The Derivation Of The Least Quantum Electrogravitational Frequency

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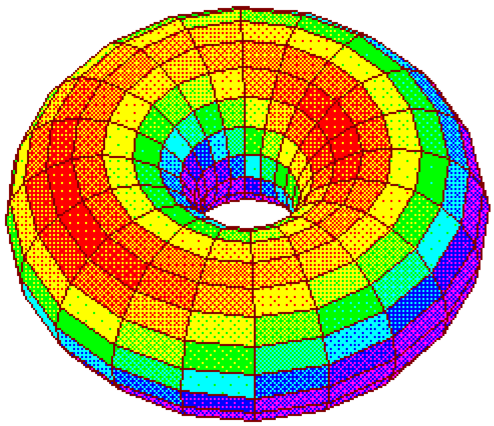


Abstract:

This paper presents a proof, based on fundamental empirically established quantum constants, of the necessary existence of a frequency equal to what I have previously termed the least quantum electrogravitational frequency, $f_{LM} = 10.03224805$ Hz. This frequency is solved for in negative as well as positive solutions wherein the average yields zero in the macroscopic. The frequency represents energy related to angular momentum in standing waves. Thus it cannot be detected as a coherent electromagnetic wave since it does not radiate electromagnetically. The total electro-gravitational action occurs non-locally between two systems of standing waves, wherein the two systems have conjugate spin energy. Thus, electrogravitational action must occur non-locally as the action while the reaction is in local space. Also, mass is defined as standing wave energy.

In my ebook "Electrogravitation As A Unified Field Theory," [1] I postulated the existence of that frequency to fit my equation of electrogravitation. It allowed for the force Newtonian be be arrived at using the parameters of the electrogravitational equation. It turned out that the frequency arrived at an energy by $E = hf$ that yielded a velocity equal to the square root of the fine structure constant with an added unit of meter per second. Until the proof provided by this paper, there existed no other explanation for the added unit of velocity associated with the fine structure constant nor for the possible existence of the quantum electrogravitational frequency.

The most concise form of the electrogravitational equation is shown immediately below:

System 1 System 2

$$F_{EG} = \left(\frac{h \cdot f_{LM}}{R}\right) \cdot \mu_o \cdot \left(\frac{h \cdot f_{LM}}{R}\right)$$

The terms in the equation are Plank's constant h, the permeability of free space μ_o, the distance between the respective systems 1 and 2 and finally f_{LM}, which is the aforementioned least quantum electrogravitational frequency. The terms are in system international, or S.I. units.

I submit that this paper constitutes a proof since to disprove the result is to change the accepted foundation constants which support the conclusion. In otherwords, the results are derived from well established and universally accepted first principles.

First, the required parameters of calculation are stated below:

$h := 6.626075500 \cdot 10^{-34} \cdot joule \cdot sec$ (Plank's constant) $m_e := 9.109389700 \cdot 10^{-31} \cdot kg$ (Electron mass)

$q_o := 1.602177330 \cdot 10^{-19} \cdot coul$ (Electron charge) $c := 2.997924580 \cdot 10^{08} \cdot m \cdot sec^{-1}$(Speed of light)

$Energy_e := m_e \cdot c^2$ $Energy_e = 8.187111168 \times 10^{-14}\, joule$

$t_e := h \cdot Energy_e^{-1}$ $t_e = 8.0933009996 \times 10^{-21}\, sec$ 1)

$V_e := Energy_e \cdot q_o^{-1}$ $V_e = 510.9990645047\, kV$ 2)

$\lambda_e := \dfrac{h}{m_e \cdot c}$ $\lambda_e = 2.4263106 \times 10^{-12}\, m$ 3)

$E_{v\_m} := \dfrac{V_e}{\lambda_e}$ $E_{v\_m} = 2.1060744016 \times 10^{17}\, \dfrac{volt}{m}$ 4)

$T_{vsec\_m3} := V_e \cdot t_e \cdot \lambda_e^{-3}$ $T_{vsec\_m3} = 2.8953869393 \times 10^{20}\, m^{-1}\, tesla$ 5)

The above Tesla form expresses magnetic flux density in wavelength cubed terms in the denominator instead of wavelength squared. Normally, Tesla is expressed as volt-sec all divided by meter^2, or a form of area.

Now let the new fine structure constant parameter be stated as shown below:

$\alpha_{new} := (0.00729735308 - 0.009291278513i) \cdot m^2 \cdot sec^{-2}$

The complex form above of the fine structure constant is the same as derived in a previous paper:
http://www.electrogravity.com/EnergySpiral_3/EnergySpiral_3.pdf, eq. 19

Or: $V_{LM} := \sqrt{\alpha_{new}}$ $V_{LM} = 0.0977540741 - 0.0475237406i\, m\, sec^{-1}$ 6)

The derivation of the least quantum electrogravitational frequency is shown below in terms of a magnetic flux in three dimensions instead of the normal two along with the new form of the fine structure constant. The frequency f_{LM} is independent of velocity since quantum wavelength is also determined by velocity.

$f_{LM} := \dfrac{T_{vsec\_m3}}{E_{v\_m}} \cdot \alpha_{new}$ $f_{LM} = 10.0322480455 - 12.7734549336i\, Hz$ **Eureka!!!** 7)

The above real portion frequency is **exactly** equal to my postulated quantum electrogravitational frequency derived in a totally different form from the original. Also, the format of the fine structure constant being expressed in terms of meter^2 per second^2 is also justified as the result above demonstrates.

Let the normal area form of the Compton electron tesla be stated below as:

$T_{vsec\_m2} := V_e \cdot t_e \cdot \lambda_e^{-2}$ Then: $T_{vsec\_m2} = 7.0251080219 \times 10^{8}\, tesla$ 8)

Then the derivative with respect to wavelength of the electron is taken in the tesla term as shown below. A very satisfying result is that the answer is a negative frequency which is equivalent to a negative energy and also a negative time.

$$f_{LMneg} := \left[\frac{d}{d\lambda_e}\left(\frac{V_e \cdot t_e \cdot \lambda_e^{-2}}{E_{v\_m}}\right)\right] \cdot \alpha_{new} \qquad f_{LMneg} = -20.064496091 + 25.5469098673i\ \text{Hz} \qquad 9)$$

What does the above formula mean? It is stating that an extremely low spin related frequency is generated by the change of one Compton wavelength in obtaining the cubic form of the magnetic field related to the electron Compton area in the numerator. This frequency is further brought about by the transfer mechanism of the special case fine structure constant in (meter^2 per second^2) terms. That is, <u>when the plane area changes to a volume in the magnetic field.</u>

The positive result for f_{LM} is stated below in terms of a change of one Compton wavelength related to the E field of the electron. The derivative with respect to one Compton wavelength yields a potential without the reference "per meter" since the derivative raises the power to zero of the wavelength.

$$f_{LMpos} := \left[\frac{d}{d\lambda_e}\left(\frac{T_{vsec\_m2}}{V_e \cdot \lambda_e^{-1}}\right)\right] \cdot \alpha_{new} \qquad f_{LMpos} = 10.0322480455 - 12.7734549336i\ \text{Hz} \qquad 10)$$

Or, $\dfrac{T_{vsec\_m2}}{V_e \cdot \lambda_e^{0}} \cdot \alpha_{new} = 10.0322480455 - 12.7734549336i\ \text{Hz}$ where, $\lambda_e^{0} = 1$

The case for electrogravitational attraction is now stated at the R_{n1} distance between two field conjugated electrons separated by a local space distance equal to the Bohr n1 shell radius of the Hydrogen H1 atom.

