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ENERGY UNIVERSE
/Energetic Physics/

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Introduction

This book is published to make our ideas about the Energy Universe popular.
In this field in 2002 we started to publish articles on the site of the Research Laboratory Sphere : http://research.zonebg.com/

In the first article we present you with a quantum model, from which the corpuscular-wave properties of the quanta follow directly.
The model is applicable for all the detachments of the microcosm.
The acceptance and application of the model solve the recent problems connected with the double-natured character of the quanta.

In the second article, we go through the behavior of the pulsating quantum model in time-space. Using it and many other facts we prove that the relativity is inverse, turned backwards, to the one from the General Relativity Theory (GRT).
Onwards in the text, based on the model, we examine and clarify the transformation of the energy into motion and the transformation of the motion into energy with an ultimate speed in time-space.
In the end, we explore how energy quanta change in gravitational fields.

In the next article, we will discuss the behavior of the pulsating quantum model in the Absolute time-space.
Based on the Absolute time-space, we clarify the dependence of the NQM and the ultimate speed in it. We relate the NQM directly to the Absolute time-space. On this base, we take out the Fundamental forces that predetermine the behavior of the energy in time-space.
In the end we clarify that the NQM is a result of the Fundamental forces in the Universe.

In the next article we go through different variations of balance between the Fundamental forces in New Quantum Model.
We explore the possibilities from absolute and non absolute balance, and we relate them to reality. Based on the facts we exclude the irrelevant models.
On the base of the confirmed model, we make the conclusion that the Absolute entropy predetermines the development of the Universe.

In the next article we will discuss the NQM in the aspect of Fundamental forces (Absolute entropy and the Absolute gravity) and we will find out that the energy is polarized by them.

From here on we analyze the behavior of the polarized model in sharp interactions with extreme differences in time-space. In these conditions the change of the pulsation is not capable of taking the big difference and that leads to discretisation - decay of the energy.

Thanks to the Discretised Quantum Model (DQM) the fundamental characteristics of the matter find their logical explanation (mass, impulse, magnetic moment, charges). This is how matter and antimatter became understandable and via their extra discretisation we get a mechanism for the explanation of the mysterious phenomena of the microcosm.

Last but not least, using the DQM, familiar to us forces from nature, can be worked out only from the Absolute entropy and the Absolute gravity.

In the last article we go through the behavior of the Descretised Quantum Model in high energies.

We observe that in a situation of over discretisation, the model would be unstable, because of the fundamental AE-AG (Absolute Entropy - Absolute Gravity) unbalance in time-space.

As a result of the unbalance, in high energies the unstable Overdiscretised Quantum Model decays to more stable DQM.

In the end we clarify that in the microcosm it is not realistic to look for fundamental components (atomos) because all the microstructures, in their energy essence, are component-derivatives of reality.

Only the energy quantum can be defined as a fundamental component of the microcosm.

New Quantum Model

According to the philosophy, the most correct answer is the most general one. And the truth is, the more we get into the technicalities of a specific detail, the more we limit ourselves to it and miss the others.

That is why, to clarify what energy is, we need to absolutely let go the thinking of materialism and to focus on the most general thing that characterizes it.

We will not use many words here or detailed discussions, but we will directly present the most general definition in relation to the energy which we had reached.

Energy is every Difference in time - space according to time - space itself.

Wherever we spot differences, we actually have the presence of energy.

If we try to give a more detailed definition of energy, we will get onto the limits of isolated cases, which will be crucial for our forward coming analyses.

Now, let us take a look at energy in the most general idea, as a difference in time-space.

Naturally, every difference is isolated (confined) in the dimensions. The energy quanta (called just quanta in the text), in their essence, are also limited in time-space.

Why, then, do the quanta reveal wave properties?

Undoubtedly, to answer that question we have to look at the conditions in which they reveal their properties.

Quanta exist in motion and their wave properties are naturally connected with it.

In every case of direct (spontaneous) registration, the quanta act like particles. Their wave properties are shown in cases of motion and are always connected to the parameter - wavelength.

What is wavelength actually?

In the aspect of the new definition of energy, this is the part from time-space in which a difference is observed. (The wavelength and the frequency are reciprocal and depend on the energy of the quanta).

Let us form a model in which energy, wavelength and time-space find their places, and where the wave properties can be seen. (fig.1-1)

It is time for us to stop thinking in a way of material ideas and to start thinking in energetic way in relation with the case given to us.

It is no longer difficult to realize that to observe a wave activity of the quanta, the latter must have wave behavior in time-space.

Now let us imagine what the simplest wave behavior of such a model would be.

Of course the model should excite.

Let us look at the model of exciting (pulsing) quantum.

The basic model is the one of the pulsing quantum between two extreme positions in time-space. In the inner extreme, the quant is characterized with the smallest volume (taken from the difference in time-space) and the biggest concentration of energy. In the outer extreme, the volume of the difference is the biggest, but the concentration of the energy is the smallest. (fig.1-2 , fig.1-3)

The characteristics of this model are in direct correspondence to the ones we are familiar with from the real world.

The energy here defines the minimum and maximum volume of the difference and the frequency of the pulsations in time-space.

The parameter, which gives the space between two minimums and two maximums, equals the wavelength and the parameter that gives us the timing between them equals the period.

Let us describe the most basic movement in the difference (energy) in time-space.

S=V.t - the distance travelled by the difference equals the speed multiplied by time.

Now we will take the case of one cycle (from inner through outer to inner extremes.)

The distance of the difference S=V.t1

Let us also quote the familiar physical formula for wavelength

$$\lambda = V/f = V.T$$

Now we will analyze it along with our case

$$S=V.t1$$

$$\lambda=V.T$$

Here t1=T, as we only look at it in one cycle (period). The speed of the motion of the difference (energy) is constant - the speed of light.

In conclusion we get

$$\lambda=V.T=V.t1=S$$

So, using only a mathematical approach, we get to the fact that the space in which the difference is seen equals the wavelength.

The model we analyzed gives us all the characteristics of the quanta and presents it as a detachment (particle) and constancy (wave) when it shows its wave characteristics - the pulsating difference in time-space.

It is time to take the model out of the book and place it in reality to check its accuracy. (Nothing can limit us from doing so but the limitations of our own mind).

What can be observed in the motion of the pulsing quanta?

We already mentioned the energy of the quantum defines the frequency of the pulsation and the minimum and maximum volume in time-space. When the so pulsing quantum moves with a constant speed (the speed of light) it makes a wave in time-space. We don't really have a concurrent wave in time-space, but we have a regular motion of the wave detachment with a given E…

It is not difficult to imagine what happens when we simultaneously have a great number of quanta in time-space… it is possible to observe wave phenomenon that are known from experimental physics.

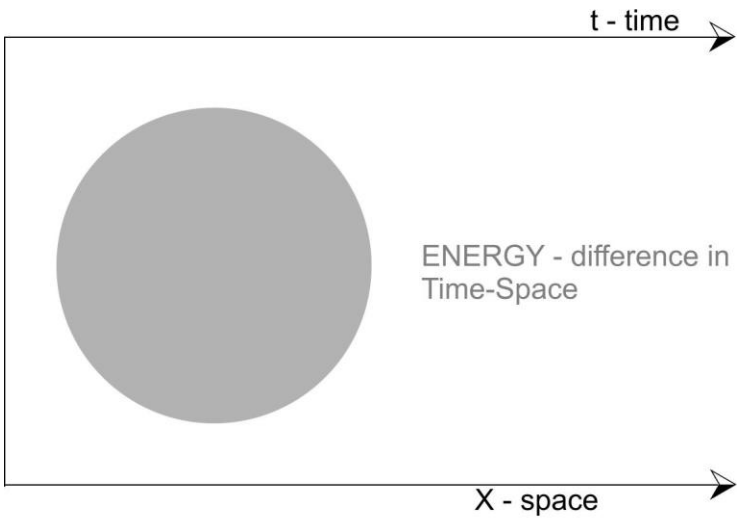
When we get into the details of the model, one can see that it doesn't contradict reality, it explains it.

(We leave detailed mathematical explanation to those who are really interested. Once they personally go through the pulsating quantum model, they could realize the fundamental meaning of it).

The presented model solves a fundamental physical problem, but also creates a new one.

