Ancient Energy Geometry

-by-

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There are four geometric structures of interest to be analyzed in this paper. It will be shown that they have parameters that form a commonality such that they share a fundamental geometric energy connection to the frequency of the hydrogen atom. The first analysis will be the Ark Of The Covenant and its most likely dimensions based on the long cubit and the golden ratio based on $(4/\pi)^2$ as listed in the **Parameters Of Calculation** in this paper. The next will be what I call the "energy pipe event" and its associated geometry. The next will be the Anasazi Bowl of the American southwest followed by the Great Pyramid of Giza. All of these have a direct connection geometrically related to the wavelength of the hyperfine structure of hydrogen.

The Ark Of The Covenant

The Ark's dimensions will be considered herein as based on the long cubit times the pyramidal Golden Ratio parameter Φ 1. The width and the height is the long cubit CU_{long} times Φ 1 instead of the long cubit times 1.5. The length of the Ark is the long cubit times the square of the Golden Ratio instead of 2.5 times the long cubit. That will exactly set the width and height to 4 times the atomic hydrogen wavelength and the length to a frequency value that will yield twice the inverse of the atomic fine structure constant α in Hz, or 274.0719790 Hz. Note that the Golden Ratio $\Phi 2$ based on mathematical solution is not quite equal to the Golden Ratio based on $\Phi 1$ and twice the difference times the Ark length yields what I have termed the fundamental electrogravitational wavelength λ_{LM} . This is shown in the below calculation example.

$$\Delta \lambda_{LM} := \Phi 1 - \Phi 2 \quad ----> \quad 2 \cdot \Delta \lambda_{LM} \cdot CU_{long} \cdot \Phi 1^2 = 8.499102165687 \times 10^{-3} \, \text{m}$$

The above is very close to the stated parameter for λ_{LM} in the parameter list above. I have read somewhere that the ARK could have been used as a weapon and we can therefore visualize the hyperfine microwave energy of atomic hydrogen being released out of the end of the ARK which is being modulated not only by the f_{α} frequency of 274.0719790 Hz but also the electrogravitational force frequency of 10.03224805 Hz, so that whatever living beings the energy interacted with would have their atoms shaken at the λ_{LM} wavelength and then also have their innards cooked at the hydrogen hyperfine frequency f_{H1} . This could also be in part the way huge stones were fit together so perfectly in megalithic structures of ancient times. (The stones could have been melted into a shape that fit perfectly.)

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The Ark Of The Covenant's actual possible dimensions are calculated below based on the golden ratio of $(\pi/4)^2$ and the calculated **biblical long cubit** CU_{long} from the parameters list.

$$A_{width} := CU_{long} \cdot \Phi 1 = 2.769831240668 \cdot ft$$
 $A_{width} = 33.237974888019 \cdot in$ 2)

$$A_{height} := CU_{long} \cdot \Phi 1 = 2.769831240668 \cdot ft$$
 $A_{height} = 33.237974888019 \cdot in$ 3)

$$A_{length} := CU_{long} \cdot (\Phi 1)^2 = 4.490281276705 \cdot ft \quad A_{length} = 53.883375320455 \cdot in$$
 4)

These dimensions are directly related to the hyperfine wavelength of the hydrogen atom by whole number ratios of wavelength as shown below.

$$\frac{A_{\text{width}}}{\lambda_{\text{H1}}} = 4 \qquad \frac{A_{\text{height}}}{\lambda_{\text{H1}}} = 4 \qquad \frac{A_{\text{length}}}{\lambda_{\text{H1}} \cdot \Phi 1} = 4 \qquad 5)$$

Note the golden ratio in the denominator of the length ratio calculation.

