RHYTHMODYNAMICS of NATURE

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# *FREQUENCY SPACE*

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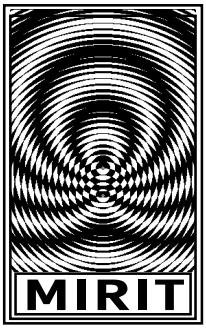
## *The CLASSICAL MECHANICS in RHYTHMODYNAMIC representation*




Moscow 1998

Ivanov Yu.N., Doctor of technical sciences, academission of RAEN and IIA. The author of the scientific division "Rhythmodynamics". The author of discoveries, "stationary waves compressing", "spider-effect". He has suggested and based a new coordinate transformation, showed the mechanism of the inertia occurence and phyics of movement on simple models, bared the reason of the nonradiating particles occurence, discribed the mechanism of selfmovement and the force selfoccurence. He has shown the principal possibility of the "no expensive" energy obtaining. He has discribed the reason of bodies gravitative rapprochement, introduced the concept of "frequency space".

You can lean only on something resisting.

*Опираться можно только на то, что сопротивляется!*

Ю. И. Иванов

Rhythmodynamics is registed as a scientific division in the International Registration Chamber of the Informational and Intellective Novation.

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## Part I. FREQUENCY SPACE

**A** new aproach to explanation of the ambiguously treated world phenomena without introducting additional fourth, fifth etc. dimensions is discribed. New representations of some physical phenomena are formed at the introduction the concept of the frequency space. A great deal is simplified if you introduce them into the framework of wave concepts. Some points of this theme seems to be disputable, therefore it is recommended to study a material with a clean sheet of a paper and a pencil. The main problem of this work is an acquaintance with a new scientific sight, which can help not only in understanding of the worldstructure, but also in development of the basic technology of the third millennium. The concept of the frequency space in this work is just basically opened.

## Part II. The CLASSICAL MECHANICS in RHYTHMODYNAMIC representation

**N**ew ways of moving in metric and frequency spaces, expenseless energetics, antigravitation: it is not complete list of innovations, expecting mankind in third millennium.

**W**e could explane these phenomena within the framework of the rhythmodynamics; rhythmodynamics could be a bachground for some new theoretical and experimental works, called to explain some unknown fenomena in physics.

**P**hasefrequency treatment of the classical mechanics formulas, opening the coases of processes, is given in this booklet. New interpretations of such concepts as: a movement, inertia, mass, pulse, force are given. Such phenomena as a compression of the stationary waves, spider-effect, unradiating particles are theoretically predicted and modeled. New transformations of coordinates for moving objects are given, a reason of gravitational rapproachement of bodies is opened, a uniform nature of interactions is shown, a base for formation of a new physics as the internally uncontradirectory science.

**P**reparatory work on creation of Rhythmodynamics Institute is caried out.

**E**ach person interesting of this theme can familiarize himself with the results of computer modeling of the phenomena in dynamics, which is listed above on the web **http://www.ipcom.ru/~mirit.**

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## "FREQUENCY SPACE" - BALM FROM THE MULTY-DIMENSIONS?

**T**he problem of perception of additional measurements with the help of the senses, which perceive the three-dimensional world, arose when the idea of multy-dimensional space occured. Is it possible to find a solution?

**L**et's consider a thought experiment. Let's say, an experimenter can change his own frequency condition and the condition of his environment according to his desire. For example laboratories, in which the experiment take place. If the frequency is increased, then for the detached on-looker the experimenter begins to decrease in size and to change a spectrum of a radiation, shifting to the ultra violet diapason .

**F**or his part the experimenter observes that the environment begins to increase in size, to change colour and density and to simply "fade away". For the experimenter the environmental world will shift to the infrared range, then will disappear totally from his field of sight and will dissipate like a cloud of steam.

**B**oth the experimenter and the observer can observe each other if the frequency displacement is not too much. For this purpose the experimenter needs a device for infrared sight, and the observer needs a device to see in the ultra violet range. People with abnormal sight extended by a frequency can observe the same things.

**F**rom the observer point of view all processes, including biological, will proceed faster in a system displaced by frequency. Everything will look otherwise from within: all processes of the observer will be slowed down.

**T**he same events will be observed differently by the experimenter and the observer. If the event occurs in the observer's frequency range, then the experimenter will see only that part of the occurence which is accessible by the frequency characteristics to his devices and senses. It is possible to say the same about the observer, who will also see only the part of the occurence accessible to him. It is possible to explain the "mysterious" and ambiguous phenomena by this or a similar way. But people try to introduce into physics some additional dimensions. In this sense the additional dimensions are the auxiliary mathematical tool for an explanation of some phenomena.

**I**t requires neither special mathematical techniques, nor introducting additional dimensions, except frequency, for a description of events occurring in one frequent system from the position of another one. An example with the badly set-up radioreceiver could serve as a simple analogy. If there is not an exact set-up, then the edge of the diapason of the transmitting radiostation is only reproduced. And fragments of the information will be accepted instead of high-grade information, by which it is hardly possible to make accurate observations about a subject.

**I** hope that we can move in frequency space (at the current rate of technology, it is a prospect of the very near future), also confidently, as well as in metric. Moving in three-dimensional metric space occurs along some axis of coordinates, from point A to point B. That's why in talking about frequency space, we have in mind moving along the frequency axis of our three-dimensional world, thus moving in metric space can be absent. In this case the observable three-dimensional world is represented by a thin sphere, the thickness of which is limited by a quite particular spectrum of the frequencies vitaly important for the person (fig.1).

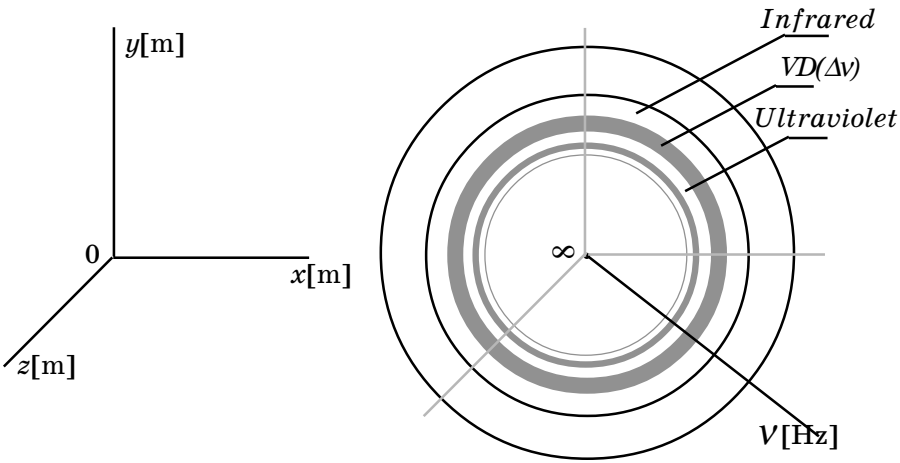



**Fig. 1**. At the left the metric system of coordinates (x, y, z), at the right - the frequency one, in which there is one axis (ν) and corporal corner, but with some clauses it is possible to use habitual system of coordinates, on axes of which the readout is in Hz. The thickness of the sphere VD (visible diapason), is defined by the abilities of our senses. From the point of view of the frequency space our world is represented by spherical shell.

