



GLOBAL JOURNAL OF SCIENCE FRONTIER RESEARCH: A
PHYSICS AND SPACE SCIENCE
Volume 22 Issue 8 Version 1.0 Year 2022
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4626 & Print ISSN: 0975-5896

The Gravity in Unitary Quantum Theory

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GJSFR-A Classification: *FOR Code: 020699*



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The Gravity in Unitary Quantum Theory

Leo G. Sapogin ^α & Andrew A. Kostin ^ο

Abstract The authors discuss the contradictions between the main sections of the modern physical picture of the universe. In the Unitary Quantum Theory (UQT), it was shown that space and time become Newtonian again [4], and the growth of the particle mass with increasing speed comes from other considerations of physics [1, page 6]. Unlike quantum theory, the modern theory of gravity (general relativity) has not been confirmed by experiments and needs a significant revision. The authors propose a new approach to the kinetic theory of gravity, which is a natural extension of the UQT.

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*Ridiculously enough to seek the truth for fee.
It's always there where payment is higher.*

A. Pechorina

I. INTRODUCTION

It seems Gravitational theory should follow from 32 nonlinear integro-differential equations of UQT and the author is expecting that it can be done in future [1-4]. Nevertheless, we will make now some conservative assertions. The current data regarding the Universe expansion can be interpreted as the change of the gravitational potential sign (gravity is replacing by repulsion) at great distances for the great masses. Probably the difference between absolute the values of electric charge of a proton and an electron, say in 15-20 signs, is responsible for his phenomena, but for us this idea is extremely unsympathetic. Gravitational interaction remains an extraordinary mysterious appearance in UQT as actually it has a very high speed of interactions distribution and approximately is in times weaker than electro-magnetic interactions. The origin of such an enormously big number remains the greatest riddle. On the other hand, if any particle is a package of partial waves of some uniform field, probably is possible a following curious phenomenon which was observed and described by us more than once earlier [4, 23]. If to put a ditch with the substance having abnormal dispersion on a way of the wave package moving in flat Euclidean space, the package after ditches can appear even if it is situated at distance of many light years from a package as formally mathematically harmonious components exist on all infinite rectilinear coordinate of package movement as ahead of it, and behind.

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Thus the package can disappear in that place where it was, and to appear at huge distances ahead of a package, or behind. Thus the package didn't move at all between points of disappearance and new appearance, and the normal idea of speed in the unitary quantum theory loses its initial meaning. Similar teleportation was observed of ten times. Probably, it is actually a long-range action, (couple longue distance) observed in gravitation. A curious though appears that the waves building a package, could be connected with gravitation and all particles consists of a gravitational field. Then this field can be a stage or a scene where all other processes with final speeds of interaction transfer are played. It will allow connecting the quantum theory and the gravitation theory which while aren't connected yet today in the future. But it is a task for the future generations. At the same time according to the processed information (Hlistunov at all [5]) from Russian Command-and-Measuring Complex for the monitoring and control of the space objects at the entire moment of collision geodesic satellites "Tope-Poseidon" and "GEO_IK" began swaying at their orbits. Normally the orbit of a geodesic satellite lies inside the tube with about 1 km diameter and the orbit can be control with the high accuracy not more than one-meter precision for the position data and centimeters per second for velocity. During the collision the sensors registered 5-8 times increase of the trajectory tube diameter. In the same article Hlistunov [5] at all on the basis of correlation analysis of the position data measurements and information obtained from earthquake-detection station it was shown that the waves of gravitational potential variation were the trigger for earthquakes. With other hand official science in Russia did not know about it [5, 6]. To the author regret they do not have the similar information from NASA.

