the normal use, the sensor reacted to the derivative of the magnetic flux). Although it was not possible to completely shield the sensor from interference (the device continued to respond to a thunderstorm in the city, to the operation of the welding machine in the building, to turning on the light in the room), in a number of cases the impact of the torsion generator and operators was reliably recorded.



Rice. 83. The response of the magnetic sensor to the inclusion of a torsion generator.

The sensor responded to turning on/off (Fig. 83), as well as to switching the operating mode of Akimov's torsion generator. The presumably non-electromagnetic nature of such an impact was evidenced by the low degree of reproducibility of the effect (about 20%), which is not typical for electromagnetic phenomena, as well as the effect of weakening the reaction by the end of the measurement session. Experiments with torsion screens (polyethylene crossed films) have shown that such screening has a significant effect on the result only in 50% of cases.

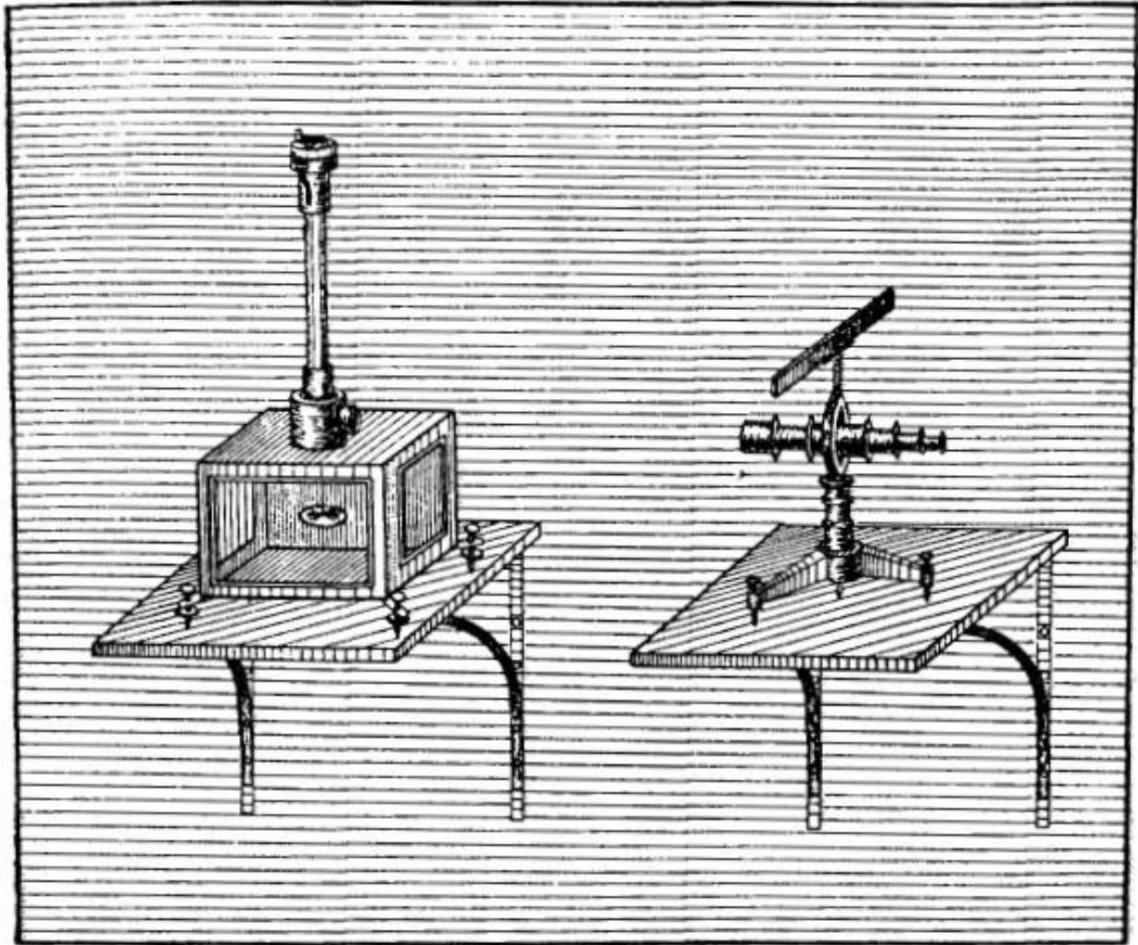
10.1.4 Mechanical systems

Torsion scales

This review began by mentioning the results of Prof. N.P. Myshkin [1, 2, 3], who, on the basis of experiments with symmetrical torsion weights, came to the conclusion about the existence of ponderomotive forces (from *pondeos* - weight, *motor* - movement) in the space in which radiant energy propagates. Let's look at these experiments in more detail, because even after a century they have not lost their relevance.

The device described by N.P. Myshkin was a thin mica disk with a diameter of 75 mm, suspended by a thin aluminum wire at the center to the lung.

a mirror, which in turn was suspended on two cocoon threads from a fixed support. This design was placed in a wooden box, closed from external air currents, with three glass side walls and one blank. Mirror made it possible to track the rotation of the moving system by the reflected beam of light (Fig. 69).



Rice. 84. Experimental setup by N.P. Myshkin [1].

The experiments described in [1] consisted, firstly, in illuminating the room with light sources of various intensities, and, secondly, in long-term monitoring of the daily readings of the device for several years. In both cases, the device was not placed under direct rays; in a number of cases, the moving part of the device was covered with an opaque screen. Sources of artificial lighting (various burners and lamps) were located at a distance of at least six meters. This minimized the effect of convection inside the instrument housing.

The result, which manifested itself in all cases: as the illumination increased, the disk rotated by a small angle counterclockwise, the angle of rotation depended on the intensity of the light. The turn was gradual - about 20 minutes after the light was turned on, the disk assumed a new position. When the light source was turned off, the disk needed about the same time to return to its previous position. The characteristic angle of deflection of the disk at the most intense light sources is

about half a degree. Measured forces acting from the side of the suspension, 101

amounted to $666 \cdot 10^{-5}$ dynes (a pair of forces applied to the edge of the disk).

In most cases, the disk was acted upon by scattered light. In some cases, the device reacted to incomprehensible factors not related to changes in lighting. In later experiments, Myshkin noticed the property of the disk-spinning factor to be accumulated by various bodies. For example, one part of a wooden block, sawn in half into two identical parts, was exposed to the sun, the second was kept in the shade. Then the "sunny" bar cooled down to the same temperature as the "shadow" one. The device did not react to the "shadow" bar, but reacted to the "sunny" one even through the screen. The device reacted in a similar way to a wooden block "charged" in the field of a permanent magnet. The exposure from the irradiated sample faded over time.

In many respects, similar experiments were carried out by V. Belyaev in the 70s with the device "Delta" [3]. The movable part of the device was an isosceles triangle, rotating on a thin thread in its (horizontally located) plane. The device showed deviations when cyclones approached, a few days before the change in weather, it reacted to nearby objects. Belyaev notes:

"The device maximally reacts to a living object only when it is located in a strictly defined position in relation to the "Delta", and, moreover, in a strictly defined point in space. It is interesting that during the day these "active" positions change, the response maxima shift, as if the space itself changes some of its characteristics ... If you move the device itself, the arrow will take a new position, but the "active" points will remain on

their places.

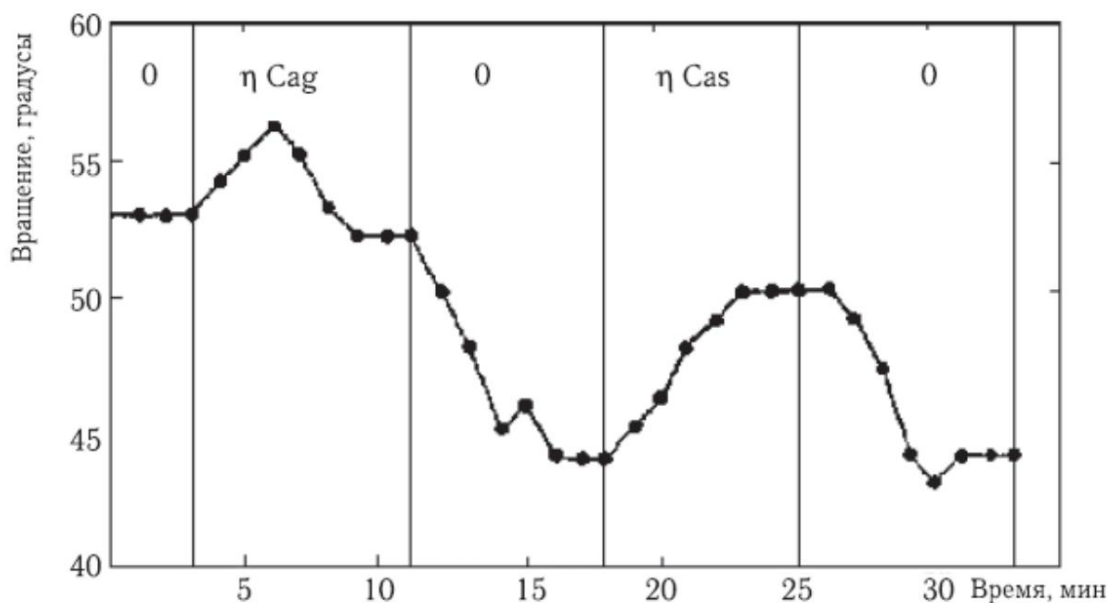
Strange and something else. Inert, inanimate bodies have a very weak effect on the device, in such cases the degree of deviation of the indicator depends only on the mass of the object introduced into the "sensitivity zone" and on the square of the distance to it; the activity of spatial points is almost not manifested.

The experiments of N.A. Kozyrev with asymmetric and symmetrical torsion weights have gained great fame [7, 148]. The asymmetric torsion balance was a thin light arrow with an attached weight of the order of one gram at one end and suspended by the center of gravity on a nylon thread 30 microns thick and 5-10 cm long. Here is a list of objects and processes to which the torsion balance reacted:

- Projection of the images of stars, the Moon and planets on the suspension point of symmetrical weights and the point at the bottom of the case (next to the long end of the arrow) of asymmetric weights; the scales were fixed at the Coudé focus of the reflecting telescope;
- Non-equilibrium thermodynamic processes (evaporation of liquid nitrogen, melting of ice, cooling of a heated body, heating of a cold body, dissolution of salt, compression/stretching of bodies, etc.);
- A person in a painful condition, as well as with strong emotional arousal;
- Cut plants - different response in different vegetative periods.

The forces acting on the balance beam in Kozyrev's experiments were of the order of 10^{-3} -

10-4 din. On Fig. 85 shows the response of the torsion weights to observations of the star η Cas. At the same time, the light of the star was blocked by black paper.



Rice. 85. An example of recording the deviation of the balance when observing the star η Cas on the RM-700 telescope.

A.G. Parkhomov in the article "What do torsion balances react to" [153] presents the results of experiments and modeling of possible causes of rotation of a torsion balance. The author confirmed the following effects:

1. "one. The pointers of the torsion weights are set in a certain direction for about a minute. In the absence of obvious external influences, this direction slowly changes, and a diurnal periodicity can be traced in the change.

2. After turning the device at a certain angle, the pointer is set in a direction close to the original relative to the *outer* space. This indicates that the reason for the pointer orientation is *outside* device.

3. If there is a person near the torsion balance, the pointer points towards the person. Some instances of torsion balances clearly "feel" a person at a distance of more than 1 *m* and even through a wall (with a delay of about an hour).

4. The effect discovered by Nasonov is confirmed: vegetables or fruits placed near the device usually "attract" the pointer, and if they are rubbed on a grater, they "repel".

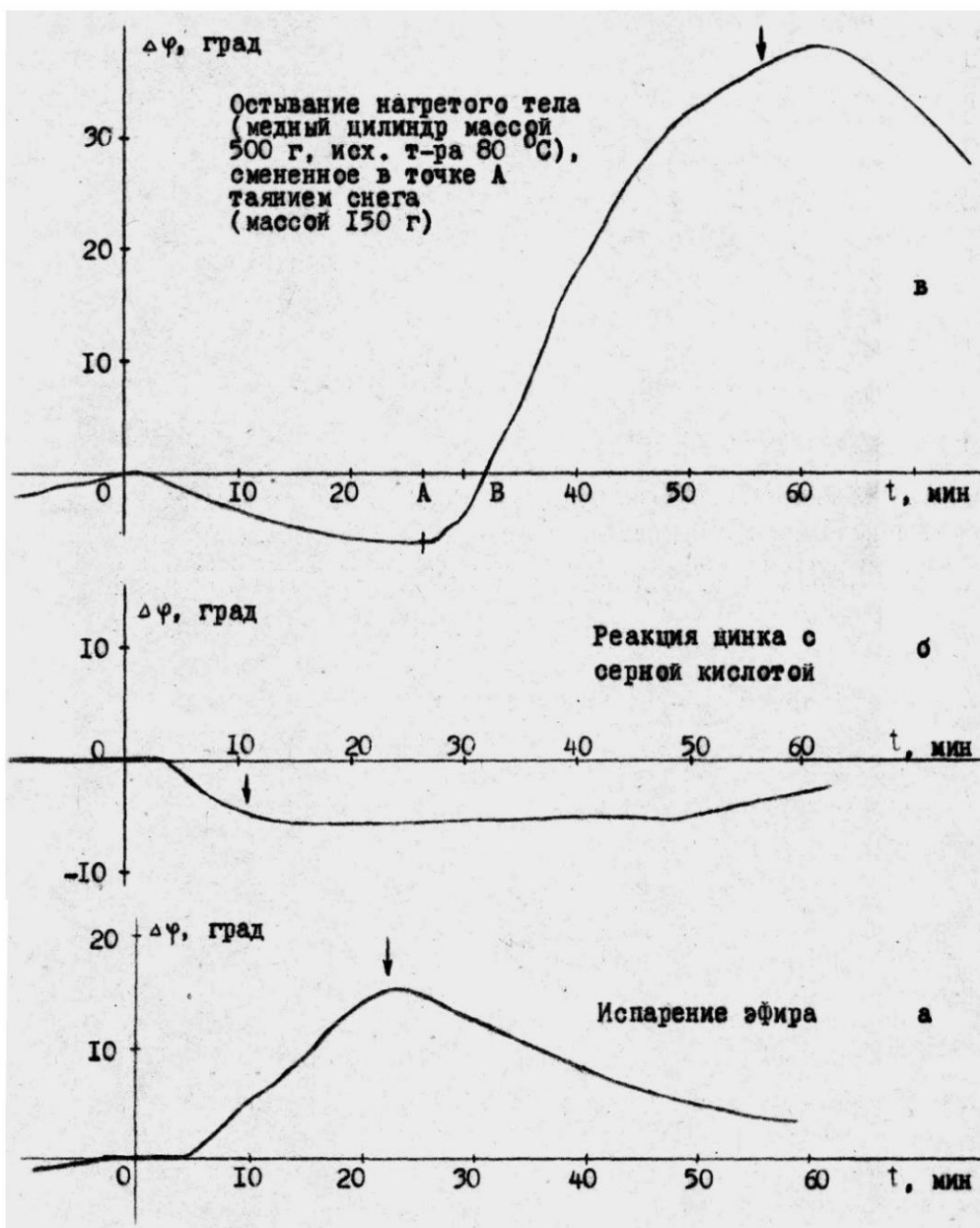
5. Any warm objects "attract" the pointer, and cold ones "repel". Placement between a warm object and a thermal insulation device, for example, a layer of cotton wool, does not destroy, but only slows down the effect.

At the same time, Parkhomov comes to the conclusion that these effects on the torsion balance

from non-equilibrium processes can be caused by convection flows inside the case - for this, a temperature difference of less than 0.01° is sufficient, while under normal conditions the temperature difference between the walls is not less than 0.1° (such measurements were carried out by Parkhomov using a differential thermocouple).

The author points out that "a torsion balance surrounded by highly effective thermal insulation (for example, placed in a Dewar vessel) does not react to warm or cold objects, vegetables and fruits, or the approach of a person," and also stop working if pumped out of the vessel with torsion weights air.

In the studies of L.S. Shikhobalov's group at the Research Institute of Physics of St. Petersburg State University [150], experiments with asymmetric torsion weights in a forevacuum of 1-3 mm Hg are presented. Art. The movable part had a weight of 1.28 g, and a Kevlar thread $9\ \mu\text{m}$ thick and 300 mm long was used.

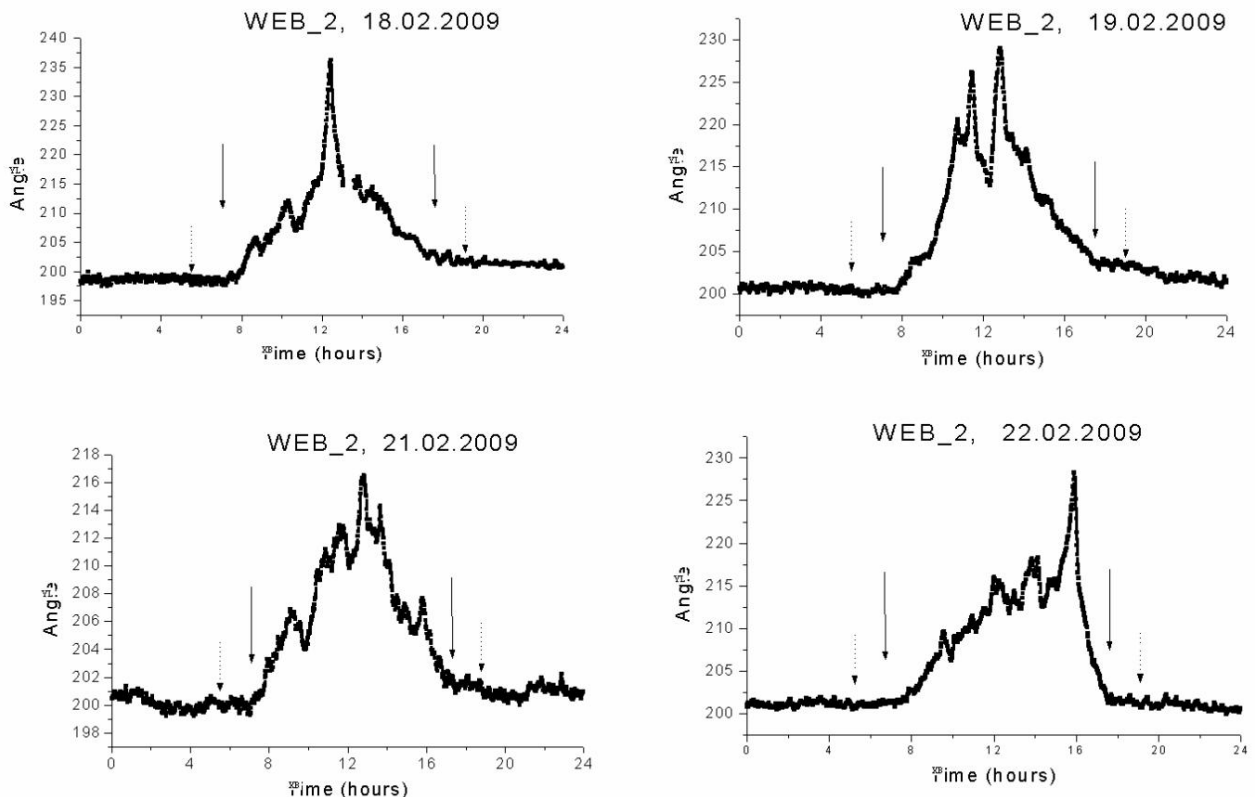


Rice. 86. The results of the impact on the torsion balance in the fore vacuum 1-3 mm Hg. Art. various non-equilibrium processes from a distance of 5-10 cm from the cap of the fore-vacuum chamber.

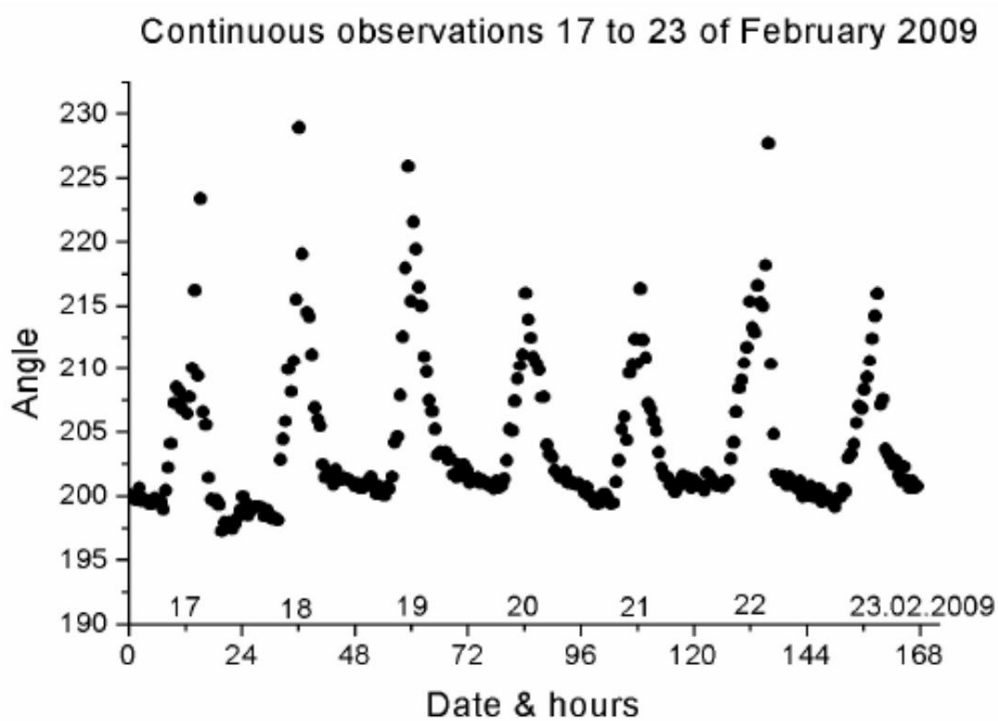
On Fig. 86 shows the results of some processes on a torsion balance. In this paper, the calculation of the contribution of the thermal factor to the observed effect is given. The authors write that the temporal characteristics - reaction delay time, saturation time - depend on the nature of the processes, but at the same time, "the sign of the effect is the one that, as one might expect, the convective movement of gas in the fore-vacuum chamber would lead to in the presence of heat exchange between the elements of the chamber and initiating process. Apparently, despite the precautions taken, the thermal factor still contributes to the observed effect.

The moment of forces acting on the torsion balance in this installation was about 10^{-5} N * m, which corresponds to a force of the order of 10^{-5} dynes applied to a small rocker load.

A.F. Pugach studied diurnal variations of light asymmetric torsion weights (the weight of the suspended part is about half a gram) in long-term observations, as well as their behavior during solar eclipses. He found a significant difference in the behavior of the balance needle during the day (after sunrise) and at night (after sunset). On Fig. 87 shows typical graphs of the position of the arrow for four days, in Fig. 88 is a continuous graph of observations of another instance of the torsion balance during the week. The behavior of the arrow is clearly divided into two phases: active - during the day and passive - at night. Additional studies have shown that temperature, humidity, the state of the ionosphere, electrostatics, and gravitational effects cannot be the cause of such a picture [159].

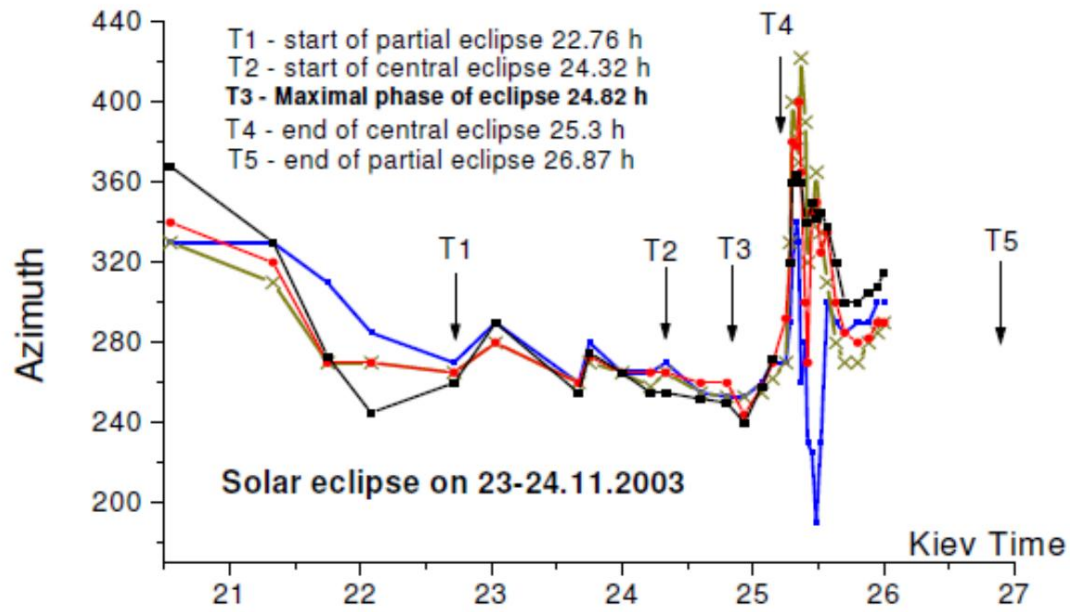


Rice. 87. Active and passive phases of the behavior of torsion balances within 4 days.

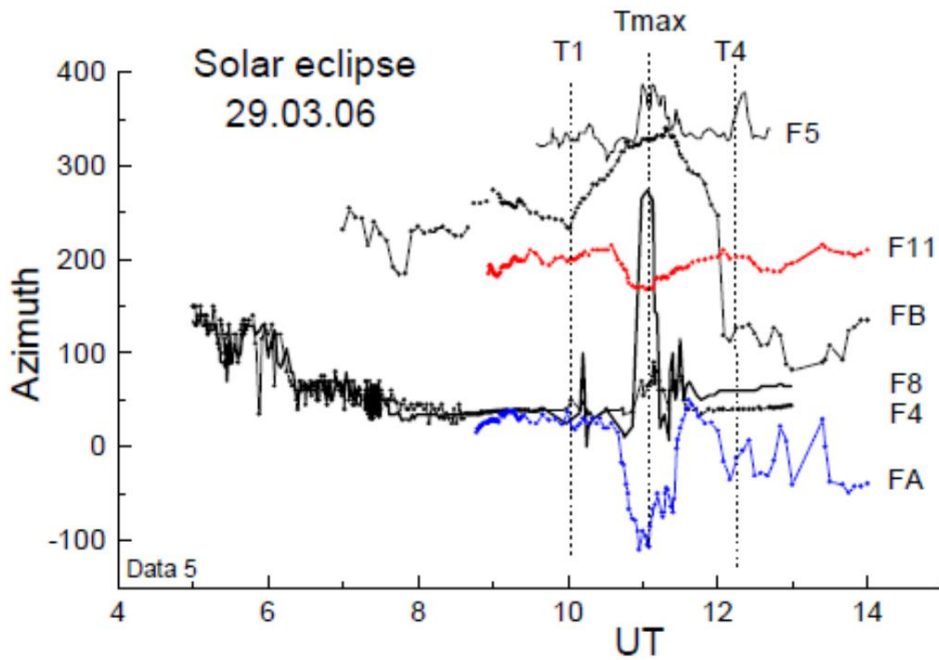


Rice. 88. Oscillations of torsion weights for 7 days.

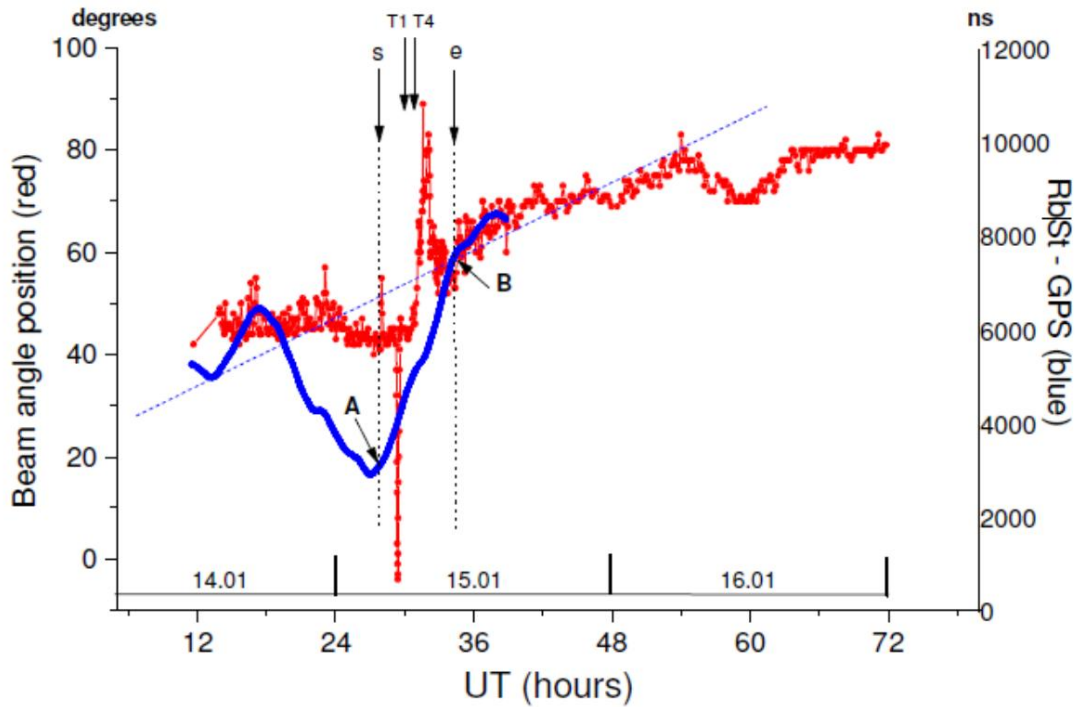
Starting from 2003, A.F. Pugach in Kyiv made observations of the behavior of light asymmetric torsion weights during solar eclipses. On Fig. 89 the joint reaction of four independent CVs is shown [161], and Fig. 90 - six KV [160]. On Fig. Figure 91 shows the response to a solar eclipse of two fundamentally different devices - a torsion balance and a rubidium atomic frequency standard (the frequency standard was determined by the phase difference with the GPS standard frequency source using a specialized receiver).



Rice. 89. Behavior of four identical torsion weights during the solar eclipse of November 23, 2003.

