

The Great Pyramid At Giza And The Quantum Two-Step Of Electrogravitation

-by-

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Abstract

This paper revisits the mysterious structure known as the Great Pyramid of Giza in Egypt and examines the engineering of its internals in terms of the quantum physics related to my theory of electrogravitation. While doing the investigation of its structure, a serendipitous discovery involving my theory of electrogravitation occurred which greatly enhances the unification of the force fields. The structure in the equations begins with the formation of mass from the existence of two fundamental charges linked by the quantum properties of permeability per meter of free space. I call it the quantum connector for all fundamental particles. The equation looks like it has wings on either side consisting of the symmetrical parameters that make up the particle and its related energy. That is the serendipitous unification I mentioned above. All of the five energy fields and the related forces have this same winged structure with the center connector being common to them all. (The electromagnetic force is separated into the magnetic and electric force fields which then amounts to five forces.)

My theory of electrogravitation treats gravity as an instantaneous action not being dependant on the speed of light. As this is written, no proof of gravitational waves has been published to my knowledge. I predict that these so-called waves will not be discovered. What could be done is to observe the stars around a visible supernova and see if they move towards or away from that supernova at the same time as the supernova explodes. That would prove whether the action of gravity was superluminal or not.

Maxwell's equation relating the product of magnetic permeability and electric permittivity as being equal to the inverse of the square of the speed of light says nothing about the speed of either permittivity or permeability. Having only one parameter divorces it from the speed of light as the limiting speed. All of the quantum field equations developed in this paper have only the magnetic permeability per meter as a connecting term. The connecting term is also called the action term and it is nearly instantaneous while the outer "wing" terms are local and thus observable and less than the velocity of light. Then the "wing" terms are the reaction terms.

$f_T := e \cdot \text{Hz}$ $f_T = 2.718281828 \cdot \text{Hz}$ $h := 6.626075500 \cdot 10^{-34} \cdot \text{joule} \cdot \text{sec}$

$m_{\text{amu}} := 1.660540200 \cdot 10^{-27} \cdot \text{kg}$ $\alpha := 7.297353080 \cdot 10^{-03}$ $\lambda_{\text{H1}} := 8.309498120 \cdot \text{in}$ 1)

$\sum_{i=1}^6 (i \cdot f_T) = 57.0839183976 \cdot \text{Hz}$ $\frac{\left[\sum_{i=1}^6 (i \cdot f_T) \right] \cdot \sum_{j=1}^{27} j}{f_T} = 7.938 \times 10^3$ 7938 factors to: $2 \cdot 3^4 \cdot 7^2$

$\sum_{i=1}^7 (i \cdot f_T) = 76.1118911969 \cdot \text{Hz}$ $\frac{\left[\sum_{i=1}^7 (i \cdot f_T) \right] \cdot \sum_{j=1}^{27} j}{f_T} = 1.0584 \times 10^4$ 10584 factors to: $2^3 \cdot 3^3 \cdot 7^2$ 2)

$\frac{f_T \cdot 10584 \cdot h}{(m_{\text{amu}})^2} \cdot \frac{4}{\pi} = 7.308553362 \times 10^{-3} \cdot \text{Sv}$ $\alpha \cdot \frac{\text{m}^2}{\text{sec}^2} = 7.29735308 \times 10^{-3} \cdot \text{Sv}$ **This is the electro-gravitational group velocity squared.** 3)

LongCubit := 20.65 · in $\frac{4 \cdot \lambda_{\text{H1}}}{\text{LongCubit}} = 1.609588014$ $\left(\frac{4}{\pi}\right)^2 = 1.621138938$ 4)

Queens Chamber Niche Matrix Parametric Generator $\text{vel}_{\text{air}} := 1.219728118 \cdot 10^03 \cdot \frac{\text{ft}}{\text{sec}}$

$n := 0, 1 \dots 4$ $\text{step} := \frac{\text{LongCubit}}{2}$ $\text{step} = 10.325 \cdot \text{in}$ (One-half LongCubit) 5)

$\Delta_{\text{QC}\lambda}(n) := \text{LongCubit} + (n \cdot \text{step})$ **Based on width** $\Delta_{\text{QC}f}(n) := \frac{\text{vel}_{\text{air}}}{\Delta_{\text{QC}\lambda}(n)}$ 6)

$\Delta_{\text{QC}\lambda}(n) =$

1	· LongCubit
1.5	
2	
2.5	
3	

Three Octave Range

$\Delta_{\text{QC}f}(n) =$

708.80084339	· Hz
472.533895593	
354.400421695	
283.520337356	
236.266947797	

Grand Gallery Corbelled Matrix Parametric Generator

$$m1 := 0,1..7 \quad \text{step1} := \frac{\text{LongCubit}}{7} \quad \text{step1} = 2.95 \cdot \text{in} \quad (\text{One-seventh LongCubit}) \quad 7)$$

$$\Delta_{GG\lambda}(m1) := (\text{LongCubit} \cdot 2) + (m1 \cdot \text{step1}) \quad \Delta_{GGf}(m1) := \frac{\text{vel}_{\text{air}}}{\Delta_{GG\lambda}(m1)} \quad 8)$$

$\Delta_{GG\lambda}(m1) =$ <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>2</td></tr> <tr><td>2.142857143</td></tr> <tr><td>2.285714286</td></tr> <tr><td>2.428571429</td></tr> <tr><td>2.571428571</td></tr> <tr><td>2.714285714</td></tr> <tr><td>2.857142857</td></tr> <tr><td>3</td></tr> </table>	2	2.142857143	2.285714286	2.428571429	2.571428571	2.714285714	2.857142857	3	<p style="color: blue; font-weight: bold;">Based on width</p> <p>One and one-half octave range.</p>	$\Delta_{GGf}(m1) =$ <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>354.400421695</td></tr> <tr><td>330.773726915</td></tr> <tr><td>310.100368983</td></tr> <tr><td>291.859170808</td></tr> <tr><td>275.644772429</td></tr> <tr><td>261.137152828</td></tr> <tr><td>248.080295186</td></tr> <tr><td>236.266947797</td></tr> </table>	354.400421695	330.773726915	310.100368983	291.859170808	275.644772429	261.137152828	248.080295186	236.266947797
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Basic Operation

Both reference 2 and table 1 are for each resonator "stack" having seven resonators. However, if we consider each resonator stack as having only six resonators, then the total number of resonators becomes 6 times 27, or 162. If we then multiply the total of 162 times the natural number e expressed in units of hertz, we arrive at $f_{\text{air}} = 440.3616562$ Hz. This frequency may be the original frequency of operation in the King's Chamber since there is evidence of a huge explosion that moved the walls outwards enough to lower the measured frequency of resonance down to 438.3 Hz as measured by Christopher Dunn during a personal visit to the Great Pyramid. The frequency of f_r times four times the wavelength of the hyperfine radiation at 21 cm of the hydrogen atom yields f_r times 2.769832702 feet, or an acoustic speed of sound at 1219.728118 feet per second. This is acceptable since the temperature inside of the Grand Gallery, the Queens Chamber, and the ascending passage could have been near 144 degrees Fahrenheit to support that velocity. A rise in temperature would likely occur as a result of tremendous agitation of the medium molecules, which I suspect may have been Methane, since it has 4 hydrogen atoms that shield the nucleus. Further, I propose it is the proton that is responsible for providing the quantum pressure wave associated with the hyperfine radiation of the hydrogen atom. There would be even more energy available from the carbon atom nucleus since there are 6 protons.

The stacks of resonators may be part of a system of tornado acoustic generators, where each acoustic resonator adds to the previous frequency by e in Hz and also velocity of circulating waves of sound rotation, moving up each stack and at the same time up the length of the Grand Gallery where the circles are interwoven like gears in a transmission. The fundamental action distance involved remains constant and is based on four times the hyperfine radiation wavelength of the hydrogen atom.

$j := 1..7$ $i := 1..27$ $A1_{i,j} := e \cdot j \cdot i \cdot \text{Hz}$

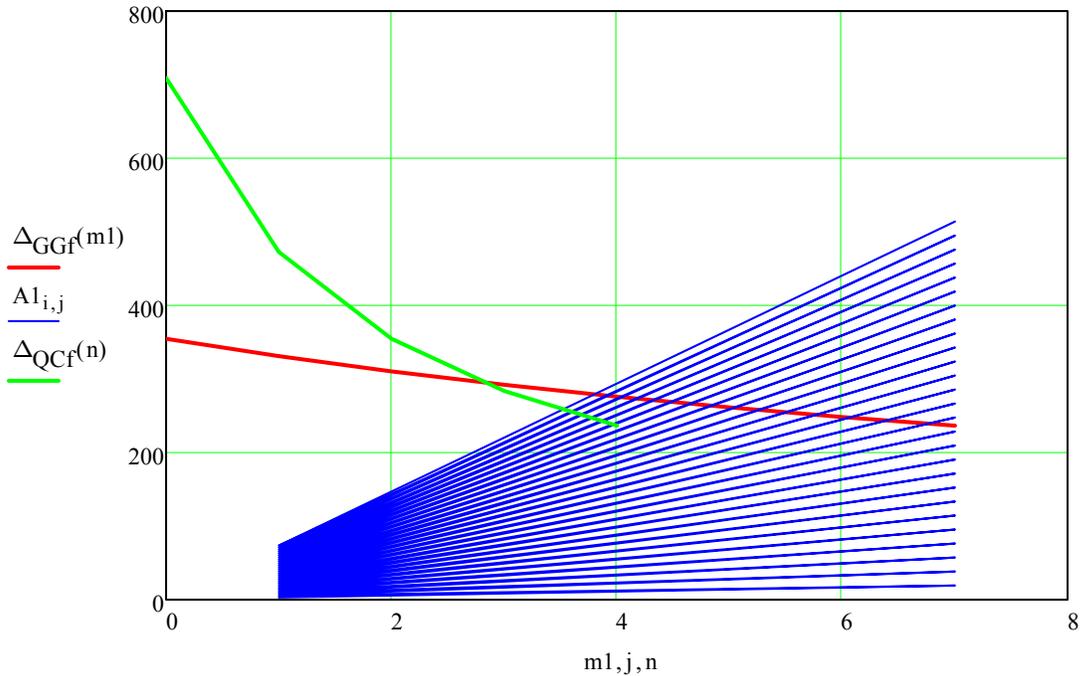
9)

Table 1

	1	2	3	4	5	6	7
1	2.718	5.437	8.155	10.873	13.591	16.31	19.028
2	5.437	10.873	16.31	21.746	27.183	32.619	38.056
3	8.155	16.31	24.465	32.619	40.774	48.929	57.084
4	10.873	21.746	32.619	43.493	54.366	65.239	76.112
5	13.591	27.183	40.774	54.366	67.957	81.548	95.14
6	16.31	32.619	48.929	65.239	81.548	97.858	114.168
7	19.028	38.056	57.084	76.112	95.14	114.168	133.196
8	21.746	43.493	65.239	86.985	108.731	130.478	152.224
9	24.465	48.929	73.394	97.858	122.323	146.787	171.252
10	27.183	54.366	81.548	108.731	135.914	163.097	190.28
11	29.901	59.802	89.703	119.604	149.506	179.407	209.308
12	32.619	65.239	97.858	130.478	163.097	195.716	228.336
13	35.338	70.675	106.013	141.351	176.688	212.026	247.364
14	38.056	76.112	114.168	152.224	190.28	228.336	266.392
15	40.774	81.548	122.323	163.097	203.871	244.645	285.42
16	43.493	86.985	130.478	173.97	217.463	260.955	304.448
17	46.211	92.422	138.632	184.843	231.054	277.265	323.476
18	48.929	97.858	146.787	195.716	244.645	293.574	342.504
19	51.647	103.295	154.942	206.589	258.237	309.884	361.531
20	54.366	108.731	163.097	217.463	271.828	326.194	380.559
21	57.084	114.168	171.252	228.336	285.42	342.504	399.587
22	59.802	119.604	179.407	239.209	299.011	358.813	418.615
23	62.52	125.041	187.561	250.082	312.602	375.123	437.643
24	65.239	130.478	195.716	260.955	326.194	391.433	456.671
25	67.957	135.914	203.871	271.828	339.785	407.742	475.699
26	70.675	141.351	212.026	282.701	353.377	424.052	494.727
27	73.394	146.787	220.181	293.574	366.968	440.362	513.755

The Grand Gallery is a linear matrix array while the corbelled wall structure presents a non-linear array 90 degrees to the direction of the linear array.

Plot 1



This satisfies the definition of a parametric amplifier or oscillator which has a linear parameter controlled by a variable non-linear reactive parameter. Note that the Queen's Chamber Niche also is a non-linear frequency generator. This could have been initiated by an impulse sound generator.

