How to change science

Dear Readers, I suggest you first read the content of the article "Fiction in life and science - Unification of physical interactions". In it I present the essence of what human consciousness is. I present how man learns about the surrounding world and how he creates science about the world. There I present the difference between wise, logical science and science about which one may have many reservations.

The topics presented here concern theoretical physics. And the changes that should take place in this area are to make it as simple as possible. Because in nature there is a natural unification of phenomena. It consists in the fact that everything that happens in ourselves and in the world around us results from the fundamental properties of the components of matter and their interactions. Therefore, the same should also be true in human-created theoretical physics. There, all properties of matter and all phenomena presented in it should result from the fundamental properties of the components of matter and their interactions. This is how I present the properties of matter and the phenomena occurring in it in the constructive field theory (CFT).
So learn and expand your knowledge.

Bogdan Szenkaryk "Pinopa"

Fiction in life and science - Unification of physical interactions

Abstract: In the article, the author presents the basics of the existence of human consciousness. At the same time, these are the foundations on which science develops. The author puts particular emphasis on the development of nature science, and specifically on the development of theoretical physics. It presents the relationship between science and logical thinking and experimental facts. But he pays special attention to the chutzpah's fiction. Using this fiction in the 20th century, scientists in the field of nature science found themselves in a dead end. The author shows how to return to the path of real development based on logical thinking.

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1. Introduction
First of all, it is necessary to clarify the meaning of the word "fiction". Usually, this word is associated with negative overtones. At this point, it should be treated indifferently. Because the overtones of the word should appear here only after adding the adjective. Because we will be talking about fiction here, which can be both necessary and very useful, as well as very harmful and superfluous.

In today's science there are two types of fiction - there is the necessary fiction and there is harmful fiction. The necessary fiction is the basis for all cognition and for the development of science - it is necessary in a similar way as for life it is necessary to breathe. Without the participation of necessary fiction, there can be no thought process, just as without breathing, for example, there can be no life of mammals. In contrast, harmful fiction is an obstacle to the logical cognitive process, which is based on experimental facts and the logical conclusions resulting therefrom. Harmful fiction is just because he describes experimental facts in a twisted and illogical way. But some elements of this harmful fiction (harmful to science!) can be useful for entertainment purposes, e.g. in cabaret or fantastic novels.

Fiction, which exists in today's science, can be divided in yet another way, namely, it can be divided into **existential fiction, conceptual fiction** and **chutzpah's fiction**. Existential fiction and conceptual fiction are necessary for cognition, because without these components it is impossible to explore the world and all its phenomena, it is impossible to think and logical reasoning. But without these ingredients it is also not possible to mislead the scientific world astray, i.e. it is not possible for there to be chutzpah's fiction.

2. Essential fiction - living fiction, conceptual fiction
As already mentioned, the necessary fiction is one without which no thought process can exist, no mind can exist, no science can exist. Necessary fiction was formed during the development of living species that have several sensory organs. In the necessary fiction one can distinguish its two types: existential fiction and conceptual fiction.

Since the dawn of time, man's psychic life has been based on fiction, which is called: living fiction. Usually one does not realize the existence of this kind of fiction. And those who think about living fiction and write scientific papers on this subject can be counted among deep-thinking philosophers.

Every living creature that has sensory organs has to do with living fiction. Usually, every human being - until the right age, until he has sufficient education - although he has a developed mind, is not aware that the grass green that he perceives exists only in his mind. A man who already knows some of the laws of nature knows that "beyond his mind" there is a material world that consists of particles and in which various waves propagate. Some waves, when they reach the brain through the eyes, give the impression of color. This is the essence of the living fiction that the sensations experienced while looking at objects are completely different, and the observed objects and stimuli that contribute to the formation of sensual impressions are different. The waves reaching the body change in the experienced impressions of color, sound, taste, smell and touch.

In fact, everyday life of every human being takes place on the basis of everyday fiction and is based on it. Usually, man is unaware of the existence of this living fiction. And he is aware of its existence only when it becomes the subject of his thoughts. This kind of fiction is extremely useful and it is simply an essential component of the life and functioning of every human being.

Without existential fiction there could be no **conceptual fiction**. In the case of conceptual fiction, its objects are created on the basis of experimental facts acquired and the process of creation is very complex. Because, apart from the fact that fictitious objects are created on the basis of experimental facts, whose existence man is partially aware of, they arise as a result of complex thought processes as a result of many logical connections and dependencies. Examples of concepts in the field of conceptual fiction can be such concepts as: centrally symmetrical (c.s.) potential field, intensity of c.s. potential field and acceleration that other similar c.s. fields achieve in this field. These three fictitious conceptual objects are closely related, and their creation is associated with the research and discoveries of Galileo, Tycho Brahe, Kepler and Newton.

The basis of these three concepts were the results of observations of the celestial bodies of the Solar System and the paths of these bodies, developed on the basis of obtained results. Research into the falling of bodies from high altitudes onto the Earth's surface was also important. On the basis of the experimental facts obtained, first of all, there was knowledge about the process of accelerating a given body. The existence of acceleration was related to the presence of a second body. On this basis, a mathematical formula was developed that described how the acceleration changes when the distance from the other body changes. On the basis of the concept of "acceleration" two other concepts were created, i.e. potential c.s field and intensity of c.s field that are in a close mathematical relationship.

The three concepts (objects) are primarily associated with the movement of celestial bodies. But in a similar way they can be associated with the movement of any component of the celestial body. Because the impact of each body that it exerts on a second body is the sum of the effects of its constituent particles on the constituent particles of the other body. The interaction between the constituent particles is in this case considered as existing at very large distances between them. This interaction and the associated acceleration is known as gravitational, while the beginnings of knowledge about it date from the time of Newton, i.e. from the turn of the seventeenth and eighteenth centuries.

At the beginning of the 21st century, on the basis of commonly known experimental facts, another important conceptual fiction arose - the concept of structural interaction and structural acceleration between the constituent particles of matter was created. In fact, the concept of a fundamental interaction between particles of matter arose, which interaction has two components. One component of this fundamental interaction is the gravitational interaction. The basic feature of this interaction is that each particle of matter gives other particles acceleration, which is directed towards its central point. The second component of a fundamental impact is structural interaction - thanks to this interaction, all kinds of stable structures can exist. Such stable structures are atomic nuclei, atoms of various elements, molecules, lumps of matter, including matter in the form of celestial bodies.

Structural interaction is associated with the existence of spherical areas that at some distance surround the center of each particle of matter. These areas are called potential coatings. Mutual acceleration of particles in the area of each such coating occurs in such a way that it may appear that the potential coating of a given particle attracts the adjacent particle to itself. Because when the two particles are not too high in relation to each other and are spaced approximately equal to the radius of the potential coating, then acceleration in the area of the coating contributes to entrapment of the particles found there. This creates a stable system with two particles vibrating with respect to each other.

You can also add the concept of "force" to these concepts. After rejecting the associations that are associated with the colloquial understanding of the concept of "force", it can be understood that this concept fictitiously replaces completely unknown physical processes that contribute to the mutual acceleration of celestial bodies and their constituent particles. What lies under the concept of "force" plays a similar role in the process of mutual displacement of material bodies, which in earlier times played mythical figures, called angels, spirits or otherwise.

The term "force" includes something that is considered to be the cause of this process in connection with the basic physical process, but the real nature of this cause will never be recognized. To know the true nature of this cause would be tantamount to knowing the absolute truth about matter. And this is not possible because of the relative nature of the cognitive process itself. Because the cognitive process is created on the basis of objects that come from existential fiction and from conceptual fiction.

Isaak Newton in the second law of dynamics described the relationship between force, mass and acceleration. He did not realize this fact, that in the overtones of the principles of dynamics he gave force a colloquial meaning. Because he described it as the cause of acceleration, while he did not know, and therefore for this reason also did not explain what this force really is - what it is in the absolute sense. For this reason, anyone who reads about such strength and thinks that it is the cause of movement, gives it their own meaning based on their own life experiences and knowledge. And these life experiences and understanding of the concept of "force" can in no way help explain the interaction and acceleration of both constituent particles of matter in nano- and microstructures, as well as in more complex forms of it, e.g. in the form of celestial bodies. Logically, this can only be explained if the observations of the sky are the basis for inference. Then, on this basis, the objects of conceptual fiction in the form of motion, change of position, acceleration, field of

potential, field strength should be derived first, and finally the concept of force. In this way, force becomes a secondary concept. In descriptions of physical phenomena operating at the fundamental level of matter structure, force can be omitted. The word "force" can be replaced by the word "influence" and no mechanism should be built for this process. Explaining that at a fundamental level the interaction takes place through the exchange of particles or waves, as it is presented in today's theoretical physics, already comes from the area of chutzpah's fiction.

3. Harmful fiction - chutzpah's fiction

The creators of malicious fiction, like everyone else, used concepts out of necessity. For this reason, it is not always easy to distinguish this fiction from useful fiction. The only criterion that distinguishes harmful fiction from useful, necessary fiction is the lack of logical connections between malicious fiction and experimental facts. On this basis, it can be argued that objects of harmful fiction are unreasonable inventions that do not fit into human imagination. For this reason, these objects can be called fantastic and deceptive, and the fiction is chutzpah's. Because the meaning of the Hebrew word "chutzpah" is best explained by the anti-scientific content hidden in this fiction - its synonyms are: mockery, deception, insolence, arrogance.

A particularly prominent example of chutzpiction (chutzpah's) fiction is the notion of a constant speed of light in a physical vacuum relative to an observer moving at any speed. Proponents of the concept of constant speed of light in a physical vacuum ignore some experimental facts. The most important fact is that there is no physical vacuum without matter. What is now called physical vacuum in theoretical physics is essentially a material medium of varying density. This varied density of the medium depends on the distance from celestial bodies and their clusters, for example, in the form of galaxies. Thus, the speed of light in such a medium (and relative to this medium) is variable and depends on the density of the subtle matter that this medium consists of. The existence of variable density of subtle matter in a physical vacuum is evidenced by the phenomenon of bending light waves near celestial bodies, which is called gravitational lensing.
Clusters of subtle matter, located in the so-called Physical vacuum is also called dark matter. But so far, physicists don't associate these two concepts with each other.

The fact that light waves propagate in a material medium and that this process involves particles of that medium means that the waves have a certain velocity relative to the medium, and also that there is a specific location of the light waves in space and time. Therefore, the speed of light waves cannot be the same with an observer who moves in any way.

Chutzpah's fiction is known to all scientists in the world who are interested in the science of nature. But they perceive the objects of this fiction from a different point of view and often do not notice the absurdities existing there. There are cases that some physicists see these absurdities. But their efforts to remove chutzpah's fiction from science have failed to produce a positive result. Examples of these unsuccessful efforts can be: 1) "Open protest of the Russian Physical Society" - the content of the protest can be found at http://www.rusphysics.ru/articles/812 and 2) "OPEN LETTER Kanareva PM To Russian President VV Putin and President RAN VJ Fortova "- the content of the letter can be found at http://www.micro-world.su/index.php/2010-12-22-11-43-09/929-2013-07-03-08-09-57 (also on http://pinopa.narod.ru/Kanareva_PISMO_ru.pdf; the content in Polish can be found at http://pinopa.narod.ru/Kanareva_PISMO_pl.pdf).

One of the first objects of chutzpah's fiction arose in physics as a result of assigning + and - signs to elementary particles of matter. These signs were first given to electrons and protons. The fact of giving signs to particles was very useful at first, because it contributed to the simplification of descriptions of electrostatic and electrical phenomena. If the attribution of signs were combined with an explanation of the physical process that forced mutual movement of the particles relative to each other, while the signs would be considered only symbols, not the cause of the movement, then in total it could be a very useful conceptual fiction. It happened differently. Until the end of the 20th century, there were no nature researchers who understood the essence of electrostatic phenomena and explained their nature at a fundamental level. For physicists, the + and - signs, instead of becoming only helpful symbols, became the basis for explaining the course of many phenomena and the physical cause of electrostatic interactions and the flow of electric current.

In the following years of the development of physics, a lot of different particles were invented, some of which had positive signs and some had negative signs. The development of theoretical physics can only be talked about in the sense that new objects of fiction fiction were emerging. Because, despite the creation of the theoretical physics department in the form of quantum mechanics, in today's academic physics there is still no knowledge of the most important fundamental physical phenomenon, namely the mechanism of formation of stable structures of matter from its component particles. And, as we already know, this mechanism develops due to the aforementioned structural interaction and directional acceleration of particles in the potential areas of coatings. But today even the leading physicists have not yet realized this fact.

In today's physics the concept of "potential shell" is unknown, which shell manifests itself in the form of variable acceleration, existing at a certain distance from the center of the particle. It is not known, although the effects of the variable acceleration of the constituent particles of matter are manifested at every step in everyday life and in every physical experience. Due to the variable accelerations, the particles maintain certain distances between them, and thus there are such natural features of matter, such as the shape of the structure of matter and its volume, hardness, elasticity, etc. Today these features of matter are presented to students using concepts from the area of chutzpah's fiction that do not explain, what is the real reason for this behavior of particles.

Today in theoretical physics there are a lot of objects of chutzpah's fiction. Together, they form a department of physics called quantum mechanics - this is a powerful warehouse of harmful fiction. In this magazine there are elementary components of matter - quarks and leptons, of which there are twelve types. Quarks have properties such as spin, isospin, smell, color, fractional positive and negative electrical charges. And there are other harmful objects called quantums, for example, there is an energy quantum, a quantum of time. Numerical values have been assigned to these objects. As befits strict science, they are used to carry out mathematical calculations. But what physical parameters are calculated this is what human reason cannot understand and cannot logically describe in words.

All the chutzpah's fictions found in quantum mechanics and in both relativity theories will not be presented here. Physicists interested in this subject, who could contribute to the removal of these harmful ideas from physics, know them well. Non-specialists can acquire approximate knowledge of some objects of harmful fiction on the websites https://en.wikipedia.org/wiki/Quark https://en.wikipedia.org/wiki/Lepton https://en.wikipedia.org/wiki/Quantum https://en.wikipedia.org/wiki/Chronon .

4. Unification of physical interactions

Why is there so much harmful fiction in quantum mechanics? The answer is simple. Subsequent objects of harmful fiction were created to enable the interpretation of newly discovered physical phenomena and to justify the validity and truthfulness of harmful fiction that were created earlier. Newly discovered phenomena, for example, in the form of the appearance in the physical experiment of a previously unknown particle of matter, could not be explained by the existing knowledge of matter, and thus a reason arose to create a new particle. This particle was given a name, some properties were attributed to it, and thus a new object of harmful fiction was created.

In general, one can guess that the emergence of new objects of fictional fiction over the decades has had a noble purpose. This goal was to show, or more precisely, to create a source from which all known physical phenomena originate, and to develop a uniform physical theory on the basis of which the mechanisms of all physical phenomena could be described. This goal was not achieved, because there was an ever deeper entanglement in invented ad hoc dependencies. These relationships are not found in nature - they were created in a mathematical description.

Lots of elementary particles not found in nature and their properties were invented. Meanwhile, for the logical explanation of the mechanisms of all physical phenomena occurring, very simple properties of three types of fundamental particles of matter - protons, neutrons and protoelectrons - are sufficient. Three types of fundamental particles are enough to explain what cannot be explained with more than two hundred types of particles.

In fact, the existence of matter and the course of physical phenomena is based on very simple principles. These simple principles result directly from experimental facts, so they do not require justification. Because the experimental facts are both confirmation and justification for them. It should be justified and explained why simple physical phenomena that are born on the basis of three types of fundamental particles are perceived by humans as very varied and complex, and how, based on simple principles, their great diversity is born.

Explaining the course of electrostatic interaction, which forces the particles to move relative to each other, is very simple. For the components of matter, the pursuit of a state of equilibrium results from the existence of their fundamental properties. More specifically, this is due to the existence of two components of the fundamental interaction of each particle of matter on every other particle of matter - this is due to the existence of gravitational acceleration and structural acceleration. The first component contributes to bringing the particles closer together, while the second component prevents complete approach. Because thanks to the second component of the fundamental interaction, the particles stop at a certain distance from each other. In this way, a natural state of equilibrium is established in matter.

For the sake of completeness, it should be added that the fundamental interaction is in fact one interaction. But due to the lack of a relatively simple function in mathematics that could be used to describe it, it has been divided into two components. For each of these two components there are relatively simple functions for their mathematical description.
But this was only one reason for the division into components. In addition, this artificial division into two components helps to describe many physical phenomena and understand their meaning.

