## How to design free energy generators according to law of symmetry

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Power generators that do not use fuel, wind, sunlight, and other known sources have become an area of active practical research today. When analyzing the operation of such devices, the question arises about the nature of the origin of excess energy. It is necessary to overcome the barrier of thinking, which was postulated by the ancient Greek philosopher Melissus of Samos, about 500 BC: "The something cannot be created from nothing." It is advisable to start considering this topic with the question of the structure of the space in which unusual energy conversion processes occur with an efficiency of more than 100%.

The theory of the structure of space and time is one of the most fascinating areas of modern science. Reasoning about parallel worlds becomes the basis not only for the science fiction writers, but also the topic of serious scientific publications. The concept of "energy" and different ways of changing the form of energy is closely related to understanding the structure of space-time.

A classic example of a concept that is directly related to the design of free energy generators is the famous theory of Academician Gustav Naan, reported in 1964. He put forward the hypothesis of a symmetric Universe, according to which there is an anti-world, and his concept differs from the classical anti-world, which was described by Paul Dirac. Academician Naan writes: "Any reasonable field theory that satisfies the principles of the special theory of relativity turns out to be true also after replacing particles with antiparticles while simultaneously reflecting all space-time coordinates" [1]. In Dirac's theory, the reversal of space is not considered. There is only a world and an identical anti-world. Several parallel worlds are considered in the theory of Academician Naan.

Let's clarify that for the anti-world all physical laws are the same as in our world. From our point of view, anti-world time flows in the opposite direction, and their space undergoes a mirror image. Of course, "reverse direction" and "mirror image" should be understood as relative concepts. By analogy with the theory of relativity, Academician Naan called this situation "the principle of the relativity of the world."

This raises the most interesting question about the total energy of the system. Academician Naan writes: "The mass of the Universe (the world + antiworld system) is identically equal to zero, since all the masses of the world are balanced by the same antiworld masses with the opposite sign. The same is the case with charges. On average, a totally symmetrical universe consists of only one void. Therefore, it can arise from the void with strict observance of all conservation laws. The statement about the possibility of emergence from nothing (emptiness, vacuum) with strict observance of conservation laws should seem extremely paradoxical. After all, the meaning of conservation laws consists in the fact that nothing arises from nothing. Nothing cannot generate something. The hypothesis being developed here in no way disputes this position. Nothing can not generate only something, but it generates more... It generate something and an anti-something at the same time! "

In the writings of Academician Naan there is an interesting analogy with the ancient Indian concept of zero, which is seen as an infinite array of balanced possibilities. Zero in Indian mathematics is not "nothing", but it is latent possibilities for creation that are in a balanced state.

Academician Naan writes: "The hypothesis proposed here is ultimately based on the even simpler fact that the equality (-1) + (+1) = 0 can be read and vice versa, from right to left: 0 = (-1) + (+1) or even so  $0 \rightarrow (+1) + (-1)$ . The last equality expresses not only cosmology, but also cosmogony. The initial "building material of the Universe" is emptiness, vacuum".

An important conclusion from the concept of "symmetric Universe" is that there is no law of entropy growth in it, that is, the thermodynamic paradox of thermal death of the Universe does not work [2]. Consequently, in Nature there is no law of the transition of any kind of energy into dissipated thermal energy, and the reverse process of concentration of the energy of the environment for performing useful work is also admissible. Thus, the balance of energy processes in the Universe is maintained.

Let's consider this issue in more detail. The conversion of thermal energy from the environment was actively pursued by P.K. Oshchepkov, A.F. Okhatrin, E.G. Oparin and other researchers. Pavel Kondratyevich Oshchepkov is known as the founder of Russian radar equipment. In 1967, Oshchepkov created the Public Institute for the Problem of Energy Inversion, in Moscow, under the Committee for the Rational Use of Material Resources. Oshchepkov wrote [3]: "Let powerful energy systems provide large factories and industries with electricity. The mass consumer, especially in the rural areas of the North of Russia and Siberia, can be equipped with mini-installations that convert the energy of the environment into electricity of one or two kilowatts power level. This is enough to provide one apartment with energy for lighting, heating and other needs."