The corbelled walls of the Grand Gallery are right angled to the forward progression of the linear resonator assembly. The corbelled walls present a non-linear increasing frequency which is acting at 90 degrees to the linear resonator matrix. I am reminded that imaginary power is in the reactive vertical portion of the Argand diagram while real power is in the horizontal. This is much like the process of extracting energy from standing waves of the hydrogen atom as explained above. The so-called imaginary quadrants 90 degrees to the real axis may have the ability to boost the power in the real axis and at the same time extract energy from energy space to sustain action in the reactive realm.

This ability was demonstrated in my recent experiments shown on my web site where a spinning magnet was perturbed 90 degrees to the direction of its field and axis of rotation to generate energy in a coil of wire whose axis was 90 degrees to the magnets axis of spin. That energy was fully decoupled from the magnet and energy drawn from the coil did not slow the rotation of the magnet at all. Further, the magnet did not lose any of its magnetic field energy in the process.

The work that a permanent magnet field can exhibit over time is effectively unlimited. One can move a shorted wire against the field of a permanent magnet and feel the resistance to the motion of the wire moving across the field. This can go on indefinitely. Work is performed and yet no energy is used up in the magnet's field. Perhaps it is, but it is a reactive field and thus can be replenished from energy space. Work is force times distance. Real work is performed moving the wire through a distance in the magnetic field and this being accomplished without any loss of field energy in the magnetic field. That is an absolutely fundamentally important fact that should receive notice by even the most casual observer. (To paraphrase Einstein when He was explaining an aspect of His theory of Relativity.)

Another aspect of the magnetic field is that it moves at a very low speed which I call the least allowed quantum velocity being equal to the square root of the fine structure constant in units of meters per second. This allows for the homopolar generator to work as it does since the magnetic field of a moving magnet has a fixed speed relative to the moving magnet. Further, the magnetic field can be linked mathematically to the generation of mass. I think of the low speed part of the magnetic field as moving at what is called group velocity while there is also the phase velocity that is moving at near 10^{18} meter/second and it is that velocity that is the action speed of electrogravitation, more commonly referred to as gravitation. The portion of mass which is expressed as field energy is linked directly to the charge associated with that mass and does not flow in the sense of electromagnetic energy. However, the field energy is capable of performing real work as a standing wave matrix and can be separated from the mass with no loss of mass or charge associated with that mass. That is by reason of the mass and its associated charge being intimately connected to energy space which continually refreshes all matter in our normal space.

Detailed Analysis of Hyperfine Energy Generation In The Great Pyramid:

$$a_0 := 5.291772490 \cdot 10^{-11} \cdot \text{m} = \text{Bohr radius of hydrogen} = r_{n1}$$

The hydrogen atom has a proton which I consider is most likely the source of the hyperfine hydrogen radiation frequency of 1.420405×10^{09} Hz. This is normally a standing wave and is thus a reactive field and therefore a non-radiating energy. However, perturbing the electron associated with the proton nucleus opens up the shielding effect of the electron and the Hyperfine energy radiates. This energy is not lost and is quickly recovered on the next energy refresh input from what I call energy space which supports all of creation from the beginning. This is now free real energy which is derived from a reactive self-sustaining field. The following equation establishes the geometric relationship of the hydrogen Bohr radius to $4/\pi$ and the active, and therefore heated air velocity, inside of the Great Pyramid.

$$\text{CH}_4\text{AtWt} := \frac{h}{m_{\text{amu}} \cdot \text{vel}_{\text{air}} \cdot a_0 \cdot \left(\frac{4}{\pi}\right)} \quad \text{CH}_4\text{AtWt} = 15.930070767 \quad \text{CH}_4 = 16.04246 \text{ g/mol} \quad 10)$$

which is very close to the atomic weight of Methane = CH₄

Methane could have been used to power the Great Pyramids parametric maser action. The power is amplified in the Grand Gallery which is fed energy from the Queen's Chamber which is the local oscillator. The foul smell noticed by first explorers in the Queen's Chamber was likely attributed to the action of Methane gas being heated and reacting with the walls of the chamber. Methane could have been generated in the bottom of the Pyramid from rotting organic matter such as plant remains. The Nile river may have been an underground source of water for aiding in the decay process.

Allowing the vertical resonator stacks to have their angle θ adjusted relative to vertical will tune the wavelength of the entire stack for power level adjustment as shown below. The entire stack would be pivoted at the fourth resonator.

$$m_{\mu} := 1.660540200 \cdot 10^{-27} \cdot \text{kg} = \text{atomic mass unit, amu}$$

$$m_M := m_{\mu} \cdot \text{CH}_4 \text{AtWt}$$

$$n := 1, 2 \dots 7$$

$$\theta := 26.2833333 \cdot \text{deg}$$

$$\Delta\lambda_{H1} := \lambda_{H1} \cdot (\sec(\theta))$$

$$\Delta\lambda_{H1} = 9.267629422 \cdot \text{in}$$

$$\left(\frac{\Delta\lambda_{H1}}{\lambda_{H1}} \right) = 1.115305556 \quad 11)$$

$$\lambda_p(n) := 4 \cdot \Delta\lambda_{H1} \cdot n$$

$$v_p(n) := (c \cdot \text{Hz}) \cdot \lambda_p(n)$$

$$12)$$

$$E_k(n) := \frac{1}{2} \cdot m_M \cdot (v_p(n))^2$$

$$\text{freq}_k(n) := E_k(n) \cdot h^{-1}$$

$$\text{freq}_p(n) := c \cdot \text{Hz} \cdot n \cdot \sec(\theta) \quad 13)$$

$$E_k(n) =$$

8.664645566 · 10 ⁻²⁶ J
3.465858226 · 10 ⁻²⁵
7.798181009 · 10 ⁻²⁵
1.386343291 · 10 ⁻²⁴
2.166161392 · 10 ⁻²⁴
3.119272404 · 10 ⁻²⁴
4.245676327 · 10 ⁻²⁴

$$\text{freq}_k(n) =$$

130.765874402 · MHz
523.063497607
1.17689287 · 10 ³
2.09225399 · 10 ³
3.26914686 · 10 ³
4.707571478 · 10 ³
6.407527846 · 10 ³

$$n =$$

1
2
3
4
5
6
7

$$E_h(n) := h \cdot \text{freq}_p(n)$$

$$\text{freq}_h(n) := E_h(n) \cdot h^{-1}$$

$$E_h(n) =$$

2.008837133 · 10 ⁻³³ J
4.017674267 · 10 ⁻³³
6.0265114 · 10 ⁻³³
8.035348533 · 10 ⁻³³
1.004418567 · 10 ⁻³²
1.20530228 · 10 ⁻³²
1.406185993 · 10 ⁻³²

$$\text{freq}_h(n) =$$

3.031714826 · Hz
6.063429653
9.095144479
12.126859305
15.158574132
18.190288958
21.222003784

$$n =$$

1
2
3
4
5
6
7

Note that $1.420405^{09} \text{ Hz } (f_{H1})$ and $1.003224805^{01} (f_{LM})$ are both centered in the above tables.

Quantum (Acoustic) Capacitive and Inductive Reactive Parameters

$$\Phi_0 := 2.067834610 \cdot 10^{-15} \cdot \text{weber} \quad v_{\text{air}} := 371.7731304 \cdot \text{m} \cdot \text{sec}^{-1} \quad \epsilon_0 := 8.854187817 \cdot 10^{-12} \cdot \frac{\text{farad}}{\text{m}}$$

$$\mu_0 := 4 \cdot \pi \cdot 1 \cdot 10^{-07} \cdot \frac{\text{henry}}{\text{m}} \quad m_e := 9.109389700 \cdot 10^{-31} \cdot \text{kg} \quad r_{n1} := 5.291772490 \cdot 10^{-11} \cdot \text{m}$$

The quantum acoustic statements for inductance and capacitance are found to be:

$$L_Q := \frac{\Phi_0^2}{(m_M) v_{\text{air}}^2} \quad L_Q = 1.169522292 \times 10^{-9} \cdot \text{henry} \quad 14)$$

$$C_Q := \frac{m_M \cdot (4 \cdot \lambda_{H1})^2}{\Phi_0^2} \quad C_Q = 4.40932898 \times 10^3 \cdot \text{farad} \quad 15)$$

The equivalent standard electrical formula for capacitance:

$$C_E = \frac{K_T \cdot \text{Area}_C}{d} \quad \text{where,} \quad K_T := \frac{4}{\pi} \cdot \frac{m_M \cdot \epsilon_0}{m_e} \quad K_T = 3.273683324 \times 10^{-7} \cdot \frac{\text{farad}}{\text{m}} \quad 16)$$

$$\text{and} \quad \text{area}_C := \frac{C_Q \cdot r_{n1}}{\left(\frac{m_M}{m_e}\right) \cdot \epsilon_0 \cdot \frac{4}{\pi}} \quad \text{area}_C = 0.712749631 \text{ m}^2 \quad (= 4 \lambda_{H1} \text{ squared.}) \quad 17)$$

$$\text{Then,} \quad C_E := \frac{K_T \cdot \text{area}_C}{r_{n1}} \quad C_E = 4.40932898 \times 10^3 \cdot \text{farad} \quad \text{EXACT match to } C_Q \text{ above.} \quad 18)$$

The above results are based on the atomic weight of methane, the wavelength of the hyperfine radiation of the hydrogen atom, the SI value of the quantum fluxoid, and the Bohr radius of the Hydrogen atom.

Note that multiplying one amu times the fine structure constant and adding that to one amu is extremely close to the mass of one proton which suggests that the difference between the calculated atomic weight of Methane and the actual measured is that the actual weight includes the field energy mass equivalent.

CH₄AtWt = 15.930070767 CH₄ = 16.04246 g/mol **Adjusted via the fine structure field:**

$$\text{CH}_{4\text{atwt}} := \frac{h}{m_{\text{amu}} \cdot v_{\text{air}} \cdot a_0 \cdot \left(\frac{4}{\pi}\right)} \cdot (1 - \alpha) \quad \text{CH}_{4\text{atwt}} = 15.813823416 \quad (19)$$

The equivalent standard electrical formula for inductance is:

$$L_E = \frac{\mu_T \cdot N^2 \cdot \text{Area}_L}{d} \quad \text{where} \quad \mu_T := \frac{1}{v_{\text{air}}^2 \cdot K_T} \quad \mu_T = 22.100766559 \cdot \frac{\text{henry}}{\text{m}} \quad (20)$$

Also: amu := 1.660540200 · 10⁻²⁷ · kg Then it follows that:

$$\frac{\mu_T}{\left[\left(\frac{4}{\pi}\right)^2 \cdot \frac{\text{amu}}{m_e}\right]^2 \cdot 2} = 1.265367403 \times 10^{-6} \cdot \frac{\text{henry}}{\text{m}} \quad \text{where,} \quad \mu_0 = 1.256637061 \times 10^{-6} \cdot \frac{\text{henry}}{\text{m}} \quad (21)$$

Letting N_{turns} be set equal to 1; N_{turns} := 1 (Note:) L_Q = 1.169522292 × 10⁻⁹ · henry (22)

$$L_{\text{ind}} := \frac{\mu_T \cdot N_{\text{turns}}^2 \cdot r_{n1}^2}{r_{n1}} \quad L_{\text{ind}} = 1.169522285 \times 10^{-9} \cdot \text{henry} \quad \text{(Fairly exact match to } L_Q) \quad (23)$$

Note that the Bohr radius of the hydrogen atom is again key to the equation above.

$$f_{\text{quan}} := \frac{1}{\sqrt{C_E \cdot L_{\text{ind}}}} \quad f_{\text{quan}} = 440.361657644 \cdot \text{Hz} \quad (24)$$

CHECK: $f_{\text{air}} := \frac{v_{\text{air}}}{4 \cdot \lambda_{H1}}$ $f_{\text{air}} = 440.361656202 \cdot \text{Hz}$ Almost exact match. (25)

The quantum acoustic properties involving the capacitive and inductive parameters involve the pyramidal geometry of 4/π as well as the radius of the hydrogen atom.

A Very Powerful Secret In The Grand Gallery Parametric Amplifier Matrix

In this analysis of the resonator matrix in the Grand Gallery, we will use a structure of six resonators per resonator stack. We will start with the bottom resonator of the lowest stack in the Gallery. It has a frequency equal to the natural number e in Hz units and has a functional acoustic wavelength of 4 times the hyperfine wavelength of the hydrogen atom of 21 cm. This wavelength is vertical from the horizontal and fits nicely inside the 3 foot vertical steps of the corbelled walls of the Grand Gallery.

$$f_r = 2.718281828 \cdot \text{Hz} \quad 4 \cdot \lambda_{H1} = 2.769832707 \cdot \text{ft}$$

The powerful secret is the possible use of the basic vertical wavelength converted to a nearly horizontal rotational wavelength which gives a 2π increase in functional acoustic velocity. I say nearly horizontal as the angle of rise of the Grand Gallery above the horizontal figures into the mechanics in a very important manner.