During the electrifying process, the balance in the structure of matter is disturbed. The structural components of matter are separated and retained some distance from each other. Due to this separation, electrostatic interaction begins to manifest. In a sense, it is the pursuit of ingredients to renew the previous state of equilibrium in the structure of matter.
The electrostatic interaction is presented in more detail in the article "Electrostatic field? ... But it's very simple!" (Polish version at http://pinopa.narod.ru/08_C2_Pole_elektrostatyczne.pdf, Russian version at http://pinopa.narod.ru/08_C2_Pole_elektrostatyczne_ru.pdf).

Over several centuries, electrostatic and gravitational interactions have been seen as two different types of interactions that have nothing in common. Views on this difference resulted from the fact that these interactions manifest themselves in different ways and different methods must be used to study them. In fact, at a fundamental level, this is one and the same gravitational interaction between the constituent particles of matter. But it manifests itself in a variety of ways because of the different structural conditions that exist in matter during research. Gravitational interaction has been adopted in connection with large, distant lumps of matter. The ingredients in the volume of each solid, when each solid is taken into account separately, form a stable system. Each of these lumps of matter is a structure that is electrostatically stable. What does it mean that the lump of matter is stable in terms of electrostatic properties? This means that this solid consists of atoms and the space between the atoms is very densely filled with particles of matter that also exist everywhere in the physical vacuum around this solid. These particles were called protoelectrons. (Using old terminology, it can be said that the space between atoms is filled with ether particles.) But in the atoms themselves and in the body of matter, the density of protoelectrons is very high compared to what exists in the air around the body and in a physical vacuum.

When considering these issues, facts from the history of gravitational discoveries should be taken into account. Newton's description of the gravitational interaction is an approximate description. The inaccuracy of Newton's description is twofold. There is an inaccuracy that results from the limited observational and measurement capabilities that existed in Newton's time. Based on the results of observations and studies of scientists such as Galileo, Tycho Brahe and Kepler, Newton determined that the gravitational acceleration that a celestial body gives to another body is inversely proportional to the square of the distance. Meanwhile, gravitational acceleration changes in a slightly different way. This inaccuracy in Newton's law of gravity is revealed, for example, in such a way that there is a movement of the perihelion of Mercury and other planets in the Solar System. According to Newton's law, the orbits of the planets can

be either circular or elliptical. And when they are elliptical, the position of the perihelion of the orbit does not change. However, when there is a perihelion motion, it indicates that the orbit is not elliptical but rosette. You can read more about this in the article "Perihelion motion of Mercury" at http://pinopa.narod.ru/Ruch_peryhelium_uk.pdf.

The much greater inaccuracy of Newton's mathematical formula, which describes gravitational acceleration, is related to what Newton did not study at all. Namely, he did not study gravitational acceleration at small and very small distances. Despite the lack of such research, Newton's formula is currently used in physics also for these distances. The error that is made when Newton's formula is used to evaluate gravitational acceleration at small distances between particles, cannot be assessed without proper testing. And one of the reasons that prevents such an assessment is that particles with different properties interact with each other. Protons and neutrons, which make up the structure of atoms and molecules, interact with much more subtle matter in the form of protoelectrons. To assess the gravitational interaction between particles at small and very small distances, research is needed on how particles behave at these distances.

The densities of protoelectrons that are knocked out of atoms during ionization are known as electrons. The resulting electrostatic interaction is a process that tends to reunite electrons with atoms. Although at the elementary level this electrostatic interaction is the sum of gravitational interactions between particles, it can also be considered as a result of the existence of a pressure difference in the protoelectron medium. The pressure difference is formed during the ionization of atoms, and the liquidation of this pressure difference occurs when the electrons return and fill the defects in the protoelectron medium in the area of atoms.

Unification of interactions is an idea, the implementation of which aims to show that all physical interactions come from one source. Currently, four interactions are known in physics, which are considered basic - they are gravitational, electromagnetic, strong and weak nuclear interactions. These four basic interactions can be easily explained and interpreted using the properties of three types of fundamental matter particles - protons, neutrons and protoelectrons. In this way, all impacts and phenomena result from one source. They come from the fundamental interactions between these three types of matter components. Here is all the unification...

For clarification, it should be added that gravitational interaction is one of the components of a fundamental interaction. However, strong and weak nuclear interactions can be explained by the idea of potential shells and structural interactions, i.e. the second component of the fundamental interaction. Because of the structural interactions, connections between the particles are created. It happens at different distances between them. By examining how large these distances are, you can assess the size of the potential rays of the coatings. Therefore, you can evaluate these parameters for each type of interaction that causes the formation of stable structural systems of matter.

The explanation of the mechanism of electromagnetic interactions is more complex. Because these interactions are the result of complex processes that involve fundamental particles. For this reason, electromagnetic interactions require slightly more complex descriptions. You can read about these impacts in the following articles:
- "Magnetic field? ... But it's very simple!" on http://pinopa.narod.ru/06_C2_Magnet_pole_ru.pdf (Russian version),
- "Epoch-making experience for pennies" http://pinopa.narod.ru/30_C4_Epokhalniy_opyt.pdf (Russian version),
- "Magnetic fraud" http://pinopa.narod.ru/Magnetic_fraud.pdf,
- "Two hundred years of fraud in theoretical physics" http://pinopa.narod.ru/36_C4_Dwustuletnie_oszustwo_ru.pdf (Russian version),
- "Magnetization - its effect on mass" http://pinopa.narod.ru/Magnes_Masa_uk.pdf.

5. Divine fiction - divine origin
In first, a short anecdote:
Drawing classes take place in the kindergarten. The tutor came up to the girl who draws something intently and asks her:
- What are you drawing?
- God ...
- But no one knows what he looks like!
- Now they'll find out!...

People say that there is a grain of truth in every anecdote. And the truth is that when young children learn that there is a world creator, they want to know what he looks like. Some, like a girl from anecdotes, try to portray the creator in their own way.
In an anecdote, the attempt to portray the creator is playful. Serious descriptions are found in beliefs and religions.
And here is another serious description of the creative process and creator of everything that exists - a popular scientific description.

Writing, pondering, talking about different types of fiction, creating conceptual systems in different languages, creating religious systems and all other activities, all this is possible thanks to the existence of one and only fiction - thanks to the existence of divine fiction. Divine fiction exists and its existence does not depend on anything else. The existence of divine fiction is in a sense similar to the existence of the universe space and the fundamental particles of matter found in this space - protons, neutrons and protoelectrons. The only difference is that the universe space and fundamental particles exist in the sphere of matter, while divine fiction exists in the sphere of the psyche.

When it comes to the existence of matter and its constituent particles, the issue is quite simple. Because it is relatively easy to show that everything that exists in the material sphere, all things and all phenomena, depend on the fundamental particles and their properties. The existence of divine fiction is somewhat more complex. But, based on experimental facts and logically concluding, its existence can be demonstrated.

The concept of divine fiction is a mental product like many other concepts. It can be associated with everything that interests different beliefs and religions. Because it is beliefs and religions that try to show how everything that exists arose. What will be presented here can also be called divine fiction. However, this should be distinguished from the content of beliefs and religions. To this end, this should

also be called **the divine origin**.

The divine origin begins in the sphere of the psyche. Simply put, it is a very simple all-encompassing mental experience that exists at a fundamental level in the construction of all mental processes. It may happen that people who use reason will find it difficult to understand. Paradoxically, although reason has arisen and developed on the basis of a divine origin, it may be difficult for him to understand the essence of his own foundations.

The equivalent of the divine origin in the simplest form that exists in the sphere of matter is generally the simplest material structures. If it were not possible for the formation of more and more complex structures of matter in the form of atoms, molecules, up to the creation of the simplest organisms that we consider to be alive, and then their evolutionary development up to the creation of man, then only a certain type of material pulp would exist. There would only be fundamental particles that would create unstable, ever-changing structural systems - there would simply be nothing solid except this material pulp. Then, mentally, there would only be a divine origin in its simplest, fundamental form and nothing else. More and more complex material structures would not arise and would develop, and more and more complex mental structures would not arise and would not develop.

From the point of view of a logically reasoning man, the development of matter and psyche can be represented as two parallel and inseparable processes and worlds. But you can also say that matter and psyche are one and the same. In fact, there is only the psyche, or otherwise, there is consciousness in the broad sense, and the material world is the invention of highly developed consciousness. This highly developed consciousness somehow closes itself in a limited area of space and perceives itself, i.e. this occupied space and processes occurring there, as a separate organism that exists in the material world. He does not notice that due to spatial self-limitation he is misled by external factors, whose images he creates at any time.

6. Summary
Some information on human awareness work can be found in Pinopa's articles:
"About concepts, cognition and the universe" at http://pinopa.narod.ru/O_pojeciach_poznaniu_i_wszechswiecie.pdf (Polish text),
http://pinopa.narod.ru/WIN2_O_ponjatijakh_poznanii_i_vselennoj.html (Russian text),
"Towards the Truth" http://pinopa.narod.ru/CAL_W_strone_Prawdy.pdf (Polish text)
http://pinopa.narod.ru/WIN6_V_storonu_Istiny.html (Russian text),
"Reality" http://pinopa.narod.ru/CAL_Rzeczywistosc.pdf (Polish text) http://pinopa.narod.ru/WIN7_Dejstvitelnost.html (Russian text).

The author of today's article hopes that next generations of physicists will one day begin to remove harmful fiction from physics. Before that, they should learn the fundamental foundations on which they will base their theoretical studies and describe physical phenomena. These can be foundations, which the author presents in articles (under the general name "Constructive Field Theory") on the following websites:
http://pinopa.narod.ru http://konstr-teoriapola.narod.ru http://pinopa.narod.ru/Polska.html .
But these can also be completely different foundations that relate to the structure of matter and consciousness - even more logically - if someone can create such.

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Poland, Legnica, 07.05.2017.

The Constructive Field Theory - briefly and step by step

(Translated from Polish into English by Andrzej Lechowski)

Abstract
Fundamentals of constructive field theory (CFT) are the result of synthetic developent of many physical phenomena. In these phenomena the author of CFT saw simplest physical properties of matter, thanks to which there are so very different characteristics of different physical phenomena. Based on the results of many experiments that were previously carried out by many researchers, the author came to the conclusion that the world of nature and the phenomena occurring in it can logically be described using the properties of the three types of fundamental particles. CFT changes the action of atoms. But these changes are occurring in the minds of people who know and understand what CFT represents. There follows an understanding that all physical phenomena have their origin from parameters of the fundamental constituents of matter - centrally symmetric fields - called briefly particles. These centrally symmetric fields is a distribution of potentials in space - they are just constituents of matter. In the distribution of fields potentials - particles, can be distinguished gravitational component and structural component. This second component occurs in the form of a plurality of spherical formations that have different radii and concentrically surround the central point of the fundamental particle. These spherical formations have been named the potential shells and with their participation there are created stable structures of matter, and with their participation occur any changes in matter.

Contents

H) Automatic motion of matter in the light of experimental facts

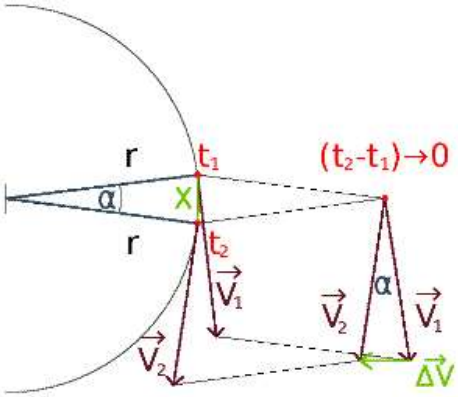
1. Galileo - gravity law of free fall

Galileo (Galileo Galilei, 1564 - 1642) experiments with gravity. He drops objects from a high altitude and measures their time of fall. Based on the results draws a conclusion that we now know as the law of free fall of objects in a gravitational field. This Galileo's law of gravity says that the objects regardless of their weight in a gravitational field fall with equal accelerations. In other words, the gravitational field treats these objects in the same way and equally accelerates them.

2. Johannes Kepler – third law of planetary motion

Johannes Kepler (1571 - 1630) analyses the results of astronomical observations of his teacher, Tycho Brahe and formulates three laws of planetary motion in orbit. Some analytical arguments are now known as Kepler's third law. This law states that the ratio of the square of the orbital period of a planet around the Sun to the cube of semi-major axis of its elliptical orbit (or the average distance from the Sun) is constant for all planets in the Solar System. Or rather, the second powers of the orbital periods of planets around the Sun are directly proportional to the third powers of the semi-major axes. This can be written by means of the formula: $\frac{(T_1)^2}{(a_1)^3}=\frac{(T_2)^2}{(a_2)^3}=\text{const}$, where T with the index of 1 or 2 are the orbital periods of two planets, but a with the index of 1 or 2 are semi-major axes of orbits of these planets. This formula can be changed slightly and for the two planets can be described it in the form: $\frac{(T_1)^2}{(T_2)^2}=\frac{(a_1)^3}{(a_2)^3}$. We can also go to a more idealized form of the planetary system in which the planets move in circular orbits. Then in the formula instead of ratio of cubes of semi-major axes of elliptical orbits appears ratio of cubes of radii of circular orbits and the formula has the form $\frac{(T_1)^2}{(T_2)^2}=\frac{(R_1)^3}{(R_2)^3}$.

The nature of the form of the formula, and thus the nature of Kepler's third law, is kinematic. That means that Kepler's law and the formula describe motion in an elliptical or circular orbit using parameters of orbit and time of motion, and there are not taken into account the reasons for such a motion. In this respect, the situation is similar to the description of the acceleration of the body on a circular orbit. In this case, the centripetal acceleration is described by the velocity of the body in the orbit and the orbit radius. The formula for centripetal acceleration (normal) has the form $a_n=\frac{v^2}{R}$, and its justification is shown in the following example.



On http://forum.szkola.net/viewtopic.php?t=3548&sid=5757292cf0adb6118990050fe98cb5fa there is the following explanation:
You are performing vector analysis of circular motion, reaching the following conclusions:
1) Triangle with sides [r, r, x] is similar to triangle [v, v, Δv]. For very small times (t⟶0) we approximate x as segment, and not arc.
2) From Thales' theorem we receive: x/r = Δv/v, which shows, that Δv=xv/r.
3) We know, that acceleration is given by formula a= Δv/t=(xv/r)t=(xv)/(rt), because x/t is nothing else but velocity v, thus we receive a=vv/r=v2/r, bearing in mind, that sense of such acceleration is towards the centre of the circle in which body orbits.

What are relations between shown both dependences regarding third Kepler's law and centripetal acceleration, will be explained further.

3. Isaac Newton - laws of motion and law of universal gravitation

Isaac Newton (1643 - 1727) is engaged with mathematical analysis – elaborates calculus - and at the same time analyses behaviour of objects in a gravitational field and during orbital motion.
Now, when we know results of Newton's analytic work in the form of three laws of motion and law of universal gravitation, we can also see that (and how) he used the scientific achievements of Galileo and Kepler. Galileo's law of gravity, which is related to the free fall of objects in a gravitational field, though not visible at first glance, is contained in the law of universal gravitation and the third law of motion. Galileo's law, assuming the same acceleration of bodies in a gravity field, in the implied meaning says that the value of the acceleration depends only on body mass, in which gravitational field the acceleration occurs. And this, you can already clearly see by

analysing relationships between parameters of motion of two bodies in an exemplary planetary system. Here's how this situation looks like.

Basing on the law of universal gravitation, we consider the situation of two bodies, a heavy body of mass M and light body of mass m, which move in circular orbits around their common centre of gravity. These bodies form a stable planetary system through the mutual acceleration. Bodies in this system interact with each other forces that are equal in magnitude and have opposite directions. Taking into consideration that each of the forces is the product of the body mass, onto which acts acceleration coming from the neighbour, and just this acceleration, the equality of these forces is precisely for this reason, that acceleration is dependent (directly proportional) only on that neighbour. If the dependence (mathematical formula) that describes the acceleration had another character, then there would be no equality of forces and Newton's third law of motion didn't work in such case.