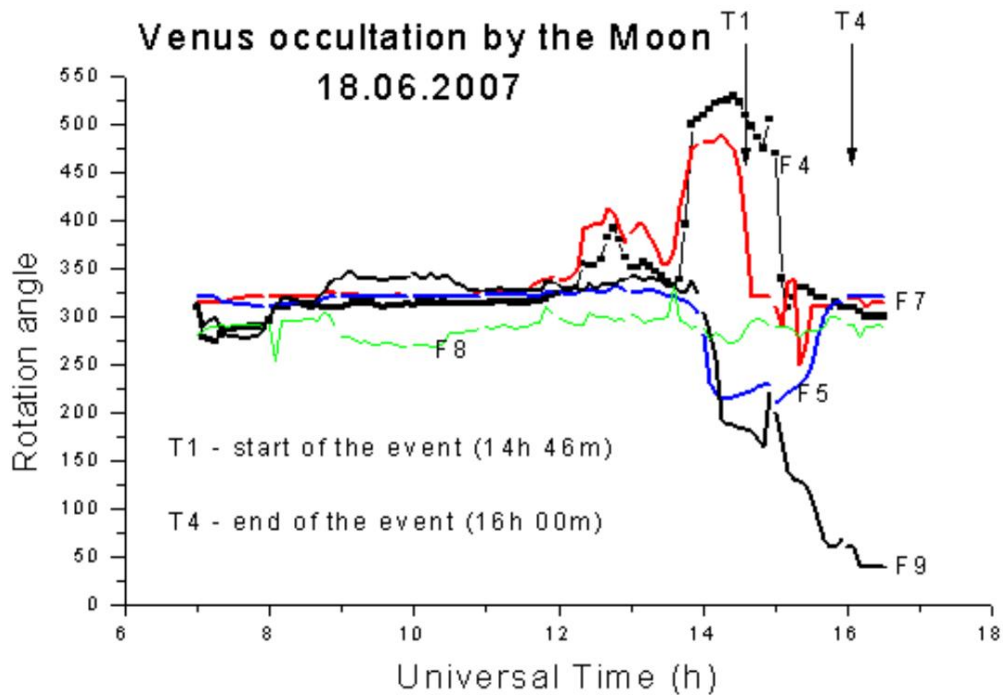


Rice. 90. Response of six torsion balances to the solar eclipse of March 29, 2006.



Rice. 91. Comparison of the behavior of the torsion balance (red graph) and the rubidium frequency standard (blue graph) during the eclipse of 01/15/2010. The blue dashed line shows the theoretical trend along which the measured difference (RbSt-GPS) should have followed.

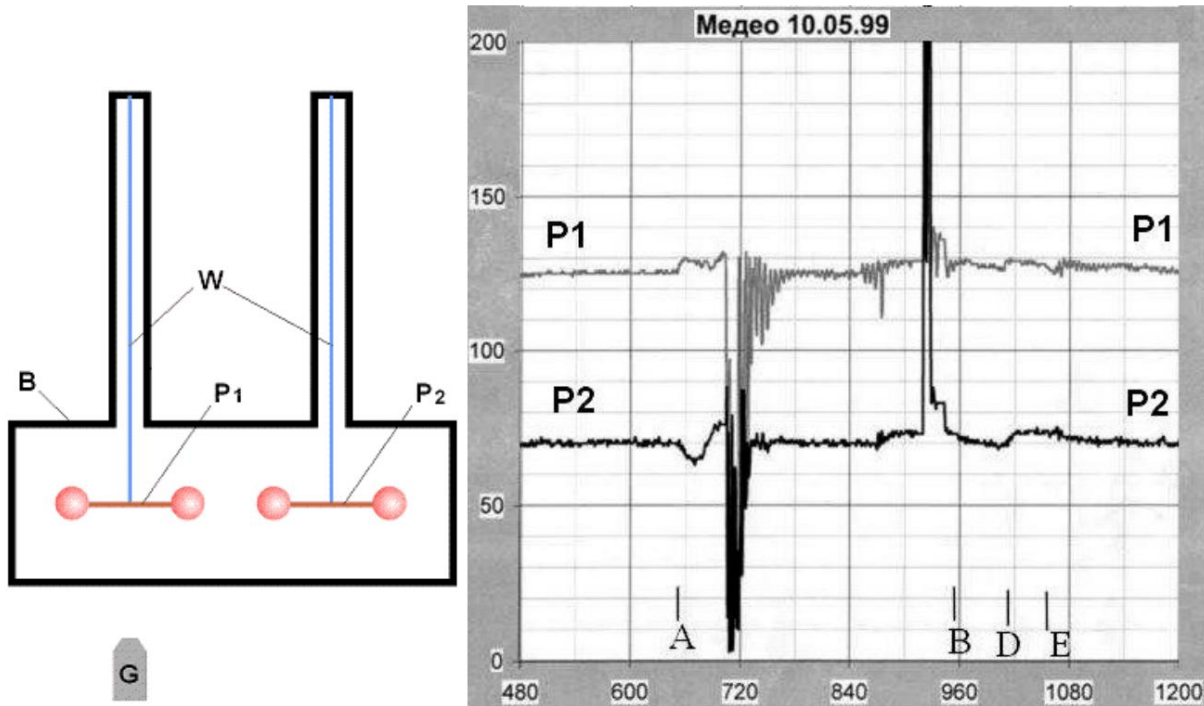
On Fig. 92 shows the reaction of five torsion weights to the occultation of Venus by the Moon [162]. It can be seen that the reaction of the devices in this case was leading.



Rice. 92. Behavior of torsion weights during the occultation of Venus by the Moon on 06/18/2007.

VT Shkatov described the effect of Akimov's torsion generator on a torsion pendulum on a quartz suspension: it was possible to increase or decrease the amplitude of the pendulum in motion if a signal was applied in the required phase [163].

A.A. Shpilman measured the parameters of torsion pendulums when they were exposed to their generators [165].



Rice. 93. Scheme of an experiment with torsion pendulums and a graph of pendulum deflection.

The experiment consisted in the impact on the pendulum of torsion at the Alma-Ata earthquake forecast station:

"Two torsion pendulums (see Fig. 93), tungsten filaments $W \sim 2$ meters long with rocker arms P_1, P_2 at the end, were in an iron barrel B with a wall thickness of ~ 1 cm. The beam of the generator G was directed at the pendulum P_1 from bottom to top, through the iron wall of the barrel."

"In the period of time AB - the generator was being installed. In the period of time BD - a pause to calm the pendulum's oscillations. At time D , the generator was switched on remotely. At time E , the generator was switched off."

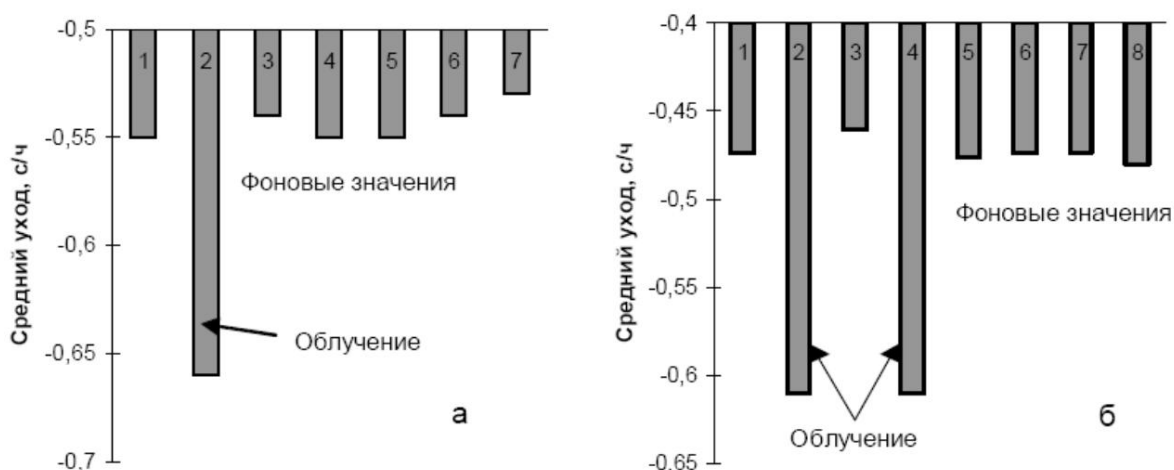
"Obviously, there is an effect. The effect is reproducible, but, unfortunately, the effect is on the verge of sensitivity of the measuring equipment."

"When the generator was turned on, a small rotation of the pendulum was observed, and a decrease in the amplitude of its noise oscillations was observed. The effect is most pronounced for the irradiated pendulum P_1 and less pronounced for the neighboring pendulum P_2 ."

"The rotation is characterized by the absence of natural mechanical oscillations of the pendulum, which should have accompanied the usual impact on the pendulum from the outside. Perhaps the "axion field" of the generator has some ability to hold the object in an unchanged position."

Mechanical watches

In the early 1990s, V.T. Shkatov also carried out experiments on the effect of "latent radiation" from Chizhevsky's chandelier on "SLAVA" pendulum stopwatches [163, 164]. A group of three stopwatches was placed inside a grounded electromagnetic shield. It was shown that the "departure" of stopwatches significantly increases when Chizhevsky's chandelier is turned on near them (Fig. 94).



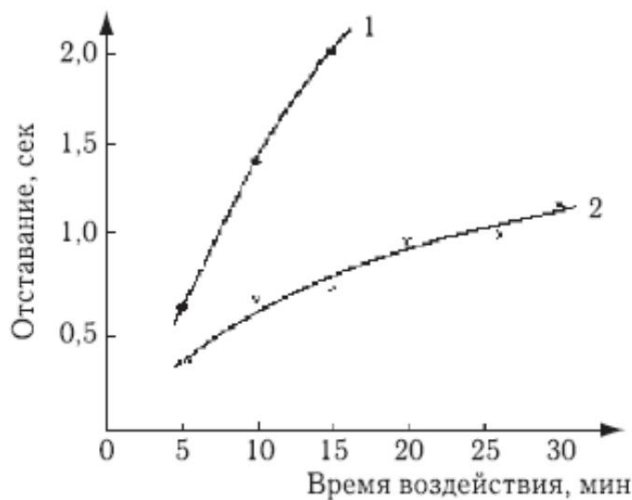
Rice. Fig. 94. Dependences of the course of pendulum stopwatches on the effect of the "hidden" radiation of the Chizhevsky chandelier in the options: a) not shielded chandelier, b) shielded.

It is interesting to compare these results with the results of V.M. Danchakov from Novosibirsk on the effect of various processes on stopwatches and mechanical watches in the framework of checking the experimental results of N.A. Kozyrev [148]. The process of evaporation of liquid nitrogen led to an increase in the lag of the Raketa wrist watch and the C-II-Ib stopwatch compared to the control. The author writes:

"Each watch was 2 pieces: for experiment and for control ... Before each experience for 45 minutes, the readings of the experimental clock were compared with control. Observations showed that there are no perceptible deviations: the readings of the experimental clocks coincided with the control ones ... In Fig. 95 presented average results of repeated experiments. As you can see, the experienced watch noticeably lag behind the controls during exposure. At the same time, experienced watches of the brand "Rocket" after 15 minutes of exposure lagged behind the control of the same brand by 2 seconds. Under the same conditions, the experimental stopwatch lagged behind the control one by 0.7 seconds.

The lag of experimental clocks indicates an increase in the period of their oscillation pendulums, which, in turn, means a decrease in the rigidity of their helical

springs. Note that the influence of a negative temperature would create opposite picture... It is interesting to note that 48 hours after exposure to all experimental clocks completely restored their course.

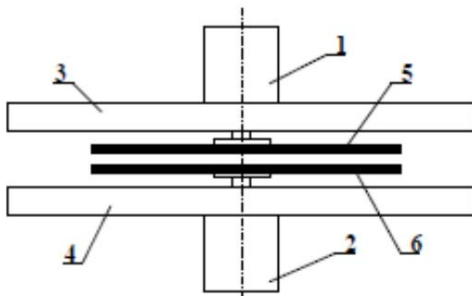


Rice. 95. Influence of evaporation of liquid nitrogen on the care of mechanical watches.

Results of V.N. Samokhvalov

All the mechanical manifestations of non-electromagnetic radiation considered so far are rather weak, and it is not surprising that in most situations they are imperceptible. But there is the setting of physical experiments, in which the interaction of bodies becomes tangible, obvious, and inexplicable from ordinary positions. VN Samokhvalov has been experimenting for several years on the interaction of closely spaced rotating masses in vacuum [166]. Samokhvalov's experimental setup is a vacuum chamber in which two DC electric motors with thin aluminum disks mounted on shafts are placed (Fig. 96). The motor shafts are not mechanically connected in any way, and power is supplied to them from two independent adjustable power supplies. The distance between the discs - from a millimeter to several

millimeters, in the chamber - an average vacuum of the order of 10^{-5} atm.



Rice. 96. Experimental setup of VN Samokhvalov. 1, 2 - DC electric motors D 14FT2s, 3, 4 - steel plates 18 mm thick, 5, 6 - discs with a diameter of 165 mm from non-ferromagnetic materials.

In a situation where the disks are mounted on the shafts with a bias, but without mechanical contact between the disks, the following effect occurs. When applying voltage to one

the motor is driven into rotation by one disk (rotational speed of the order of 100 rpm), the second disk, being at first motionless, is, as it were, carried away by the rotation of the first disk and begins to rotate, while rotating the shaft of its electric motor (voltage is not applied to the second motor). To stop the second disk, you can apply a reverse voltage to its motor, and the magnitude of this braking voltage is about half the voltage on the first motor. Those. there is a transfer of power from one disk to another. If the disks are rotated towards each other, their mutual non-contact braking begins with simultaneous rapid heating of the disks, and the disks themselves begin to deform synchronously in wave-like movements rotating relative to the laboratory frame of reference at a frequency of several revolutions per second. In this case, the disks do not touch, moreover, there is a repulsion between the disks - the disks seem to flow around each other, and after a long joint rotation they are deformed - they slightly bend away from each other.

This effect does not occur if the experiment is carried out at normal atmospheric pressure, or if a screen in the form of a thin film is installed between the disks. Also, balanced rotation without misalignment of the axis of the disks does not give any effect. Verification experiments show that neither gas-dynamic nor electromagnetic effects can explain this phenomenon. A torsion balance placed in a chamber next to the rotating discs shows significant deviations, sometimes by several revolutions. Experiments with thin films placed next to a rotating disk show that noticeable forces act on the films, which leads to their deformation. In this case, it must be emphasized once again that there is no contact with the disks. In these experiments, at a distance of more than a few millimeters, the effects of force action between the disks did not appear.

The study of the influence of the vacuum depth on the effect showed that the deeper the vacuum, the stronger the interaction of non-equilibrium rotating masses; air, like dense bodies, absorbs the impact [167]. Experiments with movable frames made of various materials show the effect of repulsion from a rotating disk: the frames were repelled without contact, and the deeper the vacuum, the more intense. VN Samokhvalov called this physical agent, leading to force interaction, *mass-dynamic radiation*. In experiments with pendulums, he also showed other manifestations of the mass-dynamic effect [168].

10.1.5 Torsimeters Shkatov

Shkatov manufactured several sensors based on changes in the measurable parameters of a solid body [163]. Ferrite rings with copper wire windings acted as the heart of the first TSM-21 torsimeter; the rings were mounted on a stationary multi-pole magnetized rotor of a synchronous electric motor. According to the maximum sensitivity from the test body (a small magnet at a distance of 3 m), the geometry of the structure was selected. The structure was placed in a screen from static magnetic fields (transformer tape steel with a winding thickness of 10 mm), then in an electrodynamic screen made of copper foil 0.1 mm thick, and placed in a wide-mouthed glass thermos to protect against rapid temperature changes.

The output parameter of the sensor was the inductance - the sensor worked as part of an oscillatory circuit at a frequency of $130 \text{ kHz} \pm 1..20 \text{ Hz}$. The difference between the frequencies of the working generator and the reference one was displayed on the screen. Between the object, from which the "torsion contrast" was taken, and the sensor, there was a "torsion shutter" (Shkatov writes about the presence of know-how).



Rice. 97. TSM-021.

TCM-030 sensor (Fig. 98) is a two-input sensor, in which high-permeability ceramic capacitors act as working elements. To amplify the torsion signal, Shkatov used "shaped amplifiers" - three triangles connected in series. In this version, "laser contact" was used - a method of delivering information from an object to a sensor. V.T. Shkatov writes:

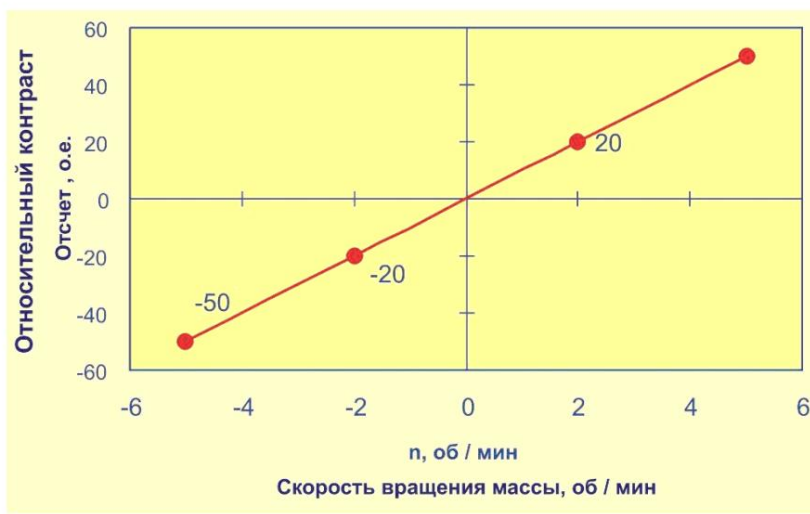
"Laser contact can also be explained through spin approaches. True, here we are not talking about individual microscopic spins, known to us from the classical physics of microparticles, but about collective formations of spins, suggesting their informational interaction. In recent years, the new physical literature is replete with models of quantum collectivization: entangled quantum states, trapped photons (in Garyaev's works, for example). I like the phrase "long photon" more. This is when the two ends of the laser beam exchange fine information with each other (not energy, it is always transferred from the place where the beam was generated in the course of its propagation). In this case, the information in the laser beam belongs to the entire "volume" of the beam. The beam as a metal conductor - informationally closes two points. Moreover, subtle information is transmitted both along the beam and against it. Rough, habitual information, transmitted through the modulation of the energy of the same laser beam, can only be transmitted forward, along its course, in compliance with all spatio-temporal (causal) norms. Implementation of laser information contact - a conventional laser pointer, or more

high-quality solid-state laser head with current stabilization. Information can be entered into the body of this head, and at the other end of the beam segment there can be an object or a sensor. It is possible vice versa, the sensor is attached to the laser head, and at the other end is the object. The system is multivariate.

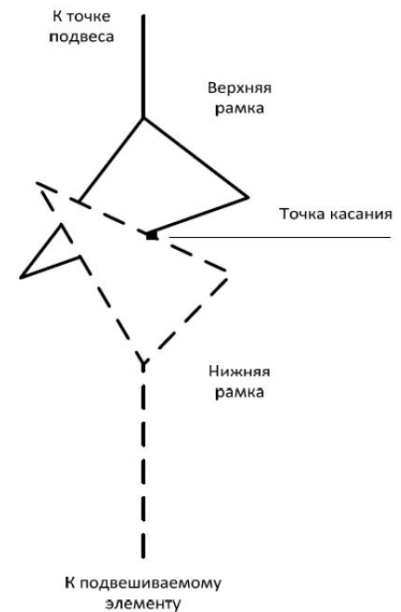


Rice. 98. TSM-030.

On Fig. Figure 99-a shows the results of measuring the torsion contrast of a slowly rotating body using the TCM-030. At the same time, for the "torsion decoupling", a cruciform filter plug was used from two triangles located perpendicularly and connected at the base point (Fig. 99-b). The results were almost independent of the material of the rotating body.



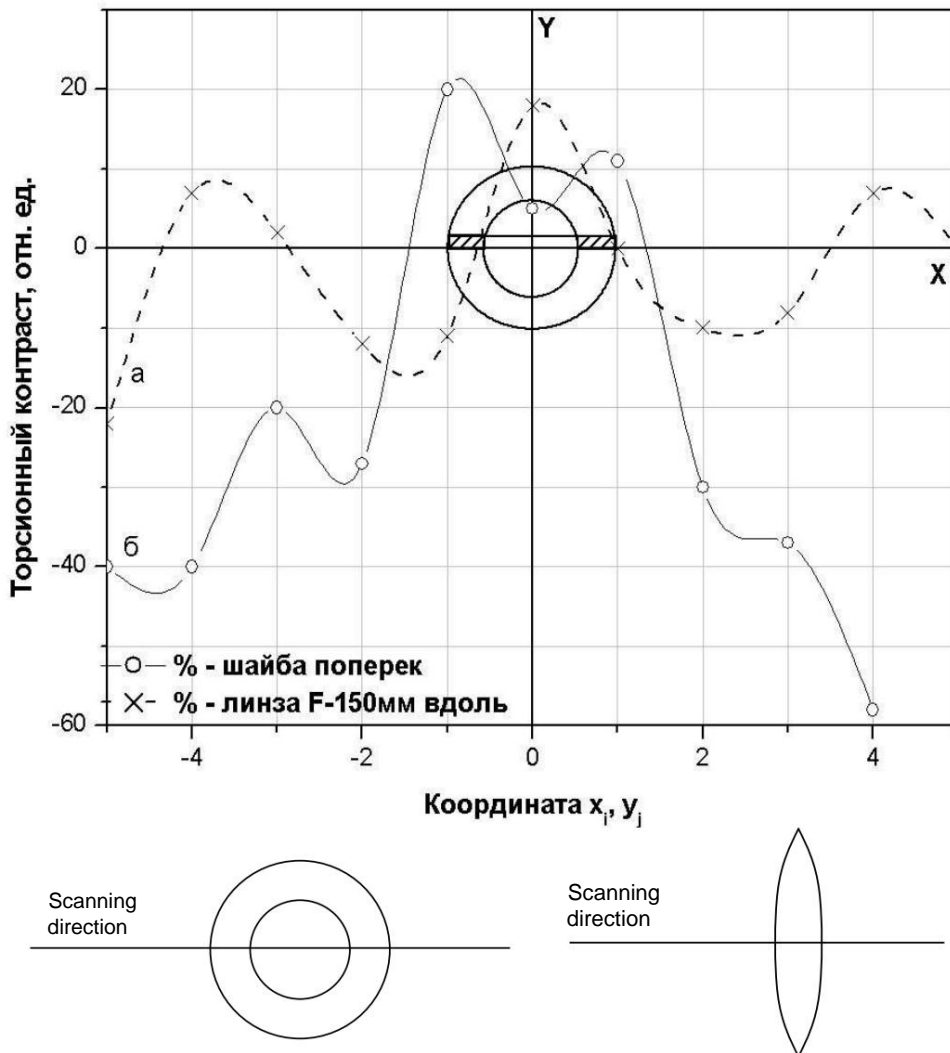
a



b

Rice. 99. a - dependence of the relative torsion contrast of a rotating body on the speed and direction of rotation of this body, b - torsion filter-plug in the design of the suspension of a rotating body.

In the SADAF torsimeter, the sensitive element is tungsten as a resistive material. One sensor receives signals from two channels in turn, which also include lasers. On Fig. 100 shows the results of scanning the torsion field with this sensor in the vicinity of a steel washer, as well as a convex lens.



Rice. 100. a) TP distribution near a steel washer $\varnothing 20$ mm in the transverse direction and an optical lens $\varnothing 20$ mm in the same direction. Scale: $M_x=1$ cm/div, $M_y=10$ pu/div. b) washer scanning direction, c) lens scanning direction.

There are also torsimeters that operate on CMOS microcircuits as sensitive elements.

10.1.1 Influence on metal hardness

A.A. Shpilman in 1993 studied the effect of radiation from his generators on the hardness of steel and cast iron [174, 175]:

“For low-carbon annealed steel grade 08Yu, a decrease in hardness by 6-8% was observed, i.e. softening of the metal took place. For high-carbon alloys (U-8 grade steel, cast iron), on the contrary, there was an increase in hardness by 27.0-35.0%, which indicates the ongoing hardening.

In 2000, studies were carried out on the effect of radiation from Shpilman generators on the hardness of pearlitic cast iron using the Brinell method (with a ball with a diameter of 5 mm), which showed an increase in hardness by 9-11%. Then the hardness of various phases of cast iron (pearlitic, cementite and conglomerate) was investigated. A diamond pyramid with a square base and an apex angle of 136° between opposite faces was used as an indented tool (indicator). The pearlite phase showed an increase in hardness by 15%, the cementite conglomerate phase showed an increase by 17.8%, the cementite lamellar phase showed a decrease by 2.4% (within the margin of error).

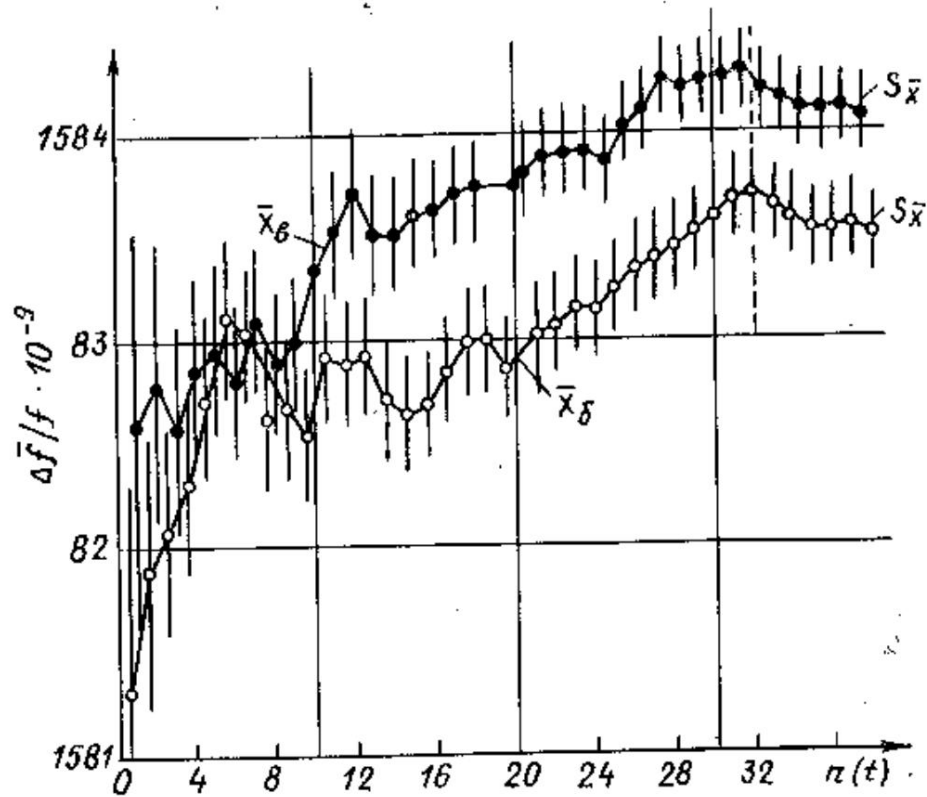
Of course, this method of detecting torsion radiation is not very convenient due to the metastability effect, but it is very interesting as a direction for further research.

10.1.2 Impact on the quartz resonator

Lunev's group carried out experiments on the effect of a gyromotor on the frequency of a quartz oscillator (the reference crystal oscillator of the Ch3-32 frequency meter, nominal 1 MHz was used) [169]. The thermostat with a quartz sensor was placed in a three-layer screen: 0.1 mm permalloy, 3 mm porous plastic, 0.2 mm copper foil, the copper screen was grounded. Measures were taken to prevent the transmission of vibration from the gyromotor to sensor.

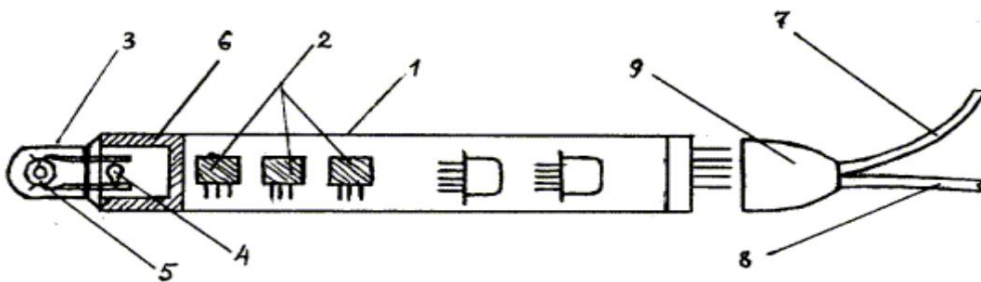
The experiment was built as follows: the value of the average frequency was taken for 100 s, with the influence of the gyro motor, then the value was taken with the gyro motor removed by 1.5 m with the axis rotated by 90° and its height shifted by 35 cm. This was one cycle. Thirty-eight such cycles of measurements were carried out.

The results of frequency measurements are shown in Fig.1. 101. It can be seen that the effect of torsion radiation from the gyro motor increases the oscillation frequency of the quartz oscillator. The experimenters note the aftereffect - the sensor remembers the impact for 1-2 hours.



Rice. 101. Effect of a spinor field on a quartz resonator with a parallel orientation of the gyromotor axis relative to its plane [169].

Yu.N.Cherednichenko, L.P.Mikhailova in the work "Effects of the form and phase transitions of the first kind: experimental study of distant interactions on physical sensors and cellular bioindicators" [170] describe the results of the influence of the pyramid and some non-equilibrium processes on a quartz sensor with controlled temperature. The KA-1 quartz sensor (Fig. 102) was part of the measuring complex, in which the sensor frequency was compared with the reference frequency of the Hyacinth-M generator of group A (relative frequency instability $1 \cdot 10^{-9}$ per hour). The frequency resolution was 0.1 Hz. The temperature of the quartz sensor was continuously measured by the ST1-19 thermistor with a resolution of 0.01°C . By changing the frequency of the resonators and their temperature, it was possible to determine the contribution of the non-thermal cause of the frequency change. The entire setup, together with the objects of influence, was placed in a grounded metal thermostat.



Rice. 102. Design of the sensor Yu.N.Cherednichenko: 1. Aluminum case; 2. Circuit elements; 3. Case of a quartz resonator; 4. Thermistor; 5. Quartz resonator; 6. Thermal insulation.

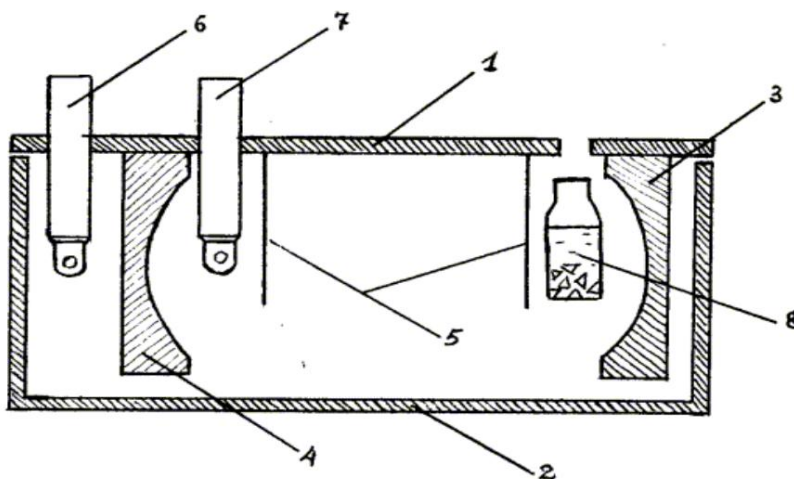
In the experiment, the influence of a fiberglass pyramid with a base size of 250 mm and a height of 160 mm was studied. On Fig. 103 and Fig. 104 shows the frequency graphs of two sensors: the experimental sensor was located inside the pyramid at 1/3 of the height along its axis, and the control sensor was located outside the pyramid at 10 cm from its base and at the same height of 1/3. The authors point out that the contribution of the additional factor was for the experimental (internal) sensor is about 40% of the temperature factor, and the control (external) - 80%, and the sign of this effect turned out to be opposite inside and outside the pyramid. On Fig. 104 shows the response of the same sensors when the pyramid was initially lowered.