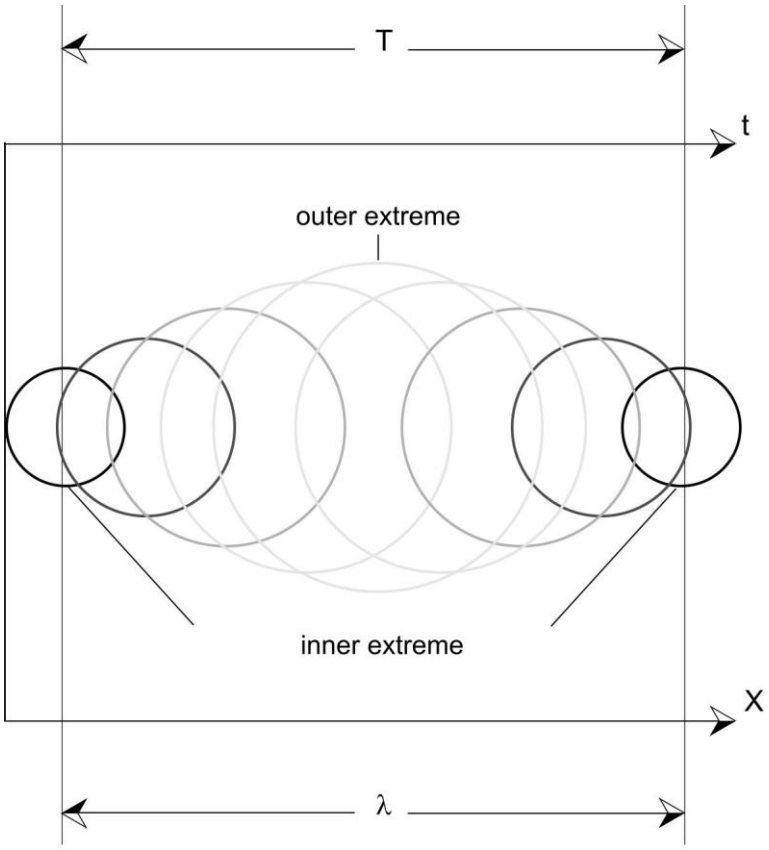
The main question that comes out is: Why do the quanta pulse?

The answer to that question will be given in the next article.



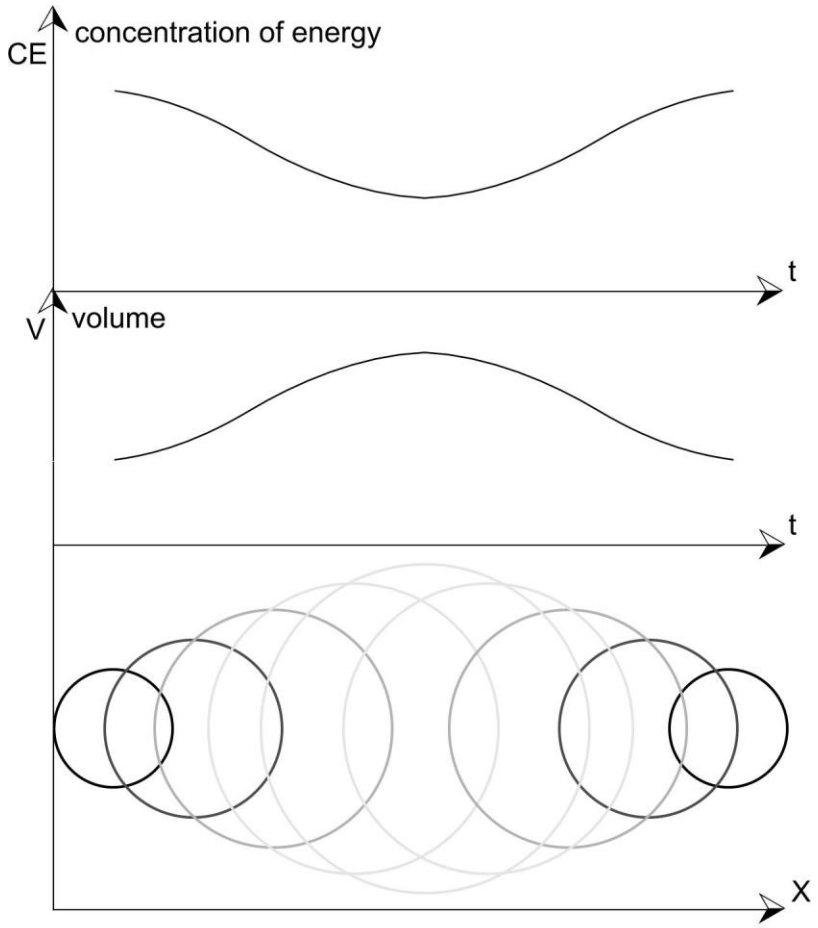
ENERGY - Difference in Time-Space

Fig. 1-1



Quantum Model - Pulsating Difference
in Time-Space

Fig. 1-2



Concentration of Energy
in Time-Space

Fig. 1-3

Absolute and Relativity

Having introduced the NEW QUANTUM MODEL in the article of the same name, we should now carry on writing from where we had stopped, and this was with “Why do the quanta pulse?”

While clarifying this fundamental question from a very important value, we should beforehand ask each other - Where do the quanta pulse?

As we stated in the article before, the energy quanta in their essence are the difference in time-space compared to time-space itself. To relate to the reality (facts), we made the quantum have wave properties. So our exciting (pulsing) quantum moves with constant

(ultimate) speed in time-space, makes a wave, and at the same time, it is a corpuscular with a defined maximum volume. This way the quantum has at the same time wave and corpuscular properties, which come out of the essence of the model. (fig.2-1)

Now we will have a closer look the behavior of this quantum model in time-space.

For example, our quant motions from point A to point B in space. (fig.2-2) The distance between these places is limited value Xab. The pulsating quant (with a specific frequency according to its energy) will travel the distance Xab with a constant speed C for time Tab.

To make it simple we make the model in vacuum, and the distance Xab is taken in a special way so it has a full number of wavelengths. So our quantum starts from point A and gets to point B in one and the same status of pulsation. (fig.2-1 , fig.2-2).

Now let's place another quantum at the same distance with two times the energy. This one differs from the first one and will have two times higher frequency and half the wavelength.

The result of the experiment will be identical. The quantum with two times more energy will travel the distance Xab, with speed C for time Tab.

The difference in the second experiment will be two times higher frequency of pulsation and half the wavelength in time-space. As we picked Xab to be divisible to the wavelength of the first quantum, it will be divisible to the wavelength of the second one too. The last will also start from point A and will get to point B in one and the same pulsation status.

If we set the next quantum with two times stronger energy to the one before and four times more powerful to the very first one, we will get identical result.

As the quanta have constant speed, not depending on their energy, they travel the distance Xab for the time Tab as Xab=Tab.C.

The objective result is that for all the different quanta, the distance Xab and the time for which they travel Tab is constant (X and T do not change). This is why there is no difference whether we explore if a specific quantum travels the distance Xab for time Tab or if for the time Tab it travels the distance Xab.

With the constant speed of the quanta, the axel of time doesn't differ from the axel of space in relation to their travel in time-space.

It is also clear that for all the quanta, time and space do not change and they are not dependant on the quantum energy (i.e. from the quanta themselves). That is why time and space are absolute! The dimensions do not depend on the quantum, but the different quanta have different behavior in time-space (dimensions) according to their energy.

If different quanta (with different energy) start parallel to one another and move synchronously in space, the result will be identical. Within the same time, they will travel the same distance.

Absolute is present in time-space, in which the relativity energy (quanta) always travels the same distance in the same time. Described in an easier way, in a very specific moment in time, the energy quanta are in a specific place in space and, inversely, they are at a specific place in space in a very specific moment in time.

Up until now we were analyzing the corpuscular behavior of the quanta, and the important thing for us was that the quanta are limited volumes of energy moving in time-space.

Now it is time to focus on the quanta behavior as waves. It is proven that proportionally

to the energy of the quanta, their frequency (of the pulsations) in time-space increases. With the increasing of the frequency (of the pulsations), a decreasing of wavelengths in time-space occurs.

Dependence is clear to us, too. The bigger the energy of the quantum, the more movement (in all directions) through pulsations it makes. This way the pulsating quantum performs a complex of two types of movements. One is with a constant (ultimate) speed in time-space directed in the direction of the travelling (where C vector is directing), and the other one is cyclic in all directions (where energy expands to its maximum volume) and from all directions (in contraction of the energy in minimum volume).(fig.2-4 , fig.2-5)

We also observe the dependence. Because of the ultimate speed, the forces that affect the quantum do not lead to a change of its speed in the motion direction in time-space, but lead to a change of the speed of its pulsations (frequency), i.e. the speed of cyclic motion in all directions.

In the absolute time-space there is an ultimate speed of motion of the difference. Because of that, when you transfer a moment of motion to the quantum, it cannot increase its speed towards the direction of the motion in time-space, but it does increases the speed of pulsation (cyclic motion in all directions).

In this case, the ultimate speed of motion is the only possible speed for the quanta, because even the least energy quanta move with a constant speed C.

If we didn't have an ultimate speed - C (according to the material logic), it would mean that the quanta can accelerate infinitely for the affecting forces.

The facts, though, prove that with real objects there are no infinite quantities. Because of that, there is an ultimate speed for motion of the energy (the difference) in time-space. In these conditions the quanta are relative (they change) in the absolute (not changing) time-space.

Now let us take a closer look at a more complex setting, in which the quanta are emitted from a moving system in the moment it gets to point A (fig.2-3).

From the moment of emission the quantum becomes independent from the moving system.

