GRAVITATIONAL EXPERIMENT AND EQUATION

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In the experiment described in the present paper, I try to demonstrate a novel and surprising interaction between the photon and the graviton, by showing that photons of a certain amount of energy indirectly interact with gravitons, thereby annulling the attraction of the Earth onto a balanced till of aluminum foil (Al). The conclusion of the present experimental workout results in a method to calculate the laser light power necessary to create a gravitonic ionized state of atoms able to nullify its gravitational attraction. The wave function of the graviton is in formula (20) and Newton's law of gravity relation is revealed.

Keywords: photo-gravitonic experiment, photonic annulment of gravitational attraction, graviton equation.

1. Introduction

For the laboratory experiment, we need laser radiation of about 380.4 nm in opposition to the attraction of the Earth to create gravitonic ionization energy equal to 3.26 eV. In the second part, I calculated the amount of power necessary to sustain a mol of substance and the wave function of the graviton.

2. Theory

The light intensity needed for the suspension of 1 kmol of substance is calculated below, is expected to slightly differ depending on the substance itself and vary between 2947 – 3300 W/kmol, or 2.95 – 3.3 W/mol, according to the calculation below.

According to reference [1], the atom must be excited in the UV domain, precisely to the wavelength λ, with a quantity of energy

$$E = \frac{h \cdot c}{\lambda} = \frac{1239.8}{\lambda(nm)}[eV] = 3.26\ eV. \quad (1)$$

3. Experimental Setting

To experiment, we use 5 led batteries, each of 50W, see Fig. 1. The experimental setup is fed from a power source of constant tension that visibly disrupts the state of an aluminum foil (Al) placed in equilibrium on a horizontal

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shaving blade (see Fig.3). Because the average frequency of the led batteries is between 380-385 nm we observe a visual confirmation of the experimental test. By slightly varying the frequencies of the tension applied to the UV-led batteries between 32-34 V, the total power amount of 250 W, we can maximize the level of observably confirmed appearance of the balance disruption phenomenon. Since the dispersion of led light is considerable, the entire experimental set-up is placed on a mirror to amplify the observed phenomenon. The characteristic of the UV-led spectrum dependent on the wavelength (nm) and, respectively, its frequency variation dependent on the forward current (mA), are displayed in Fig. 1.a, respectively, and Fig. 1.b.

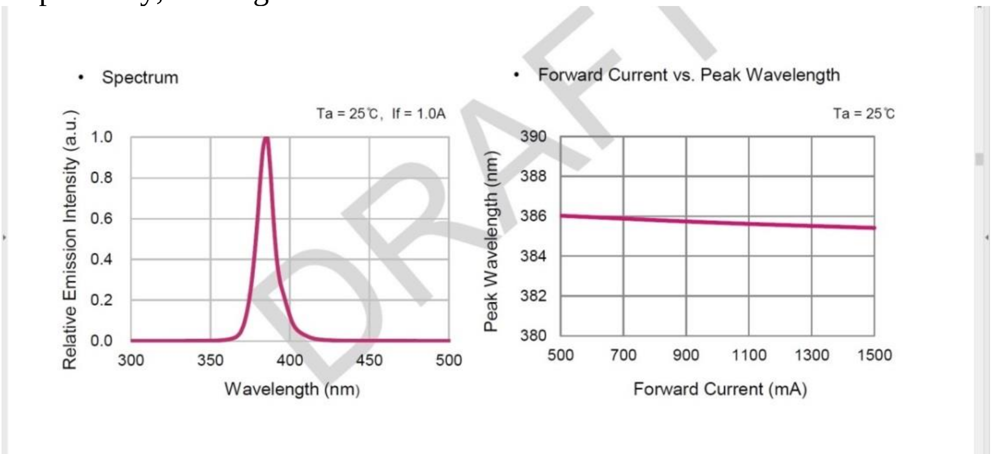


Fig. 1. a Relative emission intensity depending on wavelength 1. b Wavelength depending on forward current.

Fig. 2 LED battery

Fig. 3 Experimental setup.