Rice. 103. Influence of the pyramid on the parameters of quartz sensors. Arrows mark the moments of lowering and lifting of the pyramid. The control sensor is outside the pyramid.

Rice. 104. The effect of the rise and fall of the pyramid after exposure of the sensor inside the pyramid during the day. The control sensor is located outside the pyramid.

Similar results were obtained by the same group when exposed to quartz resonators in a system of two parabolic mirrors, in the focus of one of them there were processes of dissolution of NaCl and sucrose in water, as well as the process of heating pre-cooled water. The experimental sensor was located at the focus of the second mirror, and the control sensor was located behind the mirror. The installation scheme with mirrors is shown in Fig. 105.

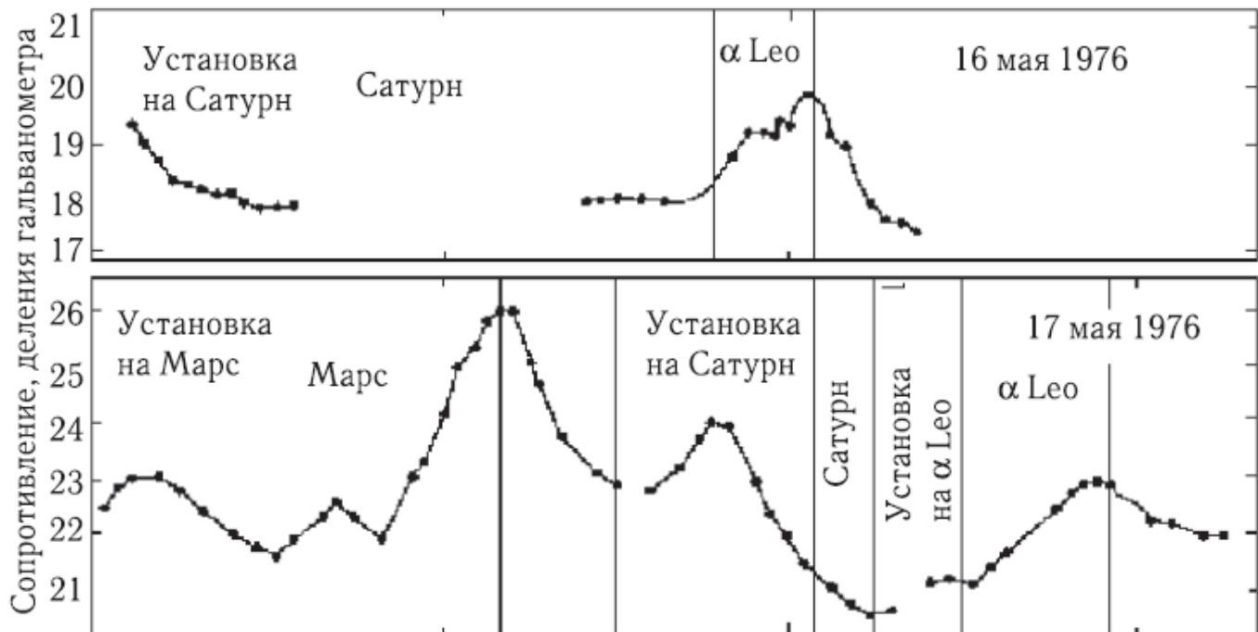


Rice. 105. 1. Aluminum cover; 2. Aluminum housing; 3. Parabolic mirror-1; 4. Mirror 2; 5. Aluminum curtains; 6. Control sensor; 7. Experienced sensor; 6. vial for carrying out the dissolution process.

It should be noted that, while the very idea of controlling the temperature of a quartz sensor to separate the contribution of non-electromagnetic effects from thermal ones is correct, the authors did not take into account the effect of this effect on the thermistor. Meanwhile resistive sensors also respond to non-electromagnetic radiation.

10.1.3 Resistive sensors - Kozyrev sensor and analogues

One of the most famous experiments of N.A. Kozyrev is the determination of the true position of the stars using a reflecting telescope [7]. The bridge circuit included a resistor that was placed at the focus of the telescope.



Rice. 106. The reaction of the resistor in the focus of a reflecting telescope (light from objects is eliminated by a thin screen).

The change in the resistance of the resistor was a useful signal. These results were subsequently independently reproduced by two groups - A.F. Pugach and A.I. Eganova [151, 152, 154, 155, 156, 157]. Also interesting are the results of the group of L.S. Shikhobalov, who repeated the experiments on the effect of non-equilibrium processes on the resistor [150]. The "Kozyrev detector" based on a resistor in a bridge circuit is also used by A.V. Kinderevich [128].

In this type of sensors, it is necessary to pay increased attention to thermal insulation. See also the description and use of A.G. Parkhomov's shielded microcalorimeter based on a thermistor in section 12, devoted to psychophysical effects.

The torsimeter of V.T. Shkatov SDAF is based on the same principle [163].

Some researchers use the conductivity of ultrapure water as an indicator of non-electromagnetic interference. For example, the group of S.V.Zenin uses such sensors, the experiments of V.V.Kvartalnov and N.F.Perevozchikov are based on this principle. However, the metastability effect does not allow using the same water for several experiments, and the water has to be changed after each experiment.

10.1.4 Photographing non-electromagnetic radiation

Several groups managed to register non-electromagnetic radiation with photographic films. The first publication about the phenomenon was an article by A.F. Okhatrin [173], which presented images taken with a special camera (Fig. 107).

Okhatrin writes:

“These macroclusters were photographed with a camera, the lens of which was placed in a hole in one of the side ends of the camera, which had a rectangular cross section. The inner surface of the chamber (its walls) was covered with a light-absorbing layer. One of the side walls of the chamber had a narrow slit through which a narrow flat collimated beam of light from a 5.00 W incandescent lamp was introduced into the chamber.

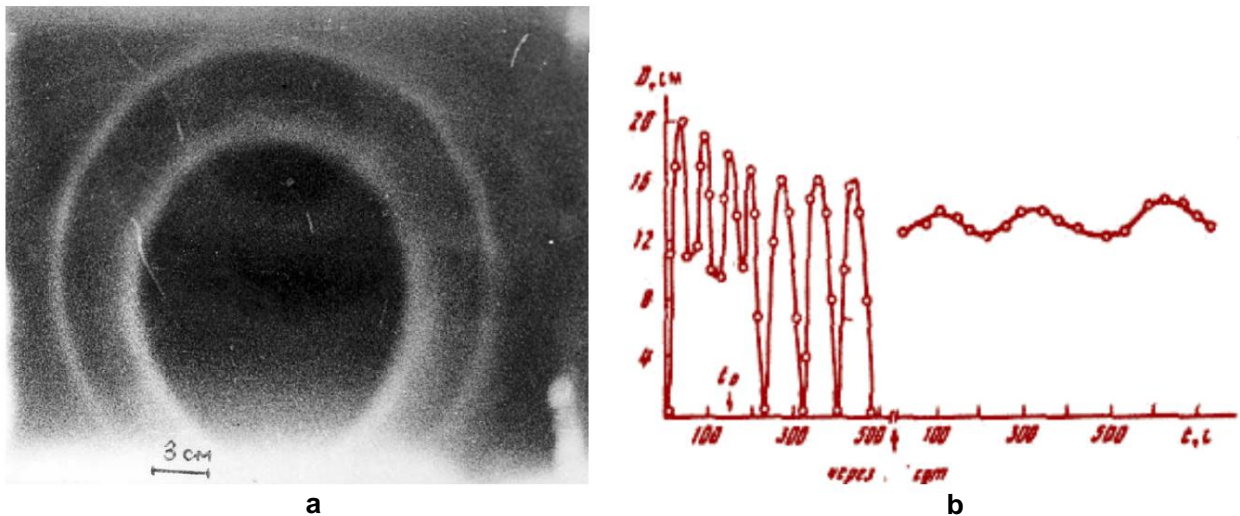
Outside the chamber, opposite its other end, a body was placed at a distance of 3 cm, surrounded, according to our assumption, by a macrocluster of ultralight gas particles (microleptons or axions). The test body is a cone 2 cm high with a base diameter of 2 cm. according to GOST, no image was recorded. However, when the lead cone was started to rotate by means of a drive from an electric motor, at a rotation speed of about 860 rpm, an image of concentric rings was recorded on the film. A further increase in the speed of rotation of the lead cone led to an increase in the brightness of the image.

On Fig. 107-a shows a typical picture of the glow from a macrocluster located outside the chamber. In this case, the ring luminous zones had different diameters, the value of which changed periodically with time. The time dependence of the diameter of one of the photographed annular zones is shown in Fig. 107-b. Section of the curve from the origin to to

corresponds to the period of time during which the lead cone rotated at a speed of 3500 rpm. At the time t_0 , the motor driving the cone into rotation was stopped. After stopping the engine and stopping the rotation of the cone, the period of free oscillations of the diameter of the zone shown in the photograph (under the conditions of this experiment, the presence of four such concentric zones was recorded) increased from 83 to 260 s after 20 days. The oscillation amplitude of the first macrocluster radius dropped from 3.5 to 1.0 cm. Moreover, the asymptotic value of the average radius was 24 cm.

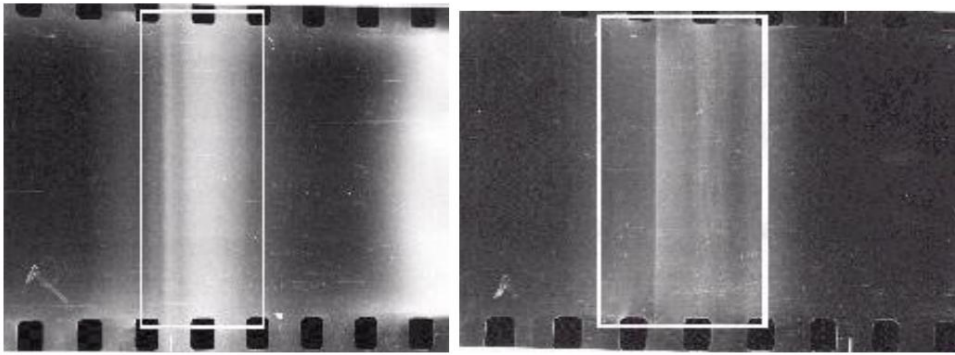
The introduction of a brass screen between the cone and the chamber led to a time delay in the occurrence of the phenomena indicated in Fig. 107-b oscillations depending on the thickness of the shielding material. The period and amplitude of the recorded changes in the size of the annular zones depended on the material of the cone.

The imposition of a magnetic field on the system reduced the period of the oscillations shown in Fig. 107-b. A field with an intensity of 0.1 T acting on a lead cone reduced the oscillation period by a factor of 2–3. The brightness of the light scattered by the annular zones depended on the material of the cone. Comparatively less bright annular zones were recorded not only in the study of rapidly rotating bodies located near the end of the chamber, but also if a lead cone was placed at the end of the chamber, which was previously in the field of a permanent magnet (field induction 0.03 T, duration of action of the magnetic fields 3 hours)".



Rice. 107. a - axion cluster; b – vibrational regimes of the axion cluster diameter for a lead sample [173].

VT Shkatov in [163] described an experiment on the effect on a 35-mm photographic film inserted into a Zenit-E camera of "latent" radiation from a Chizhevsky chandelier. When the lens was closed, images were obtained that went beyond the size of the frame, and, as Shkatov notes, caused by one detail inside the camera - the device, as it were, shot itself from the inside (Fig. 108).



Rice. 108. Photographic phenomena from the "hidden" radiation of Chizhevsky's chandelier.

The group of V.I. Lunev recorded the radiation from the gyro motor (24000 rpm) on the photographic film "Tasma" with a sensitivity of 65 units. using a Zenit-ET camera with a closed lens at distances of 3 and 100 mm from the gyro motor to the film [174]. The exposure time was 2 and 5 minutes. Examples of photographs are shown in Fig. 109.

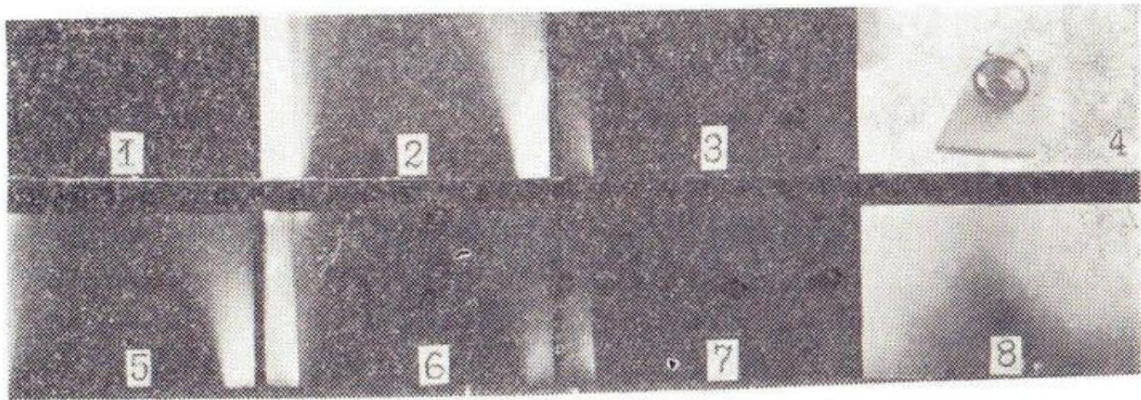


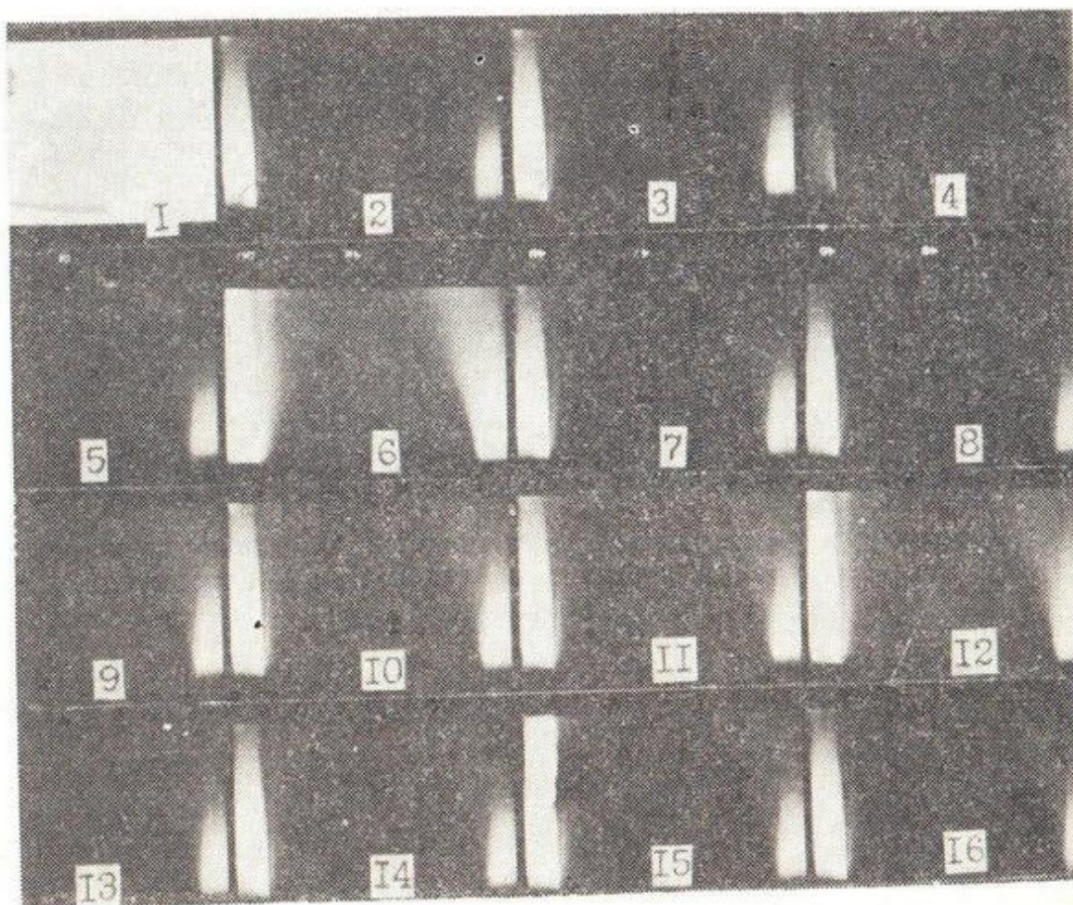
Рис. 2. Фрагмент II фотографии, визуализирующей спин-торсионное поле вблизи электродинамического генератора — гиromотора ($\nu = 24000$ об./мин), кадр № 4

Rice. 109. Photographs of torsion radiation from a gyro motor, taken through an opaque lens cover 1 - background; 2.5 - butt; 3.6 - side; distance from the surface of the gyro motor 4 (GMV-254) to the film - 100 mm. 2 min.

mm.

Frames 7 (side), 8 (end) were obtained by exposing the film through the rear cover of the camera (bypassing the lens), while the distance from the gyro motor surface to the film was 3 mm.

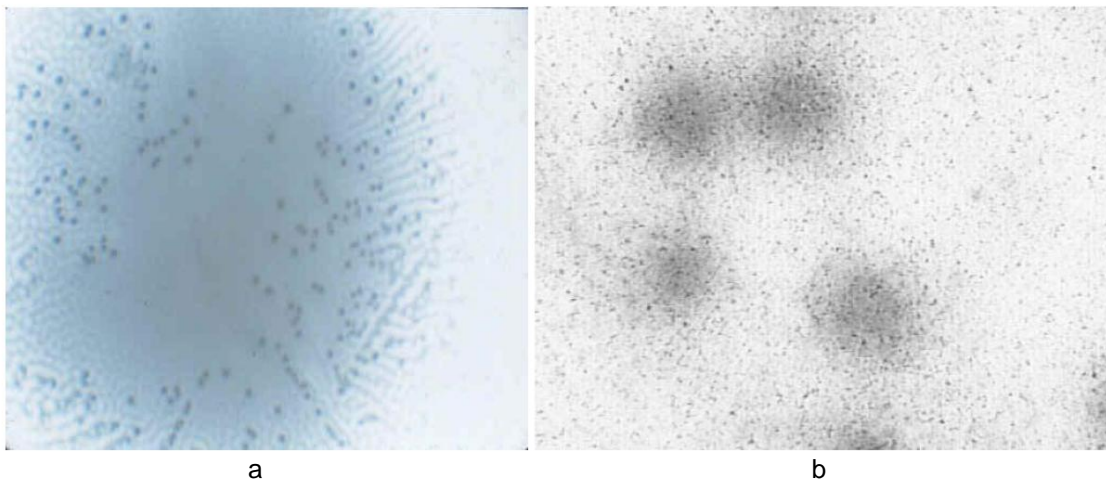
The authors note the aftereffect - the gyro motor continued to radiate for 30 minutes after the power was turned off - on frames 2..16 in Fig. 110 shows images taken from the end of the gyro motor, each frame with an exposure time of 2 min. Based on the images, the authors suggest that the radiation has axial symmetry along the axis of rotation of the mass, the shape of the generatrix is in the form of a cone with a vertex in the center of the rotating masses.



Rice. 110. A fragment of a photogram visualizing the change in the spin-torsion field. Frames are made with an interval of 2 min.

At normal (short) exposures, the radiation is not fixed and does not interfere with view photography.

M. Sue Benford, a US researcher, irradiated X-ray films intended for the study of nuclear tracks with a Shpilman "Comfort" generator [175]. As a result, black spots were obtained, which experts from several US nuclear laboratories characterized as tracks of unknown particles (Fig. 111). The spots contain traces of sulfur, magnesium and aluminum, while the non-irradiated photographic emulsion contains only carbon, nitrogen and oxygen.



Rice. 111. a - characteristic "spots" surrounded by a halo of "tracks"; b - unidentified "specks" against the background of smaller specks, which were also visible in the control images [175].

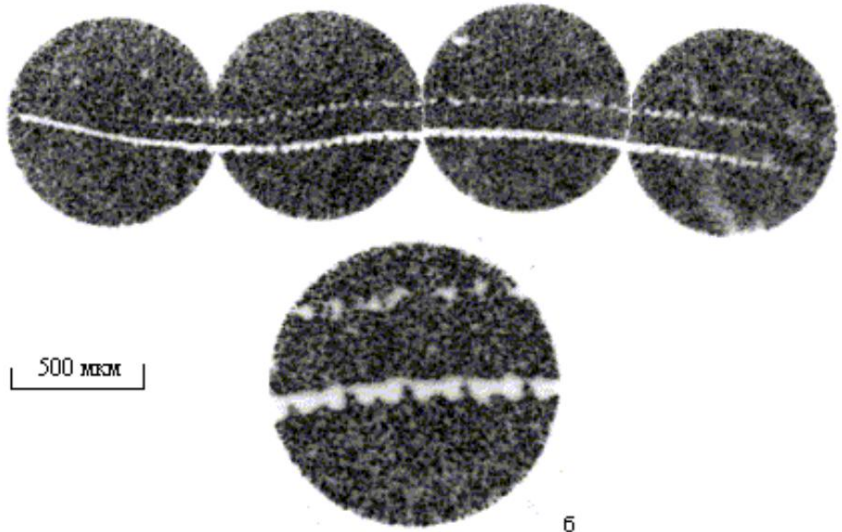
Several researchers in Russia and Ukraine at once obtained tracks of "strange radiation" according to one terminology [72, 121, 122, 123], or "Kozyrev-Dirac radiation" according to another [119], on photographic emulsions from installations that, judging by the biological impact [70, 71] are typical torsion generators. Such tracks are discontinuous and run strictly along the emulsion surface. Similar tracks were also obtained in MIS structures from the setup of S.V. Adamenko's group [124] and during solidification of zirconium in the reactor of M.I. Solin [120]. The authors suggest that a magnetic monopole can behave in this way (a hypothetical light magnetic monopole, which is a magnetically excited neutrino, was predicted in the 80s by Georges Lochak, a student of De Broglie [127]). Such a particle does not have an electric charge, but it has a magnetic one, due to which it can cause nuclear reactions in stable nuclei. In all installations, from the radiation of which such tracks were obtained, low-energy nuclear reactions really occur, which cannot be explained by standard theories, and the radiation of the Adamenko installation has an effect on semiconductor structures similar to cold annealing obtained earlier from torsion generators [125, 126].

When exposed to laser radiation on magnetized water, the same tracks appear on photographic films [176].

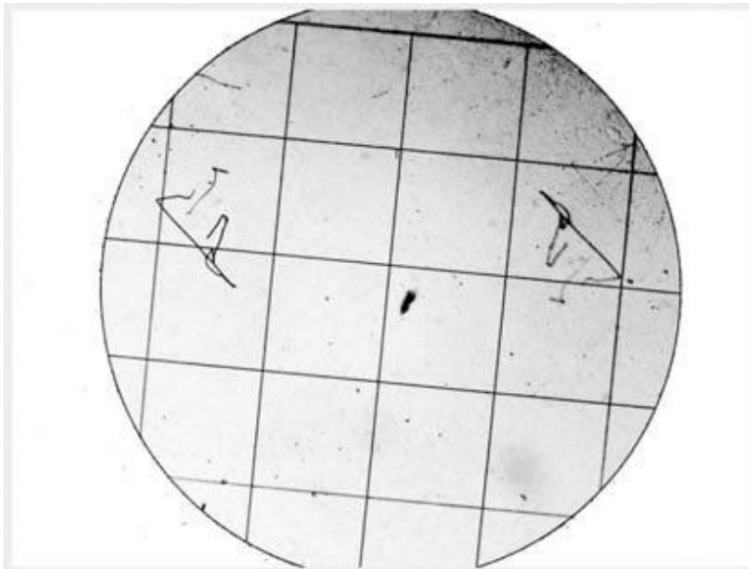
Whether such tracks are caused by the same agent as from the installations of Shkatov, Lunev, Okhatrin, or represent an independent phenomenon, it is apparently too early to say. The nature of the connection between biological effects, tracks and nuclear reactions from these installations has yet to be clarified.



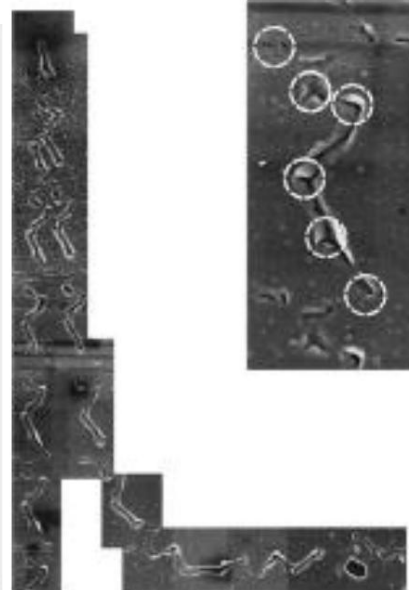
a



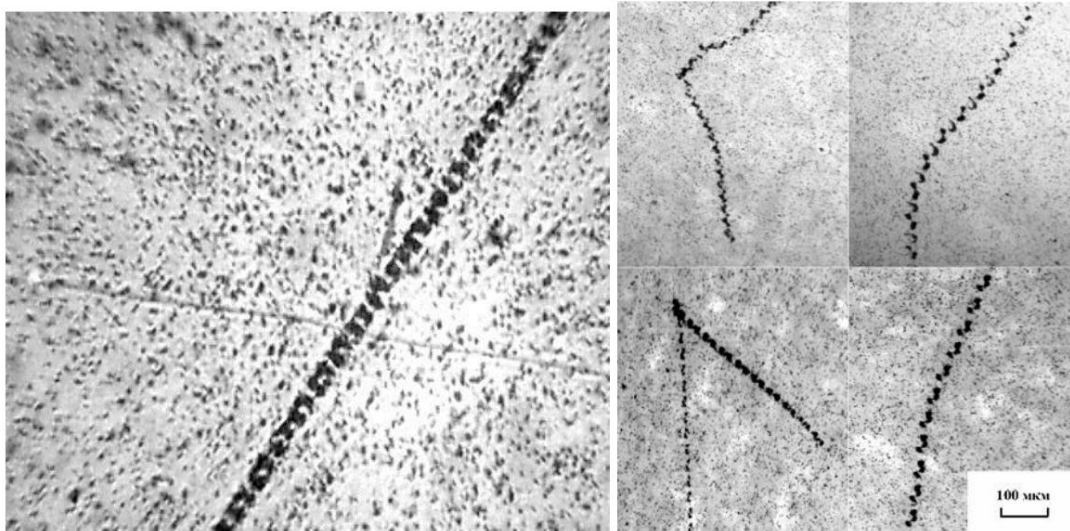
b



in



G



e Fig. 112. Examples of strange radiation tracks in experiments: a - M.I. Solina [120], b, f - L.I. Urutskoeva [72, 121], c - N.G. Ivoilova [122, 123], d - S.V. Adamenko [124], e - I.M. Shakhparonova [119].

10.2 Sensors based on changing the parameters of random processes

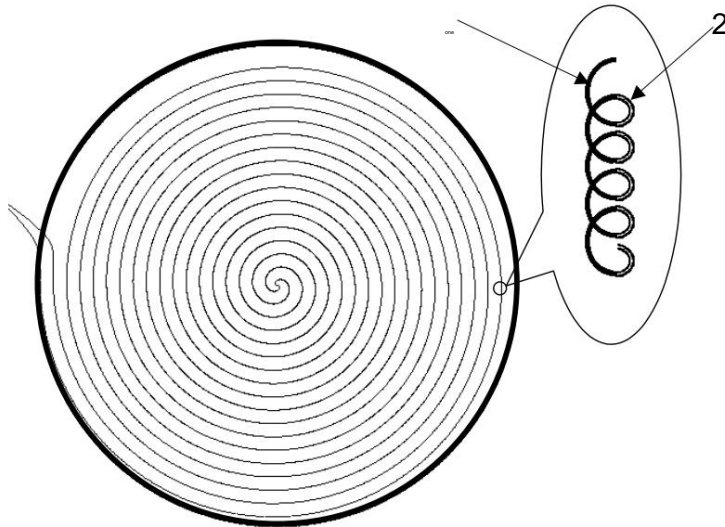
Let us now turn to the detection approach, which is based on the influence of non-electromagnetic radiation on the parameters of random processes. Here, by now, we can talk about both exploratory experiments demonstrating such an effect, and about sensors that are more or less technologically advanced in use, at least in laboratory applications.

This approach to detection is convenient in that it allows, in some cases, to abstract from known influences (electromagnetism, heat, ultrasound), since they usually do not affect such parameters as the entropy or dispersion of a random (noise) process, and to concentrate on the nontrivial influence of a nonelectromagnetic impact. Much has been said about the effect of radiation from torsion generators on the parameters of radioactive decay in Section 8. Currently, there are no technological sensors based on this phenomenon, although, for example, the results of the groups of Lunev, Krinker and Melnik may well form the basis of such a future sensor.

