

List of Solved Problems of Physics

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This article presents a list of the problems solved within the framework of the “Theory of Nature” by author. “Theory of Nature” is the materialistic physics and cosmology. These are problems of fundamentals of the physics and cosmology. These are problems of fundamentals of the universe, nature and the Universe. These are problems of fundamentals of the dialectical materialism. These are problems of the matter and mass, the elementary charge, the natural units, the fine structure constant, the structure and the evolution of the Universe. These are problems of the insufficiency and discreteness of nature (the Universe).

Below is the list of fundamental problems, the solution of which is given in the author’s “Theory of Nature”[1]. “Theory of Nature” (TN) is completely based on the scientific philosophy of dialectical materialism.

Within the framework of the "Theory of Nature" many problems, questions and tasks of the universe, the foundations of nature, physics, cosmology and dialectical materialism were solved. The list of solved problems and questions is presented below.

These are the problems

1) The problem of matter, as a concrete manifestation, the representation of matter in nature.

Matter in the universe, in nature is represented in the form of discrete material particles - elementary particles. Matter is the content (content) of elementary particles (protons, neutrons, electrons, etc.). Matter is also the content of the Singularity – the material center of the Universe

2) Concrete, the representation of matter in nature: it is a quantum of matter pulsating in the "elementary" rhythm of nature. The quantum of matter forms all elementary particles (EF) in nature. The quantum of matter consists of the minimum amount of matter in nature. This amount is equal to the value $\mathbf{EUM} = \mathbf{UCN}^{-1}$, where $\mathbf{UCN} = \mathbf{1.21030} * \mathbf{10^{44}}$ is a unique constant of nature (Robert Yusupov's constant).

3) The problem of matter as a physical quantity in physics. Matter is introduced into the bosom of physics as the base physical quantity.

4) The problem of a single description and representation of elementary particles and their connection with matter. The content of elementary particles, such as protons, neutrons, electrons, etc. is the "pure" matter of nature, the quantum of matter.

5) The problem of the existence of elementary particles. Elementary particles are discrete matter formations, consisting of the same amount of matter, this is the minimum amount of matter in nature (EUM). All elementary particles (EP) have the shape of a ball, according to the principle of simplicity of nature. The minimum on size EP is called a crupitsa of matter (CM), it has a minimum diameter (EUL) among all elementary particles. CM is a real natural material

reference carrier of the minimum amount of matter (EUM) in nature and the minimum length EUL in nature, it is the same as the diameter of CM.

This properties (amount of EUM matter and EUL as diameter) are the main (base) characteristics (properties) of a crupitsa of matter (CM). Each type of EP (protons, neutrons, electrons, etc.) has its own definite diameter. "Theory of Nature" in its constructions is based on the existence of an EP established in physics. "Theory of Nature" clarifies the meaning of the EP: the elementary particle is a material flesh pulsing in the rhythm of nature, a quantum of matter (and not a solid). EP is a material ball that varies in size (in diameter). As it is established in "Theory of Nature" elementary particle is a four-dimensional ball.

The lower boundary of the pulsation of a quantum of matter in the structure of an EP is CM. The upper limit of the pulsation of a quantum of matter is the EP itself. Pulsating matter, quantum matter (EUM), forming EP. Elementary particle is quite reasonable to consider, as a material pulsing tandem "crupitsa of matter – elementary particle" ("CM – EP"). Elementary particles are indestructible, they can only be transformed from one species into another. One cycle of pulsation of the quantum of matter (EUM) in the EP ("CM – EP") structure is a pair of "quantum squeeze (skhlop) – quantum burst (splash)". The state of the CM (instant of time) corresponds to the completion of the quantum squeeze (skhlop). The state of the EP corresponds to the completion of a quantum burst (splash) of a quantum of matter.

6) The problem of a protracted, deep, systemic, affecting the basics of physics of the crisis in modern physics and natural science. The reasons of this crisis and its connection with the crisis in natural science in the end of XIX and in the beginning of XX centuries are revealed. The main cause of the crisis in modern physics was the departure of physics and the physicists, first of all, at the beginning of XX century from position of the materialism (mechanistic) and the

transition to the position of "physical" idealism, the adoption of the concept of the philosophy of idealism for its armament.

