

**MAYAN CALENDAR-THE QUINTESSENCE OF THE
PARALLEL SYSTEM OF THOUGHT, WHICH IS SUBJECT
TO THE FUNDAMENTAL INTERACTION SYSTEM**

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Abstract: *The Mayan calendar contains concentrated knowledge of a bygone civilization, which was able to evaluate and accurately describe the cyclical nature of the processes observed in nature, which causes surprise and practical interest in hidden knowledge. Therefore, the question of deciphering this knowledge is particularly relevant. However, until now, it was not possible to find the principle of their interrelation with the existing laws of physics. The purpose of this work is to show that the Fundamental Interaction System I found (FIS) allowed not only to clarify the mechanics of some laws of astrophysics, but also to find a relationship between civilizations on the basis of the unity of nature, expressed through the FIS. The results of the work showed that quantization of the solar field energy detected by the FIS relative to the rotation angle of the planet, which is some part of a full rotation of 360° for each distance rc_p , involuntarily introduced by Maya, accurately reflected the process of movement of the planets around the Sun, what allowed to find the relationship of the existing system of thought with the Maya calculus system, united by a single mechanics of the process. Conclusions: FIS allowed to find a way that established the relationship between the characteristics, adopted by the existing civilization and the Mayan civilization and with examples of the laws of conservation of energy and Kepler, as well as calculating the duration of the Synodic and Siderian months, show examples of deciphering the laws established by Maya as a result of long-term observation of the movements of celestial bodies and their adequacy to the laws determined by the FIS. Therefore, deciphering the laws of the Mayan Calendar and comparing them with the existing ones will make it possible to trace the solar cycles that are unknown to us, which are mentioned in the calendar and determine its current state.*

Keywords: Mayan calendar, motion of the planets, solar wind, rectangular coordinate system, abnormal phenomena.

Despite the fact that the calculation system adopted by the Mayan civilization is based on an assessment of the same process of movement of celestial bodies around the sun, for the existing civilization, it still represents a mystery. The Mayan calendar, built on the basis of characteristics unknown to our system of thought, several thousand years earlier, without using optical instruments, reflected the cyclical nature of the processes that are currently taking place in Cosmos.

The nature of these processes was attempted to be understood and assessed both from the physical and philosophical points of view. However, insufficient attention to assessing the initial characteristics necessary for describing a particular process, and the adoption of incorrect

dogmas and double standards convenient for the presentation of a particular idea, led to an erroneous idea of the mechanism of the process. And the formal description of the process obtained did not allow the idea to be extended to other processes occurring in the Sun field, as was shown in a previous paper¹ the example of Newton's law of gravitation.

And only after the establishment of the FIS existing in nature,² in the previous papers³ it was possible to show how using the same classic Kepler data,⁴ on the basis of which Newton built his theory,⁵ it was possible to find a new idea that correctly reflected the essence of the processes taking place, even in the Maya calculus.

As it turned out, it was enough to test a new idea, regardless of existing laws and approaches⁶ conduct an objective assessment of astronomical observations. Even in spite of the fact that these data were obtained thousands of years to the present. The main thing is that they accurately reflect the process even in the Maya calculus.⁷

It is interesting to note that in their works⁸ outstanding philosophers paid attention to why science, beginning with Newtonian mechanics, could not find an explanation for many natural phenomena observed both in the field of the Earth and in the Cosmos. In explaining this reason from the standpoint of philosophy, Kant⁹ noted that all the complexities of the surrounding world cannot be explained on the basis of established laws. According to Kant, the harmony of the world was born from the initial chaos, containing, however, all that was necessary to restore order: the

¹ A.S. Yurchenko, "The Laws of Astrophysics are Defined by the Fundamental Interaction System there are in Nature".

² A.S. Yurchenko, *Unified Theory of Physics*, OJSC Alliance Yugpoligraphizdat, Volzhsky, 2008.

³ A.S. Yurchenko, "The Laws of Astrophysics are Defined by the Fundamental Interaction System there are in Nature"; A.S. Yurchenko, *Unified Theory of Physics*, OJSC Alliance Yugpoligraphizdat, Volzhsky, 2008.

⁴ J. Kepler, *Astronomia nova*, Voegelin, Heidelberg, 1609; J. Kepler, *Harmonices mundi*, Johann Planck, Linz, 1619.

⁵ I. Newton, "The Mathematical Principles of Natural Philosophy", in *Proceedings of the Naval Academy*, 1915 and 1916.

⁶ G.N. Duboshin, *Heavenly mechanics*, Nauka, Moscow, 1968; V.A. Kovalenko, *Solar Wind*, Nauka, Moscow, 1983; M.I. Pudovkin, "Solar Wind", in *Sorovskiy Educational Journal*, no. 12, 1996; B.S. DeWitt, "Quantum gravity", in *Scientific American*, no. 2, 1984, p. 50–62.

⁷ Yu.I. Cherkasov, "Calendar-chronological secrets of the Maya Indians", in *New Mirror of CHRONOS*. Available at: <http://www.hrono.info>; M.I. Belyaev, *The Great Cycle of Time. About the Mayan Calendar*.

⁸ I. Kant, *Works in 6 volumes*, Moscow, Mysl', 1966, vol.1, p.117, 229-230; F. Engels, *The Dialectic of Nature*, Moscow, Progress, 1982.