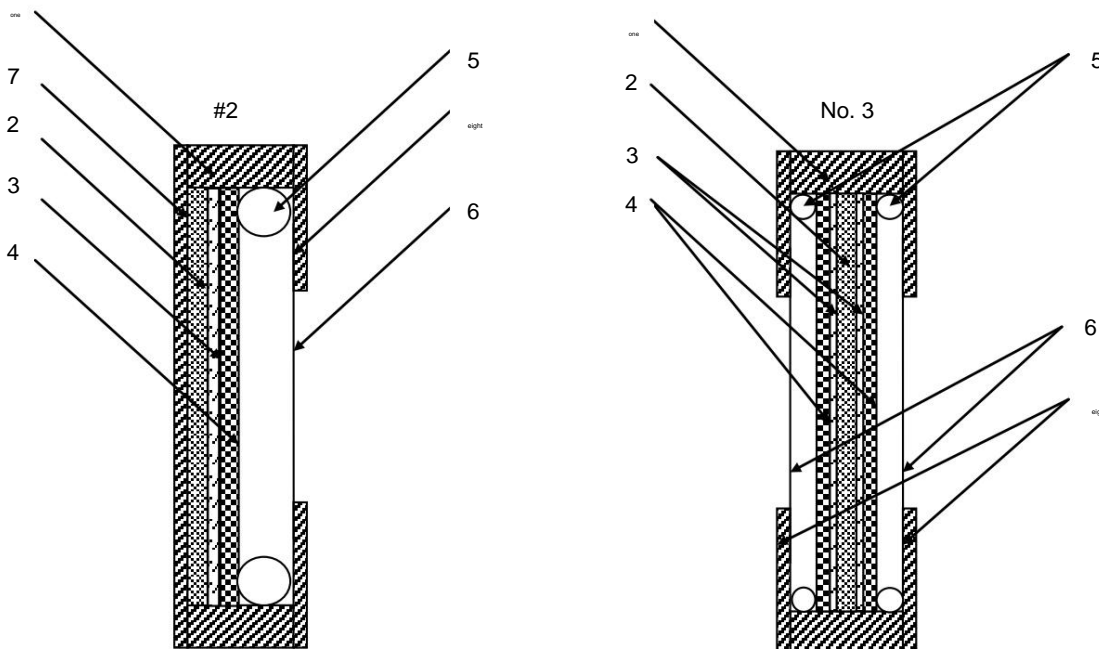
10.2.1 Thermal sensor

Since the mid-1990s, Dulnev's group has been working on the detection of non-electromagnetic radiation from generators and operators using thermal sensors [49]. After preliminary experiments, the researchers came up with the following design (Fig. 113): two joint thermal sensors that used a heat flow signal with a sampling rate of 2000 Hz. Although the heat flow of the two sensors is related, the noise component of this signal for the two sensors should be 126

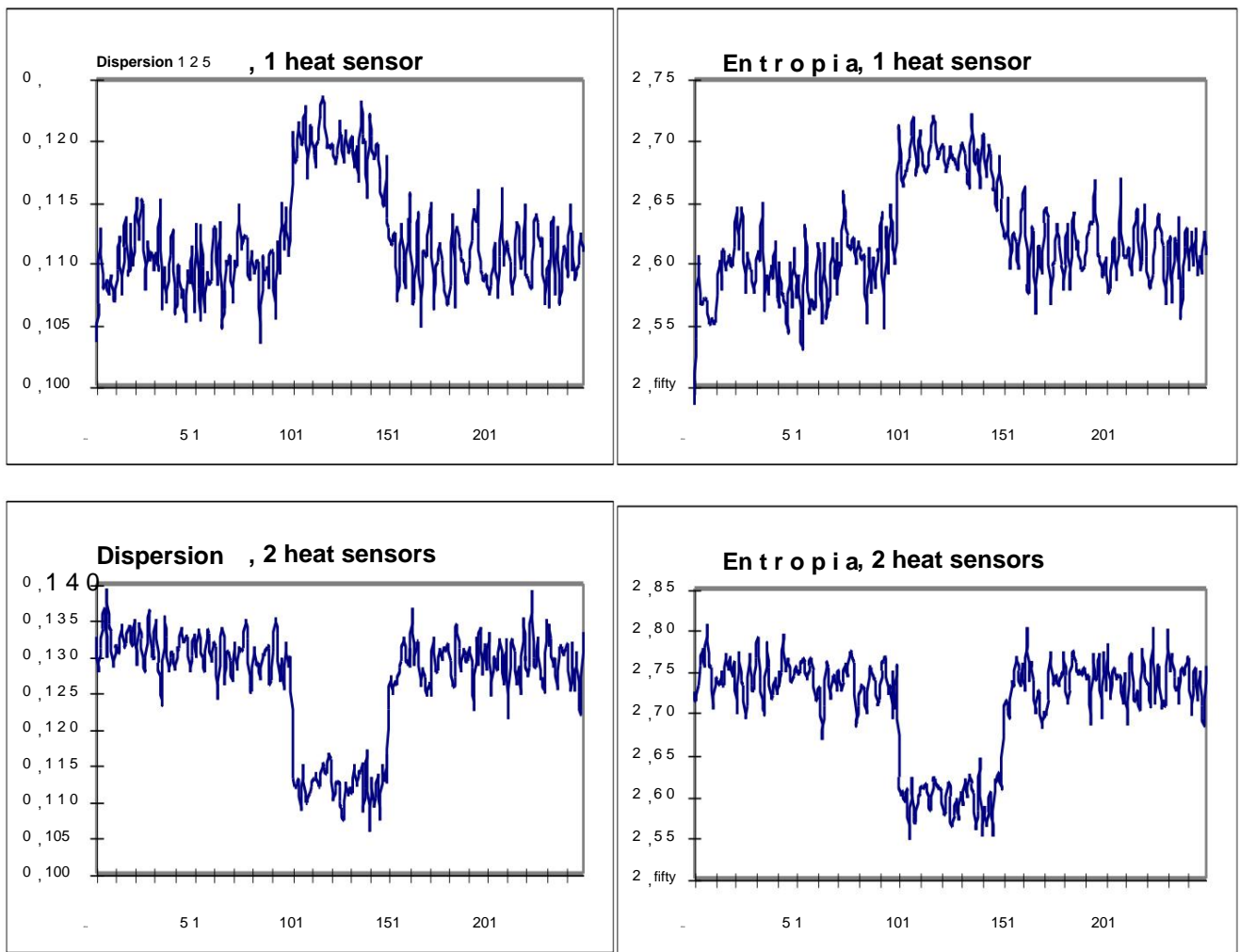
independent. In the signal from a thermocouple of a special design (Gerashchenko's heat cup - see Fig. 113), statistical parameters - entropy and dispersion of thermal noise - were distinguished at three stages: in the background, at the stage of exposure and aftereffect. It is interesting to note that the configuration of the copper-constantan winding of the thermal sensor practically repeats the configuration of the winding of the Kurapov generator (cf. Fig. 9). An example of registration of radiation from Akimov's torsion generator is shown in Fig. 115. It can be seen that an increase in the dispersion / entropy of the signal of one sensor is compensated by a decrease in these parameters for the second sensor.



Rice. 113. Heat meter Gerashchenko. 1-constantan wire, 2-copper coating.



Rice. Fig. 114. Heat cups 2 and 3. In the annular textolite body of the sensor 1 are placed: a heater 2, a bronze gasket for leveling the temperature field 3, a Gerashchenko heat meter 4, O-ring 5, thin insulating gasket 6; the sensors are closed with a back cover 7 and textolite rings 8. Design No. 2 uses one Gerashchenko heat meter, and design No. 3 uses two heat meters.



Rice. 115. Influence of radiation from Akimov's torsion generator on the dispersion and entropy of thermal noise of two thermal sensors.

In the initial version, the registration efficiency was extremely low (3 cases out of 40, i.e. 7.5%). The authors applied the following stage-by-stage refinements of the experimental scheme before they achieved confident reproducible registration of torsion radiation (the resulting performance is given in brackets):

- 1) Instead of recording the amplitude of the heat flux, they began to measure the statistical characteristics of the signal; refused to manually turn on the generator in favor of computer control (10%).
- 2) All experiments began to be carried out without the experimenter in the room (24%).
- 3) Grounded the body of the torsion generator; applied the "window" method: background exposure-aftereffect; the polling frequency is at least twice the power supply frequency of the torsion generator (60%).
- 4) 50Hz harmonic filtering (70%).

So, by successive improvement of the experimental technique, it was possible to achieve satisfactory results of registration of the radiation of the torsion generator. During repeated experiments with the reproduction of identical parameters of the experiment (generator power supply, distance to sensors, etc.), we got

reproducibility of results 93-95%. In certain modes, the response of the sensor was within the measurement error, and when reproducing these modes, the response remained within the error. See also additional experiments with polyethylene shielding in section 9, which remove suspicions in the registration of acoustic and electromagnetic factors.

These results once again confirm the recommendations given at the beginning of the chapter on the detection of torsion radiation: this unusual and "thin" object needs special measures to isolate and study it, in particular, the presence of the experimenter plays a big role here; This factor must be taken into account along with others.

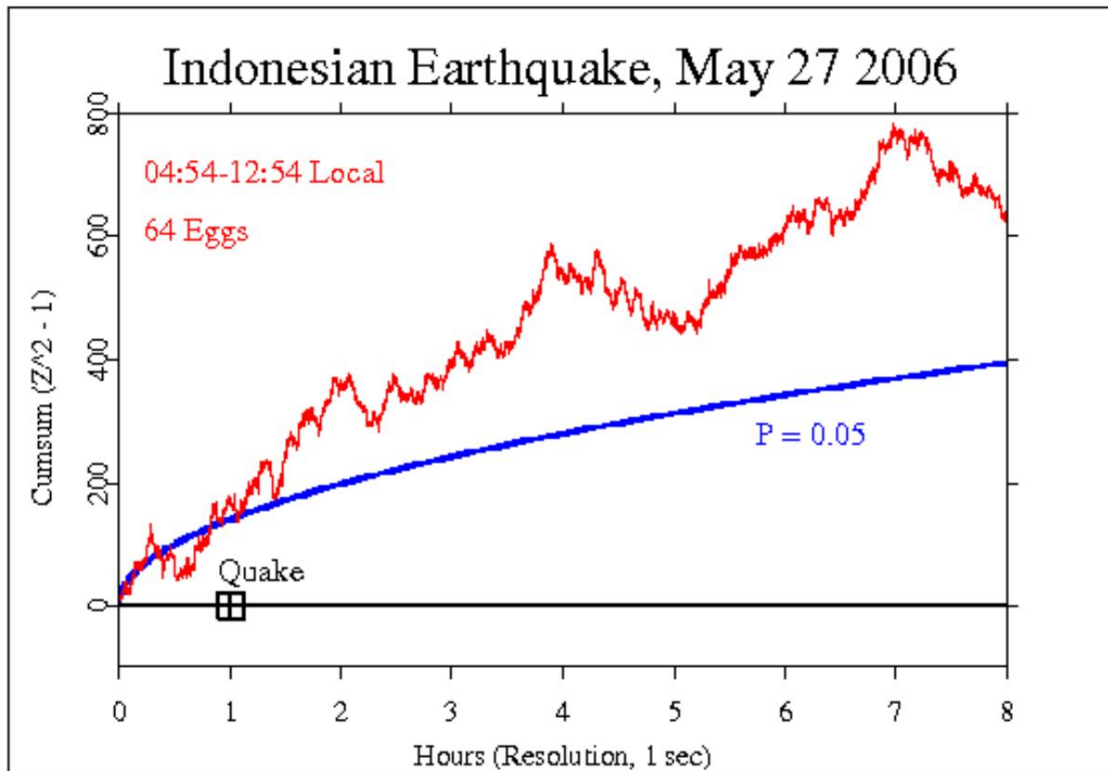
unwanted.

10.2.2 Using noise diodes

Many groups of experimenters used semiconductor junctions as noise sources and acted on them with the help of operators. Generally speaking, Bobrov's work on the influence of psychics on sensors on the IC can be attributed to similar results, although the signal amplitude was measured there.

The measurement of signal parameters of noise diodes underlies the sensors of several groups: Shnol, Li, Smirnov, Nelson (GCP project). This signal is white noise and is processed differently in different experiments. In the approach of S.E. Shnol's group, a signal is taken from two identical in terms of parameters, but spatially separated generators, and a comparison of the histogram shapes for small samples is performed. Three noise generators are simultaneously used in A.Yu.Smirnov's sensors, the operator acts on two generators, the useful signal is taken from the third one. In the sensors of the A.G. Lee group, the correlation of the signal of two noise generators is calculated, which are affected by the operator [177, 178, 179].

The setting and results of the GCP experiment (Global Consciousness Project) are interesting [180], which is currently ongoing. It takes signals from a variety of random number generators located in various cities and countries. Now the number of sensors in the project is about 70. The signals from the sensors are digitally sent to the central database. The deviation of the mean is used (the signal is a zero or one, following randomly at a frequency of 200 Hz). As the results show, the network of sensors responds to events accompanied by global emotional outbursts of masses of people (Fig. 116).



Rice. 116. Deviation from the average of the GCP system during the earthquake in Indonesia 05/27/2006.

It is interesting that the method of comparing histograms by small samples (S.E. Shnol), applied to the data series of GCP sensors, shows the same effects as in other random physical processes: it turned out that the digital method of encoding the signal of the sensors does not violate the similarity properties of the shapes histograms [181].

A study using two noise sensors according to the Shnol method inside the Red Pyramid (Egypt) showed that the severity of the local time effect (the similarity of histograms for noise sources at the moments of the same local time) decreases inside the pyramid [182]. The authors suggest that we can talk about the "noisiness" of the internal space, or about shielding the effect of local time by the walls of the pyramid.

10.3 Devices IGA-1, VEGA, SEVA

There is a class of devices that, being sensitive receivers of electromagnetic waves in the range of kilohertz, react in a characteristic way to such objects as torsion generators, activated water, geopathic zones, and the human biofield. Consider the operation of some of these sensors.

10.3.1 IGA-1

IGA-1 (Indicator of Geomagnetic Anomalies, inventor - Yu.P. Kravchenko) is a highly sensitive receiver, which measures the phase shift of the background electromagnetic signal received by the antenna at a certain frequency compared to the reference one [183, 184], Fig. 117. An arrow or digital indicator shows the integral of the phase shift. The operating frequency of the device is 6...10 kHz. The antenna is a polished disk 3 cm in diameter, the role of the second electrode is performed by a disk located coaxially at a distance of several centimeters from the central electrode of the antenna.



Rice. 117. Indicator of geophysical anomalies - IGA-1.

IGA-1 has a high sensitivity to the amplitude of the received signal - about 10 pV at the input. The operator holds the device in his hand, moving it from point to point; to reduce the influence of the operator's biofield, the handle is extended. By the deviation of the arrow, a change in the phase of the background electromagnetic signal is noticed in comparison with the base point, at which the phase is taken as 0 (zeroing the phase integral). In this case, the directivity of the device antenna is important: to measure the biofield, the antenna is directed at a person (the antenna axis is directed horizontally), to search for underground heterogeneities or geopathic zones, the antenna axis is directed downwards.

A feature of the device is both the size of the antenna (it is incommensurable with the wavelength of the electromagnetic signal in the kilohertz range), and the significant effect on the sensitivity of the device of polishing the antenna, as well as the material: a polished antenna works better than an unpolished one, polished duralumin is better than polished bronze.

The IGA-1 prototype was developed for non-destructive testing of the surfaces of critical metal parts in the aviation industry: phase characteristics were taken at different frequencies, and such a phase portrait made it possible not only to find defects in the crystal structure of the metal, but even to distinguish between different melts (batches) of the same metal grade [185]. The device later began to be used as a phase aurometer (the location of the boundaries of the phase deviation of the biofield was measured at different frequencies), and then its scope was expanded to search for underground voids, pipelines, burials, as well as to search for geopathic zones.

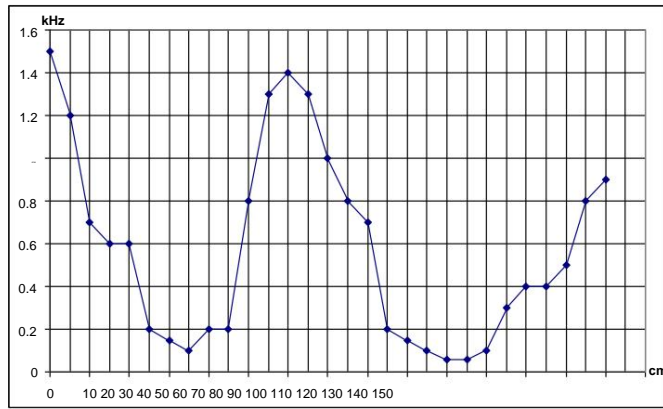
10.3.2 VEGA

VEGA (Vimiruvach of Electromagnetic Geophysical Anomalies, inventor - A.A. Andreev), Fig. 118 is also a highly sensitive receiver, the input stage of which receives signals from a coaxial antenna of approximately the same size as the IGA-1 antenna, and from which a signal is subsequently taken in the region up to 10 kHz for further processing [186]. Unlike IGA-1, VEGA measures the signal amplitude, not the phase shift. At the same time, the main effects that can be studied using VEGA coincide with those studied by IGA-1: geopathogenic zones, incl. grids, shells of the human biofield and other living objects, including phantom ones, i.e. remaining after a long stay of the object in a given place [187].

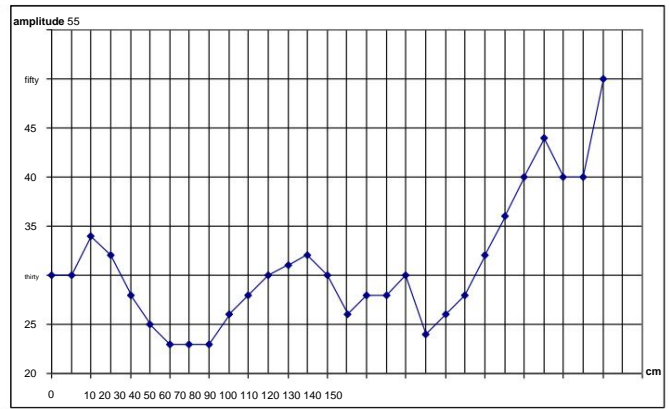


Rice. 118. Meter of electromagnetic geophysical anomalies - VEGA.

VEGA, equipped with a tunable filter 4 - 12 kHz, can be smoothly tuned to measure the fields of various objects, as well as build their amplitude-frequency portraits. VEGA, to the output of which a frequency meter is connected, makes it possible to build the frequency distribution in the profiles of GPZ lines, as well as human biofields [186]. The central electrode of the VEGA coaxial antenna is made in the form of a telescopic pin, which allows you to adjust the sensitivity of the device.

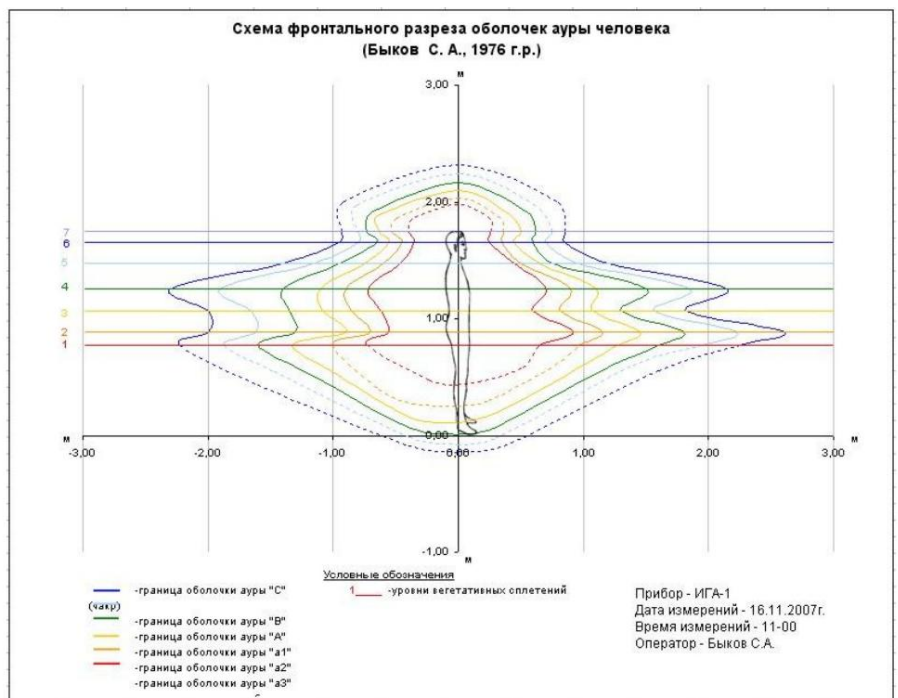


a

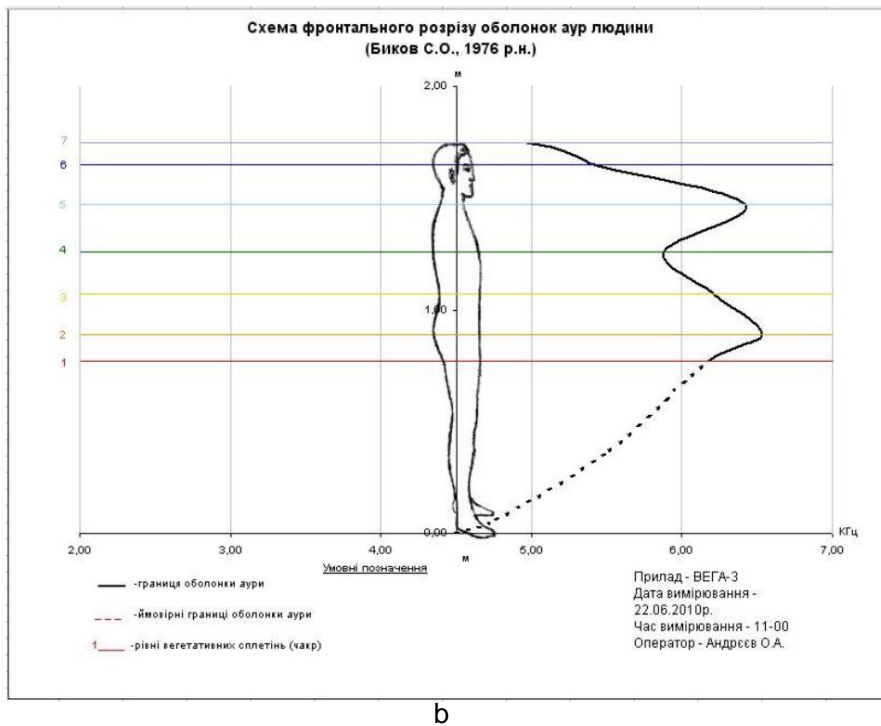


b

Rice. Fig. 119. Line profile of the geopathogenic zone: a - frequency profile, b - amplitude profile (measurement with the VEGA device).



a



Rice. 120. Measurement of the human biofield with devices IGA-1 (a) and VEGA (b).

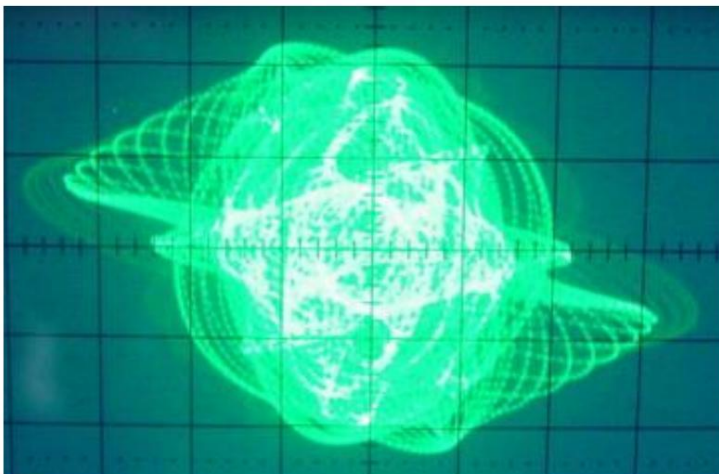
10.3.3 SEVA

SEVA (Spinning Electro Vector Analyzer, inventor - M. Krinker) allows you to detect the rotation of the electric field vector. The antenna of the device is two perpendicular pairs of plates (a quadrupole capacitor), at the output of the device an integral value is measured, which is proportional to the rotation speed and the area swept by the electric field vector [188, 189, 190, 191, 192]. Using this device, you can explore the zones of anomalies above groundwater flows, detect rays, incl. phantom, from torsion generators. The device has an additional ultra-low frequency path.



Rice. 121. Spinning Electro Vector Analyzer - SEVA.

An example of an oscillogram of a rotating electrical vector measured by SEVA is shown in Fig. 122.



Rice. 122. Oscillogram of a rotating electric field.

A characteristic effect of SEVA is the detection of a phantom that remained at the place of operation of the Shpilman "Comfort" generator and is fixed a day after the generator was removed, as well as the detection of a rotating electric vector from the water activated by this generator [200].

10.3.4 Effects

A joint consideration of the effects detected using these devices [193] suggests that we are talking about some local interaction of non-electromagnetic radiation from various objects with the characteristics of background electromagnetic radiation.

As one of the illustrations of the relationship between non-electromagnetic and electromagnetic factors, one can cite the results of an experiment described in [186]: using VEGA, areas were found in which a characteristic signal from a nearby cell phone was heard from the audio output of the device. The configuration of such areas coincided with two lines of the geopathogenic grid, and the signal was received only if the cell phone was located on the same line, or the nearest perpendicular. The effect is similar to this: in a geopathic zone about tens of centimeters in size, digital signals at a frequency of 105 kHz were listened to by a selective receiver, these signals were not heard outside this zone (an antenna similar to the IGA-1 antenna was used). There is a local factor that is not related to the carrier wavelength of the received signal, but affects its propagation.

The paper [110] presents the results of an instrumental study of torsion generators using IGA-1. For example, concentric boundaries are observed around operating vortex heat generators, similar to the shells of a human biofield; The indications of the phase shift integral change at a distance of up to hundreds of meters from powerful vortex installations. The size of the "aura" of a vessel with ordinary water differs from that for water,

processed in vortex installations. In addition, all three devices respond to flowing water - from underground flows to the pouring of water from vessel to vessel.

Another illustration: when the "Forpost" protective device is installed on the electrical distribution board of a house, the severity of the lines of the geopathogenic grid in the premises of this house, measured using the IGA-1, decreases. At the same time, it is clear that Forpost-type devices have no effect on the electrical parameters of the electrical network, and cannot emit or shield radio waves in the operating range of the IGA-1. A similar effect was observed in experiments with mobile phones on which the "Spinor" protective device was installed. In [194], the Omsk experiment is described - France, on the receiving side there was an IGA-1 device, as well as a mobile phone without a protective device, on the transmitting side, calls alternated from phones equipped with "Spinor" and without it. IGA-1 showed the deviation of the arrow only when called from a phone without "Spinor". It is clear that the usual characteristics of a digital signal passing through base stations and digital data transmission channels cannot be affected by Spinor-type devices - from the point of view of radio engineering, these are just small plastic disks.

The sensitivity of IGA-1 depends on the season and the level of solar activity. In some areas, the sensitivity of serviceable devices drops to zero - this gives some hint that some component of solar and terrestrial radiation is involved in the detection process. On the whole, the devices under consideration behave like a dowsing frame, but, just as in the case of the frame, the physics of the processes that make it possible to detect sources of non-electromagnetic radiation is unclear.

At the same time, this method of detecting non-electromagnetic radiation is quite promising, since it has a number of advantages compared to the previously considered methods:

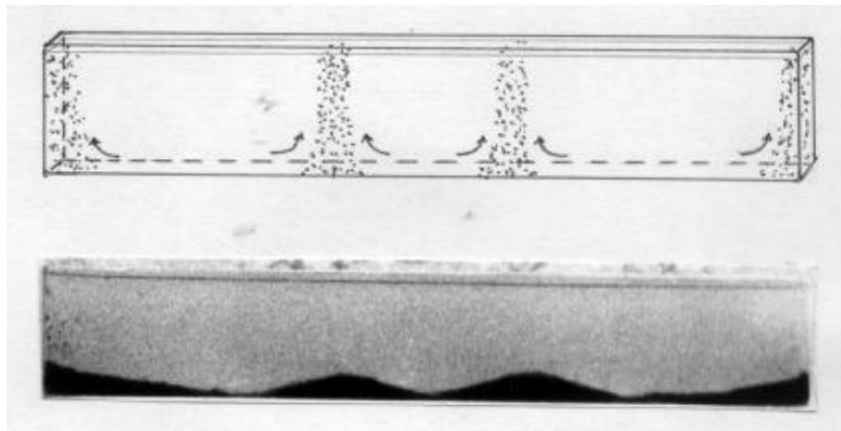
- 1) Detectors are sensitive electromagnetic signal receivers made on a standard element base, however, with non-standard antennas.
- 2) There is no effect of saturation and aftereffect, when the sensors, after exposure to non-electromagnetic radiation, stop responding to it; hence no sensor relaxation time is required.
- 3) Neither electromagnetic nor thermal shielding of the sensors is required.
- 4) At the output of devices - a low-frequency signal that is easy to record and process.

11. PHANTOM EFFECT

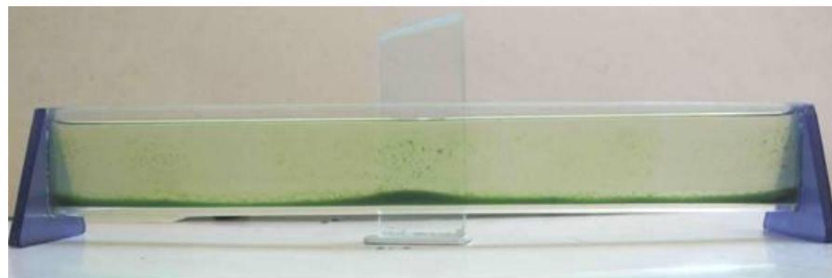
A characteristic property of non-electromagnetic radiation sources is the ability to leave phantoms after their work - regions resting in space, detected by the methods described in the previous section. These phantoms remain in places where people stay for a long time, vessels with activated water, torsion generators of various designs, and other material objects.