The quantum acoustic frequency related to the length or the width is calculated as:

$$KEY_{David} := \frac{AQ_{vel}}{A_{width}} = 444.308757129577 \cdot Hz \qquad Key Of David Frequency.$$
6)

The length of the ARK is also connected to the fine structure constant α as follows:

KEY
$$\alpha_{\text{David}} := \frac{AQ_{\text{vel}}}{A_{\text{length}}} \cdot \frac{1}{2} = 137.035989525269 \cdot \text{Hz}$$
 and $\frac{1}{\alpha} = 137.03598949333$ 7)

where;
$$\text{KEY}\alpha_{\text{David}} \cdot \frac{\alpha}{\text{Hz}} = 1.00000000233$$
 8)

And finally:
$$\frac{\text{KEY}_{\text{David}}}{\text{KEY}\alpha_{\text{David}}} \cdot \frac{1}{\Phi 1 \cdot 2} = 1$$
 The KEY Of David is very important. 9)

The ARK Of The Covenant was biblically reported to have been covered with pure gold over acacia wood. The quantum acoustic velocity of gold is 3200 meters/second. This has a direct relationship to the fundamental quantum acoustic velocity AQ_{vel} as shown below.

GOLD_{vel} := 3200
$$\cdot \frac{m}{s}$$
 Then: $\frac{GOLD_{vel}}{2 \cdot \Phi 1^3} = 375.542653740353 \frac{m}{s}$ 10)

where the quantum acoustic velocity of air is: $AQ_{vel} = 375.1052521248 \frac{m}{s}$ 11)

which is very close considering that the table for the velocity of gold may not be exact to 4 places. Then the gold covering would have an amplifying effect on the energy being generated around the ARK by a factor of 2 times $\Phi 1^3$.

The number 12 appears over and over in the Holy Bible. It may be taken as a clue to the geometry of the field of energy surrounding the ARK. That is, the enclosure of the Holy of Holies could have dimensions based on the dimensions of the ARK times the number 12.

$$CU_{long} \cdot \Phi 1 \cdot 12 = 33.237974888019 \cdot ft$$
 12)

This is consistent with the approximate dimensions given in the Holy Bible for the dimensions of the Holy of Holies. It is also very close to the dimension of the measuring chain used by the Masons who measured out the dimensions of Washington D.C. It is also 12 times 4 times the hyperfine wavelength of the hydrogen atom.

$$\lambda_{\text{masons}} := \lambda_{\text{H1}} \cdot 4 \cdot (12) = 33.237974888019 \cdot \text{ft}$$
 13)

If we divide the above λ_{masons} length by the Golden Ratio $\Phi 1$ we arrive at the length of three sections of thin-walled steel pipe that I used as an antenna mast during my 'Ham Radio' days. I was almost killed from the electric fire that erupted from the mast to a metal strip around the flat roof I was standing on when I was attempting to raise the mast into the air.

$$\lambda_{\text{pipe}} \coloneqq \frac{\lambda_{\text{masons}}}{\Phi_1} = 20.502853952381 \cdot \text{ft} \quad \frac{\text{This is exactly equal to 12 long cubits.}}{\Phi_1}$$
¹⁴⁾

Or:
$$\frac{\lambda_{\text{pipe}}}{CU_{\text{long}}} = 12$$
 AND $\frac{AQ_{\text{vel}}}{\lambda_{\text{pipe}}} = 60.023852233366 \cdot \text{Hz}$ ~Power line frequency 15)





The mast has three, thin-walled, ten-foot long steel pipes, each one inside the other progressively from left to right and are 2-1/4, 1-3/4 and 1-1/2 inches in diameter respectively. The high and low arrows show the high (+) and (-) potential points of the 60 Hz standing wave shown as a single sine wave above the pipes. The lower pipe serves as the opposite phase counterpoise for the upper pipe and energy may be extracted from the $1/4 \lambda$ wave and $3/4 \lambda$ wave HIGH points between the pipes. The upper and lower set of pipes are to be connected together at the ends to form common low points which also should be connected to Earth ground..

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$$\begin{split} \lambda A &:= 4.490281279 \cdot ft \\ \lambda B &:= 1.273239545 \cdot ft \\ \lambda C &:= 5.125713491 \cdot ft \\ \lambda D &:= 20.50285396 \cdot ft \end{split}$$
 The above figure 1 shows the energy pipe physical and field dimensions in the horizontal. The vertical is not to scale but is expanded to show the lettering and horizontal boundaries more clearly. There are three 10 foot pipes in the upper and lower mast sections and reduce in diameter from left to right.