Unfortunately, the economic interests of fuel corporations today do not allow the use of such technical solutions. The people are still forced to pay network power corporations for electricity and heat supply.

Next, another example from the history of science. The concept of entropy is associated with the natural transition of thermal energy from a hotter body to a colder one. Konstantin Eduardovich Tsiolkovsky wrote about the possibility of the reverse process. He did not accept the position of classical physics about the inviolability of the law of heat dissipation and a unidirectional increase in entropy. In his article "The second law of thermodynamics" [4], he refers to the postulate of Clausius, who wrote the following about heat: "Heat cannot by itself pass from a colder body to a warmer one" [5]. From this remark, Tsiolkovsky concludes that there is a possibility of an antientropic transfer of heat from a colder body to a hotter one, that is, the possibility of extracting dissipated heat from the environment. Of course, heat can be transferred in this way "not by itself", but under certain conditions, in certain devices and structures. Real generators of free energy, which use such an anti-entropy process, can be built on the basis of charge-discharge cycles of nonlinear capacitors or magnetization reversal of ferromagnets. Nikolai Emelyanovich Zaev wrote about such devices back in 1991: "Another way of using ("concentrating", according to Friedrich Engels) the dissipated energy may be based on the property of nonlinear capacitors to change their capacitance depending on the magnitude of the electric field ... Although this additive is usually extremely small, yet there are dielectrics that provide an addition of up to 20% in such a capacitor. Consequently, already now their efficiency is 120%, and this is not the limit. Here, too, it turns out that discharge is not a mirror image of charging. If now we assemble an oscillatory circuit with such a capacitor and a power of 1000 W, this circuit will not only be self-sustaining, it will be able to give 200 W of power to the side, to the payload. Needless to say, this condenser will be cooled, and the heat of the environment will flow to it (its exergy will become negative) "[6]. In more detail, the technical details of these systems are shown in the H.E. Zaev RU 2227947 dated 11.09.2002.

Returning to the theory of parallel worlds, let me remind you of the connection between the process of entropy growth and the usual direction of the course of time in our space. The reverse process must have the opposite direction of the passage of time. The famous scientist Nikolai Aleksandrovich Kozyrev [7] made interesting conclusions about the possibility of designing physical systems with a reverse time flow. Moving from astrophysical scales to general questions of mechanics, Kozyrev writes: "The nature of the conditions ... shows that energy in stars is obtained as a result of certain electrodynamic processes. However, the principle that a closed system can produce energy must be deep enough to be contained in simple laws of mechanics. Therefore, first of all, the following questions should be posed: how can a closed mechanical system produce energy and where will this excess energy come from? "

Kozyrev believed that anti-entropic systems can receive additional energy "from the passage of time," that is, by interacting with the anti-world.

Let's return from the questions about energy conversion, negative entropy and the reverse passage of time to the topic of parallel worlds. In a 1964 article [1], Academician Naan spoke about the symmetry of the world and anti-world. Later, he formulated a hypothesis about seven parallel worlds, taking into account possible combinations of three components of the universe: space, time and matter [8].

The development of this concept can be substantiated without involving three components, according to the theory of Academician Naan. It is enough to consider variants of reflection (reverse) of three spatial coordinates. They give eight variants of three-dimensional worlds, forming a single structure of a higher dimension. It is necessary to take into account that each of the three-dimensional worlds has its own direction of the time vector, therefore, these are four-dimensional systems. The higher dimensional system has five dimensions. In this system, there is a point at which all eight time vectors are connected, the speed of time at this point is zero.

To illustrate this concept, you can use the XYZ rectangular coordinate system familiar to us, taking into account the plus and minus signs for each dimension. The sector of space, located within three positive coordinates + X + Y + Z, conventionally denotes

our world, in which we observe ordinary processes along our time vector from the past to the future.