A clear illustration of this effect is given by M.S. Radyuk in the article "Phantom effect" (Fig. 123). The green leaf homogenate is deposited in a long transparent cuvette. Usually, the homogenate is predominantly deposited in the form of two hillocks arranged symmetrically, and the location of the hillocks obeys the proportion of the golden section, Fig. 123-a [22, 195] (the author attributes this to the effect of shapes). If an object is placed next to the cuvette with the precipitated homogenate (a glass plate in Fig. 123-b), then the nature of the sediment distribution will change: the precipitate is formed mainly near the object. If, however, to precipitate a homogenate after the "exposure" of the object, but already in the absence of it, the tubercle points to the same place where the object stood

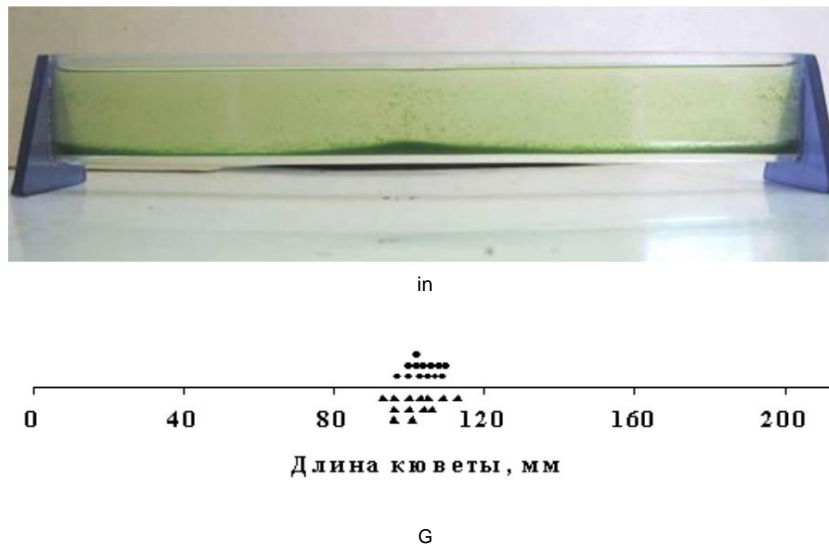
non-thermalized. The effect is 100% reproducible (Fig. 123-d), (Fig. Additional experiments show its



a

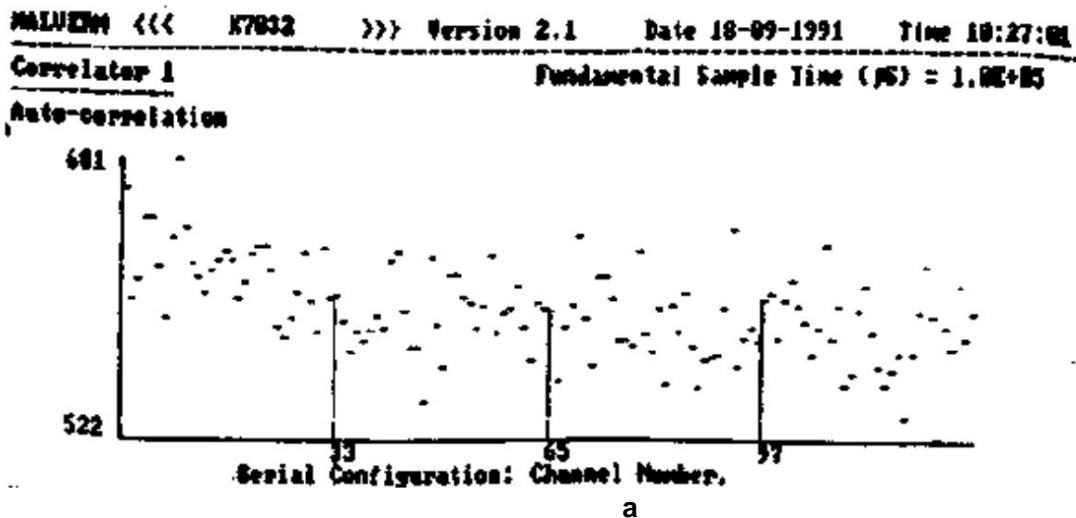


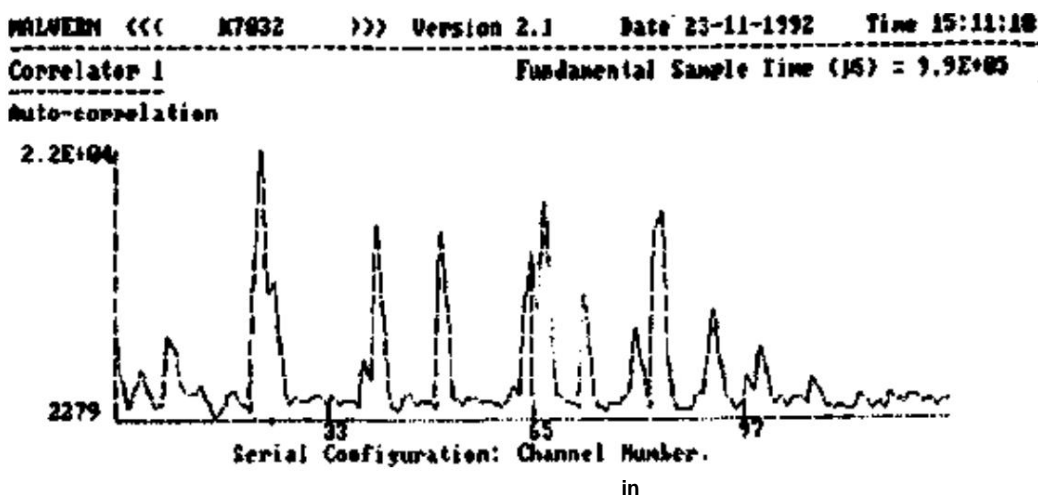
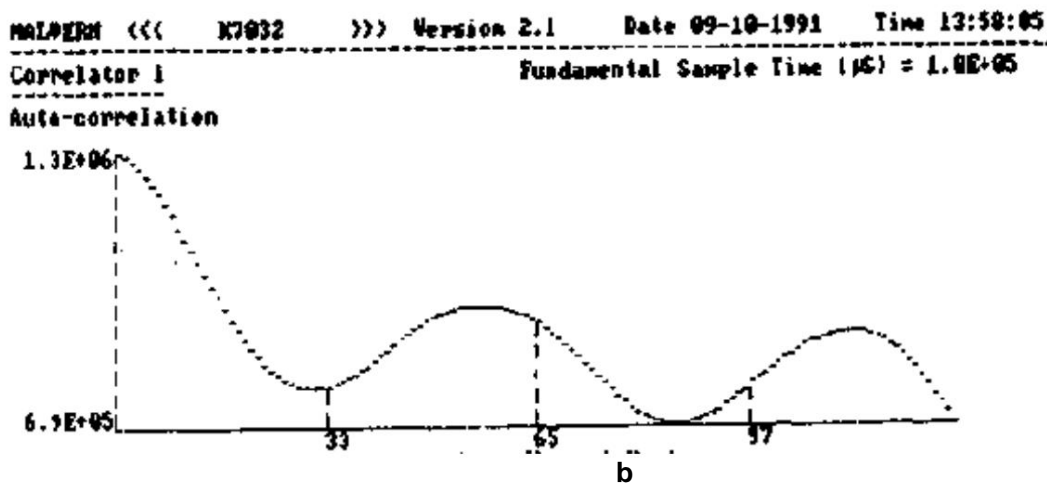
b



Rice. 123. Sedimentation of a homogenate of green leaves in a long cuvette: a) without closely spaced objects, b) with an object (glass plate) at the center of the cuvette, c) at the location of the plate, d) graphical display of 13 experiments, dots (above the axis) show the location tubercle in the presence of the object, triangles (under the axis) - in the absence.

P.P. Garyaev discovered the following phenomenon in the 1980s. Using a photomultiplier, the light scattering parameters of the DNA preparation were read when it was irradiated with a laser. In the absence of the drug, the light scattering signal was close to noise (Fig. 124-a). The light scattering parameters of the DNA preparation in the chamber showed a wave-like character of fluctuations - a slow smooth change in the autocorrelation function (ACF) - Fig. 124-b. After the drug was removed from the chamber, the photoscattering parameters acquired an anomalous character, different from the control signal both in amplitude and in the nature of changes (Fig. 124-c), and such ACF behavior was observed for at least several days. Purging the cuvette compartment with dust-free dry nitrogen led to the temporary disappearance of the DNA phantom, but after 5-10 minutes the phantom reappeared [60].





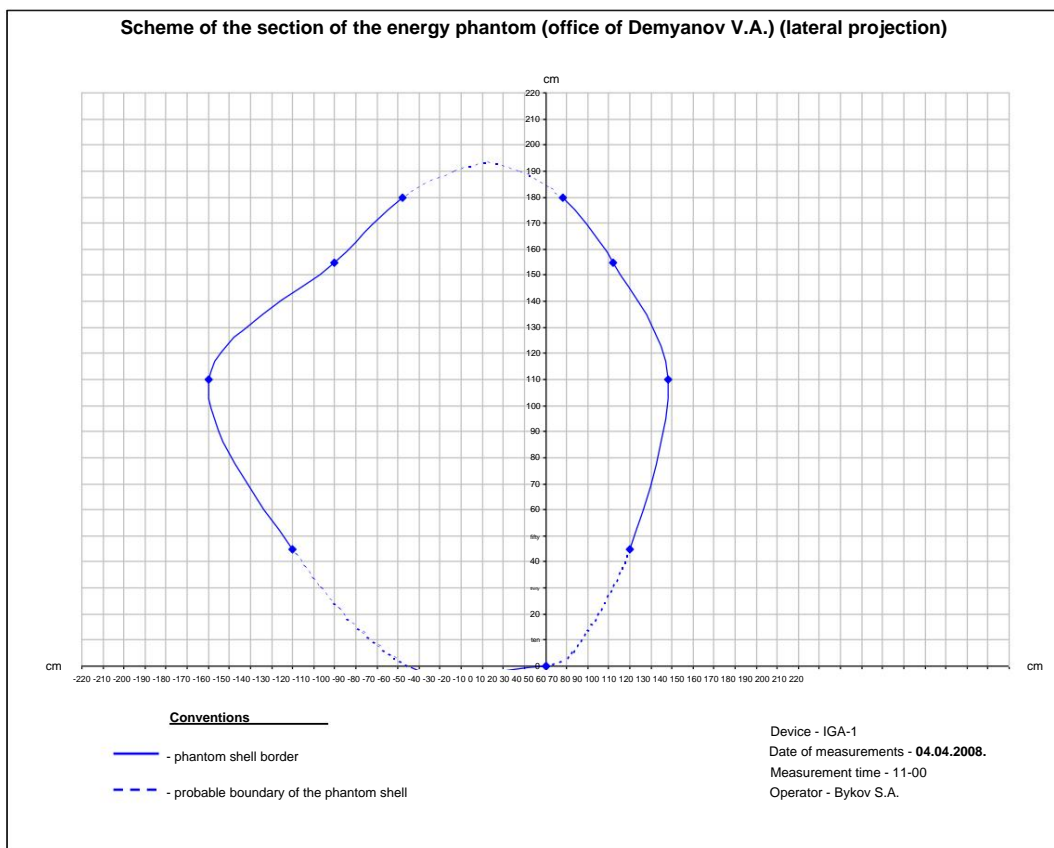
Rice. 124. Changing the autocorrelation function of light scattering:

- a) in the airspace of the camera - control;
- b) DNA preparation;
- c) "phantom" in the airspace of the chamber after removal of the DNA preparation.

Another example of the manifestation of the phantom effect is described by IA Melnik in his work "Experimental detection of the preservation of the non-Poisson statistical distribution of radiation after the disturbance source is turned off" [140]. In this work, the influence of a phantom induced by a rotating body on the readings of a semiconductor gamma radiation sensor from a radioactive preparation is investigated. The scheme of the experiment was as follows: first, control measurements were performed, then the sensor assembly with the radioactive source was removed (their relative geometry did not change), the installation was turned on with rotation, then this installation was removed, and the sensor with the preparation was returned to its place. The results of this experiment showed that the non-electromagnetic field in the immediate vicinity of the rotating body is in a metastable state and continues to affect radioactive decay for more than a week. I.A. Melnik points out that the measurement technique should take this effect into account: the readings of the sensors should be compared with the values before the experiment, since a long aftereffect is observed after the rotation stops.

The effect of a long aftereffect (20 days) from a rotating object was also described by A.F. Okhatrin in his work on photo registration of non-electromagnetic (microlepton) radiation [173].

The enumeration of results testifying to the reality of the phantom effect can be continued for quite a long time. Mark Krinker describes the aftereffect of a rotating electric vector in a setup based on a quadrupole capacitor [134, 135] - in the experiment, the effect was on the radioactivity counter when measuring the background, while changing the statistical characteristics of the count. The phantom effect from the Shpilman generator was detected by M. Krinker and V. Pismenny at the place of operation of the generator a day later using the SEVA device, also based on a quadrupole capacitor. Phantoms at the places of long-term stay of people were detected using the IGA-1 device by S.A. Bykov and A.A. Andreev [187], see Fig. 125; phantoms from the operation of torsion generators are also found using the IGA-1 Yu.P. Kravchenko [110]. The biological effects of Veinik's "tangential hedgehog" continued to be felt for many days after the hedgehog was taken apart [40]. The phantom effect from the Kurapov generator is also pointed out by V.F. Panov and S.A. Kurapov in their reports, etc.





Rice. 125. The phantom of the human workplace, measured using the IGA-1 device.

I would like to draw attention to the paradoxical nature of this phenomenon. The line of explanation involving the excited physical vacuum runs into a contradiction with the principle of relativity: the vacuum does not have a dedicated frame of reference. Phantoms behave as if they are not attached to the near environment (generators, experimenters), but rather rigidly "anchored" in relation to the Earth. The situation can be represented as if generators of non-electromagnetic radiation form stable field formations in some environment of our planet, and this environment should have the characteristics of a solid body. Evidence of changes over time in the nature of the spatial distribution of the rays of torsion generators and their phantoms gives a hint of the oscillatory nature of the relaxation of such formations in this "thin" medium. The work [197] introduces a hypothesis that gives an approach to explaining this phenomenon based on coherent streams of bosons that weakly interact with ordinary matter.

An interesting explanation of the phantom effect through the Heisenberg uncertainty principle was proposed by L.V. Leskov in [196]:

"The reason for these paradoxical properties of torsion fields can be understood by referring to the Heisenberg uncertainty relations. A local perturbation of the spin state of the medium created by a torsion generator does not lead to a change in its energy parameters, in other words, changes in energy and momentum \ddot{y}_y and \ddot{y}_p are practically equal to zero. But then it follows from the uncertainty relations that the quantities \ddot{y}_x and \ddot{y}_t are almost infinitely large, which means that the spin perturbation created by the local action

generator, immediately turns out to be nonlocal. It can be linear and occupy a very extended region of space ... "

"Returning to the interpretation of the problems of torsion communication systems with the help of the Heisenberg relations, let us consider the consequences of a large quantity temporal interval Δt . A large value of Δt means that the non-local spin-torsion perturbation of space can persist for a long time after the source that caused it has ceased to operate. In this case, we will be dealing with a phenomenon that can be called a spin-torsion phantom, capable of maintaining stability until it dissipates under the action of other spontaneous sources of torsion fields."

A.Yu. Smirnov in his work "Long-range non-local instrumental interactions in the formation of the concept of "information teleportation"" [23] points out the importance of applied aspects of studying phantoms for torsion communication, searching for people, reading information, and also considers the connection of the phantom effect with non-local and psychophysical phenomena:

"As it follows from the results of our research, in some types of distant targeted instrumentation, it is the teleportation of the "phantom" of an object or process to a given point in space-time that occurs."

"In the case of the operator's influence (or, more precisely, during the operator-instrument action), he also sends his dynamic "phantom" to a certain point in space-time, in conditions of constant information exchange with him and the object of influence. And here torsion phenomenology closely merges with the phenomena. It seems that the operator and/or observer, participant in the experiment (consciously and/or unconsciously) actualizes some of the physical properties of the "phantom", in this sense, the phantom effect is a truly psychophysical (without quotes) phenomenon."

A.Yu. Smirnov in the same work points to the phenomenon of the release of an information phantom from a biological object when the object is exposed to EHF EM radiation.

What can destroy phantoms? Repeated flashing, loud, harsh noises, and room-cleansing techniques, such as using a candle, are said to help.

The effect of phantoms should be distinguished from the effect of metastability in a medium, when a liquid or solid body changes its properties under the action of torsion radiation. Since Myshkin's experiments, it has been known that bodies after exposure to torsion radiation themselves become its sources. So, the metal melt in the ladle after exposure to the Kurapov generator freezes outside the beam of the torsion generator, but the properties inherited from the processed melt appear in the solidified metal. Another example - when exposed to Krasnobryzhev's spin teleportation system, coal enters a coherent state and remains in it for several days. The same happens with activated water.

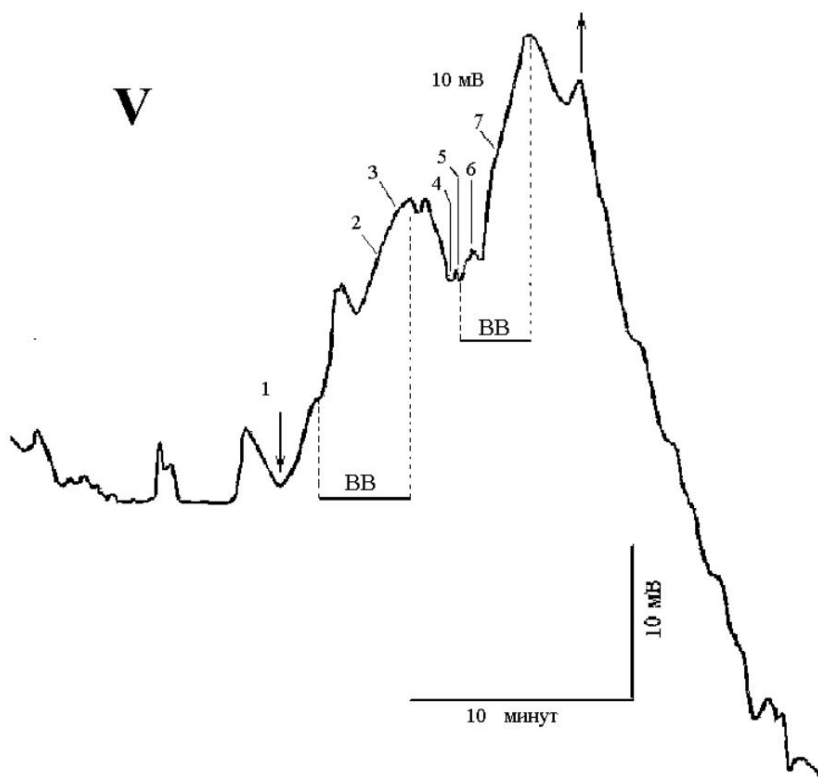
Apparently, the metastability effect often works together with the phantom effect, and in order to separate one from the other, experimenters need to make additional efforts - they need to remove the torsion generator after the impact, and, if possible, minimize the influence of the environment. So, in the experiments of the Lunev group, the effect of the gyromotor on various sensors continues after the gyromotor has stopped (see Fig. 63), but since the gyromotor was not removed after the effect, it cannot be ruled out that it could itself serve as a source of torsion radiation, "accumulated during the period of the gyro motor.

Despite the fact that the phantom effect is one of the most striking paradoxes of this line of research, it is the least studied phenomenon, despite the fact that almost all successful researchers have encountered it. The phantom effect requires a targeted program to study it.

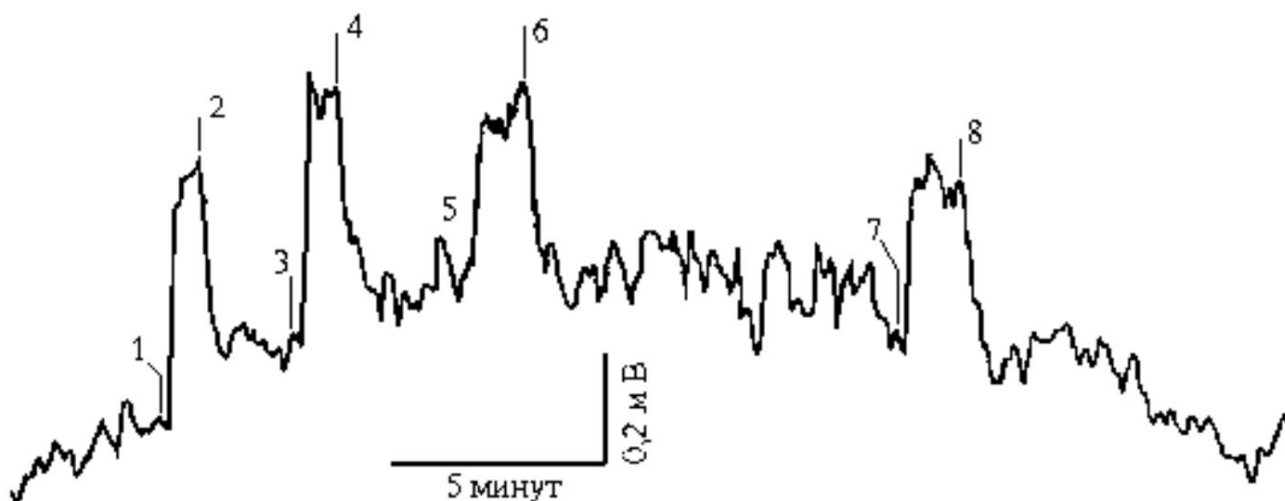
12. PSYCHOPHYSICAL EFFECTS

In this section, we will talk about psychophysical effects, more precisely, about that part of them, where the volitional influence of a human operator leads to a non-trivial reaction of physical sensors. Within the framework of this review, there is no question of considering psychophysical effects in their entirety of manifestations. This phenomenon was studied at different times by many research groups, including without any connection with the torsion direction of research, see, for example, the work of the Princeton laboratory [198]. Here we consider the results of studies whose purpose was to elucidate the physical nature of the influence of operators on physical processes; many researchers here are talking, if not about identity, then at least about the general nature of the impact that psychics operate on and that torsion generators have on sensors. We restrict ourselves to considering only a few examples in which the main properties of this type of action are visible: high penetrating power, non-local manifestations, screening by crossed spin polarization, paradoxical influence on random processes, i.e. characteristic non-electromagnetic effects. We will mainly consider the results of those groups that could compare the effect on the same sensors of operators, as well as torsion generators.

In the 6th chapter of the first part of the book "Model study of the field concept of the mechanism of consciousness" A.V.Bobrov describes many of his own experiments on psychokinesis with the participation of operators. In the late 70s - early 80s, A.V.Bobrov used a bioelectric system - the cactus "Echinopsis" with two silver electrodes installed on it as the first sensor of the highly penetrating non-thermal component of human radiation (VНКCH). The cactus reacted to the volitional influence of the psychic operator. The operator raised his hand to the cactus and tried to make an impact at the request of the experimenter or at a moment that he chose himself. The result of exposure from a distance of 15 mm is shown in Fig. 126, from a distance of 30 cm - in Fig. 127. It can be seen that the reaction depends on the distance. Also, the reaction of the sensor depended on the psycho-emotional state of the operator.



Rice. 126. The reaction of the biological sensor to the volitional influence (VV) of the operator from a distance of 15-30 mm.



Rice. 127. The reaction of a biological sensor to volitional influence from a distance of 30 cm.

It will be useful to give the following definition of Bobrov:

"The influence of the operator, coupled with his concentrated attention, with the desire to cause changes in the object of influence, leading to his reaction, with confidence in the fundamental possibility and in his ability to achieve the desired result, is called volitional influence (BB)".

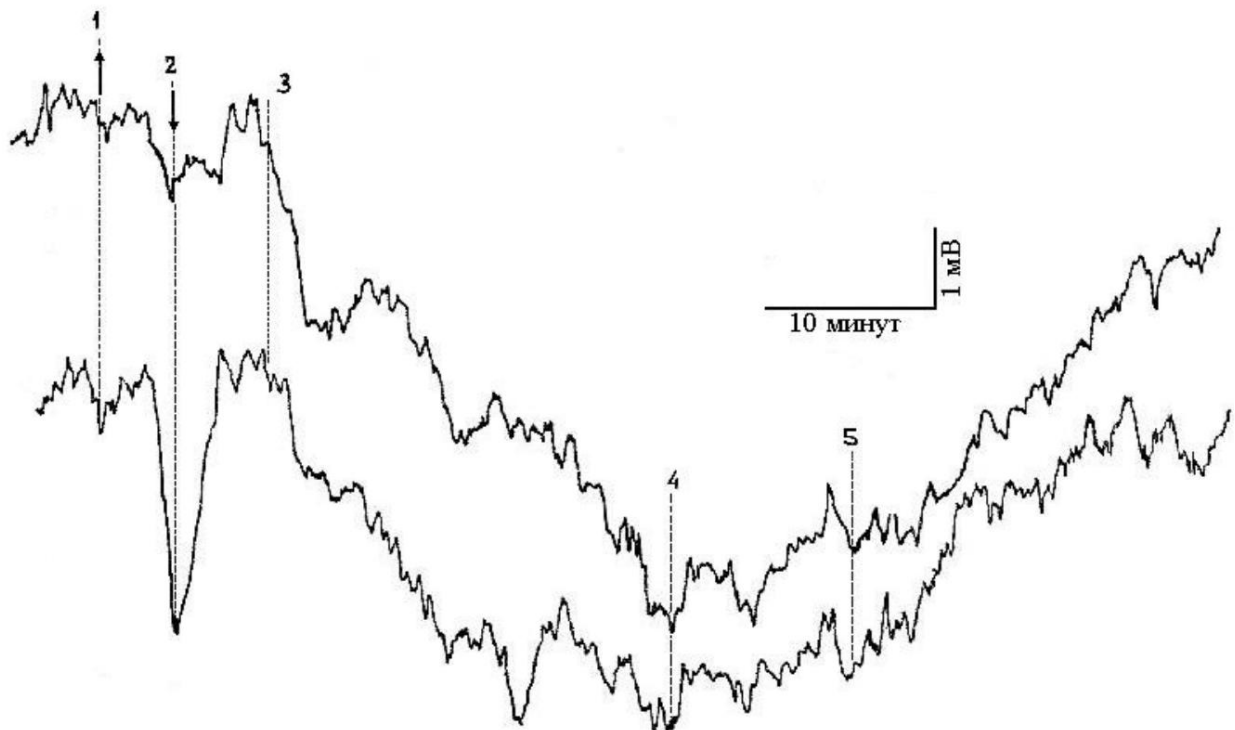
Experiments with a biological sensor are also described in A.G. Parkhomov's book "Space. Earth. Man. New facets of science" [136]. These experiments were carried out in the early 80s

years, the operator was Mikhail Nikolaev, the colonchae plant was used as a sensor, in which the interelectrode resistance was measured. Parkhomov

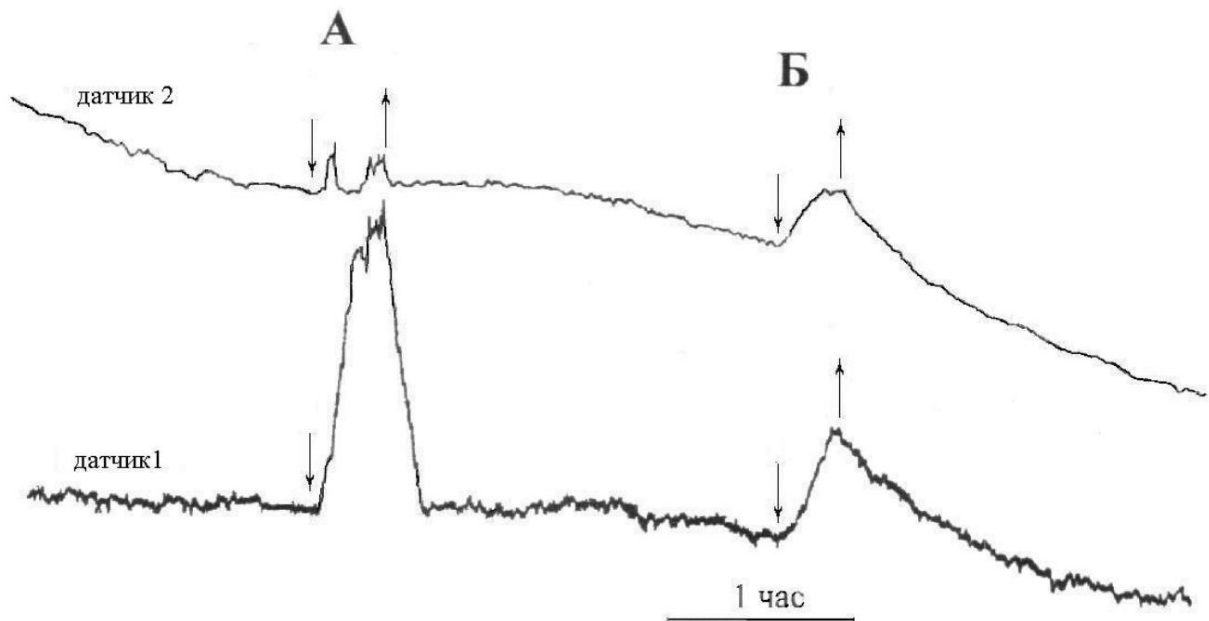
writes:

"It turned out that a plant can be in three states: "sleepy" (the rate of change in resistance is less than 10% per hour, the sensitivity to external influences is low), "awake" (the rate of change in resistance reaches 5% per minute, the amplitude is up to 20%, the sensitivity to external influences is high) and "nervous" (oscillations with a frequency of several hertz and an amplitude of several percent, sensitivity to external influences is high). aura of red or yellow color" remotely cause changes in the interelectrode resistance, comparable in magnitude to the plant's response to turning on / off the lighting or pricks of leaves; "touch of the astral hand" caused the plant to go into a "nervous" state. One of the effects was that Misha imagined "uprooting the plant." The reaction to this was unusually violent: less than a minute, the interelectrode resistance decreased by 10%. After that, the experiments with this plant had to be stopped, because with each appearance of Misha in the room with the plant, the interelectrode resistance began to fluctuate so strongly that the experiment became meaningless.

After Bobrov began using sensors on double electrical layers and ICs, it was found that the non-thermal component easily penetrates electromagnetic shields (Fig. 128, Fig. 129). On Fig. 128 shows the operator's impact on two sensors from a distance of 4 m (distance between sensors 15 cm). Positions 1 and 2 - the beginning and end of the impact associated with the psycho-emotional state of the operator due to hyperventilation of the lungs. At time 3, the operator left the building at a distance of more than 30 m. Position 4 corresponds to the arrival of the operator in the building, on the ground floor, at a distance of 8 meters from the sensors. After 10 minutes, the operator moved to the starting position, at a distance of 4 meters from the sensors (position 5).