The philosophy of idealism, the school of "physical" idealism brought physics into the swamp, into the quagmire of the modern global crisis. TN and dialectical materialism indicate the way out of physics from this severe crisis (this is also a problem to be solved in the framework of TN) is the transition to the platform of dialectical materialism. Physics is liberated from idealistic partisanship. Physics becomes a materialistic party physics. In this matter, matter acquires in physics the statute of the basic physical quantity. Matter is placed at the forefront of modern physics.

7) The problem of the unique constant of nature. In nature, there is a unique, universal constant of nature $\mathbf{UCN = 1.21030 * 10^{44}}$. Calculation of it and a full detailed proof of this statement is given in the TN. This constant has a universal character. The maximum, total amount of matter in the Universe is expressed in terms of this constant, it is equal to $\mathbf{UCN NUM}$, where \mathbf{NUM} is a natural unit of matter in nature. The total (total) time of the evolution of the Universe is expressed in terms of this constant, it is equal to $\mathbf{UCN NUT}$, where \mathbf{NUT} is the natural unit of time in nature.

Maximum divisibility of matter (by the example of \mathbf{NUM} – the natural unit of matter) is expressed in terms of this constant, $\mathbf{EUM = NUM/UCN}$ or $\mathbf{EUM = UCN^{-1} NUM}$, where \mathbf{EUM} is an elementary unit of matter in nature, which is the minimum amount of matter in nature. This amount of matter is contained in the each quantum of matter and in all elementary particles. The minimum time duration (\mathbf{EUT}) in nature is expressed in terms of the same constant (more precisely through the inverse value of this constant), $\mathbf{EUT = NUT/UCN}$ or $\mathbf{EUT = UCN^{-1} NUT}$.

8) The problem of the return of physics to the bosom of materialism on the platform of dialectical materialism. Since the beginning of XX century to this day, physics stands on the positions of idealism, physicists adhere to the ideology of the philosophy of idealism, "physical" idealism "rules" physics. Physics as a matter of fact disassociated itself, departed from the line of materialism, turned away from materialistic nature. TN assumes responsibility for the transition of modern physics to the rails of dialectical materialism and copes well with this task and with this problem.

9) The problem of cognition and discovery of the basic, fundamental, natural, universal, material process underlying the functioning and the entire evolution of the Universe. This is the process of radiation of matter by the Singularity, the material center of the Universe. This process takes place in strict periodicity, in accordance with the rhythm of nature. In each "natural" step (beat) of the rhythm of nature (this corresponds to the time of NUT), the Singularity radiates a strictly defined, the same amount of matter (NUM).

This matter goes exclusively and only on the formation of material bodies of nature, on the formation of the entire Universe. The radiated matter, having received an impulse from the Singularity, begins to move away from the Singularity. This movement occurs at the speed of light in vacuum. All galaxies fly from the center of the Universe, from the Singularity with the maximum speed in nature, characteristic for the moment of radiation of the matter of the galaxy from the Singularity. This is own rate of take-off of galaxies from the center of the Universe remains unchanged.

The maximum speed in nature decreases with time. For the modern age of the Universe, the maximum speed in nature corresponds to the speed of light in a vacuum. All this in turn means

that our Universe expands at the speed of light in vacuum. But the galaxies formed earlier, fly away from the center of the Universe with velocities greater than the modern maximum speed in nature, which is equal to the speed of light in a vacuum.

10) The problem of the structure and evolutionary development of the Universe. The Universe is a dynamic, expanding, cosmological, material, two-unit object, the tandem "Singularity- Universe" (SU). It is quite reasonable to imagine the following symbolic equality "Universe = Singularity + Universe²", where the Universe² is part of our Universe beyond the Singularity.

11) The problem of Singularity (the material center of the Universe). Singularity is the material center of the Universe, emanating, radiating matter. Since amount of the matter in the Universe is limited, and equal to UCN NUM ($UCN = 1.21030 * 10^{44}$), then there was a moment in the past, when all the matter of the Universe was collected in the Singularity.

