Some Considerations to the Work of Professor F. Smarandach

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Abstract

The article is concerned to the problem of new physica on the ruins of Einstein's Special and General Relativity. After getting acquainted with the work of Professor F. Smarandach "New paradoxes of relativism and open questions", I would like to make some observations about: 1) the legality of the choice of four space-time continuum to describe the geometric model of the universe;2) the growth of the field of inertia as manifestations of disturbance of ether at equilibrium, unstable processes. For Mercury, the inertial mass increase was 1%; 3) the violation of the law of conservation of energy in the evolution of the Universe.

Keywords: Special and General Relativity, Standard Model, Ether.

The book of Professor F. Smarandach pays a lot of attention to the paradoxes associated with alternative interpretation of Einstein's Special Theory of Relativity and Einstein's General Theory of Relativity [1]. In this regard, I would like to point out that the wrong choice of four spatiotemporal continuum follows from Kepler's third law that most objectively reflects the physical laws of the universe. Kepler formulated his third law summarizing long astronomical observations of Tycho Breguet, leaving the scientist only the function of an observer. The law states: "The ratio of the squares of periods of any two planets is the ratio of the cubes of their semi-major axes of elliptical orbits in which they revolve around a central body." This implies that the ratio of the cube radius of the orbit to the square of the orbital period of the planet is constant

$$K = (3.33 - 3.35)10^{24}\text{km}^3 / \text{year}^2. \quad (1)$$

Time in Kepler's law has a dual dimension. On the one hand, it counts a period of one revolution of a planet around the center of light, and, in this sense, it cyclical and reversible (the seasons are repeated each new turn of the planet) – T reversible. On the other hand, the "cosmological" time counting the duration of the planet, that is, time for which the planet has come all his way in the universe, if you expand its orbiting in an overall way, made by planet, and in this capacity time is irreversible and noninvariant. This "cosmological" time disappeared from consideration in the standard model of the universe built on the basis of Einstein's SRT (this follows from Wheeler-DeWitt equation) [2]. I. Prigozhin and I.Stengers in the book Time, chaos, quantum tried to fix this paradox by inserting an additional term of particle density (n) in the Einstein's equation.

Thus they argued: "Since the birth of particles corresponds to an irreversible process, Einstein's equation will now have the symmetry breaking in time." [2] But this model of the universe is a palliative. It is necessary to abandon four-dimensional space-time continuum Space in.

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Kepler's law has a triple dimension that geometrically matches a spherical shape of the universe created by the forces of gravity and inertia according to the square laws of the interaction of bodies. The geometric model of the universe, in relation to Kepler's third law, should include at least two spherical spaces.

A planet, in Kepler's system, moves in the space defined by two areas, one of which has a radius corresponding to the distance from the centre of the planet to the centre of the light, and the other - a radius corresponding to the distance from the centre of the light to the centre of the galaxy around which the solar system turns. Herewith the planet, spinning around the light, is either inside the outer sphere or outside it. To determine the location of the planet in the space of two spheres, it is necessary to address Riemann's spaces with positive and negative curvature and to the elliptic Riemann geometry and hyperbolic geometry, respectively. A space of constant curvature occurs in Riemann's work from the physical requirement that the "figures" can move in them without the "tension" and "compression", that is are able to move as hard bodies and keep their forms in motion.

Physical intuition with which Riemann puts the problem, which describes the geometry of the physically real space, is striking. He writes: "The question of whether the assumptions of geometry in the infinitely small are valid, is closely linked to that of the internal cause of the metric relations in space ... In the case of a discrete manifold the principle of metric relations is already contained in the notion of diversity, whereas in the case of continuous diversity it should be found somewhere else. Hence, something real, that creates the idea of space, forms a discrete manifold, or it is necessary to try and explain the emergency of metric relations in the case of a continuous manifold with the help of some higher forces - the binding forces acting on the real." Inertial motion of the planet in the SRT theory corresponds to the system "of flat space-time."