⁹ I. Kant, *Works in 6 volumes*, Moscow, Mysl', 1966, vol.1, p.117, 229-230.

forces of dravitation and repulsion. He believed that the first one has been found in Newton's theory of gravitation, and the second one is the subject of research scientists to this day. Therefore, Kant did not doubt the reality of the repulsive forces, and assigned them a different role than the physicists who are currently investigating the gravity of a vacuum.¹⁰ And he was right.

Having failed to go beyond the limits of vacuum, instead of comprehending the nature of Gravity together with Newton, physicists accepted not only incorrect assumptions and dogmas but also double standards to solve various problems.

What did it lead to? We quote M. Weller: "The noble path of knowledge by the method of in-depth sequential analysis, which was used by the ancient Greeks, and which was used by I. Newton, is not currently in vogue. Accepting clarity of understanding for simplicity of content is a characteristic feature of many modern theorists".¹¹ Such theorists, being unable to formulate facts into a theory, require references to the works and ideas of recognized authorities¹², equating their absence to unproven and erroneous judgments.

Moreover, scientists try to ignore even the exact solutions and explanation of the nature of "gravity",¹³ although these theorists themselves are not able to explain many phenomena observed in nature and experimental facts, considering them "anomalous". Currently, almost all sections of science refer to abnormal phenomena. And no one bothers that amendments to abnormal phenomena sometimes reach 500% or more.

When working on my thesis, I discovered a clear mechanism for precisely the anomalous process and proposed an original solution that differs from the classical one,¹⁴ eliminating the phenomenon of the input effect.

¹⁰ I. Misyuchenko, V. Vikulin, *Theory of Gravity*, St. Petersburg, 2012. Available at: http://nfp-team.narod.ru/GT_1_3.pdf; A. V. Klimenko, V. A. Klimenko, "Vacuum and Gravity", in *Chebyabinsk Physics and Mathematics Journal*, 2006, vol. 1, p. 100-116.

¹¹ M. Weller, *Human in the System*, Astrel, 2010.

¹² M.N. Lukiyanova, I.A. Zayarnaya, M.A. Kadyrov, "Introduction of the "3-p" model in the concept of strategic management of municipal entities", in *Public Policy and Administration*, 2018, vol. 17, no. 4, p. 586-599.

¹³ A.S. Yurchenko, *Unified Theory of Physics*, OJSC Alliance Yugpoligraphizdat, Volzhsky, 2008.

¹⁴ A.S. Yurchenko, A. Malkin, N.V. Tyabin, "Mechanics of Polymers", in *Zinate*, 1973, no. 1.

At that time, due to the timing of the thesis defense and many other reasons, my notions were not considered. However, the dependence I found between the experimental characteristics was a real fact. It existed.¹⁵

There were "comrades" who claimed that the experimental data were adapted. I managed to find the data of experimental studies of recognized scientists, conducted by them many decades earlier.¹⁶ Using the methods of statistical data processing, it was shown that the dependence found objectively exists in their research, despite the different theoretical approaches of these authors.

I had to represent my work on the basis of the experimentally found dependence,¹⁷ assuming that the proposed method is based on the decisive role of the duration of deformation of a continuous medium in the pre-stationary stage.¹⁸

Thus, using the methods of statistical processing of a large number of experiments, it was only possible to make believe that such a relationship exists. However, it was only possible to understand the physical meaning and theoretically substantiate this relationship after I discovered the Fundamental Interaction System (FIS),¹⁹ which also made it possible to derive theoretically all the equations obtained on the basis of experimental studies in the field of Classical Mechanics, Hydraulics, Electromagnetism, Quantum Mechanics. For example, having carried out a theoretical derivation of the viscosity equation,²⁰ as well as other

¹⁵ *Ibid.*

¹⁶ E.B. Bagley, A.M. Birks, "Flow of polyethylene into a capillary", in *Journal of Applied Physics*, 1960, no. 31, p. 556–561; A.B. Metzner, E.L. Carley, I.K. Park, "Polymer melts: A study of steady-state flow, extrudate irregularities and normal stresses", in *Mod. Plast*, 1960, vol. 11, no. 37, p. 133-140; I. F. Kanavets, S. I. Klaz, "Method for determining the rheological properties of polymeric materials", in *Plast. Masses*, 1963, no. 8, p. 27–33; B. Phillip, K. Wulf, G. Mann, "Evaluation of flow curves of concentrated polymer solutions on the basis of experimental viscosity measurements", in *Monatsh. Chem*, 1968, no. 99, p. 1521-1537; S. Middleman, *Polymer Flow*, Mir, Moscow, 1971.

¹⁷ A.S. Yurchenko, A. Malkin, N. V. Tyabin, "Mechanics of Polymers", in *Zinate*, 1973, no. 1.

¹⁸ In PhD thesis, A.S. Yurchenko, Moscow State University of Environmental Engineering, 1983; A.S. Yurchenko, N.I. Basov, Yu.V. Kazankov, "Peculiarities of flow of polymeric materials", in *International Conference on Rubber*, Moscow, 1984.

¹⁹ A.S. Yurchenko, *Unified Theory of Physics*, OJSC Alliance Yugpoligraphizdat, Volzhsky, 2008.

