A CONDITION FOR SUSPENSION OF GRAVITATIONAL FIELD

Author: **Ramesh Chandra Bagadi**
Founder, Owner, Co-Director And Advising Scientist In Principal
Ramesh Bagadi Consulting LLC, Madison, Wisconsin-53715, United States Of America.
Email: rameshcbagadi@netscape.net

White Paper One (TRL 12)
of
Ramesh Bagadi Consuting LLC, Advanced Concepts & Think-Tank,
Technology Assistance & Innovation Center, Madison, Wisconsin-53715,
United States Of America

Abstract

In this research monograph, a condition for suspension of Gravitational Field is presented. For this analysis, the concept of '*Permittivity Of Free Space For A Graviton*' is advented and utilized.

1 Theory

1.1 Permittivity Of Free Space For A Graviton

In this section, we compare the Newtonian Gravitational Interaction relation and Coulombs Electric Interaction relation and derive an expression for the '*Permittivity Of Free Space For A Graviton'*. We also calculate its value.

Considering the Gravitational Interaction Relation between two masses m_1 and m_2 separated by a distance r_{12} as

$$F_{12G} = \frac{Gm_1m_2}{r_{12}^2} \quad \text{(Attractive Force)} \tag{1}$$

And also the Electric Interaction Relation between two charges q_1 and q_2 separated by a distance r_{12} as

$$F_{12E} = \frac{1}{4\pi\varepsilon_0}\frac{q_1q_2}{r_{12}^2} \tag{2}$$

(Attractive Force if the signs of the two charges are opposite, otherwise Repulsive)

where ε_0 is the '*Permittivity Of Free Space For An Electron*', i.e., it's Electric Field, the value given by

$\varepsilon_0 = 8.854\times10^{-12}$ Farads/Meter.

Therefore, by analogy with equation (2), we can write equation (1) as

$$F_{12G} = \frac{1}{4\pi g_0}\frac{q_1q_2}{r_{12}^2} \quad \text{(Attractive Force)} \tag{3}$$

Wherein, we can call g_0 can be called as the '*Permittivity Of Free Space For A Graviton*' (a unit of mass: Two Photons Make A Graviton).

Comparing (2) and (3), we have

$$G = \frac{1}{4\pi g_0} \tag{4}$$

Where $G = 6.67 \times 10^{-11}$ Nm^2Kg^{-2}

i.e., $g_0 = 0.01192586 \times 10^{11} N^{-1}m^{-2}Kg^2$ (5)

We call this $g_0 = 0.01192586 \times 10^{11} N^{-1}m^{-2}Kg^2$ as the '*Permittivity Of Free Space For A Graviton*'.

We can see in the further sections of this research paper that this concept will find use in the Physics Of Manipulation Of Gravitational Forces.

1.2 Condition For Suspension Of Gravitational Interaction

In this section we lay down a condition that enables the Suspension Of Gravitational Field At A Given Space Co-Ordinate using a combination of Electric and Magnetic Fields.

Considering Electric & Gravitational Energy* [* Since Gravitons are Gravitic Monopoles, the form of Gravitational Energy is of the form like Magnetic Energy] in a Unit Volume and specially condition when

$$\int \frac{\varepsilon_0 E_m^2}{2} dV > \int \frac{G_m^2}{2g_0} dV \tag{6}$$

i.e., when

$$\int E_m^2 dV > \frac{1}{\varepsilon_0 g_0} \int G_m^2 dV \text{ is true,} \tag{7}$$

Gravitational Interaction is suspended in that Unit Volume.

We can write $\int E_m^2 dV = \bar{E}_m^2 V$ (8)

where V is the unit volume of consideration and $\bar{E}_m^2$ is the average value of E_m^2 throughout the volume. Similarly, we have

$$\int G_m^2 dV = \overline{G}_m^2 V \tag{9}$$

Therefore, we can re-write equation (7) as shown below:

When

$$\overline{E}_m^2 > \frac{1}{\varepsilon_0 g_0} \overline{G}_m^2 \tag{10}$$

Then, the Gravitational Interaction is suspended in that volume of consideration.

Therefore, we have

$$\overline{E}_m < \sqrt{\frac{1}{\varepsilon_0 g_0}} \overline{G}_m \tag{11}$$

for no effect of Gravitation in the unit volume of consideration.

Now, considering Magnetic & Gravitational Energy in a Unit Volume

When

$$\int \frac{B_m^2}{2\mu_0} dV > \int \frac{G_m^2}{2g_0} dV \tag{12}$$

i.e., when

$$\int B_m^2 dV > \frac{\mu_0}{g_0} \int G_m^2 dV \quad \text{is true,} \tag{13}$$

Gravitational Interaction is suspended in that unit volume.