Quantum acoustic frequencies related to the above wavelengths are calculated below.

$$f_{\lambda A} := \frac{AQ_{vel}}{\lambda A} \cdot \frac{1}{2} = 137.035989455216 \cdot Hz$$
 where: $\frac{1}{\alpha} = 137.03598949333$ 16)

$$\mathbf{f}_{\boldsymbol{\lambda}\mathbf{B}} := \frac{\mathbf{A}\mathbf{Q}_{\mathbf{vel}}}{\mathbf{\lambda}\mathbf{B}} = 966.55832033555 \cdot \mathbf{Hz}$$
 17)

$$\mathbf{f}_{\lambda \mathbf{C}} := \frac{\mathbf{A}\mathbf{Q}_{\mathbf{vel}}}{\mathbf{\lambda}\mathbf{C}} = \mathbf{240.095408797401} \cdot \mathbf{Hz}$$
¹⁸⁾

$$\mathbf{f}_{\lambda \mathbf{D}} := \frac{\mathbf{A}\mathbf{Q}_{\mathbf{vel}}}{\mathbf{\lambda}\mathbf{D}} = \mathbf{60.023852211061} \cdot \mathbf{Hz}$$
 19)

Numerical Fundamental Geometrical Energy Pipe Ratios Arrive At Unity.

$$\frac{f_{\lambda B}}{60.028 \cdot Hz \cdot (5.125713491) \cdot \pi} = 0.999930902027$$
 20)

The quarter-wavelength λC is numerically related by the number 12 as follows:

Reduction: Bowl_{dia} :=
$$\frac{\lambda C}{12} \cdot \left(12 \cdot \frac{in}{ft} \right) = 5.125713491 \cdot in$$
 21)

This segues into the analysis of the Anazazi Bowl next.

The Anasazi Bowl of the American Southwest.





The measured diameter of the ceramic bowl across the top is 5.127 inches. It is circa 1100 to 1300 AD and was sold from a private collection. The design inside suggests a possible delay-line or transmission line where the top and bottom are the potential points of action. That is, a sudden high voltage pulse for instance.

The diameter of the bowl above exactly agrees with the reduction on the bottom of page 5, equation 21. If we multiply the diameter by π we arrive at the following:

$$Bowl_{cir} := Bowl_{dia} \cdot \pi = 16.102903847732 \cdot in$$
 22)

Multiply the circumference by $4/\pi$ and we arrive at the Long Cubit.

Bowl_{cir}
$$\cdot \frac{4}{\pi} = 20.502853964 \cdot \text{in}$$
 where, $CU_{\text{long}} = 20.502853952381 \cdot \text{in}$ 23)

The mast supported an inverted-V type of antenna where about 10 feet of the mast reached from the ground to the top of the flat roof and about 11 to 12 feet was above the top of the edge of the roof. The inverted-V was two $\lambda/4$ wave #12 copper-covered steel antenna wires, each being slightly less than 5 meters long in the vicinity of 16.1 feet. (The antenna was designed as a 20 meter inverted-V construct.)

20 meters
$$/4 = \frac{20 \cdot m}{4} = 16.404199475066 \cdot ft$$
 Quarter-wave for a 20 meter band. 24)

This is very germane to the up-scaling by 12 if the circumference of the Anasazi bowl from inches to feet as shown below.

Bowl_{cir} · 12 ·
$$\left(12 \cdot \frac{in}{ft}\right)^{-1} = 16.102903847732 \cdot ft$$
 25)

Further, the apex of the antenna wires were therefore about 11 feet vertical above the asphalt roof and the lower ends of the antenna wires were spread close to 12 feet apart at the roof surface. In other words, even the length and height of the antenna accidentally fell into key dimensions required to be resonant with the mast at close to 3/4 of the mast length. It is of interest also that with my small Heathkit DX-20 (50 watt transmitter), I was told by some of my contacts that their meters indicated I was transmitting with near a kilowatt at a the distance I was from them. I could not explain that at that time but now I understand that the whole geometrical setup may have been acting as an ambient field-energy amplifier.

There were reports of persons erecting masts in those days and being electrocuted when there were no power lines nearby and the weather was blue sky with no clouds in sight. The mast I was using was sold commonly as a television antenna mast and I happen to have one just like it in my possession. It is plainly labeled as a television antenna mast. They are about as common as dinosaur eggs now.



The antenna geometry as-built is shown in the below drawing.