The velocity vertical is equal to the basic frequency times the wavelength.

$$v_V := f_r \cdot (4 \cdot \lambda_{H1}) \quad v_V = 7.529185914 \cdot \frac{\text{ft}}{\text{sec}} \quad (26)$$

The angle of rise of the Grand Gallery above the horizontal is given as: $\theta_r := 26.28333333 \cdot \text{deg}$ (27)

[Referenced angle of rise is p. 151 of the book, "Secrets of The Great Pyramid" by Peter Tompkins.]

The rotational rate has to match closely the expected vertical velocity of acoustic resonance of the bottom resonator of the second stack. The vertical velocity of the bottom resonator of the second stack is:

$$v_{V7} := 7 \cdot f_r \cdot (4 \cdot \lambda_{H1}) \quad v_{V7} = 52.704301401 \cdot \frac{\text{ft}}{\text{sec}} \quad (\text{The velocity adds in each resonator.}) \quad (28)$$

The multiplier is 7 since each stack has six resonators so the bottom resonator of the second stack is resonator number seven.

The circular and horizontal velocity due to grabbing the tail of the vertical wavelength and spinning it in the horizontal causes the vertical velocity to be multiplied by 2π in the horizontal and also the secant of the angle of rise of the Grand Gallery. (The secant is the inverse of the cosine.)

$$v_{H1} := 2 \cdot \pi \cdot f_r \cdot (4 \cdot \lambda_{H1}) \cdot (\sec(\theta_r)) \quad v_{H1} = 52.762061437 \cdot \frac{\text{ft}}{\text{sec}} \quad \frac{v_{V7}}{v_{H1}} = 0.998905273 \quad (29)$$

where, $\sec(\theta_r) = 1.115305556$ Now the reason for the angle of rise of the Grand Gallery makes perfect sense. (30)

It is seen that the vertical velocity of the seventh resonator at the bottom of the second stack now is very close to the horizontal velocity of the bottom resonator of the first stack. The acoustic gears mesh.

A transposition of approximately 90 degrees occurs twice in the above example. (From vertical in the bottom resonator of the first stack to horizontal between the stacks and then finally back to vertical in the bottom resonator of the second stack. A multiplier of acoustic velocity near 2π and the secant of the angle of rise is also accomplished during this angular transposition.

Each stack of resonators has a horizontal acoustic velocity in opposite rotation of that of the neighboring stack as viewed end-on. Also, the distance between each stack would then be twice $4 \cdot \lambda_{H1}$. Since there are 26 spaces between the 27 stacks of resonators, the total distance involved in the acoustic process between the resonators is:

$$\lambda_{dr} := 2 \cdot (4 \cdot \lambda_{H1}) \quad \lambda_{dr} = 5.539665413 \cdot \text{ft} \quad \text{Distance between each resonator stack.} \quad 31)$$

$$\lambda_{drt} := 26 \cdot \lambda_{dr} \quad \lambda_{drt} = 144.031300747 \cdot \text{ft} \quad \text{Sum total distance between resonators.} \quad 32)$$

Further, I propose that the horizontal velocity obtained by "cracking the wavelength whip" is only a half circle since the energy in the rotation is absorbed by the upper resonator with no energy left for the downhill resonator. This type of action is quantum and only in quantum fashion can action of rotation be halved with the result of a force offset in the direction of rotation since the other half would not exist. Then all of the resonators would participate in like manner and a tremendous monodirectional force would be generated up the Grand Gallery. This type of monodirectional action would also be useful for propulsion of any type of vehicle, especially in outer space.

The effective vertical acoustic wavelength of each resonator stack is equal to the wavelength of each resonator times the number of resonators.

$$\lambda_R := 4 \cdot \lambda_{H1} \quad \lambda_R = 2.769832707 \cdot \text{ft} \quad \lambda_S := \lambda_R \cdot 6 \quad \lambda_S = 16.61899624 \cdot \text{ft} \quad 33)$$

It is noted here that the length of the resonator stack is also very close to 5 meters, or 1/4 wavelength of the 20 meter amateur radio band. $\lambda_S = 5.065470054 \text{ m}$ That is the wavelength that I constructed for the energy pipe event that generated high voltage r.f. quite to my astonishment. This is fully explained in my previous online work at <http://www.electrogravity.com>.

The angle of rise adds an effective length to the acoustic mechanics. It turns out that the added length is very close to the effective acoustic length of one stack length.

$$\Delta\lambda_{drt} := \lambda_{drt} \cdot \sec(\theta_r) - \lambda_{drt} \quad \text{The difference is:} \quad \Delta\lambda_{drt} = 16.607609269 \cdot \text{ft} \quad 34)$$

Which is very close to the effective acoustic length of the stack λ_S . The length of the stack and its total energy is also of prime interest when the acoustic energy is compared to the quantum energy related to the hyperfine frequency of radiation from the hydrogen atom. This is examined on the following page.

$$f_{H1} := 1.420405751786 \cdot 10^{09} \cdot \text{Hz} \quad 35)$$

First, we determine the required energy in each resonator: $E_r := h \cdot \frac{f_{H1}}{6}$ 36)

The required acoustic velocity of the methane atom is found next:

$$v_M := \sqrt{\frac{E_r}{m_{amu} \cdot CH_{4At} W_t}} \quad v_M = 2.435147244 \frac{m}{s} \quad 37)$$

Then the related acoustic wavelength is:

$$\lambda_M := \frac{v_M}{e \cdot Hz} \quad \lambda_M = 2.939109604 \cdot ft \quad 38)$$

Finally, the angle of the stack required to fully resonate with the hyperfine frequency of radiation from the hydrogen atom is:

$$\theta_M := \operatorname{asec}\left(\frac{\lambda_M}{\lambda_R}\right) \quad \theta_M = 19.540486354 \cdot \text{deg} \quad 39)$$

This works if we allow for the stack angle with the vertical to be adjustable. At the above angle, **every hydrogen atom connected to every methane molecule will be active in radiating at the hyperfine frequency of hydrogen and the total energy unleashed in the Grand Gallery would approach a nuclear bomb yield.** That may be what happened to cause the explosion in the King's Chamber.

The Grand Gallery resonator stacks may be likened to 27 quasi-atoms where each acoustic velocity band around a resonator continuously jumps up the energy scale to the adjacent resonator. I have mentioned before that an acoustic wave may be thought of as a quantum wave since it is the motion of free particles, which in this case is methane. Thus quantum jumping to higher levels until the last resonator is reached and at that point the energy is equal to the acoustic frequency: $f_{air} = 440.361656202 \cdot Hz$

The angles θ_M and θ_r above are referenced to a 90 degree angle projected from the ceiling of the Grand Gallery downwards. Then the angle is formed by tilting the top of the resonators forward (towards the top end of the Grand Gallery) and the bottom of the resonator stack towards the bottom end of the Grand Gallery. It is suggested herein that the acoustic filter (reference 3) may be adjusted in synchronization with the adjustment of the angle of operation of the resonator stacks. The question arises, "who and where was the operator of this mechanism?" An ordinary flesh and blood organism would not survive an instant in the acoustic power and heat of the process described above.

The length of the roof of the Grand Gallery is stated in reference 1 above on page 163 as being 1,844.5 inches. This equates to 153.7083333 feet. I have wondered for some time why the length of the resonator stack matrix is $\lambda_{drt} = 144.031300747 \cdot \text{ft}$. The angle θ_M above provides the answer below where the length of λ_{drt} times the secant of θ_M yields a number very close to the actual measured length of the Grand Gallery along its roofline.

$$\lambda_{GG} := \lambda_{drt} \cdot \sec(\theta_M) \quad \lambda_{GG} = 152.833699418 \cdot \text{ft} \quad \lambda_{GG\text{meas}} := 153.7083333 \cdot \text{ft} \quad 40)$$

The frequency related to the length of the Grand Gallery is calculated based on the air velocity as:

$$f_{GG} := \frac{v_{\text{air}}}{\lambda_{GG}} \quad f_{GG} = 7.980753739 \cdot \text{Hz} \quad 41)$$

Both of the frequencies at the left are close to what is called the Shumann frequency measured in the main as 7.83 to 8.00 Hz.

$$f_{GG\text{meas}} := \frac{v_{\text{air}}}{\lambda_{GG\text{meas}}} \quad f_{GG\text{meas}} = 7.935341513 \cdot \text{Hz} \quad 42)$$

A slight adjustment of the angle of the resonator stacks would cause a perfect mesh with the length of the Grand Gallery.

$$\text{asec}\left(\frac{\lambda_{GG\text{meas}}}{\lambda_{drt}}\right) = 20.439265402 \cdot \text{deg} \quad \theta_M = 19.540486354 \cdot \text{deg} \quad 43)$$

It is seen that a small adjustment can mean a very big change in the power level.

Also on the same page 163 of reference 1 above it is stated that the height of the Grand Gallery is between 27.825 to 28.833 feet. (Converting inches in the text to feet.) The average is 28.329 feet. If we multiply the average height of the Grand Gallery by twice the natural number e, we land very close to the measured length of the Grand Gallery.

$$(2 \cdot e) \cdot 27.825 \cdot \text{ft} = 151.272383754 \cdot \text{ft} \quad (2 \cdot e) \cdot 28.833 \cdot \text{ft} = 156.75243992 \cdot \text{ft} \quad 44)$$

$$\text{avg} := \frac{(2 \cdot e) \cdot (27.825 + 28.833) \cdot \text{ft}}{2} \quad \text{avg} = 154.012411837 \cdot \text{ft} \quad \text{avg} - \lambda_{H1} = 153.31995366 \cdot \text{ft} \quad 45)$$

Power to the Pyramid!

Great Pyramid Rotational Velocity And Electrogravitationally Related Frequency

$$\text{Latitude North:} \quad \text{GP}_{\text{lat}} := 29.98083333 \cdot \text{deg} \quad 46)$$

$$\text{Earth Mean Radius At Equator:} \quad \text{E}_{\text{radius}} := 6.378137 \cdot 10^{06} \cdot \text{m} \quad 47)$$

The cosine of the latitude angle times the equatorial radius yields the length of the radius from the axis of rotation of the Earth at the GP latitude.

$$\text{R}_{\text{Eadj}} := \cos(\text{GP}_{\text{lat}}) \cdot \text{E}_{\text{radius}} \quad \text{R}_{\text{Eadj}} = 5.524695174 \times 10^6 \text{ m} \quad 48)$$

Then the related circumference at the location of the Great Pyramid is:

$$\text{Cir}_{\text{PYR}} := 2 \cdot \pi \cdot \text{R}_{\text{Eadj}} \quad \text{Cir}_{\text{PYR}} = 3.471268354 \times 10^7 \text{ m} \quad 49)$$

Total circumferential distance divided by time in seconds of a 24 hour rotation rate yields velocity in meters per second at the latitude of the Great Pyramid.

$$\text{GP}_{\text{vel}} := \frac{\text{Cir}_{\text{PYR}}}{24 \cdot 3600 \cdot \text{sec}} \quad \text{GP}_{\text{vel}} = 401.767170626 \cdot \frac{\text{m}}{\text{sec}} \quad 50)$$

The builders of the Great Pyramid understood the quantum physics of nature and how to apply them to the exact location of the Great Pyramid to allow for energy extraction from atomic geometry that supplies free energy at the hyperfine radiation wavelength: This did not involve wooden mallets or copper chisels.

The three quantum constants that are fundamental to my theory of electrogravitation are:

$$\text{v}_{\text{LM}} := \sqrt{\alpha} \cdot \frac{\text{m}}{\text{sec}} \quad \text{f}_{\text{LM}} := 1.003224805 \cdot 10^{01} \cdot \text{Hz} \quad \lambda_{\text{LM}} := \text{v}_{\text{LM}} \cdot \text{f}_{\text{LM}}^{-1} \quad 51)$$

The frequency generated at the velocity of rotation related to the above electrogravitational constants is:

$$\text{f}_{\text{PYRRot}} := \frac{\text{GP}_{\text{vel}}}{\left(\frac{\lambda_{\text{LM}}}{\alpha} \right)} \cdot \frac{4}{\pi} \quad \text{f}_{\text{PYRRot}} = 438.394913801 \cdot \text{Hz} \quad \text{Which is extremely close to the frequency measured by Christopher Dunn with his frequency counter in the King's Chamber.} \quad 52)$$

The builders incorporated the electrogravitational fundamental wavelength into their design of the Great Pyramid by using the precise velocity obtained through careful placement of the pyramid.

