Time and Matter

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Abstract: Photons travel at the speed of light in a vacuum. Electrons travel at the speed of light in a quantum cone. When mass is more than the speed of light relative to infinity, mass will become nonexistent or having no energy at the nodes of standing half waves. On this note, there does not have to be a beginning of anything just because we exist, the energy from which we came from always existed and if it did not always exist, then how can we ask the question where did the energy come from ?, unless it was always there. This report will show the relation between mass and infinity where the speed of light is common to both giving an understanding of time and matter in the electromagnetic field. This brief report can be printed out in color or black and white. [Journal of American Science 2009; 5(4):65-70]. (ISSN: 1545-1003).

Key words: Photon, Electron, Quantum Gravity, Spacetime, Electromagnetic Field.
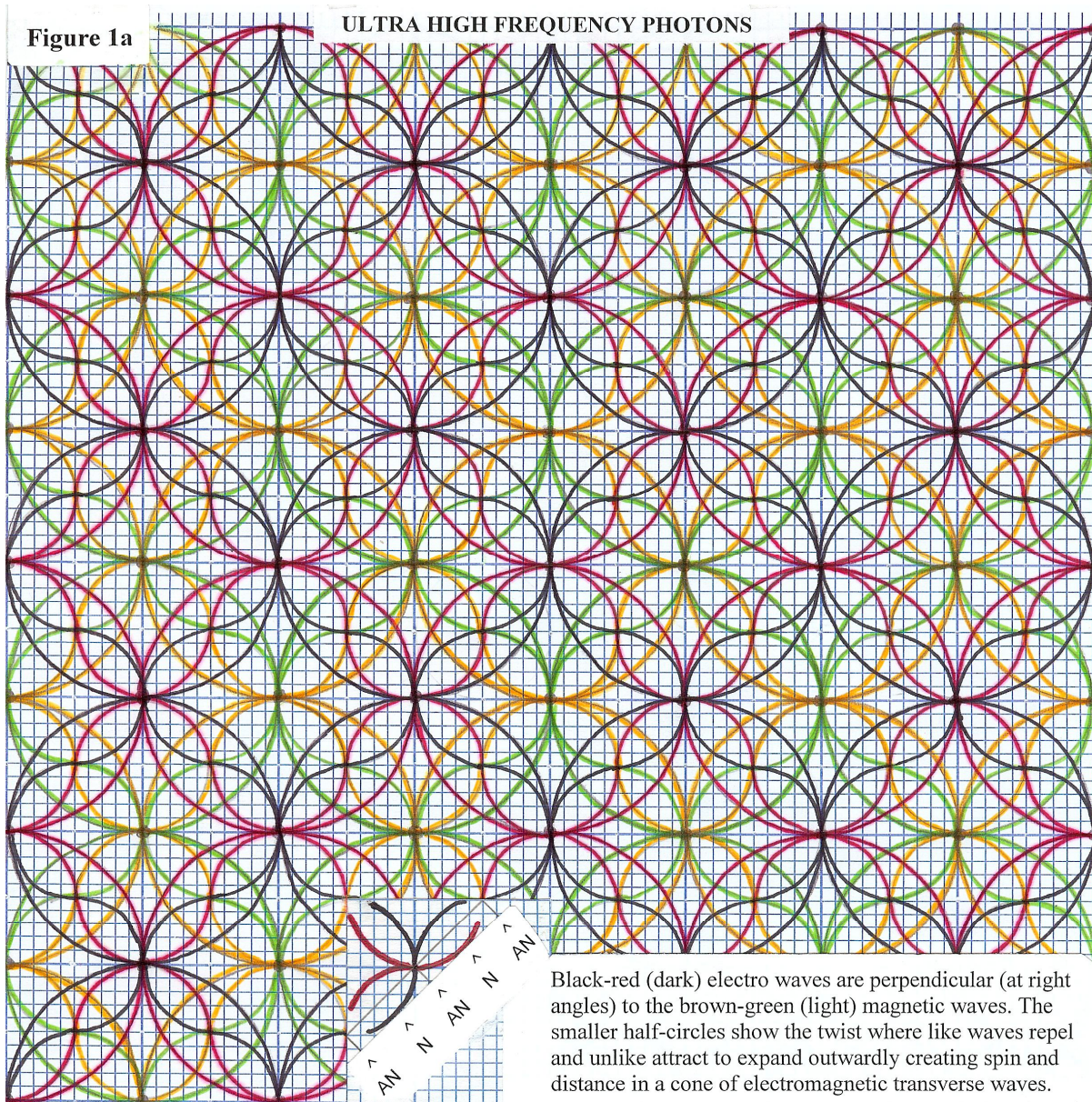
1. Introduction

The electromagnetic field is comprised of standing waves in the opposite direction where direction is relative to the source of energy. The wave duality of the standing waves provides for the electromagnetic and gravitational forces. A photon is a unit (packet) of energy from standing half waves at the antinodes where the speed of light is relative to infinity and mass is part of infinity. Energy is equal to frequency of the photons based on Planck∅s constant, $E = hf$.