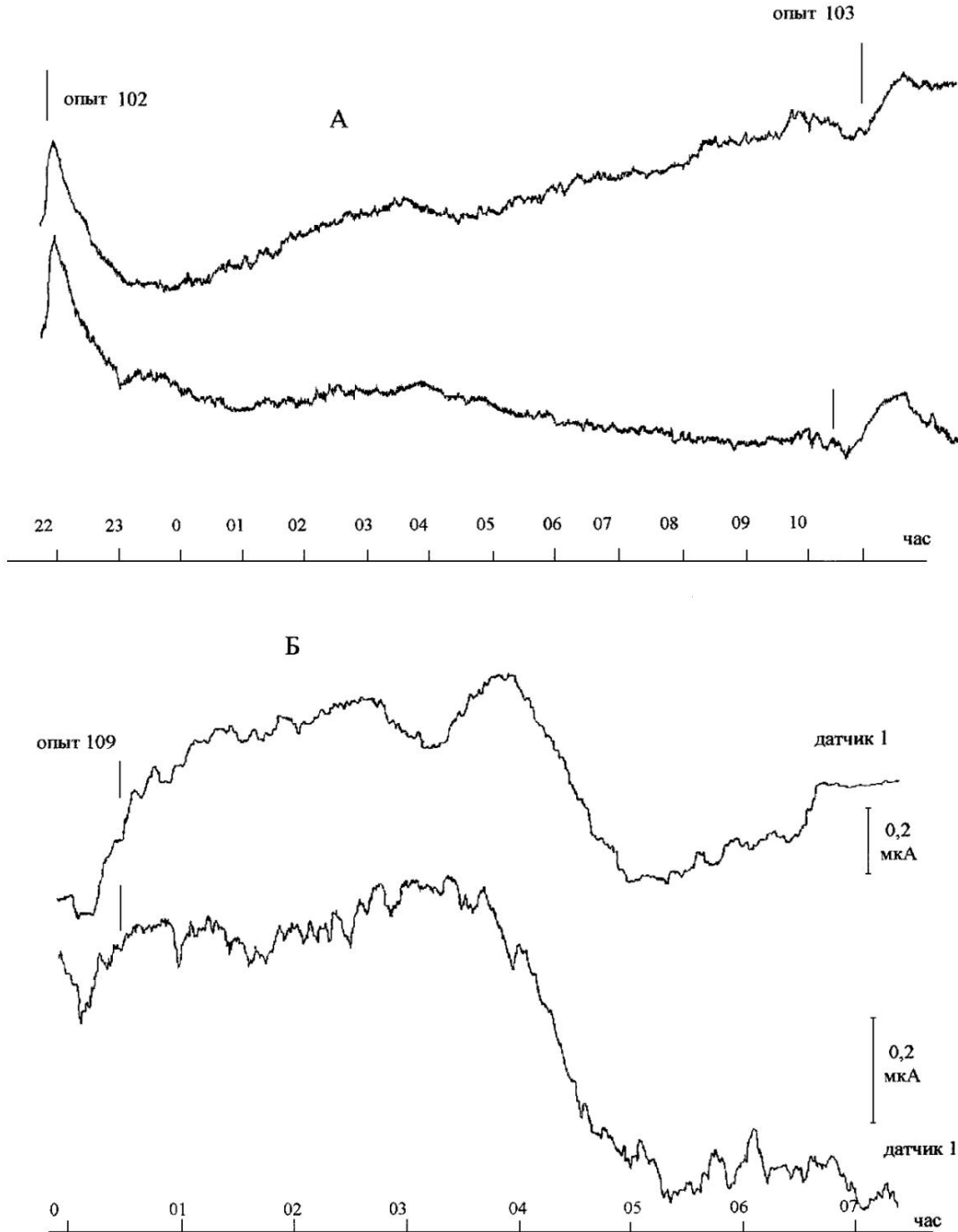
Rice. 128. Synchronous reaction of two DES detectors located in one shielding chamber.



Rice. 129. The reaction of two sensors on semiconductor ICs to the actions of operators L.D. (A) and N.Kh. (B) from an adjacent room. The screen is a reinforced concrete wall 40 cm thick.

As a result of many experiments, it was shown that DPP sensors located in metal screens respond to the movement of the operator who is in the same room with them, as well as in rooms separated by several concrete walls with a total thickness of more than 1 m.

It was also shown that a non-electromagnetic component can act non-locally: in 1991, the Leningrad-Shventoi (500 km) experiment was carried out, in which the operator in Leningrad tried to interact with the Bobrov sensor in the village of Šventoi (Lithuania), see fig. 130. Exposure time is about 3 am, duration - about half an hour (A - on the night of November 14, B - on the night of November 15).

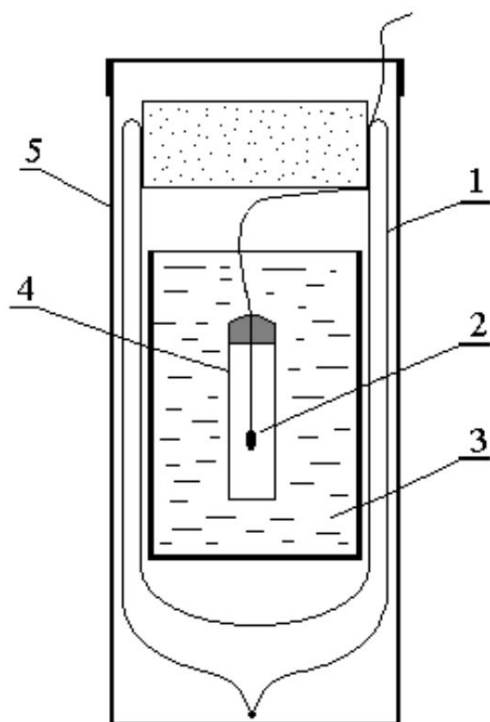


Rice. 130. Leningrad-Shventoi - possible reactions of current sensors to the volitional influence of N.Kh.

A.V. Bobrov writes about this experiment:

"The results shown in Fig. 130, can in no way be interpreted as a reliably established fact of the existence of interaction between the operator N.Kh. in Leningrad and the sensors in the village of Shventoi at a distance of more than 500 km from each other. However, they serve as the basis for the organization and conduct of a full-scale study in order to determine the limits of the long-range and ultra-long-range propagation of VNKIC. Such a study, in turn, may allow not only to judge the alleged torsion origin of VNKIC, but indirectly confirm the very concept of the existence of torsion fields and their properties.

In non-local experiments, the impact on the sensor "in the image" turned out to be effective: the operator imagined the sensor and mentally influenced it. A.G.Parkhomov describes the Moscow-Novosibirsk experiment carried out in 1989. It used thermal sensors - shielded EMC microcalorimeters (Fig. 131), by that time tested by A.G. Parkhomov in local experiments on the influence of operators.



Rice. 131. Design of a shielded microcalorimeter. 1 - Dewar vessel; 2 - thermistor; 3 - melting ice; 4 - hermetic shell; 5 - outer screen.

A.G. Parkhomov writes:

"The accumulated experience and general understanding of the processes occurring in our detectors made it possible to move on to more complex experiments, when the operator and the object of influence were separated by a considerable distance. To begin with, we conducted several dozen experiments within Moscow (E.A. Dubitsky from his apartment

or from his workplace he acted on the EMC located in the laboratory on Planetnaya Street or in the apartment of A.V. Moskovsky).

Academician V.P. Kaznacheev showed interest in our research and proposed to conduct an experiment with the participation of the Institute of Clinical and Experimental Medicine (IKEM), headed by him, located in Novosibirsk. Especially for this experiment, two identical EMCs were made. In the summer of 1988, IKEM employee Yu.M. Fridman came to Moscow, got acquainted with the design of the EMC and got used to its maintenance, after which one of the EMCs took him to Novosibirsk. From November 13 to 23, 1988, nine test recordings of signals were made in Novosibirsk. These days, the operator E.A. Dubitsky, who was in Moscow, made six attempts to influence the EMC in Novosibirsk. In five cases, these attempts corresponded to signal changes that significantly exceeded the background fluctuations.

The experience gained made it possible to carefully prepare for the main series of experiments that were carried out in March-April 1989.

Yu.M. Fridman was conducted daily (except weekends) from 07:00 to 14:00 Moscow time from March 10 to April 6, 1989. We recorded signals in Moscow at the same time as in Novosibirsk, from February 13 to April 13 .

All influences were carried out by E.A. Dubitsky. The operator mentally transferred the EMC from Novosibirsk to the table in front of him and created a vivid image of the event, which, in his opinion, could greatly change the properties of the object of influence (rotation, severe deformation, combustion in fire, change in the structure of atoms, etc.). There were 8 recordings of signals in Novosibirsk on days with impacts, and 9 on days without impacts.

To control the "purity" of the main series of experiments, a control commission headed by Professor G.N. Petrova (Institute of Physics of the Earth, USSR Academy of Sciences) was created. The Control Commission consisted of two groups: Moscow and Novosibirsk. The operator reported information about the impacts only to the Moscow group, information about the signals was transmitted only to the Novosibirsk group. Thus, until the completion of the experiments in Novosibirsk, there was no information about the effects, and in Moscow - about the signals recorded in Novosibirsk. In addition, the operator was not informed that the EMC, identical to the one installed in Novosibirsk, also worked in Moscow. The next day after the completion of the experiments, the protocol with the results obtained in Novosibirsk was sent to the Moscow control group, and the protocol with information about the effects was sent to the Novosibirsk group.

Comparison of the protocols and analysis of the obtained results showed that eight attempts at exposure corresponded to the appearance of six signals that were significantly different from the background. In the recordings made during nine days without exposure, such a signal appeared only once. The probability of such an outcome as a result of a random coincidence is $3 \cdot 10^{-5}$. Thus, the appearance of signals on the EMC, located in Novosibirsk, is statistically significantly associated with the impact

operator based in Moscow.

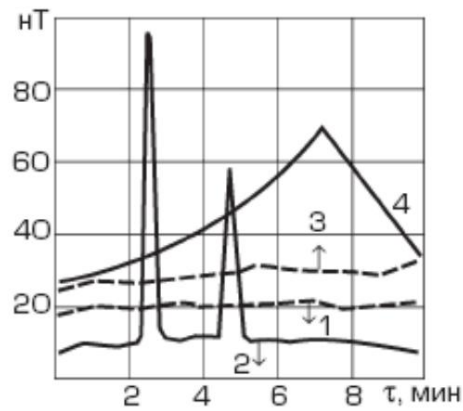
An analysis of the signals coming from the EMC installed in Moscow did not reveal significant differences between the days with and without impacts on those days when the operator was not aware of the operation of the installation in Moscow. He was informed of this only on the eve of the last impact, and only then a distinct effect was registered in Moscow, close in time to the impact. This result clearly showed the selectivity and purposefulness of extrasensory influence: out of two identical objects of influence, only one, known to the operator, "worked", although it was much further away from the other, unknown. A close object "worked" only after the consciousness (or subconsciousness) of the operator switched to it.

Experiments with the influence of operators on the readings of the magnetometer were carried out by the group of G.N. Dulnev. They are described in the book *In Search of a New World* [201]:

"An experiment was carried out according to the program of the operator, who applied various methods of influencing the G-79 device (presenting images of figures - a ball, a cube, etc.). Seven images were used in succession, which, according to the operator, have a different effect. Location of equipment, the position of the operator, other conditions of observation were similar to the previous experiment. The work was carried out each time for one minute. The sequence was dictated by the experimenter.

The results of the experiment are shown in Fig. 132. At background values of the working device of 20 nT, the use of the first two methods did not give significant shifts (curve 1). The third method showed a rapid increase in magnetic induction and a surge of more than 100 nT (curve 2), after which the instrument pointer returned to its original position with slight fluctuations (10-16 nT). The fifth reception also gave a significant surge - up to 60 nT (curve 2). The subsequent sixth and seventh sessions stabilized the level of magnetic induction by 10 nT. It is characteristic that in this experiment no "aftereffect" was observed.

During the fourth experiment, the operator Solovyov was at home. The impact radius was about 1 km. The conditions of the experiment were discussed over the phone. The results are shown in Fig. 132, where curves 3 and 4 correspond to the background and the experiment. The increase in magnetic induction continued even after the cessation of exposure (it was made at the beginning of the experiment and lasted 3.5 minutes). 15 minutes after the end of exposure, the signal returned to its original background value. The control device with an arbitrarily oriented probe of the microteslameter was in a different room during the entire experiment and showed no changes beyond the background (curve 1)."



Rice. 132. Change in magnetic induction when exposed to the operator's device.

"Sometimes the experimenter used a special screen from torsion radiation, made of linearly ordered polyethylene and operating on the principle of a polarizer. The experiment was carried out in two versions. In the first case, two layers oriented perpendicular to each other were glued to the frame. The screen was placed between the radiation source (in this case operator)

and sensor.

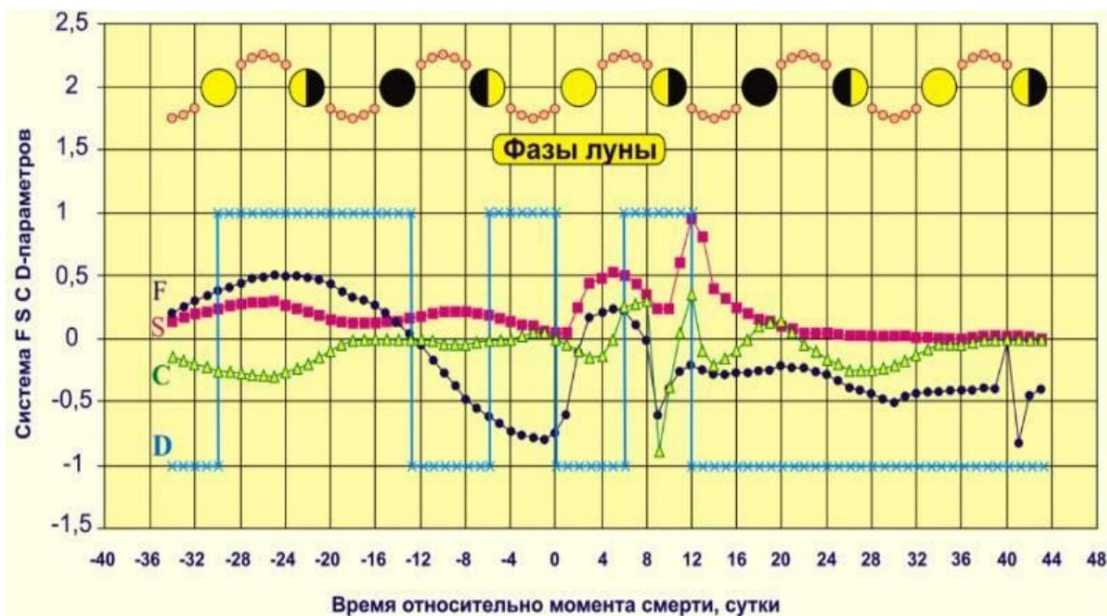
In the second, the layers were glued together and the sensor was wrapped in them. As a rule, such screens turned out to be quite effective. A description of such screens and their application for protection against torsion radiation are given in [36 // 9]. A similar protective effect of such screens, as indicated here, was also observed in the case of influences of a psychobiological nature.

All of the above, plus some other experiments, made it possible to suggest that the psychobiological fields of psychics and the fields from torsion generators have the same, or, in any case, close nature.

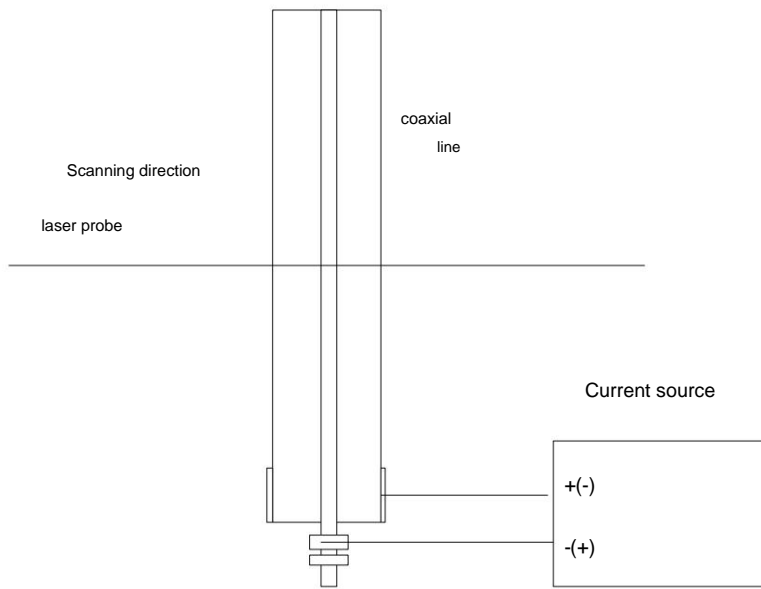
13. NONLOCAL EFFECTS

In the previous section, the impact of operators on remote physical sensors hundreds and thousands of kilometers away was shown. In this review, instrumental non-local effects have already been encountered - this is Krasnobryzhev's method of transferring spin coherent states, these are the effects of correlation of the activity of separated radioactive samples in Melnik's experiments, as well as the experiment of the Sokolova group on curing a patient by affecting a sample of his blood. In this section, I will supplement the non-local torsion phenomenology with two more complementary phenomena: reading information from the image of an object (for example, photographs), and influencing the object according to the image.

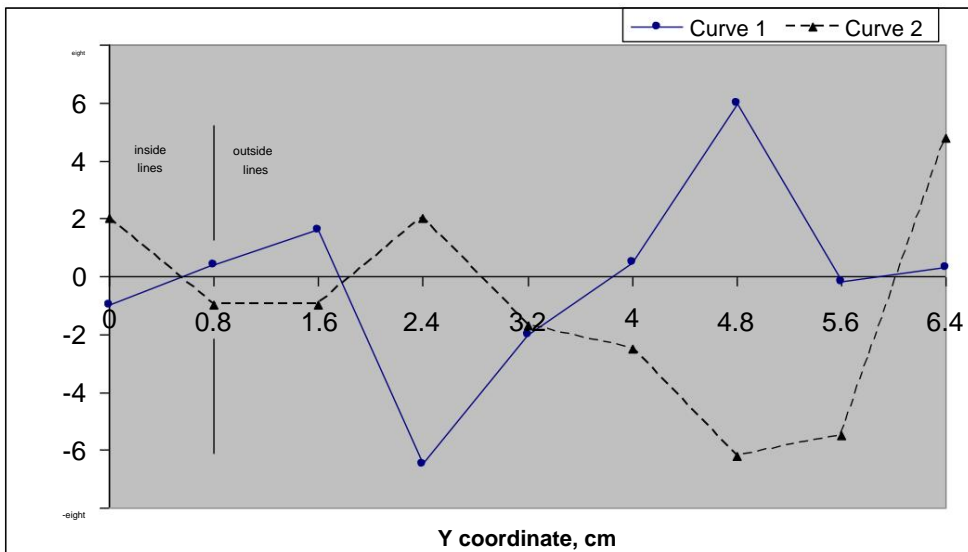
Let's return to the problem of detection, in particular, to Shkatov's torsimetry method [163]. Starting with the first torsimeters, Shkatov used the reading of torsion contrast from photographs of objects. Moreover, this method uses both chemical photographs - they are placed on the object stage of the device, and digital ones - they are displayed on the screen, and the digital image is scanned by a laser beam. Torsion phase portrait (TPP), i.e. the nature of the daily course of the readings of the sensor in contact with photographs of people depends on whether the person depicted in the photograph is alive - this is perhaps the most striking example of a non-local connection between an object and its image. The readings of torsimeters from images of other material objects change similarly (see Fig. 134 - the reading of the torsion contrast in the vicinity of the coaxial line was carried out using its photograph).



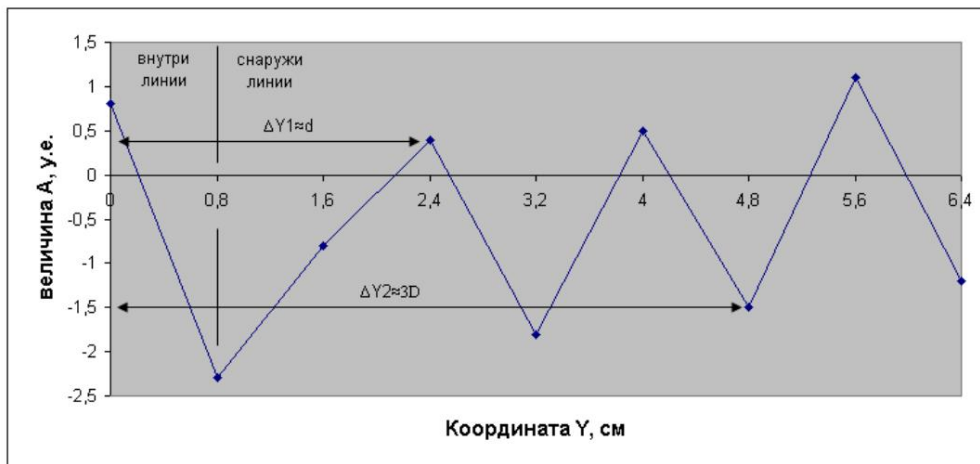
Rice. 133. Torsion monitoring of a dying person by DFT using FSCD parameters. The upper curve conventionally represents the phases of the moon, tied in time to the events on the lower curves.



a



b



in

Rice. 134. Study of a coaxial line from a photograph: a) scheme of the line under study.

b) Scanning the transverse distribution of the TP of a coaxial line with current, inside and outside it, from a photograph of the line in a horizontal layout. Curve 1 - current 2 A flowed from the central electrode. Curve 2 - a current of 2 A flowed into the central electrode.

c) The same, line without current. D is the diameter of the outer electrode, d is the diameter of the inner one.

It should be noted that a photograph of an object reflects the state of the object itself in real time. So, in an experiment on tracking the state of a dying person from his photograph, a sharp change in the DFT parameters unambiguously correlated with the moment of death (Fig. 133). Similarly, depending on whether the current was switched on through the coaxial line, the nature of the torsion contrast changed at various points in the photograph of the line's vicinity (Fig. 134). No dependence of the effect on the distance between the object and the photograph was recorded.

Apparently, the same principle of obtaining information is used in the methods of searching for minerals from photographs. In open sources, it was possible to find 5 groups of researchers who declared the effectiveness of this method. I will briefly mention these groups and their main results.

A.E. Akimov and A.F. Okhatrin with co-authors "Visualization, processing and analysis of torsion information on carriers of space images" [202] describe the following method for processing a photograph of the area.

"It was possible to experimentally confirm the correctness of the assumption that when photographing any objects, the own torsion fields of these objects falling on the photographic emulsion together with the electromagnetic (light) flux change the orientation of the spins of the emulsion atoms in such a way that the emulsion spins repeat the spatial structure of this external torsion field. As a result, on any In a photograph, in addition to the visible image, there is always an invisible torsion image.

"The understanding of this fact made it possible, by analogy with optical image processing, to construct a procedure for extracting torsion images from photographs and processing them. As indicated in Fig. 135-a, first a slide or photograph (3) is illuminated by a generator of isotropic broadband radiation (1). In this case, The spin structure of emulsion atoms can be considered as a two-dimensional spin matrix, which plays the role of a two-dimensional spin modulator (3)."

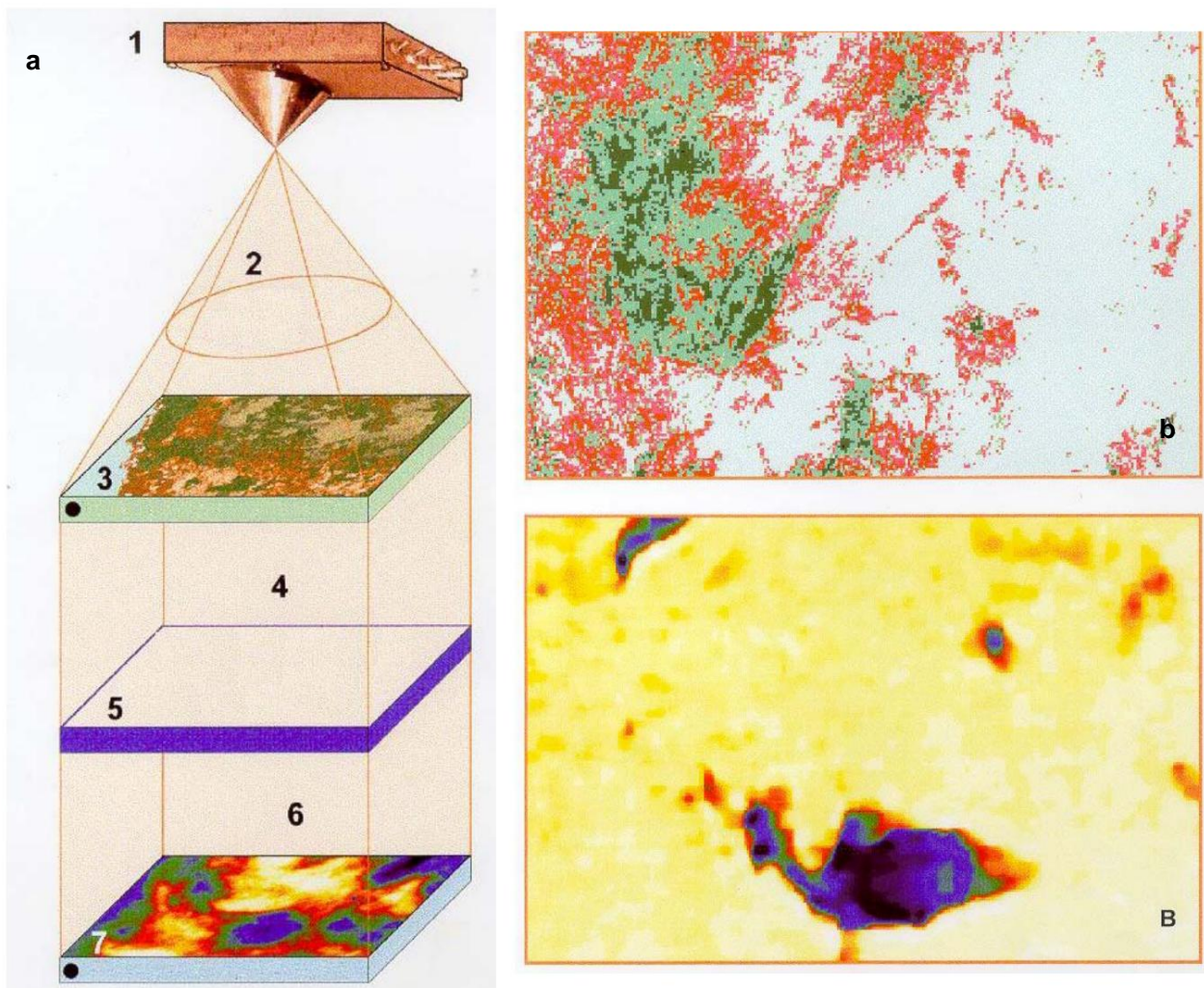
"After the passage of isotropic torsion radiation (2) through the original photograph (3), the modulated torsion radiation will repeat the spin structure of the spatial torsion field, which was perceived by the emulsion during photography. However, this initial torsion field is a superposition of the torsion fields of all sources in the thickness

planets. These sources may be geological formations or mineral deposits. Since these structural formations have characteristic spatial-frequency spectra, then if the task is to isolate, for example, a zone of concentration of a substance (mineral), then the modulated torsion radiation (4) must be subjected to appropriate filtering. For this purpose, they developed

two-dimensional spin matrices - filters. Such spin (torsion) filters pass only those spatial frequencies that correspond to the characteristic spatial frequencies of the torsion radiation of the desired substance.

"After passing through the torsion filter (5), torsion radiation (6) will be present only in those places relative to the original image (3) where the desired substance is present. This radiation, filtered by the useful torsion component, is applied to a clean special photographic material (7) subjected to a special physical - chemical attack, which provides

the possibility of photographic recording of torsion radiation".



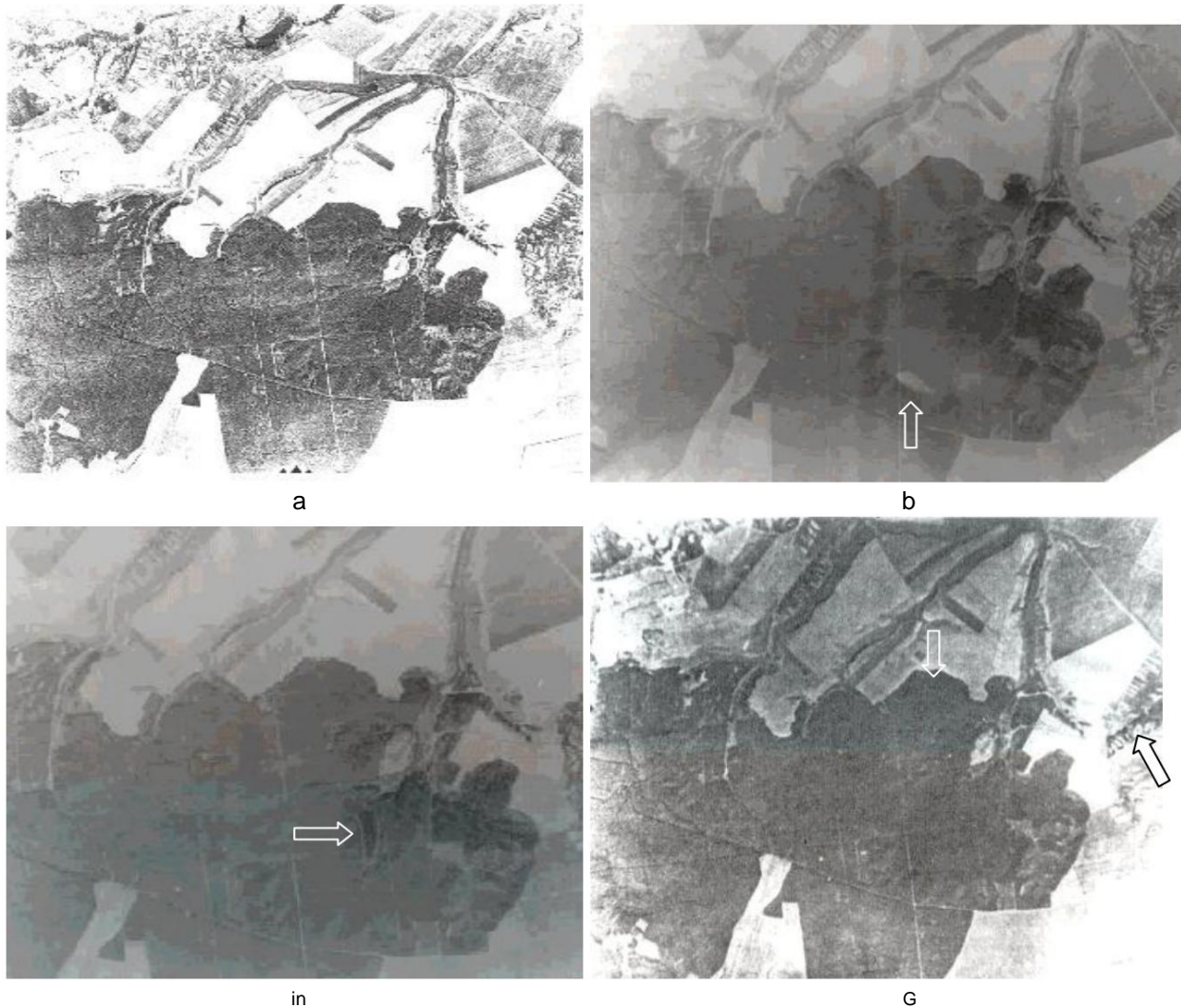
Rice. 135. a) Block diagram of physical (torsion) processing of aerospace images to extract torsion (spin) information about mineral deposits: Torsion Geovision Technology (TGV-T).

- 1 – torsion generator; 2 - isotropic torsion radiation;
- 3 – original photograph; 4 - modulated torsion radiation;
- 5 – torsion filter; 6 - filtered torsion radiation;
- 7 - photographic material for visualization of the torsion image of the field of useful fossil.

- b) Space image in the infrared range of the continental territory of the Earth;
- c) Image of oil distribution in the study area after image torsion processing b.

On Fig. 135-b and c show the original photographs and those processed by this technology.

A similar technology is used by V.A. Gokh (<http://www.gokh.net/torgeo.html>), and also by V.G. Krasnobryzhev [203], see Fig. 136.