As the quantum speed does not depend on the speed of the emitter, the quanum will travel the distance Xab for the same time Tab, as in this case, when emitted from, but not moving toward, the AB emitter. It is also important that the speed (V) with which the emitter of our quantum travels is of no importance. In all the cases, the speed of the quantum remains the same (ultimate) C.

The setting may be made more complex with different moving systems with different speed. In all the cases, because of the constant limit speed, the quanta will travel the same distance in the same amount of time. Therefore, the absolute of time-space is present and does not depend on the systems and their motion.

We have an increased interest in the relativity itself (the change) of the quantum in time-space.

For this purpose, we will take a closer look at the case of the moving system (according to AB) which emits a quantum in point A. Although the system moves with a speed V, the facts show us that the emitted quantum will not move with speed C+V. What happens with the moment of motion? Why does that do not lead to an increasing of the speed of the emitted quantum?

Many experiments prove that when there is a force that may affect the moving of the

quanta (as it was with the matter) it affects their energy but not the speed of travel in time-space. In this case, because all the quanta move with ultimate speed, everything affecting their force leads to a change to their energy.

How does this happen?

Now we will analyze the behavior of the quantum in the moment of emission from the moving system. If that was possible (according to the matter logic), the speed of the system should be summed up with one of the emitted quantum. Because of the ultimate speed, this is not impossible with quanta. The speed in the direction of the motion in time-space cannot be increased above the ultimate.

As we made it clear it above, the moment of motion in this case leads to acceleration of the cyclic motion of the quantum in all directions by the increasing of its pulsation in time-space. This is how, by the increasing of the pulsations, the quantum gets the given motion, which is transformed into energy.

If the emitter is moved in a direction opposite to the emission, we take out a moment of motion from the emitted quantum (because of the kickback), which does not lead to a decreasing of the speed in the axel of travelling, but to the decreasing of the speed of pulsations in time-space. This way, with a decrease of the pulsations, the quantum loses energy which transforms in motion.

The information given here will sound improbable to those who think in terms of material ideas (because of the limits of their own ideas) but for those who think in terms of energy, the acceptance of the pulsing quantum model is just a simple conclusion.

From the essence of the model directly comes not only the corpuscular wave properties but also the phenomenon with the transformation of motion into energy and of energy into motion.

The new quantum model easily deals with the behavior of the quanta in the gravity fields. When the quanta move to the source of the gravity field, they do not accelerate in the direction of attraction, but accelerate the pulsations and, in this way, increase their energy. When the quantum moves in the opposite direction, they do not slow down in the direction of motion, but slow down their pulsations and, in this way, decrease their energy.

The validity of the pulsing model expands over the objects from the microcosm, but their detailed research will be done in another article.

The most important thing is for us to find the answer to the question about the inverse (reverse) relativity.

Why did Einstein make time-space relative?

The answer is given to us by history.

He was a scientist for the 19th century, born and raised with the mechanics of the great Newton. Until his last moment, he was not just looking for a way to change Newton’s theory, which is obviously true for matter, but he was also looking for a way to apply to it the hated light, which was not obedient to the laws of the mechanics. Thus he was ready to make a lot of compromise (including to limit time and space) but not any that would break the law established by Newton.

So Einstein got to the paradox with the relativity of time-space. Instead of introducing relativity of matter and energy in the absolute time-space, Einstein introduced the relativity of the time-space as it relates to matter. According to him, it was not the energy and the matter that change nor the energy-matter processes, but instead time-space change according to the energy and the matter. In this way, the changes in the

energy and the matter are explained.

Yes, it is true that Einstein introduced relativity of dimensions. He got to the calculation of the relativity of the measured, but all this limits the development of future science.

When we present an infinite number of different time-space (for each quality detachment), we make the objects absolute (energetic and material).

In reality, we cannot divide time-space to smaller time-spaces - portions or fragments (any part of the time) as we can do with matter. Every single experiment to theoretically quant the time-space turns up impossible in reality (facts).

Time-space is one! It is indivisible and absolute! Relativity is a fact but it is inverse! In the real world, energy and matter change in time-space, not vice versa!

Of course, the relativity of the objects can be calculated mathematically by entering the relativity of the dimensions (time-space) as the great scientist did. What Einstein did is really tremendous, because he pointed out relativity as prime in importance. He was quite aware that this was only a temporary solution to the problem. Unfortunately, after him the majority of the scientists neither understood the General Relativity Theory (GRT) nor wanted to hear of another theory… they just believed in GRT. The firm belief in the science itself undoubtedly limits its development…

The best way to understand the paradox of reverse relativity is when we realize how we measure the objects in time-space.

The answer is through other objects. I.e. we measure some relativity (measurable ones) through other ones. It is quite normal in the process of the scientific development to accept in the first place that time-space is relative. Is it not measured with relative devices?

Later, after we fully realize the relativity of the objects, we get to the conclusion that from the stated, does not follow the relativity of time-space, but just the opposite.

Every difference in time-space, according to time-space itself, is energy.

Therefore, every differences between the objects (energy of matter ones) in time-space are a result of the energy.

According to this, every object is different (relative) in time-space. In other words, we will observe differences in objects and processes (energy of matter ones) according to their energy.

In simple wording, the objects and the processes change, not time-space.

If we were thinking materialistically, this would seem impossible. According to the materialists the objects are absolute, and as a result of the effect of the forces, they can only change their position in space, which happens for a specific time.

This is why Einstein was having a trouble with the speed of light, which remains constant in time-space and does not depend on the direction and the speed of the emitter (the forces). It is true that after the introduction of the separate complexes of time-space for each individual object, it is possible to mathematically calculate the relativity of the objects themselves, but this happens on the behalf of limitation of the dimensions.

The other great problem for the famous scientist was the gravity speed. He wanted to include the gravity interaction to his relativity theory, but he couldn't find a way because of the problem with the gravity speed (which was reckoned infinite). He played a trick there. Once he introduced time-space as relative, he decided to curve it as if it was affected by gravity; it is relative, isn't it? Then why not curved too?

There immediately comes the question about the speed of the curving of the time-

space itself, which is deliberately avoided up until now. The analyzing of it brings a dead end to the finding of the solution of the problem of the gravity speed.

Einstein himself was aware that it wasn't the way things were in reality. Unfortunately, throughout his life, he was never able to find a better theory, and after him the firm believers of GRT can never accept the contestation of it.

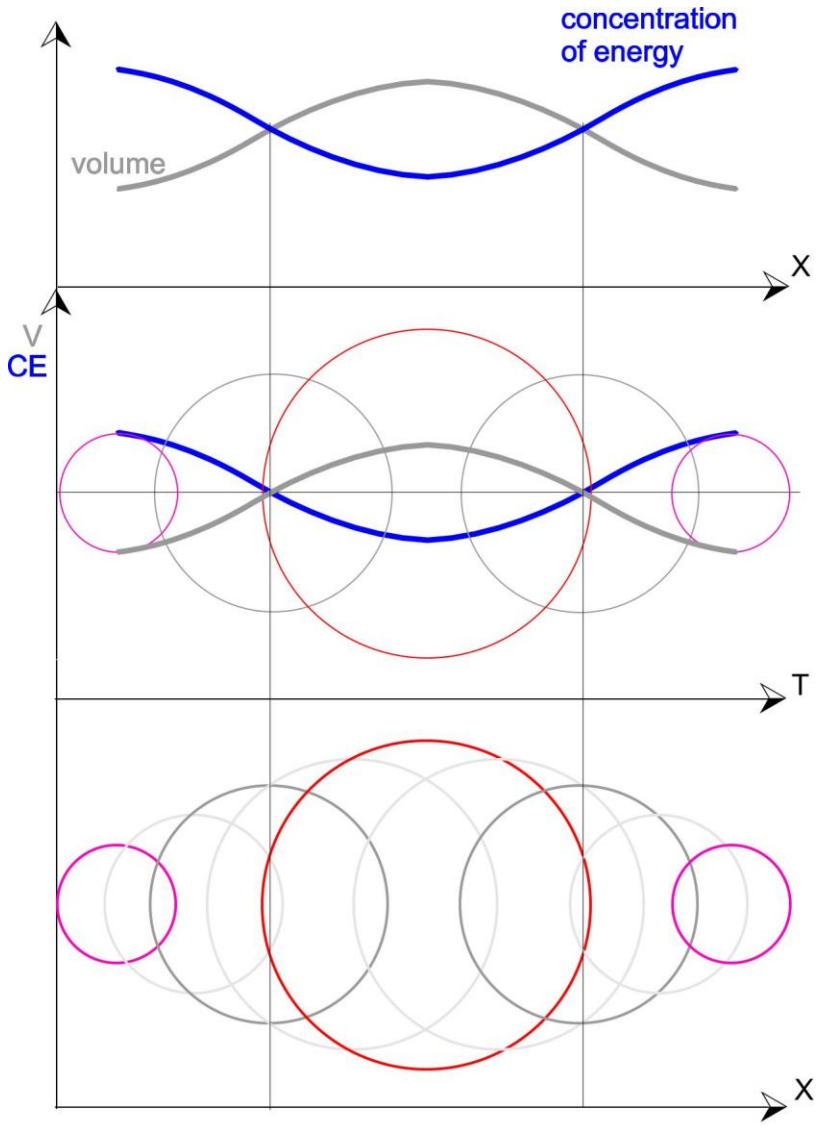
To all of them we will say that, just like time-space, which has no components which are familiar to us, gravity has no found carrier. Because we have no carrier of interaction, we cannot solve the problem with its speed. As in time-space, we can only analyze gravity through relative objects (matter and energy ones) without really being able to make a carrier of the interaction stand out.

