

# **The Universe has a center**

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Two important questions are posed and resolved in this article.

The first question is about the microcosm, the question about the process of pulsation of the quantum of matter, which, as the author believes, is the material “first brick” of nature. A quantum of matter is the smallest amount of matter in nature. Each elementary particle is based on a quantum of matter pulsing in the rhythm and pace of nature.

The second question is about the Universe, about its center. How is the center of the universe arranged and how does it function?

This idea (“The Universe has a center!”) turned out to be very fruitful in my home scientific research on the foundations of nature and the Universe.

These studies began in 2011 (May), after my retirement. Ten years later, in 2021 (August), my book the “Theory of Nature” (TN) was published.

One of the main assumptions, postulates of the “Theory of Nature” is the postulate that our Universe has a center.

I call this center of the Universe the Singularity.

Singularity is a unique natural mechanism.

Singularity is a unique and unique mechanism of generation and formation of matter in nature.

Singularity is the unique and only source, the spring of matter.

The following circumstances should be kept in mind.

First, vacuum is an objective reality of nature.

Second, vacuum is material vacuum dust and emptiness.

Thirdly, there is a distinguished uniform steady motion of material vacuum dust towards the center of the Universe, towards the Singularity.

Fourth, material vacuum dust is a grain of matter. Grains of matter are material vacuum dust. A grain of matter is not in the process of internal pulsation.

Fifth, a grain of matter is a hypothetical elementary particle that is minimal in volume, diameter and maximal in mass.

Sixth, according to the author's point of view, which is described in more detail and thoroughly in the “Theory of Nature”, the material “first brick” of the universe, nature is the quantum of matter ( EUM ).

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The quantum of matter is the minimum portion of matter in nature,  $EUM = UCN^{-1}$ . At the same time,  $UCN = 1.210256 * 10^{44}$  is a unique constant of nature, the Universe.

The quantum of matter is the minimum amount of matter in nature.

A quantum of matter is not an internally statically immobile material firmament.

The quantum of matter is the material flesh pulsing strictly in the rhythm and pace of nature.

The process of matter quantum pulsation is a strictly periodic, harmonic process of internal motion of matter.

A quantum of matter can be imagined as a ball or ball, which is in a constant, continuous, periodic process of compression and expansion.

The lower limit of compression of a quantum of matter is a grain of matter. This is a strictly fixed limit and this is a strictly fixed size and diameter of a grain of matter. The diameter of a grain of matter is the quantum of length ( EUL ) in nature. It should be noted (with reference to TN) that the diameter of a grain of matter is not a constant value, it either increases or decreases with time. If the quantum of length ( EUL ) decreases with time, then this circumstance determines the first type, variant of the Universe. If the quantum of length ( EUL ) increases with time, then this circumstance determines the second type, variant of the Universe. What type of Universe our Universe has is yet to be clarified by experimental physicists. The author in his book “Theory of Nature” (TN) is of the opinion that our Universe belongs to the second type of universe. But this is not the final decision of the author.

A grain of matter is the minimum state of a pulsating quantum of matter. A grain of matter exists for only one moment of time of nature, the duration of this moment of time is equal to 0. In the future, this circumstance will be somewhat refined. And in reality, the duration of stay of a pulsating quantum of matter in the state of “grain of matter” will be different from 0. But this duration will be the same for all quanta of matter.

The upper limit of the expansion (swelling, quantum burst) of a quantum of matter is an elementary particle. Each type of elementary particle (proton, neutron, electron, etc.) has its own size, diameter.

It is the diameter (size) of the upper limit of the matter quantum pulsation that is the main distinguishing feature of the elementary particle type.

The quantum of matter stays in the “elementary particle” state for some time different from 0. The author of the TP believes that the diameter

(size) of the elementary particle, and hence the type of elementary particle (proton, neutron, electron, etc.) is directly dependent on the time duration of the stay of a pulsating quantum of matter in the “elementary particle” state. And it is this time duration that is the main distinguishing feature of the type of elementary particle. Everything in nature at the micro level, at the Planckian scale of being, directly depends on time, on the duration of time.

