# TWO LARGE ERRORS: NEWTON FIRST LAW And INERTIAL REFERENCE SYSTEMS

Vladislav Konovalov

Abstract

In the article one more physical sense of a constant of the Planck is detected and the inaccuracy of notions endured in heading of the article is shown.

Let's consider motion of a free body. Official physics considers, that this motion obeys to the first Newton's law and, while, nobody doubts of it, except for me. In chapter 2 [1] the valid thought is adduced of the doctor M.L. Klebanov, which one can be formulated so: «any free body is not free from own mass». Let's suspect, that some body (microparticle or macrobody) imparted some speed $V$. Generally direction of velocity vector of a body and direction of an axis of its rotation are arbitrary, that is shown on a figure 1.

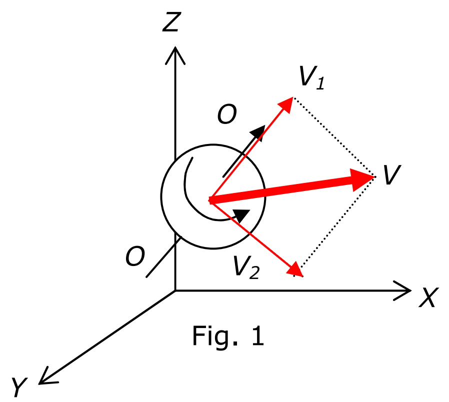


Fig. 1

The velocity vector on two orthogonally related component is decomposable: $V_1$ on a direction of rotation axis of a body and $V_2$ of perpendicular this axis.

Under the theory of new physics the gravidynamic field arises at any motion of gravitational charges. Rotated mass is look-alike to a contour with gravitational «current» creating induction of the gravidynamic field $B$, directional lengthwise axis rotations. Thus, the situation becomes similar to motion of electric charge perpendicularly to magnetic field. On a body acts gravidynamic clone of force of the Lorentz urging it to move on a circumference (clockwise if to look lengthwise axis rotation). The second independent motion takes place uniformly lengthwise axis rotations of a body, since thus the gravidynamic effect is equal to zero point. Thus, any free body is gone on a right-handed or left-handed trajectory depending on a mutual direction of vector of proper rotation and vector $V_1$. The body figured on a figure 1 will move on a right-handed trajectory. As it is a consequent of screw motion of free bodies expressed in them «a wave-corpuscle dualism», possible to assert about an inaccuracy of the first Newton's law and principled absence «of inertial reference systems», since the screw motion is absolute. For not free bodies the roundabout is saved, and translational, naturally, fades, being transformed in potential energy of universal repulsing (chapter 1 [1]).

For the same time the body passes a path, equal «to a wavelength de Broglie» in a translational motion and some circumference in a tangential rotation about an axis of a screw trajectory. This length makes an integer of lengths of waves in a translational direction (on orbit the integer «of wavelength de Broglie» is stacked), therefore we can record:

$$\frac{\lambda}{V_1} = \frac{2\pi \cdot r}{V_2} \qquad (1),$$

whence:

$$r = \frac{\lambda V_2}{2\pi \cdot V_1} = r_0 \frac{V_2}{V_1} \qquad (2).$$

In chapter 20 [1] is shown, that orbital radius of space bodies is proportional to a square of integers, starting from a ground state with minimum radius of orbit, therefore from (2):

$$r_0 \frac{V_2}{V_1} = r_0 n^2 \qquad (3).$$

Apparently, that the common energy at screw motion is peer to the sum of kinetic energy of translational motion and potential energy of universal repulsing (chapter 1 [1]) on a circumference of cross section of a screw trajectory:

$$W = W_k + W_p = \frac{mV_1^2}{2} + \frac{mV_2^2}{2} = \frac{m}{2}\left(V_1^2 + V_2^2\right) \qquad (4).$$

In view of last expression, the formula (3) will be recorded so:

$$n = \frac{W_p}{W_k} \qquad (5).$$

There is a problem: why the ratio of potential energy to kinetic before capture of space bodies from a screw trajectory on a circular orbit has only integer values from unit and above? Alone explanation I see that space bodies, having identical value the *Vr* product, have also identical «a wavelength of de Broglie» therefore are capable to be integrated among themselves («to interfere») at long-lived travel in space spaciousnesses. The law of an equal energy distribution on degree of freedoms requires equalling $V_1$ and $V_2$, i.e. $n$=1, but depending on induction of a gravidynamic field of the given body plus the gravidynamic clone of force of the Lorentz reduces radius of a screw trajectory simultaneously augmenting potential energy not influencing on kinetic energy of a body. It would be possible to compose the formula, make something out of thin air, depicting the integer values *n* for a meteoritic and cometary material, but I it to do shall not be, leaving the solution of this problem for the followers of new physics, which one at first will understand physical reasons integralness *n*, and then it is uneasy to write and applicable formula.