2. Report

From the illustration Figure 1a, energy is formed into half wavelengths at ultra high frequency standing waves. The half wavelengths become transverse waves because of the expansion process forming electro half waves perpendicular to the magnetic half waves. The half waves have two free ends where the antinodes are at the ends and nodes are in the middle such that each half wave keep multiplying indefinitely to complete whole wavelengths where $C = f \lambda$. As the wavelengths multiply from energy displacement, the expansion of the transverse waves become three dimensional as a cone resulting in an endless unit without a boundary in time. Each photon (half wave) in the field cone has its own independent cone state in the expansion process.

Each photon (half wave) in the cone is equivalent to two smaller half waves as a spiral within the photon to complete a whole wavelength where $C = f \lambda$.

From the field illustration Figure 1b, the black-red (dark) are the electro waves perpendicular (at right angles) to the page and brown-green (light) magnetic waves are on the same plane as the page. The transverse waves in the figure need to be visualized in three dimensions and the expansion of the waves visualized in a cone or spiral. The page figure 1b is a spectrum of different size wavelengths increasing in size moving outwardly (not just one wavelength as shown). As the field expands outwardly into multiple wavelengths in a cone, the atom is depicted at center when electro field couplings become nuclei from expansion. The e coupling constant, about 137.03597 is the amplitude for a real electron to emit or absorb a real photon (Feynman, 1988). Due to the expansion of the standing waves in a spiral cone (energy displacement of standing waves into larger waves), the base or space between the circles give the necessary amplitude for the photons and electron(s) to interact as a coupling and the apex or dead center between the circles in the cone is the nuclei fused in time at much shorter wavelengths.

Figure 1a

ULTRA HIGH FREQUENCY PHOTONS

Black-red (dark) electro waves are perpendicular (at right angles) to the brown-green (light) magnetic waves. The smaller half-circles show the twist where like waves repel and unlike attract to expand outwardly creating spin and distance in a cone of electromagnetic transverse waves.

It is important to visualize a quantum cone in Figure 1b from a spectrum of different size wavelengths moving outwardly. Electro and magnetic waves expand into larger waves from the antinodes (displacement) energy of standing waves at twice the wave amplitude of the smaller wave giving distance to the field. The waves increase in amplitude forming atom cones in the field where the apex of each atom cone from an infinite singularity have a strong nuclear force as nuclei. Electron(s) as photon(s) of mass continue outwardly to interact with real photons at the base of the quantum cone which is the amplitude of the e coupling constant. The electron as a wave particle makes quantum jumps on the different size waves that form the atom cone.