4. The Calculation of Laser Light Power needed for the Experiment

The atom must be excited with a quantity of energy in the UV spectral domain of precisely: $E = 3.26$ eV.

The calculation of the power needed to sustain 1 g of substance is based on the assumption that the light ionizes all the atoms of the substance but does not penetrate more than several μm into the substance, farther propagation taking place by the photonic scattering coupled with a sort of photovoltaic phenomenon. Thus, the incident photon produces gravitonic ionization of the atom which, through stimulated emission, produces a particle with the same characteristics as the incident photon, that Einstein described in the well-known reference, a particle that he always referred to as photoelectron.

Concerning the interaction between the Earth and another body at its surface, considering the diameter of the Earth of about 12742 Km and the fact that the interaction is traveling with the speed of light of about 300000 Km/s, we evaluate the total interaction time of about $\varphi = 4.25 \cdot 10^{-2}$ s, subsequently being able to calculate the power required for sustaining one gram of mercury, which thus allows us to approximate the same quantity as required for aluminum.

Since the gravitons might be stopped from traveling through the Earth to the contact point and its antipodal point, thus, for a time delay of about 4 hundredth seconds, the gravitons must be blocked from their journey through the Earth, therefore, the power of the laser beam must set up to be proportional with the diameter of the Earth.

Similarly, if the experiment would take place on the Moon, we would need 0.8 W/mol, because the diameter of the Moon is 3472 Km so is about a quarter of that of the Earth, and not one-sixth, as the gravity of the Moon is equal to about 1.6 m/s^2 is, for that of the Earth. That should be verified directly by an experimental setup on the Moon, which I quantitatively detail below.

Considering Brossel's double resonant method 'Investigating Atomic Energy Levels' for Hg (mercury), described in reference[3], where the transition from the excited to the unexcited state is about $4 \cdot 10^{-7}$ s, the above interaction time in our experimental setup is, according to reference[2], about the same

$\tau = 4 \cdot 10^{-7}$ s.

According to the description of gravitonic antipodal points above, the laser must provide enough power for the photons to block the gravitons such that the body be in equilibrium, after about several time quanta equal to $N = \frac{\varphi}{\tau}$, which is about $N = 10^5$. Thus

$$E_{atom} = 3.26[\text{eV}] \cdot 1.602 \cdot 10^{-19}[\text{C}] = 5.22 \cdot 10^{-19}[\text{J}]$$

$$P_{atom}\frac{\varphi}{\tau}[\mathrm{W}\cdot \mathrm{seconds}] = E_{atom}[\mathrm{J}] \qquad (2)$$
$$N = \frac{\varphi}{\tau} = 1.0625\cdot 10^5$$

and approximatively

$P_{atom} = 4.912\cdot10^{-24}$ W/atom

By Avogadro's number for 1 g of Hg, we calculate that $6.022\cdot10^{26}$ atoms/mol are contained in a mass of 200.6 kg with a density of 13600 Kg/m^3 we obtain $3\cdot10^{21}$ atoms in a gram of Hg. Thus the needed light power is

$P_{Hg(gram)} = 0.491\cdot10^{-23}\cdot3\cdot10^{21}$J/s (per g) = $14.74\cdot10^{-3}$ J/s (per g)

For 1 gram of Hg, we need a light power of about 0.01474 W/g (14.7mW/g), and for a mole of Hg substance, we multiply by the atomic mass equal to 200, thus obtaining about 2.948W/mol. Therefore, for a gram of Al, we calculate the needed light power by dividing it by the atomic mass, which is equal to 27, and thus that $P_{Al(g)}$= 109.2 mW/g, the phenomenon being nevertheless more complex. This is available for a few layers of the substance. The farther atoms are excited through a more complex process of scattering, but, as a first approximation, the needed light power should vary between 2.95 – 3.3 W/mol of substance.

