FREQUENCY of PHOTONS in ABSOLUTE SPACE of a NEWTON

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Abstract

In the article the radiation and reception of photons in different conditions is considered.

LIGHT SOURCE, MOVING in VACUUM

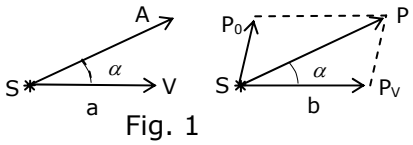

Fig. 1

On a figure 1a the light source *S* is figured, moving with in absolute speed *V*. We will be interested with light which is radiated in the direction *A*, component with *V* some angles α. On a figure 1b the computational scheme of a considered case is figured, where P_0 - impulse of a photon of a fixed source, P_V - impulse of a photon "moving" with velocity *V*. *P* - impulse of a photon in a given direction of a moving source.

From a figure 1b:

$$P = P_V \cos\alpha + \sqrt{P_0^2 - P_V^2 \sin^2\alpha} \qquad (1).$$

Allowing, that:

$$P_0 = \frac{h\nu_0}{C},\ P = \frac{h\nu}{C}, \text{ and } P_V = \frac{h\nu_0}{C^2}V \qquad (2),$$

let's substitute (2) in (1) and after some transformations we shall receive:

$$\nu^s = \nu_0^s\left(\frac{V}{C}\cos\alpha + \sqrt{1 - \frac{V^2}{C^2}\sin^2\alpha}\right) \qquad (3).$$

The speed of light from a source, moving in vacuum, in miscellaneous directions will be identical and is peer to velocity from a fixed source *C*, and the radiated frequency (Doppler effect) will be determined by the formula (3). From it, in particular, it is visible, that at $\alpha=\pi/2$ (transversal Doppler effect):

$$\nu^s = \nu_0^s\sqrt{1 - \frac{V^2}{C^2}} \qquad (4),$$

that coincides known expression of the theory of the Einstein for transversal Doppler effect. "...From the formula (received from a hypothesis about existence of an ether - V.K.) follows, that at motion of a source in relation to the spectator in a direction, perpendicular to an observer-target line ($\theta=\pi/2$), the Doppler effect should miss: $\nu=\nu_0$. The theory of relativity results in diverse conclusion - at $\theta=\pi/2$ the so-called transversal Doppler effect should be watched:

$$\nu - \nu_0\sqrt{1-\beta^2} \approx \nu_0\left(1 - \frac{\beta^2}{2}\right) < \nu_0$$

This effect is only relativistic. It is stipulated by deceleration of a course of time in a moving reference system. ...The experimental check of existence of transversal Doppler Effect is connected to large difficulties. For the first time such experiment was carried out in 1938 American physicists by G. Aivs and D. Stiluall. The results of experiments of Aivs and Stiluall were completely agreed the relativistic theory of Doppler Effect and by that were by

one more experimental affirming of validity of a special theory of relativity". B.M. Javorsky, A.A. Detlaph, Course of physics, v.3, "Higher School", M., 1967, page 204.

From (4) at α=0 (we receive radiation from a source, moving to us,), from (3): $\nu^s = \nu_0^s\left(1+\frac{V}{C}\right)$, at V=C, $\nu^s = 2\nu_0^s$, i.e. in this case we perceive doubled frequency. At α=π (we receive radiation from a source, moving from us,), from (3): $\nu^s = \nu_0^s\left(1-\frac{V}{C}\right)$, at V=C, ν^s=0, i.e. in this case of light source we simply shall not see because of an indefinitely large wavelength of radiation.

Now it is possible to show, that the astronomers insecurely counts up velocities of remote objects of the Universe, using the law of Habble. The law of the E. Habble note as follows ("Physics of space", Soviet encyclopedia, M., 1976, page 118): $z = \frac{\nu_0 - \nu}{\nu} = \frac{1}{C} H \cdot r$ (1'), where z - relative frequency change of a spectral line, ν_0 - laboratory frequency of a line, ν - apparent frequency of a line of a remote galaxy, C - speed of light, H - constant of Habble, r - distance up to a remote galaxy. From (3) at α=π (the galaxies are deleted from us) it is possible to record: $z = \frac{V}{C-V}$ (2'). Substituting (2') in (1'), we shall discover: $\frac{V}{C-V} = \frac{1}{C} H \cdot r$ (3'). If C>>V, that V=H·r. For some quasars z≅2, i.e. V/(C-V)=2, whence V=2/3C, instead of 2C, as would be received for an orthodox astronomy. At V=C, z=∞. Therefore, ad-hoc it should use a special theory of relativity. Apparently, that new physics gives more exact calculation of distances up to remote objects of the Universe not attracting a theory of relativity, and the earlier received data should be re-counted.

Thus, the experimentally affirmed formula (4) can be received not resorting to notions about deceleration time in moving bodies, the source is simple releases a photon with smaller energy, that it has got to the spectator and the spectator is capable to perceive only such photon.

Here it is necessary to add, that under the present theory light represents electromagnetic oscillations, which one under the theory of the Einstein should be committed indefinitely slowly, that indicates an inconsistency of the theory and does not correspond to the test data. If at motion the sizes of bodies decrease in a current of traffic, length of a light wave up to zero point (under the formulas of a special theory of relativity) decreases also, that contradicts experiment and energy conservation law, and if length of a light wave remains invariable, it contradicts a Michelson experiment. As the time in a moving system goes slower, the frequency of light should decrease, the wavelength also decreases and allowing, that: C=$\lambda\nu$, the speed of light too should decrease, and it contradicts an initial postulate of the Einstein. That all these inconsistencies to remove, the special status for photons is necessary, not obeying theories of relativity, that contradicts common sense. Thus, the known theory of relativity is contradictory.

SPECTATOR, MOVING in VACUUM, SOURCE IS IMMOBILE

Only absolutely fixed spectator perceives light relevant to the formula (3), i.e.:

$$\nu_0^{sp} = \nu_0^S\left(\frac{V}{C}\cos\alpha + \sqrt{1-\frac{V^2}{C^2}\sin^2\alpha}\right) \qquad (5).$$

Case, when the source is immobile, and the spectator is gone ($\nu_0^H = \nu_0^S$) is figured on a figure 2.

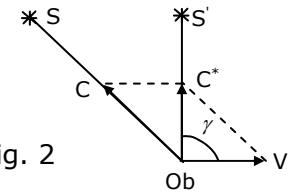

Fig. 2

From a figure 2:

$$C^* = V\cos\gamma + \sqrt{C^2 - V^2\sin^2\gamma} \qquad (6).$$

$$\nu = \nu_0 \frac{C^*}{C} \qquad (7)$$

Allowing, that:

and by substituting in (6), we shall discover:

$$\nu^{sp} = \nu_0^{sp}\left(\frac{V}{C}\cos\gamma + \sqrt{1-\frac{V^2}{C^2}\sin^2\gamma}\right) \qquad (8).$$

At: $\gamma = 0$, $C^* = C+V$, $\nu = \nu_0^{sp}\left(1+\frac{V}{C}\right)$

At: $\gamma = \pi/2$, $C^* = \sqrt{C^2 - V^2}$, $\nu = \nu_0^{sp}\sqrt{1-\frac{V^2}{C^2}}$. (transversal Doppler effect for the spectator).

At: $\gamma = \pi$, $C^* = C-V$, $\nu = \nu_0^{sp}\left(1-\frac{V}{C}\right)$.