Now we shall consider motion of a not free body. The sceptic, by reading a beginning of the chapter, will consider it for delirium mad. Let's throw a rock along a surface of ground and any screw motion we shall not see. That he has understood essence of a problem, I shall remind, that at customary running speeds a gravidynamic field very weakly, therefore sizes of a screw trajectory have space scales. Besides if in a microcosmos the gravitational interaction does not influence at all on gravidynamic, in a macroworld the outcome of a competition between by gravitational and gravidynamic interplay depends on particular parameters of bodies. Thrown along a surface of ground the rock is not free any more, therefore can move at the end only on a circular orbit. That the Earth did not preclude with its motion, suppose, that at the moment of a throw it was tightened in a point in former center of the Earth and has not changed mass. Angular momentum of a rock concerning center of the Earth:

$$S = mv_0 R \qquad (6),$$

where: *m* - mass of a rock, $v_0$ - its initial velocity of motion, *R* - radius of Earth.

Energy of connection of a rock with the Earth:

$$E = -\frac{GMm}{r} + \frac{mv^2}{2} \qquad (7)$$

is the algebraic sum of potential energy of attraction and potential energy of universal repulsing. *G* - gravitational constant, *M* - mass of the Earth, *v* and *r* current values of speed and radius of orbit. We suppose, that the rock ultimately will appear in a potential well, i.e. will take a fixed circular orbit, therefore it is necessary to find a minimum (7). But before it is necessary to express a running speed through radius of orbit. Using a law of conservation of angular momentum of a body, is similar (6) we can record:

$$S = mvr \quad (8).$$

By substituting (8) in (7), we shall discover:

$$E = -\frac{GMm}{r} + \frac{S^2}{2mr^2} \quad (9).$$

Let's discover a minimum (9):

$$r_0 = \frac{S^2}{GMm^2} = \frac{\alpha^2}{GM} \quad (10),$$

where: $r_0$ - radius of a fixed circular orbit, $\alpha$ - constant, $\alpha$ = *vr*, since *m* remains to a constant.

Substituting in (10) numerical values at $v_0$ = 10 m/sec, we shall discover, that if the Earth did not hinder motion of a rock, it would take a circular orbit around of its center of radius 10.2 meters. The speed of its motion on this orbit will be 6250 kms/sec.

Now it is necessary reply to a question: why almost all microparticles have the same moment on a screw trajectory equal $\hbar$? Though official physics separates bosons from fermions, nevertheless, at definition of «wavelength» those and others uses a de Broglie formula, which one envisions an angular momentum by their identical, divergences with experiment in definition of «wavelength» of these particles differently will be received. Therefore constant of the Planck *h* is not «quantum of action», as official physics considers, and ordinary angular momentum of a particle:

$$mvr = \hbar = h/2\pi \quad (11),$$

and this moment refers not to an own moment, and to a moment on coils of a screw trajectory, which one is significant more own moment. From (10) we shall express radius of a screw trajectory of a particle through its speed:

$$r = \frac{\alpha}{v} \quad (12),$$

where $\alpha$ not a fine structure constant, and constant of product *vr* at change of these multiplicands, when mass of a body at this change remains to a constant, therefore (12) - direct consequent of a principle of conservation of moment of momentum of a body.

From that fact, that the value $\alpha$ of planets of a solar System is augmented with increase of spacing interval from the Sun (chapter 21, the figure 21.3 [1]) is possible to draw a conclusion, that $\alpha$ is inversely proportional inductions *B* of a gravidynamic field:

$$\alpha = \frac{1}{B} \quad (13).$$

If for space bodies the counting of induction of a gravidynamic field lengthwise axis their proper rotations is intricate because of miscellaneous rotation rate, miscellaneous density of a material of space bodies and their miscellaneous value, for microparticles this calculation is considerably simplified. The components of microparticles move with speed of light, therefore create the greatest possible induction of a gravidynamic field lengthwise axis their orbits. Therefore it is possible to record:

$$B = m\rho \quad (14),$$

Where $\rho$ - specific induction of a gravidynamic field of a unit mass, and *m* - particle mass. By substituting (14) and (13) in (12), we shall discover:

$$r = \frac{1}{vm\rho} \quad (15).$$

Number of dimension of gravidynamic induction in a system CGS: [B] = $sec \cdot cm^{-2}$,

and Number of dimension of specific induction [$\rho$] = $erg^{-1} \cdot sec^{-1}$.

To receive an angular momentum of a particle on coils of a screw trajectory, we shall multiply (15) on *mv*:

$$\hbar = mvr = \frac{1}{\rho} \quad (16).$$

Thus, we have found out one more physical sense of a constant of the Planck (angular momentum of a particle). As it happens, it is peer to reverse value of specific induction of a gravidynamic field and for all particles has the same value, since their components move with identical speed of equal speed of light.

References:

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