From now on we can carry on with the interactions, but we will stop here, because analyzing the latter will be done in another research.

In the end of our article we want to make sure that from the energetic point of view there is no doubt that time-space is absolute and energy is relative in it.

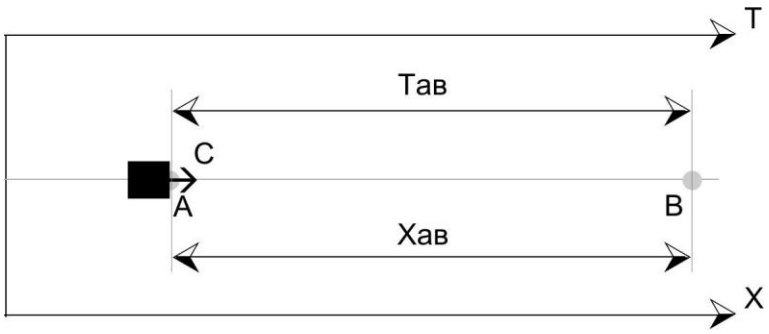
We would like to focus on micro particles and the matter, but before that we need to find out why the quanta pulse.

Actually, we are only a single step away from that.



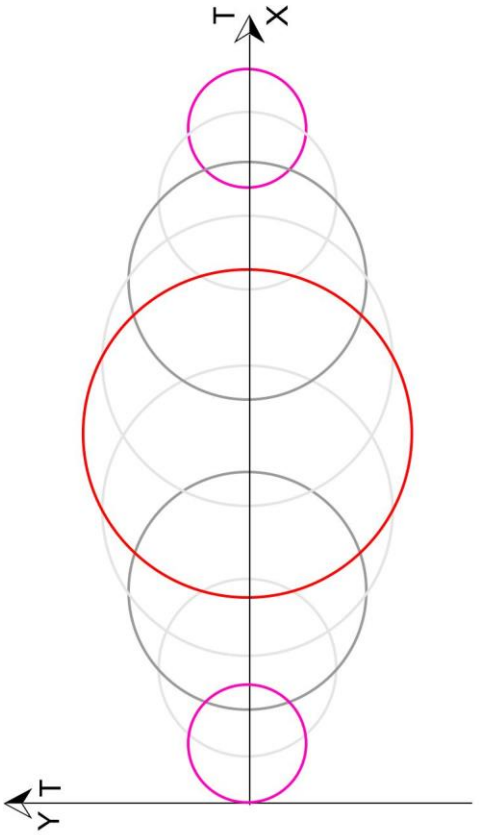
Pulsation Status - Concentration of Energy
and Volume in Time-Space

Fig. 2-1



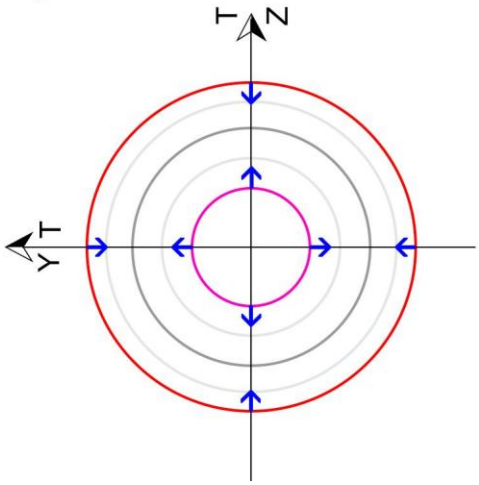
Non Moving System
Fig. 2-2

Moving System
Fig. 2-3



Motion in direction of travelling

Fig. 2-5



Motion in/from all directions

Fig. 2-4

Fundamental Forces

The New Quantum Model presents the fundamental question - Why do the quanta pulse?

In order to respond to the question, we needed to check where the quanta pulse. To that end, in the articles before this, we made it clear that the quanta are relative in the

absolute time-space. We also made it clear that the quanta change in the dimensions (time-space) not the dimensions to the quanta.

On one hand we have the absolute (constant) time-space, and on the other hand we have the relative (changing) quanta.

We also know, that the energy is a difference in time-space related to the time-space itself.

The change in the energy of the quantum leads to a change in the behavior on the quanta in time-space. Each addition of energy on the quanta leads to increasing of its pulsations in time-space (motion in all directions), and each subtraction (take away) of energy leads to slowing down of the pulsations (fig.3-1).

The constant speed of the quanta (C) is defined by the absolute time-space and not by the energy of the quanta. The absolute (irreversible) time-space results in the absolute (constant) speed of the energy (difference) in it.

Because of that, when the energy of the quanta is increased, the quanta changes itself.

The absolute time-space determines not only the process of the quanta motion in it, but their wave behavior too (fig.3-2 , fig.3-3).

We should pose the question ”What is the simplest connection between the pulsing quantum and the absolute time-space ?”

The answer is - a force! A force that makes the quantum pulse. A force that determines the pulsations of both the lowest energy quantum and the highest energy quantum!

Let us see where this force should be placed in our New Quantum Model (NQM).

As we had stated the pulsation motion has two ultimate states. One state shows the maximum concentration of energy in time-space, and the other - the minimum concentration in it.

Being close to the simplicity and the range of our analysis so far, we should place the force, determined by the absolute time-space, in one of the two ultimate states.

We have two possibilities. One of them is this force to determine the concentration of energy of the quanta in time-space (to the maximum concentration), and the other one is it to determine the dispersion of the energy in time-space (to the minimal concentration).

The seeing of simplicity makes us pick the one way of the force directed to the agent. I.e. the force, defined by the absolute time-space should direct the process of pulsation to time-space (in all directions). This force aims to disperse the energy in time-space, i.e. to reduce the difference in it.

Being aware of the essence of the process (two-sided-pulsation), we need one more force that aims to concentrate the energy (difference) in time-space.

Even here the simplicity leads us to the relevant one sidedness of the force and the agent.

To what is the force aimed, so that it aims to concentrate the energy in minimal volume? The logical answer is the energy itself. The agent of the force, which aims a maximum concentration on the energy in time-space, is the energy itself (difference)!

Is that the picture that is revealed to us?

There are two forces that make the quanta pulse. One is defined by the absolute time-space and aims to disperse the energy in it, and the other one is defined by the energy itself and aims to concentrate the energy in time-space (fig.3-4).

For the existence of the quanta, these two forces should be in balance.

The fact that the quanta do not disintegrate shows us that these two forces are in a specific balance! The balance of these forces determines the preservation of the quanta

in time-space and, with all that, everything that comes out of energy.

What are these forces indeed? Do they have parallels in physics nowadays?

From the already accepted physics Fundamental interactions, we have two which are gravity related - a strong nuclear interaction and a gravitation one; one of attraction and repulsion - electromagnetic, the weaker one, is accepted to be an activity of the electromagnetic one.

The forces of interaction of attraction correspond with the definition of concentration of energy in time-space. Gravitation, though, better suits the definition.

Because of that, the force that aims to concentrate the energy in time-space will be called Absolute gravity.

The electromagnetic interaction is dual, the weaker one does not relate well to the force that aims to disperse the energy in time-space. We need to have a closer look at the fact-o-logical arsenal of the modern physics.

After a detailed analysis we find out a phenomenon that corresponds well to the definition of energy dispersion in time-space : entropy.

Why did we choose entropy? The reason is because it well defines the dispersion of energy, in time-space.