²⁰ A.S. Yurchenko, A.A. Yurchenko, "Theoretical conclusion of newtonian viscosity equation – a new step in knowledge of human properties", in XIII interregional scientific and practical conference "Interaction of enterprises and universities – science, manpower, new technologies" (Volzhsky, May 17, 2017): conference report collection,

equations, which will be published later. In addition, based on the analysis of the Euler Movement Equations, I proved that he, like Newton, also came close to the FIS that I found, but again with a trivial reduction, returned to the system of balance of forces, that is, to the existing Framework of Views. To which Newton came, specifying universal gravitation equation.²¹ If Newton and Euler did not reduce the masses, and Newton carried out the transformation of his equation as follows

$$m \cdot a \cdot r^2 = G \cdot M \cdot m, \text{ kg} \cdot \text{m}^3/\text{s}^2 \quad (1)$$

I would get a FIS (found by me much later),²² allowing to solve a variety of problems or create mathematical models,²³ which determine the properties of materials in a wide range of loads.

Materials and methods

As for the nature of the interaction of the Sun and the Planets, there remains another opportunity to check the FIS I found on a completely unexpected system of experimental data evaluation – the System that determined the success of the Mayan culture, which carries some information that amazes our imagination. Along the way, explaining how and why Maya managed, without having a chronometer, determine and calculate the motion of the planets with such high accuracy.

But they did manage! At first they simply followed the manifestations of nature. And nature has endowed them. Here one should agree with the definition of M. Weller²⁴ that “... the right choice of characteristics quickly reveals the essence of the process under study. The researcher spends less mental effort and time on deciphering mechanics and establishing relationships with other processes, uniting them into one essence. In this case, the system of thought is cleared of unnecessary

Polytechnical Institute (Branch) of the Volgograd State Technical University, Volgograd, 2017, p. 172-177.

²¹ I. Newton, “The Mathematical Principles of Natural Philosophy”, in *Proceedings of the Naval Academy*, 1915 and 1916.

²² A.S. Yurchenko, *Unified Theory of Physics*, OJSC Alliance Yugpoligraphizdat, Volzhsky, 2008.

²³ A.S. Yurchenko Mathematical Model of Newtonian and Non-Newtonian Fluids. Advances and Applications in Fluid Mechanics; A.S. Yurchenko, “Mathematical model (MM) of a liquid in the light of dissipative heating mechanism manifestation and other properties of the matter”, *Periodico Tche Quimica*, 2018, vol. 15, Special issue 1, p. 27-40.

²⁴ M. Weller, *Human in the System*, Astrel, 2010.

dogmas, coded concepts – terms, supplemented by new knowledge, merging into a Unified System, reflecting the Essence!”

Otherwise, humanity bears much greater costs and losses per unit of result. For example, in order to know only the planetary motion scheme, European culture needed to burn Giordano Bruno, ban Kepler’s works and force Copernicus to renounce his theory. And only later to recognize that the Earth and all the planets move around the Sun, without revealing the reason for this movement.

Initially, Newton tried to describe this mechanics on the basis of his knowledge in mathematical language. However, he was unable to answer a number of emerging questions. About his theory, he said: “It tells how objects move. That should be enough. I told you how they move, not why”. The question is WHY? remained hanging in space, which all researchers called "emptiness".

Absolutely on the other hand, unrelated to the consideration of planetary motion, Descartes introduced his rectangular coordinate system into this analysis of processes. As a result, a new research opportunity has appeared. And in 1644, Descartes proposed a hypothesis about the formation of the solar system, based on the idea of a vortex motion. Representing vortex motion as the only stable form of motion, he suggested that the Sun and planets with satellites were formed from primary and secondary vortices. And, in my opinion, this was the very first and more successful hypothesis.²⁵

Sometimes in textbooks there is a mention of a rectangular coordinate system in the center of which the Sun is placed. But none of the existing theories, as far as I know, substantiated the movement of the planets due to the energy emitted by the Sun. Although, as follows from the second Kepler’s law, the Sun is the source of the movement of the planets.

Moreover, Euler, when deriving the Equations of Motion, also came close to the detection of this energy. But due to the accepted dogmas, all scientists missed the mechanics of the process under study.

Nature is very sparingly parting with her secrets, not so much because of the preservation of its secret, but more because of how it was understood – what positions were put forward and what dogmas adopted that determine the Evaluation System of phenomena observed in nature, on the basis of which the System of Thought of Civilizations was formed.

Only the Mayan civilization, but rather their predecessors, strictly followed the laws of nature, and nature has endowed them. Judging by

²⁵ R. Descartes, *Cosmogony: Two Treatises*, Moscow, Leningrad, Gostekhizdat, 1934.

their temples and calendar, it was a high-tech culture, possessing secrets that modern science still cannot unravel, including the secret of their calendar.²⁶

It is known that the day (k'in) was the basis for all the chronological calculations of the Mayan calendar, and the score was conducted according to the twenty-decimal system, which made it possible to find and use the same cyclicity in the calendar.

Maya did not have astronomical tools, but learned to achieve high precision observations of celestial objects, using a special method consisting in observing the stars through long and narrow slots – “sights” of observatories. Small windows of such observatories are still looking at the points of rising and setting of the Moon and Sun at the days of the spring and autumn equinoxes, the summer and winter solstices. If you plot these points on the ecliptic of Earth’s motion and connect with straight lines, you can easily shift to a rectangular coordinate system with the Sun at its center. It turns out that the rectangular coordinate system and the movement of the planets around the Sun are naturally incorporated by the research system used by Maya. As a result, they did not need to prove that the Earth rotates around the Sun and establish a rectangular coordinate system.

It is the high culture and scale of the observed facts, repeated from year to year, that made it possible to establish with high accuracy that the Sun “shifts” along the ecliptic for 1 day by 1°, and by as many degrees as many days as passed in the month. This allowed them to break one turnover of the Sun along the ecliptic (360°) into 18 months of 20 days.