Source it seems to the moving spectator arranged in a direction $C^*(S')$, displaced from true in the side of motion of the spectator.

SOURCE and SPECTATOR MOVES in VACUUM

In this case spectator will measure speed of light from a source pursuant to the formula (6). The frequency of received radiation will be received after substitution (5) in (8):

$$\nu^{sp} = \nu_0^{S}\left(\frac{V}{C}\cos\alpha + \sqrt{1-\frac{V^2}{C^2}\sin^2\alpha}\right)\left(\frac{V}{C}\cos\gamma + \sqrt{1-\frac{V^2}{C^2}\sin^2\gamma}\right) \qquad (9).$$

Let's consider most relevant in practice a case, when the source and spectator move with identical velocity in one side, i.e. distance between them does not vary.

If the source is arranged behind the spectator on a course of motion ($\alpha=0$, $\gamma=\pi$), the formula (9) gives:

$$\nu^{sp} = \nu_0^{S}\left(1-\frac{V^2}{C^2}\right) \qquad (10).$$

If the source is arranged ahead of the spectator on a course of motion ($\alpha=\pi$, $\gamma=0$), the formula (9) gives the same result (10) for frequency of light.

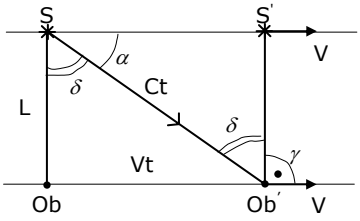

Fig. 3

Case, when a source and spectator are arranged on a line, to perpendicular their absolute motion is figured on a figure 3. It is easy to see, that to the spectator moving together with a source, it seems (*S'*) just there, where in the given moment is actually, though the photons go to the spectator from a position *S* of a source. Thus the spectator will see strictly perpendicular motion of photons to a direction of absolute motion *V* ($\gamma=\pi/2$), and the source should radiate a photon, which one will get to the spectator on the angle $\alpha<\pi/2$, ($\alpha+\delta=\pi/2$).

From a figure 3 it is possible to find, that $\sin\delta=V/C$, i.e. the angle δ is very small (for earth conditions is peer to a angle of a stellar aberration component 20.5").

"The phenomenon of a stellar aberration is, that the stars change the visible position on a sky. Within one year they describe ellipses with fixed center, the semimajor axis has which one the arc sizes in 20.5". The semi minor axis is various. It is peer to the semimajor axis for stars lying in a direction, perpendicular to a plane of Earth orbit and is peer to zero point for stars lying in a plane of Earth orbit. From a point of view of fixed ether the aberration is explained by motion of the Earth concerning ether. The wave entering through a lens *O* a telescope, expends time $t=L/c$ on reaching eyes of the spectator. But for this time the telescope will pass a way $s=vt$, and light does not fall in an eye. That light has got in an eye, the telescope is necessary for inclining in the side of motion on a angle $\alpha = tg\alpha = S/L = v/c$. If to substitute velocity of the Earth v=30 kms/sec and c=300000 kms/sec, $\alpha=10^{-4}$ radians = 20.5"(!). From a point of view of the theory of a Hertz (which one guesses, that the ether completely has a carry along by moving bodies - V.K.) the stellar aberration should not be, as the light beams entering a telescope, are spread in an ether, which one is gone together with a telescope and any lag of light will not be. Thus, the relativity for optical phenomena, which one should be run in the theory of a Hertz, results in denying of a stellar aberration". N.I. Kariakin etc., Brief manual on physics, "Higher School", M., 1962, page 302-303. From a point of view of new physics "fixed ether" is equivalent to a absolute reference system (unimportantly thus, whether there is it actually), therefore calculating value of a stellar aberration coincides with apparent. This observation indicates the vectorial sum of speed of light and spectator and simultaneously contradict the second postulate SRT, indicating on an inaccuracy of this theory.

From a figure 3 it is visible, that:

$$\cos\alpha = \frac{V}{C} \qquad (11),$$

signifies:

$$\sin^2\alpha = \left(1-\frac{V^2}{C^2}\right) \qquad (12).$$

By substituting $\gamma=\pi/2$, (11) and (12) in (9), we shall discover:

$$\nu^{sp} = \nu_0^S\left[\frac{V^2}{C^2}+\sqrt{1-\frac{V^2}{C^2}\left(1-\frac{V^2}{C^2}\right)}\right]\cdot\sqrt{1-\frac{V^2}{C^2}} \qquad (13).$$

In (13) expression $\sqrt{1-\frac{V^2}{C^2}\left(1-\frac{V^2}{C^2}\right)}$ it is possible to converse to a kind:

$$\sqrt{\left(1-\frac{V^2}{C^2}\right)^2+\frac{V^2}{C^2}} \qquad (14).$$

Applying to (14) the known approximate formula: $\sqrt{a^2+x}=a+\frac{x}{2a}$ in which one at $x<<a$ it is possible to limit only by first term in a right part, we shall discover:

$$\sqrt{\left(1-\frac{V^2}{C^2}\right)^2+\frac{V^2}{C^2}}=1-\frac{V^2}{C^2} \qquad (15),$$

by substituting (15) in (13), we shall receive:

$$\nu^{sp}=\nu_0^S\sqrt{1-\frac{V^2}{C^2}} \qquad (16).$$

Thus, the angle α on a figure 3 appears by such, that the source *S* radiates in this direction the same frequency of light, as well as at transversal Doppler effect. Comparing (16) and (10) is visible, that the spectator moving together with a source always will watch red displacement of frequency, maximum along a current of traffic. Under these formulas it is possible to find a direction and value of absolute speed. From the formulas (10) and (16) it is easy to receive connection between absolute speed of motion of a remote galaxy and relative frequency change of a spectral line it. Substituting in (16) expression for a relative frequency change of a spectral line $z=\frac{\nu_0-\nu}{\nu}$, we shall receive absolute speed of a galaxy moved by a parallel course:

$$V=C\sqrt{1-\left(\frac{1}{z+1}\right)^2} \qquad (17).$$

Substituting (10), we shall receive absolute speed of a galaxy moved ahead or behind us:

$$V=C\sqrt{1-\frac{1}{z+1}} \qquad (18).$$

Official physics fools the astronomers, when they arrest a zero relative frequency change of a spectral line of a remote galaxy, is erroneous considering, that concerning us the velocity of this galaxy is peer to zero point. As at the same velocity of a source and spectator we always apparent red displacement, from the formula (9) it is possible to find a ratio of velocities of a source and spectator at which one $\nu=\nu_0$ (z=0). If the spectator is gone ahead of a source, from (9):

$$V_S=\frac{CV_{sp}}{C-V_{sp}} \qquad (19),$$

where V_S - absolute speed of a source, and V_{sp} - absolute speed of the spectator. If the source is gone ahead of the spectator, from (9):

$$V_S=\frac{CV_{sp}}{C+V_{sp}} \qquad (20).$$

The graphs of expressions (19) and (20) are shown on a figure 4.