Let: $R_{n1} := 5.291772490 \cdot 10^{-11} \cdot m$ $\mu_o := 1.256637061 \cdot 10^{-06} \cdot \text{henry} \cdot m^{-1}$ Then: 11)

$$F_{EG} := \frac{h \cdot (f_{LMpos} + f_{LMneg})}{R_{n1} \cdot \left(\frac{4}{\pi}\right)^2} \cdot \mu_o \cdot \frac{h \cdot (f_{LMneg} + f_{LMpos})}{R_{n1} \cdot \left(\frac{4}{\pi}\right)^2} \qquad |F_{EG}| = 1.9777271982 \times 10^{-50}\ \frac{\text{henry}}{m} \cdot \text{newton}^2$$

The force is negative which by definition is attraction. One Newton term and the permeability constant are both considered constants making the result inverse to the square of the distance.

The standard gravitational constant G is redefined to be equal to the square of the new alpha in squared meter per second units times the permeability constant u_o. 12)

$$G_{EG} := \mu_o \cdot \alpha_{new}^{2} \cdot \left(\frac{4}{\pi}\right)^2 \qquad G_{EG} = -6.7382881116 \times 10^{-11} - 2.7624914041i \times 10^{-10} \left(\frac{\text{newton} \cdot \text{henry} \cdot \text{joule}}{kg^2}\right)$$

$$F_G := \frac{m_e}{R_{n1}} \cdot G_{EG} \cdot \frac{m_e}{R_{n1}} \qquad F_G = -1.9967597379 \times 10^{-50} - 8.1861023463i \times 10^{-50}\ \text{newton} \cdot \frac{\text{henry}}{m} \cdot \text{newton} \qquad 13)$$

The G standard value is: $G := 6.672590000 \cdot 10^{-11} \cdot \text{newton} \cdot m^2 \cdot kg^{-2}$ 14)

Finally, the G_{EG} to G ratio argument: $\arg\left(\dfrac{G_{EG}}{G}\right) \cdot \dfrac{1}{2} = -51.8539740117\ \text{deg}$ 15)

Next, the speed of light is derived as the ratio of E in volts per meter to B or Tesla in volt seconds per meter squared as shown below. This is expected by the usual expression of E = cB for the case of the electromagnetic field in free space.

$$\frac{E_{v\_m}}{T_{vsec\_m2}} = 2.99792458 \times 10^{8}\,\mathrm{m\,sec}^{-1} \qquad \text{where,} \qquad c = 2.99792458 \times 10^{8}\,\mathrm{m\,sec}^{-1} \qquad 16)$$

Then the electron mass is defined in terms of the cubic magnetic field divided by the electric field and all multiplied by plank's constant as shown below.

$$\left(\frac{T_{vsec\_m3}}{E_{v\_m}}\right)\cdot h = 9.1093897 \times 10^{-31}\,\mathrm{kg} \qquad \text{where,} \qquad m_e = 9.1093897 \times 10^{-31}\,\mathrm{kg} \qquad 17)$$

Note that:

$$\frac{T_{vsec\_m3}}{E_{v\_m}} = 1.3747790378 \times 10^{3}\,\mathrm{sec\,m}^{-2} \qquad \text{and the inverse is shown as:} \qquad 18)$$

$$\frac{E_{v\_m}}{T_{vsec\_m3}} = 7.2738961865 \times 10^{-4}\,\mathrm{m}^{2}\,\mathrm{sec}^{-1} \qquad 19)$$

which is the circulation constant in the Heisenberg expression for h.

That is:

$$m_e\cdot\left(\frac{E_{v\_m}}{T_{vsec\_m3}}\right) = 6.6260755 \times 10^{-34}\,\mathrm{joule\cdot sec} \qquad 20)$$

which is plank's constant. Or: $h = 6.6260755 \times 10^{-34}\,\mathrm{joule\cdot sec}$

as stated in the defined constants at the beginning of this paper.

If it is desired to calculate the force between a proton and electron at the R_{n1} radius instead of two electrons as shown in equation 11 above, the negative frequency term in the electrogravitational equation (left of the permeability constant μ_o) is simply multiplied by the ratio of the proton mass to electron mass. This by reason that I have previously defined a negative pressure wave as existing associated with the proton energy.

In conclusion, I stress that the solution of the electrogravitational frequency from basic principles based on the E and B fields as well as the fundamental quantum constants related to the electron (or proton) are as important as Einstein's $E = mc^2$ if not more so since it is established that there exists an ELF (extreme low frequency) that is fundamental to the action of gravity and which may supply an explanation of the standard mass losing mass over time as well as the existence of dark matter and negative energy in the universe. Then, electrogravitational action tends to subtract energy from a system of mass.

Finally, if we consider that twice the positive electrogravitational ELF energy in the universe is negative as shown by equations 9, 10 and 11 above, the net sum is not zero. This may provide an explanation for the negative energy in the universe since it does not disappear after the action-reaction but rather adds to the total energy in the universe over time. The main reason the frequency cannot be detected as an electromagnetic wave is that it is a standing wave of spin energy that cannot radiate. It can however connect non-locally to other standing wave systems that have conjugate energy and spin as for eq. 11 above.

End of the main body of this paper.

The fundamental quantum physics constant called the "quantum of circulation"[2] is given below as:

$$Cir_Q := \frac{h}{m_e} \qquad \text{where,} \qquad Cir_Q = 7.2738961865 \times 10^{-4}\, m^2\, sec^{-1} \qquad 21)$$

This is a fundamental constant parameter of Heisenberg's uncertainty expressions wherein the uncertainty of momentum times the uncertainty of position is equal to Plank's constant, h. Further, the uncertainty in energy times the uncertainty in time is also equal to h. In both expressions, the velocity times position and the square of velocity times time are both equal to the quantum of circulation. This analysis uses the Compton values related to the electron as the example but is germane to matter in general.

The purpose of the below analysis is firstly to present a steady state solution for time related to the fine structure constant in meter^2 per second^2 derived from the quantum of circulation. Secondly, to derive a changing time or time interval that is related to parameters in the least quantum of circulation that are changing with respect to time. Thus two distinct frequencies will be derived that apply firstly to the steady state field and then to the dynamic field that will yield the special case of the alpha constant in (meter/second) squared units.