When I was lifting the antenna mast I was in the middle area which was a low potential point as shown in figure 1 above. This was pure luck as I was not aware of the danger at the time. It was a very warm day in the afternoon and as a result I was wearing black rubber gloves since the steel pipe was too hot to hold with my bare hands. This was also pure luck. As I raised the pipe over my right shoulder it was balanced parallel to the roof. I began walking westwards to place the bottom end of the mast over the side. At the same time I began dropping the end of the mast until it contacted the edge of a metal strip that ran around the edge of the roof. As the pipe rebounded, a brilliant white electrical arc appeared between the pipe and the metal rim around the roof. As the pipe went higher, the arc became more intense and longer. I quickly forced the pipe back towards the roof until it rested firmly against the metal rim of the roof and squelched the arc. Keeping the pipe firmly against the roof edge, I successfully lowered the end of the pipe onto the ground and secured it against the metal rim of the roof. This event was a complete surprise as I did not expect or understand the high voltage display at the time. It has been many years since and much research with ancient geometry for me to conclude that modern technology has a lot to learn about fundamental wavelengths related to energy that exists connected to the long cubit of the bible. Note that the antenna structure in figure 3 forms 1/4 of a pyramid side.

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Figure 3

The Great Pyramid at Giza is the next study where it can be shown that fundamental frequencies common to The ARK OF THE COVENANT, The Anasazi Bowl and the Energy Pipe Event all have common wavelengths of operation by design. A recent You Tube video presented data regarding electromagnetic resonance in the Great Pyramid.

Great Pyramid electromagnetic frequency resonance peak measurement at 230 meters λ .

http://www.youtube.com/watch?v=syzYqO51rEE&t=85s

$$\mathbf{f_{res}} \coloneqq \frac{\mathbf{c_{vel}}}{(230 \cdot \mathbf{m})} = 1.303445469565 \times 10^6 \cdot \mathrm{Hz}$$
 Measured Peak Resonance Frequency 26)

Calculated values based on the photon coupling constant α and the hyperfine frequency of hydrogen::

$$f_{P1} := f_{H1} \cdot \frac{\alpha}{8} = 1.295650285956 \times 10^6 \cdot Hz$$
 $\frac{f_{res}}{f_{P1}} = 1.006016425647$ 27)

$$\mathbf{f_{P2}} := \mathbf{f_{H1}} \cdot \frac{\alpha^2}{8} = 9.454817604821 \times 10^3 \cdot \mathrm{Hz} \qquad \underline{\text{Requires a measurement!}} \qquad 28)$$

$$f_{P3} := f_{H1} \cdot 2 \cdot \frac{\alpha^3}{8} = 137.990284738764 \cdot Hz$$
 ~Fundamental Energy Pipe and 29)
Great Pyramid Frequency.

Equations 6,7 and 8 above can be restated below as:

$$\frac{\text{KEY}_{\text{David}}}{2 \cdot \text{KEY}\alpha_{\text{David}}} = 1.621138938277 \qquad \Phi 1 = 1.621138938277 \qquad 30)$$

where $\Phi \mathbf{1}$ is the golden ratio used in the Great Pyramid. If we assign the numerical value of $\Phi \mathbf{1}$ as having the units of frequency we can calculate the **working wavelength** of one side of the Great Pyramid as:

$$GP_{side\lambda} := AQ_{vel} \cdot (\Phi 1 \cdot Hz)^{-1} = 759.133129765965 \cdot ft$$
 31)

This is very close to the present day measurement of 756 feet.

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The number 12 is extremely important to creation energy. The importance has been shown above and further importance is shown next concerning the difference between what I have termed the Cosmic Quantum Velocity AQ_{vel} and the standard speed of sound V_{air} below. The frequency refresh rate of 60 Hz is demonstrated to 'fall out' as shown below.

Ratio₁₂ :=
$$\frac{AQ_{vel}}{12} = 102.555023 \cdot ft \cdot s^{-1}$$
 32)

Then:
$$V_{air} := AQ_{vel} - (Ratio_{12}) = 1.128105253 \times 10^3 \cdot ft \cdot s^{-1}$$
 33)

The result is precisely the expected velocity (or speed) of sound at sea level.

Please allow some latitude in my terminology concerning the mixing of velocity and speed. If you allow me to define speed as applying to all possible directions in space the speed and velocity are interchangeable to my way of thinking.