According to I.Prigozhin and I.Stengers "this universe belongs to a world devoid of matter-energy - Minkovsky universe"[2].In the General Relativity Einstein proposed a new interpretation of the acceleration due to gravity. Acceleration that Newton explained in terms of the gravitational interaction, in general relativity is considered as the result of curved space-time. In the words of I.Prigozhin and I.Stengers, "in Einstein's theory space-time curvature is determined by the existence of matter-energy. More precisely, the GTR binds two mathematical objects called tensors: the stress tensor, which determines the distribution of matter in terms of the density of matter-energy and pressure, and the metric tensor describing the curvature of space-time"[2], but there must be two metric tensors, since the formation of the space involves two centres of gravity and two times.

Half a century after Kepler, Newton introduced the power into the spatial model of the universe. Having formulated his laws of dynamics and the law of gravity, he received Kepler's third law (1), as a consequence of the law of gravity and the second law of dynamics in the form:

$$K = GM\, m_{gr.} / m_{in.} = R^3 / T^2 \qquad (2)$$

where $m_{gr.}$- the gravitational mass of the planets interacting with the Sun, the mass M, creates a centripetal force of attraction; $m_{in.}$- the inertial mass of the planet, rotating in a circle of radius R, creates a centrifugal force of repulsion;

R – the distance from the centre of the planet to the center of the Sun;,T – the rotational period of the planet around the sun; G - the gravitational constant.

According to the law of gravity a planet moves in a stationary orbit only on condition that the centrifugal (inertial) and centripetal (gravity) forces are equal. Thus, the equation of Newton and Kepler's law are identical only in the description of the inertial motion of the system. This state of the system corresponds to a stable steady state.

I. Prigozhin and I.Stengers noted that in this state "an active influence from outside on the system is negligible, but it can be very important if the system goes into a non-equilibrium state."[2].

In the fourth chapter of the book [1], Professor F.Smarandach describes in detail the properties of the medium, its viscosity, fluidity and elasticity, in particular. These properties of the medium largely determine its behavior in the border area with the bodies. Here, I think, should be noted the contribution of the medium (air) as an active factor affecting the system at equilibrium and irreversible processes. Kepler's third law describes the motion of the planets in the solar system in its steady state. Herewith, the influence of the medium (air) on the system will be minimal. In the steady state, resistance of the medium (air) will be caused almost exclusively by friction forces. In classical physics, to describe this movement the Stokes formula is involved. Stokes found that the strength of the resistivity in this case is proportional to the dynamic viscosity (u), the velocity (v) of the body relative to the medium and the characteristic body size (L)

$$F \sim u\, v\, L.$$

The proportionality coefficient depends on the shape of the body. For a sphere, if the radius of the ball (r) to take as the L, the coefficient of proportionality is equal to 6π. Consequently, the resistance force of the ball in the medium (air), according to Stokes's formula, is:

$$F = 6\pi u r v \qquad (3)$$

When the speed of the unstable state of the body increases, its vector constantly changes, eddies are formed behind the body, herewith, the vortex energy actively influences the system from the "outside" (from ether). The pressure in the resulting body vortex region is reduced, so the resulting pressure forces will be different from zero, in turn causing drag. As a result, the drag is composed of frictional resistance (3) and pressure resistance. The relation between the resistance of friction and pressure is determined by the Reynolds number (Re). The more the Reynolds number (Re) is, the greater is the role of resistance pressure. Thus, the transition of the system from stable state to an unstable non-equilibrium state will be accompanied by the growth of the vortices of ether, which will counteract the change of the system. That means it will create an additional field of inertia, and the greater disturbance ether has suffered, the stronger it will be.