For the steady-state magnetic field condition related to the solution for a frequency that will yield the special case of alpha in (meter/second) squared:

$$t_{LM} := f_{LM}^{-1} \qquad t_{LM} = 0.038028719 + 0.0484196689i\ sec \qquad 22)$$

$$\frac{V_e \cdot \lambda_e^{-1}}{V_e \cdot t_e \cdot \lambda_e^{-3}} = 7.2738961865 \times 10^{-4}\, m^2\, sec^{-1} \qquad \text{Least quantum of circulation} \qquad 23)$$

$$\frac{E_{v\_m}}{V_e \cdot t_e \cdot \lambda_e^{-3} \cdot t_{LM}} = 7.29735308 \times 10^{-3} - 9.291278513i \times 10^{-3}\, m^2\, sec^{-2} \qquad 24)$$

where also, from page 1 above: $\alpha_{new} = 7.29735308 \times 10^{-3} - 9.291278513i \times 10^{-3}\, m^2\, sec^{-2}$

and also, $$\frac{h}{m_e} \cdot f_{LM} = 7.29735308 \times 10^{-3} - 9.291278513i \times 10^{-3}\, m^2\, sec^{-2} \qquad 25)$$

Therefore, it is verified by the above that the steady state condition for the magnetic field related to the least quantum of circulation constant is arrived at by use of the previously solved for electrogravitational spin frequency, which is f_{LM}.

To solve for the time necessary for the dynamic magnetic field (changing as a function of time) which will also yield α_{new} in (meter/second) squared units, we utilize the Mathcad symbolic engine to solve for a time t_x in a derivative with respect to time of the quantum circulation that will also yield the necessary time that will yield the new value of α_{new} in (meter/second)^2 units.

First the following equality is stated: $$\frac{d}{dt_x} \frac{V_e \cdot \lambda_e^{-1}}{V_e \cdot t_x \cdot \lambda_e^{-3}} = \frac{h}{m_e} \cdot f_{LM} \qquad 26)$$

Next, we solve for an expression that will allow for t_x to be used in a derivative that will yield the new alpha. Therefore, t_x has solution(s)

$$\begin{bmatrix} \frac{-1}{(h \cdot f_{LM})} \cdot \sqrt{-h \cdot f_{LM} \cdot \lambda_e^2 \cdot m_e} \\ \frac{1}{(h \cdot f_{LM})} \cdot \sqrt{-h \cdot f_{LM} \cdot \lambda_e^2 \cdot m_e} \end{bmatrix}$$

We see that t_x has negative and positive solutions. 27)

Further, we see that the solutions are also in the imaginary plane as shown by the included imaginary operator i.

$$t_{xneg} := \frac{-1}{(h \cdot f_{LM})} \cdot \sqrt{-h \cdot f_{LM} \cdot \lambda_e^2 \cdot m_e} \qquad t_{xneg} = 9.7599283859 \times 10^{-12} - 2.00757708495i \times 10^{-11}\ \text{sec} \tag{28}$$

$$f_{xpos} := \frac{1}{t_{xneg}} \qquad \left|f_{xpos}\right| \cdot \frac{\pi}{4} = 3.5184280658 \times 10^{10}\ \text{Hz} \qquad \arg(f_{xpos}) = 64.0730129941\ \text{deg} \tag{29}$$

$$t_{xpos} := \frac{1}{(h \cdot f_{LM})} \cdot \sqrt{-h \cdot f_{LM} \cdot \lambda_e^2 \cdot m_e} \qquad t_{xpos} = -9.7599283859 \times 10^{-12} + 2.00757708495i \times 10^{-11}\ \text{sec} \tag{30}$$

$$f_{xneg} := \frac{1}{t_{xpos}} \qquad \left|f_{xneg}\right| \cdot \frac{\pi}{4} = 3.5184280658 \times 10^{10}\ \text{Hz} \qquad \arg(f_{xneg}) = -115.9269870059\ \text{deg} \tag{31}$$

Finally, we see that both solutions arrive at the new alpha form as shown below.

$$\frac{d}{dt_{xneg}} \frac{V_e \cdot \lambda_e^{-1}}{V_e \cdot t_{xneg} \cdot \lambda_e^{-3}} = 7.29735308 \times 10^{-3} - 9.291278513i \times 10^{-3}\ \text{m}^2\ \text{sec}^{-2} \tag{32}$$

Where, $\alpha_{new} = 7.29735308 \times 10^{-3} - 9.291278513i \times 10^{-3}\ \text{m}^2\ \text{sec}^{-2}$

$$\frac{d}{dt_{xpos}} \frac{V_e \cdot \lambda_e^{-1}}{V_e \cdot t_{xpos} \cdot \lambda_e^{-3}} = 7.29735308 \times 10^{-3} - 9.291278513i \times 10^{-3}\ \text{m}^2\ \text{sec}^{-2} \tag{33}$$

Next, the quantum of circulation is solved in terms of a derivative with respect to the Compton wavelength of the electron related to its rest mass::

$$\left(\frac{d}{d\lambda_e} \frac{V_e \cdot \lambda_e^{-1}}{V_e \cdot t_e \cdot \lambda_e^{-4}}\right) \cdot \frac{1}{3} = 7.2738961865 \times 10^{-4}\ \text{m}^2\ \text{sec}^{-1}$$

Where, $Cir_Q = 7.2738961865 \times 10^{-4}\ \text{m}^2\ \text{sec}^{-1}$

(States the case for changing distance that will yield the least quantum of circulation. Note the fractional multiplier of 1/3 which may be linked to why quarks have fractional charges equal to 1/3.) 34)

Then also changing with respect to time t_x as well as λ_e , we arrive at the total expression:

$$\frac{d}{dt_{xpos}}\left[\frac{d}{d\lambda_e}\frac{V_e \cdot \lambda_e^{-1}}{V_e \cdot (t_{xpos}) \cdot \lambda_e^{-4}}\right] \cdot \frac{1}{3} = 7.29735308 \times 10^{-3} - 9.291278513i \times 10^{-3}\, m^2\, sec^{-2} \quad 35)$$

Where, $\alpha_{new} = 7.29735308 \times 10^{-3} - 9.291278513i \times 10^{-3}\, m^2\, sec^{-2}$

$$\frac{d}{dt_{xneg}}\left[\frac{d}{d\lambda_e}\frac{V_e \cdot \lambda_e^{-1}}{V_e \cdot (t_{xneg}) \cdot \lambda_e^{-4}}\right] \cdot \frac{1}{3} = 7.29735308 \times 10^{-3} - 9.291278513i \times 10^{-3}\, m^2\, sec^{-2} \quad 36)$$

It turns out that f_{xpos} and f_{xneg} are related to a very important frequency that was presented by my previous work "A_frequency4.pdf", [1] equations 14 & 15 results, which are shown below:

eq. 14:. $A'_t := \left(9.5235895041 \cdot 10^{13} \cdot Hz\right)^{-1}$ eq. 15: $t'_{FQK} := \left(9.5235895242 \cdot 10^{13} \cdot Hz\right)^{-1}$ 37)

The above frequencies were derived from the universal electrogravitational vector magnetic potential as well as the electrogravitational force constant presented in the paper, "A_frequency4.pdf ". As such, they are fundamental frequencies common to not only the electrogravitational force but all of the other known forces.