This solves the riddle of why there would be two *acoustic* velocities. The Quantum Cosmic Velocity and the normal air velocity at sea level differ by only about a 102 feet per second. The normal air velocity is simple molecular interaction while the Cosmic Quantum Velocity is tied to a universal refresh rate that establishes reality as we know it. **Another approach is to consider the difference velocity divided by the long cubit.**

$$\Delta Vel := AQ_{vel} - V_{air} = 102.555023 \cdot ft \cdot s^{-1}$$
 34)

Then:

$$\Delta \mathbf{f}_{\text{vel}} \coloneqq \Delta \text{Vel} \cdot \left(\text{CU}_{\text{long}} \right)^{-1} = 60.023852233366 \cdot \text{Hz}$$
 35)

Refer also to equations 15, 19 and the definition of CU_{long} in the table of constants for direct relevance to the hyperfine frequency of the hydrogen atom. Equation 19 is 12 times greater since it deals in feet instead of inches to arrive at 60 Hz.

The natural refresh rate of the eye is 60 Hz as well as television screens and power line frequencies. The difference between the two velocities may be the reason why the droning of an approaching truck or airplane is modulated as the two different wavelengths fall into and out of phase thus adding and canceling amplitudes over time as they travel towards the listener. Thus, we may live in a slice of time based on a 60 Hz refresh rate.

The following ratio between the difference velocity above and what I have termed the "Least Quantum Velocity" is a pure number very close to the period of time for one Earth year of rotation time around the Sun. Let this stand for having the units of day.

$$\mathbf{R}_{\mathbf{E}} \coloneqq \frac{\Delta \mathrm{Vel}}{\mathrm{v}_{\mathrm{LM}}} \cdot \mathbf{1} \cdot \mathrm{day} = \mathbf{365.92258817598} \cdot \mathrm{day}$$
 36)

The actual time of Earth's revolution is set at:

$$\mathbf{R}_{\mathbf{Eactual}} := \mathbf{365.25} \cdot \mathbf{day} \qquad (\text{One day} = \text{two times 12 hours.}) \qquad \qquad \mathbf{37}$$

The difference between the two yearly times of rotation is:

$$\Delta R_{diff} := R_E - R_{Eactual} = 16.142116223522 \cdot hr$$
38)

That <u>fundamental number</u> 16.142116223522 is very closely related to the Anasazi Bowl in equation 22 above where the bowl circumference was given as:

This small interval of time gap between the period of Earth's revolution as shown above could explain why the ancient cultures were so interested in the solstices, the equinoxes and the moon stand-still cycles. Could quantum entangled portals open up during those narrow gaps of time as shown above that would allow the easy transfer of items and even human beings between Earth and spaceships or even other worlds? Especially if there existed geometric constructs that parallel the <u>fundamental numbers</u> having arbitrary units? The time spent in transit through a quantum entanglement would likely be nearly instantaneous if not actually effectively zero. Portals having exactly the same dimensions and aligned perfectly at key times of the year would allow transfer of goods and persons and may explain why entire civilizations seemed to vanish without a trace. Evidence of contact between human beings and off-world life forms seem to have occurred all over the world for thousands of years and the evidence uncovered seems to be turning up on a daily basis.

There are included in following pages graphics of ancient art that are precise in structure as well as indicative of highly skilled electrical engineering plans. Some of the work was literally carved in stone and very hard stone at that.

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Figure 4



Puma Punka Bowl From: In Search of Aliens

The above bowl has a design that appears to be an electronic delay-line having contra-currents that repel each other in the segments and it all is a loop being fed from the center. This could develop an increasing field that repels itself as it leaves the surface by mutual repulsion. Further, the bowl resembles a flying saucer.

It seems to me that physicists would greatly benefit from being well trained in electronics engineering before advancing to theoretical physics. My own background is electrical/electronic and the math involved is very similar to ordinary as well as quantum and relativistic physics with the added benefit of having practical insight into how and why theoretical physics may work or why it might not. Logic analysis applied to finding fault in designs or even physically complex systems can help unravel the tangled esoteric theories that abound in contemporary physics. It would do the theoretical physicist much good to start with what works and be willing to "stand on the shoulders of giants" to have a firm foundation rather than building castles in the sky that serve only to impress fellow scientists rather than deliver what is not only logical but actually has substance. Not having a PhD may be more helpful than being a hindrance to the process of being able to solve big complex problems since being peer-reviewed is not a worry.