5. The Graviton equation

The Wave Function of the neutrino in local space into the space volume dV at the moment of time t into spherical cords, for graviton it's a spatial wave function of dimension $[L]^{-3/2}$ and of the function of graviton f(r,t) it's related to the probability to find the graviton in the local space from 0 to 2·R (where R=$3.567\cdot10^{22}$m). These are Wave Function concrete values as you can see the f is a bounded function and we can normalize that function. Besides these values 0 to 2·R for the graviton, the wave function has virtual values, and the function is not bordered in fact for r over 2R the force of attraction change sign, goes to infinity when r->-∞ (repulsion) and is extremely high but not ∞ in origin. The fact is observed by astronomers larger diameter galaxy larger than 2·3,77=7.54 million Light Year is rare because, after that distance between 2 bodies, there is rejection. Also, the expansion of the universe is explained by rejection forces. At the normalization condition that is integral upon r and for fix $t=t_0$ we have in spherical cords: $\_C_1^2\cdot 4\pi\int_0^{2R}\psi(r,t_0)^2dr = 1$ (3)

Where dV is the elementary volume and $\_C_1$ is a normed constant in spherical cords. In the graviton equation f(r,t)= u(t) ·g(r), where $[L]^{-3/2}$ and the probability to find the graviton into the volume dV is p = $|f(r,t)^2|$dV in 3D space. The divergence operator for general coordinates "r" and "c·t" thus we have the equation

(18): $1 = div[\psi(r, c \cdot t)]$ resulted from the speed of interaction of gravity is the velocity of light "c". I propose a graviton equation starting from the wave equation slightly altered as it is supposed to be a particle without rest mass which moves with the speed of light and is confirmed by the experiment above. Introducing the Wave Function, which is the value at instant t into space and time in spherical cords, we have the equation according to [4] and empirical consideration:

$$\frac{R}{r}\Delta f(r,t) = \frac{1}{c^2}\frac{\partial^2 f(r,t)}{\partial t^2} \quad (4)$$

For graviton, the equation starts from equations (4), and (5) we assume the hypothesis that $f_{(r,t)}$ is a graviton wave function that into spherical cords proportional with the gravitational potential. So we have (1). Where R is a fixed distance of about $3.567 \cdot 10^{22}$ m approx. 3.77 million Light Year or 1.156 million Parsec, the equation that assumes spherical symmetry, invariance to the rotation of the coordinate system, starts making a substitution: f(r,t)=g(r)u(t), where f(r,t) is the wave function of the graviton depending on time and space.

In equation (1) with separated variables f(r,t)=g(r)u(t), we consider that u(t) and g(r) depending on radius r is the gravitational potential and satisfy the equations below:

$$\mathrm{u}(t) \cdot k = \frac{1}{c^2}\frac{d^2 u(t)}{dt^2} \quad (5)$$

$$g(r) \cdot k = \frac{R}{r}\frac{d^2 g(r)}{dr^2} \quad (6)$$

Solution $f_{(r,t)}$ with separations of variables will be: $f_{(r,t)}=g_{(r)}u_{(t)}$ (7)

Equation (7) has the solution in the form of a hyperbolic type,

And the Dirichlet conditions are g(R) = 0 for τ neutrino and g(2R) = 0 for electronic neutrino. The second condition for booth particle is g'(0) = R thus minces the initial value of derivation is R. And so, we have:

$$g(r)k_1 = \frac{R}{r}\frac{d^2 g_{(r)}}{dr^2} \quad (8)$$

But the velocity of the graviton is "c" all the time hence so the only clue that remains was the k_2 and supposing that:

$\frac{df(r,t)}{dt} = \frac{\partial[u(t)g(r)]}{\partial t} + \frac{\partial[u(t)g(r)]}{\partial r} \cdot \frac{dr}{dt} = c$ and replacing $\frac{dr}{dt} = c$ into the equation

So we have $g(r)\frac{\partial u(t)}{\partial t} + u(t)\frac{\partial g(r)}{\partial r} \cdot c = c$ with the assumption that (9)

For r = 0 equation (15) becomes: $g(0)\frac{\partial u(t)}{\partial t} + u(t) \cdot R \cdot c = c$ (10)

The equation with the assumption that differential over time of graviton function is equal to "c" so we have graphics and the final formula of gravitational field Effective Wave Function f(r,t).