Let $\alpha_{classic}$ be stated as: $\alpha_{classic} := 7.297353080 \cdot 10^{-03}$ (No units.)

Where then: $$\frac{\alpha_{classic}}{A'_t \cdot 2 \cdot \pi^2} = 3.5207589066 \times 10^{10}\, Hz \quad 38)$$

There is a direct geometric correlation in the above result to f_{xpos} and f_{xneg} above.

Where: $\left|f_{xpos}\right| \cdot \frac{\pi}{4} = 3.5184280658 \times 10^{10}\, Hz$ and $\left|f_{xneg}\right| \cdot \frac{\pi}{4} = 3.5184280658 \times 10^{10}\, Hz$ 39)

If we divide the absolute value of the 'dynamic' or frequency change represented by f_{xpos} or f_{xneg} into the speed of light, we will arrive at a very important wavelength.

$$\lambda_{LMneg} := \left|\frac{c}{f_{xpos}}\right| \cdot \frac{4}{\pi} \qquad \lambda_{LMneg} = 8.5206362725 \times 10^{-3}\, m \quad 40)$$

$$\lambda_{LMpos} := \left|\frac{c}{\left|f_{xneg}\right|}\right| \cdot \frac{4}{\pi} \qquad \lambda_{LMpos} = 8.5206362725 \times 10^{-3}\, m \quad 41)$$

Both results are the electro-gravitational wavelength absolute values.

The above wavelengths are related to the absolute electrogravitational frequency f_{LM} as:

$$f_{LMneg} := \left|\sqrt{\alpha_{new}}\right| \cdot \frac{\pi}{4} \cdot \lambda_{LMpos}^{-1} \qquad f_{LMneg} = 10.0189692864\, Hz \quad 42)$$

$$f_{LMpos} := \left|\sqrt{\alpha_{new}}\right| \cdot \frac{\pi}{4} \cdot \lambda_{LMneg}^{-1} \qquad f_{LMpos} = 10.0189692864\, Hz \quad 43)$$

What does the alpha in meter^2/second^2 units mean? Normally, the alpha is understood to be a pure ratio involving no units. My answer is that it may be taken as the smallest allowed angular velocity that is allowed to exist. Further, when attached to mass, it becomes the smallest allowed momentum and when squared, it becomes the smallest allowed energy allowed. One might ask, what is the velocity relative to? My answer is that it is likely an angular velocity. Rotational velocity can be defined in terms of a point moving circularly about another point and the two points having a finite distance between them forming a finite radius.

One can visualize moving as an observer with another object at exactly the same velocity in circular fashion. The least quantum velocity also says that is impossible. That is, there has to be at least the difference in velocity equal to the least quantum velocity, v_{LM} , between the observer and the object and that is what is so very important. I am saying that the new fine structure constant may well exist apart from matter, an entity unto itself. It can attach itself to matter however and matter cannot as a result have a zero angular velocity. This is to be expected since it is an integral part of Heisenberg's uncertainty principle. Finally, as an example, angular momentum is connected to the imaginary operator in the atom as the below well known equation shows.

$$m \cdot v \cdot r = \left(i \cdot n \cdot \frac{h}{2 \cdot \pi} \right) \qquad 44)$$

That is, the angular momentum of a shell is equal to the imaginary operator i times the shell number times plank's constant over 2π.

Building an x-ray type tube operated at the voltage equal to the rest mass energy of the electron (510 KV) and modulating that same tubes' electron beam at the frequency 35.207 GHz, the output electromagnetic ray would likely affect matter in some very important ways. Perhaps causing matter to accelerate, attract or repel gravity, or even disintegrate. Perhaps this is very near to what Nikoli Tesla was trying to accomplish with his high voltage x-ray tube death-ray experiments. A free electron laser, or FEL, might also be employed.

Conclusion:
Generating a frequency near or equal to the inverse of the time t_x should cause the quantum of circulation to be interfered with, possibly allowing direct manipulation of not only gravitational forces, but the forces that hold everything together.

Reference:
1. http://www.electrogravity.com

2 Parker, Sybil P., McGraw-Hill Dictionary of Scientific And Technical Terms, Fifth Edition, copyright 1994, p. A11.

End OF Addendum #1

Addendum #2 Continued Below On Page 8.

Inertial Mass-Field Creation From Changing Time And Space Parameters

The basic quantum electron field in magnetic flux **B** is:

$$B := V_e \cdot t_e \cdot \lambda_e^{-2} \qquad B = 7.0251080219 \times 10^{8}\,\text{tesla} \tag{45)}$$

Creation of field-*mass* from the change in the z direction of the area of the field of magnetic flux **B** having area = λ_e^2 and also divided by the electric field in volts/meter. (**B**/E = 1/c where c = velocity of light in free space.)

$$\frac{d}{d\lambda_e}\left(\frac{V_e \cdot t_e \cdot \lambda_e^{-2}}{E_{v\_m}}\right) \cdot \frac{h}{2} = -9.1093897 \times 10^{-31}\,\text{kg} \tag{46)}$$

= electron rest mass. The field-mass could theoretically be any value in different mediums and dimensions of time and distance. <u>Notice the negative sign for mass due to the derivative of distance. This is a scalar result which suggests that a negative mass sum of matter would possibly levitate in a gravitational field.</u>

where:

$$\left(\frac{V_e \cdot t_e \cdot \lambda_e^{-2}}{E_{v\_m}}\right) \cdot \frac{h}{2} = 1.1051104394 \times 10^{-42}\,\text{kg m} \qquad \textbf{Define momentum as:}\quad JEB := \frac{1 \cdot kg \cdot 1 \cdot m}{1 \cdot sec} \tag{47)}$$

Momentum is derived below as a change in the above kg*m with respect to time t_e as:

$$\frac{d}{dt_e}\left(\frac{V_e \cdot t_e \cdot \lambda_e^{-2}}{E_{v\_m}}\right) \cdot \frac{h}{2} = 1.3654631645 \times 10^{-22}\,\text{JEB} \tag{48)}$$

The definition of momentum is herein defined as 1 meter per 1 second equal to 1 JEB and nowhere else.