The next graphic shows a very hard stone that is carved with contra-current designs as the Puma Punka bowl above. This is a very common feature in ancient design and suggests a close parallel to contemporary printed circuit work. One can imagine a high voltage pulse being applied to the outside of the spirals that has a very fast rise time and is narrow enough time wise to move around the spiral just short of the time of the width of the pulse. It seems that the ancients were sending future beings of this planet a message of how their engineering worked for them. Engineering work of today requires payment for the effort. What was used for payment or services rendered by the aliens that left their designs and buildings for the ancient people millennia ago? Again, entire populations have suddenly vanished from many locations.all over the Earth. Did they go to the alien version of Disneyland? (Probably not.)



Figure 5

The next graphic is my drawing used for recreating the Anasazi Bowl immediately following this graphic. The Anasazi Bowl has key measurements that are tied directly to the Long Cubit as well as the hydrogen hyperfine frequency of the hydrogen atom. The bowl diameter across the top is 5.127 inches and π times that is 16.107 inches. Multiply that by $4/\pi$ and you arrive at 20.508 inches which is the Long Cubit of the bible and of the ARK OF THE COVENANT as well as the Great Pyramid of Egypt just to hit on a few of the most familiar related constructs.



Figure 6

The Anasazi Bowl below is from the American four corners region circa 1100 to 1400 AD and is precisely designed to show a printed circuit on a ceramic bowl. Again, we have contra-currents working around the bowl creating a mutually repulsive field that would push up and outwards as it repelled itself forward. A high voltage pulse between the top ring and the bottom of the bowl surface would be the connection points for the inductively coupled pulse input. The circuit forms a reflective pulse network that would build as it reflected back and forth between reflection points located at the left side of the bowl. An extremely clever design.

Figure 7



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And below we have a *running swastika* circuit that appears to alternate the direction of rotation of the swastikas as the pulse travels from left to right as I see it. These cylindrical fields would also be mutually repulsive to each other. Notice the large snake carving above the swastika carving. In fact, the Anasazi had numerous and humongous hotel-like structures with many rooms with very few bodies to be found anywhere. What was the purpose of all the rooms especially when most had no doorway? Where did all the people go?

Figure 8



Ancient Swastica: Balbeck Design (In Stone) Printed Circuit In Stone! arge

Below is yet another curious graphic possibly copied from great antiquity that appears to have contra-current pathways that may entangle the three spirals fields into a synchronous mutually repulsive field configuration. It looks like it could fit the triangular shaped design of UFO's seen in the skies all over the world nowadays.



A standing wave does not radiate as an ordinary electromagnetic wave does. It does however build layer after layer of field like the layers of an onion are built up. These layers each have the energy of each cycle of pulse stimulus and over time can build to enormous energy that also represents a field of quantum angular momentum. In fact, the field can grow dense enough to form a macro electron for example. Inside the field there would be a quantum state of zero time and inertia just like what I have previously posited for the electron. Where the field is focused is where the craft that generates the field would 'jump' to during a single field alternation. The field is what is called <u>apparent power</u> and is 90 degrees to what is called <u>true</u> <u>power</u> where the cosine of the angle between current and voltage equals 1.

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Although the standing wave power is purely reactive, the oscillating voltage as well as the current can reach extremely high values and in the atmosphere can create ionization that causes the air to emit visible light as well as invisible radiation that can be biologically harmful.

A craft that uses the type of standing wave field described would want to have the phase between the voltage and the current as close to 90 degrees as possible since the energy density in the field would literally explode around the craft and cause it to overheat and even crash. Having powerful radar beams impinging on the field that threw the field out of 90 degrees would cause the field to begin to radiate and this could easily turn into an avalanche of energy release as apparent power turned into real power of humongous electromagnetic radiation. This would be a very destructive EMP if it occurred over a populated area. I am thinking also of the Tunguska incident in that regard. In fact, what if the tremendous gamma ray bursts that occur from all directions in our universe are the collapse of what can be visualized as standing wave bodies of resonant electromagnetic waves that lost their standing wave phase and avalanched to real electromagnetic radiation? They would be invisible until they suddenly went into real power mode and radiated as a pure energy electromagnetic bomb. Further, how much of our universe is actually in a standing wave mode of energy? Standing wave energy fields gravitationally attract bulk energy and mass where mass can be considered to be standing wave energy at the electron level and in fact all the particles level. "A quick look at the electron for example reveals that it contains magnetic as well as charge components that yield mass.