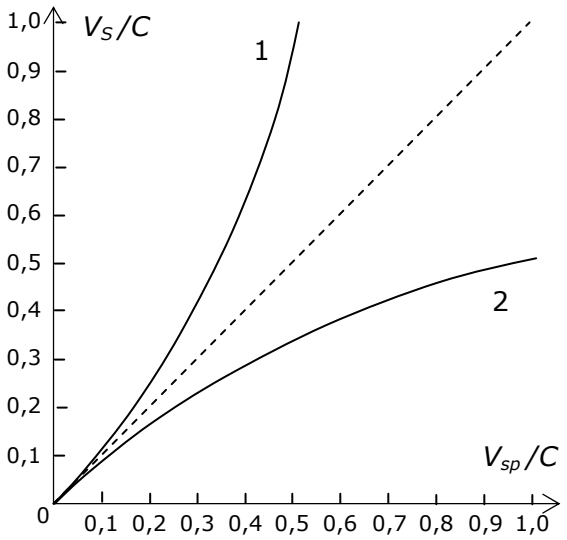

Fig. 4

From a figure it is visible, that catching up should be moves always faster escaping, that the relative frequency change of a spectral line of a remote galaxy was equal to zero point. If the escaping object is gone with velocity *C*/2, catching up should be moves with speed of light for fulfilment of this requirement. As in dilated pursuant to the law Hable the Universe the velocity of catching up object always is less escaping, in any point of the Universe we should watch red displacement (if not to allow for peculiar velocities).

MIRROR, MOVING in VACUUM

The fixed mirror reflects photons of that frequency, which one perceives. The moving mirror is "source" of light and radiates photons pursuant to the formula (3), where ν_0^S - frequency reflected by a fixed mirror. All this is fair and for light passing through a transparent plate, moving in vacuum.

PHOTONS in MOVING MEDIUM

The velocity of photons in medium decreases because of braking action a polarization track moving behind a photon (far from an absorption band). If medium is gone, that, naturally, that together with it the polarization track is gone also, that results in gradual turning about of a trajectory of a photon on motion of medium. When the photon is gone on a current of traffic of medium, distance between center of a polarization track and photon small and it corresponds to small value of index of refraction of medium, the velocity of a photon is great. When the photon is gone against motion of medium, distance between center of a polarization track and photon is incremented also it corresponds to increase of index of refraction of medium, the velocity of a photon decreases. Thus, in spite of the fact that medium has certain index of refraction, at its motion there is a dynamic index of refraction dependent on a angle between a current of traffic of photons and medium. In result the photon "is blown off" by moving medium in a current of traffic of medium.

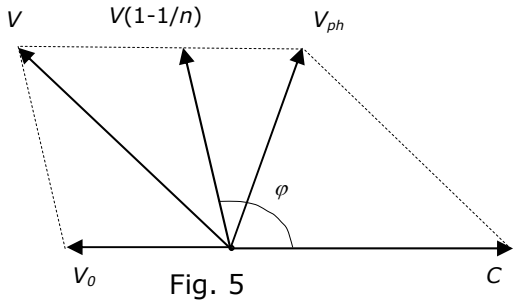

Fig. 5

We are address to a figure 5. The photon is gone in medium with velocity $C_m=C/n$.

The motion is possible to view it, as simultaneous motion with velocity C and "blowing" in the counter side with velocity V_0. Apparently, that:

$$V_0 = C - C_m = C\left(1-\frac{1}{n}\right) \qquad (21).$$

Behind absence of more constitutive thoughts, suppose, that "blowing" of a photon at motion of medium happens to the same factor, as in the formula (21), and the factor from velocity does not depend, then velocity of "blowing" of a photon by moving medium:

$$V_m = V\left(1-\frac{1}{n}\right) \qquad (22),$$

where V - velocity of medium. Certainly, this guess inaccurately reflects a reality. For example, the experiments of the Fizo give value of factors in (22) not (1-1/n), and (1-1/n^2). But also it is impossible to recognize a factor of the Fizo precise, as, as we have found out, the index of refraction of medium depends on a angle between vectors of velocities of a photon and medium, which one spontaneously varies. Holding on in this book of priority of short before an in-depth analysis, from a figure 5 we shall discover velocity of a photon V_{ph} in moving medium (velocity "blowing" V us now does not interest):

$$V_{ph} = \sqrt{\frac{C^2}{n^2} + V^2\left(1-\frac{1}{n}\right)^2 + 2\frac{C}{n}V\left(1-\frac{1}{n}\right)\cos\varphi} \qquad (23).$$

From (23): at φ=0 (medium is gone on a light ray) $V_{ph} = \frac{C}{n} + V\left(1-\frac{1}{n}\right)$, at $\varphi=\pi$ (medium is gone towards to a light ray) $V_{ph} = \frac{C}{n} - V\left(1-\frac{1}{n}\right)$, and at $\varphi=\pi/2$ (medium is gone across a trajectory of a photon, which one would be in fixed medium) $V_{ph} = \sqrt{\frac{C^2}{n^2} + V^2\left(1-\frac{1}{n}\right)^2}$.

As well as it is necessary to expect, at n=1 (medium misses) $V_{ph}=C$, and at V=0, $V_{ph}=C/n$.

The calculation on (23) displays, that "blowing" of photons in a Earth's atmosphere at its orbital motion makes an angle 0.006" in the counter side to an angle of aberration of stars (20.5").

EXPERIMENT of the MICHELSON

The previous sections have prepared the reader for new explanation of negative result of a Michelson experiment, which one was an incitement to appearance SRT. The experiment of Michelson is that touchstone, on which one classic physics has broken grinders and the theory of the Einstein "has triumphed". However this celebration apparent, since the explanation of results of experiment with the help of a theory of relativity is incorrect, in particular, is purely skipped (differently Michelson experiment it is impossible to explain) that experimentally fact in evidence, that the light source changes the frequency of photons

in velocity function of motion (for example, transversal Doppler effect). American physicists Albert Abraham Michelson (1852-1931) and Edward Williams Morley (1869-1923) with the purpose to find out "an ether wind", existing according to the theory of the Lorentz, have put this experiment in 1887. For explanation of negative result of a Michelson experiment the Fitcdgerald and Lorentz have put forward contraction a hypothesis, according to which one the sizes of bodies in a current of traffic decrease in the relation $\sqrt{1-\beta^2}:1$, where $\beta=V^2/C^2$. The Einstein by results of this experiment considered, that all spectators measuring speed of light, will receive the same result irrespective of, what velocity of his proper motion in space.

Now we shall receive explanation of results of a Michelson experiment on the basis of developed in this book neoclassical of notions and denying of relativity.

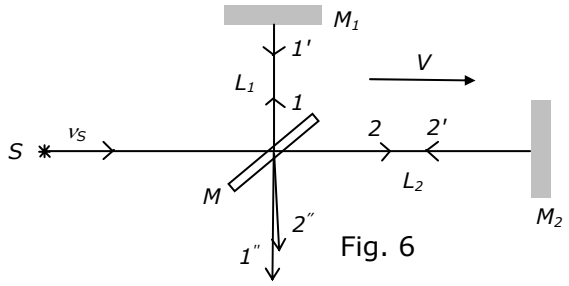

Fig. 6

Michelson with the help of the interferometer figured on a figure 6, attempted to determine absolute speed of the Earth on displacement of interference stripes at rotational displacement of an interferometer on 90^0, but has received zero result, which one does not depend on frequency of a light source (moving with an interferometer or space "fixed") from length of arms of an interferometer.