The rotation of the Earth is 90 degrees to the North-South alignment of the Grand Gallery and the ascending and descending passages of the GP. The fact that the Earth rotates may be directly related to the above electrogravitational fundamental constants presented from my theory of electrogravitation. Then it would make sense to utilize this fact when considering the latitudinal placement of the GP. The electrogravitational velocity v_{LM} is what I have termed in my previous works as the Least Quantum Velocity. **There can be no velocity lower than v_{LM} in the Universe.** It also is a rotationally related velocity and is associated with what is Group Velocity and also the basis of the magnetic field in that the magnetic field has a rotational component that anchors it in space relative to a source of magnetic field. The source can rotate much faster but the field itself remains at the least quantum velocity. This explains why (and more importantly how) the Faraday Homopolar Generator works. Then also, the electrogravitational frequency f_{LM} is a non-radiating standing wave related frequency and not detectable as an electromagnetic wave as a result. When rotated 90 degrees North-South, the standing wave nature collapses to the real axis and thus power is sent to the resonator matrix from the electrogravitational field related to the rotational motion of the Earth itself.

A quick review of the electrogravitational formula is:

$$\begin{array}{ccc}
 \text{System 1} & \text{System 2} & \\
 \boxed{F_{1EG} := \frac{h \cdot f_{LM}}{r_{n1}} \cdot \mu_0 \cdot \frac{h \cdot f_{LM}}{r_{n1}}} & F_{1EG} = 1.982973083 \times 10^{-50} \cdot \text{newton} \cdot \frac{\text{henry}}{\text{m}} \cdot \text{newton} & 53)
 \end{array}$$

where the force is the electrogravitational force between two electrons at $n1$ atomic radius of the Bohr hydrogen atom. The permeability term μ_0 is replaced by μ in general which depends on the ratio of the proton mass to the electron mass times μ_0 if we are considering the electrogravitational force between the proton and electron at the $n1$ radius. There can be only one force variable operating in the above equation at a time. Also, the velocity of action is based on phase velocity which is:

$$v_{\text{phase}} := \frac{c^2}{v_{LM}} \quad \boxed{v_{\text{phase}} = 1.052104131 \times 10^{18} \frac{\text{m}}{\text{s}}} \quad 54)$$

The phase velocity is apart from the ordinary speed of light as it conforms to what I call waveguide space, also termed energy space and non-local space in my theory of electrogravitation. As such, electrogravitation is NOT what is presented in contemporary theories as *electrogravity* which deals with only static electric field force. See the drawing in reference 8 that details waveguide mechanics for group and phase velocity. System one sees only one force. System 2 likewise. What we can see is that there are two force terms but that is because we can see both sides of the equation at once. In the non local quantum action, there is one or the other but not both at the same time. This conforms to the Pauli exclusion principle. The net result is summed up in the local space we can measure.

Notice that equation 53 above has the connecting parameter μ_o between system 1 and 2. It is magnetic permeability in henry per meter in SI units. The same parameter shows up for an equation I developed many years ago for deriving mass.

Constant Statement: $q_o := 1.602177330 \cdot 10^{-19} \text{ coul}$ $l_q := 2.817940920 \cdot 10^{-15} \cdot \text{m}$

$$\boxed{\text{mass}_{\text{electron}} := q_o \cdot \left(\frac{\mu_o}{4 \cdot \pi l_q} \right) \cdot q_o} \quad \text{mass}_{\text{electron}} = 9.109389691 \times 10^{-31} \text{ kg} \quad (55)$$

Note that q_o is the coulomb charge of the electron and l_q is the classic electron quantum radius.

The SI value of the electron mass is: $m_e = 9.1093897 \times 10^{-31} \text{ kg}$

Then, since I have made the statement that there is a least quantum velocity connected with a rotational aspect of a magnetic field that is acting 90 degrees to the direction of the magnetic field, I can now make a further connection to permeability being connected to mass itself. Then the permeability connector in equation 53 is an anchor point between system one and system 2 allowing for the two systems to act as one in time. The henry term is inductance which is based on the geometric nature of the magnetic field.

The mass equation has the connector form of: $\frac{\mu_o}{4 \cdot \pi l_q} = 3.548690439 \times 10^7 \cdot \frac{\text{henry}}{\text{m}^2}$ (56)

The connector has the property of inertia. $r_{LM} := \lambda_{LM} \cdot (2 \cdot \pi)^{-1}$ Inertia: $I = m \cdot r^2$ (57)

Then the moment of inertia for the electron regarding electrogravitation is:

$$\boxed{I_{LM} := q_o \cdot r_{LM} \cdot \left(\frac{\mu_o}{4 \cdot \pi l_q} \right) \cdot q_o \cdot r_{LM}} \quad I_{LM} = 1.6730094 \times 10^{-36} \text{ m}^2 \cdot \text{kg} \quad (58)$$

Finally, the least quantum electrogravitational energy where $\omega_{LM} := 2 \cdot \pi \cdot f_{LM}$ of the electron is:

$$\boxed{E_{LM} := \omega_{LM} \cdot (I_{LM}) \cdot \omega_{LM}} \quad \text{thus,} \quad E_{LM} = 6.647443292 \times 10^{-33} \text{ J} \quad (59)$$

$$f_{LM} = 10.03224805 \cdot \text{Hz} \quad r_{LM} = 1.35520361 \times 10^{-3} \text{ m} \quad \omega_{LM} = 63.034473546 \cdot \frac{\text{rad}}{\text{sec}} \quad (60)$$

The frequency f_{LM} is a standing wave rotational frequency and does not radiate.

It is of interest that equation 59 is a two system equation that results in a single mass just as the electrogravitational equation number 53 is also a two system equation based on the product of two of the above equation number 59 above and the result is also a single force.

System 1	System 2	
$E_{LM} = (2 \cdot \pi \cdot f_{LM} \cdot q_o \cdot r_{LM}) \cdot \left(\frac{\mu_o}{4 \cdot \pi l_q} \right) \cdot (2 \cdot \pi \cdot f_{LM} \cdot q_o \cdot r_{LM})$		The product shown of System 1 and System 2 times the connector term forms a macro system as shown below as SYS 1 or SYS 2.

SYS 1	SYS 2	
$F_{2EG} := \left(\frac{E_{LM}}{r_{n1}} \right) \cdot \mu_o \cdot \left(\frac{E_{LM}}{r_{n1}} \right)$		Same result as for equation 53 above.

$$F_{2EG} = 1.982973077 \times 10^{-50} \cdot \text{newton} \cdot \frac{\text{henry}}{\text{m}} \cdot \text{newton}$$

Even equation 55 above shows the concept of a two system approach yields a single particle with mass.

This suggests that the two system electrogravitational equation also yields a single particle. In that case, there could be nearly an infinite amount of particles at the same time being formed that would represent the entire host of possible interactions: Especially since the interaction phase velocity is extremely high as

show in equation 54 where: $v_{\text{phase}} = 1.052104131 \times 10^{18} \frac{\text{m}}{\text{s}}$

This is a good place and time to review what is occurring equation-wise starting with equation 55 above. Eq. 55 shows the most elemental system pairing where each charge is the most elemental 'system' of one parameter, namely the elemental charge of the electron or proton. The pair of charges are not associated with any particular space or time. In other words, they each could be anywhere in any time of the universe and when acted on through the magnetic permeability connector, viola, an electron is born out of the pair uniting through the magnetic permeability connector.

The fundamental connector has the units of:
$$\left(\frac{\mu_o}{4 \cdot \pi l_q} \right) = 3.548690439 \times 10^7 \cdot \frac{\text{henry}}{\text{m}^2}$$
 63)

The connector shown above connects two charges anywhere in normal space and time to form mass and this is by its very nature a quantum effect that denies observation from normal space. The connector would reside in what I call energy space which is without physical or time like dimension. **The 'pair' could also be a superposition of the same electron existing alternately in one place and then another. (Hidden mass-energy of the universe?)**

Next, in equation 58, inertia 'blooms' from mass with the addition of radius to each charge. The seed of mass is beginning to grow and open up its budding potential.

Further, in equation 59, energy blooms from inertia of the electron and we begin to see formation of the intended design almost as if petals were beginning to unfold of a yet unseen flower.

Now is the time to explain what E_{LM} is. It is the least quantum magnetic energy that exists as a macro system formed from the minor systems associated with each fundamental charge where each fundamental charge is also associated with the product of the least quantum electrogravitational radius and frequency of rotation. In short, it is a magnetic energy particle and is created from the electron mass itself. Dare I say monopole? I dare indeed. Perhaps MAGNITOID? From the least quantum magnetic energy monopole the magnetic force related to that particle at the Bohr radius of the hydrogen atom is calculated below.

$$F_{LM} := \frac{E_{LM}}{r_{n1}} \qquad F_{LM} = 1.256184635 \times 10^{-22} \cdot \text{newton} \qquad \text{MAGNETIC MONOPOLE} \quad 64)$$

Since E_{LM} is: $E_{LM} = 6.647443292 \times 10^{-33}$ joule , we can see why it is so difficult to measure and thus detect the monopole by utilizing conventional methods.

The magnetic monopole developed from equation 59 above and it is indeed a beautiful sight: But wait, the best is yet to come. Look at the next bifurcation in the process of blooming of equations 53 and 62 above where the macro particle of electrogravitation is formed. The Rose of roses has burst forth in all its glory for all the universe to behold. Finally, from the pairing and junction via the magnetic connector of the two charges forming the quantum electron, we arrive at the holy grail. Our cup indeed runneth over!

SYS1

SYS2

$$\left[(2 \cdot \pi \cdot f_{LM} \cdot q_o \cdot r_{LM}) \cdot \left(\frac{\mu_o}{4 \cdot \pi l_q} \right) \cdot (2 \cdot \pi \cdot f_{LM} \cdot q_o \cdot r_{LM}) \right] \cdot \mu_o \cdot \left[(2 \cdot \pi \cdot f_{LM} \cdot q_o \cdot r_{LM}) \cdot \left(\frac{\mu_o}{4 \cdot \pi l_q} \right) \cdot (2 \cdot \pi \cdot f_{LM} \cdot q_o \cdot r_{LM}) \right] \quad 65)$$

The above equation is the full combination of bifurcation of growth from forming the individual electron to the macro particle of the least quantum of electrogravitational energy. This macro particle can be named the electrograviton. Another way of looking at the above analysis is to think of an egg hatching and what emerged grew larger and larger wings until it was fully formed into the electrograviton. Again, it exists in nearly infinite possible combinations of particles throughout the universe and its action is fundamentally non-local and yet also local in the observed reaction phase just as all of the previous growth levels shown above are. There is a sequence to the genesis of matter above. First, a charge pair which then creates mass. Then comes inertia followed by energy. Then is the electrograviton formed by the pair of energy particles I have taken the liberty to call magnitons.

The magniton is missing in conventional physics format. Its existence is hidden by the determined effort to have all particle forces relying on the photon and labeled with the general term quantum electrodynamics. This has the effect of limiting action to the speed of light and at the same time hiding the very important magniton. Without the non-local magniton action, there can not be discovered the real cause of gravity which I have laid out in bare truth above. As I have presented above, gravity is non-local in its action and local only in the reaction and observable phase of its nature.

Utilizing the method of deriving the creation of the magniton above, the quantum electric field energy can be derived by increasing the frequency term. Eq. 59 is restated below for that purpose. Firstly the frequency is derived related to the velocity in the n1 energy level of the hydrogen atom:

$$v_{n1} := \alpha \cdot c \quad f_E := v_{n1} \cdot \lambda_{LM}^{-1} \quad f_E = 2.569222073 \times 10^8 \cdot \text{Hz} \quad (66)$$

$$E_{EM} := (2 \cdot \pi \cdot f_E \cdot q_o \cdot r_{LM}) \cdot \left(\frac{\mu_o}{4 \cdot \pi l_q} \right) \cdot (2 \cdot \pi \cdot f_E \cdot q_o \cdot r_{LM}) \quad E_{EM} = 4.359748199 \times 10^{-18} \text{ J} \quad (67)$$

The frequency $f_E = 2.569222073 \times 10^8 \cdot \text{Hz}$ is fundamental to all matter and especially for ordered structure such as crystalline material. I refer the reader to: <http://keelynet.com/gravity/kfrost.htm> There is shown an experiment that suggests the use of very high frequency electromagnetic waves and also the use of what appears to be strong electric fields can fundamentally alter matter to cause it to lift heavy weights. This may be similar to what Edward Leedskalnin (of Coral Castle fame) used to lift heavy blocks of stone. Reportedly, the crystal was caused to expand under the influence of the electric and magnetic fields employed.