$\boldsymbol{\mu}_{0} \coloneqq 4 \cdot \boldsymbol{\pi} \cdot 1 \cdot 10^{-07} \cdot \mathbf{H} \cdot \mathbf{m}^{-1}$	Magnetic permeability of free space
$q_0 := 1.602177330 \cdot 10^{-19} \cdot C$	Fundamental quantum charge
$l_{q} := 2.817940920 \cdot 10^{-15} \cdot m$	Classic electron radius

The electron mass is calculated from first principles in S.I. units to be:

$$\mathbf{m}_{\mathbf{e}} := \frac{\mu_{0} \cdot q_{0}^{2}}{4 \cdot \pi \cdot l_{\mathbf{q}}} \cdot (\mathbf{i}) = 9.109389691413\mathbf{i} \times 10^{-31} \cdot \mathbf{kg}$$
 40)

The S.I. standard mass of the electron is: $m_{electron} := 9.109389700 \cdot 10^{-31} \cdot kg$ Note the imaginary (i) to assign reactive nature by reason of standing wave forming mass. Then mass CAN be generated by a magnetic field component as well as charge squared divided by 2 wavelengths of distance and thus dark matter is formed as shown above. From this we can derive the expected least quantum energy based on what I have termed previously the least quantum velocity which is equal to the square root of the fine structure constant (also termed the photon coupling constant) in meter per second units,

$$\mathbf{E}_{LM} := \left(\mathbf{m}_{e}\right) \cdot \mathbf{v}_{LM}^{2} = 6.647443292155i \times 10^{-33} \, \mathrm{J}$$
 (1)

Then the electrogravitational force can be calculated for the force of gravitation between two electrons at the radius of the n1 energy level of the hydrogen atom to be:

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

$$G_{const} := 6.672590000 \cdot 10^{-11} N \cdot m^2 \cdot kg^{-2}$$

. .

Universal gravitational constant

$$FG_{LM} := \frac{E_{LM}}{r_{n1}} \cdot \frac{G_{const}}{v_{LM}^{4}} \cdot \frac{E_{LM}}{r_{n1}} = -1.977291385241 \times 10^{-50} N$$
⁴²

The result is negative since both energies are reactive and attraction is formed due to the resonant interaction.

Compare this with Newton's gravitational equation:

$$\mathbf{FG_N} := \frac{\mathbf{m_e}}{\mathbf{r_{n1}}} \cdot \mathbf{G_{const}} \cdot \frac{\mathbf{m_e}}{\mathbf{r_{n1}}} = -1.977291385241 \times 10^{-50} \,\mathrm{N}$$
(43)

Thus dark energy and dark matter are both explained since the energy and matter are at the lowest possible value allowed by the mechanics of creation. There is no energy available for electromagnetic interaction. that allows for direct observation.

In the electrogravitational equation (42) is the following expression: $\frac{E_{LM}}{r_{n1}}$ which is what I

propose to be the least quantum unit of magnetic force. This is shown below as F_{OM} .

$$\mathbf{F_{QM}} := \frac{\mathbf{E_{LM}}}{\mathbf{r_{n1}}} = 1.256184634679\mathbf{i} \times 10^{-22} \,\mathrm{N} \tag{44}$$

This could be the monopole that is proposed by quantum mechanics but not as yet discovered. This least quantum magnetic force is the basis of electrogravitation as shown in equation 42 above. Then the monopole completes its entanglement with a like but opposite phase monopole to create the electrogravitational force which is also the regular gravitational force of gravity. According to the Pauli exclusion principle the system interaction cannot have the same spin but must be opposite. Thus gravitation is naturally a force of attraction.