II. THE SHORT HISTORY OF GRAVITY

The force of gravity is one of the most mysterious phenomena in science. Despite being discovered many years before, Sir Isaac Newton first clearly demonstrated its applicability to the description of nature. In 1693, seven years after "Principia" publication, Newton expressed his view on gravitation in his letters to R. Bentley: "You sometimes speak of gravity as essential and inherent to matter. Pray do not ascribe that notion to me, for the cause of gravity is what I do not pretend to know, and therefore would take more time to consider of it." It seems that in nature everything happens if particles are attracted by each other

proportional to the product of their masses and inversely proportional to the square of their separation distance. Newton's Gravity Law should be considered the simplest expression of all celestial bodies' movements. In other words, Sir Isaac Newton categorically declined to consider the entire mechanism of interaction, moreover the phrase: «*I do not fabricate hypotheses*» can be ascribed to him. Newton at the end of "Principia" wrote: "*I could not to deduce the cause of gravitational properties from natural phenomena, but I don't like to fabricate hypotheses*". Despite Newton's genius, other researchers also tried either to find an explanation of the attraction mechanisms or to explain it by other phenomena.

III. A MODERN VIEW OF GRAVITY

Albert Einstein believed that planets move in a straight line, but space itself is curved by Sun field. However, the great mystery of instant action at remains unaccounted for... Einstein didn't know this, he believed that gravity propagates at the speed of light. He said [7] "... *if the Sun were suddenly ripped out of the Solar System, the Earth would leave its orbit only 8 minutes later, the time necessary for light to reach Earth from the Sun...*". In this case, according to Laplace, a stable Solar System cannot exist at all. Moreover, serious researchers have little faith at all in gravitational wave detection, because these experiments have very different explanations [22]. The rate of propagation of gravity, if not infinite, must at least be enormous. Laplace was the first [9] who tried to elucidate this question mathematically. He proved that if the propagation rate of gravity was equal to light speed, then some significant perturbations should appear in the elliptical movement of all planets around the Sun, including the Earth. For example, longitude of periapsis of the Earth in its orbit would increase by 20` each year. In fact, within the bounds of the accuracy of modern measurement techniques, the Earth's orbit deviates no more than 2`` per century, so the rate of gravity is at least 70 million times faster than light speed.

The situation in GTR (the gravitation theory) is even more scandalous. The author does not regard themselves as the coryphées in the fields of Riemann's geometry and tensor analysis; nevertheless, they are quite confident that GTR by all means bears most profound ideas of physics that will undoubtedly retain in the future theory of gravitation. But, in fact, the conception of the dependence of space properties on the distribution and motion of masses was for the first time put forward and developed by Jacobi in ... 1848. Then this conception was further expanded in the works of a whole plead of such physicists as Lipke, Bcrwald, Frank, Eizerhard [10-13]. Nowadays we understand that the spectrum of masses and the fine structure constant [1, pages 58, 64] owe their appearance only to

geometry and to the properties of space. The fact that any motion is regarded as absolute in UQT is highly positive for this theory, as was for the first time noted by Academician A. Alexandrov [13] at the All-Union Conference "Space and Time in Modern Physics" in 1959. He said that "*our issue is particularly about a mathematical theorem and, therefore, the statement that the theory is based on "the general relativity principle" (whose senselessness was admitted by Einstein as far back as in 1916) is equal to someone's allegation that "the Einstein theory relies on the general law according to which $2x2=5...$ Therefore, GTR rather does eliminate the relativity of motion than extends it from inertia I motions to any accelerated ones*".

Still many leading scientists, both in Russia and abroad, definitely deny GTR at all. The President of the American Physical Society and the Nobel Prize Winner Prof. E. Wigner stated as a well-approved fact [17] that "*...such fundamental physical concepts as a coordinate and an impulse, which might be assigned any random initial values, do not bear any physical sense within the frame of GTR*".

