

Time and Matter

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Photons travel at the speed of light in a vacuum. Electrons travel at the speed of light in a quantum cone. Therefore, mass is already at the speed of light relative to infinity. When mass is accelerated at twice the speed of light relative to infinity, mass will become nonexistent or having no energy at the nodes of standing half waves where C equal frequency times wavelength. 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 relationship between mass and infinity where the speed of light is common to both giving an understanding of gravity and pi in the electromagnetic field.

Keywords: Photon, Wavelength, Time, Matter, Gravity, Pi.

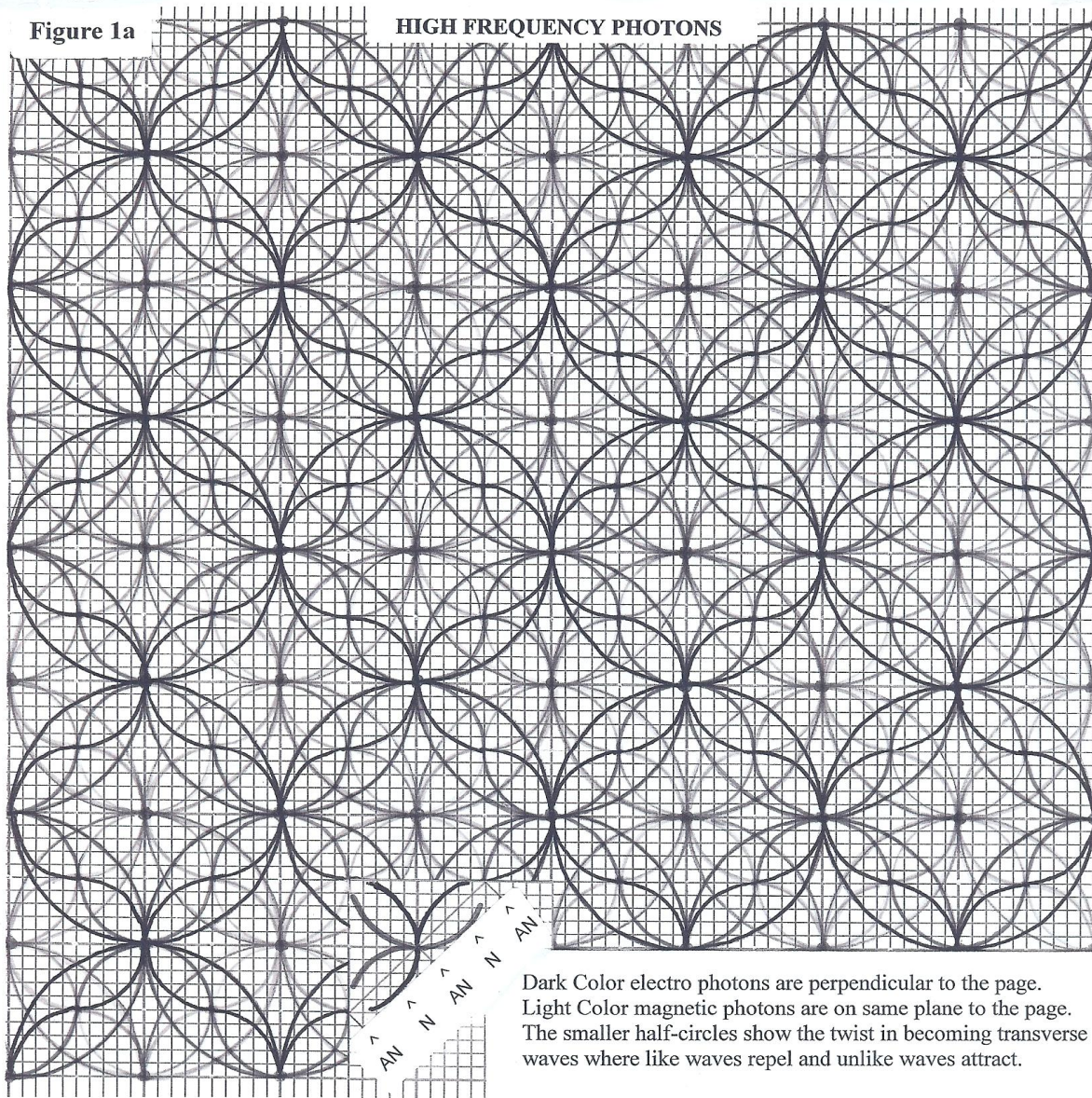
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1 Introduction

The electromagnetic field is comprised of standing waves in the opposite direction where direction is relative to the source of energy. The wave duality provides for both the electromagnetic and gravitational forces. A photon is a spiral standing half wave focused like a particle where the speed of light is relative to infinity and mass is part of infinity. A photon has duality as a wave and as a particle. Energy is equal to frequency of the photons based on Planck's constant.