Knowing the results of Galileo's gravity, Newton pondered over this, how with increasing distance varies gravity of heavenly bodies, in particular, how changes the Earth's gravity. Undoubtedly, he knew the dependences associated with the motion of bodies in a circle, of which high school students learn today. So, he knew of the existence of dependence describing centripetal acceleration (normal) and the transformation of this dependence, which now is written by means of formulas as $a_n = \omega^2 \cdot R$ and $T^2 = (2\cdot\pi)^2 \cdot \frac{R}{a_n}$. The dependence of the latter shows that if the gravitational acceleration would not alter with increasing distance, or the centripetal acceleration would be independent of the radius of the orbit, then the speed of a body in orbit would have to be such, that the square of the period of circulation of the body in orbit would be proportional to the radius of the orbit. In other words, it would be that $(T_1)^2 = (2\cdot\pi)^2 \cdot \frac{R_1}{a_n}$, $(T_2)^2 = (2\cdot\pi)^2 \cdot \frac{R_2}{a_n}$, and therefore there would have to be a real dependence $\frac{(T_1)^2}{(T_2)^2} = \frac{R_1}{R_2}$.
It should be emphasized that this would exactly happen if the gravitational acceleration coming from a given heavenly body, while changing a distance from it remained constant. But Newton also knew of Kepler's research and knew that Kepler's third law has form $\frac{(T_1)^2}{(T_2)^2} = \frac{(R_1)^3}{(R_2)^3}$. On this basis, Newton concluded that centripetal acceleration, which acts on the body in the orbit, which contributes to the curving trajectory of motion and makes that it is a circle, must be inversely proportional to the square of the radius of the orbit (the distance). In other words, Newton came to the conclusion that the acceleration of gravity should change (according to nowadays' notation) according to the formula $a_n = \frac{G\cdot M}{R^2}$. Because only then will it be so that $(T_1)^2 = (2\cdot\pi)^2 \cdot \frac{(R_1)^3}{G\cdot M}$, $(T_2)^2 = (2\cdot\pi)^2 \cdot \frac{(R_2)^3}{G\cdot M}$, and $\frac{(T_1)^2}{(T_2)^2} = \frac{(R_1)^3}{(R_2)^3}$, that is, only then it will be in accordance with Kepler's third law.

Used today in physics the concept of gravitational field is sufficiently expressive. But not always been so and few people know how this concept arose and what it actually means. Today, you can guess that the development of the meaning of this concept was initiated as a result of analytical studies of Newton. The first step, and groundwork for the emergence of the concept of a field that surrounds the body, were the results of analysis of the distribution of acceleration of outsider bodies that these outsider bodies received as a result of the impact of the given body. In connection with heavenly body there appeared spatial image of distribution of accelerations, which had a centrally symmetric character.
It is not known whether it was Newton, or perhaps someone else, but it certainly was a man who has mastered calculus. This expert in mathematical analysis found integral function, that was associated with the distribution function of accelerations around a heavenly body - it was created as a result of the integration of function describing distribution of accelerations. To use the words they could describe the whole of theoretical dependences, which came into being in this way, there were created concepts of field, field potential, field intensity. At the same time, in terms of numerical and in terms of a description by mathematical function, the field intensity was identical to the spatial distribution of accelerations. Such were the beginnings of a description of the gravitational interaction, but also the beginnings of a perfect description of the property and the structure of matter as a basis for constructive field theory.

4. Pinopa creates Constructive Field Theory. Pinopa discovers...
Pinopa (born in 1944) is dealing with analytic research of dependences between various physical phenomena. Pinopa's discoveries and interpretation of physical phenomena can be produced in the following way:

A) Instantaneous nature of the gravitational interaction
Process of gravitational interaction between objects occurs without participation of time. That's a process which happens immediately in the place of position of object, and acceleration of object proceeds according to law of universal gravitation and adequately to distribution of other objects in space. Because way of acceleration is just encoded in the whole space in a gravitational field, that surrounds every object and that is why every object being in this field (formed by all neighbouring objects) is immediately accelerated according to the resultant field intensity. This resultant field intensity is dependent on the position in space of other (remaining) objects and their physical parameters.
Other ways of explanation of gravitational interaction - namely that it takes place by means of waves or by exchange of intermediary particles between objects - are discordant with experimental facts. Because just facts prove immediate change of value of gravitational acceleration, namely that this change occurs immediately, as soon as the distance between objects is changing.
Such a confirming fact may be a motion of components of PSR B1913+16 binary star. The distances between the components of this binary star system and the trajectories of their motion are such, that in periaster, when the distance between them is minimal, light beat

this distance during the 26 seconds, and in apoaster, when the distance between them is maximal light beat this distance during 105 seconds. Speed of the pulsar in this system in “almost” elliptical orbit varies from 450 km/s to 110 km/s (One complete revolution in the orbit takes about 7.752 hours). At such speeds, the binary components of the system during 26 seconds (or 105 seconds) beat vast distances, curving at the same time in an appropriate manner their trajectories. This behaviour of PSR B1913+16 binary star components is possible only in case when the gravitational interaction has instantaneous character.

B) The identity of fundamental and gravitational interactions

Gravitational interaction is the same as the fundamental interaction that occurs between the fundamental constituents of matter and gravitational field is identical with the fundamental field. The gravitational field of the body is the resultant field, which arises from the overlapping of the gravitational fields of all components of the body. The same fundamental effect, which at large distances is manifested in the form of a well-known resultant gravitational interaction, at small distances is the interaction that joins the components in complex structural systems and is the basis of all physical phenomena that occur at this scale in matter.

The fundamental interaction at small distances between the components, with which it comes to the formation of material structures, are the same interactions that are now known as strong and weak nuclear interaction, interatomic interaction and other. While the interaction between the structures in more complex forms are known, for example, as the electrical interaction between the conductors of electric current, magnetic interaction and electrostatic interaction.

C) The fundamental particle of matter

Fundamental centrally symmetric field is the same as the fundamental particle of matter. Such fundamental particles, based on the same principle of the interaction, which operates the gravitational interactions, there are spontaneously formed stable structures of matter. Different behaviour of fundamental particles at large distances and at small distances is due to the nature of matter, which can be described by mathematical functions. And more specifically, using the function, we can describe nature of changes of the fundamental field intensity. This nature of changes in the intensity of the fundamental field enables that with mega-distances can form stable systems in the form of planetary systems, to which is needed an orbital motion, and at the nano-and micro-distances are forming stable structures in the form of atoms, small and large molecules, crystals, etc., for which the orbital motion is superfluous.

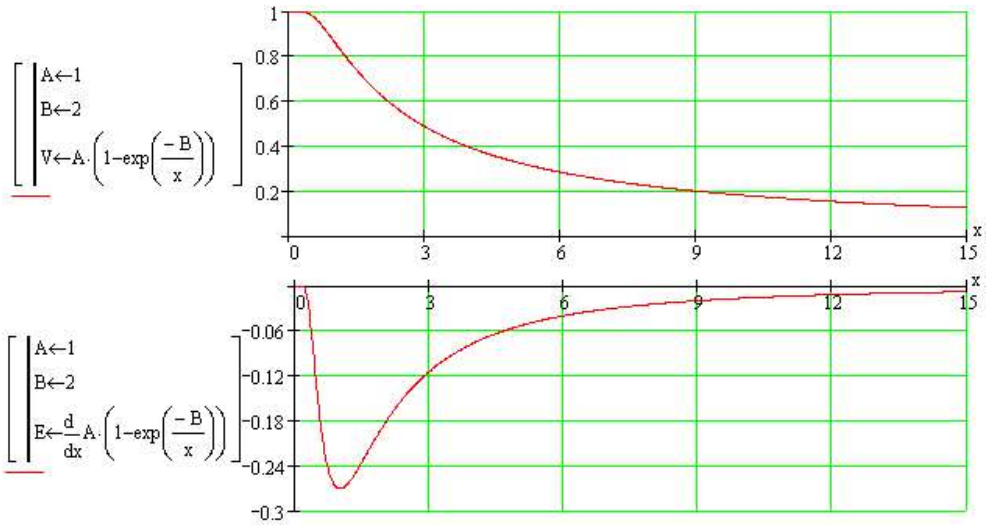
With mega-distance interaction between individual particles - a centrally symmetric fields - and the interaction between all complex structural systems, for example, between the Sun and planets circulating around it, is such, that always manifests itself as a trend to bring together these objects to each other. These objects always accelerate other objects in its side, and this acceleration is quite accurately described by the formula of Newton's law of gravity $a_n = \frac{G \cdot M}{R^2}$. While with nano-distances fundamental particles - that is, cs fields - depending on the distance from the central point may in these places accelerate other similar particles (cs fields) towards the centre of this field, then we can talk about the attraction, or - being in slightly different distances - they may accelerate them in the opposite direction, and then we can talk about repulsion of these particles. Such interaction of fundamental particles, but also the interaction of atoms and molecules, which looks like attraction and repulsion of other similar particles in the area of some small distances from their central areas, is due to existence of an appropriate distribution of field potentials. The described behaviour of fundamental particles, atoms and molecules, is confirmed by experimental facts. It is confirmed by the existence of a stable structure of matter, crystals, atoms. This behaviour results simply from the ability of constituents of matter to create stable structural systems. And these abilities result from the appropriate distribution of potentials in the structural components, which leads to such interaction. We can say more specifically that such properties are the result of the existence of spherical shells in the c.s. potential fields, which concentrically surround their central points.

D) Twofold, depending on the distance, nature of the fundamental interaction

A different way of interaction of fundamental particles and all complex structural systems built of them, with nano-distances and mega-distances can be presented by appropriate mathematical functions. Physical investigations are essential and just to these results must be chosen appropriate functions. It is known that with mega-distances gravitational interaction does not go exactly as Newton presented it. For if it changed with distance exactly according to Newton's law, the orbits of the planets in our solar system would have the exact shape of the ellipse. And they don't have such a shape. The most conspicuous example is the phenomenon that is known as the perihelion motion of Mercury. Perihelion motion of Mercury is slow, because it amounts to 42.98 seconds of arc per century. But the perihelion motion of Mercury means that the actual orbit of the planet is shaped like rosette. The variability of Mercury's orbit can be described more accurately if to the function of Newton will be added exponential factor. The variability of the gravitational acceleration would then be described by means of the function in the form $a_n = \frac{G \cdot M}{R^2} \cdot \exp\left(\frac{-B}{R}\right)$.

To analyse the motion it's more convenient to use the same function, but written as a field intensity, which varies depending on the distance R. It can also be written with a negative sign, which is recommended here in order that the function of the field potential was positive. Then the function of field intensity along any radius coming out from a central point of the field has the form $E_p = \frac{-A \cdot B}{R^2} \cdot \exp\left(\frac{-B}{R}\right)$, and the potential of such a field describes the exponential function, or function E, in the form $V_p = A \cdot \left(1 - \exp\left(\frac{-B}{R}\right)\right)$. In these formulas A is a proportionality coefficient, and B is the exponential coefficient.

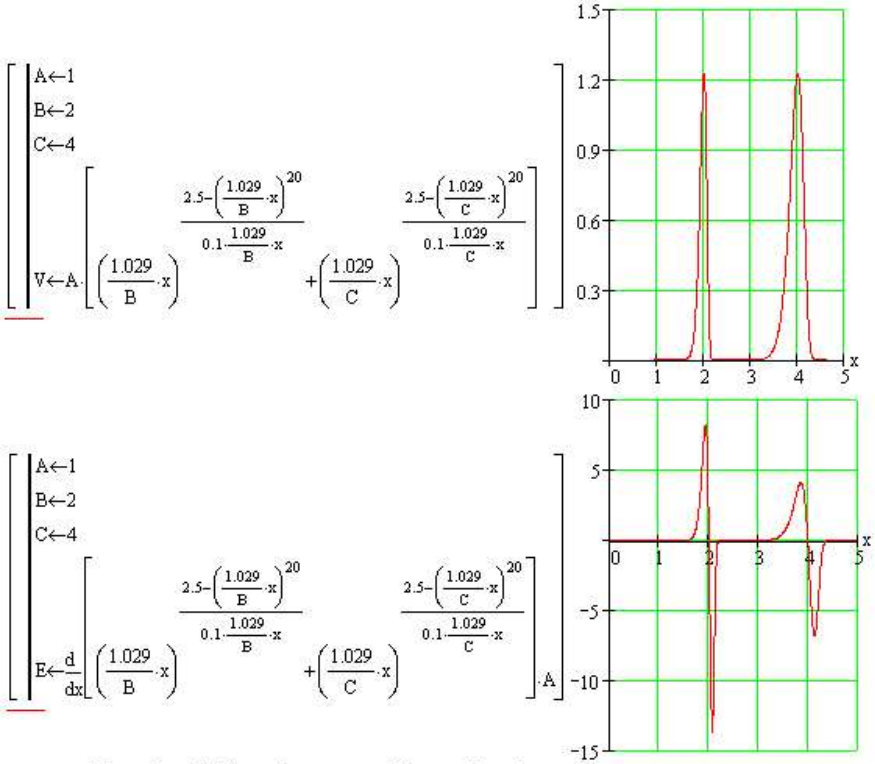
Below are presented graphs on which an exemplary field potential (the E function) and field intensity are shown.



Function E – Field potential and field intensity – changes in gravitational field

Notation of field distribution in space using the function E and the coefficients A and B has the advantage that helps to unify all interactions. This notation helps to bring all the known interactions into one single common reason for their existence and manifestation - the common cause are interactions between the fundamental constituents of matter. But this notation also helps deunify concept of gravitational interaction of heavenly bodies, which operates from the time of Newton, and see the individual character of the gravitational field of any heavenly body. The individual character of the gravitational field of heavenly bodies is expressed mainly in the fact that there is a perihelion motion of planets and stars. In the case of Mercury and other planets of the Solar System magnitude of perihelion motion is measured of at most tens of seconds of arc per century. But in the case of components of the double star PSR B1913+16 perihelion of their orbits rotates at a speed of 4.2 degrees of arc per year. Logical description of such a movement is made possible by the use of the function E.

With nano-distances at which there exist potential shells enabling the formation of stable structural systems, the distribution of field potential is described by the Poly Exponential Sum function or Function PES. An example of such a function of a field potential and field intensity is shown in the graph below.