In such a system, next to our space, there are seven more options: -X+Y+Z, -X-Y+Z, -X+Y-Z, -X-Y-Z, +X-Y-Z, +X-Y+Z, +X+Y-Z ... All eight parallel spaces have a common point of "zero time course", the so-called "zero-transition".

From the point of view of complete symmetry, here we see four pairs of antiworlds. For example, our world + X + Y + Z corresponds to the symmetric antiworld –X-Y-Z. The other six worlds can be called parallel in relation to our world.

So, in this model of a symmetric five-dimensional Universe, there are eight parallel worlds. An illustration of this model is Kepler's stella octangula. The vectors outgoing from its central point to the vertices will display eight vectors of the time course of parallel worlds.

Let's return to the question of the practical application of this beautiful theory in energy projects that do not require fuel or a primary source of energy.

Academician Naan wrote about powerful energy phenomena of an astrophysical scale [1, p. 437]: "From the point of view of the concept developed here, the colossal energy yield characteristic of the processes listed above does not pose a problem at all. Any energy can be pumped out of the vacuum, provided that the appropriate mechanism ensures the extraction of the same amount of energy for the anti-world. The sum of recovered energies is equal to zero. "

Of course, the words of Academician Naan about the "appropriate mechanism" in the antiworld should not be taken literally. We cannot create structures in the anti-world, we are talking about a special electromagnetic or mechanical system in our real world, which is built according to the laws of symmetry of the Universe. The task of the free energy generator designer is to organize two opposite balanced energy processes in our world. Each of these processes will provide power in the payload, while not changing the total "zero" energy balance of the Universe.

This principle expands the understanding of the law of conservation of energy and matter. In 1996, in my report at the conference "New Ideas in Natural Science" [9], the following formulation was proposed: Any amount of energy can be created. The law of balance requires the creation of any energy process paired with the opposite energy process. Mutual compensation of a pair of processes can take place both in space (spatial separation) and in time (chronal separation).

It is interesting to note that in 1996 I was not familiar with the work of Academician Naan. The idea of symmetry of energy processes as a way to obtain energy from vacuum came after studying the theory of virtual particles of vacuum, photons and antiphotons, in the course of lectures by Richard Feynman.

At this conference in 1996, I showed examples of designs of energy generators in which this law of maintaining balance is implemented. One of the designs is known as the "Frolov transformer" or "F-machine", Fig. 1 shows a diagram of the experiment and a photo of this demonstration installation.

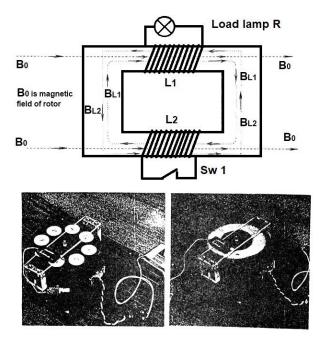


Fig.1 Scheme and photo from the Collection of reports of the conference "New ideas in natural science" 1996

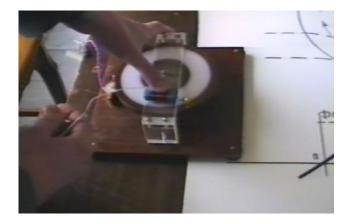


Fig. 2 Photo of the experiment with a rotor and an F-transformer, 1996

These designs implement the principle of spatial separation of two processes, due to one common primary source. In this case, the magnetic field is generated by a permanent magnet rotor. Due to partial mutual compensation of secondary processes (magnetic fields of induced currents in two branches of the ferrite core), their response to the primary energy source is significantly reduced. The efficiency of such an F-generator or F-transformer can be much more than 100%.

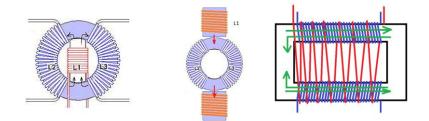


Fig. 3 Design options for the Frolov transformer, 1996

Later, analogues of this design appeared, for example, "Markov transformer" and "Heinz transformer".