For g(2·R) = 0 and the first derivate in origin d(g (0))/dr = R the initial value of the derivate is R.

$$g(r)k_2 = \frac{R}{r}\frac{d^2 g_{(r)}}{dr^2} \quad (11)$$

So, the electronic neutrino is the graviton and has the function:

$f(r,t) = g(r) \cdot u(t)$ (12)

Where $g_1(r)$ is the graviton function depending on radius and k is a constant of integration to be set of the above condition the speed of graviton is the velocity of light “c”.

A link to solve differential equation with boundary condition free is Wolfram Alfa with command line g’’(r) = r/R· g(r); g(2·R) = 0; g’ (0) = R; R>0; at this link: http://www.wolframalpha.com/widgets/view.jsp?id=e602dcdecb1843943960b5197efd3f2a

We have for electronic neutrino ν:

$$g(r) = \frac{3^{5/6}\cdot\Gamma(1/3)\cdot\left(\mathrm{Ai}\left(\frac{2}{\left(\frac{1}{R}\right)^{2/3}}\right)\cdot\mathrm{Bi}\left(r\cdot\sqrt[3]{\frac{1}{R}}\right)-\mathrm{Bi}\left(\frac{2}{\left(\frac{1}{R}\right)^{2/3}}\right)\cdot\mathrm{Ai}\left(r\cdot\sqrt[3]{\frac{1}{R}}\right)\right)}{\left(\frac{1}{R}\right)^{4/3}\cdot\left(3\cdot\mathrm{Ai}\left(\frac{2}{\left(\frac{1}{R}\right)^{2/3}}\right)+\sqrt[3]{3}\cdot\mathrm{Bi}\left(\frac{2}{\left(\frac{1}{R}\right)^{2/3}}\right)\right)} \quad (13)$$

It’s not important to have all general exact solutions. As you say we need the structure of the solution and a particular solution of (1) with condition $g_{(2\cdot R)} = 0$; $g'_{(0)} = R$; and $f_{(r,t)} = 0$ for $t = 0$ that verifies the condition that the speed of interaction is the velocity of light “c” so:

$$\frac{df(r,t)}{dt} = \frac{\partial[u(t)g(r)]}{\partial t} + \frac{\partial[u(t)g(r)]}{\partial r}\cdot\frac{dr}{dt} = c \quad (14)$$

$$g(r)\frac{\partial u(t)}{\partial t} + u(t)\frac{\partial g(r)}{\partial r}\cdot c = c \quad (15)$$

$$g(r)\frac{\partial u(t)}{\partial ct} + u(t)\frac{\partial g(r)}{\partial r} = 1 \quad (16) \qquad \text{Because: } \frac{dr}{dt} = c \quad (17)$$

So, we need an identity so the graviton speed will be “c” regardless of the radius r or into divergence operator of general coordinate r and c·t we have equation

$$1 = div[\psi(r, c\cdot t)] \quad (18)$$

And the value of f(r,t) is as the file: neutrino.pdf (But for the concrete real value of R you must use a dedicated application).

Where $\_C_1$ is a constant to be settled from the normed condition in spherical cords: $\int_0^{2R} |f(r,t_0)^2| dV = 1$ where dV is the elementary volume $\_C_1$ a normed constant. Thus we have (20):

$$\int_0^{2R} |f(r,t_0)^2| dV = \_C_1^2 \int_0^{\pi} sin\theta \cdot d\theta \cdot \int_0^{2\pi} dy \int_0^{2R} \frac{r^2\psi(r,t_0)^2}{r^2} dr = \_C_1^2 \cdot 4\pi \int_0^{2R} \psi(r,t_0)^2 dr \quad (19)$$

The elementary volume at time t_0 =0 so thus: $\_C_1^2 \cdot 4\pi \int_0^{2R} \psi(r,0)^2 dr = 1$. But the stationary state is for constant t and therefore t_0=0 thus Ψ(r) is below:

For R=49 from the normalized condition: $\_C_1^2 \cdot 4\pi \int_0^{2R} \psi(r)^2 dr = 1$