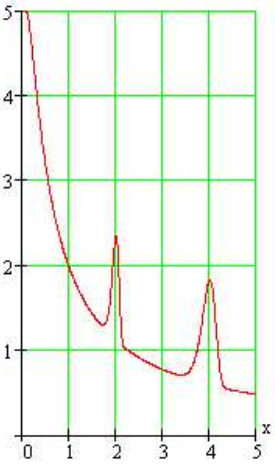
Function PES – polyexponenial sum function –
field potential and field intensity – changes in shell field

At nano-distances, the Function PES is one of the two constituent functions. The resultant Function EPES, which is used to describe the distribution of potential along any radius coming out from a central point of the field, is the sum of two overlapping functions - the

Function E and Function PES. The field potential, which is described by the Function EPES, and field intensity on the graph presents as follows.

$$A \leftarrow 1 \quad B \leftarrow 2 \quad C \leftarrow 4 \quad D \leftarrow 0.5$$

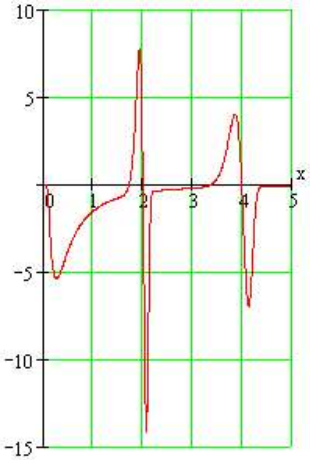
$$V \leftarrow A \cdot \left[\left(\frac{1.029}{B} \cdot x \right) \frac{2.5 - \left(\frac{1.029}{B} \cdot x \right)^{20}}{0.1 \cdot \frac{1.029}{B} \cdot x} + \left(\frac{1.029}{C} \cdot x \right) \frac{2.5 - \left(\frac{1.029}{C} \cdot x \right)^{20}}{0.1 \cdot \frac{1.029}{C} \cdot x} + 5 \left(1 - \exp\left(\frac{-D}{x} \right) \right) \right]$$



Complex function - polyexponential sum and exponential - Function EPES - hypothetical distribution of potential in the vicinity of the centre of c.s. field

$$A \leftarrow 1 \quad B \leftarrow 2 \quad C \leftarrow 4 \quad D \leftarrow 0.5$$

$$E \leftarrow \frac{d}{dx} A \cdot \left[\left(\frac{1.029}{B} \cdot x \right) \frac{2.5 - \left(\frac{1.029}{B} \cdot x \right)^{20}}{0.1 \cdot \frac{1.029}{B} \cdot x} + \left(\frac{1.029}{C} \cdot x \right) \frac{2.5 - \left(\frac{1.029}{C} \cdot x \right)^{20}}{0.1 \cdot \frac{1.029}{C} \cdot x} + 5 \left(1 - \exp\left(\frac{-D}{x} \right) \right) \right]$$

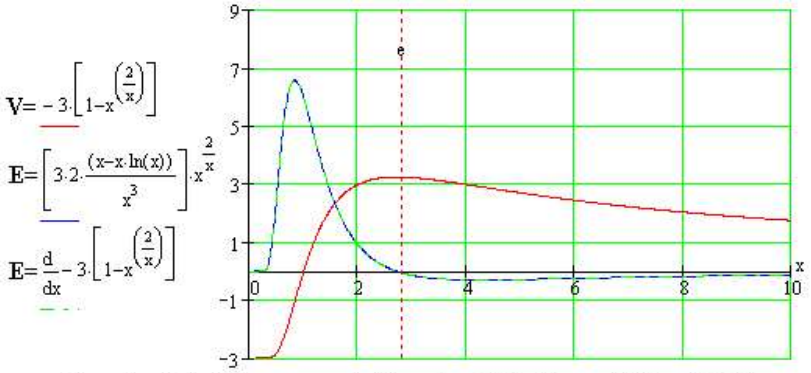


Field intensity in the vicinity of the centre of c.s. field with potential changing according to Function EPES

The fact that constituents of matter have a complex field distribution, which is described by the Function EPES, is closely connected with the existence of the following properties of matter:
- Matter in the concentrated form, for example, in the form of planet, thickens towards the centre of concentration. At such a density distribution there affects the field component, which describes the Function E.
- Matter exists in the form of stable structures, for example, in the form of atoms, molecules and crystals. The formation of stable structures is affected by existence of potential shells, having various radii and arranged concentrically around the centre of the field. Such a field distribution is described by the component function PES.
- When you take into account the existence of a distribution of the field potentials of fundamental components and the way of formation of stable structures, it becomes a base for further interpretation of physical dependences. On this basis, the existence of stable structures testifies to the existence of two types of structural components - heavy particles known as neutrons and protons, and the light ones we know as electrons. Heavy components are the main building blocks of matter. But in if they have their own high-speed, they themselves could not stabilise their motion and create stable structures. Light components of matter play a stabilizing role in the motion of heavy components. And they do it in such a way that during the formation of stable structures divert energy (of motion) outside, beyond the newly formed structures.
- Light components of matter are those components that exist before electrons start form from them - they are called protoelectrons. Light components fill space, which is called physical vacuum. In the matter, which is made of atoms, they fill the spaces between heavy components of matter, and especially the spaces between successive shells and in shells areas. Density of distribution of light elements (protoelectrons) in these structural systems (neutrons, atoms, molecules) grows in a similar way and for the same reason, as density of matter of a planet.
- Neutrons, atoms, molecules exist as stable structures in the form of a stable framework consisting of heavy elements, in volume of which light components coexist. Owing to potential shells of heavy components light components are divided into sectors, where they are trapped and kept with a smaller or greater force. Some sectors are more resistant to shocks, which are more stable than others. During the collision and the sudden change of direction of motion of such a structural system (of atom, of molecule), some sectors are emptied. Because protoelectrons that are there, are not enough firmly kept in order that they could follow along with the structure, keeping pace with change of direction of motion. Dissociating from the structure part of protoelectrons is identified with electron.

To study the properties and behaviour of matter there are useful mathematical functions that reflect the characteristics of matter only in an approximate way. An example might be a function of Newton, which is associated with gravity. For many years physicists, astronomers use it although it describes gravity as approximate. Another function that is useful for imaging the general properties of matter, is polyexponential function - the Function PE. Below are presented graphs on which the exemplary field potential is shown,

described by using the Function PE, and field intensity.



Function PE - Polyexponential function (PE) - Potential V and field intensity E (acceleration of fields) along any radius coming from the central point of the centrally symmetric field

The existence of extremum of the function describing the field potential shows that particles of matter, if they had such potential distribution along any radius, could create a stable structural systems. However with increasing distance x (at large distances from the beginning of coordinate system), value the Function PE, just as Newton's function value and the Function E value, approach zero. Such similarity between these functions, especially the similarity between the functions EPES and PE, which is associated with the possibility of creating models of stable structures of matter and its description, is sufficient for these
functions are suitable for description and modelling of various physical phenomena. Especially important is that they are suitable for describing and modelling the phenomena of electrostatic, magnetic, electromagnetic, electrodynamic, hydraulic, aerodynamic, for describe and modelling the motion of heavenly bodies in space and planetary systems. Such mathematical functions are particularly useful for training purposes.

E) Absolute and relative permeability of the components of matter

Existence of potential shells in spatial distribution of the field, which is here identified with the fundamental component of matter, on the one hand, enables the creation and existence of stable material structures, on the other hand, is the cause of such properties of matter, as: resilience, compressibility, ability to move in the matter of structural deformations in the form of diverse types of waves, and the cause of all other properties of matter. One of the most important properties of the fundamental constituents of matter is the absolute permeability. The absolute permeability to be understood as the simultaneous existence of all components of matter in the same space in the form of interpenetrating fundamental fields. These components co-existing, yet interact with each other and accelerate each other - each component accelerates all the other components accordingly to this, what is the distribution of field intensity. Absolute permeability is completely independent of anything else and there is at any time.
There is an important feature of matter in the form of relative permeability. But this permeability is a completely different category. Relative permeability is manifested by the fact that the given fundamental particle of matter or a complex material structure loses to some extent the ability to impact on the neighbourhood and itself partly ceases to be susceptible to the effects of the components of surrounding matter. The relative permeability appears in the matter because of sufficiently high velocity of some constituents of matter in relation to other ones. Relative permeability is associated particularly with the existence of potential shells. Because especially in areas where are located the shells, there is a large variation in field intensity, which is also a large variation in the ability to accelerate other particles that find themselves in these areas. Thus, even at relatively low relative velocities, particles can become for each other not very noticeable. For this reason, neutrinos can penetrate deep into the Earth, and even permeate it and go further into space.
Because of the phenomenon of relative permeability, one body moving at the same distance close to the Sun may move in a parabolic path. Other body moving at the same distance close to the Sun (at the moment of closest approach in relation to the Sun), but with a much higher velocity, will move in a hyperbolic path. But when the speed of the body, passing near the Sun will be many times greater, then the body will also move in a hyperbolic path, but it will be the path of barely visible curvature. So, in other words, the sun will affect the body (and vice versa, the body will affect the Sun) in barely perceptible way.
The phenomenon of relative permeability is directly connected with the phenomenon of an apparent increase in mass, which clearly makes itself felt in the work of particle accelerators. A large and increasingly growing speed of particles in the accelerator is the cause that accelerating devices of the accelerator during acceleration of particles less and less impact on these particles. So, for further acceleration of particles, with their increasing speed, there is a need to consume disproportionately more energy, and result in a speed increase is getting smaller.
The relative permeability of the matter was described in 2006 as a law of negligible action - an article about this physical law is placed on http://pinopa.narod.ru/05_ZakonND_pl.pdf (pl), http://konstr-teoriapola.narod.ru/05_ZakonND.html (ru).
The relative permeability of matter is also known as Usherenko effect. Interpermeability of material structures at high relative speeds (in the form of microparticles permeating the body of the object) is of great importance for the durability and safety of spacecrafts.

F) The principle of minimizing of space potentials

According to the law of free-falling objects, all objects, regardless of their mass in a gravitational field fall with equal accelerations. The law of free-fall objects is usually considered in connection with the fall of small objects on a massive body. But in nature, it covers various situations of acceleration and falling of heavenly bodies and therefore, also includes the fall of Moon to the Earth and the Earth to the Moon, the fall of the Earth-Moon system to the Sun and the Sun to the Earth-Moon system, etc. The fall of bodies in such cases is only slight, because it's only within the parameters of their orbital motion. But the reciprocal gravitational acceleration of these bodies occurs constantly and through it can arise their orbital motion.
Galileo's law of gravity applies to both heavenly bodies and the smallest ones. And it can also be used when you need to consider interaction of the fundamental constituents of matter. In this case, Galileo's law of gravity becomes a fundamental principle of

interaction in matter. Because the physical principle of interaction is the same both then, when the interaction occurs between the two fundamental components and then, when the interaction occurs between two bodies, which consist of the fundamental components. This same physical principle of interaction works both between very distant objects and between objects at small distances between them, down to the smallest distances.

Cause of motion of c.s. fields is revealed by the analysis in changes of resultant potential, that occur in space while the c.s. fields interact with each other and mutually accelerate. The cause of motion is the action of space, which consists in acceleration of centrally symmetric fields that are in it, in such a way that was followed to minimize (decrease) resultant potentials originating from these c.s. fields. Hence the action of space can be defined briefly as functioning of the principle of (M)inimizing of (S)pace (P)otentials (in assumption, gravitational potentials, fundamental potentials), or action of the MSP principle.

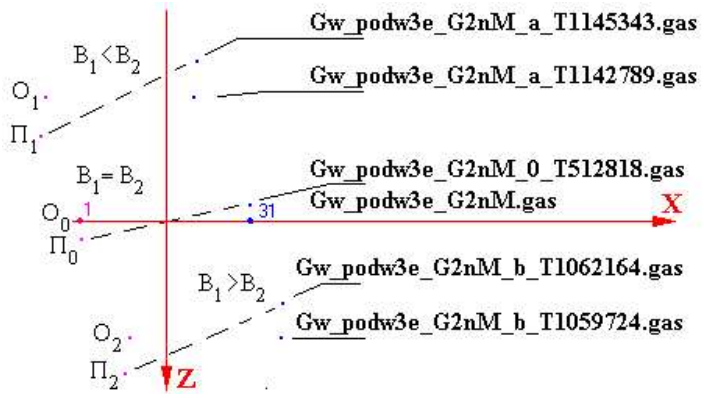
The principle of MSP relates to the same phenomenon, which is described by the law of free-fall of bodies in a gravitational field. But regarding a new point of view, the phenomenon of interaction between bodies, particles or c.s. fields, is considered globally as a result of the MSP principle. From this perspective, it is not that centrally symmetric field, particles, heavenly bodies “know” how to accelerate and move other c.s. fields, particles and heavenly bodies. From this point of view, acceleration and motion of c.s. fields, particles and heavenly bodies are managed by space in which they are contained. The MSP principle operates in the physical space in which at every moment, each component of matter interacts with all other components. For this reason, the effects of implementing the MSP principle can be analysed only by means of monotonic mathematical component, of the Function EPES i.e., without the involvement of a component of mathematical Function PES. Because the potential shells of c.s. fields that describes the Function PES, apply interactions, which are limited in range. The MPP principle is illustrated in more detail on http://pinopa.narod.ru/17_PrintsipMPP_pl.pdf (pl), http://konstr-teoriapola.narod.ru/17_PrintsipMPP.html (ru).

G) The dynamics of automatic motion of matter

When Newton was studying gravity and properties of matter, he based on a tacit assumption. He assumed, that bodies during gravitational interactions accelerate each other in the same way. Under this assumption, when in the mathematical function (that describes changes in acceleration of bodies depending on the distance) to skip the coefficient of proportionality, the remainder of this function for all the bodies is identical. The existence of such assumptions is evident in the third law of motion, when considered the operation of this law for the case of two bodies that orbit around their common centre of mass. Equality of the forces with which these two bodies interact with each other, just depends on the fact that bodies accelerate each other, and the functions that describe these accelerations, have the same mathematical structure. In this case, both forces are equal, and the common centre of mass remains motionless.

Today is already known that Newton's model describes the gravitational interaction only in an approximate way. About this fact proves the existence of perihelion motion of planets and double stars. Orbital motion of these objects can be more accurately described by a function that is a derivative of the exponential function E, which is $E_p = \frac{-A \cdot B}{R^2} \cdot \exp\left(\frac{-B}{R}\right)$. But this function is also a symbolic expression of the individual nature of the gravitational field of any planet or star. This means that the coefficients B in the functions that describe accelerations of two different objects from the orbital system, may be different. In this instance, in the system of bodies Newtonian dynamics is not working, but the dynamics of self-motion of matter. In the system of bodies orbiting the dynamics of such self-motion is expressed physically in such a way that bodies orbit and at the same time such a system as a whole is moving in space.
Confirmation of the existence of self-motion on the basis of observational data, for example, two stars orbiting system, will be extremely difficult (if at all possible). Because the motion of double star as a whole may be the result of asymmetry in the mutual acceleration of the components of double star (asymmetry caused by different mathematical functions, namely, that $B_1 \neq B_2$), and may be the result of the interaction of the system of stars with other stars, which may be due to effects on system of external factor.

The behaviour of the system as the double star can be traced to the model using the computer modelling program Gas2n-Mercury .*) Below are the changes in the position of components (of the model) of double star in the XZ coordinate system, which come from three different situations. Snapshots from the computer screen that show these situations have been superimposed to show changes in various parameters.

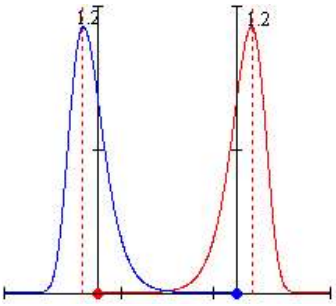


So, at the very beginning of the observation of the process double star components (marked as 1 and 31) are in position O_0. Functions of

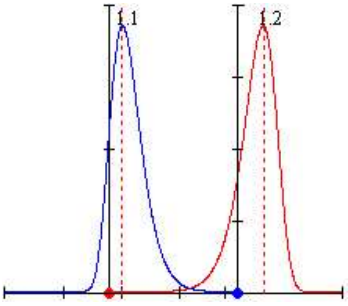
their acceleration have the same exponential coefficients: $B_1 = B_2$. At the beginning of the observation the system is in the position when its components are in apoaster (or are most distant one from another) and lie on the axis X. The stars orbit on the drawing plane in such a way that their centre of mass is in the zero point of the coordinate system. After some time the centre of mass remains unchanged, but changes the position of the line which connects the components when they are in apoaster. On the diagram this position is marked as Π_0 (pi zero). The modelled situation changes, when with the same initial parameters of the double star system coefficients B for acceleration function of both stars from the system are different from each other. Then the centre of mass moves. Depending on which coefficient is bigger and which smaller, after lapse of some time the stars in the coordinate system are in places that are marked O_1 and Π_1 or O_2 and Π_2.

Example of automatic motion of double star is inconsistent with what today's theoretical physics says. Because in the example above there is the motion of the common centre of mass of two stars, which is the cause of their mutual influence on each other. But it is not apparent from any special properties of matter. This is a result of known behaviour of matter, which lies in the fact that the acceleration of matter is always in the direction of increasing gravitational (or fundamental) field, which (this field) is related to the neighbouring matter. But it is also due to the fact that the field associated with the various constituents of matter does not vary in the same way. In other words, the various components of matter cause accelerations of other components of matter that change in a different way.

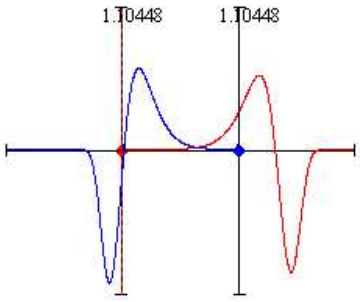
Described behaviour of matter and its components can be traced using the concept of potential shells, thanks to which there exist stable material structures. Two identical particles, each of which is in the area of potential shell of its neighbour, create a stable system. Position of the particle in the potential field of its neighbour schematically looks like in the figure below .**)



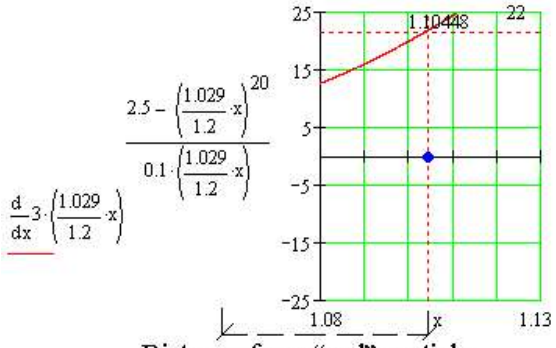
Particles accelerate each other and vibrate. But always they are accelerated in the direction where there is maximal potential. During the motion at any time, the particles are equally distant from the place where is the maximum of the function that describes the potential of neighbouring particle. At any time when one particle is accelerated “left” the second particle in the same way is accelerated “right”. This is precisely because the particles are identical - the radius of the potential shell for both particles is 1.2 units long. If the oscillatory motion of particles was halted, then they stopped at such a distance from each other, that they were in the area of highest potential, where the acceleration is zero.
Quite different is the situation when in this system of two particles to exchange one particle for such, of which the potential shell radius will be equal to 1.1 units of length. Diagram of this new situation is shown below.