**O**ur world seems like a spherical closed layer from the point of view of frequency space.

**F**rom the frequency point of view our metric space is spherical and is characterized by a frequency thickness, or by a diapason of frequencies. It is possible, that in frequency space there are other frequency diapasons, in which there is intellegent life.

**T**he hypothesis of frequency space as the spherical frequency diapasons inhabited by reason, allow us to explain simply and gracefully many phenomena, especially so-called contact ones. It is supposed that the inhabited frequency diapasons do not exist at a far star, but in direct proximity, in a three-dimensional space occupied by the physical body of the person included in contact.

**E**verything about such phenomena like ghosts, luminous circules, power poles, materialisation and dematerialisation of physical objects - including different sorts of UFOs - in the assumption of frequency space, that is in the frameworks of rythmodinamics, makes it possible to consider them as the result of the actions of "our neighbours", which experiments have partially or completely left out limits of their frequency world.

**D**oes it mean that the representatives of some diapasons of frequency space suitable for intelligent life have mastered how to move in frequency space, which is unknown to us? If so, then the question of visits to Earth by essences from other worlds passes from the category of mystery to that of explained reality.

**I**t is possible that official contact with other essences will take place when earthlings are really ready for it. Our frequency-metric world belongs to all sensible essences simultaneously and we are connected with each other indissolubly, so mutual interest in contact follows. This contact occurs every second and is the natural part of each person's life, but as a rule we perceive it by a unrealized level named intuition.

## INFORMATIONAL SPACES and INTUITION.

**I**t is possible to allocate an informational space apart from metric and frequent ones.

**S**ome exoteric schools and people influenced by them safely divide the world into separate material and spiritual ones. They usualy substantiate such a division by "a sacred revelation, coming from heaven". The situation is aggravated by the presence of an ocean of literature written by people, under under the doubtful (from the point of view of information worthiness trust) influence of unknown sources of knowledge. We shall call this situation "informational exident".

**T**he situation of such exident can be really sad. Somebody quite normal, and sometimes highly educated covers a lot of paper with writing higher spheres inspired by dictation . Many times I received information from those "contacted" (extrasensers, i.e. - supersensitive). And I have to say directly that there are many remarkable things. But when the speech is about a worldstructure or about a way of understanding the absolute, you may come across the inflexible, from the point of view of earthly science and normal human logic "important details", and it is recommended to trust in it.

**W**e shall not detail the information accepted by extrasencers, but we shall try to find a place in metric and frequent space, where the sources of this information could take place. If we succeed in even approximately nswering the question, in even approximately defing a mechanism of outside contacts during a search, then the more mystical problem will be taken off the agenda. Perhaps we can speak about such phenomenon as INTUITION openly and get the sence of it.

### 1. INFORMATIONAL SPACES.

**S**ometimes persons are born blind. Blindness from birth forms a specific informational space for the person and influences the perception of the environmental world. This perseption differs a little bit from the perseption of one who can see, because of the absence of sight, which is the one of major channels of perceiving information about the environmental world. If the one who can see will tell the blind man that a wood lake is beautiful and that a sunset is

remarkable today, it is hardly possible to count on understanding on the part of the blind man. We can safely say that the informational space of a blind man is damaginal from the sighted man‘s point of view, because a large and important part of the spectrum in a standard informational - frequency range of the person is absent.

**L**et‘s consider another example: an adult has lost sight because of an accident. If such a person is among the blind and hear a sighted man describe an occurrance, it is possible to confidently say that he perceives that differently then the sighted man talks about. The reason is the memory of contact with the environmental world by means of sight. We see the blind person, but we say that his informational space differs from the informational space of the man blind from birth.

**T**here is another type of person. In my practice there was a boy who had strong lenses in his glasses instead of corrective lenses. Personal contact with the boy showed that his sight only is slightly set - up on standard for people range, the main information under the pretext of sight acts in his brain completely from another frequency range, i.e. by another channel. It was found out during, that the boy confidently cycles (of his sight) and information acting from another frequent level helps him to do that.

**I**t is obvious, that the informational space of an almost blind boy differs seriously from all other variants described by us. If the boy describes all he could see in the spectrum of frequencies accessible only for him, at best we should take on trust this information, at worst - announce the boy mad and send him to a hospital for mental deseases. In this situation, from the point of view of the boy, an ordinary, standard person is blind. But as soon as the quantity of people like the boy tops 50 % or reaches 99 %, those we earlier considered normal will be sent to a hospital for mental deseases. Perception of the world, methods of description and cognition will change. But in the world of people with other informational space, we could not understand for a long time, what they speak about, why they act against our logic, why they consider harmful us.

**P**eople have an average informational space with insignificant deflexions of standard range of accepted frequencies. Nevertheless there is no complete agreement among people. Maybe it is the because of the division of people on points of view, the occurrence of dramatically different scientific schools, different parties, communities, enmity?

**H**owever it is necessary to consider these deflexions natural and playing an important role sometimes in the business of survival.

2.INTUITION.

**T**he most talented people have a keen feeling of something magical, inaccessible to the majority, i.e. - intuition. The reason is an extended informational space. The talented person is so set-up by nature that his senses are far beyond the average perception of the world, and sometimes block the next ranges of reasonable life. Such a person sees, feels and knows beforehand of those events which already have taken place in other frequency ranges of life, but have not already reached our frequency world, that is why they were not displayed.

**W**e discribed a situation in which metric, frequency and informational spaces take place. There is hope, that through an understanding of ourselves, through a cognition indissolubtion of each other, with visible and unvisible worlds, at once we shall reasontly make our world and mode of life according to NATURE‘s demands. Good luck to us.

## MODELING UFO MOVEMENT IN FREQUENCY SPACE

**O**ne of the urgent problems in UFOlogy is materialisation and dematerialisation in our informational space. Let us consider some points of this problem from the point of view of movement in frequency space.

**I**t is possible to assume, that a UFO moving in frequency space is compelled to cross an area of frequencies perceived by our sences. If the speed of movement is rather small, an observer on the Earth will have opportunity of sequential supervision for occurring.

**L**et us bring a speculative example. The spheroidal UFO reached ultra violet range, that is why is invisible to our eye at the time. If a UFO -sphere has a diameter of 3 meters in this range (suggesting that we have made these measurements by applying special equipment to see in the ultra violet range). What will the ordinary person observe of the UFO‘s passage through an accessible range, if all this occurs in the persons direct affinity?