However, the Mayan solar calendars differed in duration: 260 days (year “Tzolk’in”), 360 days (year “Tun”) and 365 days (year “Haab”). Modern researchers believe that Tzolk’in had a ritual purpose. Tun was used in the chronology of events. The year of Haab' (365 days) regulated daily life. Perhaps this is so, but behind this should be a real process and its assessment.

In all these calendars, the initial unit is 1 day, and a month consisting of 20 days is a common “matrix” for all three calendars. Tzolk’in consisted of 13 months, and Tun and Haab' – of 18 months. At the end of the Haab' 5 days were added. This five-day period seemed like the short 19th month of the year Haab' and was called “Wayeb’”. All five days of this month were celebrated as a holiday. And the reason for the introduction of an

²⁶ Yu.I. Cherkasov, “Calendar-chronological secrets of the Maya Indians”, in *New Mirror of CHRONOS*. Available at: <http://www.hrono.info>; M.I. Belyaev, *The Great Cycle of Time. About the Mayan Calendar*.

additional 5 days could serve as the summer and winter solstice, when the sun practically does not move along the ecliptic. In other words, in the summer for two days and in the winter for three days, the sunrise is observed in the same place and is defined as the solstice.

As mentioned above, the adopted system of observations and high accuracy of observations of celestial bodies also allowed Maya to fix that the Moon would have repeated the path of the Sun along the ecliptic for a year in a month if the plane of its orbit coincided with the plane of the earth orbit and was not tilted under angle of 5° .

Probably, Maya also knew about it.

The observed constancy of the movement of the Sun, the Moon and other planets along a closed path (ecliptic), allowed Maya to represent time as a series of endless cycles. In the end, time makes a circle (360°) until it repeats, starting with a cycle (circle) of short duration, to a cycle of “infinite” duration. Just as it happens with the second, minute and hour hands.

It is the mechanism of infinite nesting of time cycles, considered in different articles,²⁷ that is the main cause and mystery of the Mayan calendar – the “Great Redskins’ Secret”, which manifests itself in the “harmony of numbers” reflecting the harmony of processes.

Thus, on the basis of these data, it was necessary to find the physical essence and the mechanics of building the “Lost Laws of Existence”. In other words, the purpose of this work is to show on the basis of what unexpected for the modern system of thought, the characteristics underlying their System of Thought, Maya built their calendar and how it relates to the FIS.

In a previous paper,²⁸ I showed that actually all the laws of astrophysics are subject to the FIS, which determine the celestial bodies’ motion processes dynamics, setting the laws of their speed and acceleration at a given distance, and their orbits, and all the laws of mechanics.

In addition, the quantization of solar radiation field energy over the radius of the Sun made it possible to show that nature laid the foundation for Kepler’s second law not only for the mechanism associated with energy quantization, but also for the spiral nature of the solar wind

²⁷ Yu.I. Cherkasov, “Calendar-chronological secrets of the Maya Indians”, in *New Mirror of CHRONOS*. Available at: <http://www.hrono.info>; M.I. Belyaev, *The Great Cycle of Time. About the Mayan Calendar*.

²⁸ A.S. Yurchenko, “The Laws of Astrophysics are Defined by the Fundamental Interaction System there are in Nature”.

propagation in space. An example of the construction of which is given in my previous works.²⁹

Having considered the principle of constructing the scheme of the spiral trajectory of SW and the distribution of planets in orbits, given in my previous works³⁰ according to the definition (7) of “The Laws of Astrophysics are Defined by the Fundamental Interaction System there are in Nature”,³¹ we estimate the action of the solar radiation field on the planets from the point of view of the quantum approach: first of all, drawing attention to the fact that the rotation of the shoulder by one radian equal to 57.3° by different planets located at different distances from the Sun is achieved at different times:

Table 1: Quantum series

	Quantization	
	Relative to 498.33 s	According to the Titius-Bode rule
1. $t_n = r_{s-mer} / s = 58,0 \cdot 10^9 / 3 \cdot 10^8 = 193,33 s$	0,388	0,4 au
2. $t_n = r_{s-ven} / s = 108,0 \cdot 10^9 / 3 \cdot 10^8 = 360,00 s$	0,722	0,7 au
3. $t_n = r_{s-earth} / s = 149,5 \cdot 10^9 / 3 \cdot 10^8 = 498,33 s$	1,000	1 au
4. $t_n = r_{s-mar} / s = 227,9 \cdot 10^9 / 3 \cdot 10^8 = 759,66 s$	1,524	1,6 au
5. $t_n = r_{s-jupit} / s = 778,3 \cdot 10^9 / 3 \cdot 10^8 = 2594,33 s$	5,206	5, 2 au
6. $t_n = r_{s-sat} / c = 1427,5 \cdot 10^9 / 3 \cdot 10^8 = 4772,00 s$	9,544	10,0 au

As can be seen from Table 1, the quantum series estimate the processes occurring in the entire spiral Galaxy of the Sun, relative to the units adopted on the Earth. Further, using a quantum series, it is possible to calculate the angle of rotation of each planet:

1. $57,3^\circ \cdot 0,388 = 22,23^\circ$
2. $57,3^\circ \cdot 0,722 = 41,37^\circ$
3. $57,3^\circ \cdot 1,000 = 57,30^\circ$

²⁹ *Ibidem*; A.S. Yurchenko, *Unified Theory of Physics*, OJSC Alliance Yugpoligraphizdat, Volzhsky, 2008.