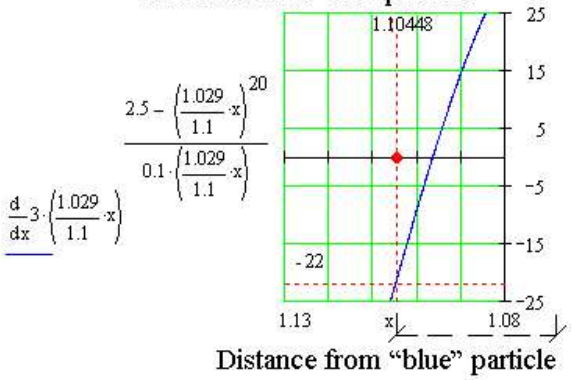


In this situation, the particles can vibrate relative to each other, they can also be halted. But they will not in this situation set in places with the greatest potential in the field of its neighbour. Because if one of them is located in the position of the maximum potential field of its neighbour - let it be that Because if one of them is located in the position of the maximum potential field of its neighbour - let it be that the “red” particle is distant 1.1 units of length from the “blue” one - then the “blue” particle is on the “left slope” of potential shell of the “red” particle and the acceleration acts on it, which is directed “to the right”. Thus, this particle will move away from “red” particle and “red” particle will also be on the “left slope” of potential shell of the “blue” particle. In the case of deceleration of mutual vibrations of the two particles, both particles will be located on the "left slopes", in places with equal gradients of slopes. In other words, the two particles will have approximately the same accelerations to the "right". This will be done when the distance between them is about 1.10448 units of length. After overlapping the diagrams of field intensity of both particles are shown below.



More details can be seen in the following graphs.





Basing on the pattern in which the particles are on the background of the graph of the field intensity of its neighbour, you can read the following information. "Blue" particle is in the positive field intensity of "red" particle, therefore, is accelerated in the direction of growth of the distance from the "red" particle, that is right. "Red" particle is in the negative field intensity area of "blue" particle, so it is accelerated in the direction of reduction of the distance from the "blue" particle, which is also accelerated to the right.

H) Automatic motion of matter in the light of experimental facts

Automatic motion of matter may be considered in two different contexts. In one context, the automatic motion of matter exists in the sense that components of matter are moving (for example, atoms) relative to each other. This is a result of the mutual acceleration. But the system of atoms and their common centre of mass does not change its position and does not accelerate in any direction. So behave, for example, the gas molecule, which is a structural system, which consists of two identical atoms of the gas.

So far, no one has studied the atoms in terms of their accelerating abilities. Therefore, the functions that describe their field intensity, are not yet known. For the time being by necessity there is a need to use hypothetical models of fields and particles, and structural systems, which by means of them can be created.

Here is the simplest example of such a system - it consists of two particles, and its initial parameters are stored in the working file DC_1.2-1.2.**). After reviewing the exercise, which can be done with this file via a computer program Gas2n.exe, it can be stated that immobility of the centre of mass of the system of two particles is related to the fact that the mathematical functions that describe accelerations of what each of these particles gives the second particle are identical, and most of all there are identical values of the exponential coefficient B in these functions - they amount to 1.2.

Quite different are the properties of two particles, in which values of the exponential coefficient B for the two functions are different. Then there is the automatic motion of matter, which must be understood quite differently. Then there is a mutual acceleration of particles, as in the previous case, but there exists also a kind of asymmetry in the mutual acceleration of the particles. The consequence is a resultant accelerated motion of particles. Exercise of such a system of particles can be performed using the working file DC_1.2-1.1.gas.

When you start the process, the output parameters of which are stored in the working file DPC_1.2-1.1a.gas, you can see the connected two pairs of particles. Each pair (if is separately) automatically accelerates and these accelerations have opposite directions. But two pairs of particles linked together do not move away from each other, because the whole is hold in a stable position by the two central particles - "green" particles. This is an example of a stable system, whose centre of mass remains motionless, even though the

components of this system (in the form of pairs of particles) have a tendency to self-accelerated motion. In this case, the stability of four particles is durable. This means that despite the existence of small oscillations of components around positions of equilibrium ***) and the existence of pairs of particles tendency to self-accelerated motion, there is no increase in amplitude of vibrations of particles and consequently there is no breakage of particles system.
This particle system is durable even after the time at which you made over a hundred thousand iterations of computing - the state of such a system is stored in the file DPC_1.2-1.1a_T100079.gas. For the time that elapses in the process, make it more real and have for it a comparative unit, you can compare it with the amount of computational iterations that fall on one period of vibration of the particle of this system. Approximately for one period of vibration of a particle falls about 200 iterations.
Another system, which consists of the same four particles, but its middle particles are two “yellow” ones, behaves quite differently. Initial parameters of the system are stored in the working file DPC_1.2-1.1b.gas. This system is also a stable one, but the process of holding of a stable state must take a course in different conditions. Namely, it will be stable only when after starting the process there is active the “Cooler” button. Then increase of energy of the system will be discharged outside the system. When observation of the system behaviour is carried out without switched on “Cooler” button, then the system as the whole does not even stand up to time in which falls 5000 computational iterations. Such a system of particles, that is coming asunder, is saved in the working file DPC_1.2-1.1b_T4717.gas.

Observing the process, whose initial parameters are saved in a file DPC_1.2-1.1b_T4717.gas, there can be observed two phenomena that are associated with the particle system – the one which existed until recently as a whole and with individual pairs of particles, which were linked together.

After running the process pairs of particles at the beginning of the process are moving in opposite directions, and the particles vibrate in a visible manner. After turning on braking process of moving particles by means of “Cooler” button there comes to stopping of the accelerated motion of particles, then begins an accelerated motion in the opposite direction. In such a way there reveals the fact that with the functions which describe accelerations of particles, is associated the existence of two different directions in which these pairs of particles can self-accelerate. Acceleration in one direction - it is acceleration, which existed at the beginning of the process when the particles were strongly vibrating - it can be relatively easy to halt and eliminate. When this occurs, there starts process of acceleration in the opposite direction, in spite of the braking action that was started with the “Cooler” button.
The second phenomenon is associated with various durability of systems, which arise from these two pairs of particles in two situations: 1) when these pairs are linking together in one system by means of “green” particles and 2) when they link together by means of “yellow” particles. To see the difference, run a process whose initial parameters are saved in the file DPC_1.2-1.1b_T4717.gas. To avoid excessive acceleration of pairs of particles resulting in their dispersion and disappearance from the field of the screen, do not wait too long and use the “cooler” button to start braking the particles. When you start braking first pairs of particles stop and then start accelerating “towards each other”. The “Cooler” button should be active all the time. Pairs of particles are approaching each other, until at some point, “yellow” particles will be at such a distance in which they happen to be, when they participate in the creation of a stable system. But the motion of particles will not stop and there will not be formed a stable system. (It can be concluded that in order to do this there should be much stronger braking of particles.). Pairs of particles will keep moving until “green” particles find themselves in a similar distance in relation to each other. Only then will cease accelerated motion of pairs of particles and arise a stable system of four particles.

Behaviour of presented here self-accelerating pairs of particles is the example of behaviour of the simplest system. Self-accelerating structural systems may consist of a large number of particles, but their behaviour will be similar. At certain positions relative to each other their resultants of acceleration may have the same direction, and then they will follow the line side by side in the same direction. In appropriate conditions, such particles can bind with each other by already known way and create a bigger, stable, self-accelerating particle. The same particles in other orientations relative to each other will have opposite directions of self-acceleration and when joined together form a stable particle, which will have ability to self-acceleration.

Self-accelerating particles in composed systems of particles, I will also interchangeably call them particles-barons. Because these particles-barons resemble an episode from the life of Baron Munchausen, who himself, together with his horse, which he gripped between his knees, pulled from the deep swamp by pulling his own hair. Particles-barons are very hard to see in physical phenomena, and the difficulty is due to one reason. To see in matter particles similar to the particles-barons, you need to have at least a vague suspicion smouldering in the mind that these particles may in general exist in nature. If “a priori” to say that in nature there are no indication, hint, or evidence that the particles-barons exist, then their abilities and traits have no right to exist in the interpretation of physical phenomena.
Then all phenomena, which can easily be explained by properties of particles-barons, and first of all by means of differentiating of acceleration functions must be explained in another way or do not have any explanation. The existence of particle-barons results from the experimental facts, therefore these facts must be presented. Because they testify to the fact that constructive field theory is not incompatible with experimental facts and correctly describes the world of physical phenomena. Here are some of these experimental facts.
Fact 1. Radioactivity of radioactive elements in the form of decay of atoms is due to destabilisation of the structure of atoms. The very process of decay of atoms is the escape of components from their structure - particles-barons. Such a particle-baron is alpha particle, or linked two protons and two neutrons. On the accelerative properties of alpha particle affect the fact that neutron and proton accelerate each other according to different functions. But this is not the only difference. Because there are such consequences that proton as a heavy component of matter (about heavy and light components of matter there is mentioning in item D) relatively easy loses part of its protoelectron cloud that (this part) is identified with electron.
On the other hand neutron, as a combination of heavy component (for which I do not invent a separate name here) and surrounding and permeating it cloud of protoelectrons, firmly holds that cloud in the area of its potential shells. Combination of two different heavy elements with each other, neutrons and protons in a suitable structural system (even when protons will be surrounded by clouds of protoelectrons, in which there are no losses, and outside such structures will manifest itself as non-ionized atoms) when it is in a structure of heavy atom, is always a potential cause of disintegration of this large atom. Unsettled balance of such a structural system can contribute to separation of particle-baron from the whole. Then it moves away with its appropriate self-acceleration. This is what happens in the case of radioactive decay, which is connected with the emission of alpha particles.

Fact 2. The existence of asymmetry in accelerations of protons and neutrons is also the cause of motion of beta particles. During the nuclear processes in the form of decay and reorganization of the structure, the difference in accelerating impact of heavy components of atomic nuclei is also manifested in the form of resultant acceleration of light components, or electrons. In view of the reason this process is identical with the contact phenomenon in the form of electrical current flow and the formation of electric potential at the point of contact between two metals, for example, Fe-Cu contact. But the contact phenomenon involves potential shells of components, which have much larger radii and other distributions of potentials in the area of these shells, than in the area of shells of small radii. For this reason, electrons in the contact phenomenon (until the maximal value of electric potential appears on the electrodes) move with much lower speeds than the speed of beta particles, which emanate during radioactive decay.

Fact 3. This fact will be presented first with regard to theoretical point of view, and then presented in connection with physical phenomena in nature. Using the working file DPC_1.2-1.1.gas, you can perform two exercises of particles-barons. In one exercise, you can observe motion of the particle-baron with the active “Cooler” button, when motion of particles is braked, and the particles during each computational iteration lose 1% of its speed. In the second exercise, you can observe motion of particle-baron, when this motion is not braked. After carrying out exercises, on the basis of their results, there can be stated as follows.
- In the absence of braking factor particle-baron keeps approximately constant acceleration. Thus after a sufficiently long time of its travel it can attain any large speed.
- If there is a braking factor, the particle-baron is moving with accelerated motion only for a short time at the beginning of the process. Discharge of appearing excess energy results that the accelerated motion ceases and the particle-baron further moves in uniform motion with a certain speed.
Presented dependences can be seen in the results that come from a few sample exercises – they are included below.

DC_1.2-1.1.gas
X=0 u(x)=0

DC_1.2-1.1_T10001_Cr.gas
X=7.24097650550874 u(x)=0.731264075261031

DC_1.2-1.1_T20002_Cr.gas
X=14.5543485221943 u(x)=0.731264075261031

DC_1.2-1.1_T10001.gas
X=365.741734289613 u(x)=73.1337299325783

DC_1.2-1.1_T20002.gas
X=1462.89380382228 u(x)=146.267445444155

In the working files DC_1.2-1.1_T10001_Cr.gas and DC_1.2-1.1_T20002_Cr.gas are saved parameters of one of the components of the particle-baron – of green “particle” (after 10,001 and after 20,002 computational iterations). The process proceeded with the simultaneous braking of motion of the particle-baron. You can see that after 10,001 computational iterations and after 20,002 iterations the speed was the same. So this means that when energy from particle-baron is taken over, then at a certain speed the reception of energy balances the energy gain (which is related to acceleration of particle) and particle velocity does not grow.
In two other two files there are saved parameters of “green” particle after similar duration of the process, but without braking motion of particle-baron. In this case, we can see that the accelerated motion after twice as long passage of time led to the situation that velocity of particle-baron doubled. This happens in the case of uniformly accelerated motion.

In nature there are a variety of particles that travel at various speeds. On the causes of velocities of particles one can spin various guesses. You can associate with them the reasons that work briefly and accelerate them into enormous speed at the beginning of their motion, and you can guess that they are particles-barons, and cause of motion of each such particle is directly related to it, and is its physical feature. There are good reasons to believe that in nature there are two causes of motion.

The cause of ejection of particles from the material structures that during their motion behave in accordance with Newton's laws of motion, is a short-term accelerated motion. This initial phase of motion of particles arises in the structure of those areas where there are potential shells. The cause of ejection of particles from the material structures that during their motion behave in accordance with Newton's laws of motion, is a short-term accelerated motion. This initial phase of motion of particles arises in the structure of those areas, where exist potential shells. Particles, creating structural systems interact with each other most energetically at these distances and transmitted by them accelerations are greatest. At the appropriate positions of particles relatively to each other, there may originate large resultants of acceleration, which acting on (other) particles in a short time of action give them high speeds.
And just in connection with acceleration capabilities and conditions under which accelerated particles then move, can be inferred speeds of motion at which both particles can move.

Existence in the physical vacuum of material medium in the form of protoelectron atmosphere, on the one hand, allows propagation of various waves, some of which we perceive as light waves, on the other hand, is the cause of braking of motion of particles, which in this medium are moving at high speeds. Hence one can conclude that particles that travel in space at speeds close to the speed of light, couldn't be accelerated to such huge speeds during short-term acceleration, for example, during a nuclear explosion.These particles exhibit the characteristics of particles-barons. Because particles that are accelerated during a short-term process, even if they reach high speeds, due to resistance of the medium in which they move, they reduce their speed to smaller and smaller values. And only particles-barons can theoretically accelerate to arbitrarily high speeds. But to all intents and purposes, due to the braking effect of protoelectron medium that exists in physical vacuum, the speed of particles-barons is limited just because of the medium resistance.

Considering theoretically, protoelectron medium has various density in different places of space. In physical vacuum, in areas that are very distant from large concentrations of matter, this medium is the most sparse. It may therefore happen that in such area

particles-barons by self-acceleration reach such high speeds, that thanks to the phenomenon of relative permeability there will almost disappear their interaction and impact both on protoelectrons and on the rest of matter. Then such particles-barons are in a sense, lost for our material world. Because they will continue to accelerate themselves to more and more higher speeds and they never can be observed in any way.
The motion of particles-barons could be recognized by one particular trait. If you happen to watch the motion of a particle in a spiral track and and in conjunction with this pitch of the spiral would be bigger and bigger, it would be an indication that the particle-baron is just moving, also rotates very slowly. Interpretations of many other physical phenomena can be found in articles on http://konstr-teoriapola.narod.ru/index.html (ru).