**T**he sizes of any material body are directly connected to its frequency characteristics at the level of molecules and atoms. If you want to reduce the size of a body, (for rare exception) it is necessary to cool him strongly. Contracting a body tells us that our own frequencies of processes, creating elements of the substance, increased. Some substances change their colour at cooling and heating. For example, the human body becomes blue at cooling, and red at heating . (It is, certainly, a joke).

**R**ed is identified with a downturn of frequency, dark blue - with its increase. We can suggest that UFOs moving in frequency space will firstly,- consistently change their colour from ultra violet up to infrared and secondly - increase its visible size. All this could be calculated as well as modeled that allows us to visualize such unusual situations on the computer screen.

**V**isualization is important for the researcher. The problem is that very few persons have the chance to see something pass through our world. As a rule, such occurs casually and not at the time and place, where there are fully researchers. A person tells what he saw, but he has no opportunity to prove the reality of the event. It is necessary to understand a situation: something at first arises in an empty place, i.e. materialises, and then it disappears, dissolves - dematerialises. In medicine it is refered to as hallucination, and people describing these phenomena are considered to be not quite normal.

**A**nother matter, if each inhabitant of Earth always has a TVcamera ready for shooting, or better, a recording CHIP implanted in his body as in sci-fi movies. In this case each lucky person could record his" hallucination " with a microprocessor. What will say psychologists then? You see, hallucinations are the fruit of the imagination, but not of TV or photoequipment.

**L**et us return to our example -hipotetic spheroidal UFO. We shall consider two cases: the sphere consists of homogeneous characteristics under the frequency; or the sphere consists of a core and a shell - the shell has higher frequency characteristics than the core. It is necessary to expect that in each case the observer will observe the occurrence differently.

**F**irst case: the homogeneous sphere. The synchronous reduction of the frequency of the sphere translaer him in the visible part of the spectrum, therefore at the first stage the observer will see the occurrence of transparent - bluish lighting, which gradually turnes into a brighter, light-blue. The change of

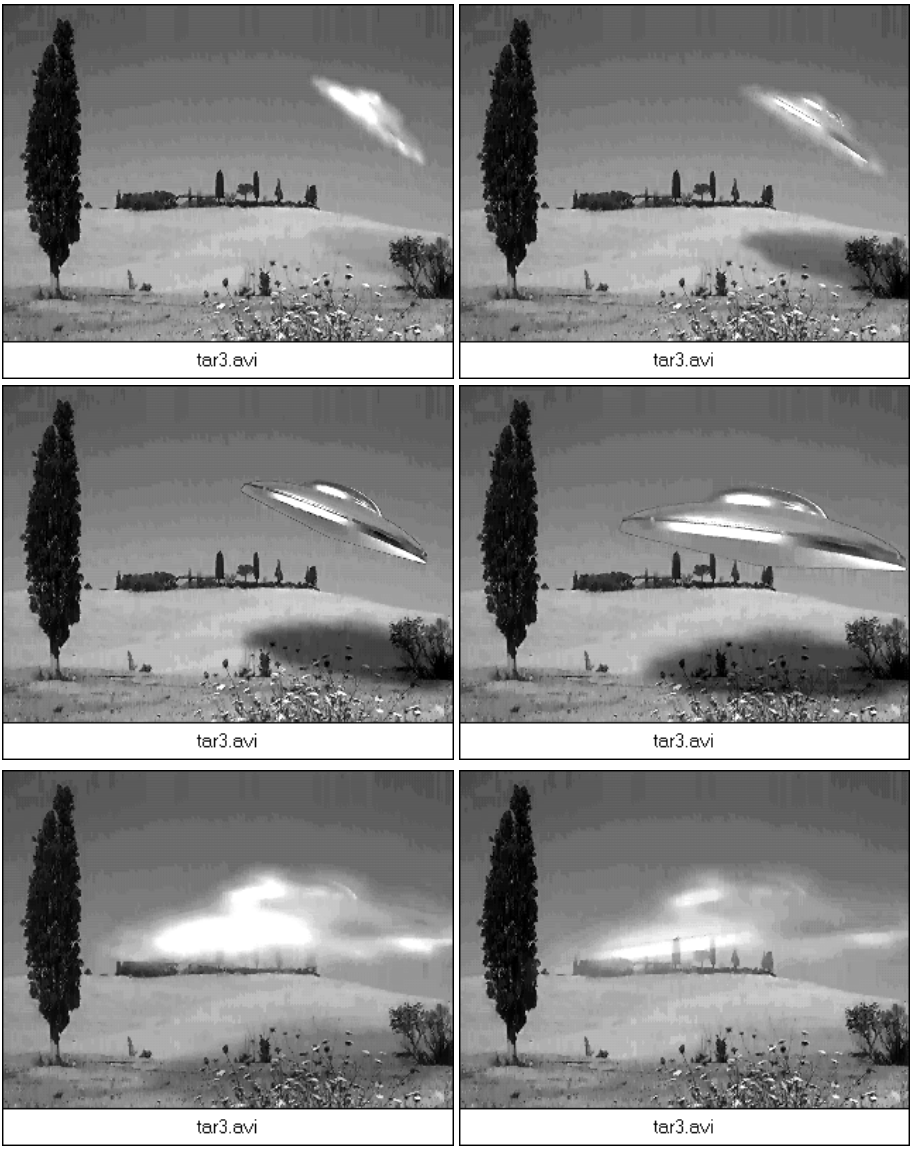



**Fig. 2**. UFO‘s movement in the frequency space. Lighting occurs first, then an object begins to be displayed. At the first stages the object is surrounded with a halo, but in accordance with entry into our frequency range the halo fades. Coming nearer to the infrared range the object grows, becomes red and transparent, and then “dematerialises”.

the sphere's colour occurs in regular intervals and as long as its body is not completely displayed in our frequency range. The diameter of the sphere will increase up to 6 meters. The observer will see it, he can touch it and recognize a normal physical body, allocated with all the properties of substance.

**B**ut the sphere continues to reduce its own frequency (a condition of its movement in frequency space) and this reducing should be accompanied by effects becoming red and further increase of demention. Reaching the infrared range the sphere diameter increases up to about 10 meters, it becomes pale-red and translucent. It is supposed, that if the observer tries to touch the sphere at this moment, he should not only feel internal heat, but also penetration of the hand into the body of the object that was impenetrable earlier. The sphere becomes penetrable. In the infrared area of space the sphere completely disappears from the observer's field of sight, but can be quite observable with infrared devices. A little bit different picture could be observed in the second case.

**C**ase two: the sphere consists of two shells. The external shell has higher-frequency than the internal one. In this situation the internal part of the sphere reaches the visible range of the spectrum a little bit faster than the external one, which is why, at first, the observer will see only it. The external layer, in view of frequent distinction, will sometimes be in the invisible ultraviolet range, that is why it will be displayed in the second turn. If frequent distinction of layers is large, materialized internal part of the sphere surrounded with the light-blue lighting of the yet external sphere, being nonmaterial this time.