At this moment, the Singularity was the largest size (diameter). The whole Universe consisted of one Singularity, surrounded by a vacuum (emptiness, absolute emptiness). The Universe as such and as the second part of the tandem SU, which is outside the Singularity, did not exist. This was the moment preceding the emergence, formation of our Universe. Because of the simplicity of nature, Singularity is a material sphere. The main function of the Singularity is defined. The main purpose of the Singularity is determined.

Singularity is the main and only generator and supplier of all matter to the Universe. Matter is radiated by the Singularity into the Universe in strict periodicity, in the rhythm of nature.

Singularity sets the rhythm of the whole Universe, sets the rhythm of the Universal time. Since matter constantly radiates in the rhythm of nature, the Singularity will gradually diminish in size (in diameter) with time. With inexorable logical inevitability and necessity, in the distant future there will come a moment when all the matter of the Singularity will be radiated outward and become the matter of the Universe.

All matter of Singularity (pra-matter) will go to the Universe. Singularity will become empty. This will be the moment of completion of the evolution of our Universe. But according to TN, the empty Singularity does not degenerate into a point, it will still be a huge cosmological object, of impressive size. Perhaps some will remain the core of most of the Singularity, containing matter in a particular state. This matter will be different from the matter of the Singularity (primary matter), which participates in the process of radiation of matter. This matter will be different from ordinary matter, which is contained in the Universe in the elementary particles. But this matter will play its further role as a "huge universal magnet (pump)", which will collect all the matter of the Universe back into the Singularity.

There will be, so-called Big Collapse (Big Skhlop) (BS) of the Universe. As a result of the BS all the matter of the Universe in a very short time, "collapses" (gathers) into the original Singularity. Big Collapse (Big Skhlop) will be the final chord in the evolution of the Universe. BS phenomenon will become a material "first-key" for the beginning of a new cycle of radiation of matter by the Singularity and for the beginning of the evolution of the new universe. This universe will become the successor of our Universe. Our Universe will collapse into oblivion, cease to exist. Nothing, no information from our Universe will not remain. No information about our Universe will be preserved anywhere and will not be transmitted "by inheritance". Only matter will remain. This matter will be collected in the process of the Big

Collapse (Big Skhlop) in one place. This matter will be concentrated in the form of a crupitsa of matter in the Singularity.

12) The problem of the beginning and completion of the evolution of the Universe. This, in other words, the problem of the Big Skhlop. Big Skhlop is the final moment of the evolution of our Universe and at the same time is (serves) a material "firstton" (first-push) in the origin, birth of a new universe, the heiress of the old. From the point of view of the "Theory of Nature" with its procedure of the Big Skhlop process, the Big Bang Theory turns out to be a false theory that does not correspond to the nature that does not correspond to the evolution algorithm of the Universe that does not correspond to the truth.

13) The problem of finding, determining the algorithm for the evolution of the Universe. The algorithm of the evolution of the Universe, discovered by the "Theory of Nature" is another solved problem of the universe. The evolution of the Universe strictly follows its algorithm of evolution. We live by the algorithm of the evolution of the Universe. The algorithm of the evolution of the universe, discovered by the "Theory of Nature" is the law of nature.

14) The problem of the space of nature (the lack of space in nature). According to the principle of simplicity of nature, matter, radiated by the Singularity into the Universe. This matter is used exclusively for the formation of elementary particles. "Estimate" of nature does not provide for the costs of the spatial matter's flesh. Space, as such (matter's flesh), does not exist in nature. This solves the problem of the falsity of the Theory of relativity, as a science.

15) The ether problem (the absence of ether in nature). According to the principle of simplicity of nature, matter emitted by the Singularity into the Universe is used exclusively for the formation of elementary particles. "Estimate» of nature does not provide for the costs of ether. Ether, as such (matter's flesh), does not exist in nature. This solves the problem of the falsity of all possible theories of the ether.

16) The problem of God (the absence of a god in nature and beyond nature). According to the principles of nature "nature is simple and economical", "nature is self-sufficient" is no God exists either in nature or outside nature. Nature perfectly does without God. Nature does not need God, space and ether. Nature is self-sufficient. There are no sneaky, no supervisor, no clerk, no master, no Lord, no God at nature. Nature develops according to its own laws and according to its logic, the logic of nature.