(Thus _C1 is determined from the normalized condition) Ψ(r) = (20)

$$
\begin{aligned}
\psi := -\Bigg(& 2\left(\mathrm{AiryAi}\left(-2\left(-\frac{1}{R}\right)^{1/3} R\right)\mathrm{AiryBi}\left(-\left(-\frac{1}{R}\right)^{1/3} r\right)\right. \\
& \left. - \mathrm{AiryBi}\left(-2\left(-\frac{1}{R}\right)^{1/3} R\right)\mathrm{AiryAi}\left(-\left(-\frac{1}{R}\right)^{1/3} r\right)\right) \\
& \Bigg(\Bigg(\frac{3^{2/3}\,\mathrm{AiryAi}\left(-2\left(-\frac{1}{R}\right)^{1/3} R\right)}{2} \\
& + \frac{\mathrm{AiryBi}\left(-2\left(-\frac{1}{R}\right)^{1/3} R\right) 3^{1/6}}{2}\Bigg)\Gamma\left(\frac{2}{3}\right) \\
& + R\,\pi\,\_C1\Bigg(\mathrm{AiryAi}\left(-2\left(-\frac{1}{R}\right)^{1/3} R\right)\mathrm{AiryBi}\left(1, -\left(-\frac{1}{R}\right)^{1/3} r\right) - \mathrm{AiryBi}\left(-2\left(-\frac{1}{R}\right)^{1/3} R\right)\mathrm{AiryAi}\left(1, -\left(-\frac{1}{R}\right)^{1/3} r\right)\Bigg)\Bigg)\Bigg) \\
& \Bigg/ \Bigg(\left(-\frac{1}{R}\right)^{1/3}\Bigg(\mathrm{AiryAi}\left(-2\left(-\frac{1}{R}\right)^{1/3} R\right)\mathrm{AiryBi}\left(1, -\left(-\frac{1}{R}\right)^{1/3} r\right) - \mathrm{AiryBi}\left(-2\left(-\frac{1}{R}\right)^{1/3} R\right)\mathrm{AiryAi}\left(1, -\left(-\frac{1}{R}\right)^{1/3} r\right)\Bigg) \\
& \left(3^{2/3}\,\mathrm{AiryAi}\left(-2\left(-\frac{1}{R}\right)^{1/3} R\right) + \mathrm{AiryBi}\left(-2\left(-\frac{1}{R}\right)^{1/3} R\right) 3^{1/6}\right)\Gamma\left(\frac{2}{3}\right)\Bigg)
\end{aligned}
$$

6. The Graviton-Equation into Newton's law explicit:

It's not important to have the exact general solution. As shown, we need the structure of the general solution of the onduscular equation.

$$\frac{R}{r}\Delta f(r,t) = \frac{1}{c^2}\frac{\partial^2 f(r,t)}{\partial t^2} \qquad (4)$$

where R= is a constant distance of value $3.567\cdot10^{22}$ m. First, we search for the basis of solutions that have separated variables f(r,t)=g(r)·u(t) and g(r) depending on radius r, the gravitational potential. Thereafter, we impose the initial conditions for the graviton such as to sort out the singular solution of interest:

A) [f(r,t) = 0 for r=2·R for any t] that can be replaced with g (2·R) = 0;

B) g'(0) = R for r = 0 the initial derivate;
C) and that verifies the condition that the speed of interaction is the velocity of light "c". The above 4 conditions imposed onto the Graviton Wave Function f(r,t) uniquely determine the basis of separated solutions of interest.
Condition C) can be expressed by employing the divergence operator in general coordinates r and c·t thus obtaining the simple equation, $1 = div[\psi(r, c \cdot t)]$ expanded to:

$$\frac{df(r,t)}{dt} = \frac{\partial[u(t)g(r)]}{\partial t} + \frac{\partial[u(t)g(r)]}{\partial r} \cdot \frac{dr}{dt} = c \qquad (21)$$

Since the graviton speed will be "c" regardless of the length of the radius r, which means that $\frac{dr}{dt} = c$ for any r, we obtain that for any r and c·t:

$$g(r)\frac{\partial u(t)}{\partial t} + u(t)\frac{\partial g(r)}{\partial r} \cdot c = c \qquad (22)$$