Vice-President of the Russian Academy of Scientists Acad. A. Logunov [15] proves that no physical sense is borne by such fundamental physical value as mass within the frame of GTR. Moreover, he wrote unambiguously that "*the energy-impulse tensor in the Einstein theory - has the same relation to physics as does the last-year snow to the mystery of the Tunguska Event*". When speaking to the UNESCO session in March 1986, Acad. A. Logunov suggested that some special international agreement should be created for expelling GTR from research as one having nothing to do with natural sciences. His article in a magazine ("Tekhnika Molodezhi", No 10, 1986) carries his opinion that "*the energy-impulse vector is always equal to zero in GTR and GTR no concept of energy can be found there*". Theory will be entirely useless if not supported by appropriate experimentation. As regards the quantum science, theory and experiment in it show coincidence with an accuracy of 6 to 9 significant figures. Unfortunately, GTR cannot boast such coincidence. We shall briefly analyze main direct experimental confirmations of the theory. Three of those are the most important. The other ones can be liable to another classical interpretation.

1. The deviation of a star beam in the Sun's gravitational field during solar eclipse. GTR predicts a 1.75" deviation of the stellar beam whereas the Newtonian theory stands for a value two times as small. The Sun has an immense plasma cloud over its surface, which also deflects the light and this deflection is tens of times larger than the predicted effect is. The plasma cloud's parameters are unknown and surely similar predictions are made to achieve needed results. The same considerations

work when quasar radio emissions in the Sun's field are measured.

2. Expansion of the Universe according to the Hubble law. The Hubble constant has changed by orders of magnitude since the observations started but all the time it corresponds to the theoretical predictions (!).
3. The motion of the perihelion of Mercury. It has been for long known in observational astronomy that owing to other planets' gravitation Mercury's motion is not simply elliptic but the planet travels along an ellipse that rotates for 575" every hundred years. Corrections based on the Newtonian theory make it to be 532". The remaining value 43" cannot be interpreted within the frame of the Newtonian theory. Not exactly... It takes the Sun about 30 days to make a full rotation on its axis.... That is why it is a bit oblate (like the Earth) ... Then the Sun's gravitational field will rely on the angle (with no spherical symmetry), and Mercury's trajectory will certainly make a turn... We do not insist that this deviation will be 43" but it will of course exist. To solve the problem correctly, one needs to know what the Sun's polar and equatorial radius, which have never been measured and no one knows the way to measure them... Everybody keeps silent about this fact for 43" is considered to be excellently accounted for in terms of GTR...

Not long ago the situation grew absolutely scandalous... The collection of articles "Unsolved Problems in Special and General Relativity" (Chief Editor Florentin Smarandach, USA) might be referred to as a requiem for the Special and General Relativity theories. The authors are an American, a Russian, the rest are the Chinese. All of them cannot be called engaged persons. The first article of the Collection, "Einstein's Explanation of Perihelion Motion of Mercury", is by Chinese mathematician Hua Di [17, page 5]. The author pointed to a rude mistake made by Einstein when calculating the error of 43" by way of integration, and the result must have been not 43" but 71.5". We were so astonished that rushed to make sure whether it was so. Sad to say this, but we all had the same result 71.5". See last calculation [18]. The above-laid considerations reflect a completely dismal general physical picture of the world. If this picture is further accepted in the scientific community, then many countries will continue wasting their time and money in empty projects like the International Reactor for Thermonuclear Synthesis, Large Hadrons Collider and the like. The now existing army of "brother's talc-tellers" will depict for us more and more fantastic physical scenarios. Amazed people will listen to these breathtaking stories about parallel universes, worm holes, the teleportation of large objects, travelling in time, horizontal events, proof fantastic theorem about destroy information in Black Hole and any other stuff like this, and demand more and more money from their Governments for putting up new

shows. Leaders of states must remember that "the viability of any idea is determined by the quantity of people feeding on it".