**F**urther movement results in the internal layer earlier proceeding in the infrared range. But we shall not observe its disappearrance, since the materialized external shell will cover it. Within the sphere is emptiness, filled with the internal heat of infrared condition of the dematerializational core. The process will proceed further, as it is described in the first case.

**I**t is curious to consider a variant, when the UFO-sphere is filled by different functional equipment, and "substance", what this equipment is made from, overlops very much the part of our spectrum by the frequency characteristics. In this case we can never see a UFO totally with the naked eye, and we shall always see only its part displayed for us, i.e. that part, which is in the range of our senses to observe in a particular moment of time. The movement of such a UFO externally will be accompanied by constant changes of configuration and different sorts of changing luminiaries. But even this superdifficult variant is

easy in three-dimensional computer modeling. But if we can computer model this unique and totally invisible process, it is possible to recreate a total view of the object in the correct way. A picture of occurrence is interest from the point of view of such wide by frequency object, it is more correctly - the essences of this object. If a few inhabited frequency zones gets at once in their frequency range, they see simultaneously a few types parallely coexisted, living and in coordinational cooperating worlds. The representatives of each of these worlds, in cause of limitation frequency sight, can not suspect about an existence of each other.

**E**xamples described by us let approve, that an other reality, and even reasonable life can exist outside of our sences.

**B**ut mainest advantage of an offered picture of the world that it lets do without hypothesises about unlimited multy-dimension of the world. The first real step is done towards to qualitatively new understanding and explanation of the environmental world.

## ON OCCURRENCE OF MANKIND ON THE EARTH

**O**ccurrence of mankind on the Earth is under discussion till now. There are a few hypothesises at this point, but all of them are not proved, even if their authors adduce as the proof the various scientific arguments. There is nothing terrible if one more hypothesis will be added to the already existing. Let‘s consider this problem in the assumption of existence of different frequency-limited spaces.

**T**he Universe is infinite in time and space. Under “Universe “ we assume the infinite volume with complex hierarchy of entity. Our world is suppressed between infinities of micro and megaworlds.

**I**f listed thesis are correct, a statement is correct, that the life in the Universe existed always and there is no beginning in absolute sense of this word. For this reason it is always difficult to speak about the beginning of life from nothing.

**T**he hypothesis on the self-origin life is unconvincing. Another version is more plausible. Let a broth, and lightning, and chemical reactions creating complex organic albumens really took place, but all this was not the reason of

creation of the material carrier of spiritual making of our world, but only conditions, creating fertile soil. Well, if there is fertile soil, it is enough to drop a grain in it. It would be necessary to assume, that such grains are not casual, but they were soud by creatures of other frequency world. To find a frequency range suitable for life is as difficult as to find a planet suitable for the specific form of life. The problem becomes much more complicated, when it is necessary to find a planet suitable for life in the alieu, but suitable frequency range. May be "tramps", crossing frequecy and metric spaces, are busy with such raid. In this situation we can only observe sometimes their flights through our world.

**W**e already mentioned the creatures frequency range of which is much wider then ours. Such idea seems unreal, fantastic for many people. But we can basically decrease a spectral range making invisible the red and dark blue colours by now, using videotechnologies. As well we could assume an opportunity of the inverce processes existans. Let us assume ourself with frequency sight extended in 100 time. First of all let us try to determine what we can see. We can do it because the level of knowledge allow us to discuss this theme. Conditions designated allow us to see not only usual things, but also these, that occurs in infrared and ultraviolet ranges. Even at the most dark night we can see the occurrence without forcing our self. The whole world becomes unusual, different to the habitual one. The modern videocameras, for example, record a wider range of frequencies and then transform them in a digestible to the eye. If you use, for example, the infrared boond, the videocamera permits see invisible signals from the board. It is not surprise after such experiment that time to time strange objects unvisible by usual sight during a shooting appeare on a photo and video films.

**I**f the extended in 100 time frequency range is broken on seven primary colours, the whole usual optical range would be only green-yellow on this scale. Such approach has far coming consequences. The further expansion of the frequency range perceived by eyes leeds to qualitatively other seeing of the world. All our reality becomes a narrow yellow spectral line in this world, in which it is practically impossible to distinguish something. But we, being inhabitants of this spectral line, know, that it is filled by life. It means that the whole our world lies in a usual spectral line of the frequency space populated by life. But then what is the World, contencing the innumerable set of similar lines? Try to look on it by eyes of a supercreatures, the frequency range of which life is infinite comparing with ours.

**L**et us assume, that there is SOMEBODY, which frequency range is million times wider then ours. But then a natural question is: how is it arranged, of what consists? To great amazement the answer to these questions is known for a long time. It consists from us, from great amount of such as we are. We are a part of this area, that is why we are united through it. We are as infusorians and viruses in comparison with it that is why, if we do something wrong, its body struggles with us, destroys us, removes us from its body. And it does this not personally, but through a hierarchy. And when the signal reaches up to neighboring frequency world, then all this begins. It is easier to materialyze themselves just the beside living creatures, i.e. to come in our frequency range to search, what we do, that prevents functioning of the system at whole. Such materialysing occurs in the same sequence, as in case of a UFO movement (fig. 2), that is why it begins with luminiscence.

**T**he existence of supercreatures is not a news for many people. You could familiarize with sights of philosophical schools of East, with the religious doctrines, with philosophical representations of worldstructure by some scientists. All listed directly or in the mystical form specifies the presence of other life beside us. We can name a supercreature as a God, and its representatives from other frequency worlds as its compelled assistants, angels and so on. But adhering the scientific point of view, it is necessary to avoid mistifications and

**Fig. 3**. At first a luminescence appeares, and then a supercreature from other frequency world arises, which looks after us, as for smaller brothers on reason.

unsertaties in such explanations. It is therefore we do not offer only a new way of representation, but also technical facilitise, letting to simulate occurring just on the pioneering stage.

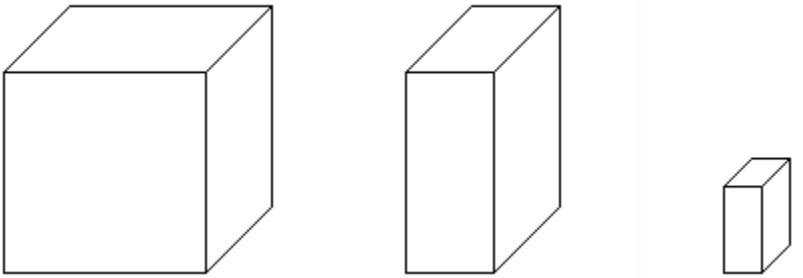
**T**he reaction of our frequency neighbors on unrealized but dangerous actions of our civilization becomes understandable: unknown illnesses, earthquakes, accidents and many other, fenomena darken our life which we think being quite correct. We come to an old conclusion that the reason of our misfortune is our ignorence.

