

Infinite Energy Field

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This paper presents the possibility that the so-called static electric field *is not* static. Further, that the field is evolving as well as self sustaining. Also, if it is considered as an open and thus not terminated field, it approaches an infinite energy over a nearly infinite volume and time of expansion.

This requires an input energy from what I call "Energy Space". This is the same Energy Space that created our universe during the Big Bang primordial creation event. In the concept presented in this paper, all electrons and protons are still connected to that energy source through their centers of origin. The mass of the electron and proton is embodied in their standing wave geometry while the dynamic field moves outwards in discrete steps. Each step distance is a fundamental length equal to the classic Compton radius derived from the particle's rest mass energy.

Shells of energy will be formed at a rate of expansion equal to the speed of light outwards from the charge-particle, if the field is unterminated. In this thought scenario, a particle is suddenly placed into an otherwise empty and nearly infinite volume of space vacuum. Initially, a shell of field energy forms around the particle equal to its rest mass energy. This requires a time such that the Plank frequency times the Compton wavelength is equal to the speed of light. When completed, instantly, the next shell begins to form wherein the same frequency times wavelength is equal to the speed of light constant.

Each shell will have a total energy equal to the particle rest mass energy while the energy density will be decreasing due to the increasing volume of each shell. Thus the field is quantized into layers of energy, much like an onion is built outwards in layers that form individual shells. It will be developed mathematically in the main body of this paper how such a construction may exist and yet be measured by conventional methods to arrive at what is incorrectly considered by contemporary science as a static field.

There is no such thing as a static field if force can be associated with the field's existence. That is, a charge-field is not built as a one-shot event. It continues to flow or it does not exist at all. If it is terminated by a conjugate field, it still *flows* from source to receptor and the result is force. It is a steady state flow if the charges are not moved relative to each other, but the field **is** flowing at all times.

The return for the field is back into energy space. I envision the actual electron and proton as being in the shape of a standing wave field that forms a torus. Then the field must also build into the same shape. The major axis of each torus is expanding as the shells form outwards while the minor radius is fixed at the Compton radius which is also the connection to energy space. In fact, it will be developed that the necessary volume will utilize the volume of a torus instead of the volume associated with the classical geometric parameters of the electrostatic field. The connection to the Golden Ratio will be the result.

It may be argued that since energy cannot be created or destroyed, what I am advocating is scientific heresy. My counter argument is that my concept above does not involve a closed system. The creation of the universe was not the result of a closed system energy event and neither is my concept of field as presented above and below. In fact, I further propose that once established as a quantum shell of energy, the shell engenders the next shell and so on. This will allow for no voids, if for example, the electron or proton is accelerated from its state of constant velocity. The old field will radiate away as a photon while a new field is formed relative to the new position of the electron or proton. The energy relative to the old field is radiated away but measurement indicates this does not destroy the electron's or proton's ability to engender a new field. The action causing the charge displacement cannot directly create a photon.

The photon is herein viewed a loop of field energy that transfers its energy in alternate half-cycles between negative and positive energy space, never gaining or losing energy overall. Further, it completes each cycle at a time related to its Plank energy and then jumps in quantum fashion instantly to its next quantum wavelength position. Thus a photon is a field of quanta and is not really a wave. However, it can exist orthogonally to its direction instantly along a line 90 degrees to its direction of travel so that in a two slit experiment, it will appear to go through two slits at once, thus being interpreted as a wave action. This applies to particles in general and not just photons by the DeBroglie wave mechanics principle.

The required parameters of calculation in S.I. units are:

$$l_q := 2.817940920 \cdot 10^{-15} \cdot \text{m} \quad q_0 := 1.602177330 \cdot 10^{-19} \cdot \text{coul} \quad \epsilon_0 := 8.854187817 \cdot 10^{-12} \cdot \frac{\text{farad}}{\text{m}}$$

$$c := 2.997924580 \cdot 10^8 \cdot \frac{\text{m}}{\text{sec}} \quad m_e := 9.109389700 \cdot 10^{-31} \cdot \text{kg} \quad \alpha := 7.297353080 \cdot 10^{-03}$$

The geneses of the first 10 field layers is established as: $n := 1, 2.. 10$

$$E_p := \frac{q_0^2}{16 \cdot \epsilon_0 \cdot l_q} \cdot \frac{4}{\pi} \quad \Delta \text{Vol}(n) := \left[2 \cdot \pi^2 \cdot [(n) \cdot l_q]^3 \right] - \left[2 \cdot \pi^2 \cdot [(n-1) \cdot l_q]^3 \right] \quad \Delta E_d(n) := \frac{E_p}{\Delta \text{Vol}(n)} \quad 1)$$

The product of the shell volume times the shell energy density is a constant equal to E_p above.

$$\Delta \text{ VOLUME} \quad \times \quad \Delta \text{ ENERGY DENSITY} = \quad \text{SHELL ENERGY CONSTANT, } E_p$$

$\Delta \text{Vol}(n) =$	$\Delta E_d(n) =$	$\Delta \text{Vol}(n) \cdot \Delta E_d(n) =$
$4.4169795836 \cdot 10^{-43} \text{ m}^3$	$1.8535542232 \cdot 10^{29} \frac{\text{joule}}{\text{m}^3}$	$8.1871111609 \cdot 10^{-14} \text{ joule}$
$3.0918857085 \cdot 10^{-42} \text{ m}^3$	$2.6479346045 \cdot 10^{28} \frac{\text{joule}}{\text{m}^3}$	$8.1871111609 \cdot 10^{-14} \text{ joule}$
$8.3922612088 \cdot 10^{-42} \text{ m}^3$	$9.755548543 \cdot 10^{27} \frac{\text{joule}}{\text{m}^3}$	$8.1871111609 \cdot 10^{-14} \text{ joule}$
$1.6342824459 \cdot 10^{-41} \text{ m}^3$	$5.0096060086 \cdot 10^{27} \frac{\text{joule}}{\text{m}^3}$	$8.1871111609 \cdot 10^{-14} \text{ joule}$
$2.694357546 \cdot 10^{-41} \text{ m}^3$	$3.0386134806 \cdot 10^{27} \frac{\text{joule}}{\text{m}^3}$	$8.1871111609 \cdot 10^{-14} \text{ joule}$
$4.0194514211 \cdot 10^{-41} \text{ m}^3$	$2.0368727727 \cdot 10^{27} \frac{\text{joule}}{\text{m}^3}$	$8.1871111609 \cdot 10^{-14} \text{ joule}$
$5.6095640712 \cdot 10^{-41} \text{ m}^3$	$1.4594915143 \cdot 10^{27} \frac{\text{joule}}{\text{m}^3}$	$8.1871111609 \cdot 10^{-14} \text{ joule}$
$7.4646954963 \cdot 10^{-41} \text{ m}^3$	$1.0967776469 \cdot 10^{27} \frac{\text{joule}}{\text{m}^3}$	$8.1871111609 \cdot 10^{-14} \text{ joule}$
$9.5848456964 \cdot 10^{-41} \text{ m}^3$	$8.5417245308 \cdot 10^{26} \frac{\text{joule}}{\text{m}^3}$	$8.1871111609 \cdot 10^{-14} \text{ joule}$
$1.1970014672 \cdot 10^{-40} \text{ m}^3$	$6.8396834804 \cdot 10^{26} \frac{\text{joule}}{\text{m}^3}$	$8.1871111609 \cdot 10^{-14} \text{ joule}$

What will be developed is that the energy measured at increasing distances from the source falls off as $1/r$ which agrees with classic physics measurements. However, the quantized method will arrive at the same conclusion by taking into account a variable area torus interface that will yield the same results as the classic method utilizing a constant area probe at increasing distances.

Thus, the field is quantized into shells of constant energy, each being a width equal to twice the classic radius of the electron. This relates to the Heisenberg expression $\Delta E \times \Delta T = h$ so that the field frequency related to the rest mass energy of the electron does not degenerate with distance. For a so called static field, a degenerate frequency or energy field by $\Delta E = h\Delta f$ would amount to destruction of energy which is not allowed since energy in a closed system (or established shell in this case) cannot be created or destroyed.

In the classic sense, since a *continuous* field of decreasing energy per unit volume with increasing distance is assumed, this would amount to a decreasing amount of energy in a linear fashion and thus radiation of the field in the form of $\Delta E = h\Delta f$.

It is therefore likely that in the quantized theory presented herein, if we consider the field that reaches outwards from a single electron into an infinitely large untermiated space vacuum, where also the electron is suddenly created in that same isolated space, the total field created over time approaches an infinite energy. Finally, it is also my proposal that the energy that creates the electron and proton field via the geometry of the related torus comes from the same infinite energy space that created the original Big Bang.

In this work, Δ torus volume divided into energy potential yields Δ energy density as shown below:

$$\frac{\left(\frac{q_o^2}{16 \cdot \epsilon_o \cdot l_q}\right) \cdot \left(\frac{4}{\pi}\right)}{\left(2 \cdot \pi^2 \cdot l_q^3\right)} \text{ simplifies to } \frac{1}{8} \cdot \frac{q_o^2}{\left[\pi^3 \cdot \left(\epsilon_o \cdot l_q^4\right)\right]} \text{ equals energy density } \frac{q_o^2}{\left[8 \cdot \pi^3 \cdot \left(\epsilon_o \cdot l_q^4\right)\right]} \quad 3)$$

A variable *major radius* torus ring is formed as shown in the below equation. The area of a torus is given as 4 times π^2 times the variable major radius $n(l_q)$ times the minor radius l_q . The variable (n) increases the classic electron radius by whole integer steps to form the increasing major radius. This increases the major (circular) radius of the energy torus accordingly. The constant $4/\pi$ is shown as a part of the total particle/field geometry and also yields a fundamental angle related to the rise of the apothem of the Great Pyramid at Giza.

Ionized Hydrogen would build an energy field, via the proton torus geometry connection to energy space, greater than the atomic form would allow in the closely terminated atomic form. When the proton recaptures the electron, a great deal of energy stored in the expanded field would suddenly be released.