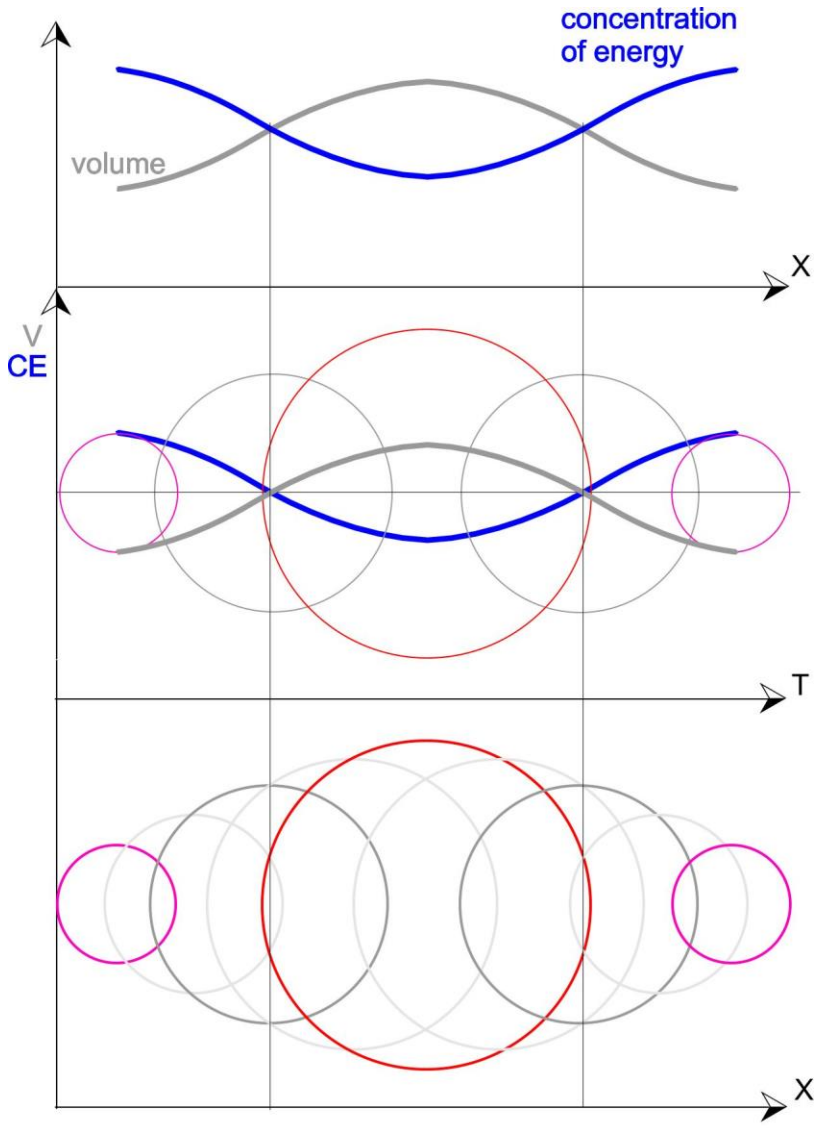
That is why the force that aims to disperse the energy in time-space will be called Absolute entropy.

Some of you may ask, why absolute?

The answer is because the Absolute entropy and the Absolute gravity are Fundamental forces from which all the other come!

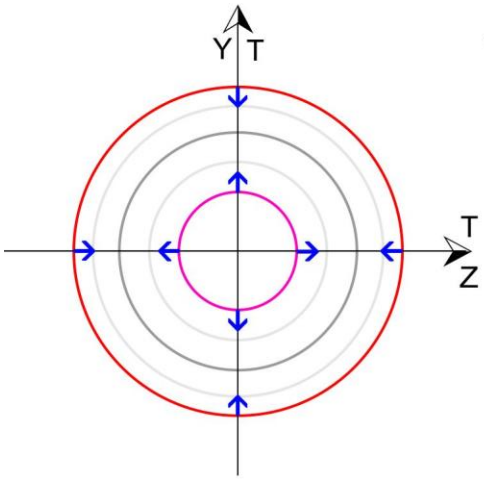
How this is happening will be seen in the next articles.

In the end we will make a conclusion, that although we started from the NQM, on its own, it is a result of the Fundamental forces in the Universe and the latter are defined by the Absolute time-space.



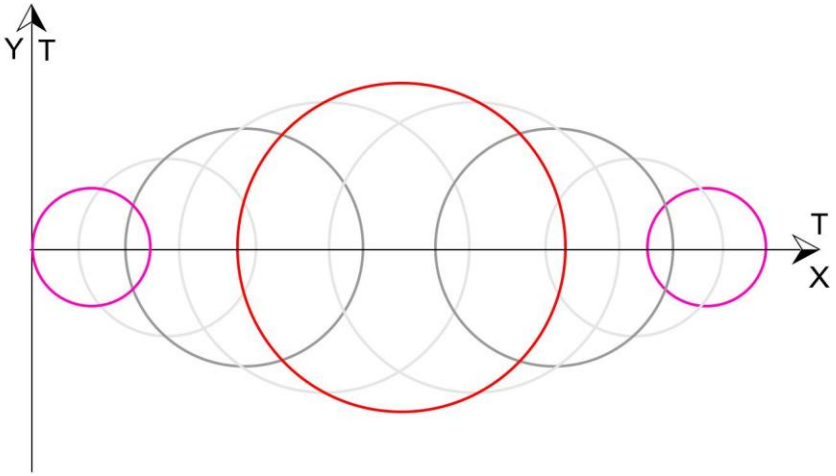
Pulsation Status - Concentration of Energy
and Volume in Time-Space

Fig. 3-1



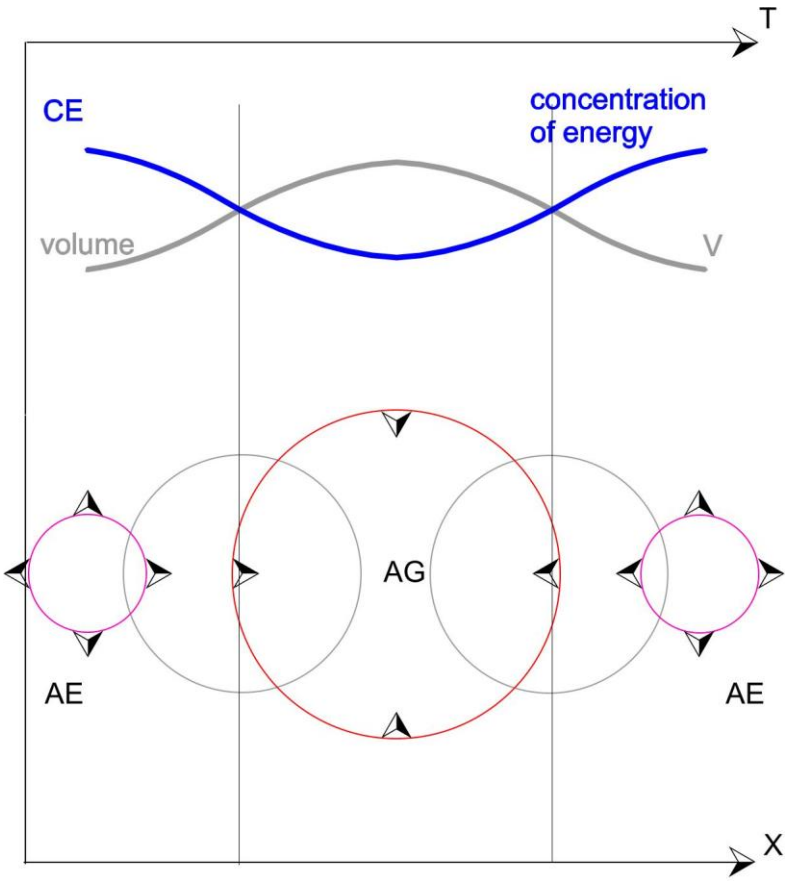
Motion in/from all directions

Fig. 3-2



Motion in direction of travelling

Fig. 3-3



Absolute Entropy (AE) and Absolute Gravity (AG)

Fig. 3-4

Energy Transformations

In the end of the previous article (Fundamental Forces), we made the conclusion that eventually the New Quantum Model (NQM) follows from the Fundamental forces ,and that they are caused by the Absolute time-space.

There are two Fundamental forces that cause the pulsations of the quanta. One is conditioned by the Absolute time-space and aims to disperse the energy in it and the other one is conditioned by the energy itself and aims to concentrate the energy in time-space (fig.4-1).

The force that aims to disperse the energy in time-space we called Absolute entropy and the force that aims to concentrate the energy in time-space is called Absolute gravity.

We also mentioned that the Fundamental forces are in some form of balance, which ensures the existence of the energy quanta in time-space.

It is very important for our ongoing exploration to clarify what kind of balance is this - absolute or not?

The first option is for the balance to be absolute. If so, in the NQM, the Fundamental forces will be absolutely equal and then the concentration of the quanta energy will not change when it has motion in time-space.

A change in the ultimate states of pulsation will not be seen and the wavelength and frequency will be independent from its motion.

The second option is the balance to be non absolute. If so, one of the Fundamental forces will have superiority over the other and the concentration of quanta energy will change with its motion in time-space. The change of the concentration of energy (the difference) in time-space will lead to changes in the ultimate states of pulsation of both wavelength and frequency.

This second option has two varieties. In the first variety, the balance is moved towards the Absolute entropy (it has superiority) and in the second variety, the balance is moved towards the Absolute gravity.

In the first option we will observe a decreasing of the concentration of the energy (difference) in time-space (on the behalf of the motion in it) leading to the increasing of the wavelength and decreasing of the frequency of the quantum pulsation.

In the second option, we will observe an increasing of the concentration of the energy in time-space, leading to decreasing of the wavelength and to the increasing of the quantum frequency in its motion in time-space.

From all the information about the options given above, it becomes clear that depending on whether the Fundamental forces (defining the behavior of the quanta) are in absolute balance or not, we will observe a qualitative different Universe (reality).

Heuristically, these options are equally possible and should be equally related to the reality.

After a thorough review of the arsenal of facts, we realize that, the only phenomenon from the astrophysics scope, relate to the range of the discussed problem.