The <u>m</u>agnetic <u>v</u>ector <u>p</u>otential **A** is stated as volts times seconds all divided by meters , or weber per meter:

$$A := V_e \cdot t_e \cdot \lambda_e^{-1} \qquad A = 1.704509406 \times 10^{-3}\,\frac{\text{weber}}{\text{m}} \qquad \text{or,} \qquad A = 1.704509406 \times 10^{-3}\,\frac{\text{volt} \cdot \text{sec}}{\text{m}} \tag{49)}$$

Then the simultaneous creation of negative mass and its related negative momentum is stated as a function of the magnetic vector potential **A** changing with respect distance λ_e as well as time t_e.

$$\frac{d}{d\lambda_e}\left[\frac{d}{dt_e}\left(\frac{V_e \cdot t_e \cdot \lambda_e^{-1}}{E_{v\_m}}\right) \cdot \frac{h}{2}\right] = -1.3654631645 \times 10^{-22}\,\text{JEB} \tag{50)}$$

In this solution for a force field, the scalar result is independent of the order of the product derivatives of time and distance.

$$\frac{d}{dt_e}\left[\frac{d}{d\lambda_e}\left(\frac{V_e \cdot t_e \cdot \lambda_e^{-1}}{E_{v\_m}}\right) \cdot \frac{h}{2}\right] = -1.3654631645 \times 10^{-22}\,\text{JEB} \tag{51)}$$

The inertial force field F_{JEBf} is the result of momentum times frequency. The quantum electrogravitational frequency f_{LM} is used as the frequency multiplier as shown below. This is compared to the quantum electrogravitational force FLM_{Rn1} at the n1 shell of the Bohr H1 atom.

$$F_{JEBf} := \left[\frac{d}{dt_e}\left[\frac{d}{d\lambda_e}\left(\frac{V_e \cdot t_e \cdot \lambda_e^{-1}}{E_{v\_m}}\right)\cdot\frac{h}{2}\right]\right]\cdot f_{LM} \qquad 52)$$

$$F_{JEBf} = -1.3698665163 \times 10^{-21} + 1.7441682196i \times 10^{-21}\,\text{newton} \qquad 53)$$

and: $\arg(F_{JEBf}) = 128.1460259883\,\text{deg}$ 54)

The R_{n1} electrogravitational force is:

$$FLM_{Rn1} := \frac{h \cdot f_{LM}}{R_{n1}} \quad \text{where,} \quad FLM_{Rn1} = 1.2561846359 \times 10^{-22} - 1.5994239538i \times 10^{-22}\,\text{newton} \qquad 55)$$

and: $\arg(FLM_{Rn1}) = -51.8539740117\,\text{deg}$ 56)

The sum of the two angles is: $\arg(F_{JEBf}) - \arg(FLM_{Rn1}) = 180\,\text{deg}$ 57)

The ratio of the force F_{JEBf} divided by the force FLM_{Rn1} is nearly equal to unity when the product of the natural number e, π and the square root of the golden ratio (pyramidal value) of 4/π is included in the divisor as shown below.

$$\frac{F_{JEBf}}{FLM_{Rn1}\cdot\left[e\cdot\pi\cdot\left(\frac{4}{\pi}\right)\right]} = -1.0029292552 + 1.445717934i \times 10^{-16} \qquad 58)$$

If we consider the pyramidal shape as applied to the above equations, **the (x) and (y) distances are changing as a function of height (z) while the frequency related to rotation rate of the angular frequency is also changing.** Thus, the change in time will occur as an inverse function of the increasing rate of angular rotation around the vertical axis while the change in distance will also occur as a function of decreasing radius with the increasing height of the pyramid around that same vertical axis

Note that there is more force or energy at the same action distance in the inertial force field F_{ABf} as compared to FLM_{Rn1} by a multiplier of:

$$\left[e\cdot\pi\cdot\left(\frac{4}{\pi}\right)\right] = 10.8731273138 \qquad \text{(Equal to 4 times e.)} \qquad 59)$$

The negative mass-field and negative momentum and force result may be used to levitate heavy objects such as stones for example.

From eq. 13 above:

$$F_{Gneg} := \frac{m_e}{R_{n1}} \cdot G_{EG} \cdot \frac{m_e}{R_{n1}} \qquad F_{Gneg} = -1.9967597379 \times 10^{-50} - 8.1861023463i \times 10^{-50}\, newton \cdot \frac{henry}{m} \cdot newton$$ 60)

Substituting the negative electron scalar field mass derived from a change in distance in the z direction of a magnetic flux in the x-y plane, we derive the resultant repulsion in a gravitational field as shown below. By definition, a negative force of gravitation is one of attraction between the system masses. Then a positive result is a force of repulsion.

$$F_{Gpos} := \frac{\frac{d}{d\lambda_e}\left(\frac{V_e \cdot t_e \cdot \lambda_e^{-2}}{E_{v\_m}}\right) \cdot \frac{h}{2}}{R_{n1}} \cdot (G_{EG}) \cdot \frac{m_e}{R_{n1}} \qquad \text{where,} \quad \frac{d}{d\lambda_e}\left(\frac{V_e \cdot t_e \cdot \lambda_e^{-2}}{E_{v\_m}}\right) \cdot \frac{h}{2} = -9.1093897 \times 10^{-31}\, kg$$ 61)

$$F_{Gpos} = 1.9967597379 \times 10^{-50} + 8.1861023463i \times 10^{-50}\, newton \cdot \frac{henry}{m} \cdot newton$$ 62)

$$\arg(F_{Gpos}) = 76.2920519765\, deg$$ 63)

Where, $$G_{EG} = -6.7382881116 \times 10^{-11} - 2.7624914041i \times 10^{-10}\, \frac{newton \cdot henry \cdot joule}{kg^2}$$ 64)

Finally, employing the expression for force field mass on both sides of the electrogravitational constant:

$$F_{Gpos} := \frac{\frac{d}{d\lambda_e}\left(\frac{V_e \cdot t_e \cdot \lambda_e^{-2}}{E_{v\_m}}\right) \cdot \frac{h}{2}}{R_{n1}} \cdot (G_{EG}) \cdot \frac{\frac{d}{d\lambda_e}\left(\frac{V_e \cdot t_e \cdot \lambda_e^{-2}}{E_{v\_m}}\right) \cdot \frac{h}{2}}{R_{n1}}$$ 65)

This expression is symmetrical about G_{EG} and is more than just aesthetically pleasing.

The result is negative in both the real and imaginary terms of the complex solution as shown below. This indicates a force of attraction which is the normal mode of electrogravitation. (Gravitation in the contemporary sense.)

$$F_{Gpos} = -1.9967597379 \times 10^{-50} - 8.1861023463i \times 10^{-50}\, newton \cdot \frac{henry}{m} \cdot newton$$ 66)

$$|F_{Gpos}| = 8.4261094863 \times 10^{-50}\, newton \cdot \frac{henry}{m} \cdot newton$$ 67)

It may be concluded from the above that the field mass of an electron could be viewed as being complex. The angle resulting from the electrogravitational action as shown in the above equation is shown below.

$$\frac{\arg(F_{Gpos})}{2} = -51.8539740117\, deg \qquad \text{Where,} \quad \operatorname{atan}\left(\frac{4}{\pi}\right) = 51.8539740128\, deg$$ 68)

This result of the angles above suggests that two similar pyramidal objects may generate the instantaneous non-local electrogravitational action between them if the geometry was based on the same as the Great Pyramid at Giza. This would simulate the structure of the electrogravitational action in the formulas above. Further, perhaps there is more than just a visual connection of similar shapes involved with the pyramids around the world as well as the ones photographed on mars. They may be portals of instantaneous energy exchange and communication as well. Perhaps even teleportation.