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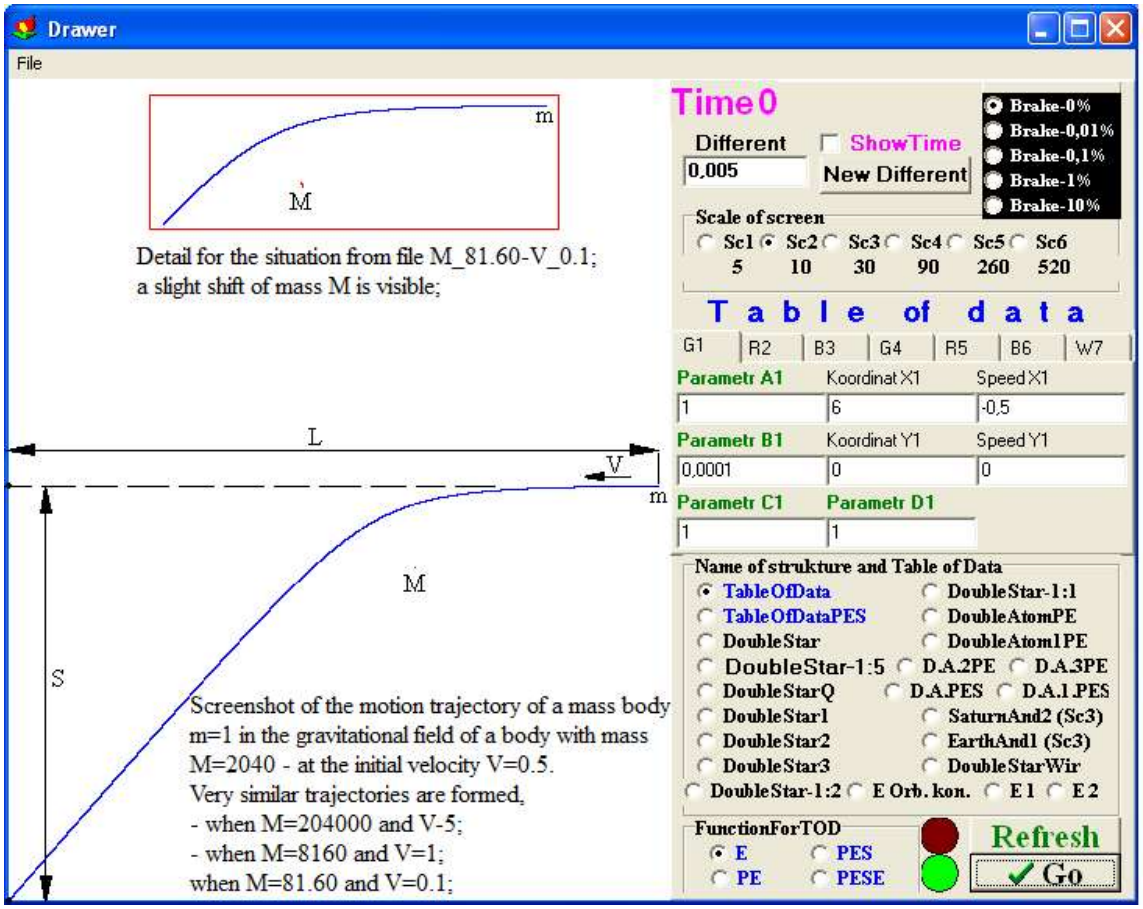
*) Note: Computer modelling programs that can be copied from the “pinopa's website” work properly on computers running Windows ME and Windows XP.
To perform exercises with the model of double star, copy the file Merkury.zip (http://pinopapliki2.republika.pl/Merkury.zip), in which there are two executive programs exe and working files gas. Using the executive program Gas2n-Merkury.exe open the summary file “Gwiazda_podwojna”, open the selected working file in format gas and start running the process. In the working file are encoded initial process parameters: position in coordinate system and initial velocity. And changes in motion of objects during the process follow on the basis of their mutual acceleration. To observe occurring on the screen process, click 12 times the left mouse button (holding the cursor on the panel of the modelling program) on the black arrow which is directed obliquely “to the top - right”. Then the modelled objects are visible on the screen.
**) To perform other exercises of the reciprocal acceleration of particles, use of the executive program Gas2n.exe. After opening the program activate button “PES” in the table “Formula”. Because particles interact with each other in accordance just with this mathematical function.
To braking the motion of particles, or extraction of part of their energy that is associated with the running process, use the “Cooler” button. When the “Cooler” button is active, then when calculating successive positions of particles in the coordinate system, during each of the computational iteration, speed of particles is reduced by 1%.
***) Small vibrations around the equilibrium positions of the components, that seem on the screen to be situated motionless, can be observed, when the button “Show Listing” is enabled. Then the table “Listing” shows changing velocities of particles or their positional parameters. To switch velocities of particles to their positional parameters (or a change in the opposite direction) on the table “Listing “ is obtained by double-clicking the left mouse button while the cursor is on the white field of the table.
When the button “Show Listing” is enabled, the modelled process slows down considerably, which allows more accurate stopping of the program in the time needed to save the process parameters.

Bogdan Szenkaryk "Pinopa"
Poland, Legnica, 2011.07.17

Deceived minds of 20th century physicists

We are already in the 21st century. Today, physicists need not feel responsible for the mistakes that were made in the past century. They should look at the past with distance and try to understand what the mistakes of 20th-century physicists consisted of. This is not easy, because, after all, these mistakes must be attributed to people who have been and are still considered scientific authorities so far. Because, in doing so, one has to conclude that the authority was wrong, that they did not recognize their own mistakes. Because one has to challenge the authority and stand above it.

Before we see how the minds of 20th century physicists were fooled, let's look at the following figure. The figure shows a snapshot of a computer screen, on which (this computer) situations with two bodies interacting (in the sense of gravitational interaction) were modeled using the modeling program Drawer.exe. One body has a mass of **m=1 MU** (mass units) and is a kind of test body that moves not far from a body with a mass **M** that is many times greater than the mass of m. This situation is repeated in several exercises, and in each of these exercises the test body moves in the same direction and at the same distance relative to body **M**. The massive body **M** has an initial velocity of zero, while body **m** has a certain initial velocity. If the massive body **M** were not in the vicinity, body **m** would move along the trajectory, which is marked with a dotted line in the figure.



When the massive body has a mass **M=8160 MU** (mass units) and the test body has an initial velocity **V=1 VU** (velocity units), then the trajectory has the shape shown in the figure. Further exercises with the program consisted of changing the initial velocity **V** of the test body **m** and changing the mass of the body **M** (corresponding to this velocity) such that the test body continues to move in approximately the same trajectory.
Thus, when the test body had an initial velocity five times greater, that is, when **V=5 VU**, then in order to obtain a similar trajectory shape, the mass of the body **M** had to be 25 times greater, that is, **M=204000 MU** Two more exercises were performed in which the initial velocity of the test body was ten times smaller than the above initial velocities, that is, in one case the initial velocity was **V=0.1 VU**, and in the other case **V=0.5 VU**. Then, in these two cases, in order to obtain a similar trajectory of motion of the test body, the massive body had to have a mass equal to **M=81.60 MU** and **M=2040 MU**, respectively.

The following are the relationships between the parameters that exist between the path of motion **L** of the test body running parallel to the **X** axis, the initial velocity **V**, the time of motion **t** of the test body and the magnitude of the shift **S**, which is caused by the gravitational influence of the body **M**. This magnitude of the shift **S**, at a distance **L** from the initial position of the test body **m** and located perpendicular to the **X** axis, can take on different meanings. Because it depends on the relationship between the values of the mass of **M** and the initial velocity of the test body. But the exercises conducted with bodies **M** and **m** had a specific purpose - the goal was to find the corresponding magnitudes of mass **M** and initial velocity **V** of the test body, at which the test body **m** moves along the same (approximately) trajectory.

$$L = V_1 \cdot t_1 = V_2 \cdot t_2$$

$$\frac{t_1}{t_2} = \frac{V_2}{V_1} = n$$

$$S = \frac{a_1 \cdot t_1^2}{2} = \frac{a_2 \cdot t_2^2}{2}$$

$$a_2 = a_1 \cdot \frac{t_1^2}{t_2^2} = a_1 \cdot \left[\frac{V_2}{V_1}\right]^2 = a_1 \cdot n^2$$

$$\frac{M_2}{a_2} = \frac{M_1}{a_1}$$

$$M_2 = M_1 \cdot \frac{t_1^2}{t_2^2} = M_1 \cdot \left[\frac{V_2}{V_1}\right]^2 = M_1 \cdot n^2$$

The magnitude of shift S is presented in the formula in a simplified way. Namely, it was presented with the assumption that a certain

average acceleration with a constant value a acts on the test body (on the shift path S). For the sake of simplicity, the fact that in the initial velocity V it is possible to determine the component velocity, which in this system will be initial velocity relative to the body M. There is also a simplification in the calculation (determination) of the time t, which appears in the formula for the path L. Because in reality this time also depends on the influence of the body M.
But as you can see, such replacement and simplification does not change the relationship between the parameters.
In the theoretically derived final formula, the relationship is the same as the one that occurred in the practical computer exercise. Specifically, when the speed of the test body is n times greater, then in order to obtain the same trajectory of motion of the test body in the gravitational field of body M, the body M must have a mass n times greater squared.

Classical physics teaches that force F=m*a, where a - the acceleration, m - the mass of the body being accelerated, and also teaches that energy (or work) E=F*S, where S - the path over which the force acts.
You can write energy as E=m*a*S. We can associate this formula with the energy that is used in the exercises presented above to move a body of mass m along the path S in different situations. These situations differ in that while in one case the body m is moving at a speed V, in the other case the same body m is moving at a speed V*n.

On the basis of the exercises carried out, it can be written that while in one case the gravitational interaction of a body of mass M and the average acceleration a given by this body was sufficient to move a body m along the path S, in the other case the mass of the body had to be M*n^2, and the acceleration given by this body had to be a*n^2. From this it follows that in the former case for moving a body m along the path S it would be necessary to consume energy E, while in the latter case energy E*n^2 would have to be consumed.
In the first case, the transfer of energy along the path S would last for a certain time t. In this case, during this process, its power was E/t. In the second case, the time of energy transfer lasted for t/n, while the power of the process was (E/t)*n^3.

The presented exercises and their results allow us to draw some conclusions. The first conclusion is that a law of nature, which is called: The law of negligible action. This law was described in 2006 in the article "The law of negligible action and related phenomena" and you can read it on http://pinopa.narod.ru/05_ZakonND_pl.pdf (in Polish), http://pinopa.narod.ru/05_ZakonND.pdf (in Russian). In the computer exercises presented, the gist was to eliminate the effect of this law - and the effect of this law was eliminated. The effect of this law occurred in the form of less and less curvature of the trajectory of motion of body m in the vicinity of a massive body M due to the increasing initial velocity of body m. The removal of this effect was carried out in such a way that the size of the mass of body M was increased. More specifically, the effectiveness of the law of negligible action, which occurs with an n-fold increase in the velocity of body m, was eliminated in such a way that the size of the mass of body M was increased n times to the second power.
Based on the results obtained in the exercises, the effectiveness of the law of negligible action can be evaluated. Because the results obtained show that with an n-fold increase in the speed of body m relative to body M, the effectiveness of the manifestation of the law of negligible action increases n times squared. That is, the manifestation of the law of negligible action increases to the same extent that the effectiveness of the cause that can eliminate its effects must increase.

The second conclusion requires a completely new look at the procedure for changing the mass size of the body M that was used in the computerized exercises presented. The body M, together with the procedure used in the exercises to change the size of the mass, can be looked at as a device with which small bodies or particles can be accelerated. Instead of body M and the procedure applied to it, let's imagine that there is a device that physicists know as a accelerator. Such a particle accelerator is a technical device. It accelerates particles, and this acceleration takes place according to the laws of nature. That is, during the operation of accelerator, regardless of the method of accelerating particles, the law of negligible action also manifests itself.

Based on the results of the exercises, it can be concluded that in order to keep the particles on the same circular trajectory in the accelerator at n times their velocity, n times squared energy consumption is required. Such a accelerator must have a large power reserve, because in such a situation the power of the device must be increased n times to the power of the third.

It should also be borne in mind that during each exercise, the shift of the body m on the path S was associated with giving it an appropriate velocity in the direction in which the shift occurred. This newly given velocity in the direction of shift S had to be appropriate and proportional to the initial velocity V of the body m. Because only then was the desired effect achieved in such a form that the body m moved along the planned trajectory. This should be borne in mind especially because even the linear motion of particles in a linear accelerator requires redirecting the motion of particles which earlier, i.e. at the beginning of the acceleration process, do not move in the direction in which they are intended to be accelerated.

The relationships listed here are obvious, but only when the mechanism of their formation is known. When the mechanism is unknown, it is easy to suggest that the difficulties arising in accelerating particles to higher and higher velocities are due to the increase in particle mass.

Bogdan Szenkaryk "Pinopa"
Poland, Legnica, 22.11.2014.

Presentation of the law of negligible action

Introduction

The law of negligible action is currently unknown in physics. For this reason, it is not used in the interpretation of many physical phenomena. The law of negligible action manifests itself in several physical phenomena. These include the penetration of spherical lightning through a window pane, which is initiated by nature itself, and the manifestation of this law in the Boreal effect, which was discovered by Prof. Louis Rancourt, a physicist at College Boreal, Canada.*1) But the law of negligible action is most impressively presented in particle accelerators. There, particle physics researchers accelerate particles to enormous speeds and naturally come into contact with the law of negligible action. However, currently physicists interpret the phenomena observed there in the wrong way. For

the understanding of physicists and all other people what the law of negligible action is, a computer version of the presentation of the law of negligible action will be presented here.

Assumptions for modeling the law of negligible action

Computer programs were used to model the law of negligible action: Gas2n_A.exe and files with the .gas extension and AtomStand.exe and files with the .ato extension. Two particles marked 1 and 2 were used for modeling. At the beginning, particles 1 and 2 are stationary in certain positions relative to each other. Then, particle 1 begins to move at a certain speed along the X axis next to particle 2. This movement and the interaction of particles 1 and 2 contribute to the movement of both particles along the Z axis. Along this Z axis, the particles move with the same speed, but in opposite directions. The magnitude of this velocity of particles 1 and 2 along the Z axis changes depending on the initial velocity of particle 1. And it is precisely the changes in the velocities of particles 1 and 2 along the Z axis, depending on the initial velocity of particle 1, that are a model testimony to the manifestation of the law of negligible action in phenomena physical.

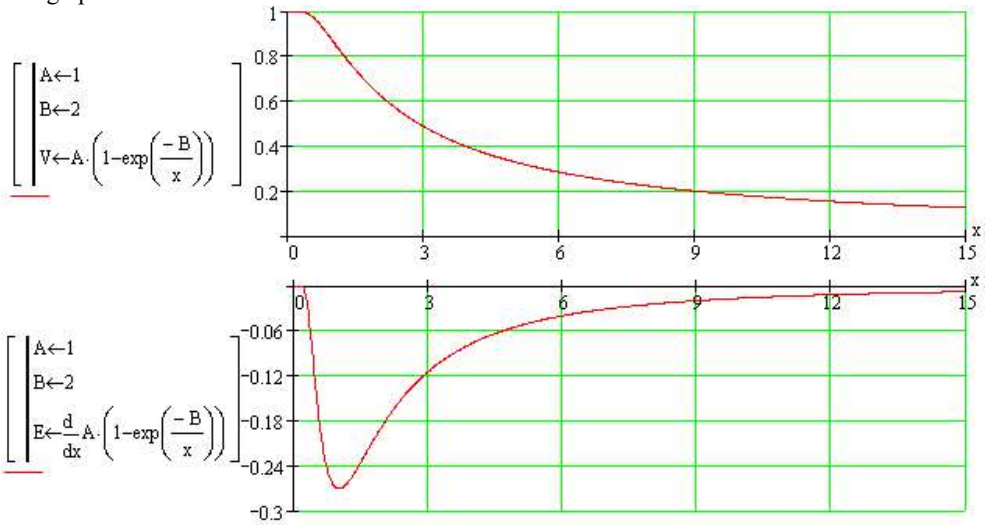
Interaction functions of particles of matter

The mutual acceleration of particles of matter has a complex form. It can be distinguished between a gravitational component and a structural component.