Without dependence from frequency of a source ν_S the translucent mirror *M* is moving with absolute speed by *V* source, which one on a arm L_1 creates frequency (see (10)):

$$\nu_1=\nu_{1'}=\nu_S\sqrt{1-\frac{V^2}{C^2}} \qquad (24),$$

and on an arm L_2 (see (10)):

$$\nu_2=\nu_{2'}=\nu_S\left(1-\frac{V^2}{C^2}\right) \qquad (25).$$

The number of waves *N* stowed on trajectories *l* is connected to frequency of light and speed of light *C* a ratio:

$$N=l\nu/C \qquad (26).$$

For a ray 1:
$$l_1=l_{1'}=\frac{L_1}{\sqrt{1-\frac{V^2}{C^2}}} \qquad (27),$$

and for a ray 2:

$$l_2=\frac{L_2}{1-\frac{V}{C}} \qquad (28) \qquad\qquad l_{2'}=\frac{L_2}{1+\frac{V}{C}} \qquad (29).$$

Substituting (24) and (27) in (26), we shall discover:

$$N_1=N_{1'}=\frac{L_1\nu_S\sqrt{1-\frac{V^2}{C^2}}}{C\sqrt{1-\frac{V^2}{C^2}}}=\frac{L_1\nu_S}{C}=N_1^0 \qquad (30),$$

where N_1^0 - the number of waves stowed on the arm L_1 of an absolutely fixed interferometer (is gone whether or not the source *S* has not value). Substituting (25) and (28) in (26), we shall discover:

$$N_2 = \frac{L_2 \nu_S \left(1 - \frac{V^2}{C^2}\right)}{C\left(1 - \frac{V}{C}\right)} = \frac{L_2 \nu_S}{C}\left(1 + \frac{V}{C}\right) \qquad (31).$$

Substituting (25) and (29) in (26), we shall discover:

$$N_{2'} = \frac{L_2 \nu_S \left(1 - \frac{V^2}{C^2}\right)}{C\left(1 + \frac{V}{C}\right)} = \frac{L_2 \nu_S}{C}\left(1 - \frac{V}{C}\right) \qquad (32).$$

Sum up (31) and (32), we shall receive:

$$N_2 + N_{2'} = 2\frac{L_2 \nu_S}{C} = 2N_2^0 \qquad (33),$$

where N_2^0 - number of waves stowed on the arm L_2 of an absolutely fixed interferometer.

Thus, we see that the interference figure created by rays 1" and 2" remains to a constant (difference in phase of photons of these rays' remains to a constant) without dependence from absolute speed of an interferometer and orientation it of relatively this velocity.

Here it is necessary to note, that as the expression (10) is precise, and (16) approximate, there is a potential capability in the future to determine absolute speed of movement of object, on which one the interferometer with a multiple reflection of a ray, almost perpendicular current of traffic (figure 7) is established.

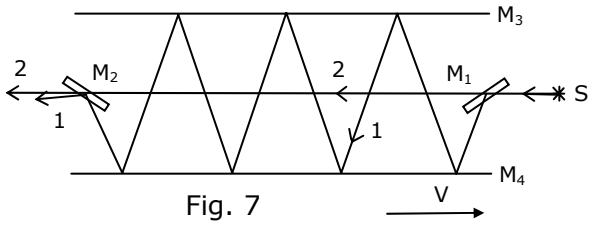

Fig. 7

From a laser source *S* light on a translucent mirror M_1 is parted on a ray 1, which one multiply is reflected from mirrors M_3 and M_4 and translucent mirror M_2 is superposed with straight lines by a ray 2 and gives an interference figure dependent on value of absolute speed *V* and orientations of an interferometer concerning vector of this velocity.

SOME WAYS of DEFINITION ABSOLUTE SPEED

Partially they were indicated earlier. Source of light radiates photons of true frequency, i.e. those, for which one radius of a screw trajectory in 2π times is less than a wavelength (step of a screw line), and the spectator perceives photons of apparent frequency. Radius of a screw trajectory of perceived photons is more or less computational wavelength, rather measured by it, depending on, whether it is gone towards to a light ray or on its direction. If on trajectories of light there is a hindrance *A* (figure 8) sizes which one of $d<\lambda/\pi$, instead of a hindrance *A* we shall see a diffraction ring *B* that a part of photons, which one could get in the area of a ring, are immersed by a hindrance at hit on it. Diameter of a diffraction ring, thus, is determined by true, instead of apparent frequency of light.

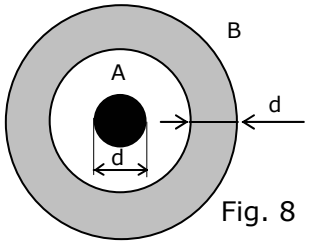

Fig. 8

Measuring diameter of a diffraction ring in miscellaneous directions from a source, we shall discover a true current of traffic in space of a source and spectator through, connecting a source and point about a minimum diameter of a ring. Absolute speed we shall discover from the formula (3) for two measurements (α=0 and α=π).

It is possible to offer and other ways of measurement of absolute speed using that radius of a screw trajectory of a photon (and other particles) depends only on its true frequency.

The relativity of motions can be denied, exploring and only mechanical phenomena. For example, by untwisting a blob in an inertial system, we shall watch precession it of the gravidynamic moment around of vector of absolute speed of a system, and the frequency of precession is proportional to absolute speed. The absolute speed also can be determined, measuring mass of a body in an inertial system, as it is a function of moving speed of a body. Thus, the Einstein, by taking for an initial postulate a relativity of motions, receives the formula linking moving speed of a body and mass of this body. As mass of a body we can determine and it is absolute, we shall discover also absolute speed therefore received formula contradicts an initial postulate of the Einstein, therefore, his theory internally is contradictory. We also have shown that for relativistic area this formula is at all unsuitable.

The theory of relativity has given rise mass of paradoxes, which one indirectly indicate its inaccuracy. For example, viewing a relativity of simultaneity SRT connects coordinate of a point to an instant of time, but as "beginning" of coordinates arbitrary, arises a unsolvable inconsistency: the event *A* earlier *B* and is simultaneous later *B*, and the difference is arbitrary and depends on a scale of an axis *X*! With clocks the same unsolvable paradox, since "moving" go slower "fixed", and motion relatively, one clocks go simultaneously faster and slower others.

"In "clocks" of Messbauer the photons released by radio-isotope iron, included in a structure of a crystal iron will be utilized. Identical clocks of Messbauer display the same time with accuracy 10^{-16}. The time variation on such share results in sharp increase of velocity of the score of photons. In experiment on check of deceleration of a course of time clocks of Messbauer were go by in spin and, as has appeared, went slower in $1/\sqrt{1-v^2/c^2}$ times identical superincumbent of clocks. Thus, theory (SRT - V.K.) again was affirmed". From a point of view of new physics this experiment (as well as others similar) displays strengthening "clocks" at the expense of growth of a gravitational charge and, accordingly, of a gravidynamic field with increase of moving speed. Earlier is shown, as far as is sharply incremented a gravidynamic factor from moving speed. Thus a radioactive decay of an isotope iron is slowed down. Explicitly this problem is surveyed in chapter 11.1 [1] dedicated gravidynamic interactions and in the chapters, relating to elementary particles. Comparing among themselves indications of such clocks established on Earth satellites, are easy are to determined by an instantaneous direction and absolute speed of motion of the Earth in space.

Really is not absurd from a point of view of sensible physical sense addition the velocities in SRT, when, for example, two electrons which are radiated in the counter sides with the velocity 0.9 *C* concerning a source, under the relation to each other moves with velocity are less than speed of light. The elementary experiment, when two spectators "meet" these electrons gives value of velocity of each electron 90 % from speed of light, their relative velocity signifies makes 1.8 *C*.

Amplify critics SRT it is not make sense. This critic in the literature has enough from the origin SRT and to this day. An alone deficiency of critics was that they almost nothing could offer in exchange, from a unified point of view by explaining all experiments on a given subject and not entering in the conflicting to mass of other test data.