One cycle (cycle, act) of the matter quantum pulsation process takes place in the minimum time duration in nature, in the minimum time of nature. This fixed minimum time duration is the quantum of time ( EUT ) of nature. Quantum of time ( EUT ) is an unchanging constant value, in quantitative terms  $EUT = UCN^{-1}$ . And the quantum of matter ( EUM ) is also a constant constant, in quantitative terms  $EUM = UCN^{-1}$ . These are facts, these are the laws of nature. All this is established within the framework of the “Theory of Nature” (TN).

But the quantum of length ( EUL ), as noted above, can change over time. Along with the change in the length quantum (and the constancy of the time quantum!) such fundamental characteristics, the parameters of the Universe, as the maximum speed in nature (an analogue of this quantity in modern physics is the speed of light in vacuum) and the gravitational quantity of the Universe (an analogue of this quantity in modern physics is Newton's gravitational constant).

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You, my dear readers, will find even more information about the structure and evolution of the Universe in my book “Theory of Nature” and in my articles on TN posted on two sites proza.ru (<https://proza.ru/avtor/yusrob>) and vixra.org ([http://vixra.org/author/robert\\_yusupov](http://vixra.org/author/robert_yusupov)).

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The figure (Fig. 1) schematically shows the linear limits for the matter quantum pulsation process for some elementary particle  $p$ .

In this case, the following correspondences take place.

The point  $p$  in the figure personifies the elementary particle  $p$ .

Point  $a$  in the figure represents a grain of matter for the modern epoch of the Universe, for the modern absolute age of the Universe, for the modern natural universal absolute time. All this is the same time.

Point  $a$  in the figure (Fig. 1) determines the diameter of a grain of matter for the modern era of the Universe, while its diameter is  $a = A^{0.125} * UCN^{-0.875}$ . In this formula,  $A$  is the absolute age of the Universe or the absolute natural, universal time in the so-called natural units of time of nature ( NUT ). At the same time, there is the following simple relationship between the quantum of time ( EUT ) and the natural unit of time of nature ( NUT ):  $1 \text{ NUT} = UCN \text{ EUT}$ ,  $\text{EUT} = \text{NUT}/UCN$ .

The value  $a$  is exactly the quantum of length ( EUL ) for the current age ( $A$  in units of NUT) of the Universe.

The limits of absolute time change (  $A$  ) of the evolution of the Universe in natural units of time of nature ( NUT ) are as follows:

$$UCN^{-1} \leq A \leq UCN.$$

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According to the TN, the total evolution time of the Universe will be exactly  $UCN \text{ NUT}$ . In our ordinary language, this time will be approximately  $2.8 * 10^{34}$  years (modern Earth years).

According to the TN, the current age of the Universe (for the second version, variant of the development of the Universe) is approximately 124 trillion years, 666 billion, 537 million and 596 thousand years.

According to the TN, the current age of the Universe (for the first version, variant of the development of the universe) is approximately 51 billion 909 million and 867 thousand years.

Due to this limitation and taking into account the formula for the change in the quantum of length EUL with time  $EUL = A^{0.125} * UCN^{-0.875}$ , the limits of the change in the quantum of length in the course and evolution of the Universe (second variant) will be as follows:

$$UCN^{-1} \leq EUL \leq UCN^{-0.75}.$$

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Consider carefully the drawing, drawing, graph (Fig. 1).

The point s (start, begin) in the figure (Fig. 1) represents a grain of matter for the moment of the beginning of the evolution of the Universe, while its diameter is  $s = UCN^{-1}$ .

The point f (finish, end) in the figure represents a grain of matter for the moment of the end of the evolution of the Universe, while its diameter is  $f = UCN^{-0.75}$ .

Point e on the graph corresponds to the value  $e = UCN^{-0.5}$ .

We consider the figure (Fig. 1) for the second variant of the evolution of the Universe, when the diameter of a particle of matter, which is also a quantum of the length of nature, increases with time. This increase occurs from point (position) s (start, begin) to point (position) f (finish, end).

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It is quite clear that the basis of all elementary particles (static state) is a pulsating quantum of matter ( EUM ).