For example, we take 2 identical atoms, with the nucleus of unit 1 diameter, located at a distance "d" one from another. The atoms change particles according to the graviton equation, considering that each atom emits particles in space with an equally distributed random distribution. If we consider the effective section of the nucleus of 2 atoms at distance "d" represented by the solid conical angle Ω at distance 2d, the surface will be ~ 4 times smaller. More exactly, α_0 = arctg l / d respectively α_1 = arctg l / (2d), where I have noted the circle arc corresponding to the solid conical angle Ω with α. Extending the two-atom model to a model of three atoms and considering that the distance between atoms is very large relative to the section of the nucleus, one atom will be attracted by the other two atoms that are at distance "d" (considering that the 2 atoms are close - in a solid body) 2 times more than a single body. Extrapolating, an atom is attracted by the other N atoms at the distance "d", N times stronger than that of a single pair of atoms. We apply the superposition and thus we have M atoms attracted by N atoms (in the first stage atoms of the same type). From the above considerations, we can conclude that two rigid bodies at distance "d" are attracted by a force proportional to the product M · N and inversely proportional to d^2. Taking this into consideration, the way I framed the problem naturally explains Newton's formula. The exact formula can be calculated starting from the premise of quantum gravity theory. The classic graviton forces between two nucleons that change gravitons are as above considering the force of 1 Newton between 102 grams of the substance $6.093 \cdot 10^{25}$ ($6.14 \cdot 10^{25}$ depends on calculus mod) nucleons and Number of Earth $1.6156 \cdot 10^{51}$ nucleons. (So, the attraction between ~10^{77} nucleons). But the rule of three at Earth nucleons can't be applied at ground level where the object of 102 grams stands on Earth's surface and all the nucleons are at rp = 6371000 m. See calculus link grav.mw & Sun.mw.
http://hyperphysics.phy-astr.gsu.edu/hbase/Mechanics/sphshell.html#c1
The electronic neutrino is the graviton and now the reaction of Fermi's theory we have neutron decay into a proton, electron, and electronic neutrino the same with

its antiparticle because it's a Majorana particle: https://uebungen.physik.uni-heidelberg.de/c/image/d/vorlesung/20211/1346/material/Lecture-11.pdf

$n \xrightarrow{\beta-decay} p + e + \nu$ where the ν is electronic neutrino mass according to neutrino oscillation probably in normal conditions around ν mass ~ 0.00038eV/c^2. Thus the nucleus receives a constant amount of energy from the Sun through τ neutrino.

At the nucleus the reactions are continuous, and the transformations are as follows where the abbreviations are: the sign $\hat{\rceil}$ is emission and $\check{\rceil}$ is absorption posit is a positron, mag is magnetron and the brackets are for grouping decay:

$p + \check{\rceil}\nu \xrightarrow{transf} n + posit\hat{\rceil} \xrightarrow{decay} (p + e + \nu\hat{\rceil}) + posit = p + (e + posit) = p$ (23)

$p + \check{\rceil}\tau \xrightarrow{transf} n + \nu\hat{\rceil} + \pi^+ + \mu\hat{\rceil} \xrightarrow{decay} (p + e + \nu\hat{\rceil}) + \mu\hat{\rceil} + \check{\rceil}\pi^- + \pi^+ = p + (e + \pi^+) = p + \mu + \Delta E$ (24)

Thus the nucleons in the nucleus receive the amount of energy of τ neutrino's, energy of around ~0.2eV each 3 ÷ 5·10^{-6} sec from the Sun that generates τ neutrino (magnetron is a very light pion π with rest mass 0.007eV/c^2).

As you can see from the initial proton in an atom nucleus emits a ν neutrino and a μ neutrino absorbs a ν neutrino also a τ neutrino may trigger the reaction that results in the initial proton. I make the supposition that the magnetron is a pion with a lower rest muss thus a meson π^+ with a rest mass of 1.369·10^{-8} smaller than the electron mass.