Most by sensible arguments against a theory of relativity the author considers following. Basically, the theory of relativity does not see a difference between a solar System on

Ptolemaic and Copernicus. To see this difference, the concept of an inertial reference system is entered, which one obeys to a law of inertia (first Newton's laws). The inertial system does not interact with others, i.e. is free. It is considered, that the theory of relativity usable only to such systems. But similar systems substantially does not exist neither in micro nor in a macroworld, all of them can not be considered as free, therefore theory of relativity it is simple there is nothing to apply. In this book is enough convincingly shown, that it is possible with a large strained interpretation to consider any body, which one as free, is gone on a screw line. In this case existence of inertial systems in classic comprehension is impossible not only practically, but also theoretically.

Versions of red shift radiation and relict radiation

To address to a problem of red shift radiation the broad controversy around of this problem constrains. Thus the writers interpret red shift in radiation of the distant objects of the Universe by the most different image, coming frequently to opposite conclusions.

1**. Reddening of radiation at the expense of dissipation**. The mechanism of a reddening of radiation is exact same, as a reddening of the Sun on sunset, when its rays are dispersed on fluctuations of density and motes at passing a thick atmospheric layer. At a reddening at the expense of dissipation the photons with the greater energy are dispersed stronger, and the long-wave photons practically are not dispersed, therefore start to dominate in passing radiation. The spectral lines at a radiation scattering remain on the places. This effect does not cause disputes and widely will be used by the astronomers in practical activity.

2. Reddening of radiation at the expense of «aging» of photons. The photons at the space travel can interact with other particles (electrons, neutrino etc.). Thus they can receive padding energy or to lose a part it, accordingly, the radiated frequency thus varies for vigorous photons rather stronger. As a result of interplay the photon necessarily will change the trajectory and any more can not get to the spectator, since is displaced in any random direction. Therefore «aged» of photons we shall not see, and we shall watch a reddening of radiation similar to point 1.

3. Reddening of radiation at the expense of «cooling» at the extension. So explain originating so-called «relict» radiation. The very vigorous photons after Big Bang «cooled down» in process of the extension of the Universe and to the present time correspond to equilibrium temperature 2.7 K. On notions of official physics a wavelength of photons «was dilated» together with the extension of the Universe after Big Bang. Whence each photon knows, how to conduct oneself, outgoing from a general information about state of the Universe, official physics holds back. If the compressed air is dilated in vacuum, it is chilled; apparently, this not having relation to a considered problem the fact has induced to error matching. It is represented apparent, that from time of birth of the Universe the vigorous ancestors of modern relict radiation have given uncountable breeds of the more and more gentle descendants and, eventually, have given a world countless number of absolutely gentle photons of relict radiation already to anything not capable. Any object of the Universe not having of an internal power source intensively exchanges an occluded vigorous photon for set of photons with the greater wavelength. This process behind rare exceptions of multiphoton occluding is irreversible and results in cooling of any body and all Universe as a whole. Therefore photons of relict radiation have the same relation to photons at birth of the Universe, what relation we have to those prehistoric mammals, from which one we, eventually, have taken place. The relict radiation speaks only about one: now mean temperature of the Universe makes 2.7 K. Any star generates radiation continuously reamed with speed of light on huge space, and any reddening of photons thus does not take place. Therefore notions of official physics concerning «relict» radiation are erratic. Besides, they contradict an energy conservation law. If quantity today's of relict photons is approximately equal to quantity them at birth of the Universe, where their huge initial energy has got to? To execute an energy conservation law quantity of relict photons should be so great, that their common energy was about peer of common energy of photons at birth of the Universe. It is possible to ensure it only with uncountable reradiations with exchange of energy of an absorbed photon on a great many again of born photons with smaller energy of each of them.

4. Gravitational reddening of radiation. Correctly to light this problem we shall take advantage of the formula (25.4) of chapter 25 [1] for a relative frequency drift of a spectral line $z = \frac{\nu_0 - \nu}{\nu}$:

$$z = \frac{1}{\frac{C^2 r_0}{GM} - 1} \qquad (34).$$

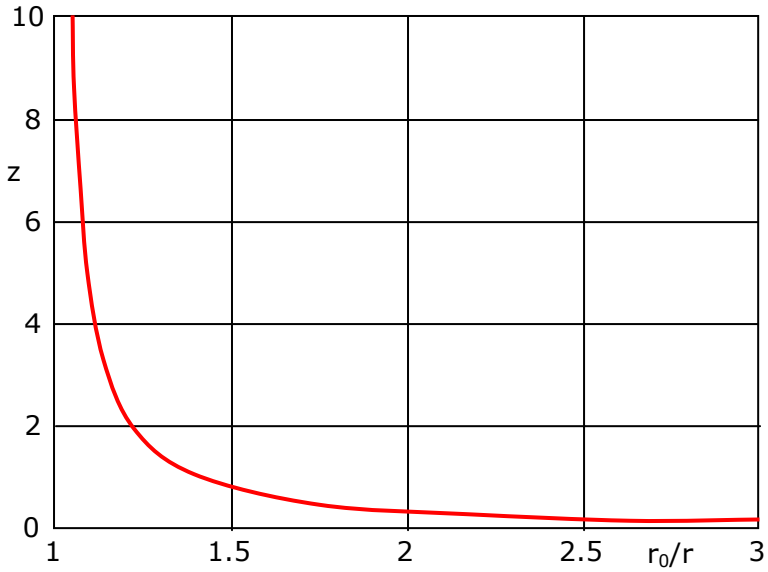

Fig. 9

This formula describes a reddening of radiation from area of a strong gravitational field. Apparently, that most strong gravitational field will be at on an edge of the Universe, and in process of movement to its center of a field decays similarly, how it takes place in process of penetration in the Earth. Let's consider, that we are somewhere near center of the Universe (about us there are no quasars). As a matter of convenience, we shall count spacing interval from us up to edge of the Universe in fractions from its radius, i.e. instead of r_0 in the formula (34) we substitute r_0/r. Besides mass of an internal part of the Universe at given r we shall count through mean density of the Universe. All data for the Universe as a whole earlier are obtained and are submitted in chapter 29.1 [1]. Substituting in (34) all numerical values, we shall receive a design formula:

$$z = \frac{1}{1.00295\left(\frac{r_0}{r}\right)^2 - 1} \qquad (35).$$

The function (35) is shown on a figure 9.

At r_0/r = 1 (on an edge of the Universe) z = 339, and at r_0/r = 2 (on half of spacing interval up to edge of the Universe) z = 0.33. The figure 9 demonstrates, that the gravitational reddening of radiation has not linear dependence from spacing interval up to object, therefore, does not explain the law the Habble. Apart 5 billions of light years the relative frequency drift of spectral lines is significant less observed, but the indispensable corrections on a gravitational reddening should be entered.

The radiation both at birth of the Universe, and at its subsequent evolution can not abandon the Universe to ensure its eternal existence, which one does not have alternative. Therefore radiation, reaching edge of the Universe, returns back, since his conveying speed does not exceed the first escape velocity for the Universe as a whole. Thus on direct and return ways the radiation changes the frequency at the expense of a gravitational reddening and become blue, but in the whole energy conservation law does not allow to lose a radiation energy «in anywhere». As a result of such homogenization of radiation on a volume of the Universe it becomes in a large-scale isotropic without dependence from energy of photons.