## SOME FACTS FROM A HISTORY OF THE RHYTHMODYNAMICS.

**1981**

**D**evelopment of representations about dependence the standard's physical size on the speed and choice of transformations of coordinates.

by Halileo by Lorentz by Ivanov



**1996**

**R**egistration rhythmodynamics as a scientific direction.

**L**et us to be in a boat and to throw in one time with force two stones equal by mass to opposite directions. If we throw them in one time, the boat replaces. But what will happen in condition of absence of friction of a boat with water, if we shall at first throw one stone, and by time - second one?

**M**ovement is a result of the temporary delay between throws. Both the Newton's mechanic speaks about it and rhythmodynamics. This rule is fullfil by all levels of material's organisation. If it seems, that rule is disturbed, it is necessary to check up - may be we don't take something in account and look on.

## RHYTHMODYNAMICS

**W**ithin the framework of rhythmodynamics the repeated analysis of perciptions of before Einshtein's period about the environmental world in light of new interpretation of A.Maikelson's experiments negative results was spent. The phenomenon "press of vertical waves" (1.1) directly indicating on incompletness of Lorenz's transformations and letting to enter in use new coordinates transformations was found (1.2c). The comparison of coordinates transformation (1.2) to look by new side at a question interference , to give new interpretation to results of experiments on detection of speed in an ether, to prove illusority of invariancy and to show, why the light speed accepts always the same meaning in experiments.

$$\lambda'_{c\,m} = \frac{c}{\nu} \cdot \frac{1-\beta^2}{\sqrt{1-\beta^2 \sin^2 \alpha}} \qquad (1.1)$$

**L**et's compare available types of transformations:

| **by Halileo** | **by Loretz** | **by Ivanov** |
|---|---|---|
| $x' = x - Vt$ | $x' = \dfrac{x - Vt}{\sqrt{1-\beta^2}}$ | $x' = \dfrac{x - Vt}{1-\beta^2}$ |
| $y' = y$ | $y' = y$ | $y' = y \Big/ \sqrt{1-\beta^2}$ |
| $z' = z$ | $z' = z$ | $z' = z \Big/ \sqrt{1-\beta^2}$ |
| $t' = t$ | $t' = \dfrac{t - V/c^2 \cdot x}{\sqrt{1-\beta^2}}$ | $t' = t$ |
| a) | b) | c) |

(1.2)

**T**he further development of perciption lets to know the reason and way of bodies interaction, resulting in a movement of material bodies, but also to reveal the reason of occurrence of inertia and concepts accompanying it: weight, pulse, force.

## INITIAL POSTULATES

**T**here are some postulates in rhythmodynamics. They are simple and satisfy to criterion of logic evidence.

**Postulates:**

1. **E**lementary "before material" ( it means unappearing in experiments) object - massless protooscillator, which has property of vibration or pulsation and stimulates an environmental world and gives rise to periodic waves in it.

2. **P**resence of environment, which transformates protooscillating vibration to missing spherical waves and ensures to this waves constant speed of transfer stimulation from a resting in environment source.

3. **R**ise of oscillator forming with protooscillator elementary primarysistem (protosistem).

**O**pportunity of the description of all processes interesting for us within the framework of threemerasuring space is supposed.

**Consequences:**

1. **A**bsence of mass of protooscillator, leads its to, noninertial increasing of speedrelative to environment in case of external actions. The inertial properties are inherent to oscillating systems as a whole, but not to oscillators itself.

**W**e do not describe oscillator properties because they demand a substantiation. But the oscillators systems, entering in interaction, resist to the speed change. We can observe this property in model experiments, carefully studying mechanism of its occurrence on interferent pictures like a "spider-effect". The received results can be adopted to real oscillating systems.

2. **T**he protomedium exsistence was entered without indication of its structure and organization. Dependence of amplitude on distance is not underlined. In opposite, it is possible to show, that the amplitude dependence on distance is a property of oscillating systems, but not of oscillators separately.

3. **I**ntroduction of a criterion of threedimensionnes is caused by inherent and brought up perciption of the world. We can not talk about common threedimensionnes of frequency-metric space, but we can divide the frequency space into a nomber of frequency-limited spaces, each of them is easily perceived in threed-

imensions. In this sense we go from confusing n- dimensional world to a system of n-frequency-limited threedimensionnes worlds. I.e. each frequency-limited world can be represented as the threedimensional one.

## BASIC FORMULAS of RHYTHMODYNAMICS

**T**he deformation of a field of interferency counteracting to change of speed was discovered in investigation reaction of the elementary of system cooperating oscillators on a change of the speed relative the environment. This counteraction corresponds to the inertia definition and exsists only in oscillators system, which interacts with formation of a stationary wave.

### 1. Speed

**T**he formula of dependence of phases shift on the movement speed is as simple as the π theorem:

$$V=c/_{\pi}\cdot\Delta\varphi\ , \qquad (1.3)$$

where: $c$ − is the speed of light in the medium (ether, physical vacuum),
$\Delta\varphi$ − is the shift of phases between oscillators.

### 2. Acceleration

**T**he change of speed occurs by means of acceleration, and so by means of change of phases shift or, it is the same, by means of change the established earlier frequencies. The acceleration dependence on the frequency gradient is expressed as:

$$a=2c\cdot\Delta\nu\ , \qquad (1.4)$$

where: a − is the acceleration,
$\Delta\nu$ − is the difference of frequencies.

**T**he formulas 1.1-1.4 are the main ones in rhythmodynamics. Substitution 1.1-1.4 in basic formulas of the mechanics, which connect speed, acceleration, phase and frequency after them.

## THE FORMULAS the CLASSICAL MECHANIC in RHYTHMODYNAMIC REPRESENTATION.

**N**ew interpretation of the classical mechanics formulas is achieved, by substitution the main rhythmodynamic equations 1.3 and 1.4 into them

### 1. Speed

**I**f earlier the speed was described by a formula of the classic mechanic $V=S/t$ in which there are no world lconstant, in the new formula there are two of them : the speed of light $c$ and the period $\pi$:

$$V=c/\pi \cdot \Delta\varphi \qquad (1.3)$$

**I**n (1.3) the speed is equal to the phase shift multiplied on the ratio of proportionality $c/\pi$. This ratio in an avident and unevident form is present in all formulas of the classical mechanic.

### 2. Pulse

**I**t is known, that the pulse of a system is equal to product of mass on speed:

$$p = m \cdot V. \qquad (2.0)$$

**W**ith the account **(1.3)** it is:

$$p=mc/\pi \cdot \Delta\varphi. \qquad (2.1)$$

**H**ere $c/\pi$ is a constant in form of the coefficient of proportionality between the pulse and the phase shift.

**N**ow we may treat a pulse not only as a quantity of the movement, but also as a quality of the system condition. The new interpretation permits approve, that the pulse depends only on the phase shift, and as a cosequence is characterized by a speed of the system.