Rice. 136. Photo processing by the Photospin system: a)
- original aerial photograph of the Earth's surface, 1946, Cherkasy region, original scale 1: 25000,

b) – fluorite deposit (light area), c) – copper deposit (shaded area), d) – tungsten deposit (shaded area).

The method of searching for minerals, similar to the one described, consists in the analysis of the light reflected from the area of the photograph, more precisely, its informational characteristics. Patent RU 2181204 for the Infoscan technology of the SPCCRI "ORIZON" from Gelendzhik is based on the discovery "The phenomenon of increasing the readable amount of information contained in a photographic image of a physical object" [204]. The formula of the invention reads as follows:

"A method for measuring the phase shift increment characterizing the energy of a noise electromagnetic process, characterized in that the studied area of photographic materials is excited with light and the first measurement cycle of the phase shift increment is performed, consisting of n measurements, after which the particle of the desired substance is placed in the area of the photograph under study, the same area is excited with light zone of photographic materials and perform the second cycle of measurements of the phase shift increment, also consisting of n measurements, after which the energy of the noise process is determined for the first and second measurement cycles according to the formulas

$$\mathcal{E}_\omega = \sigma^2 \tau_\rho \quad \text{и} \quad \mathcal{E}_{\omega+s} = \sigma'^2 \tau'_\rho,$$

where \mathbf{Esh} is the energy of the noise process in the first measurement cycle; $\mathbf{Esh+s}$ is the energy of the noise process with the possible inclusion of the signal energy in the second measurement cycle;

\ddot{y}^2_{one} , \ddot{y}^2_2 - variance of the phase shift increment of the first and second cycles of the phase measurements, respectively, is calculated by the formulas

$$\sigma^2 = \frac{n \sum A_i^2 - (\sum A_i)^2}{n(n-1)};$$

$$\sigma'^2 = \frac{n \sum A'_i{}^2 - (\sum A'_i)^2}{n(n-1)},$$

where n is the number of measurements in the cycle,

τ_ρ , τ'_ρ - the correlation interval for the first and second measurement cycles, respectively, is determined by the formulas $\ddot{y} = 1/P_e$; $\ddot{y}' = 1/P'_e$

where P_e and P'_e - equivalent bandwidth for the first and second measurement cycles, respectively, is determined by the formulas

$$P_e = 2 \Pi \left| \frac{A_{i\max} - A_{i\min}}{T} \right|;$$

$$P'_e = 2 \Pi \left| \frac{A'_{i\max} - A'_{i\min}}{T'} \right|;$$

where $A_{i\max}$ and $A_{i\min}$, $A'_{i\max}$ and $A'_{i\min}$ are, respectively, the maximum and minimum values of the phase shift increment obtained during the time T , T' of the first and second measurement cycles, respectively, and the energy E_s corresponding to the signal present in the noise is defined as $\mathbf{E_s = Ash + s - Ash}$ ".

In other words, the patent holders claim that in the presence of the desired substance, the photographic material "noises" more strongly in the phase of the reflected signal in the optical range than in the absence of the substance. The website of the technology developers also says that you can use its photo as a matrix of the substance you are looking for; when reprinting and scaling, hidden information is not lost.

The test results of this technology showed 74% convergence of field predictions and actual oil content of 23 wells in Kalmykia on land and on the shelf of the Caspian Sea. In this case, a capsule with oil was placed in the studied area of the photographic material.

The same company offers a technology for diagnosing diseases by photography.

A similar technology for obtaining hidden information from photographs using optical methods is used by the Tomko company, Tomsk. According to I.A. Melnik, who worked in this company, "the company outlined several deposits in the Krasnoyarsk Territory in terms of area, and some of them coincided with the already developed areas, which they were completely unaware of." A laser beam is used to analyze the information contained. The technology also makes it possible to estimate the depths of oil and gas layers. According to V. Rostovtsev, director of the Tomko company, "during the processing of ground and helicopter photographs of the Beryambinskaya area, the boundaries of the field were outlined and an unexpected forecast for Krasnoyarsk geologists was made about the presence of an oil and gas bearing zone in the depth range from 1 to 2 kilometers. The forecast was fully confirmed : from the upper zone of oil and gas accumulation, a gas inflow was received with a debit of 1 million cubic meters / day.

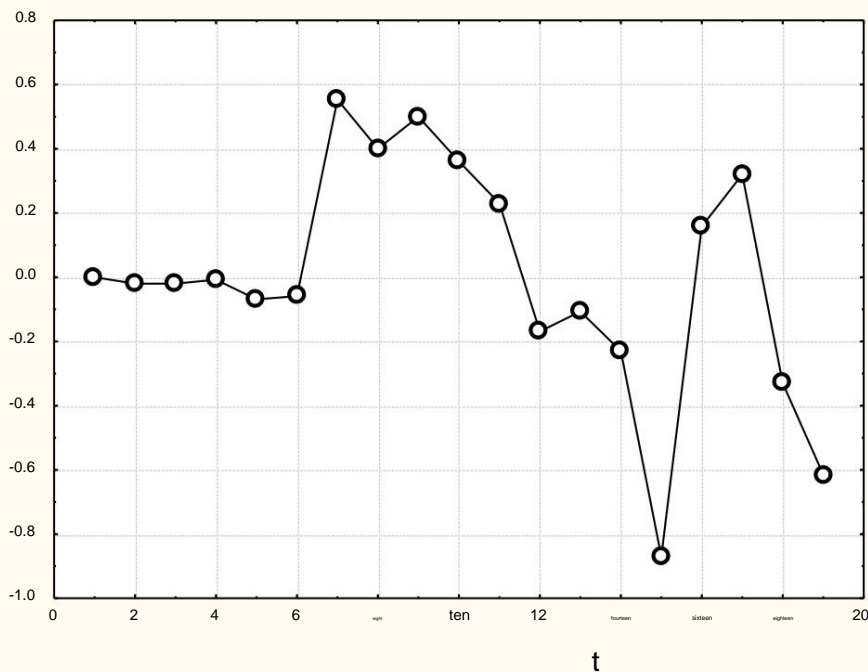
Complementary to this phenomenon (obtaining hidden information from a photograph) can be considered the impact on an object from its photograph. In Akimov's large torsion generators, the size of the receiving compartment of the modulator corresponded to the size of standard photographic film slides (in some designs there were two compartments for slides - apparently, to transfer information from one slide to another - see Fig. 11).

In numerous experiments of A.Yu. Smirnov's group with torsion generators of their own design, mice with transplanted tumors were affected [23]. The negatives of mice images were inserted into the torsion generator; in some experiments, the impact was carried out using an information matrix from various drugs. The exposed mice were kept under the same conditions as the control mice, the negatives of which were not exposed. To exclude artifacts, the method of coding photographs and animals was applied. Rectal temperature, as well as the growth rate of tumors in the experimental group compared to the control, were used as controlled parameters.

On Fig. 137 shows the dependence of the difference in the average temperatures of the control (13 animals) and experimental (14 animals) groups. On Fig. 138 shows the change in the growth rate of tumors in the experimental group compared to the control group (34 animals in each group).



Rice. 137. Influence of distant exposure on the rectal temperature of mice with tumors. The abscissa shows dates. On the y-axis, the difference between the mean values of rectal temperature in the "control" (K(tm)) and "experimental" (Exp(tm)) groups. The impact was made on October 29 and November 3. The session was 1 hour long.



Rice. 138. Dynamics of tumor growth under conditions of distant exposure. The abscissa shows the day after transplantation of tumors. On the y-axis - the difference between the average volume of tumors between the "control" and "experimental" groups ($V_k - V_o$). Surviving culture of sarcoma - 37 in vitro was used as an information matrix (MI) (exposure on days 5-6 was used after tumor inoculation into animals). On the 14th - 15th day, a 10^{-5} M cyclophosphamide solution was used as an MI. The duration of one exposure session was 3 hours.

According to A.Yu. Smirnov, the effectiveness of non-local exposure was also shown by his group on chicken embryos, the impact was on photonegatives of the embryos.

Naturally, such results lead to the idea of long-distance non-local communication, when the receiver and transmitter are interconnected in an image. Apparently, the first successful experiment on torsion coupling is the experiment described in [205], carried out in April 1986. The transmitter was located in the south of Moscow, near the Moscow Ring Road, the receiver - on the Lubyanka. In the article, Akimov does not disclose the design of the receiver (apparently, A.A. Deev's generator was used as a transmitter). It can be assumed, based on the current state of research in 1986, that a bioelectronic system was used as a detector - a plant in which, for example, the RDP was measured (the method used by the Sokolova group at that time), and the impact was carried out either on a remote fragment of the plant (Sokolova points out in [45] such a method of influence), or his photograph.

At present, experiments on nonlocal communication are being carried out in several countries of the world (see, for example, [206], [18], [207]).

Non-local effects in this area of research pose a new methodology for science problem: in the general case, there is no longer a situation of experience and control, since the impact goes both on prototypes and on control ones - through the information connection of experience and control. This is well illustrated in the work of the Experimental Laboratory of Life Safety Problems, Voronezh [208, 209]. This group has been conducting active research for several years in the Novokhopyorsk geoactive zone, which is located on the border of the Voronezh and Volgograd regions. It has been established that in the anomalous zone the impedance of thin magnetic films with cobalt nanogranules changes by 60%, the dielectric constant of silicon oxide changes, in 2-

The care of quartz clocks increases 3 times, the capacitance of ferroelectrics changes by 2-8 times, pronounced anomalous biological effects occur, etc.

But the most interesting thing is that the same, sometimes even more pronounced anomalous changes occur in control samples, which during expeditions to the Novokhopyorsk zone (NZ) are located in Voronezh, 250 km from the experimenters with prototypes. This manifests itself both in biological experiments (for example, when chlorophyll is destroyed in 90% of experimental pea seeds, the same occurs in 55% of seeds in control), and in purely physical systems - for example, changes in the capacitance of ferroelectrics in control samples exceed the change in experimental ones. Experimental and control samples are connected informationally, and, apparently, it is through the consciousness of the experimenter, who puts the experimental and control samples in line. All this requires completely new methods of experiments, taking into account non-locality in combination with psychophysical phenomena.

14. CONCLUSION

This review covers more than 200 publications of experimental work, beginning with Myshkin's experiments in the late 19th and early 20th centuries. Approximately half of these works were carried out under the "flag" of the torsion concept, the second half tried, at least terminologically, to distance themselves from it. Nevertheless, a joint consideration of both of these results indicates a unified and nontrivial nature of the phenomena under study.

Of course, some publications on the topic were not included in this review. Taking into account the closed stage of research in the 80s of the 20th century, as well as the stage of de facto prohibition of this direction in the academic science of Russia and Ukraine since the late 90s, the volume of unpublished experimental scientific results on torsion radiation can be comparable to the volume of published ones. In any case, this is at least hundreds of works.

But even published works are unknown to the general scientific community (regardless of the terminology used). The same results that become known, as a rule, are not taken seriously, because in the scientific picture of the world that developed about half a century ago, based on the so-called. there is simply no place for these facts in standard theories.

It is possible to characterize the current situation as catastrophic: there was not just a stratification of the results into permitted and prohibited ones, but, in fact, a whole layer of experimental works broke away and went far ahead of standard theories. This situation leads, on the one hand, to distrust of these "disgraced" results on the part of those who believe that the criterion of truth is publication in a "serious" scientific journal. On the other hand, respectable theories turn out to be devalued in the eyes of those who believe that the ultimate criterion of truth is still practice and experiment: this experimental layer is too large.

However, questions of the sociology of science are beyond the scope of this work. The reason for the exit of this line of research from the mainstream of "normal" science is considered in more detail in [5].

Topical issues

As mentioned at the beginning of the review, most of the research here is still at the exploratory stage, since the results of experiments so far do not so much provide answers as they raise many new questions.

In this review, the task of explaining the considered results was not set, i.e., even an attempt to give answers at the level of generalizing models of phenomena here would be premature. But I would like to formulate some relevant, in my opinion, questions in this area:

1. How do the considered non-local effects at the macrolevel relate to the effects of 162

- quantum entanglement of particles, which have been discussed since the well-known publication of Einstein-Podolsky-Rosen?
2. What is a quantum of non-electromagnetic radiation; does modern quantum mechanics apply here?
 3. Are phantoms really tied to geographic coordinates, or is speech all is it about binding to the immediate environment?
 4. What contribution to the impact on processes and sensors does a phantom from a working torsion generator? Will torsion generators moving relative to the ground work?
 5. What determines the stability of metastable states of liquids and solids substances? If these are indeed coherent states, why don't they collapse under the influence of the environment?
 6. What is the nature of collective quantum states that lead to a violation of the Poisson distribution in radioactive sources, as well as to an anomalous change in the dispersion of noise processes?
 7. Are operatorless torsion technologies possible, in which the direct influence of the operator's consciousness on the technological process can be neglected?
 8. What role does the interface play in the shape effect?
 9. How are the effects of changing the frequency and phase of a weak (background) electromagnetic radiation in the kilohertz range with sources of torsion radiation?
 10. What is the most adequate mathematical apparatus for describing configurations torsion field of material objects, allowing you to build models with predictive power?
 11. What is the physical mechanism for transmitting complex information about the structure of substances and biological objects through non-electromagnetic radiation?
 12. What is the origin of geopathogenic zones and grids?

15. LITERATURE

1. Myshkin N.P. The motion of a body in a stream of radiant energy // Journal of Russian Physical and chem. society. - 1906, issue 3, pp. 151 - 184. (<http://www.second-physics.ru/lib/articles/myshkin.pdf>)
2. Myshkin N. P. Ponderomotive forces in the field of a radiating source // Journal of the Russian Physical and Chemical Society, 1911, no. 6, p. 371.
3. Belyaev V. Experiments of Professor Myshkin. Technology-Youth, 1983/10. p. 42. (<http://www.second-physics.ru/lib/articles/tm1983-10.djvu>)
4. Gavrish A.G. A.G. Gurchik. The True History of the Biological Field (http://wsyachina.com/biology/biopoiesis_history.html)
5. Zhigalov V.A. Destruction of torsion research in Russia. Independent investigation (<http://www.second-physics.ru/reviews/Rassled.pdf>)
6. Perebrynos KN et al. Evaluation of the possibility of using gravitational waves for communication purposes. Research report // M., 1966, 17 p.
7. Kozyrev N.A. Selected works. - L.: Publishing house of the Leningrad University, 1991. (http://www.chronos.msu.ru/RREPORTS/kozyrev_selected.exe)

8. Kaznacheev V.P., Shurin S.P., Mikhailova L.P. ÿOpening #122. distant intercellular interactions in the system of two tissue cultures.ÿ // Official. bul. for inventions and discoveries under the Sov. Min. USSR, 1973, No. 19.
9. Akimov A.E. Heuristic discussion of the problem of searching for new long-range actions. EGS concepts. - M., 1991. - 63 p. - (Preprint / Inter-industry scientific and technical center of venture. non-traditional technologies; N 7A). (http://www.secondphysics.ru/lib/books/akimov_soznanie.zip)
10. Shipov G.I. Theory of physical vacuum. Theory, experiments and technologies. - Moscow: Nauka, 1997.
11. Gerlovin I.L. Fundamentals of a unified theory of all interactions in matter. – L.: Energoatomizdat, 1990. 432 p. (http://www.secondphysics.ru/lib/books/gerlovin_tfp.pdf)
12. Dyatlov VL Polarization model of inhomogeneous physical vacuum. Novosibirsk. Publishing House of the Institute of Mathematics, 1998 (<http://prometheus.al.ru/phisik/dyatlov.zip>)
13. Etkin V.A. Energy dynamics (synthesis of theories of energy transfer and transformation). - St. Petersburg: Nauka, 2008, 409 p.
14. Akimov A.E. et al. A method for correcting the structural characteristics of materials and device for its implementation. Patent SU-1748662 (http://www.axion.xost.ru/Pa/SU_1748662.pdf)
15. Bobrov A.V. Multifunctional quantum generator for scientific research and information therapy // In the collection of articles. [74] (<http://www.ostu.ru/personal/bobrov/30.rar>)
16. Shpilman A.A. Axion field generator "Comfort-M5" (<http://spinfields.narod.ru/ALMANACH/1n01/comfort.htm>).
17. Shpilman A.A. Magnetodynamic generator of the axion field (http://spinfields.narod.ru/ALMANACH/N3_96/Na_2.htm)
18. Krasnobryzhev V.G. Universal system of quantum teleportation // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.secondphysics.ru/sochi2009/pdf/p486-499.pdf>)
19. Boyarshinov A.E. etc. Electromagnetic antenna. Patent RU 2336612 (http://www.second-physics.ru/lib/articles/perm_patent.pdf)
20. Panov V.F., Strelkov V.V., Yushkov V.V., Yushkova T.A. A device for influencing the structure and function of biological systems and the properties of materials. Patent RU 2149385, pending May 12, 1999 (http://www.ntpo.com/patents_water/water_1/water_338.shtml).
21. Kinderevich Anatoly, Kicha Leonid. Method and system with apparatus for acceleration of activity decrease and radioactive material deactivation. US Patent Application 20040238366 (<http://www.freepatentsonline.com/20040238366.pdf>)
22. Radyuk M.S. The effect of "heterogeneity of space" in biological and physical processes // Quantum magic, volume 3, no. 4, pp. 4141-4155, 2006 (<http://www.quantmagic.narod.ru/volumes/VOL342006/p4141.html>)
23. Smirnov A.Yu. Long-range non-local instrumental interactions in the formation of the concept of "information teleportation" // Torsion fields and information interactions - 2010. Proceedings of the II International Scientific and Practical Conference, Tambov. September 28-29, 2010 - TSTU, 2010 (<http://www.secondphysics.ru/lib/articles/smironov2010.pdf>)

24. M. Surekha Bhat, Guruprasad Rao, K. Dilip Murthy, P. Gopalakrishna Bhat. Housing in Pyramid Counteracts Neuroendocrine and Oxidative Stress Caused by Chronic Restraint in Rats (<http://downloads.hindawi.com/journals/ecam/2007/523097.pdf>)
25. Stepanov I.N. form radiation. Problem state. Overview (http://www.chronos.msu.ru/RREPORTS/stepanov_forma.pdf)
26. Tkachuk Yu.V., Yaremchuk S.D., Fedotov A.A. Experimental study of the effect of rotating ferrite-magnetic disks on the hydration reaction of acetic anhydride // Torsion fields and information interactions - 2010. Proceedings of the II International Scientific and Practical Conference, Tambov. September 28-29, 2010 - TSTU, 2010 (<http://www.second-physics.ru/tambov2010/tambov2010.pdf>)
27. Bakurov N.P., Bakurov O.N. The method of water activation according to the method of N.P. Bakurov. Patent for invention No. 2152906 dated July 20, 2000. Russia (http://www.ntpo.com/patents_water/water_1/water_72.shtml)
28. Bakurov N.P., Avtonomova E.N., Zagryadsky V.A., Bakurov O.N. Influence of the hydrogen nucleus spin on the kinetics of hydrogen peroxide decomposition // Bulletin of the Tver State Technical University, issue 14, Tver 2009, pp. 109-112 (http://www.second-physics.ru/lib/articles/bakurov_spin.pdf)
29. Bakurov N.P., Bakurov O.N., Zagryadsky V.A. Research and Development measures to eliminate the negative impact of the discharged waters of the Kalinin NPP on the ichthyofauna of water sources and the environment // Information Bulletin No. 1 for 2000 materials of the seminar "Resources and Geoecology - Applied Problems of Rational Nature Management in the Tver Region. Water resources of the Tver region." Tver, TSTU, 2000 (http://www.second-physics.ru/lib/articles/bakurov_aes.pdf)
30. Bakurov N.P., Lyabakh V.F., Bakurov O.N., Belykh V.V., Zlokazov V.P., Zagryadsky V.A. Pseudoscience and supersteel // Proceedings of the international conference OPMASNM&C "The latest technologies in traditional folk medicine of the XXI century" Tekirova/Kemer, Turkey. Part 2. "Energy-informational mechanisms of healing practice", (Sharm-AI-Sheikh, Egypt). M.: 2004, p.136 (http://www.second-physics.ru/lib/articles/bakurov_superstal.pdf)
31. Exploratory experimental research in the field of spin-torsion interactions. - Tomsk: SibNITSAYA, 1995. (http://www.second-physics.ru/lib/books/tomsk_poiskovyje.djvu)
32. Melnik I.A. Rotation is a source of non-electromagnetic influence on non-equilibrium semiconductor charges and radioactive decay // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p398-413.pdf>)
33. Mustafaev R.I. Heat generator and device for heating liquid. Patent No. 2132517, dated July 27, 1999, with priority dated 08/20/97. (<http://ru-patent.info/21/30-34/2132517.html>)
34. Akimov A.E., Kuzmin R.N., Mustafaev R.I. Scientific foundations and ways of development torsion sources of energy // "Academy of Trinitarianism", M., EI No. 77-6567, publ. 11576, 15.10.2004
35. Serdyukov O. Torsion fields warm and process // Inventor and rationalizer, 2/2009 (http://ir.ru/show_arhive.php?year=2009&month=2&id=1760)

36. Roshchin V.V., Godin S.M. Experimental study of physical effects in dynamical magnetic system // Letters to ZhTF, 2000, Issue 24, P.26. (<http://nt.ru/tp/ts/dms.htm>)
37. Krasnobryzhev V.G. Properties of coherent matter // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p475-485.pdf>)
38. Vershinin I.N., Vershinin N.P. Apparatus with rotating electromagnetic field. Process activation settings. Questions of theory and practice. - Salsk 2007.
39. Okulov B.V. Electrostatic generator of the spin-torsion field // Search experimental research in the field of spin-torsion interactions. - Tomsk: SibNITSAYA, 1995. - S.95-98. (http://www.second-physics.ru/lib/books/tomsk_poiskovye.djvu)
40. Veinik A.I. Thermodynamics of real processes. - Minsk: "Science and technology", 1991. 576 pages (<http://www.veinik.ru/lib/books/article/4.html>)
41. Pyotr Lukin. Gravitons exist (http://forecast.terikapress.blogspot.com/2007/07/blog-post_4728.html).
42. Chekunov A.Ya. Radiation generator in dowsing. Biogeofizika ý2, 2004 (http://www.second-physics.ru/lib/articles/chekunov_generator.pdf)
43. Pavlenko A.R., Kravchenko Yu.P., Kurik M.V. Torsion field and radioactivity // Bioinformational and energy-informational technologies in industrial, social and spiritual spheres (BEIT-2005): dokl. 8 int. scientific Congr.
44. Sokolova V.A. Study of the reaction of plants to the impact of torsion radiation. M., ISTC VENT, 1994. Preprint No. 48, p. 32.
45. Sokolova V.A. The first experimental confirmation of the existence torsion fields and prospects for their use in the national economy. - M., 2002.
46. Chernoshchekov K.A. Spin Detection Experimental Study of the torsion field based on its possible effect on the reproduction and variability of enterobacteria // Search experimental research in the field of spin-torsion interactions. - Tomsk: SibNITSAYA, 1995. - S.108-114. - Bibliography: 4 titles. (http://www.second-physics.ru/lib/books/tomsk_poiskovye.djvu)
47. Mikhailova L.P., Kaznacheev V.P., Mosolov A.N. Action research torsion fields per cell // Vestnik MNIKA. - 2000. - Issue 7. - P.70-72. (http://tonnel-ufu.narod.ru/tonn_30_Kaznacheev.doc)
48. Lupichev L. N., Lupichev N. L., Marchenko V. G. Distance interactions material objects in nature. // On Sat. "Investigation of the dynamic properties of distributed environments". - IFTP AN SSSR, 1989. - S. 3-12
49. Dulnev G.I., Ipatov A.P. Studies of the phenomena of energy-information exchange: experimental results. - St. Petersburg, GITMO, 1998. - 72 p. (<http://www.roerich.com/zip/preprint.zip>)
50. Kvartalnov V.V. Experimental extraction of components from laser radiation unknown physical nature. // "Laser-Inform" No. 12 (219), 2001. (http://www.helpmed.ru/upmenu_story_doc/1159)
51. Kvartalnov V.V., Perevozchikov N.F. Discovery of the "non-physical" component radiation of optical quantum generators // Parapsychology and psychophysics, 2000, No. 1 (29), pp. 67-70 (<http://datchik.agpl.ru/st/pr2.pdf>)
52. Anosov V.N., Perevozchikov N.F. The effect of the non-light component of laser radiation on the erythrocyte sedimentation rate // Reports of the International

- conference "Laser and information technologies in medicine of the XXI century", St. Petersburg, June 21 - 22, 2001
53. Anosov V.N., Perevozchikov N.F. Impact of the non-light component of laser radiation on water and aqueous solutions of organic compounds // Reports of the "International Forum on Problems of Science, Technology and Education", v.2, Moscow, December 4 - 8, 2000
54. Krasnobryzhev V.G. Teleportation of vaccine properties // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p525-529.pdf>)
55. Krasnobryzhev V.G. Study of the inhibitory efficiency of coherent water ("Dipol" system) // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p515-524.pdf>)
56. Bobrov A.V. Information torsion fields in medicine // Bioenergoinformatics (BEI-99): Dokl. 2nd Intern. Congr. T.1, part 1. - Barnaul: AltGTU Publishing House, 1999. - S.24-31. - Bibliography: 13 titles. (<http://www.ostu.ru/personal/bobrov/23.rar>)
57. Bobrov A.V. Information torsion fields in medicine and plant growing / VINITI, dep. No. 635-B98, M., 1998. (<http://www.ostu.ru/personal/bobrov/20.rar>)
58. Bobrov A.V. The physical nature of the mechanisms of induction (http://www.second-physics.ru/lib/articles/bobrov_induction2011.pdf)
59. Garyaev P.P., Kokaya A.A., Mukhina I.V., Leonova-Garyava E.A., Kokaya N.G. Influence of electromagnetic radiation modulated by biostructures on the course of alloxan diabetes mellitus in rats // Bulletin Exp. Biol. And Med., No. 2, 2007, pp. 155-158. (<http://www.wavegenetics.jino-net.ru/zip/Diabet.zip>)
60. Garyaev P.P. A new type of DNA memory? / In the book. "Wave genome". 1994. M. Ed. Public benefit. pp.166-199. (<http://predmet.ru/garyaev-small.pdf>)
61. Garyaev P.P., Tertyshny G.G., Gotovsky Yu.V. Transformation of light into radio waves // III international conference "Theoretical and clinical aspects of the use of adaptive resonance and multiresonance therapy." "IMEDIS". Moscow. April 18-20, 1997 pp. 303-313. (<http://www.wavegenetics.jino-net.ru/zip/Transform.zip>)
62. Shcherbakov R. "... What our wise men never dreamed of" // Knowledge-Power, 1989/8.
63. Jiang Kanzheng Yu.V. Patent RU-2090613. Device for transferring natural informational nutrition to a biological object "BIOTRON-JIANG" (http://www1.fips.ru/fips_servl/fips_servlet?DB=RUPAT&rn=3705&DocNumber=2090613&TypeFile=html)
64. Jiang Kanzheng Yu.V. Patent RU-2057808. Method for body rejuvenation (http://www1.fips.ru/fips_servl/fips_servlet?DB=RUPAT&rn=9434&DocNumber=2057808&TypeFile=html)
65. Jiang Kanzheng Yu.V. Mastering the potential of life by the bioelectromagnetic field // "Asia-Pacific region in global politics, economics and culture of the XXI century". International scientific conference October 22-23, 2002, materials of reports. Khabarovsk 2002. pp. 118-120. (<http://replay.waybackmachine.org/20070403012426/http://www.jiang.ru/ru/dok/dok040.shtml>)
66. Conclusion of the extended seminar on the report by Jiang Kanzheng of the Institutes of the Siberian Branch of the USSR Academy of Sciences, the Siberian Branch of the USSR Academy of Medical Sciences, the Siberian Branch of the Academy of Agricultural Sciences and other institutes of Novosibirsk and Tomsk.