Below is shown a comparison of the conventional expectation field energy measurement $\Delta E_p(n)$ compared to the area gated form $\Psi_e(n)$ involving the added terms related to the square root of the golden ration $(4/\pi)$ and the increasing major torus radius $(n \cdot l_q)$ multiplied by the electron classic minor radius (l_q) .

$$\Delta E_p(n) := \frac{q_o^2}{16 \cdot \epsilon_o \cdot (n \cdot l_q)} \cdot \frac{4}{\pi} \quad \Psi_e(n) := \Delta Vol(n) \cdot \Delta E_d(n) \cdot \left[\frac{\left(\frac{4}{\pi}\right) \cdot \pi^2 \cdot l_q^2}{\left(\frac{4}{\pi}\right) \cdot \pi^2 \cdot (n \cdot l_q) \cdot (l_q)} \right] \quad 4)$$

$\Delta E_p(n) =$

8.1871111609.10 ⁻¹⁴	joule
4.0935555804.10 ⁻¹⁴	
2.7290370536.10 ⁻¹⁴	
2.0467777902.10 ⁻¹⁴	
1.6374222322.10 ⁻¹⁴	
1.3645185268.10 ⁻¹⁴	
1.1695873087.10 ⁻¹⁴	
1.0233888951.10 ⁻¹⁴	
9.0967901787.10 ⁻¹⁵	
8.1871111609.10 ⁻¹⁵	

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1.1695873087.10 ⁻¹⁴	
1.0233888951.10 ⁻¹⁴	
9.0967901787.10 ⁻¹⁵	
8.1871111609.10 ⁻¹⁵	

The above equation does not cancel like terms to illustrate the possible geometry of the field related to the golden ratio. The terms inside of the above equation's bracket derive a ratio of the increasing torus area in the denominator divided into a fixed probe area corresponding to the fixed area of a measurement of the field.

The first 1000 classic (l_q) electron quantum radii field layers will yield the total summation of energy:

$$n := 1, 2 .. 1000 \quad \Psi_{pot_e}(n) := \Delta Vol(n) \cdot \Delta E_d(n) \quad \sum_n \Psi_{pot_e}(n) = 8.1871111609 \times 10^{-11} \text{ joule} \quad 5)$$

$$\text{Note that the electron rest mass energy is given as: } E_e := m_e \cdot c^2 \quad E_e = 8.187111168 \times 10^{-14} \text{ joule} \quad 6)$$

Obviously, the field cannot be static, as the above analysis shows.

Now let: $h := 6.626075500 \cdot 10^{-34}$ joule·sec and $E_{d\text{torus}} := \frac{q_0^2}{\left[8 \cdot \pi^3 \cdot (\epsilon_0 \cdot l_q^4)\right]}$ 7)

Energy density times the velocity of light yields the Poynting vector power of:

$S := E_{d\text{torus}} \cdot c \cdot \alpha$ or, $S = 4.0550046645 \times 10^{35} \frac{\text{watt}}{\text{m}^2}$ (Alpha (α) reduces c to the velocity of the n1 orbital of Hydrogen.) 8)

Let the Compton electron 'time' be stated as: $t_e := \frac{h}{m_e \cdot c^2}$ $t_e = 8.0933009996 \times 10^{-21}$ sec 9)

Finally, allowing for a **time x area gate** to be applied to the tremendous Poynting vector power above:

$E := (S) \cdot t_e \cdot \pi \cdot l_q^2$ $E = 8.1871112279 \times 10^{-14}$ joule = **electron rest mass energy.** 10)

The utilization of t_e signifies that the electron *pulses* its energy into expanding and thus sequential field layers at the rate of the inverse of the time of t_e . This approximates an onion skin appearance to the field if an onion were shaped like a torus.

The torus shape of the field and of the source electron and proton is arrived at as shown below.

The contemporary or classic form of the electron field arrives at an energy density equation of:

$E_d = \frac{1}{2} \cdot \epsilon_0 \cdot E_v^2$ where E_v is the field in volts/meter: $E_v = \frac{q_0}{4 \cdot \pi \cdot \epsilon_0 \cdot r^2}$ 11)

Then: $E_d = \frac{1}{2} \cdot \epsilon_0 \cdot \left(\frac{q_0}{4 \cdot \pi \cdot \epsilon_0 \cdot r^2}\right)^2$ simplifies to $E_d = \frac{q_0^2}{32 \cdot \pi^2 \cdot \epsilon_0 \cdot r^4}$ (= Classic volume.) 12)

$\frac{32 \cdot \pi^2 \cdot \epsilon_0 \cdot l_q^4}{8 \cdot \pi^3 \cdot (\epsilon_0 \cdot l_q^4)}$ simplifies to: $\frac{4}{\pi}$ **This is very close to the square root of the golden ratio which is ubiquitous in the design and growth of natural processes.** 13)

The $4/\pi$ form for the volume ratios of the classic field to the quantum torus field reveals a field that is the basis of unlimited energy by revealing an *evolving* quantum torus structured field instead of a static field.

Therefore, the following is postulated: The universe is not static, since it is expanding. It is growing, or evolving. As a result, it is not a closed system. It has been said, "As above, so below!" Then it should be no surprise to find that the basic particles such as the electron and proton, are not separate from the same energy field that not only created all matter but drives the universe to expand as well.

This takes us all the way back to my first publication involving my electrogravitational field theory. This work is titled "*Electrogravitation As A Unified Field Theory*," Chapter 1, specifically, pp 8 through 9. Therein I developed the torus model of the electron and the math that supported that conclusion. This work is available for free downloading in Adobe Acrobat PDF format at: <http://www.electrogravity.com>.

For the case of the magnetic field, the electron or proton is first considered as moving along a circular (helix) path in that infinite space vacuum mentioned above. Its rate of inline progress related to its distance of rotation is connected to the $4/\pi$ ratio as outlined above. It is continually creating a magnetic field relative to its charge and velocity. No energy is applied to the electron to aid its motion since it began its existence and yet, the magnetic field is building outwards along the path of the moving charge. It is obvious that this cannot be a static energy scenario even for the simple case of linear non-accelerated motion. As the electron or proton continues to build the field, the electron or proton does not lose any rest mass or charge in the process, but simply continues to generate more magnetic and electric field layers as it moves along.

Now if we accelerate the isolated charge-particle, the field forms a photon and radiates away. Yet, the charge-particle's rest mass energy does not cease to exist or even in the least diminish. Further, the charge associated with that particle does still exist and it also continues to create more field energy without itself being in the least diminished. The 'push' that accelerated the charge created a rift in the field that will be self-healing. Finally, it is a physical force apart from the rest mass or charge of the particle itself.

Thus, we must conclude that considering a charge field as being 'static' is incorrect. Therefore, a field associated with charge is most likely a *dynamic energy*, capable of *evolving over time*. As a result, the field associated with particle charge is supported from the same energy space that created the universe.

Even energy space may be viewed as a torus structure. In fact, it has been suggested by some that our universe may also be a torus structure.

If an observer is standing inside of a torus so that the observer is looking along the axis of the torus, we can imagine that the rotation of the torus wall is moving clockwise as the observer sees it. Now, if the observer is turned 180 degrees in the opposite direction, the wall of the torus will appear to be moving counterclockwise. Then we can ascribe these two different viewpoints as not only positive and negative time but also positive and negative energy, respectively. As a result, the same energy space in the form of a torus can have the economy of exhibiting either positive and negative energy (and time) depending on the orientation of the observer when entering that space.

Then, field energy may be considered as a connection to torus energy space via the center of the electron or proton, wherein a single half cycle is allowed, either positive or negative according to the direction of the connection inside of the torus. A photon however, alternates in successive half cycles between 'positive' and 'negative' energy space by continually flipping its orientation in the torus geometry of energy space. The net photon energy yields no rest mass energy. However, at any instant, energy related to quantum frequency by $E = hf$ must exist. Charge, on the other hand, is associated with rest mass energy since the field is monopolar in energy sign and time with respect to direction of orientation along the axis in torus energy space. The direction of this torus axis must be considered as dependent on the spin of the charge-particle and as a result, the possible orientations in a quantum sense must be finite.

A half-cycle is equal to π radians = 180 degrees and the angle of rise of the great Pyramid at Giza is equal to the $\text{atan}(4/\pi)$. It has been suggested by some investigators that the Great Pyramid holds a secret that is key to the construct of the universe and also that the Great Pyramid is perhaps as old as 12,000 years or more. The Sphinx may also fall into this category of being far older than contemporary research is able to admit.

The above conceptual view of so-called static fields actually being dynamic and capable of growing to infinite energies in an uninterminated scenario is stunningly different than contemporary science will allow us to believe. More on the Great Pyramid later.

If we are to believe that the entire universe was suddenly created from an incomprehensible amount of energy, it is natural to conceive of matter still being connected to that same beginning source, albeit in a much more subtle way. That concept demands growth of structure small as well as large and thus the field energy cannot 'rest' in a static form, and if allowed to grow uninterminated, will grow to infinite proportions according to the summation of increasing layers of energy over all time. Contemporary science's measurement of the field amounts to a blind man placing a stick into a steadily moving current of water. He will say, "here is a force! I can feel it against my measuring stick!" He will not see the steady movement of the river. He may rationally conclude that the force must be a 'static' force if it does not change with time.

The Quantum Magnetic Field:

It is developed below that the quantum magnetic field related to unchanging velocity of a charge in open space is far weaker than the corresponding electric field as developed above. The energy density is correspondingly much less for the magnetic field than for the electric field per unit of volume. For a photon, it is established that the energy density for both the electric and magnetic fields are equal. However, this is for the case of a photon or electromagnetic wave wherein the fields were born of accelerating charges and thus give rise to sympathetic and equal energy density field structures.