It is of interest that allowing for f_{LM} to occupy one of the frequency parameters of E_{Hyp} below, we arrive at the electric field r_{n1} frequency f_E .

$$E_{Hyp} := (2 \cdot \pi \cdot f_E \cdot q_o \cdot r_{LM}) \cdot \left(\frac{\mu_o}{4 \cdot \pi l_q} \right) \cdot (2 \cdot \pi \cdot f_{LM} \cdot q_o \cdot r_{LM}) \quad E_{Hyp} = 1.702385941 \times 10^{-25} \text{ J} \quad (68)$$

$$f_{Hyp} := E_{Hyp} \cdot h^{-1} \quad f_{Hyp} = 2.56922207 \times 10^8 \cdot \text{Hz} \quad \text{where,} \quad f_E = 2.569222073 \times 10^8 \cdot \text{Hz} \quad (69)$$

The above is a product of the electric and magnetic parameters which make it a candidate for being electromagnetic radiation. In other words, also a photon.

The equation below derives the hyperfine radiation by changing the connection constant as shown so that it is a function of $4/\pi$ as for the basis of the construct of the Great Pyramid.

$$E1_{\text{Hyp}} := (2 \cdot \pi \cdot f_E \cdot q_o \cdot r_{LM}) \cdot \left[\frac{\mu_o}{l_q \cdot \left(1 + \frac{4}{\pi}\right)} \right] \cdot (2 \cdot \pi \cdot f_{LM} \cdot q_o \cdot r_{LM}) \quad E1_{\text{Hyp}} = 9.4107164 \times 10^{-25} \text{ J} \quad 70)$$

$$f1_{\text{Hyp}} := E1_{\text{Hyp}} \cdot h^{-1} \quad f1_{\text{Hyp}} = 1.420254931 \times 10^9 \cdot \text{Hz} \quad \text{Note: } f_{\text{H1}} = 1.420405752 \times 10^9 \cdot \text{Hz} \quad 71)$$

The difference places the frequency in the range commonly used by Tesla coils.

$$\Delta f := f_{\text{H1}} - f1_{\text{Hyp}} \quad \Delta f = 1.508211682 \times 10^5 \cdot \text{Hz} \quad 72)$$

We are now back in the realm of the Great Pyramid and why it was constructed.

The hyperfine energy available from the hydrogen atom is mentioned in contemporary science (in terms of radiation from deep space atoms) as being infrequent due to sparse interaction with atoms in the vacume and photon excitation, etc. According to present theory, the process of radiation of energy is restored by further interaction with energy available from ambient radiation. Thus, the energy that is the hyperfine radiation at 21 cm is seriously downplayed to say the least. If we form a suitable waveguide container for hydrogen atoms, especially monoatomic atoms of hydrogen in colluminated transit, a resonance in the gas having enough amplitude will cause a steady stream of energy to be emitted from the atoms at 21 cm wavelength. The energy radiated is restored not by externally pumping the atoms, but by the proton pressure wave coming from the proton itself. This is the secret to unlimited free energy.

I mentioned above the space I call energy space. This is the same space that created the big bang and in my theory is the same space that restores the 21 cm energy radiated from the hydrogen atom. This by reason of the fact that the proton is connected internally to energy space as are all fundamental quantum particles. Notice that equation 55, the electron formula, has no geometric form. It is formless and thus not restricted to a particular space-time. This holds true for the proton as well. In fact, the difference in mass is determined by the size of the connector which determines how much energy is formed that determines the particle mass.

The proton is effectively shielded by the electron since the electron surrounds the proton in a 'cloud' of its presence so that normally, no energy radiates unless the atom is perturbed by an outside force such as josteling against other atoms or radiation excitation externally. Carefully tuned resonance that causes the hydrogen atom to do the energy dance will release energy in a steady stream which can be useful for all.

The following is an excerpt from my online paper and includes the equation numbers and page numbers. The blue text at the top of the page are links back to the source.

Hydrogen gas may be 'light' due to proton electromagnetic radiation of energy as outlined above. The release of electromagnetic radiation may repel other like Hydrogen atoms so that they do not 'bounce' off of each other like billiard balls while in a container. Instead, they experience a cushioned deflection due to repulsive field interaction between the atoms. It is reasonable to expect that the neutral Hydrogen atom should allow relatively close proximity to another neutral Hydrogen atom due to the close-up proton to electron electrostatic fields being tied together in a close knot. This is not the case and in fact the space between atoms is what makes Hydrogen gas so light. The same process may be occurring for Helium. However, as we consider atoms with more electrons, I propose that the radiated proton electromagnetic energy becomes shielded by the increasing number of electrons surrounding the nucleus. Thus atoms become more tightly packed and begin to form molecules since they can get close enough to each other.

This suggests that the radiated energy from the Hydrogen nucleus may be harnessed on a large scale to create a repulsion field that can be directed towards other mass and create what is popularly called antigravity. The energy may also be directly harnessed by means of resonating the atom in coherent fashion with many other atoms in a suitable container, such as a specially designed acoustic-electric Hydrogen maser.

I cannot help but wonder if the cold fusion claim is not cold fusion but actually the resonant dance of the H-2 Deuterium atom with its neighbors and the electromagnetic energy output from the protons began to rise when the protons are forced into a wild gyration that causes larger proton electromagnetic radiation than normal. I would like very much to make a measurement of a cold fusion experiment around the two frequencies related to 1.420×10^{09} and 3.13×10^{11} Hz. This would explain the absence of neutrons during such experiments since it is not really fusion. It is possibly the form of electromagnetic proton radiation as described above.

Electromagnetic radiation can create pressure. Quote: An electromagnetic wave whose Poynting vector has the magnitude S loses the momentum S/c per unit area per unit time when it is absorbed by a surface, and so the force it exerts upon the wall is S/c per unit area. Since pressure is force per unit area, the pressure p of the wave is $p = S/c$. Unquote. ¹¹

Note: The vector S has the units of energy per unit time per meter squared. This amounts to power per meter squared.

$$S_{avg} = \frac{\text{Energy}}{\text{time}} \cdot \frac{1}{\text{area}} \cdot \frac{1}{2} \quad \text{and the momentum per unit time and unit area is given as:} \quad (112)$$

$$P_{avg} = \frac{\text{Energy}}{\text{time} \cdot \text{velocity}} \cdot \frac{1}{\text{area}} \cdot \frac{1}{2} \quad \text{yields} \quad P_{avg} = \left(\frac{m \cdot v}{t} \right) \cdot \left(\frac{v}{v} \right) \cdot \left(\frac{1}{2 \cdot r^2} \right) \quad \text{which can be expressed as pressure since pressure is force per unit area.} \quad (113)$$

$$\text{Then the average pressure is given as:} \quad \text{Press} = \frac{\text{force}}{2 \cdot \text{area}} \quad (114)$$

Let us examine the lowest energy level of the H-1 Hydrogen atom for the amount of force on the electron in that level exerted by the energy radiated by the proton's radiation at 1420 MHz. The equation in 115 below is the result of equations 112, 113 and 114 above. First the radius of the n1 energy level must be stated.

$$R_{n1} := 5.291772490 \cdot 10^{-11} \cdot \pi \text{ Bohr radius.} \quad \text{and} \quad f_{H1} = 1.420405752 \times 10^9 \cdot \text{Hz}$$

Then the pressure at the n1 energy level is calculated by the following equation where we do not assume the surface area of a sphere, ($A = 4\pi r^2$), but only the area of a plane surface defined by the square of the Bohr n1 radius.

$$\text{Press}_{n1} := \frac{h \cdot f_{H1}^2}{(R_{n1})^2 \cdot c} \quad \text{Press}_{n1} = 1.592422089 \times 10^{-3} \cdot \text{Pa} \quad 115)$$

where, $1 \cdot \frac{\text{newton}}{\text{m}^2} = 1 \cdot \text{Pa}$ The Pa unit is the Pascal in newton/meter² units.

The pressure above is throughout the n1 surface defined by R_{n1} squared. Therefore, the actual force on the much smaller electron Compton radius area can be found by multiplying the above pressure by the square of the product of the fine structure and the unit meter.

$$\text{Then: } F_{en1} := \text{Press}_{n1} \cdot (\alpha \cdot \text{m})^2 \quad \text{or, } F_{en1} = 8.479864509 \times 10^{-8} \cdot \text{newton} \quad 116)$$

Next we calculate the electric field force due to the interaction of the field of the electron with the field of the proton at the n1 Bohr radius.

$$F_{En1} := \frac{q_0^2}{4 \cdot \pi \cdot \epsilon_0 \cdot R_{n1}^2} \quad F_{En1} = 8.238729466 \times 10^{-8} \cdot \text{newton} \quad 117)$$

The pressure on the electron due to the energy of the radiating hyperfine electromagnetic frequency is a little more than necessary to counterbalance the coulomb electric field force. This is an alternative explanation as to why the electron cannot be pulled into the proton by the force of the electrostatic field and further, it establishes why it is that the first shell is located at the n1 radius. It is located where the outward electromagnetic wave from the proton balances the inward electric field force.

Therefore, the "orbital" picture of the electron totally gives way to the probability wave of where the electron is in the energy shell which agrees with the expected quantum result. The electron can be effectively sitting still and yet not be able to go any further towards the proton than allowed by the force balance point which holds the electron in the bottom of the energy valley very close to zero joules. It is thus desirable to consider the pressure wave from the proton to be energy that cancels the positive electric field energy of the electron with the proton pressure wave's negative energy. Or, put another way, the proton's negative field energy cancels the electrons positive field energy and the proton pressure wave cancels the electrostatic force field between the proton and the electron with some energy left over which is the Hyperfine and CBR radiation.

I am going to ask the reader to fasten their mental seat belts. The next result is astounding. At least it is to me.

The difference in the (-) energy pressure-wave force and the (+) energy electric field force at the Bohr radius on the electron divided into the energy of the n1 shell derives a distance ΔR_{n1} as:

$$\Delta R_{n1} := \frac{m_e \cdot (c \cdot \alpha)^2}{2 \cdot (F_{en1} - F_{En1})} \quad \Delta R_{n1} = 9.040055227 \times 10^{-10} \text{ m} \quad 118)$$

Then if we find the ratio of the ΔR_{n1} to the quantum De Broglie wavelength of the n1 shell, we arrive at a very interesting number.

$$\frac{\Delta R_{n1}}{2 \cdot \pi \cdot R_{n1}} = 2.718880069 \quad \text{where,} \quad \frac{\Delta R_{n1}}{2 \cdot \pi \cdot R_{n1} \cdot (e)} = 1.00022008 \quad 119)$$

And where also: $e = 2.718281828$ **which is the natural number e.**

This is a eureka moment! The natural number e is ubiquitous throughout physics as related to the growth and decay of many types of natural processes. In this case, a distance ΔR_{n1} divided by the natural number e yields the wavelength of the n1 (lowest energy level) of the Bohr 'orbital' of Hydrogen-1. Therefore, the proton pressure wave works to 'fix' the n1 foundation wavelength through the decay of ΔR_{n1} to R_{n1} which is controlled by e. The energy can be stated as a negative energy by reversing the order of the forces in the denominator above. This is shown below in the solution for energy based on equations 118 and 119 above.

$$\Delta E_{diff} := (e) \cdot (2 \cdot \pi \cdot R_{n1}) \cdot (F_{En1} - F_{en1}) \quad \Delta E_{diff} = -2.17939446 \times 10^{-18} \text{ joule} \quad 120)$$

The result is negative energy which is what I propose is coming from the proton as a pressure wave. It is this negative energy that may be used by UFO's to interact with the gravitational field of the Earth. It has been reported by numerous persons that electrical devices fail to work close to the presence of UFO energy fields. Negative field energy would cause just this sort of effect on positive energy devices that are electrically and/or magnetically operated. If we could isolate a lot of protons, we could build a source of negative energy. The trick is to keep electrons from getting close to cancel the negative energy field. Negative energy implies negative time and clocks have been known to lose time in ambient energy fields of the UFO's.

Seat belt still fastened? The below equation (121) is based on the sum of the kinetic energy of the n1 shell of the Bohr H-1 atom and the negative energy of equation (120) above and delivers a frequency very near the Cosmic Background Radiation frequency when divided by twice Plank's constant. This correlates very strongly the 1420 MHz fine structure 'pressure wave' and the CBR to the energy output of the proton in the Hydrogen atom.

$$\text{CBR}_{\text{freq}} := \frac{\frac{m_e \cdot v_{n1}^2}{2} + \Delta E_{\text{diff}}}{2 \cdot h}$$

23 33

$$\text{CBR}_{\text{freq}} = 3.619351927 \times 10^{11} \cdot \text{Hz} \quad 121)$$

Note that: $\frac{m_e \cdot v_{n1}^2}{2 \cdot q_0} = 13.605698076 \cdot \text{volt}$ which is the electron volt energy of the n1 level of Hydrogen. 122)

And $\frac{\Delta E_{\text{diff}}}{q_0} = -13.602704388 \cdot \text{volt}$ Results in the required negative binding energy of the n1 shell. 123)

===== End of "Excerpt" insert =====

Equation 115 in the excerpt insert above can easily be modified to establish the forces of the shells of the hydrogen atom if we include the n squared multiplier in the denominator where n squared is the shell number. Included is equation 116 to show the related force. First, a small difference in R_{n1} , called $\Delta R1_{n1}$ is found by generation of numerical values to arrive at f_{H1} in table 9 below.