³⁰ A.S. Yurchenko, “The Laws of Astrophysics are Defined by the Fundamental Interaction System there are in Nature”; A.S. Yurchenko, *Unified Theory of Physics*, OJSC Alliance Yugpoligraphizdat, Volzhsky, 2008.

³¹ A.S. Yurchenko, “The Laws of Astrophysics are Defined by the Fundamental Interaction System there are in Nature”.

4. $57,3^\circ \cdot 1,524 = 87,32^\circ$
5. $57,3^\circ \cdot 5,206 = 298,13^\circ$
6. $57,3^\circ \cdot 9,544 = 546,87^\circ$

And taking into account that the quantization of the solar field energy corresponds to the rotation angle of the planet, and 1° in the Maya system serves as the initial unit for estimating the process, we can assume that Maya involuntarily introduced the quantization of the solar energy field by the angle of rotation of the planets.

Then, using the law of conservation of energy for rotational motion, discovered by the wonderful scientists Leonardo da Vinci, according to which the product of the angular momentum by the angle of rotation turns out to be constant, for the solar radiation field we write

$$F \cdot r \cdot \alpha = Const \quad (2)$$

Or with a constant field mass $[M]$

$$[M] (a \cdot r \cdot \alpha) = Const \quad (3)$$

the product $a \cdot r \cdot \alpha$ should give a constant value.

Let us check this law of energy conservation in relation to the field of solar radiation. To do this, using the values of a and r , determined for the series of planets adopted above, as well as the corresponding values of the angles of rotation of the field carrying the planets according to the calculated angle of rotation of each planet, let us calculate the value we are interested in $r \cdot a \cdot \alpha$

1. Mercury $58,0 \cdot 10^9 \cdot 0,03946 \cdot 10^8 \cdot 22,32 = 50,88 \cdot 10^{17}$
2. Venus $108,0 \cdot 10^9 \cdot 0,01178 \cdot 10^8 \cdot 41,37 = 50,84 \cdot 10^{17}$
3. Earth $149,5 \cdot 10^9 \cdot 0,00594 \cdot 10^8 \cdot 57,30 = 50,88 \cdot 10^{17}$
4. Mars $227,8 \cdot 10^9 \cdot 0,002558 \cdot 10^8 \cdot 87,32 = 50,88 \cdot 10^{17}$
5. Jupiter $778,8 \cdot 10^9 \cdot 0,000219 \cdot 10^8 \cdot 298,13 = 50,85 \cdot 10^{17}$
6. Saturn $1426,0 \cdot 10^9 \cdot 0,0000652 \cdot 10^8 \cdot 546,87 = 50,85 \cdot 10^{17}$

Whence it is seen that the energy of the solar radiation field is indeed a constant value and, by its constancy, determines the dynamics of field rotation together with the planets.

In other words, we can say that the rotation of the planets in the solar galaxy obeys the law discovered by Leonardo da Vinci.

Thus, the location of the Earth and the planets can be determined depending on the angle of rotation of the field formed by the SW, transporting the planets in their spiral motion relative to a rectangular coordinate system with the Sun in its center (Figure 1).

As can be seen from the diagram in fig. 1 coincidence of the points of intersection of the spiral SW by the orbits of the planets and the angle of rotation of their orbital radii of the OM clearly confirms the possibility of an assessment system adopted by Maya.

This diagram is enough to begin the analysis of the mechanics of building the Mayan calendar.

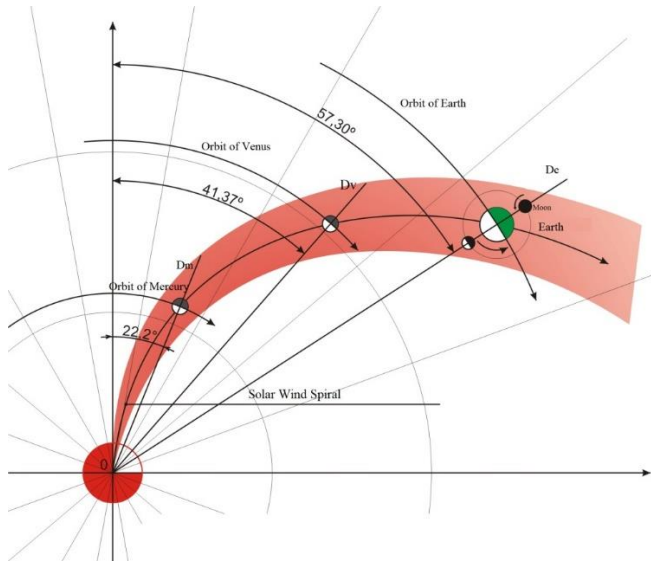


Figure 1: Scheme of finding the planets in a spiral arm with a parallel system of process evaluation

As I showed above, all these “riddles” and “secrets” lie on the surface of the mechanism of planetary motion. And, having familiarized themselves with this work, readers interested in the information contained in the Mayan calendar can themselves deal with encrypted events. To do this, you only need to understand the principle of construction and the mechanism of planetary motion, as described above, as well as link them with the positions of the Moon relative to the Earth observed in nature. Taking as a basis the scheme presented in Figure 1, it is possible to consider those positions of the Moon when the new moon begins at a point with coordinates corresponding to the position of the Sun relative to the Earth on the same day. And the full moon will occur at the ecliptic

point, standing at 180° . In this case, the Moon moves around the Earth almost in a circular orbit and makes one turnover around its axis in the same time as one turnover around the Earth. Moreover, the directions of motion of the Moon and the Earth around the Sun coincide, and the movement of the Moon, like the Sun, occurs from West to East, in the direction opposite to the diurnal movement. Due to this, the Moon is always facing the Earth in the same hemisphere. A full turnover of the Moon around the Earth (relative to the stars) is called a stellar – sidereal period of circulation or Sidereal month, which lasts 27.3 days. And since the Earth, revolving around the Sun, "carries along" with itself and the Moon, in order for the next new moon to come after the sidereal month, the Moon needs to move a little further and make more than a full rotation. It needs more than two days to do this. That is why the Synodic month lasts 29.5 days.