The case for the isolated and non-accelerated charge magnetic field genesis is given below. The magnetic expression is based on the least quantum velocity related to what I call the least quantum electrogravitational energy equal to 10.03224805 Hz This frequency and energy is fundamental to my theory of electrogravitational action Firstly, the necessary parameters for calculation are stated:

$$f_{LM} := 1.003224805 \cdot 10^{01} \cdot \text{Hz} \quad \mu_o := 4 \cdot \pi \cdot 10^{-07} \cdot \frac{\text{henry}}{\text{m}} \quad \mu_o = 1.2566370614 \times 10^{-6} \frac{\text{henry}}{\text{m}} \quad (14)$$

$$V_{LM} := \sqrt{\frac{h \cdot f_{LM}}{m_e}} \quad \text{or,} \quad V_{LM} = 0.0854245461 \text{ m sec}^{-1} \quad (15)$$

The potential magnetic energy related to V_{LM} at the classic radius of the electron is:

$$E_{LM} := \left(\frac{\mu_o \cdot q_o^2}{4 \cdot \pi \cdot l_q} \right) \cdot (V_{LM}^2) \quad E_{LM} = 6.6474432951 \times 10^{-33} \text{ joule} \quad (16)$$

Next we determine the magnetic flux energy density \mathbf{B} at the classic radius as follows:

First, the E_{LM} energy above is set equal to the equation that includes \mathbf{B}_{LM} at the same classic radius. Then Mathcad's symbolic equation solver is utilized to find the expression that solves for the magnetic flux density \mathbf{B} . We will then utilize the usual basic equation $E_d = B^2/2\mu_o$ to find the magnetic field energy density.

$$\left(\frac{\mu_o \cdot q_o^2}{4 \cdot \pi \cdot l_q} \right) \cdot (V_{LM}^2) = (q_o) \cdot (V_{LM}) \cdot (B_{LM}) \cdot (l_q) \quad \text{has solution(s):} \quad \mu_o \cdot \frac{q_o}{(4 \cdot \pi \cdot l_q^2)} \cdot V_{LM} \quad (17)$$

[Equal to force x distance = **expended** energy]

Finally:

$$B_{LM} := \mu_o \cdot \frac{q_o}{(4 \cdot \pi \cdot l_q^2)} \cdot V_{LM} \quad B_{LM} = 172.3572258209 \text{ tesla} \quad (18)$$

where, $1 \cdot \text{tesla} = 1 \frac{\text{weber}}{\text{m}^2}$
Also: $1 \cdot \text{tesla} = 1 \frac{\text{volt} \cdot \text{sec}}{\text{m}^2}$

Comparing the above magnetic energy density to the electric field energy density:

Magnetic Energy Density	Electric Energy Density
$E_{m_d} := \frac{B_{LM}^2}{2 \cdot \mu_o}$	$E_{d_{torus}} = 1.8535542232 \times 10^{29} \frac{\text{joule}}{\text{m}^3}$
$E_{m_d} = 1.1820045025 \times 10^{10} \frac{\text{joule}}{\text{m}^3}$	$E_{d_{torus}} = 1.8535542232 \times 10^{29} \frac{\text{joule}}{\text{m}^3}$

(19)

It is immediately apparent that the magnetic field that arises from the least quantum electrogravitational magnetic field is much weaker than the quantum electric field when non-accelerated charge motion is concerned. This least quantum magnetic field is also associated with the observable gravitational reaction as well. Note that V_{LM} is a least quantum constant angular 'velocity' and is therefore related to constant angular momentum in the quantum sense as in the Heisenberg expression $\mathbf{mvr} = \mathbf{inh}/2\pi$.

The volume is solved for below related to the magnetic field potential energy divided by the magnetic field energy density as shown above.

$$\text{Volume} = \frac{E_{LM}}{E_{m_d}} \quad \text{Then:} \quad \frac{\left[\left(\frac{\mu_o \cdot q_o^2}{4 \cdot \pi \cdot l_q} \right) \cdot (V_{LM}^2) \right]}{\left[\frac{\mu_o \cdot \frac{q_o}{(4 \cdot \pi \cdot l_q^2)} \cdot V_{LM}}{2 \cdot \mu_o} \right]^2} = E_{LM} \quad \text{simplifies to} \quad (8 \cdot \pi \cdot l_q^3) \quad (20)$$

$$= \frac{B_{LM}^2}{2 \cdot \mu_o}$$

The ratio of the above volume to the torus volume expression is:

$$\frac{8 \cdot \pi \cdot l_q^3}{2 \cdot \pi^2 \cdot l_q^3} \quad \text{simplifies to} \quad \frac{4}{\pi} \quad (21)$$

If we return to the contemporary classical form of expressing electric field energy potential divided by energy field density we have:

$$\frac{\left(\frac{q_o^2}{4 \cdot \pi \cdot \epsilon_o \cdot l_q} \right)}{\left(\frac{q_o^2}{32 \cdot \pi^2 \cdot \epsilon_o \cdot l_q^4} \right)} \quad \text{Electric Field Energy Potential} \quad \text{simplifies to} \quad (8 \cdot \pi \cdot l_q^3) \quad \text{which is the same volume we arrived at for the magnetic field volume above related to its magnetic energy potential divided by its energy density.} \quad (22)$$

(Non-torus field)

The reason the beginning analysis utilized the volume of a torus is so that equation (10) above would arrive at the correct energy for the rest mass energy of the electron. If the strict classical non-torus form of volume is used, the electric field energy will be lower than required to arrive at the correct rest mass energy for the electron by $1/(4/\pi)$. This was the fundamental reason why the electron was ascribed the geometry of a torus in my beginning as well as present field analysis. Utilizing the torus energy density, the torus volume is shown for the electric field as shown below:

$$\frac{\left(\frac{q_o^2}{4 \cdot \pi \cdot \epsilon_o \cdot l_q} \right)}{\left[\frac{q_o^2}{8 \cdot \pi^3 \cdot (\epsilon_o \cdot l_q^4)} \right]} \quad \text{simplifies to} \quad 2 \cdot \pi^2 \cdot l_q^3 \quad \text{This is the area of a circle times a circumference through the axis of rotation of that same circle.} \quad (23)$$

Then we may find the energy density expression that relates to the quantum magnetic field torus as we did for the electric field above.

$$\frac{\left(\frac{\mu_o \cdot q_o^2}{4 \cdot \pi \cdot l_q}\right) \cdot (V_{LM}^2)}{2 \cdot \pi^2 \cdot l_q^3} \text{ simplifies to } \frac{\mu_o \cdot q_o^2}{(8 \cdot \pi^3 \cdot l_q^4)} \cdot V_{LM}^2 = 1.5049748746 \times 10^{10} \frac{\text{joule}}{\text{m}^3} \quad (24)$$

which is similar to the electric field energy density of equation (3) above of:
$$\frac{q_o^2}{[8 \cdot \pi^3 \cdot (\epsilon_o \cdot l_q^4)]} \quad (25)$$

Then let the torus form of energy density be stated below as:

$$\text{E}_{\text{mtd}} := \frac{\mu_o \cdot q_o^2}{(8 \cdot \pi^3 \cdot l_q^4)} \cdot V_{LM}^2 \quad \text{or,} \quad \text{E}_{\text{mtd}} = 1.5049748746 \times 10^{10} \frac{\text{joule}}{\text{m}^3} \quad (26)$$

The ratio of the torus electric field energy density to the torus magnetic field energy density is:

$$\frac{\left[\frac{q_o^2}{[8 \cdot \pi^3 \cdot (\epsilon_o \cdot l_q^4)]} \right]}{\left[\frac{\mu_o \cdot q_o^2}{(8 \cdot \pi^3 \cdot l_q^4)} \cdot V_{LM}^2 \right]} \text{ Electric Field Torus Energy Density} \text{ simplifies to } \frac{1}{[\epsilon_o \cdot (\mu_o \cdot V_{LM}^2)]} = 1.2316180518 \times 10^{19} \quad (27)$$

Magnetic Field Torus Energy Density

which is a 19 magnitudes number as the ratio of electric to magnetic field torus energy density.

Multiplying the inverse of the above ratio ratio by the square of the speed of light and taking the square root of the result, we have:

$$\sqrt{\left[\frac{1}{[\epsilon_o \cdot (\mu_o \cdot V_{LM}^2)]} \right]^{-1}} \cdot c^2 = 0.0854245461 \text{ m sec}^{-1} \quad \text{which is the least quantum magnetic and electrogravitational velocity as stated in the beginning.} \quad (28)$$

$$\text{where:} \quad V_{LM} = 0.0854245461 \text{ m sec}^{-1}$$

It turns out that the least quantum magnetic field energy related to the electrogravitational (gravitational) action is at a temperature in degrees Kelvin in what is called the Bose-Einstein condensate range where very weird quantum things happen such as Helium forming geysers and climbing up the sides of its container. Also, the particles at this temperature act as one large particle sharing the same quantum wavelength.

Solving for the temperature T in degrees Kelvin related to the least quantum magnetic energy:

$$E_{LM} = \frac{3}{2} \cdot k \cdot T \quad \text{has solution(s)} \quad \frac{2}{3} \cdot \frac{E_{LM}}{k} \quad \text{where,} \quad k := 1.380658000 \cdot 10^{-23} \cdot \frac{\text{joule}}{\text{K}} \quad (29)$$

$$\text{Then: } T_{LM} := \frac{2}{3} \cdot \frac{E_{LM}}{k} \quad \text{or,} \quad T_{LM} = 3.209794796 \times 10^{-10} \text{ K} = 321 \text{ pico Kelvins.} \quad (30)$$

A Helsinki group reportedly has recently reached the vicinity of 100 pico Kelvins. Electrogravitational effects may quite likely appear at or near the above temperature since it represents the least quantum electrogravitational energy posited not only by this paper but others as presented by myself previously at the above named website. This includes geysering of Helium as well as crawling up and out of the container. Also, the repulsion of magnetic fields may be expected if the magnetic field is of the open form and not part of a torus geometry which is the closed standing wave field in the superfluid condensate temperature range. It is even possible that a least quantum phonon energy less than $E_{LM} = m \times V_{LM}^2$ may shed V_{LM} and convert to mass only since V_{LM} is the absolute lower limit of angular momentum.

As in the manner of equations (8) and (10) above, we will solve for the Poynting vector related to the magnetic energy density $\times c$. Area \times time yields an energy just below the electrogravitational energy, E_{LM} .

$$S_{LM} := E_{md} \cdot c \cdot \alpha \quad S_{LM} = 3.2924206157 \times 10^{16} \frac{\text{watt}}{\text{m}^2} \quad (31)$$

$$\text{Area } \times \text{ time gate of } S_{LM}: \quad E_{SLM} := (S_{LM}) \cdot t_e \cdot \pi \cdot l_q^2 \quad E_{SLM} = 6.6474433496 \times 10^{-33} \text{ joule} \quad (32)$$

$$\text{Finally: } \frac{E_{LM}}{E_{SLM}} = 0.9999999918 \quad (33)$$

This may also be the secret as to why the Great Pyramid has a $4/\pi$ ratio of the height to $1/2$ the length of the base. It is suggested that it may be of interest to measure the energy available from a good conductor stretched from the base of the pyramid to its apex. Especially a superconductor.