5. Reddening of radiation at the expense of Doppler effect. At first we shall check up on a validity the formula of Doppler effect obtained in a special relativity theory (SRT):

$$\lambda = \lambda_0 \frac{1+\frac{V}{C}\cos\varphi}{\sqrt{1-\left(\frac{V}{C}\right)^2}} \qquad (36),$$

where: λ_0 - wavelength fixed rather each other source and receiver. φ - angle between velocity vector and direction on a source.

The formula of Doppler effect of new physics (3):

$$\nu = \nu_0 \left(\frac{V}{C}\cos\alpha + \sqrt{1-\left(\frac{V}{C}\right)^2 \sin^2\alpha} \right) \qquad (37),$$

where: ν_0 - radiated frequency of a fixed source. α - angle between traffic route of a source and traffic route of a radiated photon. Let's express (36) through a radiated frequency and to not be confused to angles, we shall take into account, that $\alpha + \varphi = \pi$:

$$\nu = \nu_0 \frac{\sqrt{1-\left(\frac{V}{C}\right)^2}}{1+\frac{V}{C}\cos(\pi-\alpha)} \qquad (38).$$

Here it is necessary to mark, that SRT are considered as a matter of fact with speed of light as absolute speed, though does not advertise it. Therefore it is necessary to recognize speed *V* in the formula (38) also absolute, instead of relative velocity; differently Doppler effect will depend on selection of a reference system. The formula (37) is obtained from a principle of absolute motion. Light source in general spit, whether somebody watches of it. On a course of motion it beams photons, the energy which one is put together with translational energy at the expense of motion of a source. The photons with smaller energy for the same reason are backwards beamed. The charts of functions (37) (red color) and (38) (cyan color) are shown on a figure 10.

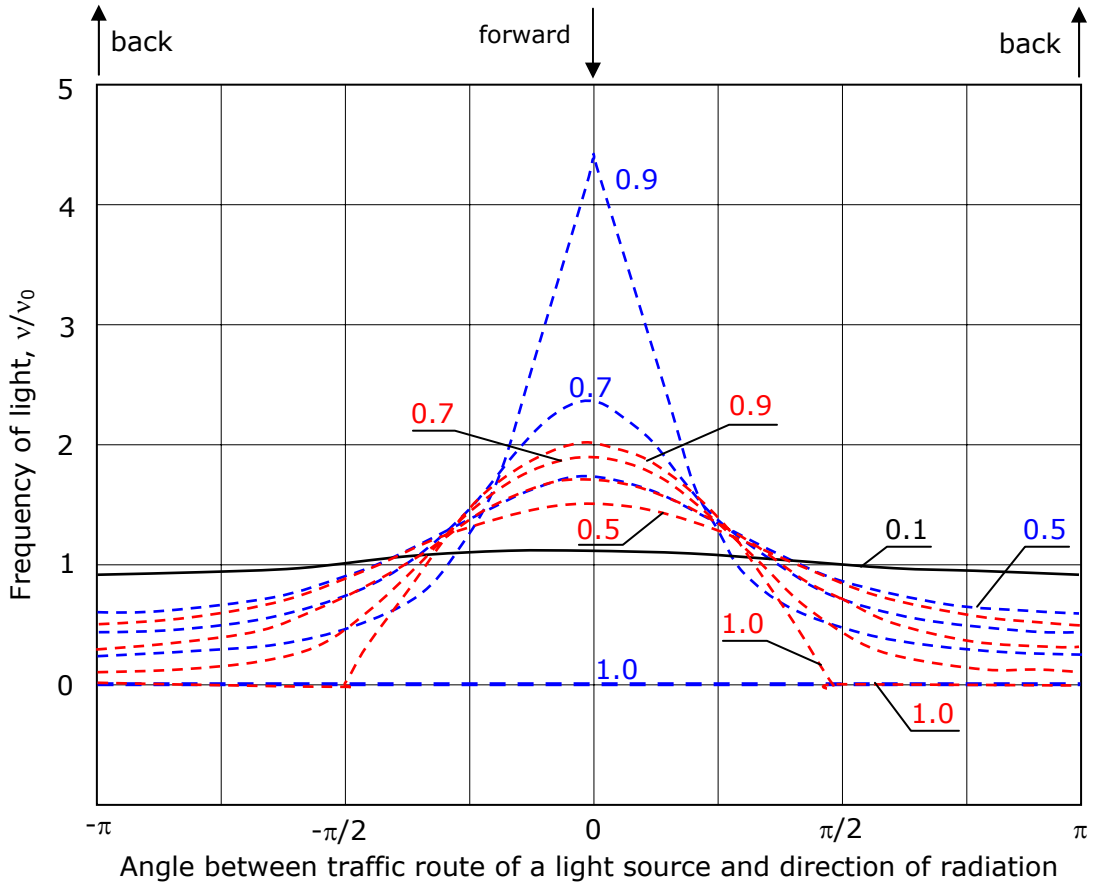

Fig. 10

The digits near to curves indicate ratio *V/C*. From a figure 10 it is visible, that under both theories the curves are symmetric concerning a current of traffic of a source that was possible to expect because of symmetry of a problem. At speed of a source 10% from speed of light, the curves under both formulas practically coincide (is shown a black line). Besides the applicable cyan and red curves are intercepted in points $-\pi/2$ and $\pi/2$. It indicates the same expression for transversal Doppler effect. Let's try to analyze two competitive expressions from the point of view of sensible physical sense. At motion of a source with speed of light forward it can beam photons with energy no more doubled energy of photons of a fixed source. The second half photon receives at the expense of energy of source motion. In these conditions back it nothing beams, since the motion of a source «discontinues» a photon in this direction, its absolute speed will become to equal zero point. The expression (38) from the point of view of sensible physical sense behaves very strange. At nearing speed of a source to speed of light the frequency of photons which are radiated on a current of traffic, unrestrictedly increases, work for perpetuity, since the fraction denominator decreases much faster than numerator. At reach of speed of light the source in general ceases something to beam in any direction. Such cases in mathematics meet very much frequently, but in substantial processes of such tricks it does not happen. On this basis the formula for Doppler effect obtained in frameworks SRT is necessary is to recognized error, as well as theory SRT.

From the conducted analysis it is possible to draw a conclusion, that the observed red shift of remote objects of the Universe is conditioned by Doppler effect, as a consequent of the extension of the Universe on inertia after Big Bang.

The figure 10 demonstrates that the radiation of relativistic objects collects ahead of a source and with ultimate output is diffused forward as a ray of the floodlight. Therefore on outskirts by the Universe space objects (quasars, galaxies separate stars) these floodlights are turned outwards and are active brakes the extension of the Universe since are look-alike to a photon rocket, the engine by which one turned on braking. Inside the Universe we can watch similar floodlights only short time, when the spurt of matter takes place to a

relativistic velocity in our direction. Such spurt will look as a flash, the spectrum by which one is step-by-step displaced to long-wave area at the expense of decreasing speed.

6. Reddening of radiation at the expense of the extension of space. For many pundits now by favorite toys it is space and time, with which may do anything you like. Anybody from them has not found time to demonstrate yet, that space and time not interspaces between things and events, and substantial physical objects. Nevertheless, they widely will use since to test, whether space was bent or in it was arose «mole's burrow» it is impossible. By outcome of these distortions was the notion that at the extension of the Universe space is extension also, i.e. is expanded, including the electromagnetic wave, radiation «grows old» in outcome there is a relict radiation. If to it to get accustomed closer, in photons of this radiation it is possible to learn the photons which have arisen at birth by the Universe, only with a lengthy gray-haired beard. I shall not trouble these pundits, let and further are amused in the pleasure as their notions contradict an energy conservation law.