Newton studied gravitational acceleration and presented the results of his research in the form of a mathematical formula $a_n = \frac{G \cdot M}{R^2}$. Today we know that the gravitational force does not change exactly as Newton presented it. Because if it changed exactly according to Newton's law when the distance changed, then the orbits of the planets in the solar system would have the exact shape of an ellipse. And they don't have that shape. The most striking example is the phenomenon known as Mercury's perihelion motion.*2) Mercury's perihelion motion is slow at 42.98 arc seconds per century. But the existence of this motion shows that the actual orbit of this planet is rosette-shaped. The variability of Mercury's orbit can be described more accurately if an exponential factor is added to Newton's function. Then the variability of the gravitational acceleration can be written using a function in the form $a_n = \frac{G \cdot M}{R^2} \cdot \exp\left(\frac{-B}{R}\right)$. When analyzing motion, it is better to use this function, but written as a field intensity that changes depending on the distance R. It can also be written by adding a "minus" sign, which is recommended here to make the potential field function positive. Then the field intensity function along any ray that comes from the central point of the field has the form $E_p = \frac{-A \cdot B}{R^2} \cdot \exp\left(\frac{-B}{R}\right)$, and the potential of such a field is described by an exponential function, i.e. by the function E in the form $V_p = A \cdot \left(1 - \exp\left(\frac{-B}{R}\right)\right)$. In these formulas, A is the proportionality coefficient and B is the exponential coefficient.

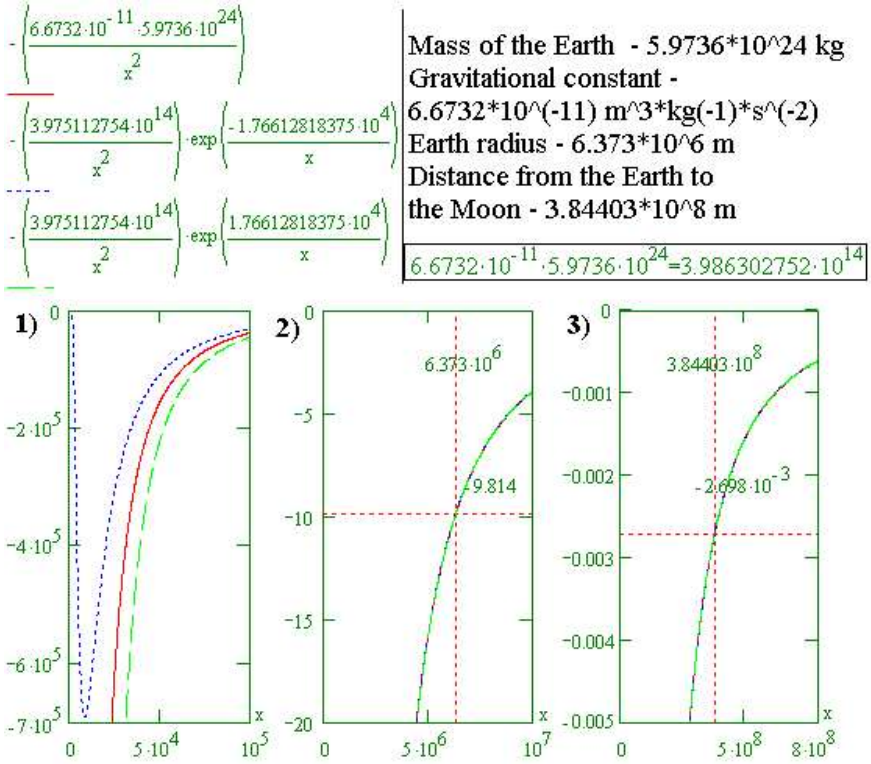
At large distances R (on the cosmic scale), the parameters of the gravitational field of a celestial body recorded in this way and the parameters according to the notation presented by Newton differ only to a small extent. Because as the distance increases, the exponential factor exp(-B/R) tends to one. But the exponential factor plays a large role in the description of the fields of individual components of matter, such as fundamental particles, atoms, molecules, as well as in the description of their mutual accelerations at small distances, on the order of the distance between the components in the nucleus of the atom and the distance between atoms.

The graphs of these functions are shown below.



Function E – Field potential and field intensity – changes in gravitational field

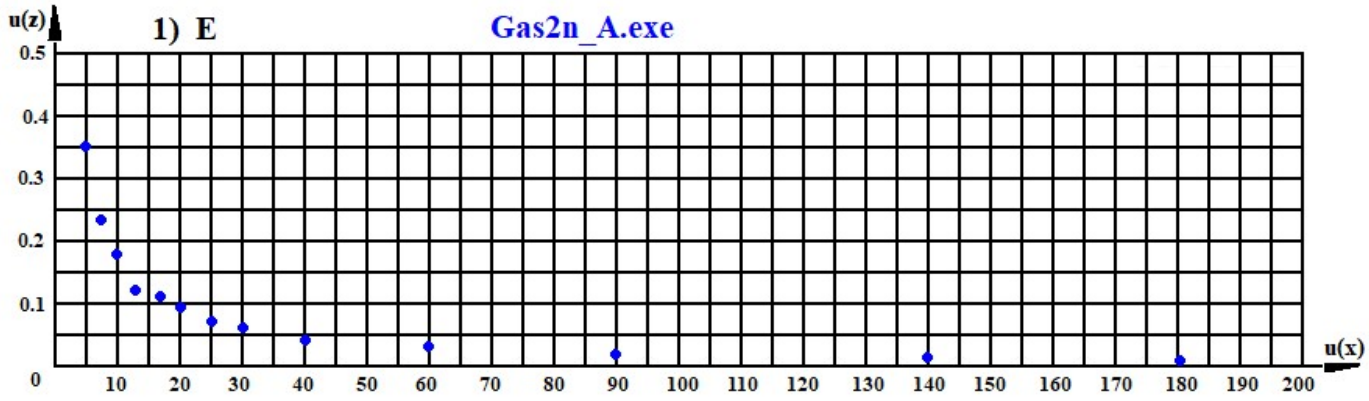
And the finction charts below show that at cosmic distances, the difference in the gravitational interaction according to Newton's formula and according to the exponential function E, i.e. the same formula, but with an exponential factor, is imperceptible.



The calculations show that at the distance at which the Moon is from the Earth, the acceleration due to gravity according to Newton is approximately 0.002690146399 m/s^2. However, if an exponential factor is added to Newton's formula, then according to this exponential formula, the acceleration due to gravity at the location of the Moon is approximately 0.002690270004 m/s^2. The difference is 123.605*10^9 m/s^2 and it proves the existence of the Moon's perihelion movement. Of course, it also proves the existence of the movement of the Earth's perihelion and the orbits of the Earth and the Moon in the form of a rosette, not an ellipse.

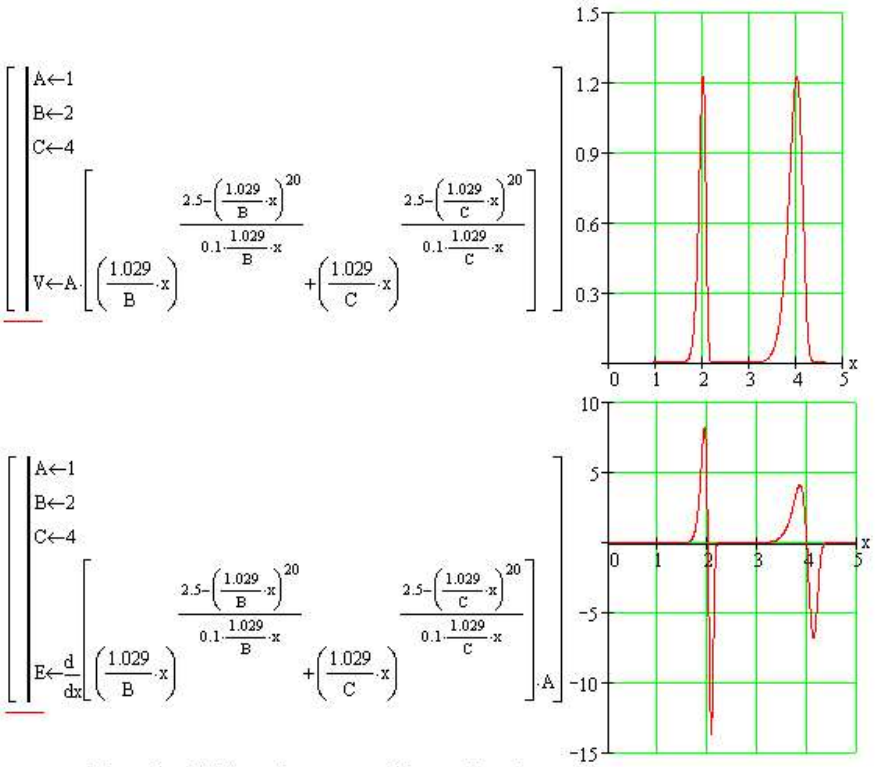
Computer modeling of the law of negligible action

In computer modeling of the motion of particles 1 and 2 relative to each other, one can first use the gravitational component of the interaction between the particles. The obtained results are presented below in the form of a dot plot **1) E**.



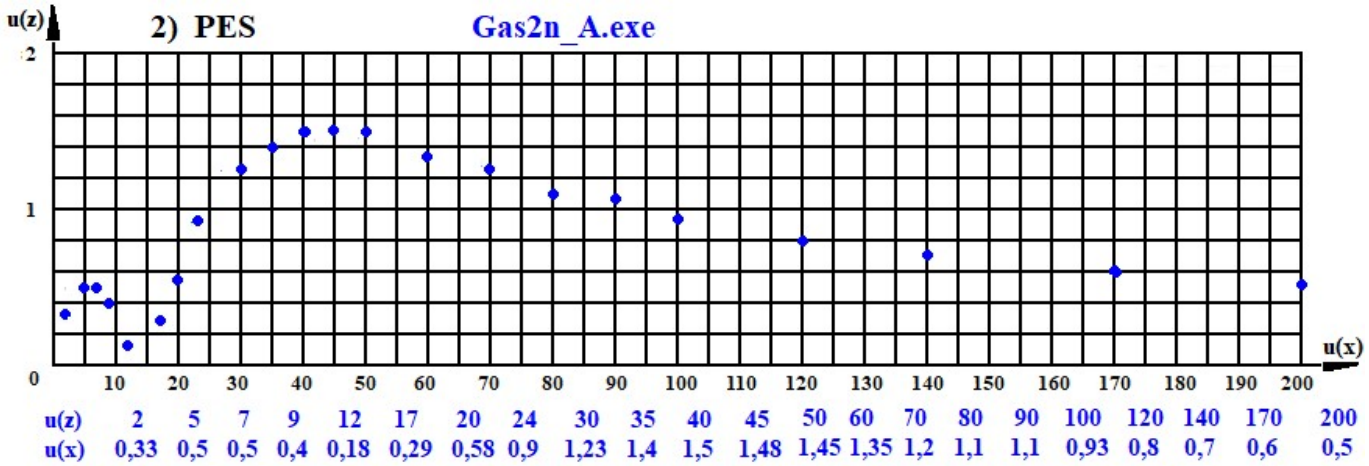
The results of the interaction at a speed of particle 1 less than 5 speed units are not presented, because then particles 1 and 2 move as one whole, i.e. as a stable structure.
For clarity, it should be added that when carrying out these exercises in the Gas2n_A.gas program, the E function was active in the "Formula" table.

The following exercises used the properties of the structural component of the interaction between particles, and more specifically, the properties of the potential shells. Two particles were used in the exercises (numbered 1 and 2) and each of them had one potential shell with a radius of 2 units of length. Two identical particles, when separated by a distance of 2.1 units, each of them is in the potential shell of its neighbor. Left alone, they create a stable structure, but are in constant motion relative to each other.
Below is a drawing with diagrams of the field potential and field intensity of a particle with two potential shells. The shells have radii of 2 and 4 units.



Function PES – polyexponenial sum function –
field potential and field intensity – changes in shell field

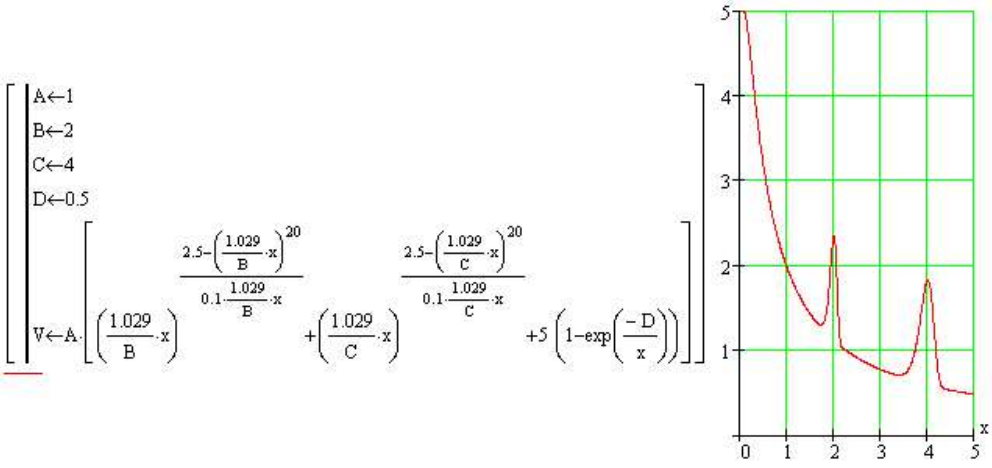
At these distances from the particle center there are points with extreme shell potential. A second similar particle located in the area of the shell vibrates between the slopes of this potential shell. Of course, both particles vibrate relative to each other. Because they are identical particles and each of them is located in the potential shell of its neighbor.
Before carrying out the exercises with two particles vibrating on their neighbor's shells, their motion was slowed down to almost zero. The "Cool" button was used to slow down the movement of particles in the Gas2n_A.exe program. After stopping the oscillating movement, the particles were located on the Z axis at the same distance from point 0. Before starting further exercises, particle 1 was moved parallel to the X axis "to the left" - the ordinate remained unchanged, and the abscissa was equal to -5. From this position the movement of particle 1 "to the right" began; in subsequent exercises at different speeds.
The results of modeling the motion of particles 1 and 2 relative to each other using the structural component of particle interaction are presented below in the form of a dot plot **2) PES**.



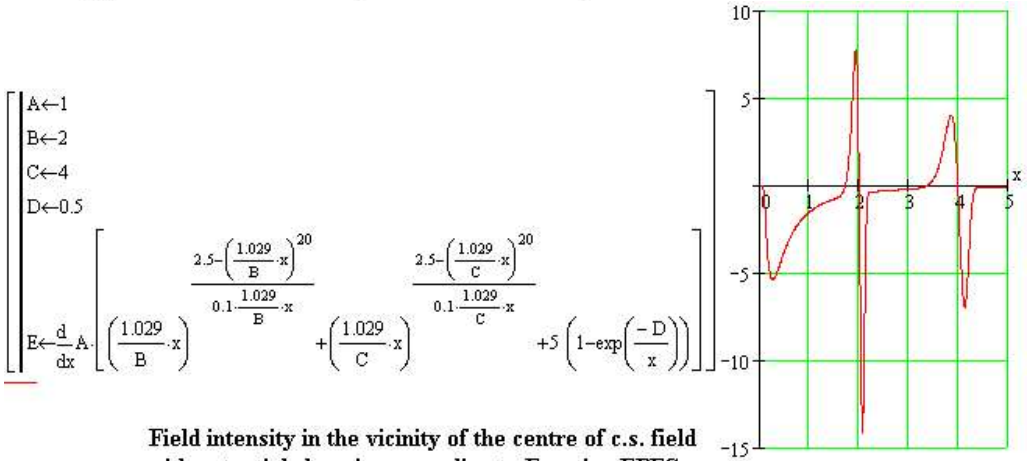
u(z)	2	5	7	9	12	17	20	24	30	35	40	45	50	60	70	80	90	100	120	140	170	200
u(x)	0,33	0,5	0,5	0,4	0,18	0,29	0,58	0,9	1,23	1,4	1,5	1,48	1,45	1,35	1,2	1,1	1,1	0,93	0,8	0,7	0,6	0,5

In this case, at a speed below 12 units. some kind of disorder is visible. This disturbance is the result of a longer time of interaction between particles 1 and 2, i.e. it is the result of the relatively low speed of particle 1. During this time, the particles are in the area of the potential shell of their neighbor and vibrate towards each other. As a result of this vibration, the final result of their velocity along the Z axis changes its sign from minus to plus or vice versa.

In both versions of the exercises with two particles, i.e. in the mutual interaction of particles according to the gravitational E function and according to the structural PES function, the law of negligible action is manifested. The essence of this law is very simple - increasing (in subsequent exercises) the speed of particle 1 contributes to reducing the mutual interaction of particles 1 and 2. But there is a significant difference. In the case of particles interacting according to the PES function, the law of negligible action begins to manifest itself only when the speed of the particles relative to each other exceeds a certain value. But for the meaning of the law of negligible action in nature, this difference is not important. Because both of these types of interactions are inextricably linked and are encoded in the structure of matter particles.
Below are schematic diagrams of mathematical functions that are related to and describe these interactions.