The electrogravitational force between two electrons separated by the first energy shell ($n1$) radius of the Bohr H1 atom is given as:

$$F_{EG} := \left(\frac{E_{SLM}}{l_q} \cdot \alpha^2 \right) \cdot \mu_o \cdot \left(\frac{E_{SLM}}{l_q} \cdot \alpha^2 \right) \quad F_{EG} = 1.9829731165 \times 10^{-50} \text{ newton} \cdot \frac{\text{henry}}{\text{m}} \cdot \text{newton} \quad (34)$$

The above equation shows that E_{SLM} is equal to E_{LM} . This implies that the gravitational frequency that actually shows up to an observer is extremely close to what is called the Schuman frequency between 7.83 and 8.00 Hz. This is perhaps incorrectly *assumed* to be electrical/magnetic resonance between the ionosphere and the Earth but is actually the electrogravitational frequency f_{LM} divided by $4/\pi$.

$$f_{ESLM} := \frac{E_{SLM}}{h} \quad \text{or,} \quad f_{ESLM} \cdot \left(\frac{4}{\pi} \right)^{-1} = 7.8793092503 \text{ Hz} \quad f_{LM} \cdot \left(\frac{4}{\pi} \right)^{-1} = 7.8793091932 \text{ Hz} \quad (35)$$

The product of $4/\pi$ times $4/\pi$ yields a number extremely close to what is called the Golden Ratio. Then it is suggested by above result that the action of gravity embodies the structure of the geometry connected to the ubiquitous Golden Ratio found in most all processes involving natural growth.

Eq. 19 above is the open field in deference to a standing wave torus structure connected with the quantum ohm which does not radiate electromagnetically and is considered to be a closed field. The open field is connected to the free space resistance which is connected to electromagnetic radiation.

$$S_{rad} := E_{md} \cdot c \cdot \alpha \quad S_{rad} = 2.5858611047 \times 10^{16} \frac{\text{watt}}{\text{m}^2} \quad (36)$$

$$E_{\text{Srad}} := (S_{\text{rad}}) \cdot t_e \cdot \pi \cdot l_q^2 \quad E_{\text{Srad}} = 5.220889798 \times 10^{-33} \text{ joule} \quad (37)$$

$$f_{\text{Srad}} := \frac{E_{\text{Srad}}}{h} \quad f_{\text{Srad}} = 7.8793092503 \text{ Hz} \quad \text{Which is very close to the well known Schuman frequency that is considered to occur via an Earth-ionosphere resonance.} \quad (38)$$

Note that: $\frac{f_{\text{LM}}}{f_{\text{Srad}}} = 1.2732395355$ where f_{LM} is the closed volume torus (mass) and thus quantum ohm related frequency while f_{Srad} is the open free space resistance related frequency having no rest mass. (39)

where, $\frac{4}{\pi} = 1.2732395447$ (40)

Therefore, the 7.83 Hz Schuman frequency may be expected to exist on other planets having atmospheres that can be jostled about by the electrogravitational action as outlined above.

Finally, we would expect a different Schuman frequency cavity resonance according to the size of the cavity formed by the volume between the upper atmosphere and the ground mass. Also, due to the rise and fall of the distance between the upper atmosphere and the ground due to night and day solar effects, the frequency should shift accordingly. I have not heard of this as being the case here on Earth which suggests that if the Schuman frequency is fairly constant, therefore, it is not likely due to Earth to sky cavity resonance which should be affected by day to night heating variations affecting the volume and this frequency of resonance.

It has been presented above that our universe is not likely a closed system, and therefore, it is quite possibly the fields connected with the field generating particles are not isolated from the same energy that created the Big Bang in the very beginning.

Perhaps negative energy and dark matter arises from 'shed' least quantum angular velocity from least quantum angular momentum that in effect creates mass which later on acquires energy by being jostled about by other mass and energy.

In closing, I prefer to think of "static", when applied to fields, as being at the very least an unfortunate limiting concept to what is actually occurring.

Reference:

<http://www.electrogravity.com>

In The Beginning...

by

Addendum #1

Jerry E. Bayles

March 22, 2008

In the following addendum to the above paper, the beginning of the universe is examined in terms of the least Plank time and Plank radius. It will be developed through use of the Heisenberg uncertainty equation that the beginning energy is far less than what exists in the present day universe. As a result, the conclusion is that the energy input to the universe is ongoing and has been since the very beginning. This meshes with the concept of field growth potential of uninterminated charges yielding potentially an infinite energy increase over time. The universe therefore is continually seeding itself for unlimited growth.

This addendum analyzes the energy available in the primary wavelet associated with the Big Bang.

The universal gravitational constant is stated as: $G := 6.672590000 \cdot 10^{-11} \cdot \text{newton} \cdot \text{m}^2 \cdot \text{kg}^{-2}$

Next, the contemporary least quantum Plank time and radius is stated as:

$$\text{Plank radius: } r_{\text{plk}} := \sqrt{\frac{G \cdot h}{2 \cdot \pi \cdot c^3}} \quad r_{\text{plk}} = 1.6160486159 \times 10^{-35} \text{ m} \quad (41)$$

$$\text{Plank time: } t_{\text{plk}} := \sqrt{\frac{G \cdot h}{2 \cdot \pi \cdot c^5}} \quad t_{\text{plk}} = 5.3905579437 \times 10^{-44} \text{ sec} \quad (42)$$

The Plank energy related to the Plank time above via Heisenberg's uncertainty is:

$$E_{\text{plk}} := \frac{h}{t_{\text{plk}}} \quad E_{\text{plk}} = 1.2292003108 \times 10^{10} \text{ joule} \quad \text{The Plank torus energy density is:} \quad (43)$$

$$E_{\text{plkfld}} := \frac{q_0^2}{8 \cdot \pi^3 \cdot \epsilon_0 \cdot r_{\text{plk}}^4} \quad E_{\text{plkfld}} = 1.7136224501 \times 10^{110} \frac{\text{joule}}{\text{m}^3} \quad (44)$$

$$S_{\text{plkfld}} := E_{\text{plkfld}} \cdot c \cdot \alpha \quad S_{\text{plkfld}} = 3.7488771256 \times 10^{116} \text{ kg sec}^{-3} \quad (45)$$

The Poynting vector power S_{plkfld} may also be stated in the conventional units as shown below:

$$S_{\text{plkfld}} = 3.7488771256 \times 10^{116} \frac{\text{watt}}{\text{m}^2} \quad (46)$$

It is of interest that the Plank Poynting vector power may be expressed as mass per time cubed. Thus, it can be surmised that our three dimensional distances in space can be expressed as (velocity x time)³ which means that time is the fundamental parameter. Velocity then relates to the offset angle per observation interval of time. This approach naturally includes Einstein's so-called fourth dimension of time as applied to his Special Theory of Relativity.

The final Plank **rest mass** energy is:

$$E_{\text{plkmass}} := S_{\text{plkfld}} \cdot (\pi \cdot r_{\text{plk}}^2 \cdot t_{\text{plk}}) \quad E_{\text{plkmass}} = 1.6580347965 \times 10^4 \text{ joule} \quad (47)$$

$$\frac{E_{\text{plk}}}{E_{\text{plkmass}}} \cdot \left(\alpha^2 \cdot \frac{1}{4 \cdot \pi^2} \right) = 1.0000000091 \quad \text{Note the dimensional adjustment between the two energy fields involves the product of the square of the fine structure constant } \alpha \text{ as well as the } 1/(2\pi)^2 \text{ related to torus structure.} \quad (48)$$

$$\frac{E_{\text{plk}}}{q_0} = 7.6720615616 \times 10^{28} \text{ volt} \quad \frac{E_{\text{plkmass}}}{q_0} = 1.0348634732 \times 10^{23} \text{ volt} \quad (49)$$

I consider the beginning of the universe very similar to the Dirac delta function wherein at zero time, the amplitude is effectively infinite and at all other time, the amplitude is effectively zero. However, in reality, the Dirac delta function may be thought of as equal to the impulse function used in transient analysis. The weighted impulse function is similar to the Dirac delta function but does not involve infinities or zeros while still approaching the limits of zero time and infinite amplitude. As such, it is a practical engineering approach to real boundary limits. The narrow time and high energy of the beginning may be viewed as a wavelet that spreads over time and thus reduces also in amplitude correspondingly.

The age of the universe is set close to 13 billion years as shown below and then the total number of seconds is calculated based on that time duration. Then the age is slightly adjusted to yield exact results below equal to the expected Higgs energy as well as the related exact energy of the electron.

$$U_{age} := 12.834796457 \cdot 10^{09} \text{ years} \quad \text{Age in seconds:} \quad U_{agesec} := 3600 \cdot 24 \cdot 365.25 \cdot U_{age} \quad (50)$$

The above age is very close to 13 billion years but is accurate to 11 significant figures.

The degraded wavelet energy related to time spread is:

$$E_{plknow} := \frac{E_{plk}}{U_{agesec}} \quad E_{plknow} = 3.0347974369 \times 10^{-8} \text{ joule} \quad (51)$$

$$\text{GeV} := 1 \cdot 10^{09} \cdot \text{volt}$$

$$V_{plknow} := \frac{E_{plknow}}{q_0} \quad V_{plknow} = 189.4170751315 \text{ GeV} \quad (52)$$

It is predicted that the Higgs particle is very close to the above energy V_{plknow} in electron volts.

Please see the article, "*The Coming Revolutions In Particle Physics*", by Chris Quigg, p. 49 of Scientific American, Feb. 2008, pp 46-53 inclusive for an excellent overview of the Higgs particle and its expected energy. **Quote: "Electric charge: 0, Mass: Expected below 1 Tev, most likely between 114 and 192 GeV. Believed to endow W and Z bosons, quarks and leptons with mass."-Unquote.** P. 48 of the above reference.

Next, the energy of the electron in electron volts is arrived at by the same age reduction process applied to the field related plank energy in electron volts V_{plknow} from above:

$$\text{MeV} := 1 \cdot 10^{06} \cdot \text{volt}$$

$$V_{plknowmass} := V_{plknow} \cdot \left(\alpha^2 \cdot \frac{1}{4 \cdot \pi^2} \right) \cdot (2) \quad V_{plknowmass} = 0.5109990645 \text{ MeV} \quad (53)$$

$$\text{For the electron rest mass energy:} \quad V_e := \frac{m_e \cdot c^2}{q_0} \quad V_e = 0.5109990645 \text{ MeV} \quad (54)$$

The above strongly suggests that the energy of the Higgs and the electron and even the proton is decreasing as the universe ages. Meanwhile, the dark matter and negative energy is quite likely going to increase by the same time aging process. The total number of seconds in the age of the universe is huge and we would likely not notice the change of mass of the basic particles in the short time of the existence of our quantum science.

$$U_{agesec} = 4.0503537267 \times 10^{17} \text{ seconds.} \quad \text{A million years} = 7.79 \times 10^{-05} \text{ of the value at the left.} \quad (55)$$

There is a geometric number based on powers of π that when multiplied by the mass of the electron yields the mass of the proton to a almost exact correspondence.