The theory of symmetry of the Universe and the construction of multidimensional spaces look fantastic, but their study provides fairly simple practical solutions. Let's consider an example of "chronal separation" of two energy processes. A simple phase shift of an alternating current in a capacitive and inductive load makes it possible to create resonance, that is, symmetrical antiphase processes, which together give zero effect on the primary source of oscillations. Real heat losses in current conductors, of course, must be taken into account, but their value is much less than the received power at the output.

At the dawn of electrical engineering, this use of alternating current caused genuine surprise among the public. For example, Jean-Claude-Van Ostwald [10] wrote in 1914 about an interesting situation in an alternating electric current circuit: Since the capacitance is under the action of a variable electromotive force, then the total current flowing through this system is not equal to the sum, but to the difference between the currents passing through the two indicated branches.

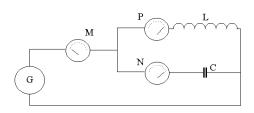


Fig. 4 AC circuit diagram with inductance and capacitance

So, alternating current understands "addition" in its own way, and since it is not in our power to retrain it in our way, we ourselves have to apply to its customs. The introduction of a capacitance, in a sense, compensates for the effect of self-induction ... Let us begin to gradually change the self-induction by pushing in the iron core. We will ensure that the current through the coil becomes equal to 80 Amperes, that is, the same value that we observe simultaneously in the branch with the capacitor. What happens under these circumstances? You, of course, guess: since the total current is equal to the difference between the currents passing through the branches, it will now be equal to zero. An absolutely incredible picture: the machine gives a current equal to zero, but splits into two branches, 80 Amperes each. Not a bad example for a first acquaintance with alternating currents, isn't it? "

Note briefly that constructions with two opposite processes are not the only option. The balance can be provided by several processes, subject to their mutual compensation.

This concept makes it possible to develop not only energy. The law of conservation of momentum, from a new point of view, can also be understood as the law of conservation of symmetry of counter processes. On this theoretical basis, new technologies are being developed for creating the motive power of aircraft, in which the principle of jet mass ejection outside the aircraft is not applied. In the 1997 article

"Trilateral spacetime effect" [11], the author considered the so-called "three-sided space-time effect", since the generation of free energy can cause noticeable antigravitational and chronal effects. In the book "New Space Technologies" [12], these issues are discussed in more detail.

The real technical solutions and experiments shown above perfectly illustrate the concept of Academician Gustav Johannovich Naan. The theory of a symmetric universe gives us the opportunity to understand how the universe exists forever, and without the cost of matter and energy. Thus, we can design non-fuel energy sources of any power without violating the laws of Nature, but following its laws of symmetry.

## References

1. Naan G.I. "Symmetrical Universe", Tartu Astronomical Observatory Publications. 1964. Volume XXXIV. No. 6.

2. Ambartsumyan V.A. "Development of Astronomy in the USSR". Moscow, "Science", 1967.

3. Oshchepkov P.K. "Life and Dreams", Moscow Worker, 1967 See also the article by P.K. Oshchepkov. "Can Humanity Use Environmental Energy", 1943

4. Tsiolkovsky K.E. "The second law of thermodynamics", Kaluga, S.A. Semyonov, 1914

5. Clausius, Poggendorff's An., Vol. 81, p. 168, 1850.

6. Zaev N.E. "Close distance of power engineering", Journal of the Russian Physical Society, No. 1, 1991

7. Kozyrev N.A. "Selected Works", 1991. Ed. LSU

8. Radunskaya IL, "Quants and Muses", Moscow, "Moscow Textbooks", 2006, p. 349-351.

9. Frolov AV, Report "The work of a potential field", Collection of reports of the conference "New ideas in natural science", St. Petersburg, ed. "PiK", 1996.

10. Jean-Claude-Van Ostwald "Electricity and its applications in the public domain" Printing house IN Kushnerev, Moscow, 1914. p. 463.

11. Alexander V. Frolov, "Trilateral spacetime effect", Newsletter of Planetary Association for Clean Energy, Vol. 9 (2 & 3), April 1997, pp. 10-14.

12. Frolov AV, "New aerospace technologies", Tula, Publishing house of The Tula State University, 2017.

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