As we'll soon see, Unitary Quantum Theory - UQT generally eliminates the question of the rate of gravitational propagation. All we know leads us to the recognition that every particle demonstrates its existence in every corner of the universe, yet this phenomenon is completely beyond explanation without UQT. According UQT [4] each particle is a single wave packet (field clot, bunch) – the function $f(r-vt)$ is part of equation (1) for the UQT wave function. The UQT wave function differs from standard wave function of quantum mechanics by multiplicand of running structured function:

$$\Phi(\mathbf{r}, t) = f(\mathbf{r} - \mathbf{v}t) \exp\left(i\frac{Et}{\hbar} - \frac{\mathbf{P}\mathbf{r}}{\hbar}\right) \quad (1)$$

Structured function $f(r-vt)$ of wave package nulls de Broglie wave everywhere except the area of its existence, or in other words the absence of the space where de Broglie wave can spread. Thus problems in connection with the reduction of wave function immediately disappear. We would like to accentuate that de Broglie wave isn't really a wave but maximum locus of packet on the run that arrange (or "draw") a sine wave. The geometric point place of packet appears as sum of the harmonic waves, and exists in any diffraction experiment, because all propagation equations are linear. As these packets are not overlapped then everything is linear and the superposition of the partial waves creates a total diffraction pattern modulated by the de Broglie wave, although the plain de Broglie wave doesn't exist at all. It should be stressed that de Broglie wave is a packets locus of points of maximum in his motion, and it is a superposition of partial waves, that is why it appears in any diffraction and interference experiment.

If we perform a Fourier transform, then instead of this function we will get an assembly of infinite numbers of sinusoids (partial waves) that exist on the r axis from $+\infty$ to $-\infty$; exactly the same representation from a mathematical point of view. In other words, both exist at the same time. Let's trust math! We have developed this approach by analyzing the daring experiments of Professor Kozyrev which confirmed UQT brilliantly [3, 24, 25]. Let's briefly talk about some attraction mechanism explanations, which are based mainly on certain properties of a medium – ether. There is no ether in UQT [1 pages 81,90], and we are not going discuss it, as there are many articles dedicated to it [1]. It'll be in the manner of Newton - *to quit while you're ahead* [1, page 99].

Gravitational pulsation theories, despite their proximity to the UQT, are unlikely to be suitable in the future. Since such interaction strongly depends on the

phases of the processes and great difficulties will arise with them. Among them the model of Norwegian physicist K. Bjerknæs stands out. K. Bjerknæs was among the first who tried to combine all fields by unified theory. Bjerknæs publications (in 1870) involved an idea that behavior of particles in ether looked like behavior of synchronously pulsating bodies in an incompressible fluid between which, as we know, there is a force inversely proportional to the square of distance. English physicists Frederick Guthrie and William Mitchinson Hicks supported the Bjerknæs' concept, the latter theoretically described «negative matter» in which atoms oscillated in the opposite phase and antigravity. Charles Burton further developed Bjerknæs' theory (in 1909), he attributed pulsations to electrons inside bodies. Independently, Jules Guyot in "Eléments de physique générale" (1832) explained gravitation by oscillating motion of atoms. To illustrate his ideas, he experimented with the attraction of light objects by ringing bodies (beads were drawn by a tuning fork). In a series of his memoirs entitled "Mathematical Theory of attractive forces" (1859-76), Challis presented an extensive mathematical theory of wave propagation in ether. Both, he and Bjerknæs argued that a wave could attract a body to its source, which was extremely small relative to the wavelength itself. These waves are the cause of what we call gravitational forces. Under the action of these partial waves, the wave packet (particle) begins to move and as described by Newton's mechanics, and the mass of this packet is now inertial. This leads to a complete coincidence between inertial and gravitational masses.

To draw a final line in the discussion about the experimental substantiation of the General Relativity Theory (GRT), let us cite the conclusion of French Scientist L. Brillouin [21] who left to us his unambiguous estimation: *"The conclusion is that no experimental facts exist that would confirm the mathematically cumbersome theory by Einstein. Everything done after Einstein provides mathematically complicated generalizations, additions or modifications not supported by experimentation. Science fiction in the area of cosmology is, frankly speaking, a very interesting but hypothetical thing."*