A few years back I remember that the geometry of the electron was measured by some researchers as having a 'pointy' structure. That is, from certain angles, it appeared as a point-like object. Pyramids have points.

Constant energy extraction by a pyramid from the environment surrounding its location may cause a desert to form. The Great Pyramid on Earth is surrounded by desert. Mars is almost totally a desert planet.

It is of interest to indirectly create a field of force by allowing the time related to angular velocity and also the field wavelength to change in a cross-product form as shown below. This field may not be connected to the initiator of the force field **B** which is the magnetic flux. The magnetic vector potential (**A**) can exist in space apart from the **B** field that creates it as was proven by the famous and often repeated Aharonov-Bohm experiment. In the derivatives of time and 1/wavelength, the 1/wavelength evolves to an area while the time devolves to a zero value. Time is treated as a vector in this analysis. This is by reason of a rotating frame of reference.

Quantum Angular Momentum = $\Delta JEB = m \cdot v \cdot \Delta r$ where, $v = 2 \cdot \pi \cdot \Delta f \cdot \Delta r$ and $\Delta t = \Delta f^{-1}$

The above treats velocity as a constant but angular momentum is increasing with each step change.

The resultant free standing (and/or projected) force field is:

$$Y_{JEB} := \begin{pmatrix} \frac{d}{dt_e} t_e \\ 0 \\ 0 \end{pmatrix} \times \begin{bmatrix} m^{-2} \\ \frac{d}{d\lambda_e}(\lambda_e)^{-1} \\ m^{-2} \end{bmatrix} \cdot \left(\frac{V_e \cdot h \cdot f_{LM}}{E_{v\_m}} \right) \cdot \frac{1}{e \cdot \left(\frac{4}{\pi} \right) \cdot 2 \cdot \pi} \qquad 69)$$

$$Y_{JEB} = \begin{pmatrix} 0 \\ -7.4168000026 \times 10^{-46} + 9.4433630584i \times 10^{-46} \\ -1.2598643213 \times 10^{-22} + 1.6041090748i \times 10^{-22} \end{pmatrix} newton \qquad 70)$$

Reversing the cross product order reverses the force vector via reversing the momentum vector:

$$Y_{BEJ} := \begin{pmatrix} m^{-2} \\ \frac{d}{d\lambda_e} \lambda_e^{-1} \\ m^{-2} \end{pmatrix} \times \begin{pmatrix} \frac{d}{dt_e} t_e \\ 0 \\ 0 \end{pmatrix} \cdot \left(\frac{V_e \cdot h \cdot f_{LM}}{E_{v\_m}} \right) \cdot \frac{1}{e \cdot \left(\frac{4}{\pi} \right) \cdot 2 \cdot \pi} \qquad 71)$$

$$Y_{BEJ} = \begin{pmatrix} 0 \\ 7.4168000026 \times 10^{-46} - 9.4433630584i \times 10^{-46} \\ 1.2598643213 \times 10^{-22} - 1.6041090748i \times 10^{-22} \end{pmatrix} newton \qquad 72)$$

Note: The second index of the above vector result yields the argument as shown below in degrees where the 0 index is the first or top result of 0:

$$\arg\left(Y_{JEB_2}\right) = 128.1460259883\ \text{deg} \qquad \arg\left(Y_{BEJ_2}\right) = -51.8539740117\ \text{deg} \tag{73)}$$

The real portion of the above vector forces are:

$$\mathrm{Re}\left(Y_{JEB}\right) = \begin{pmatrix} 0 \\ -7.4168000026 \times 10^{-46} \\ -1.2598643213 \times 10^{-22} \end{pmatrix} \text{newton} \qquad \mathrm{Re}\left(Y_{BEJ}\right) = \begin{pmatrix} 0 \\ 7.4168000026 \times 10^{-46} \\ 1.2598643213 \times 10^{-22} \end{pmatrix} \text{newton} \tag{74)}$$

The complex solution to the electrogravitational force field of attraction between two electrons at the R_{n1} radius of the Bohr Hydrogen atom electrogravitational action is:

$$FG_{YY} := \mathrm{Re}\left(Y_{JEB}\right) \cdot \mu_o \cdot \mathrm{Re}\left(Y_{BEJ}\right) \qquad FG_{YY} = -1.9946073639 \times 10^{-50}\ \text{newton} \cdot \frac{\text{henry}}{\text{m}} \cdot \text{newton} \tag{75)}$$

$$\arg\left(Y_{JEB} \cdot \mu_o \cdot Y_{BEJ}\right) = 76.2920519765\ \text{deg} \qquad \text{and} \qquad F_G := \frac{G \cdot m_e^{\,2}}{R_{n1}^{\,2}} \qquad F_G = 1.977291389 \times 10^{-50}\ \text{newton}$$

$$\frac{\arg\left(Y_{JEB} \cdot \mu_o \cdot Y_{BEJ}\right) - 180 \cdot \text{deg}}{2} = -51.8539740117\ \text{deg}$$

Changing the rate of rotation of a changing **A** vector radius *action length* should create a force field as shown above. In effect, this is related directly to a spiral.

It is of interest that changing the wavelength down to 1/10 and increasing the time by a factor of 10 increases the force field by 100 as shown below. This amounts to slowing the rate of rotation while decreasing the radius related to the circular wavelength.

$$Y'_{JEB} := \begin{bmatrix} \dfrac{d}{dt_e}\left(10.0 \cdot t_e\right) \\ 0 \\ 0 \end{bmatrix} \times \begin{bmatrix} m^{-2} \\ \dfrac{d}{d\lambda_e}\left(0.10 \cdot \lambda_e\right)^{-1} \\ m^{-2} \end{bmatrix} \cdot \left(\frac{V_e \cdot h \cdot f_{LM}}{E_{v\_m}}\right) \cdot \frac{1}{e \cdot \left(\dfrac{4}{\pi}\right) \cdot 2 \cdot \pi} \tag{76)}$$

$$Y'_{JEB} = \begin{pmatrix} 0 \\ -7.4168000026 \times 10^{-45} + 9.4433630584i \times 10^{-45} \\ -1.2598643213 \times 10^{-20} + 1.6041090748i \times 10^{-20} \end{pmatrix} \text{newton} \tag{77)}$$

Where the original parameters yielded:

$$Y_{JEB} = \begin{pmatrix} 0 \\ -7.4168000026 \times 10^{-46} + 9.4433630584i \times 10^{-46} \\ -1.2598643213 \times 10^{-22} + 1.6041090748i \times 10^{-22} \end{pmatrix} \text{newton} \tag{78)}$$

The area resulting from the circumference change corresponds to a flat ring where the inside ending circumference is 1/10 the circumference of the larger beginning circumference while the rate of rotation in time has been slowed by a factor of 10 times which is equivalent to 1/10 the beginning frequency of rotation. This is also related directly to the changing radial **A** vector associated with the changing circular **B** vector. In this scenario, the **A** vector does not close back on itself while the **B** vector does. The torus is broken open and laid out flat. This is similar to the geometry of UFO's where two nearly flat surfaces are put together.