All these facts are known and interesting. However, the definition of Sidereal Month itself is more interesting: If at a certain moment in time we draw an imaginary line through the centers of the Earth and the Moon and continue it towards the stars, then on the celestial sphere the end of this line will indicate a certain point. When the Moon moves in orbit, these points change, but again the end of the line drawn will rest in the same place in 27.3 days.

Based on the mechanics of planetary motion proposed by me in [1 and 2], all the above facts make it possible to link the motion of the Moon with the so-called "shoulder" turn of planet Earth NM_3 under influence of SW, in essence, defining the rotation of the tangent to the spiral at one or another point of the location of the planet, or the rotation of the sectional plane of the spiral SW (Figure 1 in "The Laws of Astrophysics are Defined by the Fundamental Interaction System there are in Nature").³²

For the Earth, the angle of rotation of this „shoulder" in degrees is estimated in one second there³³ above equation and is $a = 0,114874$, °/s. Then, based on the fact that in the initial period the Earth and the Moon were in the same position (for example, as both hands of the clock on the same digit), and during each subsequent day, the Earth will twist the number of degrees around its own axis, which is $a \cdot 24 \cdot 60 \cdot 60 = 9925,113^\circ$, then in order for the Earth and the Moon to regain their former position,

³² A.S. Yurchenko, "The Laws of Astrophysics are Defined by the Fundamental Interaction System there are in Nature".

³³ *Ibid.*

it is necessary to calculate how many turnovers of the Earth ($360^\circ = 1$ day) this will happen: $9925,113^\circ / 360^\circ = 27,569$ days.

From which it follows that for a day the Moon will shift relative to the previous position by the number of degrees determined according to the following relation

$$360^\circ / 27,57 = 13,057^\circ / \text{day}$$

as confirmed by astronomical observations. Moreover, since there is an error in estimating movement in degrees (360°) and in days (365 days), determined by the coefficient

$$360 / 365 = 0,99,$$

then the exact value of the sidereal month will be

$$27,569 \cdot 0,99 = 27,29 \text{ days}$$

The accuracy of this calculation can be improved by taking more accurate values of the distances between the planets and more thoroughly calculating the angles of rotation of the “shoulders” of the planets. The principle of calculating the angles of rotation of the “shoulders” of the planets and their values are first given in “Unified Theory of Physics”.³⁴ There are also equations for calculating the distance between the Sun and the planets, which can be calculated for all planets, as well as their location on the SW spiral.

Observing the motion of the planets in the angular characteristics (degrees – days), Maya could not help but notice the difference between the year of Tun and the year of Tzolk'in, resulting from the turning of the rays OM_e и OM_v (Figure 1), which, in relative units, according to the theory I proposed, is

$$\frac{OM_e}{OM_v} = \frac{57,30^\circ}{41,37^\circ} = 1,385$$

³⁴ A. S. Yurchenko, *Unified Theory of Physics*, OJSC Alliance Yugpoligraphizdat, Volzhsky, 2008.

and by 4 ten thousandths it differs from the ratio of the days of the year of the Tun, which is responsible for chronology, and the year of Tzolk'in, taken by Maya.

$$\frac{360}{260} = 1,3846$$

Thus, the theory makes it possible to assume that the year Tzolk'in was a year characterizing the constancy of some process, for example, the energy of solar radiation.

Indeed, the original name of the matrix formed by the product of "magic" numbers

$$13 \times 20 = 260 = 5 \times 52,$$

components of 260 of some elements is unknown. And archaeologists called it "Tzolk'in" – counting days or, literally, "counting k'ins" ("k'in" means "Sun", "day" and is the main harmonic unit).

Interestingly, the above numeric entry gives an idea of the constancy of a cycle occurring in nature, characterized by 260 days.

Then, based on the fact that all the planets obey the law of constancy of the energy of solar radiation, we can assume that the year Tzolk'in characterizes 260 portions of energy. Accordingly, the magic record

$$52 \times 365 = 18980 = 73 \times 260$$

characterizes the constancy of the energy radiated by the Sun in time. In other words, for 52 years for 365 days, the same amount of energy is consumed as for 73 years for 260 days. Most likely, such Maya recordings expressed physical laws. So, for example, the Kepler law in the statement of the Maya can be represented as follows: the direct connecting the Sun with a more distant planet (for example, with the Earth, with a turnover period of 365 days), for 52 years (days, months), will "sweep" the same area as the matrix for 260 days in 73 years (days, months).

As can be seen from the above examples, Maya's knowledge system was based on the mechanism of infinite nesting of repeated cycles observed in nature. This approach to their assessment allowed the Maya to reduce all the cycles observed by them into a single "law of all things", referred to as "The Great Wheel of Mandala Pacal Votan" or "Sacred

Calendar 'Tzolk'in', which is based on a cycle forming the initial matrix of the product of magic numbers:

$$\begin{aligned}13 \times 20 &= 260 = 5 \times 52 \\13 \times 4 \cdot 5 &= 260 = 5 \times 4 \cdot 13 \\52 \times 5 &= 260 = 4 \times 65\end{aligned}$$

As can be seen from the last row, this matrix of 260 days detects another cycle, formed by the product of magic numbers $5 \cdot 13 = 65$, nested in a matrix consisting of 260 days 4 times.