According to them, the red shift and the relict radiation (quantum background) are directly related to the problem.

The red shift of light from distant stars is accepted to be interpreted as a result of their setting wide apart caused by the Expanding Universe.

The relict radiation is accepted to be interpreted as a result of big bang, which made the Universe.

In its essence, the relict radiation is a quantum background in a very narrow scope of the microwave part of the spectrum.

The red shift and the relict radiation are in the core of the theory of the Expanding Universe.

It is enough to accept for our further thinking that the quantum background (relict radiation) is a result of some phenomenon in the early Universe, when the emitted energy was of higher frequency (short wave length) and those former high energy quanta today are observed as a cool radiation (long wavelength).

The existing physical facts do not contradict this interpretation. Any attempts for other interpretation of the quantum background are refuted by the facts themselves.

The quanta from the background which reached us are relative to time-space in a

universe scale. In this scale it is set and the relevant dispersion of its energy represents, in its essence, a decrease in the concentration of the difference in time-space.

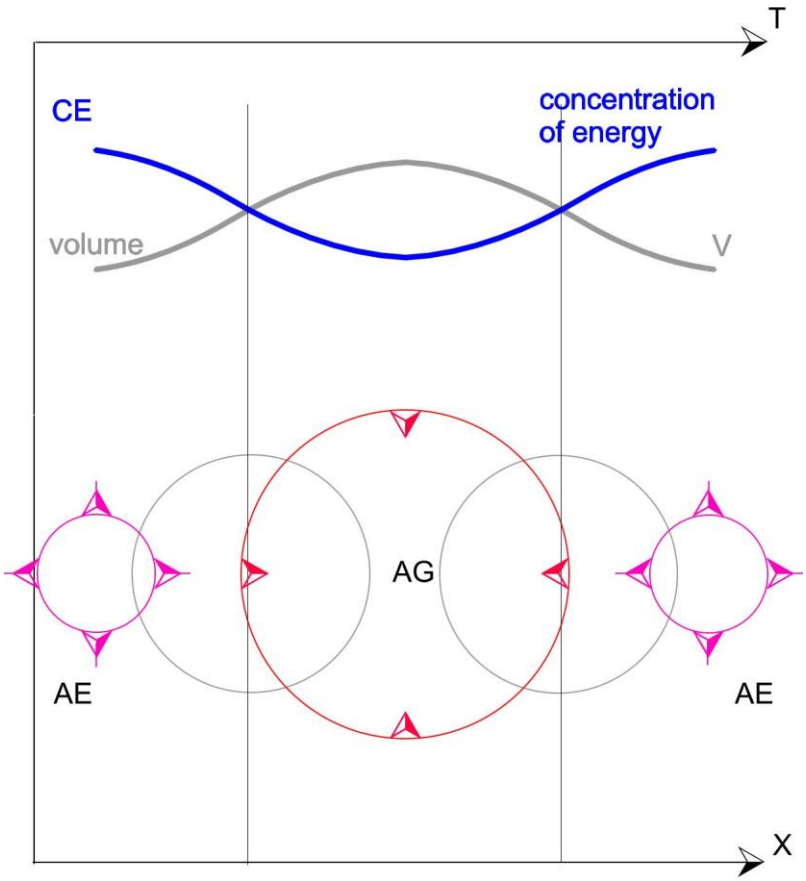
For our research, this is enough to allow us to throw aside the Heuristic variations of the NQM that do not relate to the reality (they contradict the facts).

The only option that remains valid is the one of non-absolute balance with a superiority of entropy (fig.4-1).

The shown development of the New Quantum Model gives us the difference between the Absolute gravity and the Absolute entropy. It is incredibly small. This difference is the one that is ultimately needed and has enough value, the one that predefines the observed dispersion of the energy in time-space and at the same time gives us the existence of the quanta. The red shift has a very important position in this picture. The latter shows the macro development (expanding) of the Universe.

In the end we will make a conclusion that the facts undoubtedly define the realistic variation of NQM. The balance of the Fundamental forces is not absolute. We can face a shift of the balance on behalf of the Absolute entropy. This predetermines the decreasing of concentration of the difference (energy) in the motion in time-space.

We observed the relict radiation has a longer wavelength than the basic one, because of the unbalance between the Fundamental forces. The last one determines the constant dispersion of energy in time-space. It is proved that it is not only the Universe that expands (disperses) but the quanta themselves also expand. This leads us to the conclusion that the entropy determines the development of the cosmos both on micro and macro level.



Superiority of Absolute Entropy

Fig. 4-1

Polarisation and Discretisation

After we are aware of the Fundamental forces and the energy transformations coming from them, we can already go through the New Quantum model (NQM) as a result of the Absolute Entropy and the Absolute Gravity (called only entropy and gravity in the text from now on).

On one hand we have gravity, which aims to shrink the quantum to a maximum concentration of the difference (energy) in time-space, and on the other hand we have entropy, which tries to expand (disperse) the quantum to the minimum difference in time-space (fig.5-1).

What does this contra interaction lead to? Is it only to the pulsation of the quantum?

If we get deeper into the details, we will notice one very important consequence. The

two Fundamental forces polarize the quantum. Although the quantum is an integrant unit, in its inner zone (part) it is polarized gravitationally and in its outer zone - entropic, i.e. there is a difference in the difference.

As a result of the counter interaction of the two Fundamental forces, the energy (difference) polarizes towards them.

The polarization can be defined also as a space-point one, based on the essence of the Fundamental forces.

So the energy and all its derivatives in reality are entropy-gravitationally (E-G) polarized by the two Fundamental forces (fig.5-2).

Now it is time to take a closer look at the polarized NQM.

As we know from the articles before, it is very easy for the model to explain the quantum phenomena in the gravity fields and the other cases in which energy, through a moment of motion, is given or taken. According to this specific situation the quantum increases or decreases its pulsation frequency (in direct dependence on its energy) but does not change its speed of motion in time-space.

In reality though, all that cannot be defined as energy (energy quantum) moves with a speed slower than the speed of light (C).

On the other hand when a quantum materializes

$$(\gamma) \sim> (e+) + (e-)$$

the derivative micro particles move with a speed slower than (C), and in annihilation of particles and antiparticles

$$(e+) + (e-) \sim> (\gamma) + (\gamma)$$

the quanta we get again move with the speed of light (the ultimate speed).

It is clear that energy transformation happens in these processes of materialization and annihilation. In them, energy materializes and dematerializes.

That makes us want to look for a better development of NQM, which will help solve this fundamental problem.

The task seems impossible at the beginning, but with a deeper energy based thinking it seems that NQM may get a colossal energy-difference.

On our way to find a solution we only ask ourselves - how do we develop NQM in a way that it could get colossal differences?

The next important question is, what will the behavior of the polarized NQM be in such conditions?

As we know, when energy is transmitted to the quantum, the pulsation frequency increases and when you take away the energy, the frequency decreases.

In the article “Energy Transformations,“ we analyzed the behavior of the energy quanta when having a motion in time-space without other interactions. We know that with motion they lose energy proportionally to the motion. Actually, the concentration of energy in time-space decreases and so the latter just disperses in it. This is a kind of energy spring that constantly unwinds when springing in time-space.

There is no doubt that the quanta with less energy have weaker E-G polarization than

high energy quanta. The greater the concentration of energy in time-space the stronger it gets polarized by the Fundamental forces (Absolute entropy and the Absolute gravity) which make the pulsation of the quanta.

It is time for us to take a closer look at how the quantum gets greater amounts of energy-difference. There is no doubt that in this case the quanta will be strongly polarized and the frequency of pulsation will be highly increased because of the higher concentration of energy in time-space.

Let us think about it. What will happen to a high energy quantum in extreme (sharp) changes of polarization?

To make it easier, let us imagine the pulsing quantum as an energy spring. Its pulsations, caused by the Fundamental forces, will become more and more frequent when we increase its energy. And now it is time for us to think what will happen to our energy spring in a sharp change of the polarization.

Everyone can see the effect of this by just observing a spring. To a certain degree the spring takes the pulsations normally (contract and release), but with a sharp/extreme load it will break.

Let us apply that example to our energy quantum.

It is logical for us to accept that in extreme conditions of sharp polarization the quanta will break - discretise. That will be an important change of the quantum, it is no longer a polarized unity, but in its essence is already discretisized energy.

Let us have a more detailed look at the Discretisized Quantum model - DQM (fig.5-3).

We made it clear above in the text that the energy of the quantum disscretise (decays) when we have a sharp change of polarization. In the process of this transformation it may split into two or more parts, depending on its energy and polarization. The greater the energy and the related polarization, the more parts discretisize the quantum (fig.5-4).

It is also very important to take a closer look at how the quantum energy distributes in its discretisized sectors.

From the very beginning of the NQM we were led by the possible levels of freedom of the difference (energy) in time-space. This is why it was it was for us to excite quanta. It comes naturally to have a look again of the levels of freedom (in the disretised model already) (fig.5-3).