Figure 1b   ELECTROMAGNETIC & GRAVITATIONAL FIELD
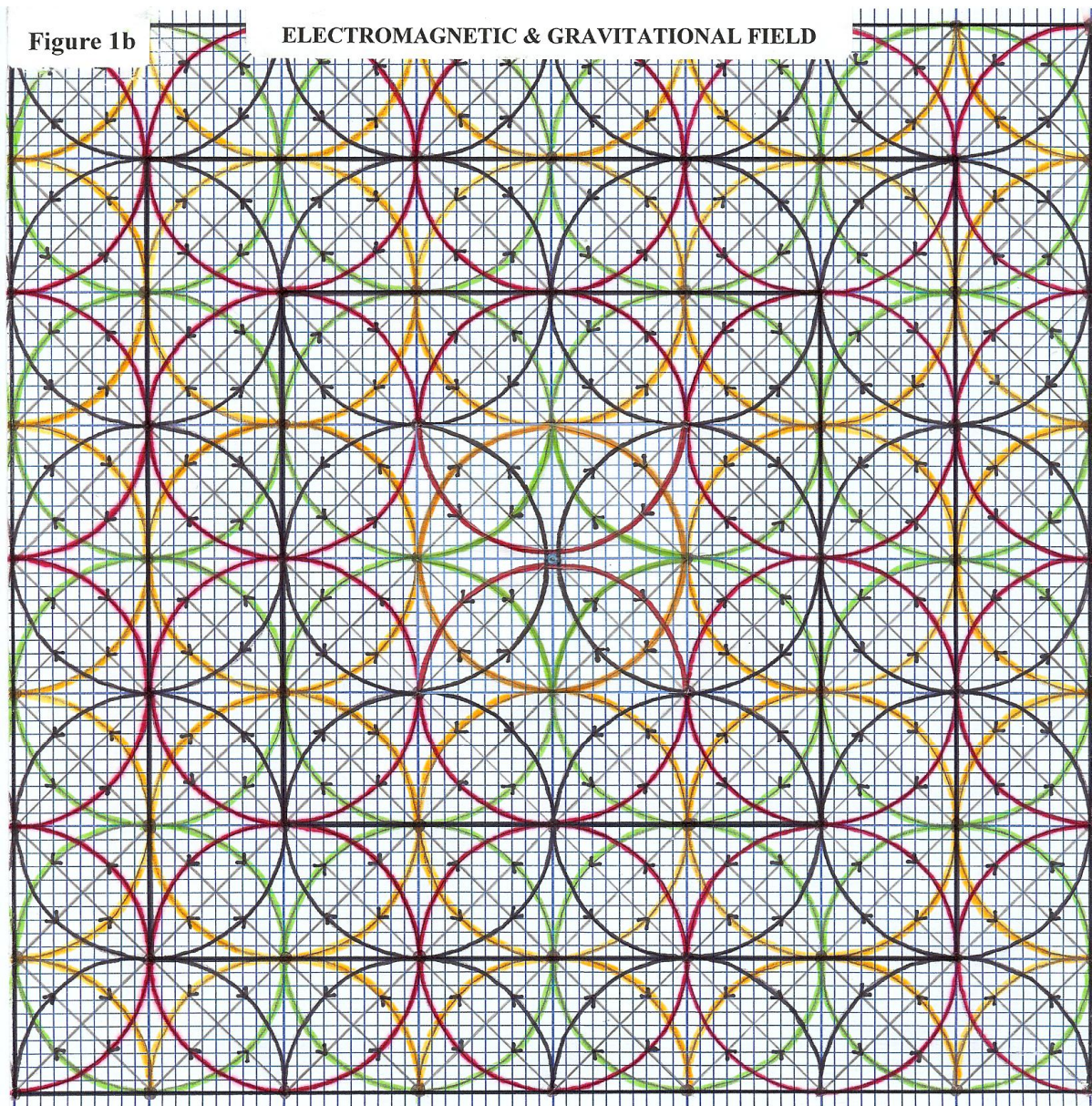
The electro field wave is perpendicular (at right angles) to the inside magnetic field wave, therefore, the electro will become nuclei as the preference of the two from energy expansion. Atom identity is determined by the life cycle duration of the electro couplings that became mass. Like the life cycle of a star, the electro couplings having a longer duration to expand will nuclei as a lighter atom such as a hydrogen atom. A star is formed when a large amount of gas (mostly hydrogen) starts to collapse in on itself due to its gravitational attraction (Hawking, 1996). The field expands into larger waves from the displacement energy of standing waves and the energy from mass propagates on the waves. The field waves are endless in time; hence the waves are open regardless of the size of the spiral waves in the wavelength spectrum.

Moving two steps from center in Figure 1b and squaring, there are four complete green (light) circles in the square. On three steps from center and squaring, there are nine complete brown (light) circles in the square and so on in the inverse square distance of the magnetic field. Moving diagonally from the center in Figure 1b, (Pythagorean Theorem), the photon half waves alternate between the electro and magnetic waves as photon energy in a vacuum which is the way light travels. Holding the page up diagonally at eye level show how the transverse waves oscillate as photon energy in a vacuum.

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Gravity forces come from the magnetic waves around the atom Figure 1b (center) which is an inward attraction force at the nodes that help conserve the energy Figure 1a. The electro is an outward expanding wave from the source of energy while the magnetic is an inward contracting wave to conserve the energy. Gravity will adjust inward forces to conserve energy in any kind of atom right down to the nuclei apex within the cone. The atom and gravity are united and comply with the inverse square distance and constant G. It follows that the accumulation of mass includes the accumulation of gravity as the photon waves interact with other field electrons.

In Figure 1b, energy forms matter from electro couplings giving a point center to the magnetic circle of photons where the ratio of the diameter in the magnetic circle to its circumference is infinite. This ratio is pi and infinite from the open ended waves with pi having the same value regardless of the size of the circle. Mass is the center for a diameter in the field as a ratio to the open circumference.