The wave-corpuscle dualism of photons by nothing differs from a wave-corpuscle dualism of any microparticles. Therefore, at «stretching» of a wavelength of a photon the associated waves of any fragments «are expanded», that means decreasing their mass if to interprete a de Broglie formula how it official physics understands. Where disappears bound with mass energy? Allowing for scales of the extension of the Universe «stretching» of waves of microparticles does to impossible interplay by exchange of «virtual» particles and together with this impossible existence of atom nuclei and atoms. The numerous consequences of wave «stretching» result in full discrediting of a modern physics and consequently them better to not esteem.

7. Appearance of radiation of relativistic sources. The speed of sound in given environment as is absolute, as the speed of light, i.e. does not depend on rate of movement of radiation source. Therefore appearance of a sound field at speed of a source of an equal speed of sound or superior it is similar to appearance of a photon field of any wave-lengths at speed of a source of equal speed of light or more it. It is as a matter of convenience, a sound field and photon field we shall call as a field of radiation. For fixed sources of a field of radiation spherically symmetric and in all sides the waves (or photons) with identical frequency are beamed. At increase of a rate of movement of a source the spherical field of radiation is flattened in traffic route and at achievement of a speed of sound or speed of light is transformed into the thin disk, the plane which one is perpendicular to traffic route. Thus the radiation is diffused only in a radial direction of this disk that is well visible from a figure 11, where the overcoming by an airplane of a sound barrier is shown.


Fig. 11.

At further increase of speed the disk is transformed into a hollow thin-wall cone. The apex angle of a cone, where there is a radiation source, decreases with increase of a rate of movement.

Is applicable the set up notions to the best comprehension that we see or not we see on a sky. It is understandable, that in this case we shall conduct speech only about relativistic space objects it speed is comparable to speed of light in vacuum. It is clear that to see we can only that relativistic light source, which one is gone in a plane, perpendicular direction of observation. If it is gone in anyone the other direction to see it is impossible. If a source is the envelope, inflating with a relativistic velocity, we are capable to watch only cross

section of this envelope, perpendicular observer-target line as a luminous ring by exact or out of shape. Inside this ring the radiation misses (if there are no stars). Therefore, arresting a flash of a supernew star, we as a matter of fact arrest cross section of its envelope and the substantial scales of catastrophe appear considerably more observed. The relativistic rejects of a material in a plane of a perpendicular observer-target line can look as different luminous arcs in any wave band. Relativistic objects in the Universe are arrested considerably less their true number because of the extremely unfavorable conditions for their observation. The exception is made only by relativistic envelopes.

Comments of the author: 1. Response on the article Charles H. Lineweaver and Tamara M. Davis «Paradoxes of Big Bang», journal «In a world of science», № 7, 2005 (on a site http://www.sciam.ru) .

The extension of the Universe the writers compare to an inflated children's bead, on a surface which one the galaxies are not drawn, and are attached to it, saving the value, but augmenting spacing interval among themselves. The article is pierced by orthodox logic, on which one the simple people can not understand the modern theories and to them should illustrate, that is correct, and that amiss. And mandate from the god, that he by him has entrusted to own true in the last resort to nobody demonstrate and to ask it is impossible at modern monopolism on true. The instructions go only with Olympus, the back address is not present, therefore prolong quietly to pay taxes for development of fundamental science.

«After 75 years after discovery of the extension of the Universe many scientists can not penetrate into its true sense». After discovery of the extension of the Universe crowds of the scientists dashs on untrampled a field everyone with delirious ideas and have complicated this problem finally. It seemed, that it is easier to go by a straight way: if dilates means there was a Big Bang and the debris it as galaxies scatter in a slowed-up way on inertia. The solution of problems on this path cannot be covered by new conjectures. In this chapter is convincingly shown, that the official formula of effect of the Doppler is erratic. Besides the maximum gravity potential on boundary of the dilativing Universe also decreases to center of Big Bang (gravity potential similarly changes in process of penetration in the Earth). Therefore we receive photons from area of large gravity potential and any accelerated extension of the Universe is not present, but only deboosting pursuant to a law of universal gravitation.

« It there was explosion space, which one has resulted matter in motion. Our space and time has arisen in Big Bang and beginning to be extensions. Anywhere there was no center, since the conditions everywhere were identical, any pressure overbalance, characteristic for customary explosion, was not». Explosion and isotropic extension of space and time, apparently, one of newest «achievements» of a modern cosmology. Around vacuum: the Universe practically empty, galaxies too almost empty, and we - moving vacuum if to take into account ratio of volumes of electrons and nuclei to a volume of atoms.

Therefore, if to follow the logic of the writers of the article together with the extension of space all bodies of the nature, especially galaxies should be expanded. However, the writers, resulting unconvincing proofs, negate the extension of bodies. The general impression from the article corresponds to the law, opened by me, of a degradation of ideas. Initial physically clear ideas step-by-step acquire crazy additions and after all are transformed into a subject suitable for a waste tip of a history of science. Examples? The theory of the Bohr - wave quantum mechanics, fundamental particles - string theory, Big Bang - extension of space and time etc. The science is a minefield, on which one each step requires discretion. Earlier scientists were engaged in science not on a duty, therefore and outcomes quite good. Now huge competition, is necessary to complete the salary and to outmarch the numerous contenders, therefore there is no time to reflect.

2. I reject «the extension of space».

Let's suspect, that after Big Bang the matter of the Universe had very much temperature and applicable spectrum of heat radiation with a maximum applicable to this temperature. In process «extension of space» the wavelength of all photons is proportionally augmented, therefore all radiation spectrum as a whole should displace in long-wave area without distorting the form. However, the experiments demonstrate, that the spectra of heat radiation for miscellaneous temperatures have the miscellaneous form and do not correspond to simple displacement as a whole on a wavelength scale. Therefore «the extension of space» contradicts the experimental data.

3. Scholastic debate around of «relict» radiation.

On each new scientific fact the visionaries of all world, as flys on honey are flied. Some consider a high isotropy of radiation, others indicate the facts of an anisotropy, third invent the facts sucked from the finger. The new scientific fact fast becomes by center of a full confusion. In my judgement, research of «relict» radiation we measure temperature of the proximate space environment (basically, cosmic dust). In the other place of a Galaxy these data can appear absolutely others, therefore to diffuse this fact on all Universe is imprudent. Let's mount on an airship above some terrain and we shall measure heat radiation from different sites of this terrain. We shall be surprised of high isotropy of radiation, though in some directions we shall fix a minor anisotropy. All visionaries are better for placing on this airship.

4. The redshift is watched even at angles of motion of beaming object smaller 90^0 in relation to the spectator.

By sectioning both parts of an equation (37) on v_0 it is easy to count up, that the redshift of spectral lines at V/C = 0,9 will be watched at value of a angle more than 63^0 (figure 10), and at V/C = 0,5 - it is more 75^0. It mean, that the redshift is demonstrated even by such objects, which one have component speed in a direction to us. As the peculiar objects frequently are observed, there is nothing surprising that two objects in the same place of space can demonstrate miscellaneous redshift of spectral lines.