It is not difficult to foresee that the discretisized sectors in our model can get energy (difference) either with pulsation and with rotation (as they spin). And that keeps us only a step away from the material world. In its essence the discretisation of our polarized quantum makes it matter, and in its essence the matter is discretisized rotating polarized energy.

The universality of the model developed here allows it easily to take all the possible differences (energy) in the Universe…(fig.5-4) but we will stop here for now.

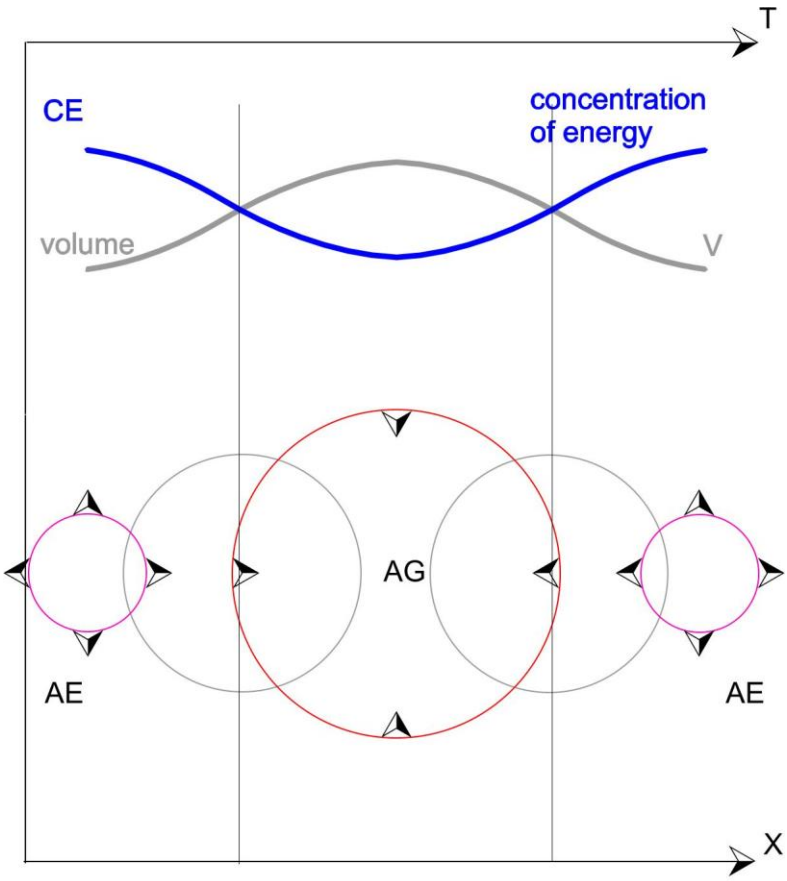
In the end of the article we will mention again that DQM brings out a number of fundamental characteristics of the matter as a mass, orbital and magnetic moment, charge, impulse and etc. on its base only from the Fundamental forces we can take out all the derivative forces that are more or less familiar to all the physicists.

We can do that in the coming pages, but we will do it in other articles, so we can give the chance to enjoy the energetic way of thinking to all who want that practice.

Our main purpose is to walk you in the material world through the gate of energetic thinking.

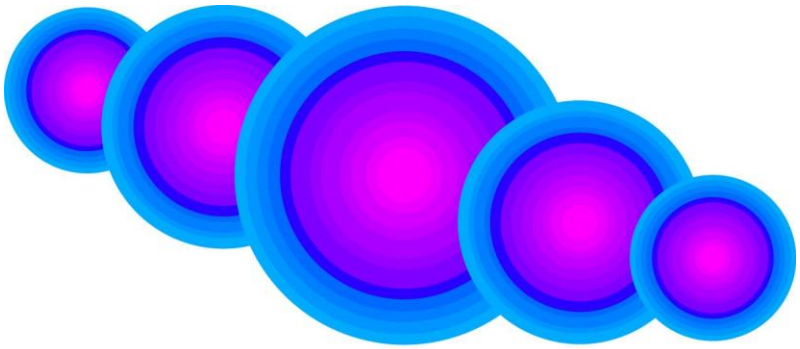
We hope that everyone has realized, that the foundation in our Universe is energy, and

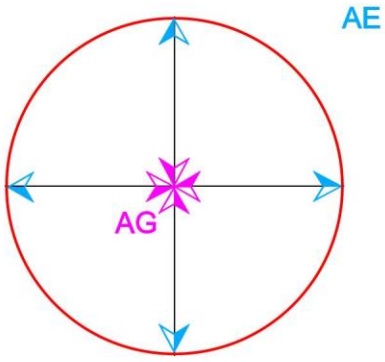
the reality we live in is an energy derivative.



NQM, Absolute Entropy (AE) and Absolute Gravity (AG)

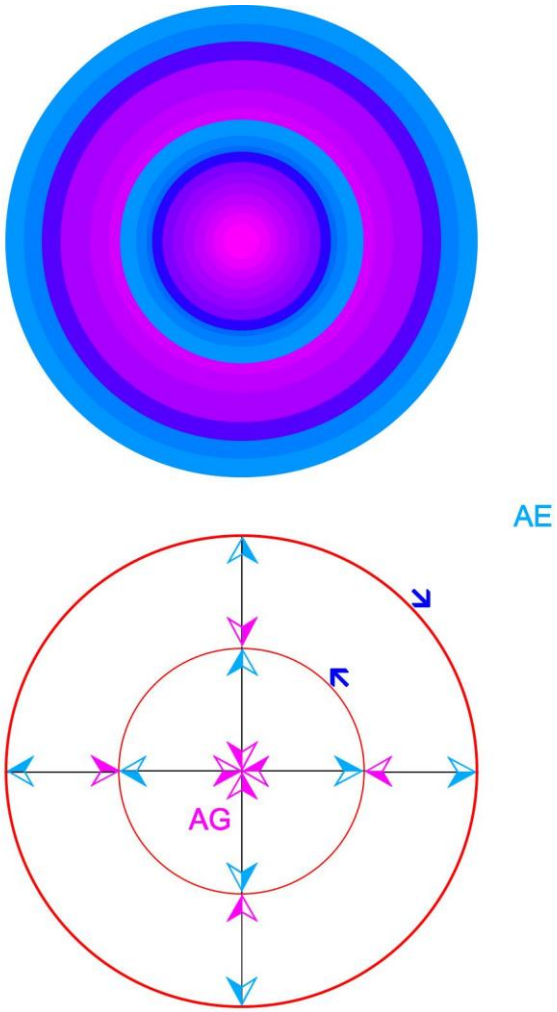
Fig. 5-1





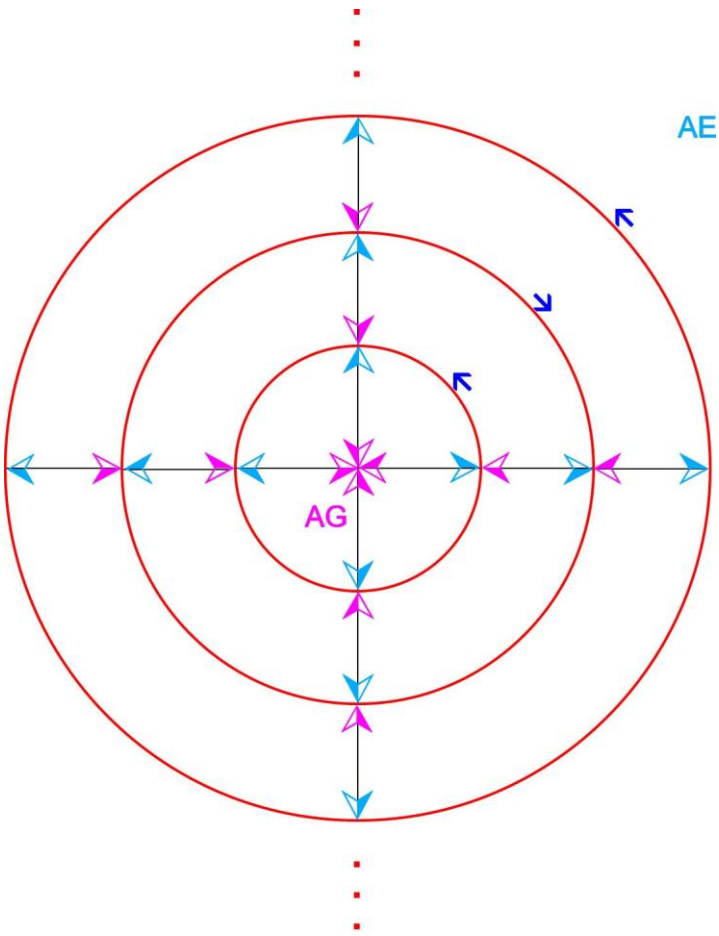
Fundamental forces and E-G polarization of NQM

Fig. 5-2



Discretisation and rotation of polarized NQM - DQM

Fig. 5-3



Multiple discretisation and rotation of polarized NQM

Fig. 5-4

Components and Derivatives

In the article before that we made it clear how DQM can get extreme differences in Time-Space (TS). The bigger the transformed from the model energy, the more layers the DQM discretizes (splits).