The accepted S.I. value of the mass of the proton is: $m_p := 1.672623100 \cdot 10^{-27} \cdot \text{kg}$

$$m_{ep} := m_e \cdot (6 \cdot \pi^5) \quad \text{calculated mass} = \quad m_{ep} = 1.6725915387 \times 10^{-27} \text{ kg} \quad 56)$$

The slight difference may be in relativistic mass added to arrive at the measured value of m_p .

Since the original creation energy was much greater than the rest mass energy of a single proton, the rest of the missing energy may be found in the creation of similar particles, neglecting radiation energy from photons and the mass of electrons. Then, roughly speaking, the total number of protons in the universe that will add up to the total energy available during the creation event can be calculated as shown below.

$$p_{tot} := \frac{E_{plk}}{m_p \cdot c^2} \quad p_{tot} = 8.1767960442 \times 10^{19} \quad \begin{array}{l} \text{Total \# of protons having the rest mass} \\ \text{sum total energy of the primordial} \\ \text{creation event.} \end{array} \quad 57)$$

The mass related to the number of protons above is:

$$m_{ptot} := p_{tot} \cdot m_p \quad m_{ptot} = 1.3676697948 \times 10^{-7} \text{ kg} \quad 58)$$

Obviously, this is far less mass than we observe to exist in the present universe! Therefore, it is suggested by the above result that energy in the form of energy fields being converted to mass is and has been an ongoing process since the original creation event. This conforms with the beginning analysis in the main body of this paper wherein it was proven that a single charge-particle had the potential ability to generate an unlimited amount of energy in the field in the case of being unterminated by a conjugate charge-particle.

Therefore, the so-called creation event, also known as the Big Bang, was only a kick-start to begin the running up of the engine of creation as an ongoing process. The geneses charge-particles were and are energy seeds that generate more energy seeds and so on. In this scenario, the universe is alive with new energy from one second to the next and all particles in a holistic sense are connected together through their centers to each other all the way back to the creation event and instantly throughout time to each other through the same effectively timeless and infinite energy space that created the original geneses event. It is by means of that structure that the non-local electrogravitational action mechanism is also generated.

Then not only are the fields connected with charge-particles not static, but the total energy in the universe is not static with the passage of time. The universe is growing, expanding outwards as a flower or tree does grow. At the heart of all physical evolution is the natural number e as well as the golden ratio. Then the structure of the Great Pyramid a Giza may represent ancient engineering that tuned into that universal dynamic quantum energy and during the process of resonance with the basic frequencies of creation, generated energy that was utilized by an entire world-wide system of pyramidal structures. It will be developed below that the pyramids may have been used to terraform the planet starting about 400 million years ago.

The basic particles vibrate in a quantum fashion in response to this input energy from energy space and the charged ones generate a frequency at or near 7.83 Hz as the analysis in the main body of this paper proved mathematically. Thus, planets having an atmosphere of charged particles would collectively and sympathetically generate 7.83 Hz as a result of the basic quantum energy associated with the open field structure of magnetic and electrogravitational field actions.

There can be developed equations which fit the geometry of the Great Pyramid that involve the proton mass and charge as well as the square root of the golden ratio and the natural number e. This is presented beginning on the following page. Not only is the Great Pyramid at Giza of interest regarding the golden ratio but also the Parthenon in Athens is said to incorporate the golden ratio in its design.

A new fundamental equation that establishes the velocity of sound at sea level and at 70 degrees Fahrenheit is presented below as relevant to the acoustic velocity as well as quantum parameters of hydrogen:

First, the Bohr radius of the n1 energy shell is stated as: $R_{n1} := h \cdot (2 \cdot \pi \cdot m_e \cdot c \cdot \alpha)^{-1}$

$$v_{\text{air}} := \frac{h}{\left[\left(\frac{4}{\pi} \right) \cdot (e) \cdot (2 \cdot \pi \cdot R_{n1}) \right] \cdot m_p} \quad \text{where,} \quad v_{\text{air}} = 344.2489732198 \frac{\text{m}}{\text{sec}} \quad (59)$$

$$\text{or,} \quad v_{\text{air}} = 1.1294257652 \times 10^3 \frac{\text{ft}}{\text{sec}} \quad (60)$$

The wavelength based on the least quantum electrogravitational frequency f_{LM} , R_{n1} , e and proton rest mass m_p is given as:

$$\lambda_{\text{air}} := \frac{h}{128 \cdot f_{LM} \cdot R_{n1} \cdot e^2 \cdot m_p} \quad \text{where,} \quad \lambda_{\text{air}} = 0.7889689782 \text{ m} \quad (61)$$

$$\text{or,} \quad \lambda_{\text{air}} = 2.5884808997 \text{ ft} \quad (62)$$

Note that f_{LM} is the least quantum electrogravitational frequency related to field of the electron and proton charge and is therefore applicable to both particles. In the air, the charge coupled electron follows the vibration of the proton since the proton is much more massive.

The frequency related to the velocity and wavelength above is:

$$f_{\text{air}} := \frac{h}{8 \cdot R_{n1} \cdot \lambda_{\text{air}} \cdot e \cdot m_p} \quad \text{where,} \quad f_{\text{air}} = 436.3276411665 \text{ Hz} \quad (63)$$

The King's Chamber frequency in the Great Pyramid at Giza has been measured by several people as having an acoustic resonance of 438.3 Hz. However, the above frequency may be the original designed frequency.

$$\frac{f_{\text{air}}}{\left[4 \cdot \left(\frac{4}{\pi} \right)^2 \right] \cdot e \cdot \pi} = 7.8793091932 \text{ Hz} \quad \text{where,} \quad f_{\text{Srad}} = 7.8793092503 \text{ Hz} \quad (64)$$

(From eq. 38 above.)

The above is a remarkable result since the equation results of (35) and (38) above agree almost exactly with the equation result above.

$$\text{Note that:} \quad \left[4 \cdot \left(\frac{4}{\pi} \right)^2 \right] \cdot e \cdot \pi \quad \text{simplifies to} \quad \frac{64}{\pi} \cdot e = 55.3763826837 \quad (65)$$

It is of interest that powers of 2 appear repeatedly when various acoustic equation solutions are formulated.

For example, in the below form of velocity of the air solution:

$$v'_{\text{air}} := \frac{h^2}{(1024) \cdot R_{n1}^2 \cdot \lambda_{\text{air}}^3 \cdot m_p^2 \cdot f_{LM}} \quad \text{where,} \quad v'_{\text{air}} = 1.1294257652 \times 10^3 \frac{\text{ft}}{\text{sec}} \quad (66)$$

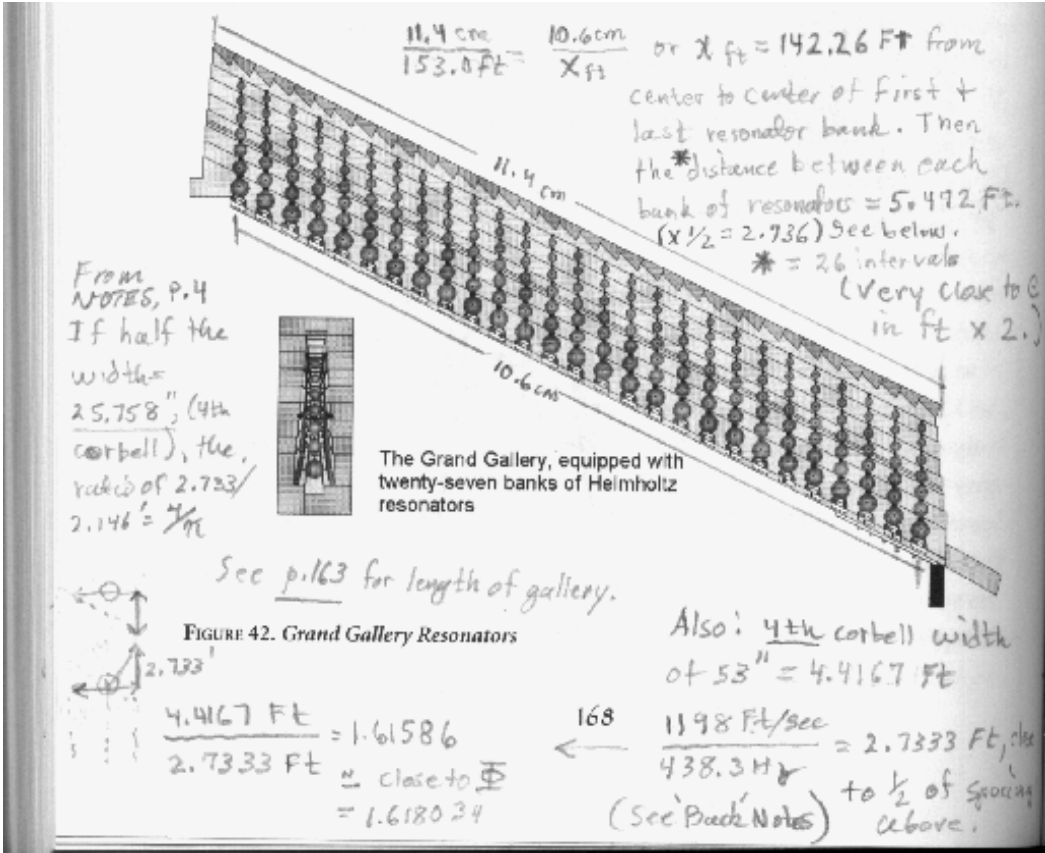
$$\text{where,} \quad 2^{10} = 1.024 \times 10^3 \quad \text{and,} \quad v_{\text{air}} = 1.1294257652 \times 10^3 \frac{\text{ft}}{\text{sec}} \quad (67)$$

Therefore, let: $\lambda_{\text{gallery}} := \frac{v_{\text{air}}}{f_{\text{Srad}}}$ or, $\lambda_{\text{gallery}} = 43.6902477469 \text{ m}$ 68)

and $\lambda_{\text{gallery}} = 143.3407078309 \text{ ft}$ 69)

The above result is extremely close to the distance from the first to the last "resonator" bank in the Grand Gallery. The total length of the Grand Gallery is very close to 153.8 feet. "See the below figure that is from the book: "The Giza Powerplant - Technologies of Ancient Egypt," by Christopher Dunn, copyright 1998 by Christopher Dunn, Published by Bear & Company, p. 168, Figure 42. The distance of 142.26 feet in the below figure 1 is arrived at by ratio and proportion with a mechanical divider and a ruler.