02/24/1989

<http://replay.waybackmachine.org/20080624223508/http://www.jiang.ru/load/zak.pdf>

67. L. Montagnier et al. DNA waves and water
http://arxiv.org/PS_cache/arxiv/pdf/1012/1012.5166v1.pdf, Russian translation
<http://adekvatnoe.info/?p=579>
68. Preparata G. QED Coherence in matter. 1995 (Singapore: World Scientific).
69. Panov V.F., Testov B.V., Klyuev A.V. The reaction of mice to torsion radiation // Scientific foundations and applied problems of energy-informational interactions in nature and society: Proceedings of the Intern. Congress "InterENIO-99". - M.: VIU Publishing House, 2000. (http://www.roerich.com/zip/mouse_t.zip)
70. Shakhparonov I.M. Kozyrev-Dirac radiation and its effect on animals. (<http://www.shaping.ru/congress/russian/shahparonov/shahparonov.asp>)
71. Pryakhin EA, Tryapitsina GA, Urutskoyev LI, Akleyev AV Assessment of the biological effects of "strange" Radiation // Annales de la Fondation Louis de Broglie, Volume 31 no 4, 2006 (<http://www.ensmp.fr/aflb/AFLB-314/aflb314m514.pdf>)
72. Urutskoev L.I., Liksonov V.I., Tsinoev V.G. Experimental detection of "strange" radiation and transformation of chemical elements // Applied Physics, 2000. No. 4. with. 83-100. (http://www.uf.narod.ru/public/recom_s01.pdf)
73. Orlov O.I. and other Chemical phantoms of biologically active substances-2. Research work on the influence of torsion fields on wildlife in the "Laboratory of Experimental Ecology" Gymnasium No. 102, Kazan (<http://www.second-physics.ru/lib/articles/orlov.zip>)
74. Bobrov A.V. Field information interactions. Digest of articles. - OrelGTU, 2003. (<http://www.ostu.ru/personal/bobrov/list.htm>)
75. Bobrov A.V. Model study of the field concept of the mechanism of consciousness. - OrelGTU, 2007. (<http://www.ostu.ru/personal/bobrov/list.htm>)
76. Bobrov A.V. Biological and physical properties of activated water // In Sat. [74] (<http://www.ostu.ru/personal/bobrov/22.rar>)
77. Bobrov A.V. Investigation of the effectiveness of the method of indirect information impact in the production of bread // In Sat. [74] (<http://www.ostu.ru/personal/bobrov/26.rar>)
78. Bobrov A.V. Intensification of the process of maturation of hard cheeses // In Sat. [74] (<http://www.ostu.ru/personal/bobrov/27.rar>)
79. Britova A.A., Adamko I.V., Bachurina V.L. Activation of water by laser radiation, radiation, magnetic field and their combination // Bulletin of the Novgorod State University, 1998 No. 7 ([http://www.admin.novsu.ac.ru/uni/vestnik.nsf/all/16A1E4C148AF3720C3256ABE00379003790B9/\\$file/BritovaPDF.pdf](http://www.admin.novsu.ac.ru/uni/vestnik.nsf/all/16A1E4C148AF3720C3256ABE00379003790B9/$file/BritovaPDF.pdf))
80. Klassen V.I. Magnetization of water systems. - M.: Chemistry, 1978. - 240 p. (<http://www.twirpx.com/file/176541/>)
81. Fradkin B.Z. White spots of the boundless ocean. – M.: Nedra, 1983. – 92 p. (<http://nplit.ru/books/item/f00/s00/z0000051/index.shtml>)
82. Krasnobryzhev V.G., Kurik M.V. Properties of coherent water // Quantum Magic, Magic, 2/2010 (<http://quantmagic.narod.ru/volumes/VOL722010/p2161.pdf>)
83. Krasnobryzhev V.G., Kurik M.V. Quantum effects in natural water // Quantum Magic 4/2010 (<http://quantmagic.narod.ru/volumes/VOL742010/p4132.pdf>)
84. Krasnobryzhev V.G. Management of the heat capacity of water in the thermal power industry // Torsion fields and information interactions - 2009. Materials

- international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p500-505.pdf>)
85. Novikov S.N., Ermolaeva A.I., Timoshenkov S.P., Remote transmission of information about the supramolecular structure of water // Quantum Magic 4/2009 (<http://quantmagic.narod.ru/volumes/VOL642009/p4169.pdf>)
86. Krasnobryzhev V.G. Coherent coal - a new perspective of energy // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p552-557.pdf>)
87. Krasnobryzhev V.G. Ecology of coherent motor fuel // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p530-535.pdf>)
88. Krasnobryzhev V.G. Increasing the energy efficiency of gas in thermal power engineering // Fundamentals physical interaction. Materials of the I International Scientific and Practical Conference. Kiev 2008 (<http://www.second-physics.ru/lib/articles/kyev2008.pdf>)
89. Krasnobryzhev V.G. Technology of spin modification of oil in processing // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p544-551.pdf>)
90. Akimov A.E., Kurik M.V., Tarasenko V.Ya. Influence of the spinor (torsion) field on the process of crystallization of micellar structures // Biotechnology. - 1991. - N 3. - pp.69-70. - Bibliography: 6 titles.
91. Ermolaev V.A., Azikova G.I., Izmailova O.A. Radiography of spin-torsion fields // Search experimental research in the field of spin-torsion interactions. - Tomsk: SibNITSAYA, 1995. - S.95-98. (http://www.second-physics.ru/lib/books/tomsk_poiskovye.djvu)
92. Lunev V.I. Theoretical and experimental studies of the features of influence of the spin-torsion field on fractal objects // Search experimental research in the field of spin-torsion interactions. - Tomsk: SibNITSAYA, 1995. - S.98-108. (http://www.second-physics.ru/lib/books/tomsk_poiskovye.djvu)
93. Panov V.F., Kurapov S.A., Klyuev A.V. Development of field information technologies of the Perm group // In press.
94. Gurdin V.I., Sedelnikov V.V. Management of the properties of solutions and melts when using torsion fields // "Academy of Trinitarianism", M., El No. 77-6567, publ. 14566, 13.09.2007 / 02311028.htm)
95. Abramov A.A., Akimov A.E., Bulatov E.I. etc. Physical bases and experimental results of the study of torsion technologies in the production of materials // Horizons of science and technology of the XXI century: Proceedings. T.1 / Intern. in-t theor. and appl. Physics of the Russian Academy of Natural Sciences. - M.: FOLIUM, 2000. - S.67-100. (<http://www.trinitas.ru/rus/doc/0231/005a/02310003.htm>)
96. Study of the effect of a torsion field on the state of the surface in a strong electric field. Research report. St. Petersburg Electrotechnical Institute of Communications. prof. M.A. Bonch-Bruevich, 1993, p.25.
97. Study of the effect of a torsion field on the process of forming the surface of a pointed single crystal in a strong electric field. Brief report on research. St. Petersburg Electrotechnical Institute of Communications. prof. M.A. Bonch Bruevich, 1993, p. 12.

98. Mayboroda V.P. and others. Influence of torsion fields on the melt of tin. ISTC VENT, M., 1993, preprint No. 49.
99. Mayboroda V.P. and other Structure and properties of copper inherited from the melt after exposure to torsion radiation. ISTC VENT, M., 1994, preprint No. 5720.
100. Akimov A.E. et al. Method for correcting the structural characteristics of steel. Patent RU-2151204 (http://www.axion.xost.ru/Pa/RU_2151204.pdf)
101. Krasnobryzhev V.G. Coherent technology - a new direction energy saving in steel annealing processes // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p558-563.pdf>)
102. Kurapov S.A., Panov V.F. Field deep impact on metal melts // Space. Time. Energy. Collection of articles dedicated to the 100th anniversary of D.D. Ivanenko. M.: "Squirrel", 2004. - 415 p. (<http://www.trinitas.ru/rus/doc/0231/005a/02310006.htm>)
103. Kurapov S.A., Panov V.F., Klyuev A.V., Boyarshinov A.E. Improving the physical and mechanical properties of ferrous and non-ferrous metals during melt processing in a non-stationary electromagnetic field of a wave emitter // Torsion fields and information interactions - 2010. Proceedings of the II International Scientific and Practical Conference. Tambov, 2010 (<http://www.second-physics.ru/tambov2010/tambov2010.pdf>)
104. Klyuev A.V. et al. Structure and mechanical properties of metal after melt processing in a non-stationary magnetic field of a wave emitter // Materialovedenie 7/2009 (http://www.second-physics.ru/lib/articles/mitom_7_2009_svm.djvu)
105. Meshcheryakov V. Will the West catch up with Russia? // "Academy of Trinitarianism", M., EI No. 77-6567, publ. 11685, 01.12.2004 (<http://www.trinitas.ru/rus/doc/0231/005a/02310007.htm>)
106. Ivoilov N.G., Urutskoev L.I. Effect of "strange" radiation on the Mössbauer spectra of Fe57 in metal foils // Applied Physics, 2004. No. 5. with. 20 - 25. (http://www.uf.narod.ru/public/recom_s10.pdf)
107. Grenier E. AZF Toulouse: monopole hypothesis // Fusion No. 100 March-April 2004, p.8-12. (http://uf.narod.ru/pop/Fusion100A_Rus.htm)
108. Kladoy A.V. Cavitation destruction of matter (<http://roslo.narod.ru/rao/rao1.htm>)
109. Lazarev VV Research on the cavitation influence on change of half-life period. Research Report (<http://www.faraday.ru/radioactivity.pdf>)
110. Kravchenko Yu.P., Saveliev A.V. Experience in instrumental studies of torsion generators // Torsion fields and information interactions - 2010. Proceedings of the II-nd international scientific-practical conference, Tambov. 28-September 29, 2010 – TSTU, 2010 (<http://www.second-physics.ru/tambov2010/tambov2010.pdf>)
111. Shakhparonov I.M. Patent RU-1806477 dated May 21, 1990 "Device for vacuum polarization" (<http://axion.xost.ru/Pa/SU1806477.pdf>)
112. Shakhparonov I.M. Patent RU-2123736 dated December 20, 1998 "Method of magnetization of non-magnetic materials" (http://www.sinor.ru/~bukren7/shahparonov_pat1.doc)
113. Shakhparonov I.M., Kolotukhin S.P., Chepenko B.A., Khandurov Yu.N. "Application cold nucleosynthesis in the oil industry", 2004. ([http://www.shaping.ru/congress/download/cong04\(013\).pdf](http://www.shaping.ru/congress/download/cong04(013).pdf))

114. Stanzo V. "Ivan and his monopoles" // "Technique - Youth", No. 10, 1996
(http://www.sinor.ru/~bukren6/stanco_shah.doc)
115. Shakhparonov I.M. Action Guide (<http://www.chakhparonov.ru/themes/prof/content.asp?folder=2278&foundID=3416>) 116.
- Shakhparonov I.M. Patent RU-2061266 dated May 25, 1996 "Method of decontamination of radioactive materials" (http://www.sinor.ru/~bukren7/shahparonov_pat2.doc)
117. Shakhparonov I.M. Interaction of Kozyrev-Dirac radiation with radionuclides
(<http://www.chakhparonov.ru/themes/prof/content.asp?folder=2280&foundID=3770>)
118. Shakhparonov I.M., Chicherin V.G. An attempt to model some processes, occurring in powerful geoactive zones of the earth
([http://www.chakhparonov.ru/files/articles/3329/3%20%C4%EE%EA%EB%E0%E4\(2007\).doc](http://www.chakhparonov.ru/files/articles/3329/3%20%C4%EE%EA%EB%E0%E4(2007).doc))
119. Shakhparonov I.M., Chicherin V.G. Interaction of μ -factor with the substance
(<http://www.chakhparonov.ru/themes/prof/material.asp?folder=2280&matID=3348>)
120. Solin M.I. Experimental facts of spontaneous generation of a condensate of soliton charges with the formation of nuclear fusion products in liquid zirconium. Part 1 // Physical Thought of Russia, 2001. No. 1. pp.43–58.
(<http://www.invur.ru/print.php?page=proj&cat=neob&doc=solin1>)
121. Agapov A.S., Kalensky V.A., Kaitukov Ch.B., Malyshev A.V., Ryabova R.V., Steblevsky A.V., Urutskoev L.I., Filippov D.V. Detection of "strange radiation" and isotopic distortion of titanium during testing of industrial electrical equipment // Applied Physics, 2007. No. 1. with. 37 - 46.
(http://www.uf.narod.ru/public/recom_s13.pdf)
122. Ivoilov N.G. Low-energy generation of "strange" radiation // Georesources, 2(17) 2005.
123. Ivoilov N.G. Low Energy Generation of the "Strange" Radiation // Annales de la Fondation Louis de Broglie, Volume 31, no 1, 2006. (http://www.ensmp.fr/aflb/AFLB_311/aflb311m484.pdf)
124. Adamenko S.V., Vysotsky V.I. Experimental detection and modeling of the orientational motion of hypothetical magnetically charged particles on a multilayer surface // Surface, 2006, no. 3, p. 84-92.
125. Gorodysky M.I., Popov V.M., Pokanevich A.P., Rossashakin Yu.V., Adamenko A.S. Report on the study of the influence of electromagnetic and corpuscular radiation of a hot spot of an artificially initiated collapse of a solid target on the electrophysical parameters of microelectronics technological structures. (http://www.proton21.com.ua/proposal/MIS_ru.pdf)
126. Tarasyuk I. I. The occurrence of the phenomenon of "cold annealing" in semiconductors at semiconductors under spin-torsion action. – Consciousness and physical physical reality, volume 11, no. 1, 2006, pp. 25-32.
127. Loshak Zh. On the possibility of a light, lepton magnetic monopole capable of influencing weak interactions. Applied Physics, 2003. No. 3. with. 10 - 13.
128. Kinderevich A.V. Solving the problem of accelerated decontamination of radioactive elements // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.secondphysics.ru/sochi2009/pdf/p608-613.pdf>)
129. Krasnikov I.I., Bershadsky M.I., Bershadskaya O.V., Ogorodnik S.S., Palienko A.A., Shevel V.N. Study of the possibility of influencing processes

- radioactive decay (Part 1) // Quantum Magic 1/2010 (<http://quantmagic.narod.ru/volumes/VOL712010/p1101.pdf>) 130.
- Krasnikov I.I. Investigation of the possibility of influencing the processes of radioactive decay (Part 2) // Quantum Magic 1/2010 (<http://quantmagic.narod.ru/volumes/VOL712010/p1124.pdf>)
131. Yekhanin S.G., Lunev V.I., Okulov B.V., Tsarapkin G.S. experimental detection of the influence of the torsion field of the gyromotor flywheel on the readings of a gas-discharge detector of ionizing radiation // Search experimental research in the field of spin-torsion interactions. - Tomsk: SibNITSAYA, 1995. - S.81-85. (http://www.second-physics.ru/lib/books/tomsk_poiskovye.djvu)
132. Okulov B.V., Lunev V.I., Tsarapkin G.S. Spin Effect Detection of the torsion field of the gyromotor flywheel on the readings of the scintillation detector of ionizing radiation // Search experimental research in the field of spin-torsion interactions. - Tomsk: SibNITSAYA, 1995. - S.86-90. (http://www.second-physics.ru/lib/books/tomsk_poiskovye.djvu)
133. Okulov B.V. Possibility of increasing the sensitivity of a scintillation detector of ionizing radiation to torsion fields // Search experimental research in the field of spin-torsion interactions. - Tomsk: SibNITSAYA, 1995. - S.91-95. (http://www.second-physics.ru/lib/books/tomsk_poiskovye.djvu)
134. Krinker M., Kitaichik F. Influence of Spinning Electric Fields on Natural Background γ Radiation (<http://arxiv.org/ftp/arxiv/papers/1004/1004.5161.pdf>)
135. Krinker M., Goykadosh A., Kitaichik F. Spinning Electric Field-Induced Changes in Statistics of Background Gamma-Radiation. Cumulative Aftereffect in the Detector // Torsion Fields and Information Interactions - 2010. Proceedings of the II International Scientific and Practical Conference, Tambov. September 28-29, 2010 - TSTU, 2010 (<http://www.second-physics.ru/tambov2010/tambov2010.pdf>)
136. Parkhomov A.G. Space. Earth. Man. New facets of science. - M.: Nauka, 2009.
137. Melnik I.A. Awareness of the fifth force. - M.: Folium Publishing House, 2010. (http://www.second-physics.ru/lib/books/melnik_5_sila.pdf)
138. Melnik I.A. Response of radioactive decay to the remote impact of rotating objects // Quantum Magic, 2007/3 (<http://quantmagic.narod.ru/volumes/VOL432007/p3132.pdf>)
-
139. Melnik I.A. Detection of correlations in the decay rate of radioactive elements in experiments with a rotating fluid // Quantum magic vol. 5, no. 3, 2008, pp. 3123-3130 (<http://quantmagic.narod.ru/volumes/VOL532008/p3123.pdf>)
140. Melnik I.A. Experimental discovery of non-Poisson conservation Statistical Distribution of Radiation after Switching Off the Disturbance Source, Izv. universities. Physics., 2004, No. 2, pp. 15-18.
141. Shnol S.E., Kolombet V.A., Pozharsky E.V., Zenchenko T.A., Zvereva I.M., Konradov A.A. On realization of discrete states in the course of fluctuations in macroscopic processes // UFN, 1998, v.168. (http://ufn.ru/ufn98/ufn98_10/Russian/r9810d.pdf)
142. Shnol S.E., Panchelyuga V.A. Experimental study of the influence of a rapidly rotating massive body on the shape of the distribution function of alpha decay rate fluctuation amplitudes // Hypercomplex Numbers in Geometry and

- Physics, 1(5), Vol.3, 2006 (<http://hypercomplex.xpsweb.com/articles/272/ru/pdf/05-06.pdf>)
143. Shnol S.E. Cosmophysical factors in random processes // Svenska fysikarkivat, Stockholm (Sweden), 2009. 388 p.
(http://www.chronos.msu.ru/RREPORTS/shnoll_kosmofizich.pdf)
144. Bobrov A.V. Response of electrical double layers to the action of a torsion field // In the collection [74] (<http://www.ostu.ru/personal/bobrov/18.rar>).
145. Vincent C. Reddish. The Field of Rotating Masses. Makar Publishing, Edinburgh
(<http://www.second-physics.ru/lib/books/reddish.pdf>)
146. Bobrov A.V. Method for registration of torsion radiation // Bioenergoinformatics (BEI-98): Dokl. 1st Intern. Congr. T.2. - Barnaul: AltGTU Publishing House, 1998. - P.5-10. (<http://www.ostu.ru/personal/bobrov/19.rar>)
147. Tsarapkin G.S. Problems of metrological support of experiments in the field of spin-torsion interactions // Search experimental research in the field of spin-torsion interactions. - Tomsk: SibNITSAYA, 1995. - S.22-27. (http://www.second-physics.ru/lib/books/tomsk_poiskovye.djvu)
-
148. Levich A.P. Substantial interpretation of the concept of time by N.A. Kozyreva // Time and stars: to the 100th anniversary of N.A. Kozyreva. - St. Petersburg: Nestor-History, 2008. - S. 152-213
(http://www.chronos.msu.ru/RREPORTS/kozyrev_100/levich_interpretatsiya.pdf)
149. Shikhobalov L.S. Kozyrev's causal mechanics in development // Expanded text of the report at the conference "Energy, information and time: physical foundations and foundations and technical applications", Zurich (Switzerland), November 6 - 7, 2010
of the year
(http://www.chronos.msu.ru/RREPORTS/shihobalov_prichinnaya_mehanika_kozyreva.pdf)
150. Bakaleinikov L. A., Baranov V. S., Vasiliev M. G., Vinnichenko M. B., Golovnya E. G., Ivanov M. A., Selivanov A. M., Skvortsov S. V., Khrustalev AZ, Shikhobalov LS Investigation of remote influence of physical processes on the state of surrounding bodies. // Forms and meanings of time (philosophical, theoretical and practical aspects of the study of time): Collection of scientific papers / Ed. V. S. Churakova. - Novocheerkassk: Publishing House "NOK", 2010. - S. 14 - 46.
(http://www.chronos.msu.ru/cabinets/nature_ref/shichobalov_issledovanie.pdf)
151. Akimov A. E., Kovalchuk G. U., Medvedev V. G., Oleinik V. K., Pugach A. F. Preliminary results of astronomical observations of the sky according to the method of N. A. Kozyrev. - Kyiv, 1992. - 17 p. — (Preprint / Academy of Sciences of Ukraine. Main Astronomical Observatory; No. GAO-92-5ÿ)
152. Pugach A.F. Kozyrev worked for a while. Now time works for Kozyrev // "The Universe and Us", No. 1/1993 (<http://www.irlen-building.ru/d-kozyrev-pugach.php>)
153. Parkhomov A.G. What do torsion balances react to? // Parapsychology and psychophysics, No. 4(6), 1992, p. 54-59.
(http://www.chronos.msu.ru/RREPORTS/parkhomov_na_chno.pdf)
154. Lavrentiev M. M., Eganova I. A., Lutset M. K. et al. On remote action stars per resistor // Dokl. Academy of Sciences of the USSR. 1990. Vol. 314, No. 2
155. Lavrentiev M. M., Gusev V. A., Eganova I. A. et al. On the registration of true positions of the Sun // Dokl. Academy of Sciences of the USSR. 1990. V. 315. No. 2.
156. Lavrentiev M. M., Eganova I. A., Lutset M. K. et al. On registration of the reaction substances on an external irreversible process // Dokl. Academy of Sciences of the USSR. 1991. V. 317. No. 3.

157. Lavrentiev, M. M., Eganova, I. A., Medvedev, V. G., et al., On scanning the starry sky with the Kozyrev sensor, Dokl. AN 1992. V. 323, no. 4.
158. Korotaev S.M., Serdyuk V.O., Sorokin M.O., Machinin V.A. experimental study of the effect of nonlocality of artificially excited dissipative processes // Vestnik OGGGN RAS 3/2000 (<http://www.second-physics.ru/lib/articles/korotaev.pdf>)
159. Pugach A.F. Detection of diurnal variations in readings of ultralight torsion balances (http://www.chronos.msu.ru/RREPORTS/pugach_sutochnye.pdf) 160. Pugach A.F., Medvedsky M.M., Peretyatko N.N. etc. The first experience of observations solar eclipse using miniature torsion balance // Kinematics and Physics of Celestial Bodies, 2008, vol.24, no.5, pp.401-410 (http://www.chronos.msu.ru/RREPORTS/pugach_pervyi.pdf)
161. Pugach A.F. Observations of the behavior of the arrows of the torsion balance during annular solar eclipse on January 15, 2010 (http://www.chronos.msu.ru/cabinets/nature_ref/pugach/pugach_nablydenia.pdf)
162. Pugach A.F. Observations with an ultralight asymmetric torsion balance (http://www.chronos.msu.ru/discussions/pugach_nabliudenia.html) 163. Shkatov V.T. Detection of torsion fields // In press (http://www.second-physics.ru/lib/articles/shkatov_detect.pdf)
164. Shkatov V.T. Chronometric detection of "latent radiation" of a chandelier Chizhevsky // Izv. Universities, Physics, 1999 No. 7, p. 85-89.
165. Shpilman A.A. Influence of the "axion field" generator on the torsion pendulum // Almanac "Free Search" (<http://spinfields.narod.ru/ALMANACH/2n01/Medeo.htm>)
166. Samokhvalov V.N. Experimental study of the interaction of rotating dynamically unbalanced thin disks // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p414-430.pdf>)
167. Samokhvalov V.N. Influence of vacuum depth on intensity of mass-dynamic interaction (<http://www.sciteclibrary.ru/rus/catalog/pages/11202.html>)
168. Samokhvalov V.N. Influence of rotation of large masses on the relative motion of bodies and moving media // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p431-444.pdf>)
169. Okulov B.V., Tsarapkin G.S., Lunev V.I. Influence of the torsion field of rotating masses on physical processes // Search experimental research in the field of spin-torsion interactions. - Tomsk: SibNITSAYA, 1995. - S.118-127. (http://www.second-physics.ru/lib/books/tomsk_poiskovye.djvu)
170. Cherednichenko Yu.N., Mikhailova L.P. Shape effects and phase transitions of the first kind: experimental study of distant interactions on physical sensors and cellular bioindicators // Parapsychology and Psychophysics, 1999, No. 2(28), p.67-73 ([http://aeninform.org/sites/default/files/pp_rus_archivs/99-2/67-73\(2-99\).rtf](http://aeninform.org/sites/default/files/pp_rus_archivs/99-2/67-73(2-99).rtf))
171. Dakhno L.A. The results of the experiment to study the influence of exposure of axion radiation on the hardness of the metal // Almanac "Free search" search" (<http://spinfields.narod.ru/ALMANACH/Exp/hardnessR.htm>)

172. Myachin P.M., Shpilman A.A. Influence of the "axion field" on the hardness of pearlite pearlitic cast iron // Free Search Almanac N1/2001 (<http://spinfields.narod.ru/ALMANACH/Exp/hardnessR2.htm>)
173. Okhatrin A.F. Macroclusters and ultralight particles // DAN, 1989, vol. 304, no. 4, pp. 866-869 (<http://www.trinitas.ru/rus/doc/0016/001a/00160074.htm>)
174. Lunev V.I. Photo registration of the spin-torsion field of an electrodynamic generator // Search experimental research in the field of spin-torsion interactions. - Tomsk: SibNITSAYA, 1995. - S.118-127. (http://www.second-physics.ru/lib/books/tomsk_poiskovye.djvu)
- 175.M. Sue Benford. Probable Axion Detection via Consistent Radiographic Findings after after Exposure to a Shpilman Axion Generator // Journal of Theoretics Vol.4 (<http://www.journaloftheoretics.com/Articles/4-1/Benford-axion.htm>)
176. Evmeneko V.V., Malakhov Yu.I., Perevozchikov N.F., Sharikhin V.F. Unusual Unusual physical phenomena observed during the interaction of laser laser radiation with magnetized water // Program and Abstracts of the RKKhTYaiShM-18, RKKhTYaiShM-18, September 4-11, 2011,
177. Lee A.G. Registration of bioenergy impacts (http://tonnel_ufo.narod.ru/tonn_36_Li.html)
178. Yolkin S.V., Maksimov V.Yu., Kulikov D.N., Krutov A.V., Li A.G. Results of an experiment using a group of sensors on random event generators (http://psi_world.narod.ru/publications/experiments/experiment_with_sensors_group.pdf)
-
179. Kulikov D.N. An experiment to identify the possibility of dynamic studies of the effects of micropsychokinesis when exposed to a "white noise" generator (http://psi_world.narod.ru/publications/experiments/experiment_with_christos_drossinakis.pdf)
-
180. Global Consciousness Project (<http://noosphere.princeton.edu>, <http://gcp.grama.co>)
181. Shnol S.E., Panchelyuga V.A. Cosmophysical effects in GCP time series GCP-network (http://www.second-physics.ru/lib/articles/shnoll/shnoll_gcp.pdf)
182. Study of the azimuthal manifestation of the local time effect in the Red Pyramid (Dahshur) (http://www.lah.ru/expedition/egypt2009/otchet_rp2006.pdf)
183. Kravchenko Yu.P., Kalashchenko N.V. On the issue of registration of electromagnetic radiation of the human body for the purposes of medical diagnostics // Parapsychology and Psychophysics No. 4 (16) 1994 ([http://aeninform.org/sites/default/files/pp_rus_archiv/94-4/43-49\(4-94\).rtf](http://aeninform.org/sites/default/files/pp_rus_archiv/94-4/43-49(4-94).rtf))
184. Kravchenko Yu.P., Saveliev A.V. Development and application of devices for measuring superweak fields of natural radiation // Proceedings of the conference "Torsion fields and information interactions -2009" (<http://www.second-physics.ru/sochi2009/pdf/p99-113.pdf>)
-
- 185.A.S. (USSR) No. 1828268 dated February 13, 1990. A method for studying electrostatic surface fields. Kravchenko Yu.P. and etc.
186. Andreev A.A., Bykov S.A. Device V.E.G.A. and its application for the study of GPZ, aura and fine-field structures // Torsion fields and information interactions - 2010. Proceedings of the II International Scientific and Practical Conference, Tambov. September 28-29, 2010 - TSTU, 2010 (<http://www.second-physics.ru/tambov2010/tambov2010.pdf>)
-
187. Andreev A.A., Bykov S.A., Demyanov V.A. On the physical mechanism of the manifestation of fine-field structures in three-dimensional space (On the question of measuring

- "thin" fields with IGA-1 equipment) // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p223-241.pdf>)
188. Krinker M., Pismenny L. What stands beyond Dowsing and Feng Shui? – New York 2006.
189. Krinker M., Pismenny L. Method And Apparatus For Detecting And Analyzing Pathogenic Zones, USPTO Publication US-2007-0015990-A1, 2007, USA. Available: www.uspto.gov
190. <http://www.freepatentsonline.com/y2007/0015990.html>
191. M. Krinker. Spinning Electric Vector Analyzer, SEVA. Theory of Operation and experimental test. Collection: Biophysical Method. Contemporary Research. MNTRES, M.2008, p.5-31.
192. M. Krinker, A. Goykadosh. Mapping Geo-Pathogenic Zones and Required Instrumentation, IEEE LISAT2010 Conference. May 2010.
193. Andreev A.A., Zhigalov V.A., Kravchenko Yu.P., Krinker M. What does the IGA-1 device and its analogues detect? Effects and Hypotheses // Torsion Fields and Information Interactions - 2010. Proceedings of the II International Scientific and Practical Conference, Tambov. September 28-29, 2010 - TSTU, 2010 (<http://www.second-physics.ru/tambov2010/tambov2010.pdf>)
194. Kosov A., Rusanov A., Pavlenko A. On the problem of protecting people and animals from the negative impact of electronic technology // Torsion fields and information interactions - 2010. Proceedings of the II-nd international scientific and practical conference, Tambov. September 28-29, 2010 - TSTU, 2010 (<http://www.second-physics.ru/tambov2010/tambov2010.pdf>)
195. Radyuk M.S. Phantom effect // Quantum Magic, 4/2010 (<http://quantmagic.narod.ru/volumes/VOL742010/p4139.pdf>)
196. Leskov L.V. Revealing the secrets of the void. In book. "Five steps beyond the horizon." M.: Economics, 2003 - 262 p.
197. Zhigalov V.A. Hypothesis of highly penetrating flows of coherent Bose radiation // Torsion fields and information interactions - 2009. Proceedings of the international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p164-175.pdf>)
198. <http://www.princeton.edu/~pear/publications.html>
199. R. Peoc'h. Psychokinetic Action of Young Chicks on the Path of An Illuminated Source // Journal of Scientific Exploration, Vol. 9, no. 2, pp. 223-229, 1995 (http://www.scientificexploration.org/journal/jse_09_2_peoch.pdf)
200. Axion Generation Test Video (<http://www.youtube.com/watch?v=xvRQLLHzbCA>)
201. Dulnev G.N. In search of a new world. Description of scientific experiments on the study of psychic abilities. – Ves, 2004, 286 p. (http://www.second-physics.ru/lib/books/dulnev_v_poiskah_novogo_mira.zip)
202. Akimov A.E., Okhatrin A.F., Finogeev V.P. and others. Visualization, processing and analysis of torsion information on carriers of space images // Horizons of science and technology of the XXI century: works. T.1 / Intern. in-t theor. and appl. Physics of the Russian Academy of Natural Sciences. - M.: FOLIUM, 2000. - S.101-128. - Bibliography: 45 titles (http://www.second-physics.ru/lib/books/gorizonty_XXI.pdf)
203. Krasnobryzhev V.G. "Photospin" system for searching for mineral deposits // Torsion fields and information interactions - 2009.

- Materials of the international scientific conference. Sochi, 2009 (<http://www.second-physics.ru/sochi2009/pdf/p510-514.pdf>)
204. Patent Mayko V.P., Ivanov V.A., Tashlyk M.P. No. 2181204 dated 12/26/2000. "Method of measuring the phase shift increment characterizing the energy of the noise electromagnetic process" (<http://ru-patent.info/21/80-84/2181204.html>)
205. Akimov A.E. Torsion communication - the basis of space information transmission systems based on new physical principles // Horizons of science and technology of the XXI century: Proceedings. T.1 / Intern. in-t theor. and appl. Physics of the Russian Academy of Natural Sciences. - M.: FOLIUM, 2000. - S.52-66. - Bibliography: 20 titles. (http://www.second-physics.ru/lib/books/horizonty_XXI.pdf)
206. World-First Public Demonstration of Telecommunications free from Electric Smog // Raum & Zeit 2001/114 (<http://www.cheniere.org/references/G-COM%203.pdf>)
207. Gorokhov E., Zamsha V., Krinker M., Shkatov V. On the likely influence of the External Consciousness (V.S.) on the structure of signals received with the help of technical receivers of thin fields // Proceedings of the 15th International Conference "New in ufology and bioenergy informatics", Moscow, October 22–23, 2011 (in print).
208. Lebedev V.A., Prokhorov S.G., Prokhorov S.S., Simonova O.A., Chernikina E.D. Abnormal local energy-information impacts of the planet's georeactive zones on physical, chemical and biological objects and humans // Torsion fields and information interactions - 2010. Proceedings of the II-nd international scientific-practical conference, Tambov. September 28-29, 2010 - TSTU, 2010 (<http://www.second-physics.ru/tambov2010/tambov2010.pdf>)
209. Lebedev V.A., Prokhorov S.G., Prokhorov S.S., Simonova O.A., Chernikina E.D. Non-local energy-information impacts on experimental and control samples of physical and biological objects // Torsion fields and information interactions - 2010. Proceedings of the II-nd international scientific and practical conference, Tambov. September 28-29, 2010 - TSTU, 2010 (<http://www.second-physics.ru/tambov2010/tambov2010.pdf>)
-