### 3. Pulse of force

The pulse of force is equal to change of a pulse of the body:

$$p_2 - p_1 = F\Delta t = mV_2 - m_0V_1 \qquad (3.0)$$

$$F\Delta t = mc/_{\pi} \cdot (\Delta\varphi_2 - \Delta\varphi_1) \qquad (3.1)$$

### 4. Force

Force, as a measure of action:

$$F = m(V_2 - V_1)/\Delta t = ma \qquad (4.0)$$

$$F = mc/_{\pi} \cdot (\Delta\varphi_2 - \Delta\varphi_1)/\Delta t = m \cdot 2c\Delta\nu \qquad (4.1)$$

$$F = mc/_{\pi} \cdot 2\pi\Delta\nu \qquad (4.2)$$

$$F = mc/_{\pi} \cdot \Delta\omega \qquad (4.3)$$

### 5. Centrifugal force

The centrifugal force is expressed by the equation:

$$F_{цб} = mV^2/r\,. \qquad (5.0)$$

$$F_{цб} = mc^2/_{\pi^2} \cdot \Delta\varphi^2/r. \qquad (5.1)$$

But $mc^2 = E$, and $\Delta\varphi/\pi = V/C = \beta$, and so

$$F_{цб} = E\beta^2/r. \qquad (5.2)$$

But $E = h\nu$, and so

$$F_{цб} = h\nu\beta^2/r. \qquad (5.3)$$

$$F_{цб} = \hbar\omega\beta^2/r. \qquad (5.4)$$

## 6. Kynetic energy

**T**he kynetic energy is described by formulas:

$$W_k = mV^2/2, \qquad (6.0)$$

$$W_k = mc^2/\pi^2 \cdot \Delta\varphi^2/2, \qquad (6.1)$$

**B**ut $mc^2=E$, and $\Delta\varphi/\pi=\beta$, so:

$$W_k = E\beta^2/2. \qquad (6.2)$$

**B**ut $E=h\nu$, so:

$$W_k = h\nu\beta^2/2, \qquad (6.3)$$

or

$$W_k = \hbar\omega\beta^2/2. \qquad (6.4)$$

**K**ind of the formula shows, that $W_k$ is of the wave nature. Occurrence the Plank constant ($h$) in the formulas of rhythmodynamics speaks about unity of the quantum and classical approaches to the world description. Rhythmodynamics has made a first steps on the way to association scientific directions earlier considered as independent.

**I**n the case of third condition of rest (for example: free fall in the gravitational field the formulas of energy differs, thus we deal with the phase shift increasing in time:

$$W_{ka}=m(V_{мгн})^2/2, \text{ and } W_{ka}=m(at)^2/2. \qquad (6.5)$$

**B**ut $V_{мгн}= at=2c\Delta\nu t$, so:

$$W_{ka}=m(2c\Delta\nu t)^2/2, \qquad (6.6)$$

or

$$W_{ka}=2mc^2t^2(\Delta\nu)^2, \qquad (6.7)$$

or

$$W_{ka}=2Et^2(\Delta\nu)^2, \qquad (6.8)$$

or

$$W_{ka}=2h\nu t^2(\Delta\nu)^2, \qquad (6.9)$$

or

$$W_{ka}=2\hbar\omega t^2(\Delta\nu)^2. \qquad (6.91)$$

## 7. Gravitation

**F**orce akts on a body in the gravitational field:

$$F_g=mg \qquad (7.0)$$

**L**et's rewrite the initial formula taking 1.4 into account:

$$F_g=m \cdot 2c\Delta\nu \qquad (7.1)$$

$$F_g=mc/_{\pi} \cdot 2\pi\Delta\nu \qquad (7.2)$$

$$F_g=mc/_{\pi} \cdot \Delta\omega \qquad (7.3)$$

**W**e could in the formulas continue the analysis of classical mechanics concepts but it will be reduced to the mechanical substitution of expression for speed (1.3). The movement of the presents almost in all formulas classical mechanics in an obvious or unobvious form and thus vibration, waves and phase-frequency distinctions at a system condition. The suggested changes allow expantion concepts of the classical mechanics by introduction waves interactions into them.

**W**e do not put an aim to rewrite the physics. We are interesting in practical consequences, for example, how to achieve an accelerated self-movement of system by arithmic action, including artificial one. How to receive the energy by a spendless way not disturbing the low of preservation of energy?

## 8. Rhythmodynamics mass.

**W**e took unused earlier coefficient of proportionality from $c/\pi$ $V$ representing the speed by the phases shift. Attaching it to mass $m$ ,we obtain $mc/\pi$. The received value corresponds to the greatest possible pulse of a body of $m$. Now the final pulse does not depend on the speed ($V$), but on phase shift ($\Delta\varphi$). The phase shift does influence on a really measured pulse. The change $\Delta\varphi$ from $0$ till $\pi$ increases the pulse up to its greatest possible meaning $mc$. The mechanism of change of a pulse (including vectorial ) shows as inertness.

**W**ithin the framework of rhythmodynamics, coefficient $c/\pi$ is entered in mass $m$ to simplity formulas:

$$m_{p\partial} = m \cdot c/\pi \text{ [кг} \cdot \text{м/(с} \cdot \text{рад)]}, \quad (8.0)$$

**W**here $m_{p\partial}$ – is the rhythmodynamical mass.

***Rhythmodynamical* mass *is the complete pulse of a body, and so it is a measure of inertness in the direct sense of this word.***

## RHYTHMODYNAMICS FORMULAS

**1. Speed**

$$V = c/_{\pi} \cdot \Delta\varphi \quad (1.3)$$

**2. Acceleration**

$$a = 2c \cdot \Delta\nu\ , \quad (1.4)$$

**3. Pulse**

$$p = m_{p\partial} \cdot \Delta\varphi. \quad (8.1)$$

**4. Pulse of force**

$$F\Delta t = m_{p\partial}\,(\Delta\varphi_2 - \Delta\varphi_1) \quad (8.2)$$

**5. Force**

$$F = m_{p\partial}\,\Delta\omega \quad (8.3)$$

**6. Centrifugal force**

$$F_{\text{цб}} = m_{p\partial}\,c \cdot \Delta\varphi^2/\pi r. \quad (8.4)$$

**7. Kinetic energy**

$$W_{\text{k}} = m_{p\partial}\,c \cdot \Delta\varphi^2/\ 2\pi, \quad (8.5)$$

$$W_{\text{k}a} = m_{p\partial}\,ct^2(\Delta\omega)^2, \quad (8.6)$$

**8. Gravitation**

$$F_{\text{g}} = m_{p\partial}\,\Delta\omega \quad (8.7)$$

## FROM THE EDITOR

**U**p to novadays many natural phenomena have unsatisfactory explanations. For example, dualism a wave - a particle. More over, such important concepts, as the movement, inertia, force are foggy explained by the official science.