In summary, mass is created from open ended electro half waves at the apex of cone expansion in the electromagnetic field. Gravity inward forces from the magnetic half waves are the result of mass given that there can be no mass without gravity; hence, pi is the result of gravity forces on mass regardless of mass size.

3. Conclusion

Left Side   *Right Side*
Expanded Equation: $E = C = \infty =$ Open Cir. $= MC^2$

Infinity is on the left side of the equation above. Mathematics has little application on the left side of the equation because there is nothing to measure or count. Photons are counted on the right side of the equation with mass because C is finite (general relativity). Photons are not counted on the left side of the equation because C is infinite (no relativity). In essence, the speed of light is relative to infinity and mass is part of infinity because the speed of light is from the same energy.

Velocity is distance divided by time; therefore any time frame relative to infinity will have a value of C or less. Distance is the inverse square expansion of the magnetic field that contracts inward to offset time (mass) in the form of gravity. C^2 is the offset to the inverse square distance of the magnetic field where mass is equal to energy divided by C^2. Mass and C^2 cancel out leaving energy to equal C and infinity.

Time is relative only when mass is created where C is finite. Time includes the three spatial dimensions in the form of õmass as finite energyö on the right side of the equation. The classical three spatial dimensions plus time is equal to õmass as finite energyö where mass is the three dimensions and finite energy is the time. Time is finite on the right side of $E = MC^2$, where time has a beginning and an end. Time is infinite on the left side of the equation having no beginning or end. An observer is part of time and part of infinity from the same source of energy where the speed of light is the same for all observers. General relativity indicates that space-time is not flat but curved or warped by the distribution of mass and energy in it (Hawking, 1996). This energy is finite where time has a beginning and an end. Energy at the square root of C^2 as an outward force is synonymous with velocity, time, mass and finite C while the square root of C^2 as an inward opposing force is synonymous with gravity, antimatter and conservation of energy.

Mass is regulated by gravity as an opposing force at the speed of light. The satellites orbiting the earth are subject to gravity of the earth and the earth in turn is subject to gravity of the sun. All mass in the universe is receding in the electromagnetic field due to the different gravity levels in the field. Thus, $E = C = MC^2$ where mass is not the multiplicative of C^2 but the multiplicative inverse of C^2. Energy is the same as mass and conversely mass is the same as energy when C is finite as in the square root of C^2 because E is equal to the square root of C^2 both on the right side and left side of the equation above.

Photons in the form of energy are infinitely small just as they are infinitely large; matter as finite energy is an intermediary and part of infinite energy. Matter is projected as energy at each half cycle; hence, there is no energy or matter at the nodes where $C = f\lambda$. The bridge between E and MC^2 is C, therefore $C = MC^2$ and mass is the reciprocal of C^2. C^2 divided by mass is equal to infinite C on the left side of the equation because the wavelengths are open ended at the antinodes. $C = MC^2$ can also be seen as a static universe. The electromagnetic field is fixed or static from standing half waves and the mass in it is receding to look like expansion as a result of the different gravity levels in the field evidenced by the redshift and distance. Mass is receding in the field of a static universe that give finite time on the right side of the equation.

4. Supplemental Data

Left Side   *Right Side*

- $E = C = \infty = \text{Open Cir.} = MC^2$

- $M = \dfrac{E = C = \infty}{C^2}$

The square root of C^2 (gravity) offset mass on the right side of the equation above and is infinite on the left side of the equation.

- $\text{Velocity} = \dfrac{\text{Distance } (C^2)}{\text{Time } (M)} = \infty$

Distance is the inverse square expansion of the magnetic field and contracts inward to offset time (mass) in the form of gravity.

Time includes the three spatial dimensions in the form of "mass as finite energy" on the right side of the equation.

- $C = MC^2 = \dfrac{C^2 \text{ (Magnetic Field)}}{M \text{ (Electro Field)}} = \infty$

- $\begin{array}{l} \text{Inward Magnetic (-)} \quad \text{B to A} \; = \; C^2 \\ \text{Outward Electro (+)} \quad \text{A to B} \; = \; M \end{array} = \infty$

- $C = \dfrac{C^2}{M} = \infty \quad \text{Where} \quad \begin{array}{l} C = f\,\lambda \\ \lambda = \infty \end{array}$ The standing wavelengths are open ended at the antinodes for each photon.

References
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