17) Problem of the expansion of the Universe. In nature, there is a process of motion (movement) of matter from the center of the Universe. This matter received the initial impetus, impulse from the Singularity. Matter moves in a vacuum by inertia radially away from the Singularity (the center of the universe). That's the reason for the expansion of the Universe. Expansion of the Universe occurs with maximum speed in nature.

This velocity (maximum speed in nature) is a quantity that decreases with time. Each NUM and each galaxy formed by their NUM moves away from the center of the Universe with its own (fixed, constant!) maximum speed in nature, characteristic of the moment of radiation of matter (NUM) by the Singularity. This speed exceeds the speed of light in a vacuum, which is only the maximum speed in nature for the modern era of the Universe. But the maximum speed in

nature as a characteristic of nature decreases with time and for the modern age of the Universe it is equal to the speed of light in a vacuum.

18) The problem of time and its connection with matter. This connection is expressed by identity: **time=matter** – time is matter. This connection is inherent in nature itself in the process of radiation of matter by the Singularity. This is a strictly rhythmic process. This is a standard process of natural Universal time. In every "natural" cycle (NSN) of the rhythm of nature, the same amount of matter (NUM) is emitted. This process establishes a one-to-one correspondence between the "natural" cycles (NSN) of the rhythm of nature and the radiated matter (NUM).

In fact, one "natural" cycle, step (NSN) of the rhythm of nature is equivalent to a "natural" unit of dimensionless time. One "natural" unit of matter (NUM) emits one natural cycle (NSN) of the rhythm of nature. Here is the direct, inseparable, organic natural connection between the matter of nature and time.

Time can be measured by the quantity of "natural" cycles (NSN) of the rhythm of nature or by the quantity of matter in the NUMs, radiated by the Singularity.

19) The problem of the unity of time, motion and matter. The matter entering the Universe receives the initial impulse of motion from the Singularity. This momentum (impulse of motion) of matter remains after radiation, after falling matter into the Universe (beyond the Singularity). In this natural, standard, fundamental process of radiation of matter, time, matter and movement are inextricably, indissolubly, organically merged

Here is a truly materialistic explanation of this unity, the triune unity of time, movement and matter. Here is the true primary source (the radiation of matter by the Singularity) of any movement in nature, in the Universe. This is another fundamental problem of the Universe and nature solved by the "Theory of Nature".

20) The problem of a unit of matter, as a unique, universal unit of nature. Since matter is emitted by the Singularity in equal quantities in the strict rhythm of nature, it follows the unit of matter to take that matter which is radiated into the Universe from Singularity for one natural cycle (step, NSN) of the rhythm of nature. This unit of matter should be called the natural unit of matter (NUM). There is a one-to-one, natural, inseparable relationship between matter (NUM) and the natural cycle, step (NSN) of the rhythm of nature.

We should come up with a separate name for the unit of matter. Let this be a "merilo". That is, we accept the agreement that is **merilo=NUM**. Merilo will be a unique and universal unit of nature. Merilo is a unique and universal unit of nature in reality. This unique and universal unit of matter nature (and we together with nature) measures its matter.

We must go from nature. Nature is primary. And in nature there is nothing but matter and various forms of its movement. The duration of the natural cycle (step) of the rhythm of nature will be called the natural unit of time and denoted by NUT. In view of what has just been said about the merilo and previously said about the identity of time and matter, we can write the following identities: **NUM \equiv 1 merilo, NUT \equiv 1 merilo, NUT \equiv NUM**. The last identity is nothing more than a defining time as the physical quantity in the "Theory of Nature". Time is determined through the physical quantity matter. We do not find such an in-depth true understanding of the world order in modern physics.

21) The problem of mass and its connection with matter. Physicists since I. Newton try to solve the problem of mass and its connection with matter. But it is impossible to do this within the framework of idealistic modern physics, as it is impossible to understand nature from the standpoint of religion and priests. Only from the position of dialectical materialism, from the position of the "Theory of Nature", from the standpoint of materialistic physics, that is physics, which puts matter in place of the base (main) physical quantity in its theory we can find such solution.