Figure #1



If we allocate a multiplier of two to each resonator bank, the total amplification of 27 resonator banks is:

$A_{\text{gain}} := 2^{27}$ $A_{\text{gain}} = 1.34217728 \times 10^8$ 70)

The acoustic force acting on a proton at 72 degrees Fahrenheit and at sea level at the velocity of sound and at the wavelength λ_{air} above is:

$F_{\text{airp}} := \frac{m_p \cdot v_{\text{air}}^2}{\lambda_{\text{air}}}$ $F_{\text{airp}} = 2.5123692554 \times 10^{-22} \text{ newton}$ 71)

The above force parameters are demonstrated below to have an electrogravitational V_{LM} connection as well as a connection to electron mass and the radius of the n1 Bohr energy level of the H1 atom.

The force relative to the least quantum magnetic force at the n1 energy shell of the hydrogen H1 atom is calculated next as:

$$F_{Rn1} := \frac{m_e \cdot V_{LM}^2}{R_{n1}} \quad F_{Rn1} = 1.2561846277 \times 10^{-22} \text{ newton} \quad (72)$$

The ratio of the two forces above is:

$$\text{Ratio}_{F1_2} := \frac{F_{airp}}{F_{Rn1}} \quad \text{or,} \quad \text{Ratio}_{F1_2} = 2 \quad \text{(Equal to 2 exactly.)} \quad (73)$$

Then each interaction of the acoustic (air) motion of the proton in the H1 Hydrogen atom with its associated electron in and about that atom will allow for an equalized force gain equal to exactly two times the least quantum magnetic force which is also equal to one of the parameter elements of the total electrogravitational force interaction. See the below electrogravitational equation for clarification. **The acoustic wavelength (λ_{air}) is the key to synchronizing the electron and proton force parameters for the energy boost shown above.**

The electrogravitational force between two electrons at the R_{n1} radius is:

$$F_{EG} := F_{Rn1} \cdot \mu_o \cdot F_{Rn1} \quad F_{EG} = 1.9829730553 \times 10^{-50} \text{ newton} \cdot \frac{\text{henry}}{\text{m}} \cdot \text{newton} \quad (74)$$

This provides the mechanism for amplification of the least quantum electrogravitational energy up through the resonator banks to the desired level. It turns out that the quantum energy result yields an energy that has a frequency very close to the hyperfine frequency of the H1 atom which is ubiquitous in the universe.

$$E_{LMgain} := h \cdot f_{LM} \cdot A_{gain} \quad E_{LMgain} = 8.9220473692 \times 10^{-25} \text{ joule} \quad (75)$$

The quantum frequency associated with the above energy is:

$$f_{LMgain} := \frac{E_{LMgain}}{h} \quad f_{LMgain} = 1.34650554 \times 10^9 \text{ Hz} \quad (76)$$

The empirical value of the hydrogen hyperfine frequency is:

$$f_{H1} := 1.420405751786 \cdot 10^{09} \cdot \text{Hz} \quad \text{and} \quad f_{H1} - f_{LMgain} = 7.3900211783 \times 10^7 \text{ Hz} \quad (77)$$

Note: Please refer to my previous work at http://electrogravity.com/DualFreqEG/A_frequency4.pdf, equation (29) on page 6, wherein $A'_{dbf} = 73.405234414 \text{ MHz}$.

The location of the Great Pyramid is of interest from the standpoint that it was a carefully chosen site that would harness the inertial as well as gravitational energy potential of the Earth. The energy was then imparted to the proton in the hydrogen H1 atom, quite possibly being freely available in the Grand Gallery. The slope of the Grand Gallery may have also played an important part in arriving at the most efficient energy capture. The following parameters are necessary for the calculation of the related Earth energies as described above.

$$\text{The radius of the Earth is:} \quad R_E := 6.37 \cdot 10^{06} \cdot \text{m}$$

$$\text{The circumference of the Earth is:} \quad C_E := 2 \cdot \pi \cdot R_E$$

$$\text{The actual Grand Gallery slope has been measured as:} \quad \text{slope}_{GG} := 26.29361111 \cdot \text{deg}$$

The latitude of the Great Pyramid is very close to 29 degrees, 58 minutes, 51 seconds North. Therefore, the longitudinal velocity of rotation may be calculated as shown below.

Great Pyramid latitude: Lat := 29.98083333·deg

$$V_{\text{pyr}} := \frac{C_E}{24 \cdot 3600 \cdot \text{sec}} \cdot \cos(\text{Lat}) \quad \text{or,} \quad V_{\text{pyr}} = 1.3164521338 \times 10^3 \frac{\text{ft}}{\text{sec}} \quad (78)$$

The inertial force acting on a proton of the H1 atom 90 degrees to the Earth's axis of rotation is calculated as:

$$F_r := \frac{m_p \cdot V_{\text{pyr}}^2}{R_E \cdot \cos(\text{Lat})} \quad \text{or,} \quad F_r = 4.8807240255 \times 10^{-29} \text{ newton} \quad (79)$$

The additional product of the cosine of the latitude (Lat) in the denominator is used to arrive at the actual radius of rotation with respect to the orthogonal axis of rotation of the Earth.

Next, the gravitational force acting on the proton is calculated relative to the radius of the Earth from the center of mass of the Earth.

The mass of the Earth is: $M_E := 5.98 \cdot 10^{24} \cdot \text{kg}$

Then the force of gravity at the radius of the Earth on a proton is:

$$F_{\text{Gp}} := \frac{G \cdot M_E \cdot m_p}{R_E^2} \quad F_{\text{Gp}} = 1.6448066378 \times 10^{-26} \text{ newton} \quad (80)$$

The total vector energy is arrived at by multiplying the force times a distance of action which is very close to the total distance of the Grand Gallery length which is 153.3 feet.

First, the net vectored force related to the gravitational force is found. The result is the force parallel to the disk of rotation at the latitude of the great Pyramid.

$$F'_{\text{Gp}} := F_{\text{Gp}} \cdot e^{i - \text{Lat}} \quad F'_{\text{Gp}} = 1.4247193645 \times 10^{-26} - 8.2192676564i \times 10^{-27} \text{ newton} \quad (81)$$

$$F_{\text{tot}} := F'_{\text{Gp}} - F_r \quad |F_{\text{tot}}| = 1.6405808036 \times 10^{-26} \text{ newton} \quad (82)$$

The slope of the Grand Gallery nearly coincides with the plane of rotation at the latitude of the Great Pyramid. The difference is taken into account to allow for a slight adjustment of the force and then the work or energy is arrived at by multiplying the net force by the adjusted working distance as shown below.

$$F'_{\text{tot}} := \cos(\text{Lat} - \text{slope}_{\text{GG}}) \cdot F_{\text{tot}} \quad |F'_{\text{tot}}| = 1.6371847769 \times 10^{-26} \text{ newton} \quad (83)$$

$$E_{\text{Gp}} := |F'_{\text{tot}}| \cdot (148.1311 \cdot \text{ft}) \quad E_{\text{Gp}} = 7.3919480884 \times 10^{-25} \text{ joule} \quad (84)$$

Below is the hyperfine H1 energy divided by the above net energy E_{Gp} imparted to a proton in the Grand Gallery by the gravitational field of the Earth as well as the inertial energy in the plane of rotation.

$$\frac{h \cdot f_{\text{H1}}}{E_{\text{Gp}}} = 1.2732388863 \quad \text{where,} \quad \frac{4}{\pi} = 1.2732395447 \quad \arg\left(\frac{h \cdot f_{\text{H1}}}{E_{\text{Gp}}}\right) = 0 \text{ deg} \quad \text{Viola!} \quad (85)$$

The $4/\pi$ ratio is the result and may be taken as significant since it is very close to being equal to the square root of the Golden Ratio.

The kinetic quantum energy of the proton in the H1 atom due to the rotational velocity of the Earth at 30 degrees latitude North is:

$$E_r := \frac{m_p \cdot V_{pyr}^2}{2} \quad E_r = 1.3465056052 \times 10^{-22} \text{ joule} \quad (86)$$

The quantum frequency is: $f_r := \frac{E_r}{h}$ where, $f_r = 2.0321313954 \times 10^{11} \text{ Hz}$ (87)

The energy of interaction is the energy in the field. The average is obtained by dividing by 2. The frequency is very close to the mean of the Cosmic Background Radiation frequency of $3 \times 10^{11} \text{ Hz}$ which is associated with the background energy left over after the Big Bang event.

Next, the geographically related rotation velocity of the proton is used to calculate the force on a proton at a given magnetic field strength of the Earth orthogonal to the direction of the velocity related to the charge on the proton. It is desired to arrive at a wavelength related to the energy of rotation E_r above that will yield a wavelength equal to the electron's least quantum electrogravitational wavelength.

Let:

$$B_E := 138.8 \cdot 10^{-06} \cdot \text{tesla} \quad \lambda_{BE} := \left[\frac{E_r \cdot (\sin(\text{slope}_{GG}))}{q_0 \cdot V_{pyr} \cdot B_E} \right] \cdot \left(\frac{4}{\pi} \right) \quad \lambda_{BE} = 8.5108652495 \times 10^{-3} \text{ m} \quad (88)$$

And:

$$\lambda_{LM} := \frac{h}{m_e \cdot V_{LM}} \quad (\text{Equals electrogravitational wavelength.}) \quad \lambda_{LM} = 8.5149954142 \times 10^{-3} \text{ m} \quad (89)$$

This may cause a resonance of standing wave nature between the proton and the electron with the quantum electrogravitational wavelength λ_{LM} as shown above.

Another way of calculating the velocity of the Great Pyramid is shown below.