Accordingly, from the second example

$$\begin{aligned}52 \times 365 &= 18980 = 73 \times 260 \\13 \cdot 4 \times 5 \cdot 73 &= 18980 = 73 \times 4 \cdot 5 \cdot 13 \\2 \times 365 &= 18980 = 292 \times 65\end{aligned}$$

it can be seen that the new matrix is at 18980 days, the original matrix is included at 260 days, repeated 73 times, and one more cycle is detected at 292 days, nested in the new matrix 65 times. And if we compare the last lines of these examples, it is clear that the "magic number 4" is involved in the formation and this cycle, which is included in the original matrix. In addition, Maya found a form of recording that makes it possible to move from one cycle to another. For example, by subtracting from the original matrix of magic numbers 13 and 4, we get the cycle of Venus's turnover around the Sun.

$$260 - 13 - 4 = 243 \text{ days}$$

Accordingly, by adding the cycles of 292 and 73 days, we get the cycle of the Earth's turnover around the Sun.

$$292 + 73 = 365 \text{ days}$$

Of course, behind all this lies the processes that take place in nature, which can be explained both from the positions of the System, adopted by Maya, and from the position of the found FIS. For this purpose, the original matrix, estimated by the product of magic numbers, is represented in the Evaluation System we are used to – in the system of rectangular coordinates shown in Figure 2.

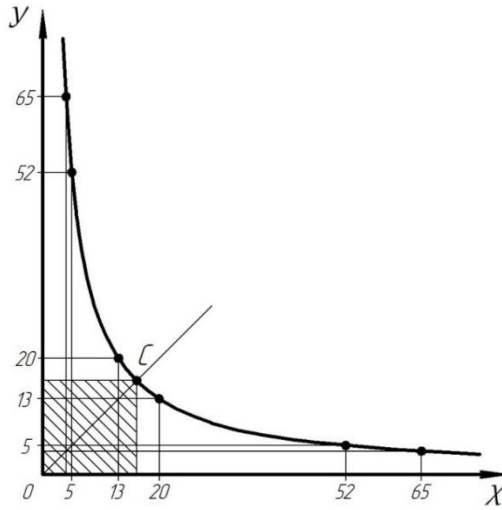


Figure 2: The law of conservation of energy, reflected by the Maya product of magic numbers

Results and discussion

From fig. 2 that the product of these “magic numbers”, in essence, is an inverse proportionality, described by an equilateral hyperbole, which allows to reflect some kind of a constant process, estimated by the constancy of the area. For example, as it is observed when considering a flat flow of an ideal fluid, when different volumes, selected in the coordinate axes $\xi-x$ peaks C_1, C_2, \dots , described by a variation of hyperbole, reflecting the constancy of energy.

Then, if we assume that in 1 day the Sun radiates some portion of energy, then the 260-day cycle can characterize the cycle of solar activity, repeated over many millions of years.

Thus, apart from Kepler's law, we considered another example from the calendar, when Maya recorded a law called “The Law of Conservation of Energy” in an entirely unexpected way for modern science. In this case, we can talk about a parallel system of thought. But in no case about parallel worlds.

Therefore, it is necessary to look for the meaning of the “Great wheel of Mandala Pacal Votan” or the sacred calendar of T'zolk'in on the basis of the interrelation of planetary movements under the influence of the SW, since the construction of the Mayan Calendar is also based on the principle of the action of the SW.

In the book “The Mayan Factor. Non-technological way ” by José Arguells³⁵ various drawings and diagrams of this „wheel” are shown. Figure 3 shows the so-called Tzolk'in calendar matrix, which was the basis of all other calendars. Based on the fact that the Mayan calendar was based on the observation of the movement of the stars, its construction should reflect the principle or system of research adopted by them. As a result, in the center of the ecliptic or “Great Wheel” there are rectangular coordinate axes in the form of “sights” for observations and a spiral characterizing the initial positions of the calendar construction. Further, at a distance from the center, the movement of the Earth, the Moon and Venus can be displayed by splitting the Earth's ecliptic into degrees (days) and months with a total duration of 20 days, in the original cycle. The cyclical nature of the movement of the observed celestial bodies made it possible to establish the infinite nesting of time cycles and their interrelationships. Some of them we considered above.



Figure 3: The matrix of Tzolk'in calendar

³⁵ H. Arguells, *Maya factor. Non-technological path*, Zodiac, 1994.

Based on the above, it can be argued that the whole "harmony" of numbers, discovered by various authors in the study of the Mayan calendar, is a consequence of the reflection of the nature of the spread of the SW, which organizes the movement of all the planets. Moreover, the manifestation of the various laws of this movement is recorded by Maya in the form of numerical tables. Most likely, these tables are a collection of Maya theoretical knowledge recorded in stone. And the very construction of the Calendar accurately reflects the mechanics of the process of celestial objects movement.

Thus, the beginning of the most consistent of the Mayan texts surviving to our time "Popol Wuj" tells us the following: "... the story in her about how the emergence of everything happened: heaven and earth; its four corners and four main points were formed and marked; how it was dismembered, and how the sky was divided; and the rope was taken to measure and stretched in heaven and on earth, at four corners, at four main points..."³⁶

Isn't it true, the given description reminds the construction of drawings explaining the motion of the planets around the Sun under the influence of the SW? One can only guess whether this construction was invented by the Maya themselves on the basis of observations, or did they get it from a highly developed civilization that existed before? But hardly from aliens. First, the Mayan calendar ties the movement of other planets to the Earth's calendar in Earth's standards – 1 day, 20 days... Secondly, the calendar is built from a whole – 1° —this is one part of a whole circle of 360° observed in nature.