5. The distant objects of the Universe are arranged much closer to us.

From a figure 9. clear it is visible, that the distant objects of the Universe at z> 0,3 are arranged much closer to us because of an error of definition of spacing interval on redshift. Therefore all estimations of power-engineering of quasars also are erratic.

«Superlight» running speeds in space

At rejects from cores of active galaxies and quasars the observed linear speed of movement of radiospots can exceed speed of light C. For example, the observed linear speed of radiospots of a galaxy 3C120 makes about 4C. Naturally, that this speed is apparent. New physics enables maximum speed at the moment of reject from a core above $C\sqrt{2}$, while the ejectable matter had no time to receive yet screw motion. But as such motion is established rather fast, the linear speed of movement can not exceed it speed of light. Official physics explains apparent superlight speed as follows. At reject of matter under some small angle φ to an observer-target line the projection of a running speed of matter V_p to a picture plane will make:

$$V_{ob} = V_p \sin\varphi \qquad (39).$$

In process of moving of radiospots along a line of reject their radiation will come to the spectator earlier. Therefore official physics results the strange formula for observed speed of movement of radiospots. (Physical encyclopedia, v. 4, page 448-449):

$$V_t^{ob} = \frac{V_p \sin\varphi}{1 - V_p \cos\varphi / C} \qquad (40).$$

Apparently, here obvious misprint and the formula (40) on presentation of official physics should look so:

$$V_t^{ob} = \frac{V_p \sin\varphi}{1 - \frac{V_p}{C}\cos\varphi} \qquad (41).$$

With similar explanation it is impossible to agree for following reasons. At first, the second term in a denominator of the formula (40) should be non-dimensional value. Besides under the badge of a cosine there is also dimensional value at all not having of physical sense. Apparently, in this case, here something all wrong or not so is printed out. Secondly, incoming of radiation to the spectator earlier from those spots, which one are arranged closer to him, does not influence in any way apparent velocity movement of these spots in a picture plane, as the speed of light in this case is perpendicular of a picture plane. Except for the indicated incident, writers adds on unknowns to reasons also the Lorentzian factor,

finally complicating the reader, though this factor influences only a radiated frequency on presentation of official physics (see chapter 24.8). Above mentioned is illustrated on a figure 12.

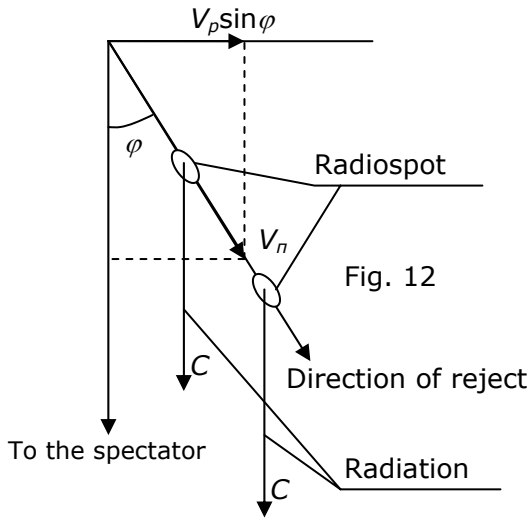

Fig. 12

New physics tenders following explanation of phenomena at reject of matter with a relativistic velocity. A bit later after reject the material is gone on a screw trajectory. Thus the screw step is more than its diameter in π of time, and the beaming matter is distributed on all trajectory. In previous chapter is shown, that the radiation collects in traffic route of a source within the limits of angle $\pm \pi/2$. Therefore at motion of matter on a screw trajectory «to us» we shall find out radiation, and at motion «from us» the radiation misses. In the total we shall watch a radiospot «driving» with speed $3.14 \cdot C$. If the motion on a screw trajectory has not reached yet equilibrium state, when for one revolution on a screw line the linear movement is equal $2\pi \cdot r$, i.e. the wavelength of de Broglie is more or less circumference of cross section of a screw trajectory, the observed speed of movement of a radiospot will differ from above indicated. It is understandable, that reject, directional in our side pursuant to previous chapter will be significant brighter, than contrareject.

If the representations of official physics concerning «superlight» running speeds were valid, at observation of synchrotron emission we could to fix «superlight» speed of electrons generating this radiation, since the physical picture in this case is look-alike to motion in space.

Something about reference systems

The relativity theory requires the mandatory indicating of a reference system, as it outgoes from representation about even and rectilinear motion of free bodies. Such indicating the Bible authors have made, by placing in center of a world the flat Earth surrounded by the crystal dome with stars, fixed on it. Ptolemaeus has perfected this system, by leaving the Earth in center of a world. This reference system has appeared error and it should be exchanged by Copernicus a new reference system, where in center of a world the Sun is placed. In due course was found out, that Sun, our Galaxy nor can be considered in many cases as adequate reference systems. Such reference system now, apparently, is the relict radiation uniformly filling in the Universe. It is necessary to recognize, that the relativity theory is confused to selection of a reference system itself and complicates those who wants to be disassembled in conglomerations of this theory.

New physics recognizes existence of absolute motion and, accordingly, absolute reference system. Let's consider the elementary case, when the body № 1 commits right-handed motion in some direction. Behind it in pursuit of the body № 2 is gone. What will watch an orthodox in a reference system, bound with a body № 2? He will see also devices separately to confirm that fact, that the body № 1 is gone on the left-hand screw towards to him. And what he will see, run from bodies № 1 in that a direction? He again will fix left-

handed motion of a body № 1, leaving from him. What conclusions can be made of these observations? Apparently, that any. And remained obscure, whither the body № 1 and is gone as it is gone. The exact conclusion can be made only from absolute, in this case, reference system, whence it is visible, that both bodies move along one direction with miscellaneous speed, and the body № 1 always has right-handed, instead of left-handed motion.

There is a natural problem, in what conditions it is possible to consider the given reference system absolute. If we is observed the wife, which one run about on a kitchen, for an absolute reference system is possible to accept walls of a house. But if we shall shaked a chandelier hanged to a ceiling, our sensing devices will show, that the plane of swinging is step-by-step turned in space, that is connected to rotation of the Earth around of an axis. In this case for an absolute reference system it is necessary to accept the spacecraft moved by a parallel course in relation to orbital motion of the Earth.

In the reviewed above case of motion of bodies № 1 and № 2 is easy to be disassembled in actual motions using the formulas of a relative frequency drift of a spectral line (19) and (20) for cases, when the spectator ahead of a driving source and behind. For this purpose on a body № 1 there should be a light source (even mentally) or we can study a reflected beam, sent by us. Then at motion after to a body № 1 we shall watch red displacement of a spectral line until we shall increase the speed pursuant to the formula (20) until, that the relative frequency drift of a line will become $Z = 0$. In this case we shall be convinced, that we catch up with a source № 1, and it is gone in one direction with us. Therefore becomes clear as a current of traffic of a body № 1 and that it has right-handed motion. Is similar, if we shall ahead of a source on a current of traffic and we shall begin to change the speed, we shall be convinced, that at increase of speed the red displacement of a spectral line is augmented, and at braking decreases until will become $Z = 0$. At further braking we shall watch already cyan displacement of a spectral line and we shall come to those to conclusions as at arrangement of a body № 2 behind a body № 1 on a course of motion.

Thus, the great tangle with reference systems in a relativity theory fades if to use an absolute reference system, which one does not depend on desire of the explorer to receive the outcome, necessary to him. The selected absolute reference system not be influenced by any factors located outside of this system. Otherwise it is necessary to select a new reference system, that these factors become not external, and internal.

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1 http://www.new-physics.narod.ru