If we take a Heuristic look at all this, this is the way the DQM can take endless energy through the respective multiple discretization of the difference in TS.

Is this simplified behavior of DQM ecologically valid?

To clarify the realistic behavior of DQM, we should explore what happens to the model in the reality of high energies.

Bearing in mind that DQM is placed in the Absolute time-space, it is affected by the effect of the Absolute Entropy (AE) and the Absolute Gravity (AG).

The latter polarizes the energy, and in extreme conditions (high energies) NQM discretizes to DQM. This way our quantum model can take greater energy (difference) in TS.

In DQM the difference (the energy) is split between the pulsation and rotation of the discretized energy layers.

The more energy (difference) the DQM gets the more discretized energy layers we have.

And here comes the question - can DQM receive an endless amount of energy (difference) and remain stable in TS?

A very discretized energy load of DQM could lead to overdiscretization (split) of energy, accompanied with an excessively high frequency of pulsations of an excessive number of rotating energy layers in a condition of over short wavelength in TS (fig.6-1).

On the other hand we know that NQM is not absolutely balanced. We face a super small superiority of polarization made by the Absolute Entropy over the one that is a result of the Absolute Gravity (check ”Energy Transformations”).

In reality, the dispersion of energy (difference) in time-space has superiority, as the energy quanta decrease their pulsations in time-space on the behalf of their motion in it.

When reporting this AG-AE unbalance it is realistic to accept that overdiscretization of the DQM leads to its unstable condition, in which the AE polarization accumulates considerable superiority over AG polarization.

Overdiscretization of DQM will be possible only near a kind of ultimate condition, which is acceptable by the fundamental AG-AE unbalance. Any further discretization of the quantum model will lead to over-instability and the following decay to AE-AG stable DQM (fig.6-2).

We know from quantum physics that in the microcosm (in high energies) the greater the mass of a particle, the higher the related Plank frequency. Also, the heavier the micro-particles are, the faster they fall apart in other micro-particles, i.e. with the increasing of the mass they become more and more unstable and have a shorter life span in time-space.

The relation of these fundamental facts to DQM again leads us to an unstable model. The more discretized energy (mass) we have, the greater the frequency of pulsations of the rotating energy layers increases in less and less TS for taking those pulsations (shorter wavelength). The accumulation of a lot of motion (rotation and pulsation) in the model in less and less TS (volume) undoubtedly leads to greater and greater instability of DQM.

When reaching a specific AG-AE ultimate quantum state, each following discretization in the model leads to its decay to more stable DQM.

The derivatives from this decay DQMs will have a fewer number of discretized energy layers, lower pulsation frequency (longer wavelength) and smaller concentration of energy in TS. In this situation the derivatives (from the decay) of DQMs will be more stable than the Overdiscretized QM (OQM).

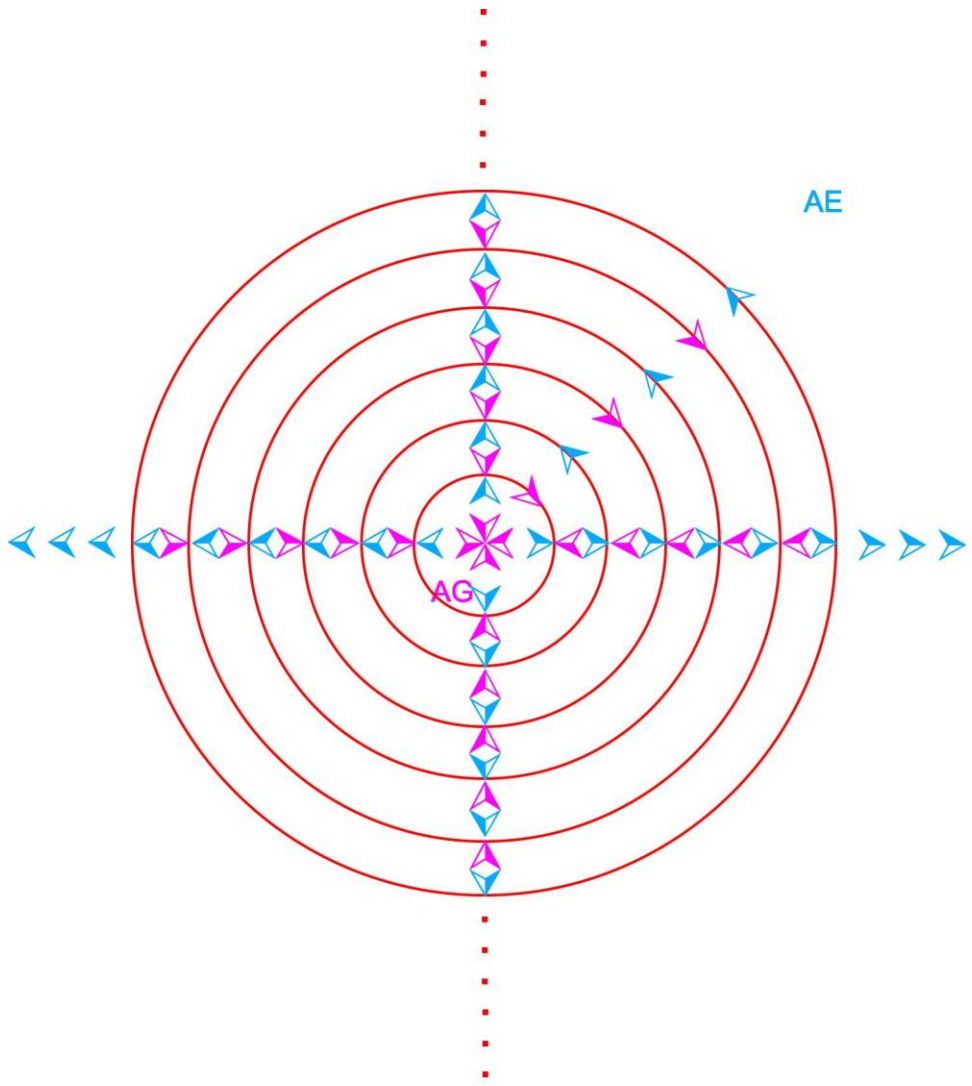
We really hope that everyone will realize the energy essence of the microcosm and the energy transformations that are typical for it. With an energy foundation of reality, it is not realistic to look for a fundamental component (atomos) in the microcosm.

In conditions of overdiscretization (High energies) always happen predetermined from

AE-AG unbalance energy transformations, in which we will have only derivative microstructures!

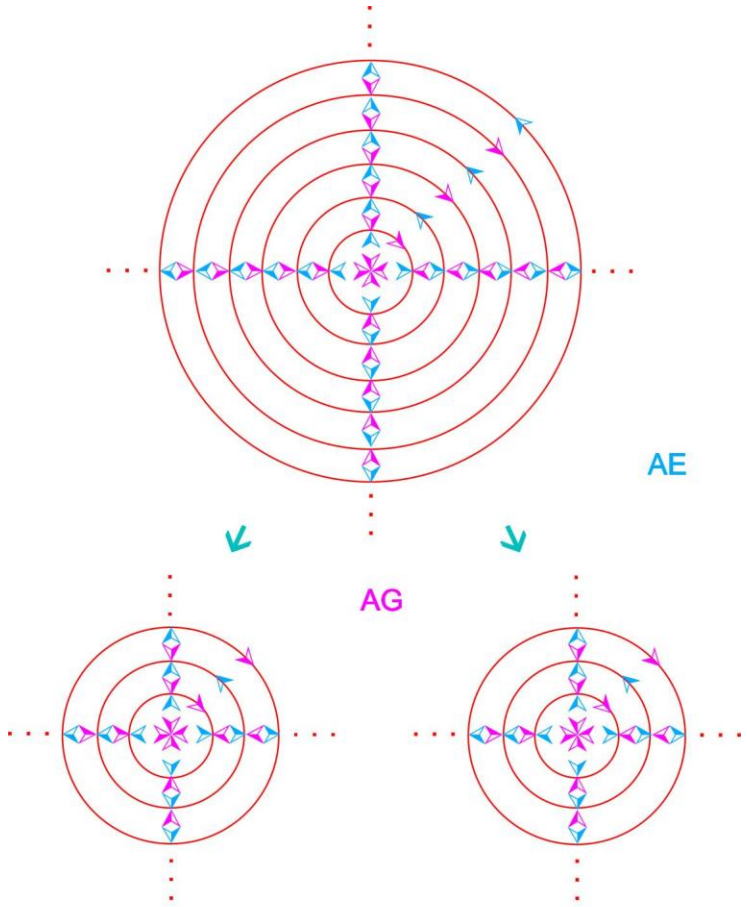
I.e. in the microcosm the result from all the processes will always be the obtaining of energy derivative microstructures!

Only the energy quantum can be defined as a fundamental component of the microcosm.



Overdiscretisation of QM

Fig. 6-1



Decay of Overdiscretised QM

Fig. 6-2