**U**p to novadays many natural phenomena have unsatisfactory explanations. For example, dualism a wave - a particle. More over, such important concepts, as the movement, inertia, force are foggy explained by the official science.

**T**he author of rhythmodynamics suggests a simple system of initial postulates, in which oscillators are represented as massless. This property is very important because it allows looking after a mechanism of the inertia occurrence, in massless oscillators at their entering in interaction. As the matter of fact it point on the phasefrequency nature of inertness.

**E**quation 1.4 pays attention to itself, giving dependence of acceleration of two oscillators system difference of their frequencies. It is not difficult to count up, that $a=9.8м/с^2$ corresponds to $\Delta\nu=1{,}633 \cdot 10^{-8}$ Hz. Just that difference of frequencies arises at oscillators system near the Earth surface. Experiments on the basis of Messbauer's effect specify on just such difference.

**M**essbauer effect shows, that the frequency condition of a body depends on external conditions, for example, on distance to gravitating mass. Introduction of the "frequency space" concept is a logical continuation of a phasefrequency method for the processes description .

**O**ccurrence of the phase shift the frequencies difference and Planks constant in the classical mechanics formulas, is an attribute of transition from the quantitative description of natural phenomena to qualitative one. It is not so difficult to see uniformity in the description of the interaction mechanism of both microparticles and macrobodies.

**I**mportant results are the following: self-origion of the movement and force; unemissing oscillator systems; existence of the latent and displayed energy, which sum is constant; the mechanism of gravitational of self-rapproachement bodies; gravitational synthesis; new ways of replacement in the metric space; unspending production of energy not contradicting to the law of preservation etc.

**R**hythmodynamics really clearify some situations. Phasefrequency method of description of events on the micro and macro level of the substance organizations takes force. There are some new works.

D. N. Koshzevnikov

## INERTNESS IS A PROPERTY OF SYSTEM

**T**he occurrence of the inertial properties in oscillator system take place also on the macrolevel. Carring out some experiments on the water using superficial waves, and wheits suspended on a bar as oscillators, the phasefrequency unconcertance of oscillating results in distortion of the interferensional picture; and conferently in the energy redistribution both inside of the system and outside of it. Wheits-oscillators appear in a less comfortable power situation, and therefore they will try to displace in the power comfort zones.

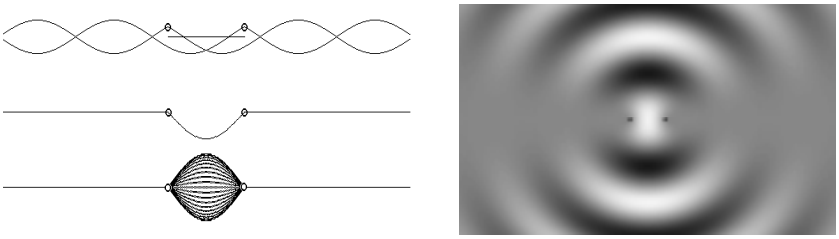


**Fig. 144**. A wave field of two oscillators. There is no radiation along the X- axis.

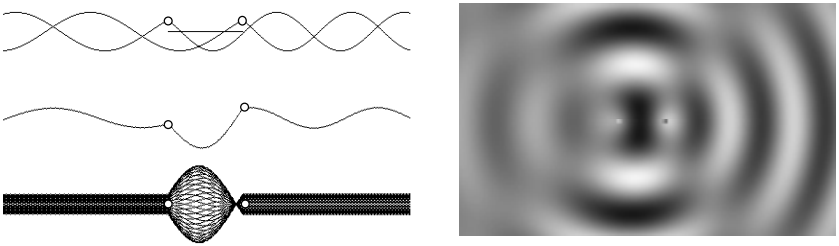


**Fig. 146**. $V_1 = 0.11c$. There is no phases shift. Increase of speed results in the energy redistribution and the system reaction.

**R**eaction of the oscillator system on the energy redistribution caused by the speed change coincides exactly with our representation of the inertness. It allows a statement, that inertness is a property of system. But then we have an opportunity to detail the mechanism of this property occurrence as well as phenomena, in which the inertness displays itself by some way.

## HIERARCHY OF LOGIC SPACES

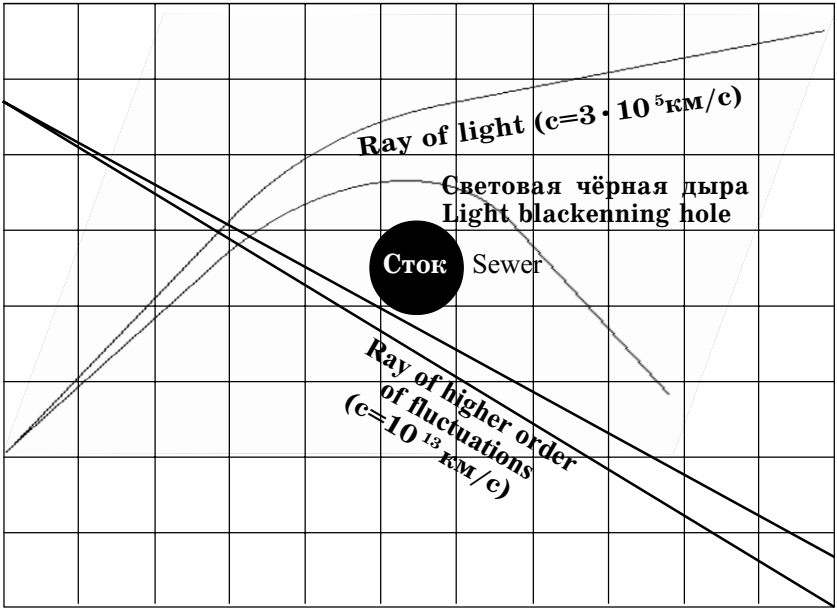



**Fig. 44**. **T**he light logic space is imposed on the higher one. We can see, that "light" logic differes from the "higher level" ones. In relation to "higher level", "light logic" seems to us being curvilinear one. From the point of view of the absolute observer the presence of a light black hole does not render influence on the scale grid of the higher order. If you try to construct a light scale grid then the "lighter" observer will have problem with curvature, that is why it is very difficultly to solve this task without N.Lobachevskiy and G.Riman ideas. Quite the same problem arises before the "higher level" observer in a case of exsistance a black hole at his level of processes organization, that is why he is also forsed to enter the absolute scale grid, and then to look for the mechanism of transition from rectilinear system of coordinates to his own, and back. We already spoke, that the problem solution simplify, if it is consided from a higher hierarchical position.

**S**eems that there is a its own theory of relativity for each level of wave organization, beginning from a sound (but all of them have the same formula). In 1982 the author has independently constructed the sound theory of relativity for "sound" observer and has found out its completly similarity with Light Theory of Relativity. It is possible to leave the egocentrical perception only from the position of a higher wave level.

**Reference information:**

CERTIFICATE - LICENCE (registration № EIW 000198 of 23 september 1996)

Information summary: A new scentific area, RHYTHMODYNAMICS, has taken shape.