The conclusion is that to detect the ether by its impact on the system is possible only when the system is in disequilibrium. Therefore, experiments of Michelson and Morley to detect the ether were doomed to failure. N.Kozyrev understood it well when he made his experiments in which he reproduced irreversible processes. To tell you the truth, he believed that the time has an active influence on the system, but it was more important to find that impact. In his article "About the possibility of reducing the mass and weight of bodies under the influence of active properties of time"[4] N.Kozyrev indicates that completely inelastic collision of bodies (irreversible process), a decrease in their total weight in the restructuring of matter can be detected. He writes: "Of course, weight reduces not because of reducing the amount of matter but because of the reduction of the inertial mass. This is the second evidence of the existence of active properties of time after astronomical observations of the instantaneous impact." As A. Akimov and G.Shipov found that the radiation detected by N.Kozyrev is a vortex inertia field[3], all the conclusions of the experiment made by N.Kozyrev can be related to the ether. Nature itself regularly makes experiments on a global scale with the active participation of the ether. In particular, it is possible to note the difference in the value of Kepler's constant (K) for the central group of the planets, such as Venus, Earth, Mars, Jupiter, rotating in stable orbits which undergo small perturbations, for which the value of K = 3.35 of Mercury whose orbit undergoes strong perturbations due to the proximity of the planet to the Sun . For the planet the value of K = 3.33 that is, 1% different from the planets with stable orbits. Perhaps, it is an active contribution of ether to the maintenance of the planet on its orbit because the value of K depends on the ratio of the gravitational mass to the inertial mass (2).

The postulate of adiabatic cosmic evolution, which means that there is no heat exchange between the atmosphere and the elementary volume: d Q = 0, was placed in the standard model of the universe built on the basis of general relativity by Einstein. The inclusion of ether in the model of the universe requires a review of the mechanism of cosmic evolution and the rejection of this postulate for nonequilibrium irreversible matter creation.

The results of observations of China's scientists about the moving of Mercury and other planets were published in American «Unsolved Problems in Special and General Relativity» (2013). The verdict is:« Is "The General Theory of Relativity"a Scientific Theory? By carefully comparing the results given by the general theory of relativity and the actual astronomical observation, the contradiction between them is found to be difficult to overcome. Furthermore, there is no sign so far of the existence of "the waves" predicted by the general theory of relativity. Therefore, the general theory of relativity is pointed as a wrong theory. All the research results and inference based on the general theory of relativity should be queried».

In the fifth chapter [1] Professor F.Smarandach addresses the issue of imperfections of the physical laws that govern the modern science, the law of conservation of energy, in particular. In this regard, I would like to quote N.Kozyrev regarding the heat death of the universe from his book "The causal mechanics." He wrote: "It is interesting that even such a specific question - why the sun and the stars shine, that is, why they are in thermal equilibrium with the surrounding space, cannot be resolved within the known laws of physics. This conclusion follows from the analysis of astronomical data. The fact is that some heavenly bodies and their systems are so isolated from each other that their thermal death should noticeably approach before a third party system intervention. Therefore, the degraded conditions of the systems would prevail, and yet they almost never occur. The challenge is to understand why some of the systems and the heavenly bodies themselves continue to live, despite short periods of relaxation"[4].

The answer to the question «Is the Universe a closed system at the conception of the thermodynamics?» is evident. Exchange of energy between the system and the atmosphere (ether) causes flow of energy into the system from the "outside" and, thus, leads to a violation of the law of conservation of energy in the conventional sense in physics. As our knowledge deepens, science is getting closer to solving the mystery of a nuclear-free extraction of energy from the atmosphere (ether). The veil of secrecy was lifted 100 years ago by N.Tesla in his Wardercliff experiment. Nowadays in their works, academician G.Shipov, professors L.Sapogin and G.Nikolaev have not only theoretically justified a violation of the law of conservation of energy in real processes, but also create technologies to extract energy from the atmosphere on this basis. The works of these scholars give clear positive answer to the question of professor F.Smarandach: "Will it be possible to create physical systems where the law of conservation of energy does not hold?"[1].

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