It is unlikely that we will soon find out whether the people of the Maya understood the whole point of the calendar. Is it built on the basis of some theory or only on the high accuracy of experimental data and the ingenuity of Maya's ancestors? But that the Maya culture, had a knowledge of processes unknown to us and could use them – this is undeniable.

It goes without saying that the construction of various calendars of the world, including the Mayan calendar, is based on the same model of planetary motion, which obeys and is regulated by the state of the solar wind!

Undoubtedly, the Mayan ancestors understood the meaning of the Sun and tried to define not only the observed cyclical nature of various processes occurring in nature, but also the state of the Sun, evaluating each cycle as a "new Sun".³⁷

³⁶ M.I. Belyaev, *The Great Cycle of Time. About the Mayan Calendar*.

³⁷ *Ibidem*.

Analyzing the myths about the death of the four Suns, scientists find direct analogies with some natural disasters. However, in order to know what happened to the Sun during this time and suppose that it expects us, it is necessary to decipher the Mayan calendar in detail, which seems to be a rather painstaking and lengthy task.

In a few examples I have shown that the properties of the numbers that used Maya are the meaning of various repetitive cycles in nature. These cycles have existed and still exist and affect both the life of people and the processes occurring in nature, and they are of interest to us not only in terms of the state of the Sun.

Maya, by virtue of their approach, managed to detect and describe such phenomena and processes that modern civilization only guesses. It is precisely because of repeated cycles in nature that the “protagonist” in the Maya calendar turned out to be numbers.

Modern civilization in this respect remained at the level of the Inquisition, when its Gregorian calendar intentionally destroyed the meaning of repeated cycles that contradicted the canons of religion³⁸. As a result, the original digital characteristics in the perception of the world, adopted by the Maya civilization, are perceived by modern science as a mystery, carrying an incomprehensible meaning, as well as various drawings on the fields in different countries of the world.

In order to understand and decipher these drawings or cryptograms sent from space, it is necessary to understand in which System of thinking they are executed.

If we assume that a civilization that existed earlier on our planet left the Earth for some reason, or an extraterrestrial civilization left traces in the form of a Mayan culture, then it sends messages in the same System of Thought. Indeed, if you look at those circles, triangles, squares, spirals appearing in the fields of different countries of the world, you will notice a lot in common with the Mayan calendar.

It is suggested that the lines are a kind of reference points on which extraterrestrial civilizations aim, wishing to declare themselves with the help of prints created on Earth.

It seems that someone is trying to draw attention to the system of thinking adopted by the once-mighty civilization. It is also likely that this "someone" is a great mystifier. In his drawings there are spirals, the deviations of the whole pattern from the general coordinate system are

³⁸ A. Sailaukyzy, G. Yertassova, K. Sak, N. Kurman, “Social aspects of religious matters in the comparative analysis of the historical and contemporary feature materials of Kazakhstan”, in *Utopia y Praxis Latinoamericana*, 2018, vol. 23, no. 82, p. 52-62.

repeated, the harmony of numbers and similar signs of the Mayan Calendar are observed.

It is hard to believe that extraterrestrial civilization sends us messages. Warns about something or advises. And if this is so, then the meaning of these figures can be established only by understanding the System of thinking in which they are performed. In this regard, only the Process Assessment System based on the FIS can help, proposed by me and allowing the numeral characteristics of the Maya System to be identified with the existing understanding of the mechanics of the process and its essence. As shown above.

Incorrect characteristics introduced an incomprehensible semantic load to the existing System of thinking, as a result of which the Maya System, correctly reflecting the process with the help of numeral characteristics unfamiliar to our thinking, is perceived as a mystery. And civilizations may not understand each other. And not only civilizations — sometimes two people who speak the same language cannot understand each other, because the system of perception and assessment of what is happening is different. The system of life values is also different. And the gods are different too. Although they accept that God is one.

Nature is also unified and in order to understand its manifestations, the existing Systems for assessing physical quantities observed in nature must be subordinated to the FIS. Otherwise, the existing science will increasingly turn into a “Territory of Errors”, which will inexorably impose the existing System of Thought, full of inaccuracies and contradictions.

In addition, the more the existing theory meets with the so-called anomalous phenomena, the more sophisticated are the double standards. It is unfortunate that the mainstream, which had to be constantly cleared by academic science, was beaten with ambitious theories with double standards, which created a dam that interfered with common sense.

Therefore, for journalists, eager for sensations, and, unfortunately, sometimes uninformed, it is easier to believe in the existence of parallel worlds and super technology with the aliens. Although one should not think that Maya had not high enough, even by our standards, technologies subordinated to their evaluating system, for example, as in the case of the estimate of the motion of the Moon given above. But the existence of a parallel System of Thought is a fact. And its knowledge can be used by deciphering the Mayan Calendar.

I hope that the full publication of my work will put everything in its place and allow to answer all the accumulated questions in

Electromagnetism, Quantum Mechanics and Nuclear Physics. I do not publish these works yet. And some of them are not finished. Therefore, I do not have time to decipher the Mayan Calendar. But it is necessary to do this, since by cognizing the past, to some extent, we will be able to determine the future.