The pulsation of a quantum of matter ( EUM ) occurs per quantum of time ( EUT ). The pulsation limits are either the trajectory “ s - e - s ” (more expanded “ s - a - f - p - e - p - f - a - s ”) or the trajectory “ e - s - e ” (more expanded “ e - p - f - a - s - a - f - p - e ”).



At point p (this is the state of “elementary particle”), the quantum of matter is also “delayed”, but for the time that would be required to pass the trajectory “ p - e - p ”, provided that the process of real pulsation of the quantum of matter would occur over the entire area interval [s, e].

It is clear that for different types of elementary particles, the point p will have its own (the p value will determine the diameter of the elementary particle) and there will be its own “delay” trajectory “p - e - p”, and accordingly, there will be its own “delay” time stay at point p. It can be conditionally considered that “delays” in the state of a pulsating quantum of matter at points a (grain of matter) and p (elementary particle) are some “excited states” of the quantum of matter ( EUM ). The “states of excitation” of a pulsating quantum of matter at different points p (which corresponds to different types of EP) will have some quite definite, fixed time duration, which, ultimately, determines one or another type of elementary particle p (proton, neutron, electron, etc.). etc.).

These are, in general terms, the views of the author of “Theory of Nature” on the process of pulsation of matter quanta.

Considering all of the above, we can talk not about the process of pulsation of a quantum of matter (as it really takes place in nature), but conditionally, for the sake of convenience of narration, we can simply talk about the process of pulsation of the elementary particle (EP) itself. But one must always remember that behind any elementary particle (this is a static state) there is a quantum of matter pulsing in the rhythm of nature (dynamics, movement).

Each elementary particle “contains” the same minimum amount of matter in nature – a quantum of matter,  $EUM = UCN^{-1}$ .

This understanding of the structure of nature at the micro level on the Planckian scale of being is the modern dialectical-materialistic understanding. This is the true understanding of the structure of nature. This is how our nature, the Universe, is arranged. Nature manages



perfectly well without God (the Supreme), without religious lies. Nature manages perfectly well without the lies of bourgeois - idealist philosophy. Nature does well without mysticism and esotericism, without mystical, esoteric lies and other fundamentally false theories, teachings, directions, schools, instructions.

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At the center of the Universe is the Singularity. This is a kind of natural material mechanism that produces matter and radiates it outside, into the surrounding vacuum.

The raw material for the production of matter by the Singularity is vacuum, or rather material vacuum dust, and to be more precise, then grains of matter. In nature, as it seems to the author, there is a distinguished predominant uniform movement of material vacuum dust (grains of matter) to the center of the Universe, to the Singularity. Singularity, like a pump, sucks in vacuum dust and forms NUM-objects, bodies out of it. It seems to the author that all NUM-objects consist of UCN grains of matter. Immediately after their formation or generation, NUM-objects receive an initial impulse from the Singularity and, thanks to this impulse, begin to move in the surrounding vacuum by inertia, evenly and rectilinearly away from the Singularity, from the center of the Universe. It is possible in this connection to speak about the radiation or eruption of NUM-objects by the Singularity. Here it is the original reason for the inseparable connection between matter and motion in nature. Here it is the original cause of the inertia of material bodies. Here it is the original reason for the expansion of the Universe from the center, from the Singularity.

Having received the initial impulse from the Singularity, the newly generated NUM-object begins to move at the maximum speed in nature for the moment of its radiation. The process of formation, generation and

radiation of NUM-objects by the Singularity is a unique, fundamental, basic process in all nature. This is a strictly periodic, harmonic process. This process takes place in the rhythm and pace of nature, at a rate of 1 NUM-object per 1 quantum of time ( EUT ). More accurately and correctly, it should be said that this natural, universal process itself sets the rhythm and pace of nature, of the Universe. At the same time, the mechanism of the Singularity can be reasonably considered as a unique, natural material oscillator. Its operating frequency is UCN cycles per natural unit of time NUT .