The standard equation for the linear velocity of a particle experiencing angular rotation is:

$$V = 2 \cdot \pi \cdot f \cdot r \quad \text{where:} \quad f = \frac{1}{T} \quad \text{and } T \text{ is time in seconds.} \quad (90)$$

$$T_{rot} := 3600 \cdot \frac{\text{sec}}{\text{hr}} \cdot 24 \cdot \text{hr} \quad T_{rot} = 8.64 \times 10^4 \text{ sec} \quad (\text{3600 seconds/hour times 24 hours in 1 day of rotation.})$$

Then the velocity at the latitude of the Great Pyramid is: (81)

(From above)

$$V_{1_{pyr}} := \frac{2 \cdot \pi \cdot (R_E \cdot \cos(\text{Lat}))}{T_{rot}} \quad \text{or,} \quad V_{1_{pyr}} = 1.3164521338 \times 10^3 \frac{\text{ft}}{\text{sec}} \quad V_{pyr} = 1.3164521338 \times 10^3 \frac{\text{ft}}{\text{sec}}$$

What would be the change in latitude to arrive at a change in radius equal to the least quantum electrogravitational radius R_{LM} ?

$$\text{where,} \quad \lambda_{LM} = 8.5149954142 \times 10^{-3} \text{ m} \quad R_{LM} := \frac{\lambda_{LM}}{2 \cdot \pi} \quad R_{LM} = 1.3552036106 \times 10^{-3} \text{ m} \quad (92)$$

The statement that addresses the above question is:

$$R_{LM} = (R_E \cdot \cos(\text{Lat})) - (R_E \cdot \cos(\Delta\text{Lat})) \quad 93)$$

where ΔLat is the required latitude to produce the electrogravitational wavelength along the plane of rotation.

Utilizing Mathcad's symbolic equation solver we solve for the unknown ΔLat as follows:

$$R_{LM} = (R_E \cdot \cos(\text{Lat})) - (R_E \cdot \cos(\Delta\text{Lat})) \quad \text{Lat} = 29.98083333 \text{ deg}$$

has solution(s)

$$\pi - \arccos\left[\frac{(R_{LM} - R_E \cdot \cos(\text{Lat}))}{R_E}\right] \quad \text{or,} \quad \Delta\text{Lat} := \pi - \arccos\left[\frac{(R_{LM} - R_E \cdot \cos(\text{Lat}))}{R_E}\right] \quad 94)$$

$$\Delta\text{Lat} = 29.9808333544 \text{ deg} \quad \text{check:} \quad (R_E \cdot \cos(\text{Lat})) - (R_E \cdot \cos(\Delta\text{Lat})) = 1.3552028686 \times 10^{-3} \text{ m} \quad 95)$$

The change in circumferential distance due to the change in latitude is equal to 2π times the change in radius R_{LM} which is equal to the least quantum electrogravitational wavelength λ_{LM} .

$$\text{Then:} \quad \Delta\text{Cir} := 2 \cdot \pi \cdot [(R_E \cdot \cos(\text{Lat})) - (R_E \cdot \cos(\Delta\text{Lat}))] \quad \text{or,} \quad \Delta\text{Cir} = 8.5149907521 \times 10^{-3} \text{ m} \quad 96)$$

$$\text{Where the least quantum electrogravitational wavelength is:} \quad \lambda_{LM} = 8.5149954142 \times 10^{-3} \text{ m}$$

Distance equals velocity times time.

$$\Delta T := \frac{\Delta\text{Cir}}{V_{\text{pyr}}} \quad \Delta T = 2.1220916924 \times 10^{-5} \text{ sec} \quad \Delta f := \frac{1}{\Delta T} \quad \Delta f = 4.7123317225 \times 10^4 \text{ Hz} \quad 97)$$

$$2 \cdot \pi \cdot \Delta f = 2.9608453441 \times 10^5 \text{ Hz} \quad 98)$$

$$\text{Note:} \quad \Delta f \cdot \left(\alpha \cdot \frac{4}{\pi}\right) = 437.8358648112 \text{ Hz (See eq. 63 above.)} \quad 99)$$

The ultrasonic frequency Δf may exist in matter such as granite and marble. This would explain the use of the 438.3 Hz frequency above in the Grand Gallery.

Finding the right frequency of acoustic and electrical pulsation may synchronize the pulsating energy coming from the Earth so that over time the energy would build to a high level suitable for levitation and energy extraction by resonator mechanisms. For instance, the magnetic energy coming from the Earth may be considered as **not** moving with the rotation of the Earth. Therefore, an object moving with the surface of the Earth would be cutting the magnetic lines of flux continually. Also, adjusting an acoustic frequency of pulsation properly will allow for resonance with the pulsations of the Earth so that as the object rotates around a circle of the Earth from East to West, the bands of magnetic and acoustic pulsation would synchronize with the pulsations of the object such as the Grand Gallery Hydrogen atoms and energy would continue to build in the Hydrogen gas as a result. This principle would also work in the case of the famous 'stone levitators' wherein levitation is accomplished by acoustic means such as drums and gongs played near the stone at a certain beat rate.

See: <http://www3.sympatico.ca/slavek.krepelka/ideas/stolev.htm> "Stone Levitation"

<http://www.crystalinks.com/levitationtibet.html> "Tibetan Sound Levitation Of Large Stones Witnessed By Scientist"

There are also lines of flux corresponding to so called 'Ley lines" that can be detected by some people. Next, we examine the corrected air velocity relative to the slight difference of the slope of the Grand Gallery with the latitude of the Great Pyramid and find the vector slope in degrees relative the velocity of the pyramid with the corrected air velocity in the Grand Gallery. This will lead to a calculation of when the Great Pyramid at Giza may have been built.

$$\text{Lat} = 29.98083333 \text{ deg} \quad \text{slope}_{GG} = 26.29361111 \text{ deg}$$

$$\Delta\text{angle} := \text{Lat} - \text{slope}_{GG} \quad \Delta\text{angle} = 3.68722222 \text{ deg} \quad 100)$$

$$V_{\text{pyr}} = 1.3164521338 \times 10^3 \frac{\text{ft}}{\text{sec}} \quad v_{\text{air}} = 1.1294257652 \times 10^3 \frac{\text{ft}}{\text{sec}}$$

$$\Delta v_{\text{air}} := \cos(\Delta\text{angle}) \cdot v_{\text{air}} \quad \Delta v_{\text{air}} = 1.127087837 \times 10^3 \frac{\text{ft}}{\text{sec}} \quad 101)$$

$$\text{atan}\left(\frac{V_{\text{pyr}}}{\Delta v_{\text{air}}}\right) = 49.4313304509 \text{ deg} \quad \text{atan}\left(\frac{4}{\pi}\right) = 51.8539740128 \text{ deg} \quad 102)$$

It may be that the angles above agreed in the beginning when the Great Pyramid was first built. It therefore may be possible that when the Great Pyramid was built, the velocity of the Earth was faster resulting in a shorter period of rotation. Using Mathcad's symbolic processor, we can solve for the old or original Earth rotation velocity at the latitude of the Great Pyramid that will yield the angle equal to the atan of $4/\pi$.

$$\text{atan}\left(\frac{V_{\text{pyr}}}{\Delta v_{\text{air}}}\right) = \text{atan}\left(\frac{4}{\pi}\right) \quad \text{Solving for } V_{\text{pyr}} \text{ has solution(s)} \quad 103)$$

$$\frac{4}{\pi} \cdot \Delta v_{\text{air}} \quad \text{or,} \quad V_{\text{pyr old}} := \frac{4}{\pi} \cdot \Delta v_{\text{air}} \quad V_{\text{pyr old}} = 1.4350528044 \times 10^3 \frac{\text{ft}}{\text{sec}} \quad 104)$$

Then the actual seconds per rotation of the Earth when the Great Pyramid may have been built is:

$$\frac{V_{\text{pyr}}}{V_{\text{pyr old}}} \cdot \left(3600 \cdot \frac{\text{sec}}{\text{hr}} \cdot 24 \cdot \text{hr}\right) = 7.9259427952 \times 10^4 \text{ sec where,} \quad \frac{V_{\text{pyr}}}{V_{\text{pyr old}}} = 0.9173544902 \quad 105)$$

The seconds per rotation now (year 2008) is:

$$\left(3600 \cdot \frac{\text{sec}}{\text{hr}} \cdot 24 \cdot \text{hr}\right) = 8.64 \times 10^4 \text{ sec} \quad 106)$$

The total time the Earth has slowed since the Great Pyramid was built is:

$$T_{\text{total}} := \left(3600 \cdot \frac{\text{sec}}{\text{hr}} \cdot 24 \cdot \text{hr}\right) - \frac{V_{\text{pyr}}}{V_{\text{pyr old}}} \cdot \left(3600 \cdot \frac{\text{sec}}{\text{hr}} \cdot 24 \cdot \text{hr}\right) \quad T_{\text{total}} = 7.1405720482 \times 10^3 \text{ sec} \quad 107)$$

$$T_{\text{total}} = 1.9834922356 \text{ hr} \quad \text{Define:} \quad \text{cen} := 100 \cdot \text{yr} \quad \text{cen} = 3.155692608 \times 10^9 \text{ sec} \quad 108)$$

20)

The Earth is measured by scientists of today as slowing an average of 0.0018 seconds per century. Extrapolating backwards in time, the age of the Great Pyramid is calculated as:

$$7.1405725987 \cdot 10^3 \cdot \text{sec} = 0.0018 \cdot \frac{\text{sec}}{\text{cen}} \cdot (n \cdot \text{cen}) \quad \text{where } n \text{ is the number of centuries.} \quad 109)$$

Solving for (n) as the number of centuries from the above equation:

$$7.1405725987 \cdot 10^3 \cdot \text{sec} = 0.0018 \cdot \frac{\text{sec}}{\text{cen}} \cdot n \cdot \text{cen} \quad \text{Solving for } n: \quad 110)$$

$$3966984.7770555555556 = 3.9669847771 \times 10^6 = \text{total number of centuries.} \quad 111)$$

$$3.9669847771 \cdot 10^6 \cdot \text{cen} = 3.9669847771 \times 10^8 \text{ yr} = 396.69847771 \text{ million years.} \quad 112)$$

It is suggested by the above result that the Great Pyramid may have been used as a power generator to cause global terraforming. Christopher Dunn, in his notable book, "The Great Powerplant At Giza", suggested that microwave energy was beamed upwards into space through waveguides sloping upwards from the King's Chamber. The microwaves were possibly generated via a maser process involving resonance with the Hyperfine frequency of the hydrogen atoms which were chemically generated in the Queen's Chamber and fed upwards to the King's Chamber via the Grand Gallery shown above. The same may be said of the pyramids on Mars. This is not unreasonable since the age of the Earth is measured as about 4 to 4.5 billion years old. Perhaps terraforming killed the dinosaurs in the process.

Equations 71, 72 and 73 from above have a correlation with the results of one of my previous papers. In that paper, equations 9 and 10 on page 2 of, "The Derivation Of The Least Quantum Electrogravitational Frequency", wherein equation 9 yielded a quantum frequency equal to exactly twice that of equation 10. These frequencies have an energy equivalent by $E = hf$.