Let: $\Delta R1_{n1} := 7.68819727560294 \cdot 10^{-13} \cdot \text{m}$ NOTE: $\left(\frac{\Delta R1_{n1}}{R_{n1} \cdot 2}\right) \cdot \frac{1}{\alpha} = 0.995469593$ Very close. 73)

$$\text{PressS}(n) := \frac{h \cdot f_{H1}^2}{\left[\left[n^2 \cdot (R_{n1} + \Delta R1_{n1}) \right]^2 \right] \cdot c} \quad \text{ForceS}(n) := \text{PressS}(n) \cdot \alpha^2 \cdot \text{m}^2 \quad \text{ForceE}(n) := \frac{q_0^2}{4 \cdot \pi \cdot \epsilon_0 \cdot (n^2 \cdot R_{n1})^2} \quad 74)$$

$$\text{Radius}(n) := n^2 \cdot R_{n1}$$

Table 2

ForceS(n) =

8.238731245 · 10 ⁻⁸ N
5.149207028 · 10 ⁻⁹
1.017127314 · 10 ⁻⁹
3.218254392 · 10 ⁻¹⁰
1.318196999 · 10 ⁻¹⁰
6.357045713 · 10 ⁻¹¹
3.431374946 · 10 ⁻¹¹

Table 3

ForceE(n) =

8.238729466 · 10 ⁻⁸ N
5.149205916 · 10 ⁻⁹
1.017127095 · 10 ⁻⁹
3.218253698 · 10 ⁻¹⁰
1.318196715 · 10 ⁻¹⁰
6.357044341 · 10 ⁻¹¹
3.431374205 · 10 ⁻¹¹

Table 4

Radius(n) =

5.29177249 · 10 ⁻¹¹ m
2.116708996 · 10 ⁻¹⁰
4.762595241 · 10 ⁻¹⁰
8.466835984 · 10 ⁻¹⁰
1.322943122 · 10 ⁻⁹
1.905038096 · 10 ⁻⁹
2.59296852 · 10 ⁻⁹

Table 5

n =

1
2
3
4
5
6
7

Table 6

ForceS(n)·Radius(n) =

4.359749135· 10 ⁻¹⁸ J
1.089937284· 10 ⁻¹⁸
4.844165706· 10 ⁻¹⁹
2.72484321· 10 ⁻¹⁹
1.743899654· 10 ⁻¹⁹
1.211041426· 10 ⁻¹⁹
8.897447215· 10 ⁻²⁰

Table 7

ForceE(n)·Radius(n) =

4.359748194· 10 ⁻¹⁸ J
1.089937049· 10 ⁻¹⁸
4.84416466· 10 ⁻¹⁹
2.724842621· 10 ⁻¹⁹
1.743899278· 10 ⁻¹⁹
1.211041165· 10 ⁻¹⁹
8.897445294· 10 ⁻²⁰

Here we see a slight difference between the Poynting vector force and the electrostatic force in the shells. This will develop f_{H1} in the first shell as shown below.

$$f_{H1} = 1.420405751786 \times 10^9 \cdot \text{Hz}$$

Table 8

ForceS(n)·Radius(n) – ForceE(n)·Radius(n) =

9.411715742· 10 ⁻²⁵ J
2.352928935· 10 ⁻²⁵
1.045746192· 10 ⁻²⁵
5.882322339· 10 ⁻²⁶
3.764686295· 10 ⁻²⁶
2.614365479· 10 ⁻²⁶
1.920758316· 10 ⁻²⁶

Table 9

$(\text{ForceS}(n) \cdot \text{Radius}(n) - \text{ForceE}(n) \cdot \text{Radius}(n)) \cdot h^{-1} =$

1.420405750263884· 10 ⁹ ·Hz
3.551014375659709· 10 ⁸
1.578228608336246· 10 ⁸
8.877535939149272· 10 ⁷
5.68162299902092· 10 ⁷
3.945571520840614· 10 ⁷
2.898787247030674· 10 ⁷

Electron Compton wavelength diameter minus (classic electron wavelength diameter divided by golden ratio approximation) is very close to ΔR_{n1} .

$$\alpha \cdot R_{n1} \cdot 2 - \left(\alpha^2 \cdot R_{n1} \cdot \frac{2}{1.618033989 - \alpha} \right) = 7.688196987 \times 10^{-13} \text{ m and } \Delta R_{n1} = 7.688197275603 \times 10^{-13} \text{ m } \quad (75)$$

The value of the golden ratio number is: $\Phi_{\text{gold}} := \frac{1 + \sqrt{5}}{2}$ $\Phi_{\text{gold}} = 1.618033989$ (76)

The purpose of the above analysis is to find the condition that yields the hyperfine radiation frequency of the Hydrogen atom in the n1 shell. That condition is marked by a resonance and thus interaction between the diameter of the electron minus the diameter of the classic electron wavelength divided by the (golden ratio minus alpha). At that resonance of wavelengths, no radiation is likely occur. When the electron is disturbed by an outside source, standing wave resonance is broken and radiation may occur.

A follow up of the analysis in pages 20 through 24 above reveals precise coincidence in the calculations that strongly support the concept that there is indeed a pressure wave associated with the proton that provides the repulsive force necessary to keep the electron from being pulled into the nucleus. Further all shells benefit from this same pressure wave in very close agreement with what would be required to stabilize the shell electrons. Further the energy left over is the hyperfine radiation energy that does not radiate so long as there is resonance between the primary first shell diameter and the electron diameter and also the classic electron radius with the additional function of the golden ratio.

The pressure wave theory above is the only reason that makes sense since there is no explanation offered in contemporary physics as to what keeps the electron from being pulled into the nucleus. Especially since the concept of orbiting electrons is not acceptable since the electron is spread out around the nucleus and thus is a quantum 'cloud'. Thus no inertial force is available to hold it away from the nucleus based on a known velocity around that nucleus.

The builders of the Great Pyramid at Giza apparently took this knowledge into account when building the Great Pyramid.

Another follow up concerning pages 15 through 17 suggests that if we allow for the Great Pyramid to be a single MACRO-SYSTEM involving the concept of being a quantum construct, then another pyramid of like construction would be in instantaneous resonance of energy through the same connector energy space that applied to previous other system constructs in pages 15 through 17. This is akin to the Tesla coil idea of power transmission that Nicola Tesla envisioned. His system of power transmission did not depend on the speed of light as its connector or medium. His system also worked on multiples of a quarter wave so that the quarter wavelength coils each formed 1/2 of a resonant 'open' transmission line. Energy transferred back and forth almost instantaneously in that configuration as it must in order to prevent energy decoherence. In other words, what is happening in one leg of the transmission line must be in step with what is happening in the other or the line fails to carry power, period. This is an important concept concerning Tesla's coils that has been held in obscurity for many long years.

What about transmission of material objects between the pyramids? Could the Great Pyramid have been employed to transfer physical objects from one part of the Earth to another? Or perhaps from Earth to Mars or even remote solar system planets.? If so, any or all of that process would be based on the energy available from the hyperfine frequency of the proton-electron mechanics of the hydrogen atom. Hydrogen is also the most abundant element in the universe.

Note that there are common parameters in the quantum two-system magnetic permeability connected equations above. The parameters μ_o , $4\pi I_q$, q_o , r_{LM} , f_{LM} and f_E form up the complete set of energy equations that form a unified approach to the non-nuclear field forces. It is herein suggested that the so-called nuclear forces have the same or similar parameters.

The next page introduces a two-step iteration process where the output of the first equation is used to create a new parameter in the second self-same equation to derive an energy gain transformation at the output of the second equation. The first process will derive the neutron energy of decay energy which also points to creating the strong force by the same process. Then the electrogravitational energy is developed using the same two- step process which develops a weaker energy at the output equation.

Equation 68 on page 18 above derives the frequency $f_{\text{Hyp}} = 2.56922207 \times 10^8 \cdot \text{Hz}$ which is the same as $f_E = 2.569222073 \times 10^8 \cdot \text{Hz}$ which is one of the parameters of the equation itself.

First, the rest mass of a proton is: $m_p := 1.672623100 \cdot 10^{-27} \cdot \text{kg}$

The adjusted Compton radius is: $R_p := \frac{h}{2 \cdot \pi \cdot m_p \cdot c \cdot (.983418)}$ $R_p = 2.138550771 \times 10^{-16} \text{ m}$ 77)

First step for neutron decay energy genesis from an electromagnetic equation:

Step 1:

$$E_W := (2 \cdot \pi \cdot f_E \cdot q_o \cdot r_{LM}) \cdot \left(\frac{\mu_o}{4 \cdot \pi \cdot R_p} \right) \cdot (2 \cdot \pi \cdot f_{LM} \cdot q_o \cdot r_{LM}) \quad \frac{E_W}{q_o} = 1.400102271 \times 10^{-5} \cdot \text{volt} \quad 78)$$

$$f_W := E_W \cdot h^{-1} \quad f_W = 3.385430966 \times 10^9 \cdot \text{Hz}$$

Step 2:

$$EN_W := (2 \cdot \pi \cdot f_W \cdot q_o \cdot r_{LM}) \cdot \left(\frac{\mu_o}{R_p} \right) \cdot (2 \cdot \pi \cdot f_W \cdot q_o \cdot r_{LM}) \quad \frac{EN_W}{q_o} = 7.823437948 \times 10^5 \cdot \text{volt} \quad 79)$$

$$f_{NW} := EN_W \cdot h^{-1} \quad f_{NW} = 1.891698174 \times 10^{20} \cdot \text{Hz}$$

It is a two step process involving feedback from the first step where first, R_p is input to the connector term for magnetic permeability and the output is fed back to the two frequency terms in the same equation. In the second step, the 4π term is dropped. Note the velocity of light adjustment for the calculation of R_p . The voltage result is extremely close to the accepted and measured value.

The very same two step process can be utilized to derive the strong force energy from the much weaker electric and magnetic energy frequencies.

The next page will derive the two step electrogravitational energy at the Bohr n1 radius between two electrons in the first shell radius of hydrogen. The desired single newton term is arrived at for the first time.

Stating again the angle of rise of the Grand Gallery: $\theta = 26.2833333\text{-deg}$

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

Then:

$$EG_{Rn1} := m_e \cdot \frac{G_k}{R_{n1}} \cdot m_e$$

$$EG_{Rn1} = 1.046337618 \times 10^{-60} \text{ J}$$

Classic Newtonian gravitational energy between 2 electrons at the Bohr n1 radius of hydrogen. 80)

Borrowing from the two-step method above, we iterate the magnetic energy equation (eq. 61) into itself with some very relevant substitutions of established parameters of distance, angle and geometric pyramidal constants to find the electrogravitational force equal to the classical gravitational force above. This method is therefore universal to force fields in general and can also be considered a growth process of the universe.

Step 1:

$$E1_{LM} := (2 \cdot \pi \cdot f_{LM} \cdot q_o \cdot r_{LM}) \cdot \left(\frac{\mu_o}{4 \cdot \pi \cdot r_{LM}} \right) \cdot (2 \cdot \pi \cdot f_{LM} \cdot q_o \cdot r_{LM})$$

$$E1_{LM} = 1.382235284 \times 10^{-44} \text{ J} \quad 81)$$

$$f1_{EG} := E1_{LM} \cdot h^{-1}$$

$$f1_{EG} = 2.086054232 \times 10^{-11} \cdot \text{Hz} \quad 82)$$

Step 2:

$$E2_{LM} := (2 \cdot \pi \cdot f1_{EG} \cdot q_o \cdot r_{LM}) \cdot \frac{\mu_o \cdot \sec(\theta)}{4 \cdot \pi \cdot R_{n1} \cdot \left(\frac{4}{\pi}\right)^2} \cdot (2 \cdot \pi \cdot f1_{EG} \cdot q_o \cdot r_{LM})$$

$$E2_{LM} = 1.05296432 \times 10^{-60} \text{ J} \quad 83)$$

$$f2_{EG} := E2_{LM} \cdot h^{-1}$$

$$f2_{EG} = 1.589122127 \times 10^{-27} \cdot \text{Hz} \quad 84)$$

Finally, the electrogravitational force between two electrons at the Bohr radius of hydrogen is found to be:

$$FEG2_{n1} := E2_{LM} \cdot R_{n1}^{-1}$$

$$FEG2_{n1} = 1.98981404 \times 10^{-50} \cdot \text{newton} \quad 85)$$

which is very close to the classical approach above. More importantly, it has the acceptable single newton desired by conventional physics.