We know that an elementary particle (EP) has two basic properties: it contains matter (EUM) and it has a diameter d . Let us denote the mass of the EP by m . Then the mass of elementary particle (EP) defined as the ratio between of the matter and diameter of EP

mass≡**matter/diameter** or simply или **$m \equiv \text{EUM}/d$** . This is quite natural and completely reasonable. Thus easily and simply, one can say elegantly solves problems of mass and matter in materialistic physics, in "Theory of Nature". In modern physics, this problem has not yet been solved.

22) The problem of the value of the elementary electric charge (e) and its connection with matter, with a minimum amount of matter in nature (EUM). This problem is solved within the framework of the "Theory of Nature". This is the solution **$e \equiv \sqrt{\text{EUM}}$** . Note that in modern physics there is no such solution.

23) The problem of fine structure constant (FSC) or constant A. Sommerfeld . The fine structure constant (FSC) is, according to TP, not the fundamental physical quantity, as

considered in modern physics theory (MFT) and is only connection coefficient between units of the physical values length, mass and time in SI: 1 meter, 1 kilogram, 1 second. Here is the formula for determining the FSC $\alpha \equiv \frac{1 \text{ s}}{1 \text{ m} * 1 \text{ kg}}$. It should be said that the problem of PTS is facing physicists since 1916. And this fundamental problem of physics is solved by the "Theory of Nature" of author.

24) The problem of natural units of nature (mass, length and time). As a result of solving this problem, it is established that a crupitsa of matter is a material carrier and a standard of these units, and the identity between time and matter is the same as physical homogeneous quantities: time=matter (**EUT** \equiv **NUM**). The minimum values of matter, time and length in nature and the maximum value of the mass in nature are found. They are characteristics of a crupitsa of matter and the Singularity process.

25) The problem of dependence in the aggregate of physical quantities of mass, length and time. In modern physics, these quantities are considered independent. In the "Theory of Nature" it is established that physical quantities of mass, length and time are dependent in aggregate quantities. This dependence for natural units of nature (length, mass, time) is expressed by the identity: (mass*length)/time=1 1, where the right-hand side is dimensionless 1. The same dependence for units in SI is expressed by the identity:

$$\frac{1 \text{ kg} * 1 \text{ m}}{1 \text{ s}} \equiv \alpha^{-1} \mathbf{1} \text{ or } \frac{1 \text{ s}}{1 \text{ kg} * 1 \text{ m}} \equiv \alpha \mathbf{1},$$

where the right-hand side is a dimensionless value and where α is a fine structure constant (FSC).

26) The problem of the finiteness of the Universe. Since the Universe contains a finite amount of matter and the Universe is expanding at a finite speed, the Universe, even at the end of its evolution, when it will be greatest itself, but finite length diameter, will be limited in size. It is known from the "Theory of Nature" that the amount of matter in the Universe is finite (**UCN NUM**). The same finite amount of time (**UCN NUT**) will exist our Universe. It is also known that the Universe expands at a finite rate, with the maximum speed in nature. Therefore, even at the end of its evolution, the Universe will have finite dimensions and a finite diameter. So, and throughout its evolution, the Universe will be finite for all.

27) The problem of the age of the Universe. The problem of the connection between the age of the Universe and the gravitational quantity of the Universe. The modern, current age of the Universe (**51.913** billion years) is defined. The total duration of the evolution of the universe ($2.799 * 10^{34}$ years) is determined. A simple formula for calculating the age of the universe in seconds: $A = \alpha * \{G\}^{-2}$, where α is FSC, and $\{G\}$ is the numeric value in the SI of the Newtonian constant of gravitation. Generally speaking on the site G is the physical dimensionless quantity, the gravitational quantity of the Universe. This quantity is a decreasing with time value. At the same time, the Newtonian constant of gravitation is a constant physical quantity in modern physics. This value, more precisely, its numerical value for the modern era of the Universe coincides with the numerical value of the Newtonian constant of gravitation in SI.