See: http://www.electrogravity.com/EGFreqSolve/EGFreqSolve_Add1.pdf

$$\text{Eq. 9:} \quad f_{LMneg} = \left[\frac{d}{d\lambda_e} \left(\frac{V_e \cdot t_e \cdot \lambda_e^{-2}}{E_{v_m}} \right) \right] \cdot \alpha_{new} \quad f_{LMneg} := -20.064496091 \cdot i \cdot \text{Hz} \quad 113)$$

Quote:

"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 (meter² per second²) terms. That is, when the plane area changes to a volume in the magnetic field.

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." --Unquote.

$$\text{Eq. 10:} \quad f_{LMpos} = \left[\frac{d}{d\lambda_e} \left(\frac{T_{vsec_m2}}{V_e \cdot \lambda_e^{-1}} \right) \right] \cdot \alpha_{new} \quad f_{LMpos} := 10.0322480455i \cdot \text{Hz} \quad 114)$$

Equations 71, 72 and 73 are repeated below for illustration.

$$71: \quad F_{\text{air}_p} := \frac{m_p \cdot v_{\text{air}}^2}{\lambda_{\text{air}}} \quad F_{\text{air}_p} = 2.5123692554 \times 10^{-22} \text{ newton} \quad 115)$$

$$72: \quad F_{\text{Rn1}} := \frac{m_e \cdot V_{\text{LM}}^2}{R_{n1}} \quad F_{\text{Rn1}} = 1.2561846277 \times 10^{-22} \text{ newton} \quad 116)$$

$$73: \quad \text{Ratio}_{F1_2} := \frac{F_{\text{air}_p}}{F_{\text{Rn1}}} \quad \text{or,} \quad \text{Ratio}_{F1_2} = 2 \quad \textbf{(Equal to 2 exactly.)} \quad 117)$$

The energies are all related to the first energy level radius R_{n1} of the hydrogen H1 atom as shown below.

$$9: \quad E_{f_{\text{LMneg}}} := h \cdot f_{\text{LMneg}} \quad E_{f_{\text{LMneg}}} = -1.3294886597i \times 10^{-32} \text{ joule} \quad 118)$$

$$71: \quad E_{F_{\text{air}_p}} := F_{\text{air}_p} \cdot R_{n1} \quad E_{F_{\text{air}_p}} = 1.3294886603 \times 10^{-32} \text{ joule} \quad 119)$$

$$10: \quad E_{f_{\text{LMpos}}} := h \cdot f_{\text{LMpos}} \quad E_{f_{\text{LMpos}}} = 6.6474432984i \times 10^{-33} \text{ joule} \quad 120)$$

$$72: \quad E_{F_{\text{Rn1}}} := F_{\text{Rn1}} \cdot R_{n1} \quad E_{F_{\text{Rn1}}} = 6.6474433014 \times 10^{-33} \text{ joule} \quad 121)$$

Then the following equality incorporates a synchronization of the quantum related acoustics of the proton with fundamental quantum parameters of the hydrogen n1 level of the electron wherein the absolute forces are equal on the proton and the electron and this is stated as shown in the below equality.

$$\frac{m_e \cdot V_{\text{LM}}^2}{R_{n1}} = \frac{m_p \cdot v_{\text{air}}^2}{2 \cdot \lambda_{\text{air}}} \quad 2 \cdot \lambda_{\text{air}} = 5.1769617993 \text{ ft} \quad 122)$$

$$\frac{m_e \cdot V_{\text{LM}}^2}{R_{n1}} = 1.2561846277 \times 10^{-22} \text{ newton} \quad \frac{m_p \cdot v_{\text{air}}^2}{2 \cdot \lambda_{\text{air}}} = 1.2561846277 \times 10^{-22} \text{ newton} \quad 123)$$

It is of interest that the actual distance between the resonators in the Grand Gallery are close to twice the wavelength of λ_{air} in order that the forces acoustic and quantum are equal.

$$\text{Also:} \quad E_{f_{\text{LMneg}}} + E_{F_{\text{air}_p}} = 1.3294886603 \times 10^{-32} - 1.3294886597i \times 10^{-32} \text{ joule} \quad 124)$$

$$\arg(E_{f_{\text{LMneg}}} + E_{F_{\text{air}_p}}) = -44.9999999871 \text{ deg} \quad 125)$$

$$E_{f_{\text{LMpos}}} + E_{F_{\text{Rn1}}} = 6.6474433014 \times 10^{-33} + 6.6474432984i \times 10^{-33} \text{ joule} \quad 126)$$

$$\arg(E_{f_{\text{LMpos}}} + E_{F_{\text{Rn1}}}) = 44.9999999871 \text{ deg} \quad \text{Note that the angle of the stones in the ceiling of the Grand Gallery are equal to 45 degrees.} \quad 127)$$

The following correlations with my previous works concerning related quantum and acoustic frequencies occur in equation 77 above as well as equations 97, 98, and 99, also above. First equation 77 is repeated below from above.

Quote From Above:

$$77: \quad f_{H1} - f_{LMgain} = 7.3900211783 \times 10^7 \text{ Hz} \quad (128)$$

"The change in circumferential distance due to the change in latitude is equal to 2π times the change in radius R_{LM} which is equal to the least quantum electrogravitational wavelength λ_{LM} ."

$$96: \quad \text{Then: } \Delta C_{ir} := 2 \cdot \pi \cdot [(R_E \cdot \cos(\text{Lat})) - (R_E \cdot \cos(\Delta \text{Lat}))] \quad \Delta C_{ir} = 8.5149907521 \times 10^{-3} \text{ m} \quad (129)$$

$$\text{Where the least quantum electrogravitational wavelength is: } \lambda_{LM} = 8.5149954142 \times 10^{-3} \text{ m} \quad (130)$$

Distance equals velocity times time.

$$97: \quad \Delta T := \frac{\Delta C_{ir}}{V_{pyr}} \quad \Delta T = 2.1220916924 \times 10^{-5} \text{ sec} \quad \Delta f := \frac{1}{\Delta T} \quad \Delta f = 4.7123317225 \times 10^4 \text{ Hz} \quad (131)$$

$$98: \quad 2 \cdot \pi \cdot \Delta f = 2.9608453441 \times 10^5 \text{ Hz} \quad (132)$$

$$99: \quad \text{Note: } \Delta f \cdot \left(\alpha \cdot \frac{4}{\pi} \right) = 437.8358648112 \text{ Hz (See eq. 63 above.)} \quad (133)$$

--Unquote.

A direct correlation exists with one of my previous papers titled, "*Primordial A-Vector Firmament Creation Field*", May 07, 2006, page 13, equations 69 & 70. A frequency was calculated as $f_{BLM} = -295.955984569332 \text{ KHz}$ which is very close to equation 98 above.

See: <http://www.electrogravity.com/PrimePwr/PrimePwr.pdf>

Equations 69 & 70 from the above quote are shown below: Note: KHz := 1000·Hz

Quote:

Plank quantum frequency possibly related to B_{LM} in eq. 2.

$$69: \quad f_{BLM} = \frac{S_{real_2} \cdot t_{n1} \cdot (\lambda_{LM})^2}{h} \quad f_{BLM} := -295.955984569332 \cdot \text{KHz} \quad (134)$$

Plank quantum frequency possibly related to E_{LE} in eq. 4

$$70: \quad f_{ELE} = \frac{S_{real_2} \cdot t_{LM} \cdot (2 \cdot \pi \cdot R_{n1})^2}{h} \quad f_{ELE} := -295.928924539595 \cdot \text{KHz} \quad (135)$$

--Unquote.

S_{real} is derived in eq. 28 of the above reference as a quantum Poynting Power.

Also quoted from the same above reference:

$$74: \quad \text{Finally, } f_{\text{BLM}} \cdot (2 \cdot \pi)^3 = -7.3411945142 \times 10^7 \text{ Hz} \quad \begin{array}{l} \text{These are De Broglie frequencies} \\ \text{that are standing wave frequencies} \\ \text{and they are nearly equal. Thus} \end{array} \quad 136)$$

$$75: \quad \text{And: } f_{\text{ELE}} \cdot (2 \cdot \pi)^3 = -7.3405232896 \times 10^7 \text{ Hz} \quad \begin{array}{l} \text{both the } \mathbf{E} \text{ and } \mathbf{B} \text{ fields have the} \\ \text{same interaction frequency.} \end{array} \quad 137)$$

--Unquote.

$$\text{Equation 77 above yields: } f_{\text{H1}} - f_{\text{LMgain}} = 7.3900211783 \times 10^7 \text{ Hz} \quad 138)$$

A previous on-line paper: http://www.electrogravity.com/DualFreqEG/A_frequency4.pdf on page 6, equation 29, solved for a fundamental field related quantum frequency of mass motional vibration which forms a De Broglie matter wave.

$$A'_{\text{dbf}} := 7.3405234414 \cdot 10^{07} \cdot \text{Hz} \quad \text{The related quantum wavelength is:} \quad 139)$$

$$\lambda'_{\text{fc}} := \frac{h}{m_e \cdot \sqrt{\frac{h \cdot A'_{\text{dbf}}}{m_e}}} \quad \text{where, } \lambda'_{\text{fc}} = 3.1478935252 \times 10^{-6} \text{ m} \quad 140)$$

The above wavelength corresponds to a critical field frequency:

$$f_{\text{field}} := \frac{c}{\lambda'_{\text{fc}}} \quad f_{\text{field}} = 9.5235895242 \times 10^{13} \text{ Hz} \quad 141)$$

The above field frequency is common to all field connected matter. Interfering with fields at the above electromagnetic frequency or wavelength may cause matter to break apart into its most elemental or atomic components. This frequency was developed in the reference immediately above.

Conclusion:

This paper presents a new viewpoint concerning so-called static electric and magnetic steady state fields as actually being dynamic. The result is that there is nearly an unlimited energy in uninterminated fields over nearly an unlimited time. Also, a *timescape* is suggested wherein serial events are accessible via non-local timeless parallel action. It is possible to imagine a picture of the entire history of creation unfolding before a viewer and that viewer could touch any point on that picture in zero time. That approximates the viewer being in what I call energy space. In reality, that viewer would be God, the infinite source of all energy and timeless in that same energy space. In energy space, there is no up or down. For that matter, there is no *direction* at all. Everything in local space (serial event time-space) is accessible from energy space in zero time. Everything in local space is created from one instant to the next and thus continuous space does not exist in that scenario. Zeno's paradox is local space reality. Thus we act out our existence as mortals in the fashion of screen actors, one frame at a time, being unaware of our sequential nature while further thinking that all is continuous and unbroken regarding our measured time.

Jerry E. Bayles