A review of the above electrogravitational equation development of equations 81 through 85 reveals that the two-step approach is non-linear in the energy output and the output energy is decreasing instead of increasing as is the case for the nuclear energy genesis.

The two-step electrogravitational energy development of equations 81 through 85 yields the much sought-after single newton result. Does this mean that the former electrogravitational energy equation number 65 from above is not valid? Not at all. In fact, the new form of the electrogravitational equation that yields a single newton result augments the newton squared form of equation 65. It can be mentioned also that equation 65 is a linear energy throughput while equations 81 through 85 are non-linear.

If we think of the newton squared form as relating to an area being swept out by equation number 65, we would ascribe to it the property of inertia and it can be pictured as horizontal on the surface of the Earth while a vertical direction can be visualized for the form in the equations of 81 through 85. Further, the angle of rise $\theta = 26.2833333 \cdot \text{deg}$ per revolution of the horizontal mode towards the vertical can be set to the angle of rise of the Grand Gallery of the Great Pyramid of Giza and this is shown in equation 83. Also in equation 83 is the $4/\pi$ constant also related to the fundamental construct of the Great Pyramid itself. Then we can see that the Great Pyramid taps into the dynamics of tornado action and that action is fundamentally related to electrogravitation.

Then the total picture is that of the electrogravitational tornados in the Grand Gallery encircling each stack of resonators and each successive tornado stack rotating in the opposite direction of the previous one as we work our way up towards the King's Chamber.

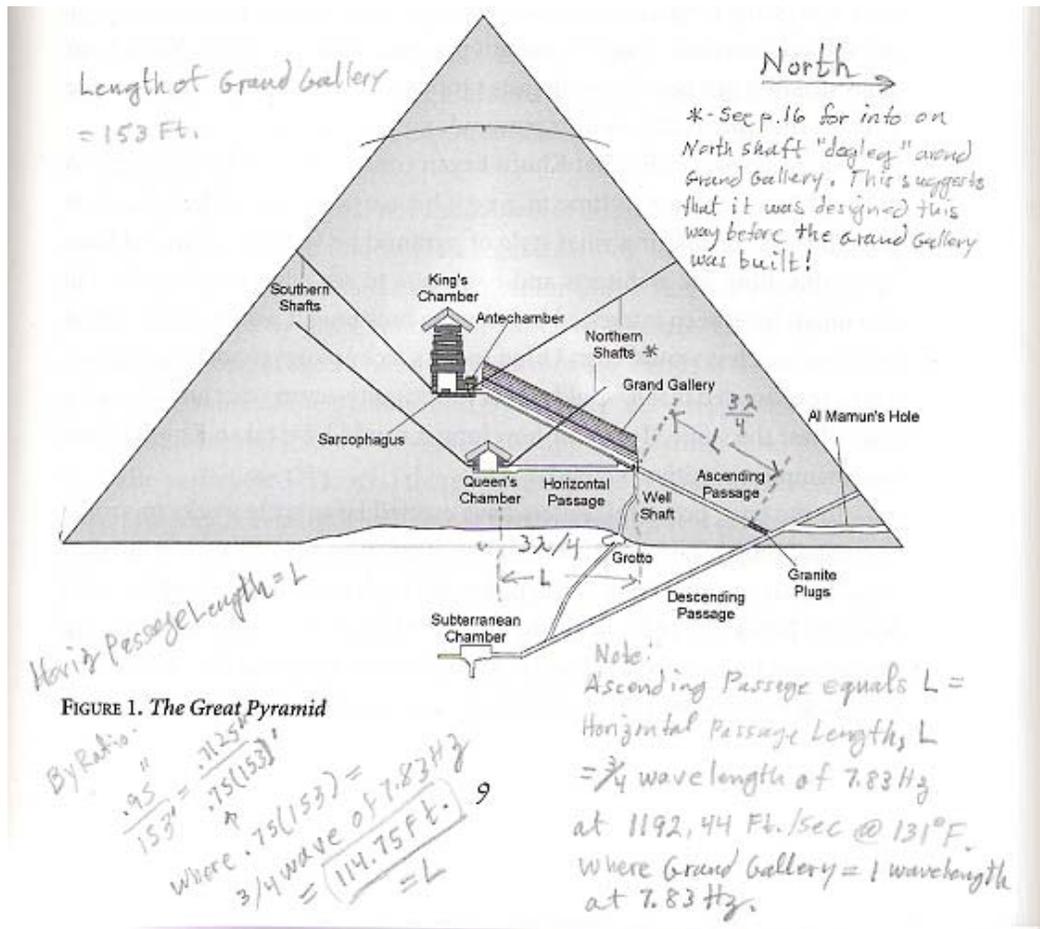
Then the new form of the electrogravitational equation completes the missing puzzle of the construct of the dynamics of electrogravitation. Electrogravitation is a rotation in two dimensional space sweeping out an area which yields the newton squared in the output units while also having a vertical component having one newton in the output. That makes it three dimensional in its action.

Since the electrogravitational equations have all of the same parameters as the other force field equations, we can expect that the electrogravitational equation will interact with them. Especially since the same connector term $\left(\frac{\mu_0}{r_x} \right)$ is in all of them including simple mass generation. It is a non-local term.

The weak and strong force equations that I have developed and posted on my web site also have multiple newton terms in the units and thus form the rotational part of of equation 79 above. Then the electrogravitational mechanics having two-component rotational forces coupled with a third component all 90 degrees to each other is similar in dynamics to the nuclear forces. The main difference is that the nuclear forces grow stronger during the two-step process while the electrogravitational two-step process grows weaker. The rotational forces are non-local while the two-step process is local and thus has real effects that are observable. **This work now forms a General Theory of the Unified Field of Forces.**

The inner structure of the Great Pyramid is shown below and relative wavelengths of the passages can be shown as wavelengths compared to the length λ of the Grand Gallery. The layout approximates the configuration of reference 5, the electronic parametric amplifier.

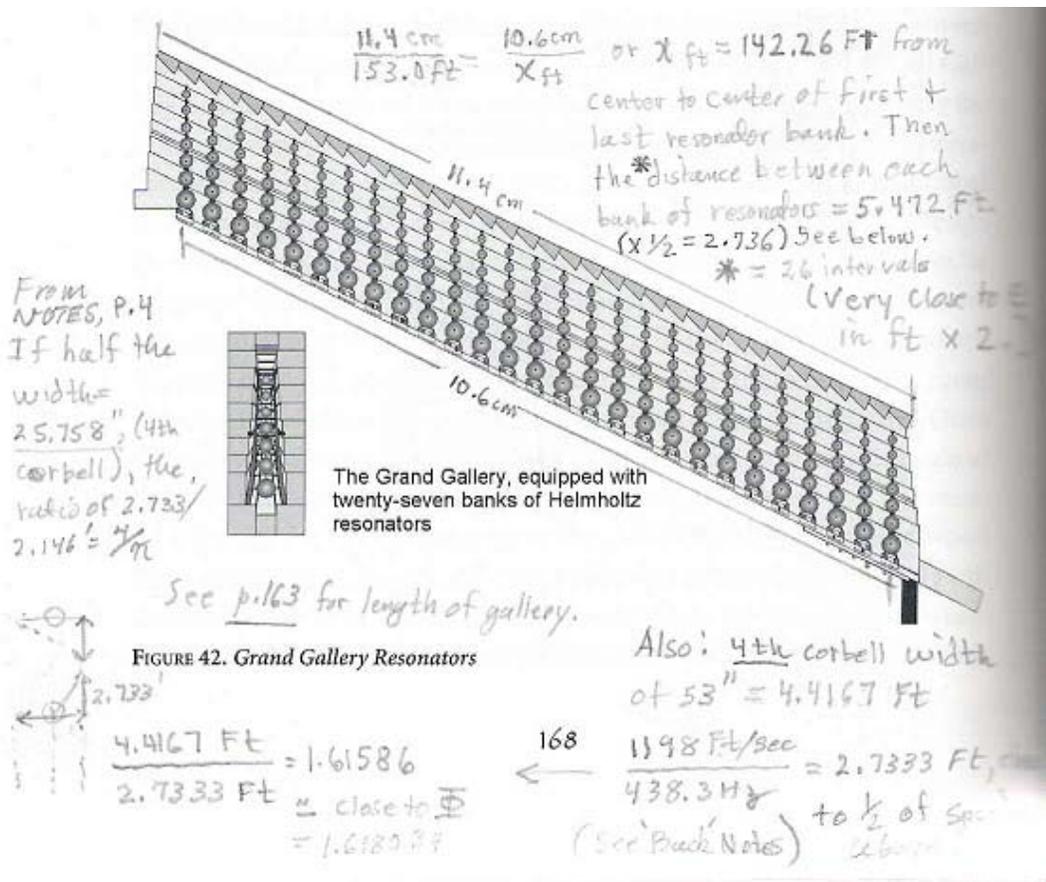
Reference #1.



The subterranean chamber may have been connected to the Nile river and also held a large amount of decaying vegetation to generate Methane gas, the prime medium for the acoustic parametric amplifier mechanism in the upper portion of the Pyramid. Methane has four hydrogen atoms bound to a single carbon atom and its atomic weight is only a little less than 16. This makes it ideal for generation (radiation) at 21 cm of wavelength.

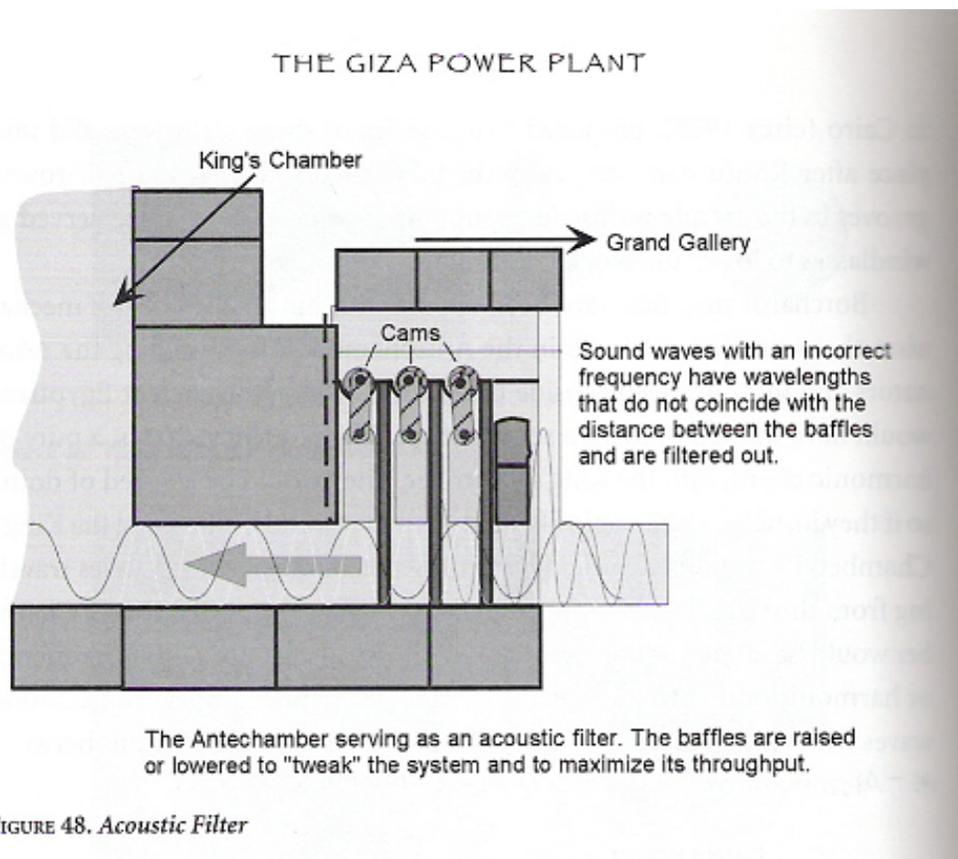
The Grand Gallery shown below shows the proposed 27 banks of Helmholtz resonators as proposed by Christopher Dunn: Each bank having 7 such resonators. It is my conjecture that each resonator was tuned to the exact frequency of the natural number e in Hz. Table #1 shows the spectrum of frequencies produced by the acoustic resonator matrix. The corbelled wall dimensions formed the parametric amplification of the acoustic frequencies in the resonator matrix by working at 90 degrees to the upward power flow of the resonator energy towards the "King's Chamber".

