

Materials of Conferences

NEW FUNDAMENTAL CONSTANTS

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These constants should have been discovered in the first half of the twentieth century, but even our time of stationarity, absolute, and axiom opium prevent us from accepting the incredible changeability of our world and inscrutable simplicity of the Universe structure.

A necessity of the search for «magnet» component of a gravity field arose a while ago, but here a comprehension of space as a mathematical absolute tricks us. The corresponding formulas are written long time ago, but to understand their physical sense we have to implement theory to the reality (make an experiment). Without thorough examination through practice a science transforms into the esotericism, or, even worse, into a religion.

If we implement field theory formulas by J. Maxwell to the physical reality, we can easily consider space to have a physical essence of gravity interaction «quantum» and linked to mass as a 2charge». A relation $\lambda_0 = m/GK$ defines the m charge (table 1) main «quantum» (graviton) wave length, that diffuses with speed V_g . It also obvious that new constants should be searched for within a well studied gravity system that should be described by the theory.

While in order to discover the Universal gravity law I. Newton required the system Earth-Moon, to calculate new constants we need all Solar System that should be studied as a quantum-wave sys-

tem (table 2). In the main condition of this system should be a planet with the following parameters: orbit radius equals λ_0 ; orbit movement speed – V_g ; spin projection (an equator inclination against the ecliptic flatness) – 0; poses the biggest mass. It is obvious that the main Solar System planet is Jupiter. The following giant planets are placed at the second energetic level and their radiuses are multiple of λ_0 : $2 \cdot 1 = 2$, $2 \cdot 2 = 4$, $2 \cdot 3 = 6$. Their spins projections equal: 30° , 90° (Uranus lays on its side), and 150° (here the Neptune satellite moves in the direction of the planet rotation, not the opposite, as it is commonly thought). Earth group planets are placed in the interference zone and their radiuses equal: $\lambda_0/3$, $\lambda_0/5$, $\lambda_0/7$, $\lambda_0/13$. All these coefficients are provided in table 2 and serve for the graviton main wave and «magnetic» gravity constant calculation. To calculate the graviton speed the coefficients are taken in degree $1/2$.

Table 1

Electromagnetic and gravity constants of the field theory by J. Maxwell

Interaction	Electromagnetic	Gravity
Charge	e	m
Potential constant	ϵ_0	$GN \cdot K$
«Magnet» constant	μ_0	$GK = m/\lambda_0$
«Quantum» speed	C	$V_g = (GN \cdot K \cdot GK)^{1/2}$
Structure constant	$K = C/V_g$	

Table 2

Initial data to calculate new constants

Planet	Средний радиус орбиты			Средняя скорость планеты	
	Coefficient	Observation, million km	λ_0 index, million km	Observation, km/h	V_g index, km/s
1	2	3	4	5	6
Mercury	1/13	57,9	752,7	47,85	13,27
Venus	1/7	108,2	757,4	35,01	13,23
Earth	1/5	149,6	748	29,77	13,31
Mars	1/3	227,9	683,7	24,11	13,92
Jupiter	1	778,3	778,3	13,06	13,06
Saturn	2	1427	713,5	9,62	13,60
Uranus	4	2870	717,5	6,8	13,60
Neptune	6	4496	749,3	5,43	13,30

The following calculation results were obtained:

- The main Sun graviton wave length $\lambda_0 = 739,15(10,70) \cdot 10^{11}$ sm;
- The main Sun graviton period $T_0 = 10,95$ years;
- «Magnetic» gravity constant $G_K = 2,698 \cdot 10^{19}$ sm;
- Graviton speed $V_g = 13,413(0,097) \cdot 10^5$ m/s;
- K structure constant $= C/V_g = 22351$.

If we express constant G_{N-K} from the graviton speed formula and provide the calculated figures here, we will obtain the following result:

$$G_{N-K} = V_g^2 / G_K = 6,668 \cdot 10^{-8} \text{ sm}^3/\text{g} \cdot \text{s}^2,$$

which well corresponds with the inquiry indexes of this constant and within its calculation error [1].

References

1. Kurkov A.A. Personal Internet – magazine. Registered on 02.06.2007 [digital source] / Science – News: site: URL: <http://zaza149.inauka.ru/> (request date 13.01.2011).