The parameters related to repeated macroscopic step changes of the electrogravitational quantum wavelength λ_{LM} and frequency f_{LM} may be utilized in the above analysis along with the constant Compton time t_e as shown below. The derivative of the quantum electrogravitational parameters $\Delta\lambda_{LM}$ and Δt_{LM} are both step variables with time increasing and circumference also increasing per event of step change.

First, the required parameters are defined as shown immediately below as:

From above: $V_{LM} = 0.0977540741 - 0.0475237406i\ \mathrm{m\,sec}^{-1}$ where,

$$\lambda_{LM} := \frac{h}{m_e \cdot V_{LM}} \quad \text{or,} \quad \lambda_{LM} = 6.0185459959 \times 10^{-3} + 2.9259529207i \times 10^{-3}\ \mathrm{m} \qquad 79)$$

Note:

$$\left|\lambda_{LM}\right| \cdot \frac{4}{\pi} = 8.5206362725 \times 10^{-3}\ \mathrm{m} \qquad \left|t_{LM}\right| \cdot \left(\frac{4}{\pi}\right)^2 = 0.0998106663\ \mathrm{sec} \qquad \text{and} \qquad f_e := t_e^{-1} \qquad 80)$$

$$Y''_{JEB} := \begin{bmatrix} \dfrac{d}{dt_{LM}}(t_{LM}) \\ 0 \\ 0 \end{bmatrix} \times \begin{bmatrix} m^{-2} \\ \dfrac{d}{d\lambda_{LM}}(\lambda_{LM})^{-1} \\ m^{-2} \end{bmatrix} \cdot \left(\frac{V_e \cdot h \cdot f_e}{E_{v\_m}}\right) \cdot \frac{1}{e \cdot \left(\frac{4}{\pi}\right) \cdot 2 \cdot \pi} \qquad 81)$$

$$Y''_{JEB} = \begin{pmatrix} 0 \\ -9.1346647735 \times 10^{-27} \\ -1.2598643213 \times 10^{-22} + 1.6041090748i \times 10^{-22} \end{pmatrix} \mathrm{newton} \qquad 82)$$

From the Y_{JEB} above:

$$Y_{JEB} = \begin{pmatrix} 0 \\ -7.4168000026 \times 10^{-46} + 9.4433630584i \times 10^{-46} \\ -1.2598643213 \times 10^{-22} + 1.6041090748i \times 10^{-22} \end{pmatrix} \mathrm{newton} \qquad 83)$$

<u>The below expression extracted from the above formula suggests a constant as fundamental as the Heisenberg expressions that yield Plank's constant.</u> Instead of joule-seconds however, the result is in joule-meters which includes a parameter from both Heisenberg forms which yield h. That is, Δ**energy** times Δseconds = h and Δmomentum times Δ**distance** = h.

From the above formula: $\dfrac{V_e \cdot h \cdot f_e}{E_{v\_m}} = 1.986447461 \times 10^{-25}\,\text{joule}\cdot\text{m}$ 84)

Utilizing Mathcad's symbolic processor, it is possible to solve for a frequency related to the f_e parameter that will yield joule-meters in terms of the least quantum electrogravitational energy h times f_{LM} times the least quantum electrogravitational wavelength, λ_{LM}.

Solving for f_x in the expression: $\dfrac{V_e \cdot h \cdot f_x}{E_{v\_m}} = h \cdot f_{LM} \cdot \lambda_{LM}$ has solution(s) 85)

$f_x := f_{LM} \cdot \dfrac{\lambda_{LM}}{V_e} \cdot E_{v\_m}$ where, $f_x = 4.0289183946 \times 10^{10} - 1.9586833019i \times 10^{10}\,\text{Hz}$ 86)

Note also that the absolute value of f_x divided by $4/\pi$ yields:

$f'_x := \left| f_{LM} \cdot \dfrac{\lambda_{LM}}{V_e} \cdot E_{v\_m} \right| \cdot \left(\dfrac{4}{\pi}\right)^{-1}$ $f'_x = 3.5184280658 \times 10^{10}\,\text{Hz}$ 87)

which has been shown previously to have a direct electromagnetic wave frequency connection to the quantum electrogravitational constants above. Further, the argument of f_x yields the exact angle of rise of the Great Pyramid at Giza.

$\arg(f_x) = -25.9269870059\,\text{deg}$ or $\operatorname{atan}\left(\dfrac{\operatorname{Im}(f_x)}{\operatorname{Re}(f_x)}\right) = -25.9269870059\,\text{deg}$ 88)

If we use the acoustic wavelength and frequency from the Great Pyramid as shown below:

$\lambda_{air} := 7.889689782 \cdot 10^{-01} \cdot \text{m}$ $f_{air} := 436.3276411665 \cdot \text{Hz}$ From InfiniteEnergyField.mcd, equations 61 and 63 respectively. 89)

The new frequency related to f_x is:

$f''_x := \left| f_{air} \cdot \dfrac{\lambda_{air}}{V_e} \cdot E_{v\_m} \right| \cdot (e)$ $f''_x = 3.8567433549 \times 10^{14}\,\text{Hz}$ **Note the multiplier of (e).** 90)

This frequency is very close to a previously calculated quantum electrogravitational force constant frequency. See **http://www.electrogravity.com/DualFreqEG/A_frequency4.pdf**, Equations 4 and 5, from the related link, are presented below.

4) $F_{QK} = \dfrac{i_{LM} \cdot \lambda_{LM}}{l_q} \cdot \mu_o \cdot \dfrac{i_{LM} \cdot \lambda_{LM}}{l_q}$ $F_{QK} := 2.9643714476 \cdot 10^{-17} \cdot \text{newton}$ **EG force constant.** 91)

5) $f_{FQK} = \dfrac{F_{QK} \cdot (\lambda_{LM})}{h}$ $f_{FQK} := 3.8094358097 \cdot 10^{14} \cdot \text{Hz}$ **Force constant frequency.** 92)

The f_{FQK} force constant frequency is the gateway to the primal energy source that connects all matter in the universe in a non-local manner. Please note that the above equation that arrived at the coincident f''_x utilizes the λ_{air} and f_{air} in the Grand Gallery of the Great Pyramid at Giza wherein the λ_{air} is the distance between the resonator banks. Thus, the force constant frequency is intimately related to the acoustic parameters of the Great Pyramid and strongly suggests that the Grand Gallery may indeed have an energy extraction system designed to extract energy from the primordial energy source, which I call energy space. Energy space not only created the universe but actively supports the fundamental particle fields of the universe for continued growth throughout all time.