The flux equation for electronic neutrino considering and spherical cords symmetry & the speed of graviton equal to light speed is for (electronic neutrino)

Flux second-order equation is: $\frac{\partial^2 P(r,t)}{c^2 \partial t^2} - \frac{\partial^2 P(r,t)}{\partial r^2} = 0$ (25)

With initial condition P(2R,t)=0 and diff(P(0,0),r)=-R=-3.567·10^{22};

Thus the gravitational force F_G ~flux/ surface unit = P(r,t) /4πr^2:

$$\frac{Fgflux}{4\cdot\pi\cdot r^2} = \frac{(\_c_2\cdot t^2 + 4\cdot R^2 - 2\cdot R\cdot r + 2\_C3\cdot t)\cdot c^2 + (-4R^2 + r^2)\_c_2}{8\cdot\pi\cdot r^2\cdot c^2} \quad (26)$$

Considering the initial value of time t = 0, the value of Earth's gravitational force is proportional to (27)

$$F_{g1} \sim \frac{R^2}{2\cdot\pi}\left(1 - \frac{\_c_2}{c^2}\right)\frac{1}{r^2} - \frac{R}{4\cdot\pi}\frac{1}{r} + \frac{\_c_2}{8\pi c^2} \quad (27)$$

And with boundary condition P(2R,0) = 0 we have: $\_c_2 = \frac{4\cdot c^2}{7}$

The coupling constant loses its meaning because the gravity depends also on r^{-1} not only on r^{-2}, where "M" is Earth-mass and G the Newton gravitational constant G = 6.674·10^{-11} N·m^2/Kg^2, R a distance R=3.567·10^{22} m and "c" the speed of light. Thus, the unit quantic force between two nucleons that change ν neutrino equation: $F_{g1} \sim \frac{3R^2}{14\cdot\pi}\cdot\frac{1}{r^2} - \frac{R}{4\cdot\pi}\cdot\frac{1}{r} + \frac{1}{14\cdot\pi}$ (28)

Where "M" is Earth-mass and G the Newton gravitational constant G = 6.674·10^{-11} N·m^2/Kg^2, R a distance R=3.567·10^{22} m and "c" the speed of light.

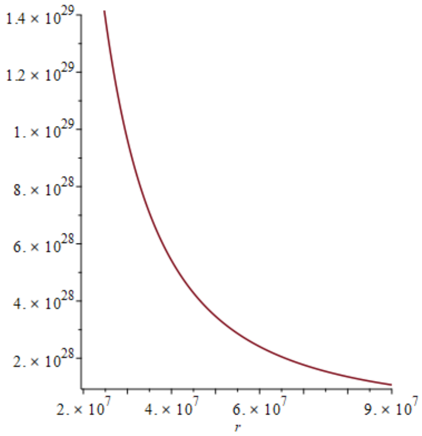
Thus, the integral quantic gravitational forces in Newtons between 2 neutrons at r in meters that change ν neutrino (gravitons) are:

$$F_{g1} = \frac{4.09 \cdot 10^{-64}}{r^2} - 1.34 \cdot \frac{10^{-86}}{r} + 1.07 \cdot 10^{-109} \sim \frac{4.09 \cdot 10^{-64}}{r^2}$$

$$F_{g1} \sim \frac{1.85 \cdot 10^{-64}}{r^2} \div \frac{4.09 \cdot 10^{-64}}{r^2}$$

Thus, the quantic gravitational attraction force in Newton between 2 nucleons at radius r (in meters) may be approximate: $Fgq \sim 2 \div 4 \cdot 10^{-64}/r^2$ (Newton). As you can see at r exceedingly big the order of 2·R, the force is equal to 0, beyond that distance of $7.14 \cdot 10^{22}$ m, there is only rejection, and the model must be rewritten.

The plot of gravitational Earth force is from ground level $6.38 \cdot 10^6$ to $9 \cdot 10^7$ m:



7. Conclusions

Considering the experimental evidence and the calculatory estimations we draw the novel and surprising conclusion that beams of continuous coherent light of wavelength 380.4 nm with the power of 2.95 – 3.3 W/mol of substance will annulate gravity exerted onto the substance being experimented upon. The graviton wave function provided by formula (20) is, for the stationary state not dependent on time, which matches Newton's law of gravity.

R E F E R E N C E S

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