Just as in the case of Electric Energy, we use

$$\int B_m^2 dV = \overline{B}_m^2 V$$

Therefore, we can re-write (12) as

$$\overline{B}_m^2 > \frac{\mu_0}{g_0} \overline{G}_m^2 \tag{14}$$

Then the Gravitational effect is suspended in that unit volume of consideration.

Therefore, we have

$$\overline{B}_m < \sqrt{\frac{\mu_0}{g_0}} \overline{G}_m \tag{15}$$

for no effect of Gravitation in that unit volume of consideration.

When, we use both E_m and B_m , we can have a relation by adding and subtracting equations (7) and (13) , i.e.,

$$\int\left(E_m^2 \pm B_m^2\right)dV > \left\{\frac{1}{\varepsilon_0 g_0}\int G_m^2 dV\right\} \pm \left\{\frac{\mu_0}{g_0}\int G_m^2 dV\right\} \tag{16}$$

i.e., when

$$\int\left(E_m^2 \pm B_m^2\right)dV > \left\{\frac{\mu_0}{\varepsilon_0 g_0}\left(\frac{1}{\mu_0} \pm \varepsilon_0\right)\int G_m^2 dV\right\} \tag{17}$$

Is true, then Gravitational Interaction is suspended in that unit volume.

When we use $\overline{E}_m$, $\overline{B}_m$ and $\overline{G}_m$ as the average values of the fields in that volume of condideration, we have equation (17) as

$$\left(\overline{E}_m^2 \pm \overline{B}_m^2\right) > \frac{\mu_0}{\varepsilon_0 g_0}\left(\frac{1}{\mu_0} \pm \varepsilon_0\right)\overline{G}_m^2 \tag{18}$$

for no Gravitational Interaction in the volume of consideration.

It can be noted that the above condition can be used for the creation of *Well Maneuverable Potential Wells*.

1.3 Gravitational Wave Frequency Manipulation Via Magnetic And Electric Field Frequency Manipulation For Appropriate Suspension Of Gravitational Interaction For Navigation Of Desired Space Traverses

In this section, we lay down a relation for Gravitational Wave Frequency Manipulation Via Magnetic & Electric Field Frequency Manipulation For Appropriate Suspension Of Gravitational Interaction For Navigation of Desired Space Traverses.

We differentiate (Fractionally at a Variable Level: see author's Fractional Differentiation [1] http://viXra.org/abs/1510.117) equation (18) w.r.t time on both sides

$$\frac{\partial^{N+\alpha}}{\partial t^{N+\alpha}}\left(\overline{E}_m^2 \pm \overline{B}_m^2\right) > \frac{\partial^{N+\alpha}}{\partial t^{N+\alpha}}\left\{\frac{\mu_0}{\varepsilon_0 g_0}\left(\frac{1}{\mu_0} \pm \varepsilon_0\right)\overline{G}_m^2\right\} \tag{19}$$

where

N is a positive integer and $0 < \alpha < 1$.

We can note that the above equation can be made true for a certain N, a certain $0 < \alpha < 1$ by adjusting the values of $\bar{E}_m^2$ and $\bar{B}_m^2$ on the L.H.S. of the above equation (19).

References

1. http://viXra.org/abs/1510.0117 '*Some Basic Concepts Of Fractional Calculus*'
2. 'Electrodynamics' by John David Jackson.
3. 'Physics' by Robert Resnick and David Halliday.
4. 'Mechanics' by Kleppner & Kolenkow.

Acknowledgements

The author would like to express his deepest gratitude to all the members of his loving family, respectable teachers, en-dear-able friends, inspiring Social Figures, highly esteemed Professors, reverence deserving Deities that have deeply contributed in the formation of the necessary scientific temperament and the social and personal outlook of the author that has resulted in the conception, preparation and authoring of this research manuscript document.

Note

Note Of Importance: Also, it is to be understood clearly that the author has not given any body consent either in native instantaneous causality culture and/ or non-native implied future causality culture to embed, super-set and subset the author in true form or as a quantum signature entity form, spirit form and/ or any other extra-human form of intelligence during the conception, development, analysis and preparation of this research manuscript. Any such aforementioned actions would be deemed illegal and therefore any of such entities claims on the authorship of this research manuscript stands defeated and annulled despite their, such actions of unrequited and unrequested servitude.

Note: The red and black coloured portion part of this research article document was uploaded and published in the 'Classical Physics' Category and was live until Wednesday, September 23rd, 2015 with the following details:
http://viXra.org/abs/1502.0154
request reference8596971
request timestamp: 2015-09-23 07:58:30
viXra citation number: 1502.0154
subject category: Classical Physics
Title: Title: A Condition For Suspension Of Gravitational Field
Authors: Ramesh Chandra Bagadi, Roderic S. Lakes, Peter T. Timbie, Tao Han
However, due to authorship claimlessness disputes the authors list has been truncated in this version.