28) The problem of maximum speed in nature. This speed is an analogue of speed of light in vacuum in the terminology of the modern physics. This velocity is a decreasing with time physical quantity. At the same time, the speed of light in a vacuum is a constant physical

quantity in modern physics. For the modern age of the universe, this value is equal to the speed of light in vacuum.

29) The problem of the gravitational quantity of the Universe. This quantity is an analog of the Newtonian constant of gravitation on modern physics terminology. This quantity is a decreasing with time physical quantity. For the modern age of the universe, this value is equal to the Newtonian constant of gravitation.

30) The sixth problem of Hilbert: the mathematical presentation of the axioms of physics. This is one of the problems posed by David Hilbert in his report to the II International Congress of Mathematicians in Paris in 1900. This problem is devoted to the axiomatization of theoretical physics. Theory of Nature is a sample of the solution to this problem.

31) The problem of the evolution of a crupitsa of matter. An algorithm for decreasing the diameter of a crupitsa of matter with time has been determined. It turns out that the standard of length, in which the diameter of CM is used in nature, is not a constant value. This follows from the law of dependence in the aggregate of natural units of mass, length and time. This is the evolutionary dialectical nature of the development of matter in nature and in the Universe. Nature is dialectical at its core. The establishment (postulation) of the theory of modern physics (TMP), that physical quantities mass, length and time are independent quantities turns out to be wrong, turns out to be false. The truth is established by the "Theory of Nature".

32) The problem of the absolute reference frame (ARF) in nature. In nature, there is a material body with which the AFR is connected. This is the Singularity, the material center of the

Universe. The statements of General theory of relativity (GTR) that in nature there is no absolute frame of reference (AFR) turn out to be incorrect, prove to be false.

33) The problem of absolute time. Presented in the “Theory of Nature”, the materialistic YRA model of the universe, the foundations of nature, the structure and evolution of the Universe, uniquely determines the absolute natural Universal time. This time has its beginning. This is the origin (birth) of the Universe. This time will not be infinite. This time will have its end, finish. The completion of the Universal time will be Big Slam (Skhlop) of our Universe.

34) The problem of the unchangeability of the rhythm of nature. The rhythm of nature is strictly constant, unchanging rhythm. This is the absolute rhythm of nature, the Universe. This is the fundamental law of nature. This follows from the law of conservation of matter and its minimal manifestation in nature in the form of a quantum of matter. The time of nature does not slow down its running and does not speed up its running. The statements of the General Relativity on the slowing down or acceleration of the passage of time of nature are a bluff, an illusion, a lie. Thus the General Theory of Relativity is a false science.

35) The problem of determination in the theory of fundamental physical quantities (FPQ): the maximum speed in nature (the analogue in the theory of modern physics (TMP) is the physical quantity of the speed of light in a vacuum), the gravitational quantity of the Universe (the analogue in the theory of modern physics (TSF) is the physical quantity of the Newtonian constant of gravitation), elementary electric charge (electron charge), fine structure constant. There are no defining formulas for these of fundamental physical quantities (FPQ) in the theory of modern physics (TMP). This is another point why TMP can not be considered scientific theory.

36) The problem of the uniform velocity of the movement of all elementary particles in nature. All elementary particles (EP) in nature in a time equal to one elementary unit of time (EUT) are moved to the same distance, equal to one unit of length (EUL or the diameter of a crupitsa of matter). This is the maximum speed in nature. In the terminology of the theory of modern physics (TMP) this is the speed of light in a vacuum. There is no other speed of movement an elementary particles in nature. This is another remarkable conclusion of the "Theory of Nature".

37) The problem of the scientific of the theory of nature or the criterion of the scientific of the theory of nature. The criterion of the scientific theory that studies nature and physics, first of all, includes three main points, moments, positions.

Firstly, the subject material science area (physics), presented material the prototypes should be reflected in the conceptual apparatus of science (physics), in its ideal of conceptual images, categories and terms adequately (in a way). That means that is displaying "material prototype of nature --> ideal image of the theory" must be strictly one-to-one. To each real, material prototype there must correspond only one ideal image, and vice versa, to each ideal image in theory there must correspond one and only one real material prototype of nature from the subject domain of the theory (in nature).