The existing general picture of the world looks extremely sad [22]. The author of UQT has written about this repeatedly. On the one hand, GRT gives a description of the world in terms of a continuous field, but, unfortunately, has very weak experimental evidence, although it is quite visual for a demanding mind. On the other hand, modern quantum theory has absolutely brilliant experimental confirmations, but is replete with paradoxes that baffle any serious mind. The standard response of a professional theoretical physicist to these paradoxes is simple - "shut up and count" can only make an unbiased researcher smile. There is no reason to doubt the correctness of the UQT, since it allowed, for

the first time in the world, to calculate the value of the fine structure constant $1/137$ [1, page 58] (this is the square of a dimensionless electric charge) and found an analytically accurate solution to the scalar integro-differential equation of the UQT. As a result, an accurate calculation of the mass spectrum of many elementary particles followed, including the mass of the Higgs boson 5 years before its discovery [1, page 64]. This calculation was made in 2007, and when it was published, Professor Vladimir Dubovik (JINR, Laboratory of Theoretical Physics – Dubna) told author: "They won't forgive you for this, in 2-3 months there will be nothing left of you, they will find a mistake." But 14 years have passed and it is pretended that the UQT does not exist. Note that any good student or mathematician can reproduce all these calculations [1, page 64] on a regular laptop using «Maple» or «Mathematica» programs.

But all these results required the sacrifice of the special theory of relativity: only the relativistic relationship between energy and momentum remained of it, and the reduction of rulers and the deceleration of clocks remains in the past. But, on the other hand, now the mass growth at a speed has a physically clear origin, is absolute and is simply associated with an increase in the amplitude of the wave packet - for details, see [1 page 6, 4]. The motion of a particle is absolute, but the question is, what is it about? so far, it is vague. We suspect that the movement is relative to the global vacuum potential, but this will become clear in the future. Now the UQT has acquired features that are extremely necessary for closed cosmology and there are no conservation laws for energy and momentum in it (at least in the approximate version of the equation with an oscillating charge [4]). It is the laws of conservation of energy and momentum that prohibit the emergence and development of the Universe, and they are absent in some versions of GRT, but there are also some issues that can be solved if we abandon some relativistic interpretations.

When high-energy protons collide, both new protons and a mass of mesons and other particles can arise. However, science does not answer the question of how matter with a mass from a conditional relative physical quantity depending on the reference point can appear. These difficulties arise when interpreting the multiple birth of particles, since before the UQT, the mechanism of converting kinetic energy into matter was completely incomprehensible from the standpoint of special relativity, since in it the mass has the same value in all reference frames, it is invariant regardless of how the particle moves.

In the UQT, the multiple birth of particles is explained as follows: with accelerated particle motion, its mass begins to increase, and this is due to an increase in the amplitude of the wave packet [1, page 6]. The field of such a wave packet will diffract on the

complex structure of the proton, and there will be a huge number of different particles in the diffraction maxima. With multiple births, these are mainly π_+ , π_- , π_0 . Strange particles, new nucleons, as well as heavy particles - B-mesons, W-bosons, Z-bosons are born much less often. The main problem of studying such collisions is the huge number of particles formed. The reverse process is observed in any nuclear reactions and is widely exploited by mankind, confirming the transition of the mass defect into the kinetic energy of the products of nuclear reactions.

Unfortunately, the special theory of relativity has left its diabolically schizophrenic imprint not only on quantum theory, but also on general relativity. Imagine two particles flying towards each other from different distant places where, according to our calculations, they should meet. If the gravitational fields along the motion of the particles were different (this is the most reasonable assumption) then at the point of the intended meeting they will have different times and therefore they will never meet. The fact is that there are two points with the same spatial coordinates, but with different times, these are completely different points and in order for the particles to meet, they need to have the same time. Even if they have the same spatial coordinates, the time coordinates will always be different and no collisions will be possible. Of course, it's monstrous. What had to be sacrificed and what conclusions can be drawn from this consideration [1-4]?

1. The concept of time is misinterpreted in GRT and quantum theory.
2. The flow of time can only be uniform and independent of physical conditions. This position has always been held by Sir Isaac Newton.
3. A change in the gravitational potential does not lead to a change in the velocity of time, but to a change in the velocity of physical processes.