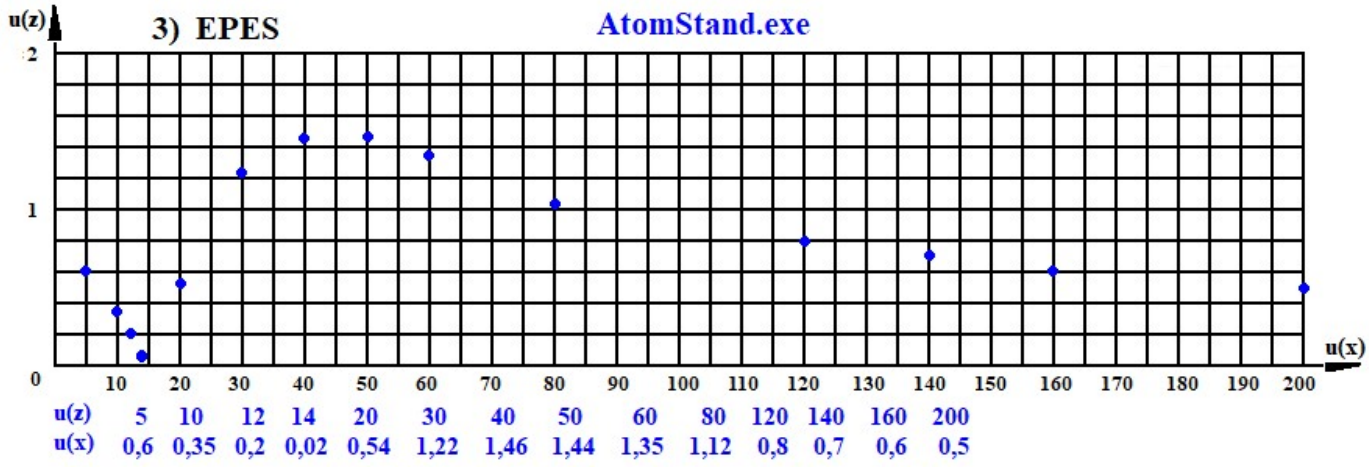


Complex function - polyexponential sum and exponential - Function EPES - hypothetical distribution of potential in the vicinity of the centre of c.s. field



Field intensity in the vicinity of the centre of c.s. field with potential changing according to Function EPES

Potential shells of matter particles are the basis for the construction of all kinds of structures in nature. Thanks to the nuclear potential shells of protons and neutrons, which in the closest distance surround the center of each nucleon, atoms of all chemical elements are created. Thanks to molecular potential shells, which surround the center of each nucleon and have much larger radii than nuclear shells, molecules of all chemical compounds and all kinds of permanent structures of matter are created. Thanks to the influence of potential shells, the material is resistant to tearing and compression and elasticity. In matter, there are all kinds of resistances to the propagation of various types of waves, particles and larger objects.
It is these resistances, in their elemental form, that are visible in the **3) EPES** dot plot below.



In the diagram, these resistances occur (approximately) when the speed of particle 1 is from 14 units. up to 45 units At such a speed of movement of particle 1, an increase in its speed along the X axis causes an increase in the speed of particles 1 and 2 along the Z axis. At the speed of particle 1 greater than 45 units. (approximately) there is a decrease in the interaction between particle 1 and particle 2. This is expressed in the form of their decreasing velocities along the Z axis. In other words, the resistance of particle 2 to the movement of particle 1 decreases.

The functioning of the law of negligible action

The law of negligible action presented here operates in two types of phenomena.
One type of phenomena is related to particles that move linearly in relation to an object at enormous speeds. One particle moving at great speed and the particles of matter in relation to which it is moving have a negligible impact on each other. This situation exists in

two known phenomena. One of them is the movement of particles accelerated to enormous speeds in a particle accelerator. There, particles move in a vacuum, but they overcome the inhibiting influence of the surrounding matter of the accelerator itself and the matter of the physical vacuum, which is not an absolute vacuum.
Another example of linear motion is the neutrino. Neutrinos reach us at enormous speed from space, but they are also thrown into space during the decay of atoms of radioactive elements on Earth. Thanks to their enormous speed, in accordance with the law of negligible action, they penetrate deep into the Earth.

The parameters of particles that are accelerated to high speeds in accelerators are currently misinterpreted by theoretical physicists. This is related to the incorrect understanding and interpretation of concepts such as energy and mass. The incorrect formula E=m*c^2 has been used in physics for almost one hundred and twenty years. Based on it, theoretical physicists currently wrongly believe that the energy used in accelerators to accelerate particles turns into the mass of these particles. They believe that this is the reason for the increasing difficulties in the process of accelerating particles that are moving at higher and higher speeds. And the actual state of affairs is that when it becomes more and more difficult to accelerate a particle in accelerators, when its speed increases, this is the result of the accelerator's decreasing ability to influence the particle.

The second type of phenomena in which the law of negligible action manifests itself is related to the vibrating motion of particles of matter.
The discovery in this field was made by prof. Louis Rancourt, a physicist at College Boreal, Canada. He called his discovery the Boreal effect.
In one of his experiments, prof. Rancourt used two masses - 100 g and 500 g. He placed the smaller mass on a torsion scale, and the larger mass was placed near the smaller mass. After stabilizing the position of the smaller mass (mounted on a scale) relative to the larger mass, the researcher passed a beam of laser light (in another experiment, it was a beam of ordinary light) through the space between both masses. The result was that the smaller mass moved closer to the larger one.

In another experiment, the researcher did not use the impact of a larger mass on a smaller one, but only had a torsion scale and a 100 g weight suspended on it. In this experiment, he transmitted a beam of light through a space not far from the weight, for example, from the north side. Under the influence of the light beam, the weight moved northwards, i.e. it moved closer to the light beam. And when light passed near the weight from the south, the weight deflected to the south.

The experiments were carried out in different conditions, including in the basement. In each case, in different places in the basement, or in different places in the laboratory, the torsion balance arm with the mass attached was set in different directions. The direction was decided by the location of the closest large masses of matter - walls, equipment, etc. And in each experiment it was so that simultaneously with the light beam being turned on, the mass attached to the torsion balance lever approached the light beam, and when the light beam was turned off, the lever with the mass returned to its original position.

To explain the Boreal effect, the interpretation proposed by the discoverer is not recommended. Because even if we use the concept of pressure difference to explain the physical mechanism of the Boreal effect, it does not mean that this mechanism is related to the gravitational interaction. Because in fact, today's theoretical physics does not know the mechanism of gravity. Currently, this mechanism - of gravity itself, as well as the Boreal effect - can be logically explained only on the basis of ideas that are contained in the constructive field theory (CFT).*3)
You can read more about the Boreal effect in the article "The Boreal effect - Law of insignificant action".*1)

In fact, the Boreal effect manifests the law of negligible action, which is related to the vibrating motion of particles of matter. Particles of matter carry light radiation. Vibrating at high frequency, they move at high speed. As a result, they significantly reduce the interaction with particles of matter from the surroundings. Thanks to this, the balance in the interactions between particles of matter is destroyed. And when, after the appearance of a light ray, a nearby object begins to move, it is, in a sense, an attempt of the components of matter to create a state of equilibrium in the newly created situation.

The Boreal effect indicates that a vacuum, i.e. space without atoms, is filled with particles of subtle matter. In this vacuum, light waves propagate in a similar way to how sound waves propagate, for example, in air. Particles of subtle matter, the existence of which is confirmed by the results of the physical experiments of Prof. Louis Rancourt, in the constructive field theory (CFT) they were called protoelectrons.

The final conclusions

The presentation of the law of negligible action presented here is a challenge to theoretical physicists. This call is intended to encourage theoretical physicists to take action to correct theoretical physics.

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*1) "The Boreal effect - Law of insignificant action" - http://pinopa.narod.ru/Effect_Boreal_uk.pdf.
*2) "Perihelion motion of Mercury" - http://pinopa.narod.ru/Ruch_peryhelium_uk.pdf.
*3) "The Constructive Field Theory - briefly and step by step" - http://pinopa.narod.ru/KTP_uk.pdf.

Bogdan Szenkaryk "Pinopa"
Poland, Legnica, 2024.02.23.

Stupid formula E=m*c^2
(The ignorance of physicists 8)

The ignorance presented here can be especially troublesome for some people. This will be the case when these individuals see a glaring inaccuracy in the physical formula and in the theory considered "basic theory", and at the same time hold high scientific positions. They

may face a dilemma: officially question this formula or not. By undermining the correctness of such a theory, they risk losing their existing scientific privileges. Because it may result in the loss of position, earnings, respect in the environment, etc. And what is this "particularly troublesome" ignorance? Currently recognized as the "basic theory" is "mass-energy equivalence" - it is expressed by the formula E=m*c^2.
The ignorance associated with this mathematical formula ignores three physical laws - issues.

The first law that was overlooked - The Law of Faint Action
The ignorance associated with this pattern is depicted in connection with the work of accelerators. In these devices, the particles are accelerated to ever higher speeds. During the acceleration process, the amount of energy used in acceleration increases "at a dizzying rate". Thus, physicists invented that the increase in energy to be used to accelerate the particles to ever greater velocities is due to an increase in the mass of the particles that are accelerated in the accelerator. In other words, they came up with the idea that the energy transferred to the particles (while making them faster and faster) turns into their mass. And such a "dark" solution by physicists to the problem of the increase in energy, which is used to accelerate particles, arose due to the fact that they did not know (and do not know so far) a certain physical phenomenon. This phenomenon is related to the mutual transfer of energy by the particles at increasing relative velocities as they collide with each other. In short, the collision of particles with each other, when they have greater and greater velocities in relation to each other, means that these particles transfer less and less energy to each other. This phenomenon has been called the law of negligible action (ZD law). You can read more about this in "The right of negligible action in action" at http://pinopa.narod.ru/Prawo_ZD_uk.pdf.

Second ignored law - The law of dynamic resistance of the medium
While respecting the "ignorance" introduced into physics in the form of the formula E=m*c^2, the existence of dark matter is ignored. The concept of "dark matter" was introduced into physics in order not to return to the concept of "ether". Dark matter exists everywhere - so it exists in a void of space, where there is no atomic matter, and exists in various ways densified in atomic matter. Dark matter is just a protoelectron medium, which is made up of particles called protoelectrons. Densities known as electrons are formed from these particles under suitable conditions. (You can learn more about electrons in the article "Electrostatic field? ... It's very simple!" at http://pinopa.narod.ru/Pol_el.stat_to_proste_uk.pdf.) In accelerators, particles are accelerated to huge speeds in channels with physical vacuum. There is no atomic matter there, but there is a much condensed protoelectron medium. High concentration of protoelectrons in these places (channels) is caused by the atomic matter present in the vicinity. The particles that rush through the condensed protoelectron medium with great speed are necessarily exposed to the resistance of this medium. This phenomenon of the influence of the protoelectron medium on flying particles is similar to the effect of air on a flying rifle projectile. It is true that at high speeds, the phenomenon described in the ZD law becomes more and more visible, and then the resistance of the medium to the rushing particles decreases. However, before this law of ZD is clearly manifested, there is a strong resistance put up by the protoelectron medium. Physicists who introduced "ignorance" to physics in the form of the formula E=m*c^2, did not take this resistance into account.

Third ignored law - The law of mass increase with compaction
The above-mentioned protoelectron center also testifies to the existence of "darkness" in physics in a different way. This topic is presented quite extensively in the article entitled "Dark Matter in Phenomena", which is available at http://pinopa.narod.ru/Ciemna_materia_w_zjawiskach_uk.pdf. There are presented experiences that allow you to understand that dark matter not only exists in the cosmos, but is simply one of the components of atomic matter. The results of experiments in which there is an increase (and / or decrease) in the mass of matter show in two things. Firstly, the properties of dark matter can be studied not only through astronomical observations, but also here on Earth, e.g. in laboratories. Second, the results of the experiments show that the equivalence of mass and energy, which some say is expressed by one of the most famous formulas in human history as E=m*c^2, has nothing to do with reality. Because according to this formula, the loss of weight of 0.38 grams should be combined with the appearance of a huge amount of energy. Also, an increase in the mass of matter by such a value should take place after the supply of an appropriate amount of energy. This amount calculated using the formula should be approximately 34.2 terajoules. This is a value comparable to the energy of a large size atomic bomb. And it should not matter whether the cause of, for example, the loss of mass is demagnetization of water or mild steel, or the crushing of an appropriate amount of metal foil. Each such case proves that the famous formula E=m*c^2 has nothing to do with reality. Because in this case, the physical law says that the mass of matter increases with its concentration. And this compaction does not require such a large energy as it is shown by the famous formula E=m*c^2.

Author for lightening physical issues
Pinopa

Magnetization - its effect on mass

(Translated from Polish into English by Andrzej Lechowski)

This article is in some sense a continuation of two other articles on the magnetic fraud in theoretical physics, or "Magnetic fraud" (http://pinopa.republika.pl/Magnetic_fraud.html) and "Two hundred year fraud in theoretical physics" (http://pinopa.republika.pl/Dwustuletnie_oszustwo.html). It applies to phenomena that are difficult to see. Thus, there is nothing surprising in this, that the first researchers who studied magnetism, electricity, and relations between them - Hans Christian Oersted and Andre Marie Ampere did not see it. It simply did not come to their minds that magnetization leads to condensation of matter. For indeed, it is not easy to guess that the steel block before the magnetization has a smaller mass than that which gained it after magnetization.

If the former, researchers surmised the existence of the phenomenon and investigated it, then physics would show today totally different picture of structure of matter. First of all, the leading role in the description of physical phenomena would play matter of physical vacuum, which formerly was called the ether. Because an increase in weight of magnetized materials is in some sense an eye evidence that the process of magnetization of the material leads to compaction of subtle matter of physical vacuum in this magnetized area.

During magnetization by means of another magnet or by an electric coil with current, tends to form in the atomic matter flowing streams of subtle matter and the compaction of this flowing matter. The external image of the compaction exists and can be observed in at least two forms. In one case, the phenomenon of compaction of subtle matter can be seen as a mutual attraction between coils in the electrical coil with flowing current, and in the second case, the phenomenon of compaction of subtle matter is manifested as an increase in weight. There grows both coil weight when electric current starts to flow in it and mass of the magnetized steel block.

Using a modest home opportunities, the author conducted a trial whose aim was to check whether in the primitive household conditions he can determine the change in mass of matter under the influence of magnetizing. In the experiment, was used a balance scale with a set of weights from 1 gram to 20 and weights from 10 milligrams to 500 milligrams. In the experiment, was used neodymium magnet with a diameter of 18 mm and a thickness of 5 mm, which was used as the source of the magnetic field. Objects that during the experiment were magnetized, was glued set of three steel flat washers - that had a form of a ring of a thickness of 6 mm and diameters: internal and external, respectively, 11 mm and 21 mm - and a steel ball from bearing with a diameter of 18.8 mm.

The experiment was carried out as follows: First, were weighed separately: magnet, ring and ball - they had respectively the weight of: 9.38 g, 11.15 g, 27.75 g. By adding up the total weight of these items was 9.38 g + 11.15 g 27.75 g = 48.28 grams. This total weight was not possible to weigh using weights that were available. For this reason additionally was used (as a weight) 26,08 grams shingle.
Next, the magnet, ring and the ball were joined together into one lump and immediately after union weighed together - the weight was equal to 48.27 grams. (The noticeable difference in weight can be explained by the measurement error.) However, before this weight had been read (after summing the weights), for about 15 - 20 minutes the scales remained calm and its observation was carried on. Then during farther observation the pan with a magnetized lump of steel increasingly kept dropping down. For its balancing there were put whole matchsticks and their parts on the pan with weights. When it became clear that there is a weight increase of the lump, observation was discontinued. Then were weighed matches that during the experiment were put on the balance scale - their weight was 0.38 grams - and summed values of the other weights that were on the scales - the total was 48.27 grams.
In this way it had been established that the weight of the lump during magnetization (and thus also its mass) increased by a value of approximately 0.38 grams. So during the magnetization just such amount of subtle matter infiltrated additionally to the atomic matter of the ring and ball, which total weight before magnetization was: 11.15 g + 27.75 g = 38.90 grams.

The value of the weight of the ring and the ball during the magnetization in the experiment was (0.38 * 100 % / 38.9) about 1%.

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