Secondly, the theory claiming the title of science should have in its composition the defining formulas for basic, fundamental physical quantities (for example, for the speed of light in vacuum).

Third, the values of the physical quantities presented in the determining formulas, calculated theoretically by these formulas, must coincide with the calculation of the same quantities, performed by the experimental method.

It should be noted that Popper's criterion, widely used by physicists (the criterion of falsifiability), as a criterion of the scientific theory of the nature, gives an incorrect, false conclusion about modern physics, considering it a scientific theory, whereas, according to the dialectical materialistic criterion of scientificity (presented in TN), modern physics is not the scientific theory.

38) The problem is not the scientific theory of the nature such theories as the modern theory of physics (MTP), Special theory of relativity (STR), General theory of relativity (GTR), the Big Bang theory. The main point, the main argument not of the scientific of these theories about nature is the circumstance that these theories do not reflect matter in their conceptual apparatus as the base (main) physical quantity. Also, all these theories have no defining formulas for such a fundamental physical quantity (FPQ) as, for example, the speed of light in a vacuum.

39) The problem of pseudo-science of General relativity. In addition to the aforementioned shortcomings, this theory postulates, in the first place, the existence of space-time, although as shown in the "Theory of Nature" no space exists in nature, and secondly, affirms the existence of a connection between time and space, although this also does not exist in nature and this also is shown in the "Theory of Nature".

40) The problem of infinity in nature, in the universe. No infinity in nature and in the Universe as it follows from the "Theory of Nature" does not exist. Infinity is not constructive. Only the finite nature (and the Universe) is constructive. Constructivity is an opportunity to recreate, build a model of all (total) nature and explain its evolution and laws. Infinity has neither beginning nor end.

41) The problem of discreteness of nature. According to the conclusions of the "Theory of Nature" nature and the Universe is discrete in all their main indicators. Discrete matter is represented by quantum of matter. Time is discretely, it is represented by time quantum. Quantum of time corresponds to durability of one cycle (ESN) of the elementary rhythm of nature. Durability of one step, cycle (ESN) of the elementary rhythm of nature is equal to one elementary unit of time (EUT). Elementary unit of time (EUT) is minimal time duration in the nature and equal to **$EUT = 6,029\,397\,6282 * 10^{47} \text{ s}$** .

The elementary action in nature is discrete. Firstly, it is the displacement of the elementary particle (EP) by one elementary unit length (EUL) per one elementary unit time (ESN, EUT). Secondly it is one pulse, cycle of the matter quantum inside the elementary particles (EP). This cycle consist of pair "quantum skhlop - quantum burst". All these pulsations of all elementary particles (EP) are strictly synchronized in the nature. All these pulsations occur in the elementary rhythm of nature. One step, cycle of these pulsations is equal to EUT.

42) The problem of the knowability of nature and its laws by man. The whole "Theory of Nature" is a good and clear example of this.

All these problems are solved in the "Theory of Nature" by the author. While working on TN, the author always walked with his grandson Maxim in nature. These walks were very productive. Many unclear points and questions were very productively considered during these walks. For this, Maxim gets out and is declared grateful.

The solution of most of these problems is a candidate for the Nobel Prize in Physics. "Theory of Nature" is the scientific prestige of Russia.

I do not know what such "super-empowering" abilities should be for a great professional, a physicist, so as not to notice all these solved problems in the "Theory of Nature"?! "Blindness" of the specialists experts, professional, academicians, professors, doctors of physics are not explicable in terms of the common and ordinary meaning. Not recognition of TP by the physical community of Russia during for 6 years speaks volumes. This is clear and unambiguous evidence of an the extreme degree of debility, degradation and professional impotence of the Russian physical community. Physical power, the physical party of Russia, deeply disliked the discoveries and achievements in natural science made by the "Theory of Nature". The Party of Physicists of Russia at the beginning of the 21-st century is a depressing example and stands on the positions of extreme reaction and obscurantism.