Some time after its eruption, the NUM-object breaks up into UCN matter quanta ( EUM ) pulsing in the rhythm of nature. The frequency of pulsation of matter quanta ( EUM ) is the same as the operating frequency of the Singularity, UCN cycles per 1 NUT. In the future, all kinds of elementary particles (EP) are formed from pulsating matter quanta, and first of all, the simplest of them are protons, neutrons and electrons. From these elementary particles (EP) are formed, in turn, the atoms of all known chemical elements. The rest is already known. All material bodies and objects of nature (with the exception of NUM-objects) are formed from the atoms of chemical elements.

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The above assumption of the author about two essentially different variants of the evolution of the Universe has the following further explanation and a more complete and detailed explanation.

The Universe is the largest material object in nature. The Universe is not eternal. The Universe has a limited period of its existence in nature. The total evolution time of the Universe is UCN NUT. In nature, after the end of the evolution of one Universe, immediately without any stops, the evolution of the next (heir to the first) universe begins. At the same time, for the next universe, there is a smooth change of the variant, the version

of the evolution of the universe from the first to the second, and vice versa, from the second to the first. The Singularity never stops. The Singularity works non-stop, continuously, producing, shaping, generating and radiating matter in the form of NUM-objects into the surrounding vacuum. It is the only eternity in nature.

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The first variant, version of the evolution of the Universe assumes a smooth decrease in the diameter of a particle of matter, which is also a quantum of length from the value of  $UCN^{-0.75}$  to the value of  $UCN^{-1}$ . This option corresponds to the formula:  $EUL = A^{-0.125} * UCN^{-0.875}$ .

From this formula it follows (it is clear) that the diameter of a grain of matter, which is also a quantum of length, will vary within the following limits:

$UCN^{-1} \leq A \leq UCN$  – are the limits of change in the age of the Universe, absolute natural, universal time;

$UCN^{-0.75} \geq EUL \geq UCN^{-1}$  – are the corresponding limits of change (reduction) of the quantum of the length.

In the figure (Fig. 1), this option corresponds to the trajectory “f - a - s”.

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The second variant, version of the evolution of the Universe assumes a smooth increase in the diameter of a particle of matter, it is also a quantum of length from the value of  $UCN^{-1}$  to the value of  $UCN^{-0.75}$ . This option corresponds to the formula:  $EUL = A^{0.125} * UCN^{-0.875}$ .

From this formula it follows (it is clear) that the diameter of a grain of matter, which is also a quantum of length, will vary within the following limits:

$UCN^{-1} \leq A \leq UCN$  – are the limits of change in the age of the Universe, absolute natural, universal time;

$UCN^{-1} \leq EUL \leq UCN^{-0.75}$  – are the corresponding limits of change (increase) of the quantum of the length.

In the figure (Fig. 1), this variant corresponds to the trajectory “ s - a - f ”, this is the reverse trajectory for the trajectory of the first variant.

So, according to what variant (first or second) of development does our Universe evolve? This question has yet to be answered by physicists, astrophysicists, and cosmologists.

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Sincerely

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## Reference

1. Yusupov R. A. Theory of Nature (physics of nature, revolution in physics, critical notes on modern physics) : monograph / R. A. Yusupov. – Vladivostok : Publishing House of the Far Eastern Federal University, 2021. – 328 p. ISBN 978-5-7444-4973-5. DOI

<https://doi.org/10.24866/7444-4973-5>.

<https://disk.yandex.ru/i/IWyHHVOUOQEbXg> – TN on the Yandex disk.

<http://philosophystorm.org/books/robert-almazovich-yusupov-teoriya-prirody> – TN on the Philosophical Storm website.

2. Rutkevich M. N. Dialectical materialism. Course of lectures for philosophy. Faculties. M., "Thought", 1973. 527 p.

[https://vk.com/doc317347240\\_578240991](https://vk.com/doc317347240_578240991).

3. Lenin V. I. Materialism and empirio-criticism. PSS. Volume 18,

[https://vk.com/doc317347240\\_581773885](https://vk.com/doc317347240_581773885).

4. <https://proza.ru/avtor/yusrob> – articles on TN on the site proza.ru.

5. [http://vixra.org/author/robert\\_yusupov](http://vixra.org/author/robert_yusupov) – articles on TN on vixra.org.

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