The force constant is a central constant parameter of the electrogravitational equation shown on the main page of my web site at **http://www.electrogravity.com** and this is shown below. The equation states the case for the force between two electrons at the Bohr Hydrogen atom's radius of the n1 level. The l_q constant is the electron's classic radius and i_{LM} is the fundamental electron charge times f_{LM}. The μ_o parameter is the magnetic permeability constant of free space and of coarse, λ_{LM} is the fundamental quantum electrogravitational quantum wavelength.

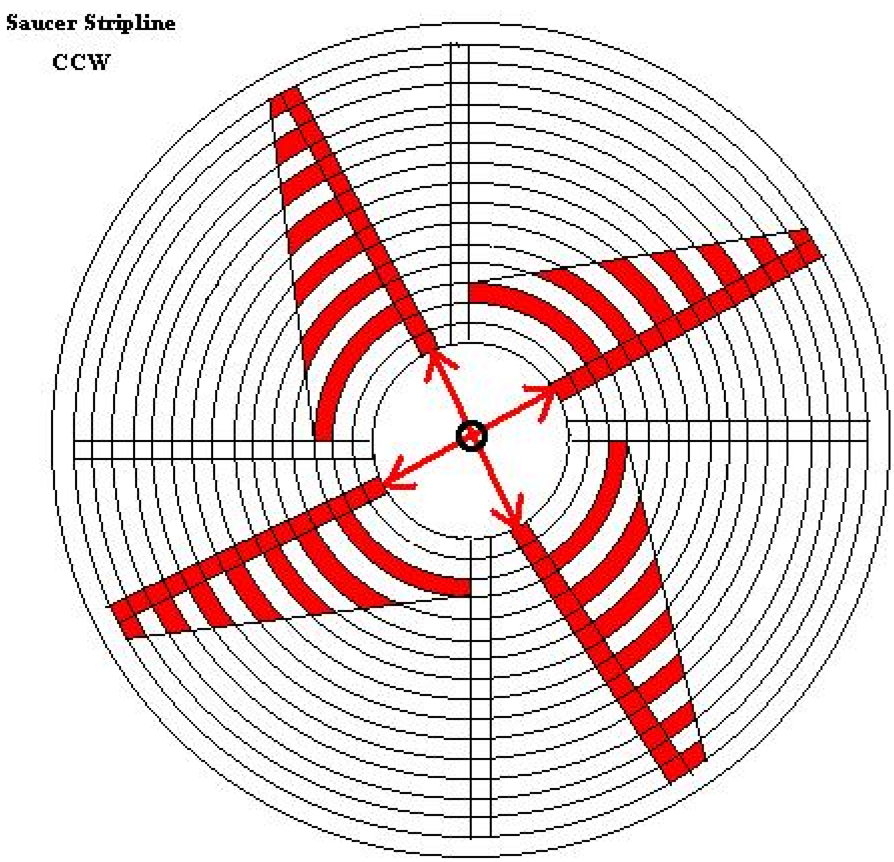
Local Space	**Non-Local Space**	**Local Space**
A Vector	**Force Constant**	**A Vector**

$$F_{EG} = \frac{\mu_o \cdot i_{LM} \cdot \lambda_{LM}}{4 \cdot \pi \cdot R_{n1}} \cdot \left(\frac{i_{LM} \cdot \lambda_{LM}}{l_q} \cdot \mu_o \cdot \frac{i_{LM} \cdot \lambda_{LM}}{l_q} \right) \cdot \frac{\mu_o \cdot i_{LM} \cdot \lambda_{LM}}{4 \cdot \pi \cdot R_{n1}} \qquad 93)$$

The force constant f_{FQK} times the quantum electrogravitational wavelength λ_{LM} yields energy which divided by plank's constant will yield f_{FQK}.

Below is shown a possible stripline configuration for conducting an energy pulse around the surface of a craft utilizing an elecrogravitational geometry that involves changing rotation θ as well as a changing radius.

Figure 1



Angular velocity is defined by physics as the amount of change in degrees θ of a rotating object per unit time. Looking at the above drawing, we see that as the energy impulse moves outwards along the main feeder line, the delay built into the line causes the impulse to arrive at each circumferential line at later times in proportion to how far out on the radius feed line the energy pulse travels. It is immediately apparent that the farther out the main feed line energy travels, the further behind in circumferential rotation each rotational stripline energy pulse is.

Then the above drawing satisfies the requirement of having the rotational field change in angular momentum with a change of radius of the field.

From page 11 above, the requirement for the statement above is restated mathematically as:

$$\Delta\text{Angular Momentum} = \quad \Delta JEB_{\theta} = m \cdot v \cdot \Delta r \quad \text{where,} \quad v = \theta_{rad} \cdot \Delta f \cdot \Delta r \quad \text{and v is constant.} \tag{94}$$

Since we are considering the degrees per step as related directly to one radian, then the formula that states the case for the related angular velocity may be stated below as:

$$\Delta\text{AngularVelocity}_{\omega} = \frac{\theta_{rad}}{\Delta t} \qquad \text{where,} \qquad \Delta t = \frac{1}{\Delta f} \tag{95}$$

Then the angular velocity must decrease as the radius increases for a constant linear velocity along the stripline circumference.

$$v = \Delta\text{AngularVelocity}_{\omega} \cdot \Delta r \tag{96}$$

The stripline velocity is fixed by the geometry of the stripline as well as the related degrees of rotation per increasing radius step. Equation 44 above also states the case for a changing angular momentum having to do with the change in orbital number n. This suggests that if a coherent atomic lattice experiences a simultaneous change in energy state from a higher n to a lower n such as for a laser action, an unexpected electrogravitational interaction may result as well as the expected energy release in the form of a photon. This could be tested by firing the laser up and then down and carefully measuring the reaction force to see if a difference appeared in the reaction force overall.

Conclusion:
The case for electrogravitation has been made by this paper (as well as numerous others by myself) as being caused by an interaction via a non-local energy space causing a double ended reaction that is measured in local space. Since this does not conform to be within the accepted limits of present day thinking, it has not been well received by academia at large. Perhaps it is better for now that it is not being taken seriously since I may not be writing this at the moment. Time will indeed tell whether I am right or wrong in my approach to the riddle of what the action of gravity really is. When Einstein first encountered a compass, he marveled at the action. He may have found the correct answer to what gravity is if he had not encountered and became a part of the scientific community at large.

Jerry E. Bayles

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