UQT has long come to the same requirements [3, 4]. In order to save Einstein's wonderful physical ideas about the coincidence of gravitational and inert mass, the identification of inertia and gravity (and this is all at the heart of GRT), it was necessary to get rid of time. Almost half a century ago, physicists John Wheeler and Bryce Dewitt [19, 20] were able to derive a Great Equation based on Einstein's general ideas, which the scientific community initially took with hostility, since it "violated physical laws." If we judge objectively, the Equation did not violate the laws, but it radically changed the usual picture of the world. Based on the discovery of Wheeler and Dewitt, there is no such magnitude as time. *"There has never been time, there is no time, and there never will be. It's only in our heads and the equations we use every day. In the universe, processes are not required to obey any periodicity and intervals. We are not aware of phenomena capable of describing time,"* — John Wheeler [19, 20].

And how can us not remember the words of Blessed Augustine again: *"I know what time is, as long as I'm not asked about it..."*

IV. THE GRAVITY IN UQT

And then there's the cherry on top: In 1976, at a symposium in Burakan [24,25], Professor N.A. Kozyrev reported on unusual astronomical observations he had made when scanning the celestial sphere with a reflector telescope covered by an opaque lid. He placed unusual sensors in the focal plane of telescope - a torque scale or a small thin-film resistor included in balanced bridge arm (see Fig. 1).

These results initially seemed so unbelievable that astronomers did not take them seriously, and for more than a decade, nobody tried to repeat these observations using Prof. Kozyrev's method. Later they were confirmed in Japan, Germany and America and the halo of «crazy» around Kozyrev disappeared without a trace. Now there are many scientific articles on this subject [24, 25] even including Kozyrev's assumption that «time burned in stars». But, Kozyrev initially argued that these were examples of superluminal motion.

Here we would like to offer very simple and natural explanation of these results from UQT point of view. According to UQT, any particle is a single wave packet (field slot) – function $f(r-vt)$ of equation for wave function (eq.1). If somebody performs a Fourier transform over it, then instead of this function he will get a set of infinite numbers of sinusoids (partial waves) that exist on the r axis from till. Mathematically this is exactly the same representation. In other words, they both exist at once. The star just appeared in Point 3 (Fig.2.) and photons started their movement from it, a long time before they will finally reach the telescope, but their harmonic components would appear at point 3 IMMEDIATELY. There are many photons, the sum of their partial waves carries energy, and that results in change of the detector (4) resistance at Fig.2.

The author has been formulating UQT for more than 65 years and he has found that TRUTH is of little interest to mankind, and now money is the main goal, although in the past it was not quite so. The main difficulty in adopting a new paradigm is growing ignorance, which is linked not only to a decline in the general level of education, but also to a certain degeneracy, as evidenced by the world's diminutive political figures. The extreme complexity of the overall false picture of the world and the emergence of useless but well financed projects also challenge the adoption of a new paradigm. Who wants to lose their grant money? Nevertheless, a new picture of the world could free humanity from the daunting challenges that loom ahead [1 page 90, 23].

The general theory of relativity "explains" gravity by the curvature of space, in other words, replaces one

riddle with another, without explaining the reasons for the appearance of gravitational forces. But there have been other approaches for a long time. One of them is the kinetic model of gravity. It was proposed by the Swiss mathematician Nicolas Fatio de Duillior back in 1690 and was supplemented by George-Louis Le Sage in 1756. There is even a Newton estimate for this theory: "A unique hypothesis that can explain gravity was developed by the most brilliant geometer, Mr. N.Fatio."

The basic meaning of the model boils down to the fact that the universe is filled with extremely small particles moving chaotically and in different directions at a very high speed. The consequence of such chaotic movement is the pressure exerted by these particles on any material bodies encountered in their path. Since the direction of movement of the particles is random, the average flow of these particles in any direction is approximately the same.