RHYTHMODYNAMICS deals with all forms of movements and interactions in complex oscillating systems, earlier believed simple.

A new volumetric interference method of process visualisation was created. This method enabled discovery of spider-effects - twisting of wave beats info circular, eddy, cellular and other structures.

The phenomenon of compression of stationary waves was opened. New transformations of the coordinates are proposed.

Qualitatively new interpretations were given to the notions of Mass, Inertia, Force, Gravitation and Quiescent State.

Applications are to be found in power industry, medicine and propelling devices of new generation.

A brief title: RHYTHMODYNAMICS OF COMPLEX OSCILLATING SYSTEMS.

## THE CONTENTS

Frequency space - balm from multydimensions.....3
Informational spaces and intuition..... 6
Modeling a UFO movement in frequency space..... 8
On occurrence of mankind on the Earth..... 12
Rhythmodynamics..... 17
Initial postulates..... 18
Basic formulas of the rhythmodynamics..... 19
The classical mechanic formulas in rhythmodynamic representation..... 20
The rhythmodynamic formulas..... 24
Inertness is the property of system..... 26
Hierarchy of logic spaces..... 27
The help information. The contents..... 32

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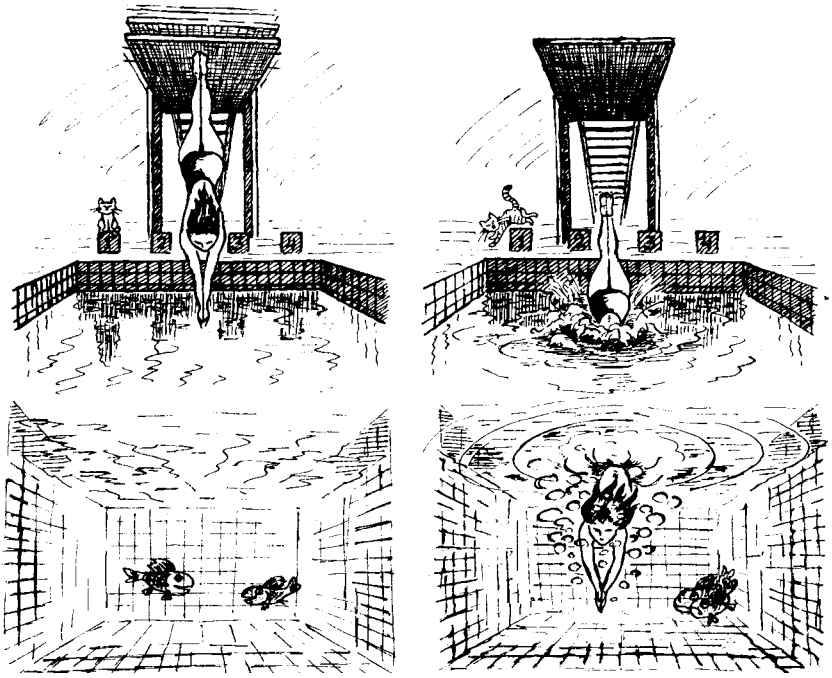
## On the «FREQUENCY SPACE» problem.



The reflection angle does not permit to an over water observer seeing the under water objects as well as to an under water observer seeing a diver flying to the water surface. Transition throw boundary between the air and the water is not only the object disappearing in one world ant it‘s appearing in the others. This transition is accompanied by the intencive wave disturbance of the boundary surface. The under water observer could get a thought that spontanous borning (materialising) of an object took place as well as the over water observers thought could be its disappearing (dematerialising). The boundary between volumes of different frequency ranges is obvious in this example. Our sensors overlap both frequency ranges. A situation seems to be more interesting in which the worlds of different frequency are inclosed one into other. If the frequency difference is enough big and our sensors do not overlap them, the transition fromone frequency range to the other will be accompantied with the following events: the disappearance in the first world, the appearance in the other, the wave disturbance of the conditional boundaries of the division. This fenomena can be mathematicaly discribed without any additional coordinate dimensions as well as could be understood threedimensional logic.

Existence of the universe medium as the foundation of the real world allows us make different look on the mechanism of the elementary microobjects interaction. Investigating two real electrons we can assume each of them as a complex of interacting oscillators. First electron senses the medium polarisation in his location which is produced by the second one. It displays in his phaseshift change on a value being proportional to the medium polarisation produced by the second electron. An energetical "discomfort" appears. The electron will change its location to minimyze this energetical "discomfort". The second electron does the same. We would like to direct your attention to the main points: the interaction of two electrons can be discribed in the quite simple way: the second electron changes the phaseshift of the first one and the first in its order change the phaseshift of the second. Anyone can see that mechanism of the microparticles interaction is created in this very simple way.

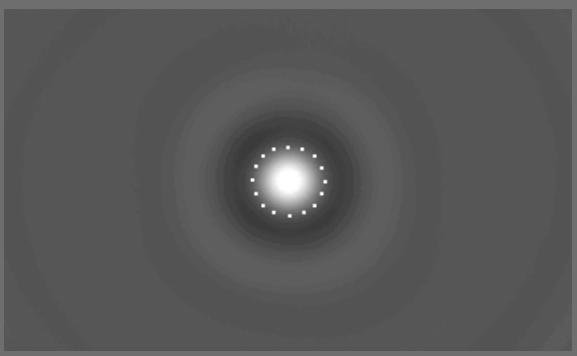


Fig.155 Momentary photo of nonradiating particle (section). The stationary wave occures within the oscillators system (antinode). Figuratively talking, wave energy "is trapped", and radiation outside is absent. In this sense it was a success to create a model of volumetrical soliton which`s speed in the medium could be from 0 up to c[km/s].

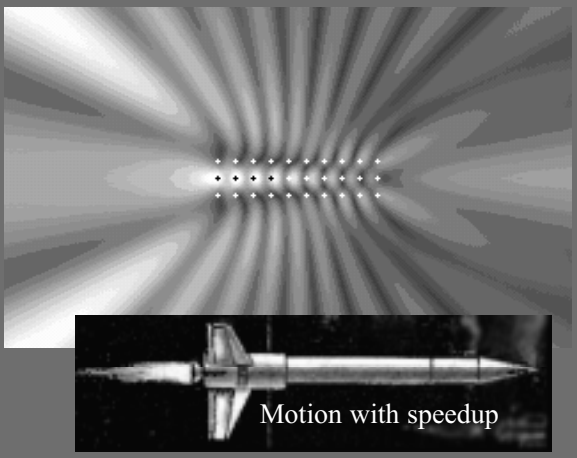



Fig 125 The phaseshift is organized in the system of 30 oscillators. The redistribution of latent and displayed energy takes place. The illusion arises ot a detached-on-looker that the energy stream is directed on the left and consequency this system should move on the right. Rhythmodynamics has another explanation of the movements reason.