Not to see all this (as listed in the list of solved problems), not to notice all this, or simply to ignore the outstanding achievements in physics and cosmology given by the "Theory of Nature" it was apparently the purpose of the expert conclusion[2, 3] that was made by the

experts of the main expert center of Russia (ФГБНУ НИИ РИНКЦЭ, FGBNU NII RINKCE Research Institute) on July 7, 2017 in relation to the "Theory of Nature". This is a blatant lie, an obstruction, possibly having a corruption component. The Investigative Committee of Russia should pay attention to this lawlessness of officials from science.

Reference:

The Federal State Budget Scientific Institution "Research Institute - Republican Research and Consulting Center of Expertise" (FSBSI RI RRCCE) was established in 1991 as a multidisciplinary expert organization. It is under the jurisdiction of the Ministry of Education and Science of the Russian Federation.

FGBNU NII RINKCE is one of the leading institutes of the scientific and technological complex of the Russian Federation, which solves problems of expert, scientific, methodological, organizational, technical and informational support of scientific, technical and innovative activities of the Russian Federation.

As you can, after reading the "Theory of Nature", you do not understand that the genius discoveries were made within the framework of the TN, the fundamental problems of the universe, the foundations of nature, the foundations of physics and cosmology were solved, and a revolutionary breakthrough has been made in our knowledge of nature (the universe) and its laws.

Not recognition of the outstanding revolutionary successes and achievements of the "Theory of Nature" from the physical junta, the physical elite, the physical party of Russia is a SHAME of the whole Russian Academy of Sciences (RAS) and its Department of physical sciences! SHAME of the junta, party of Russian physicists who have embarked on the path of progress that hinder the progress of science and physics! The main reactionaries and obscurantists are today in the ranks of Russian physicists. The forces of reaction and obscurantism find full support in the ranks of the party of modern physicists. These are modern realities.

Modern physics is party physics, it is idealistic physics. Idealism is a false philosophical trend. The lie of idealism is transferred to physics and physics ceases to be a science. Idealistic physics is not science. Modern idealistic physics is not a science it's just a near-scientific craft. Adhering to the line of idealism, it is impossible to understand nature and its laws. Adhering to the line of idealism, one can not know the secrets of nature and one can not comprehend the truths of nature. Idealism and lies are not separable. Idealism and lies are two pairs of boots. Idealism and truth are not compatible. Truth is contraindicated in idealism. The party of idealism rules the consciousness of modern physicists. The party of idealism rules modern physics. The school of "physical" idealism took over in physics in the early 20th century. Metastases of "physical" idealism penetrated deeply into the consciousness of most modern physicists. V.I. Lenin warned of the danger that physics would slip into the swamp of idealism in his book "Materialism and Empirio-criticism, Critical Comments on a Reactionary Philosophy"[4] written in 1908-1909.

"Theory of Nature" is a new materialistic physics. This is also party physics. There is no nonparty physics. The basis of materialistic physics ("Theory of Nature") is the scientific philosophy of dialectical materialism. Matter is the basis, essence, substance of nature. Physics is the science of nature. Therefore, in its essence, physics must be materialistic. Consideration of the question (problem, phenomenon) "how and why the physics of the twentieth century has slipped into the position of idealism", is subject to thorough study and in-depth analysis, this problem awaits its researchers. The basic concept in physics is the concept of physical quantity. Matter in modern physics is not a physical quantity. This is the most important error of modern physics. Without this, physics ceases to be a true theory and ceases to be a science. "Theory of Nature" actually introduces matter into the bosom of physics as the base (main) physical quantity. This is the main thing in the "Theory of Nature", in the new materialistic physics. Physics dissociates itself from ideology, and the partisanship of the philosophy of idealism. Physics returns to the position of materialism and passes to the platform of dialectical materialism. Physics returns to the natural sciences. And all this gives us the "Theory of Nature". "Theory of Nature" is the victory of the forces of reason, progress, development and science over the forces of stagnation, reaction and obscurantism.

Misunderstanding of the "Theory of Nature" has been demonstrated over the past 6 years by the whole modern party, junta, elite of Russian physicists. It's sad. But it is a fact.

May 15, 2018

Sincerely, dear readers

Robert Yusupov, a free researcher, a dialectical materialist, a communist.

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