Accordingly, the external pressure exerted by the total flow of such particles on any 3-dimensional object is balanced in all directions and is generally directed to its geometric center. But Maxwell did not agree with these ideas, and Poincaré even proved that the speed of motion of gravitational particles should exceed the speed of light by several orders of magnitude, and this would lead to overheating of the planets. If gravity is caused by shielding, then the Moon at those moments when it is between the Earth and the Sun should significantly affect the force of attraction of these bodies and, accordingly, the trajectory of the Earth, but nothing like this is observed in reality. This is what put an end to the kinetic model of gravity. But all this can be revived if, instead of hypothetical particles, we consider partial waves of spectral decomposition of wave packets representing particles of matter. These waves have a very small amplitude and, therefore, all matter is completely transparent to them. They are chaotic and multidirectional.

Consider partial waves from two wave packets running strictly towards each other. Among the wide spectrum, there will necessarily be waves of the same wavelength, which will form a standing wave. It will have no momentum unlike the other waves. Therefore, waves traveling from other directions will exert pressure on these two packets with their impulses, but strictly in the direction connecting the centers of the packets, the pressure of the waves will be less, which will lead to the appearance of an attractive force between them. It is intuitively clear that such interaction will be very weak. The authors regret that they are already very many years old and they do not have the strength and energy to calculate the gravitational constant. The ideas outlined are enough to accomplish this task.

At the same time, gravity itself does not need intermediaries like gravitational waves, and such a concept as speed has no physical meaning in relation to gravity, since the entire universe is formed from existing

partial waves. Therefore, Newton's classical mechanics does not use the speed of gravity when calculating the force of mutual attraction. It (the speed of gravity) there is no need as an absolutely redundant and meaningless quantity.

But many years later [26] Tom Van Flandern, an American astronomer and astrophysicist, experimentally carried out a series of measurements of the frequency of pulses emitted by double pulsars in various regions of the celestial sphere, and subsequent calculations showed that the vector of attraction of the Earth to the Sun is directed not to the position of the Sun visible from Earth, but to the center of its current true position. In other words, the situation is very similar to the results of Professor Kozyrev's experiments. From this it clearly followed that the speed of gravity propagation in the measurements carried out exceeded the speed of light by at least 10 orders of magnitude greater than the speed of light. In fact, do binary pulsars predict their future position, velocity, and acceleration faster than the light time between them allows? The book [26] poses a discouraging question: «Why do black holes have gravity, despite the fact that nothing can overcome them, because it would require a speed higher than the speed of light? Why does the total eclipse of the Sun by the Moon reach its peak before the gravitational forces of the Sun and the Moon align? »

V. CONCLUSION

The authors hope that they have discovered a consistent approach to gravity from the standpoint of UQT and have answered the acute experimental contradictions of modern science set out in the book [26] Tom Van Flandern.

ACKNOWLEDGEMENTS

The authors thank for discussions to professors V. A. Boichenko, S. I. Konstantinov, V. V. Graboshnikov, V. I. Utchastkin.

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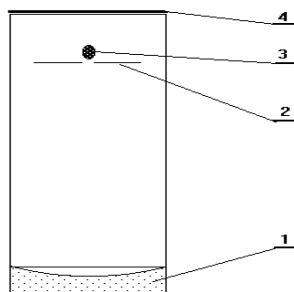


Fig. 1: Scheme of Kozыrev telescope. 1 – focusing mirror, 2 - slot, 3 - detector, 4 – light-proof lid

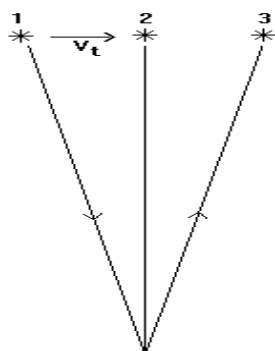


Fig. 2: The past (1), verily (2) and the future (3) positions of astronomical object. Portion of light emitted by object in position (1) reaches observer (4) many years after. During this time the object that moves perpendicular to observer with speed v , moves to position (2). If at the moment of record portion of light were emitted for point of observation, it would meet object in point (3)