This brings to the forefront a question: What causes energy to sink to such a low value at the end of its interaction with the electromagnetic energy? ANSWER: **ENTROPY**. The constant loss of energy over time to all matter <u>including electromagnetic waves such as the light used to</u> measure the speed of recession of stars and galaxies that are caused by the so called expansion of our universe. Over billions of years even gamma rays would suffer the energy 'death' described above concerning dark matter and energy. Therefore the universe may not be expanding as contemporary science has assumed for many years.

Then quantum computers could possibly work based on cells or chambers involving standing waves so that a chamber could be entangled with other resonant oppositely phased chambers in a quantum uncertainty of cubits instead of real power photons. This would be a completely dark process. Maybe all that dark matter and energy is a giant living quantum computer brain? The interaction between cells would be instantaneous.

The **duality** between quantum instantaneous non-local electrogravitational action coupled with relativistic local space reaction allows for both to be participants in the overall gravitational process. The first would be nearly instantaneous while the latter would be relegated for measurement based on the speed of light. It would be the quantum action that would allow for the loss of energy from a black hole since time and space do not exist for electrogravitation. The duality of wave and particle suggests that gravity is both a quantum as well as relativistic in its totality of action.

The Quantum Phase Action Is Perpendicular To The Group Motion

The formation of waves near an ocean beach is both fascinating and quite beautiful in the organized way they are suddenly formed by jumping up and at the same time begin to progress towards the beach. In thinking about the famous quantum two-lit experiment I must consider that the duality of particle and wave can also be applied to an ordinary ocean wave.

Perpendicular to the forward motion of the ocean wave can be imagined the phase wave that lines up the particles or molecules in the wave to form the straight line that rises up parallel to the beach. The phase wave has an extremely high velocity compared to the forward motion of the wave which can be considered to be the group velocity. This is math that can be demonstrated below that is also directly applicable to electronic waveguides.

$$v_{p} := \frac{4}{\pi} \cdot \frac{AQ_{vel}^{2}}{v_{LM}} = 2.097170445658 \times 10^{6} \frac{m}{s}$$

The phase velocity turns out to be close to the velocity of the electron in the n1 shell of the Bohr Hydrogen atom.

$$v_{n1} := c_{vel} \cdot \alpha = 2.187691416747 \times 10^6 \frac{m}{s}$$

In fact, if we were to rework the waveguide math equations based on constant time related to the inverse of frequency we would arrive at the Lorentz expression involving Einstein's Special Theory Of Relativity. I will close this paper by hooking the 40 meter Ham band to the Hyperfine wavelength of the hydrogen atom as:

$$\frac{40.53 \cdot m}{48 \cdot \lambda_{H1}} = 4.000618009758$$
 Those lucky energy riding HAMS!

Allowing for antenna end-effect, pretty close to a whole number of 4.

$\mathbf{\Omega}$

December 10, 2020

Parameters Of Calculation

$$f_{H1} \equiv 1420405751.786 \cdot Hz$$

$$\Phi 1 \equiv \left[\left(\frac{4}{\pi} \right)^2 \right]$$

$$\Phi 2 \equiv \left(\frac{1 + \sqrt{5}}{2} \right)$$

$$\alpha \equiv 7.297353080 \cdot 10^{-03}$$

$$c_{vel} \equiv 2.997924580 \cdot 10^{08} \cdot m \cdot s^{-1}$$

$$AQ_{vel} \equiv 1.230660276 \cdot 10^{03} \cdot ft \cdot s^{-1}$$

$$AU_{11} \equiv \left[\frac{c_{vel}}{(f_{H1})} \right]$$

$$CU_{long} \equiv \frac{4 \cdot \lambda_{H1}}{\Phi 1}$$

$$v_{LM} \equiv \sqrt{\alpha} \cdot m \cdot s^{-1}$$

$$f_{LM} \equiv 1.003224805 \cdot 10^{01} \cdot Hz$$

$$\lambda_{LM} \equiv \frac{v_{LM}}{f_{LM}}$$

$$f_{\alpha} \equiv 2 \cdot \alpha^{-1} \cdot Hz$$

Frequency of atomic hydrogen Golden Ratio based on PI Golden Ratio based on geometry Atomic fine structure constant Speed of light in free space Speed of quantum acoustic action Atomic hydrogen wavelength Biblical long cubit (Exact derivation) Least quantum electrogravitational velocity Fundamental electrogravitational frequency Electrogravitational wavelength ARK length quantum acoustic frequency