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RELATIVITY OF MOVEMENT TAKING INTO ACCOUNT ELECTROMAGNETIC AND GRAVITATIONAL INTERACTIONS

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If we stick a paper stripe on a rubber ribbon and start to stretch the rubber, the paper will start to break. Under the certain rubber tension only separate pieces of paper will remain on it. This is a mechanical example of the movement relativity that is studied in this article.

The initial constants are: «magnet» gravity constant $G_c = 2,698 \cdot 10^{19}$ g/cm, graviton speed $V_g = 13,413 \cdot 10^5$ cm/s, structure constant $K = C/V_g = 22351$ and wave length of the main space body with mass m : $\lambda_0 = m/G_c$.

The common Universe attributes: body mass growth and linear growth of their size under the permanent entropy that equals $K^2 = (C/V_g)^2$.

From the electromagnet field theory by J. Maxwell we know, that light spreads with a permanent speed regardless of the reading system. As mentioned constants are calculated according to the Maxwell theory applied to gravity, the graviton will also have all the photon common attributes. Since photon has more speed comparing to graviton, from the moment of the Universe creation its borders (radius is a linear size) are defined by the light spread front. A photon cannot spread in any other way but through space, that is through gravitons. The Universe border moves with the light speed, and all space stretches along with that (like a rubber ribbon) in proportion to the scale. Such Universe is limited, locked on both interactions and has a permanent entropy that is linked to the relation between these interactions' bearers.

In this work we do not study the mechanism of the Universe structures formation or other principles of its apparatus, but give the explanation of the outlined and observed by astronomers structures from the position of movement relativity. The observed structures hierarchy can be divided as follows: space bodies (stars and planets), linked associations of space bodies (planet systems, stars associations, and galaxies), and galactic associations (clusters, superclusters, and the whole Universe). The expansion (recession) speed is dependent on the linear size, that is connected to the mass constant G_c . If the Universe structure is described

only by two interactions (electromagnet and gravity), then the structure sizes and their masses are multiple of the constant K . We come up with a very simple rule: if the Universe mass is divided by K , we will obtain the supercluster mass and size. The bottom space body mass limit can approximately be valued according to relict radiation (the difference between a planet and «debris» is conditional), but even debris' masses in asteroid zones and planet rings must correspond to this simple rule.

If we use the equation of S.U. Cary, that consider expansion and place the described constants into it we will understand the number of observed structures and their division according to attributes: $F = (G_{N-K} \cdot m_1 \cdot m_2 / R^2) \cdot (1 - (V/C)^4)$. The first bracket in the formula corresponds to the universal gravitation law of I. Newton. The second bracket considers the Universe expansion, in which a relative speed is in degree 4. Here V is the expansion speed. If all four $V = C$, we will obtain the highest level 1 – the Universe. A sequent placement of $V = V_g$ leads to the following structure level up to level 5 (table). For a galaxy (level 4) a recession speed is comparable to the graviton speed, so multiple galaxies and galaxies with satellites exist. On level 5 a replacement for all four stages is provided, so star associations are represented as multiple stars. Then follow space bodies. If their size is smaller than the wave length, linked gravity systems exist around them.

Universe structure levels

Level	Name	Mass m, g	Wave length λ_0, cm
1	Universe	$1,3 \cdot 10^{56}$	$4,8 \cdot 10^{36}$
2	Galaxy superclusters	$5,8 \cdot 10^{51}$	$2,1 \cdot 10^{32}$
3	Galaxy clusters	$2,6 \cdot 10^{47}$	$9,6 \cdot 10^{27}$
4	Galaxy	$1,2 \cdot 10^{43}$	$4,3 \cdot 10^{23}$
5	Star association	$5,2 \cdot 10^{38}$	$1,9 \cdot 10^{19}$
6	Star	$2,3 \cdot 10^{34}$	$8,6 \cdot 10^{14}$
7	Planet	$1,0 \cdot 10^{30}$	$3,8 \cdot 10^{10}$
8	Planet satellite	$4,6 \cdot 10^{25}$	$1,7 \cdot 10^6$
9	Minimal limit	$2,1 \cdot 10^{21}$	-

In [1] you can find more than 20 articles, among which the initial data is provided, as well as formulas and the results of new fundamental constants calculation and their values errors, and also the application of these constants in different science areas.

References

1. Kurkov A.A. Personal Internet – magazine. Registered on 02.06.2007 [digital source] / Science – News: site: URL: <http://zaza149.inauka.ru/> (request date 13.01.2011).

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