Reference #2



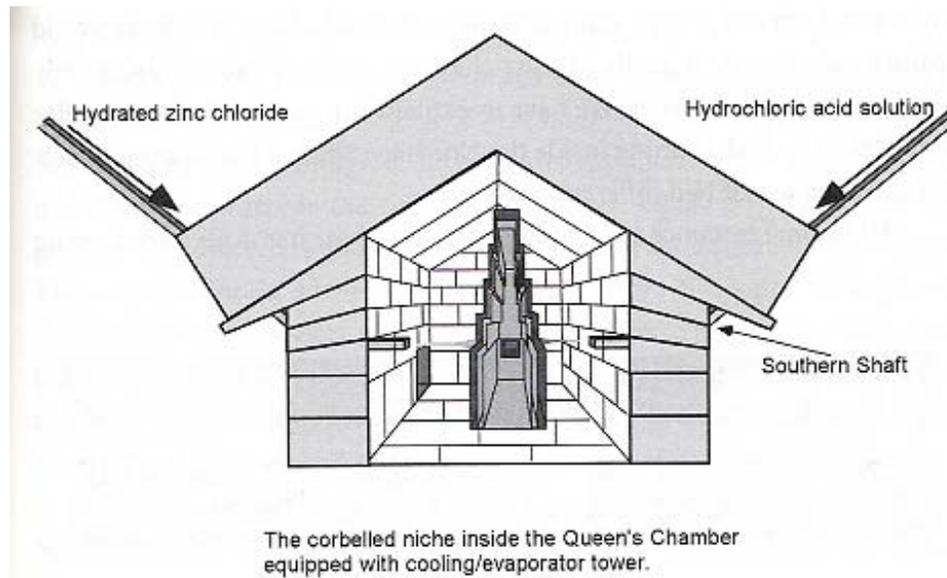
Note the small inset figure that shows what I surmise to be the pivot point for each resonator bank that is a slot in the wall following the rise of the gallery about halfway up the side of the corbelled gallery sidewall. This allows for each bank to be adjusted (by tilting closer or further from the vertical) for power level adjustment as the actual point of resonance is varied away from or closer to peak power at the actual resonance point.

Reference #3



The figure above not only may adjust amplitude but also act as a filter to allow only the frequencies necessary to promote hydrogen maser amplification as shown in the figure's text.

Reference #4

FIGURE 61. *Cooling/Evaporator Tower*

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The corbelled niche shown above has a shaft about 38 feet that ends in a bulb shaped cavern. I propose that explosions occurred in the bulb shaped cavern that started the generation of frequencies in the niche.

 $\Delta_{QCf(n)} =$

472.533895593
354.400421695
283.520337356
236.266947797
202.514526683
177.200210847
157.511298531

·Hz

These frequencies have been calculated above and are shown again at the left. See p. 197 of reference 1. This would be the beginning of the acoustic generation process where the niche serves as a frequency synthesizer. Note that 38 feet is very close to 1/4 the Grand Gallery length of 153 feet. 1/4 wave is a standing wave as for the Tesla coil and can act as an impedance transformer.

Reference 5

The figure at the left shows Christopher Dunn's idea of how the hyperfine frequency of the hydrogen atom is amplified. I suspect that the main energy input was from the Grand Gallery.

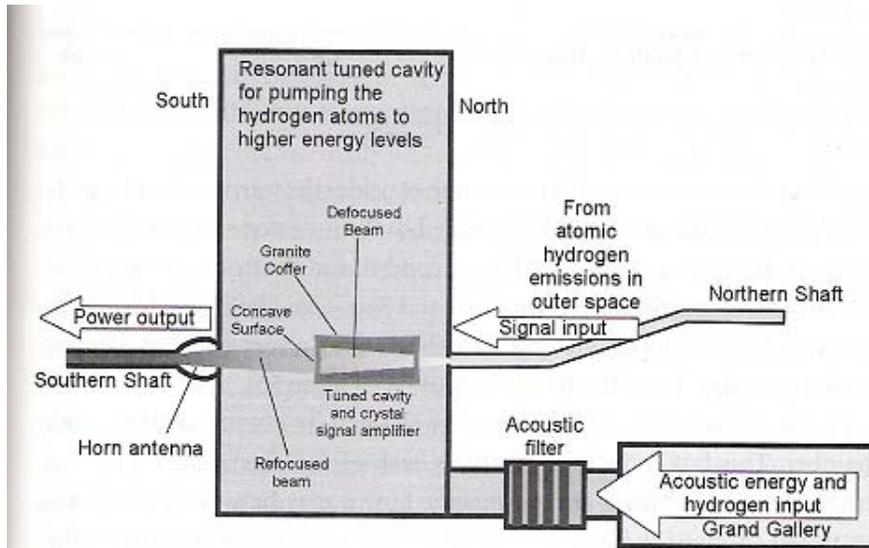


FIGURE 55. *The Pyramid MASER*

paramethadione [PHARM] $C_7H_{11}NO_3$ An anticonvulsant primarily useful in the treatment of petit mal epilepsy. ('par-ə'meth-ə'dī-ōn)

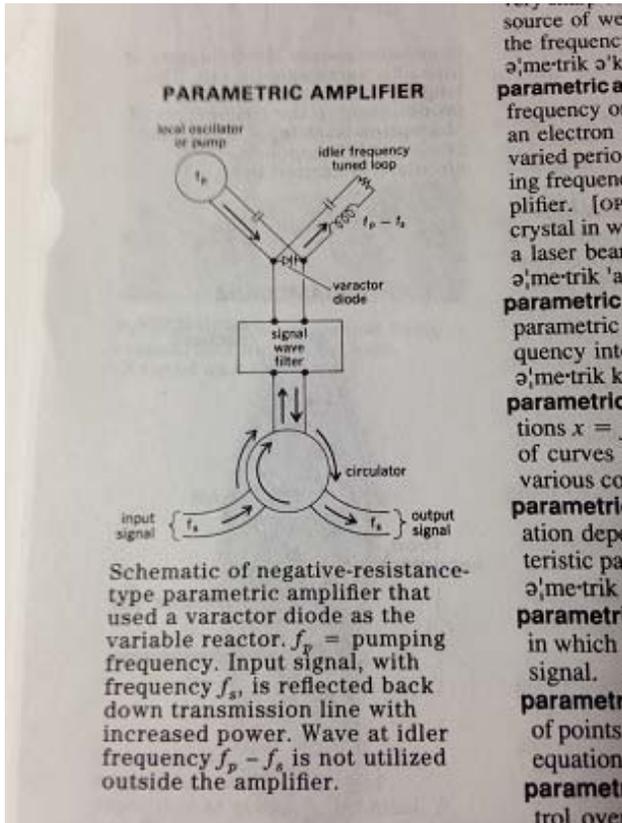
parametric acoustic array [ACOUS] A device for generating very sharp beams of sound devoid of side lobes, consisting of a source of well-collimated high-frequency sound modulated at the frequency of the sound which is to be generated. ('par-ə'me-trik ə'küs-tik ə'rā)

parametric amplifier [ELECTR] A highly sensitive ultra-high-frequency or microwave amplifier having as its basic element an electron tube or solid-state device whose reactance can be varied periodically by an alternating-current voltage at a pumping frequency. Also known as mavar; paramp; reactance amplifier. [OPTICS] A device consisting of an optically nonlinear crystal in which an optical or infrared beam draws power from a laser beam at a higher frequency and is amplified. ('par-ə'me-trik 'am-plə-fī-ər)

parametric converter [ELECTR] Inverting or noninverting parametric device used to convert an input signal at one frequency into an output signal at a different frequency. ('par-

Reference 6

At the left is a copy of the definition of a parametric acoustic array as well as for an amplifier. Also is shown a diagram of a parametric amplifier used for microwave amplification. Take note of the fact that non-linear reactance is utilized as well as the split angular separation between the energy pump and the signal being amplified.



Reference 7

The picture at the left shows an electronic method of generating a power amplification utilizing a non-linear inductive parameter 90 degrees to the input signal as described in the above definition in reference 6.

This is likely the method of power amplification by acoustic means in the Grand Gallery of the Great Pyramid at Giza, Egypt.

Reference 8

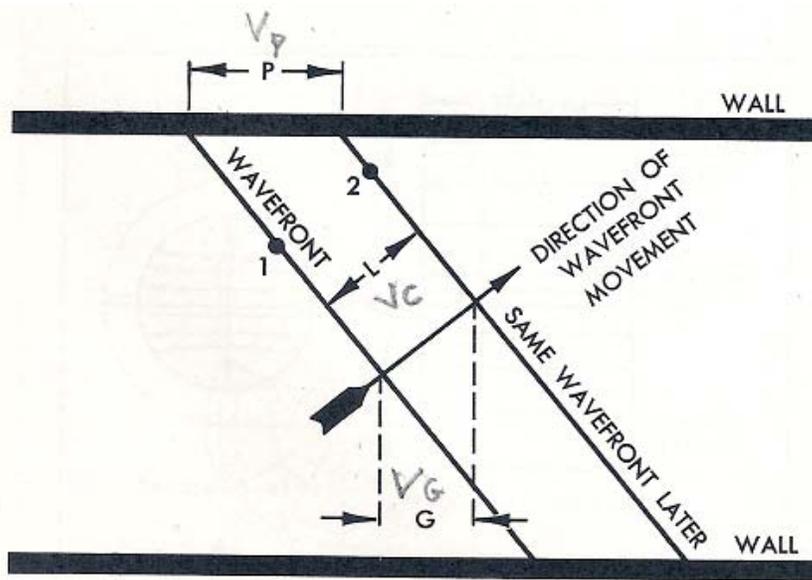


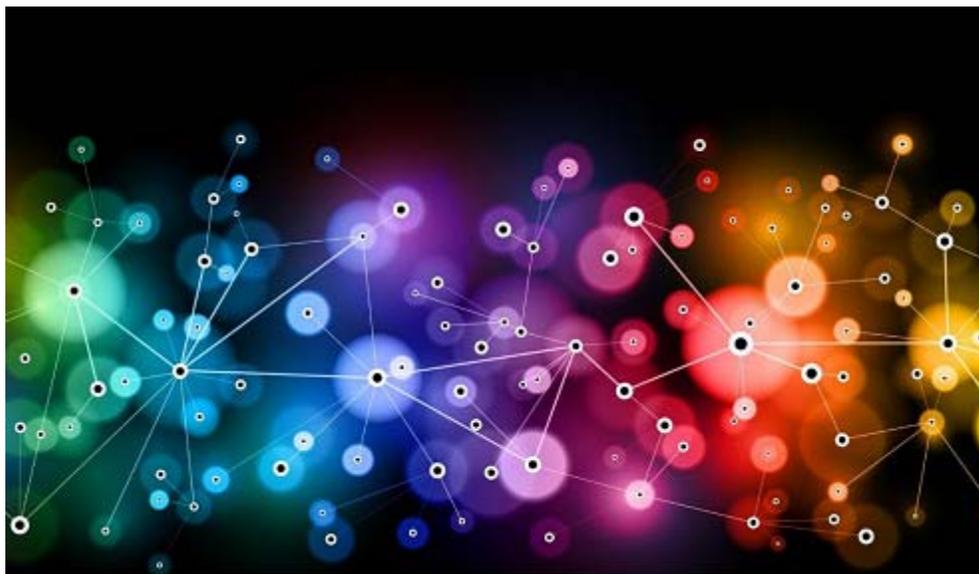
Figure 11-22. Relation of Phase, Group, and Wavefront Velocity

AF MANUAL 52-8 VOL II

The phase v
 λ_g since: $\lambda_g =$

The above diagram details waveguide geometry for electromagnetic group and phase velocities inside of a waveguide. It serves the purpose of introducing quantum particle probability waves as complex and having the nature of acting as though the probability fields travel as though they move through a wave-guide like space determined by the probability wave function Ψ . For electrogravitation, the action is non-local and in the phase velocity while the reaction is in local space and is in the group velocity.

It is interesting that Microsoft Windows 8 desktop features a picture that parallels how I perceive the instantaneous connections between quantum particles. This is shown below. The black dots in the center of the orbs are actually the self-same dot in non-local action energy space, which is dimensionless, zero time, and infinite in energy. The lines between orbs are reaction space and are in local observable space. The orbs therefore represent observables.



References

1. Dunn, Christopher, "The Giza Power Plant", Copyright 1998 by Christopher P. Dunn, Publisher: Bear & Company, Santa Fe, New Mexico, p. 9, Fig. 1.
2. Ibid Ref. 1, p. 168, Fig. 42.
3. Ibid Ref. 1, p. 173, Fig. 47.
4. Ibid Ref. 1, p. 199, Fig. 61.
5. Ibid Ref. 1, p. 185, Fig. 55.
6. McGraw-Hill Dictionary Of Scientific And Technical Terms, 5th ed., copyright 1994, 1989, 1984, 1978, 1976, 1974, by McGraw-Hill, p.1446.
7. Ibid Ref. 6, p. 1446.