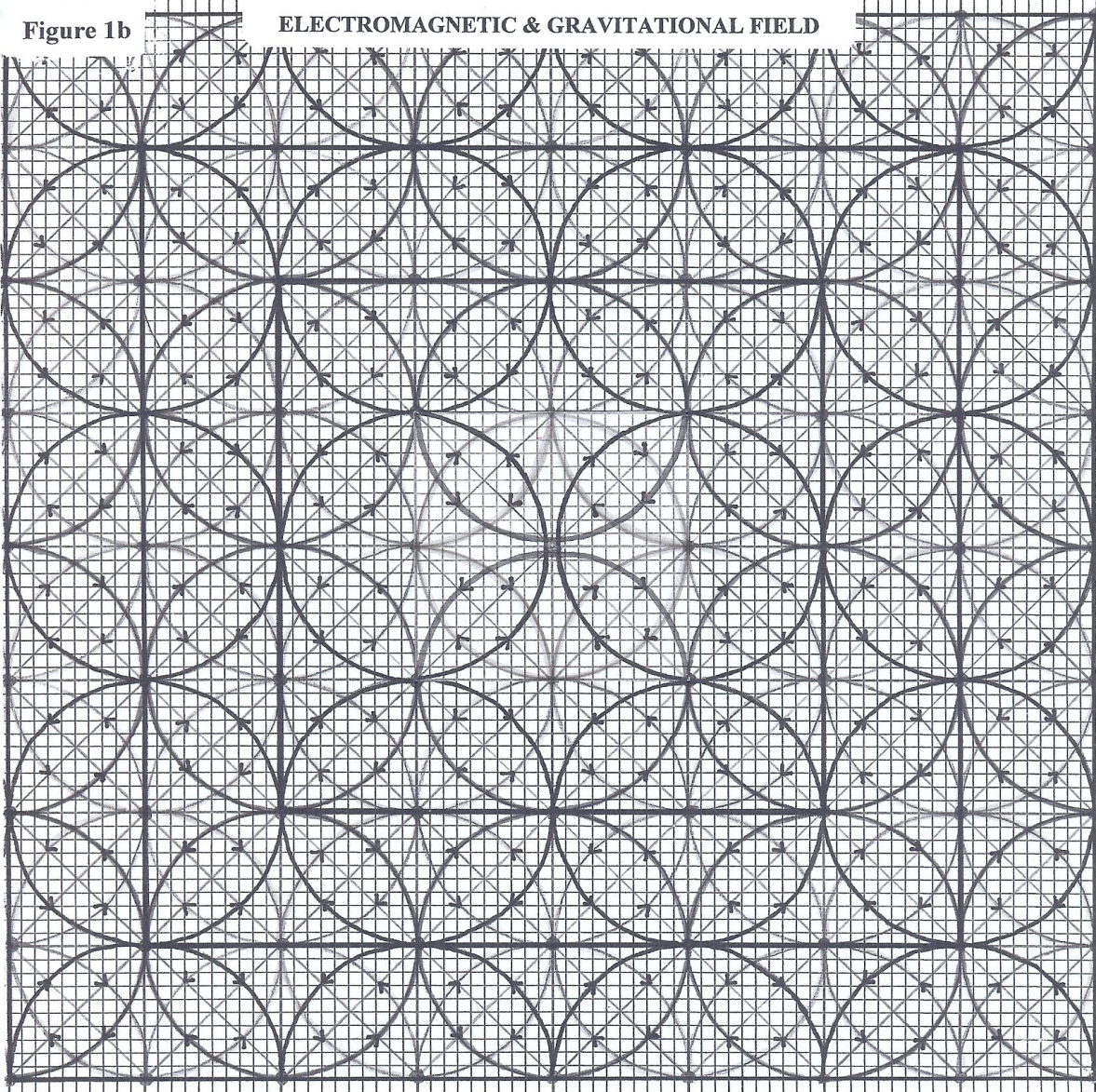
2 Report



From the illustration Figure 1(a), 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 spiral or 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 $C = f \lambda$.

Figure 1b

ELECTROMAGNETIC & GRAVITATIONAL FIELD



From the field illustration Figure 1(b), the (dark color) are the electro waves perpendicular to the page and (light color) 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 form. The page figure must be seen as a spectrum of different size wavelengths. As the field expands into multiple wavelengths in a cone, the atom is depicted at center when electro field couplings became nuclei from expansion. The e coupling constant, about 137.03597 is the amplitude for a real electron to emit or absorb a real photon [1]. 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.

It is important to visualize the quantum cone in Figure 1(b) 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 the atom cone have a strong nuclear force as nuclei. Electron(s) as photon(s) of mass continue outward to interact with real photons at the base of the black quantum cone which is the amplitude of the e coupling constant. The electron as a wave particle makes the quantum leaps from the couplings within the atom cone to balance the energy charge.

The electro field wave is perpendicular to the inside magnetic field wave, therefore, the electro apex 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 [2]. Direction of energy is relative to the source energy of mass and field energy. 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 circles are open regardless of the size of the spiral waves in the wavelength spectrum.

Moving two steps from center in Figure 1(b) and squaring, there are four complete (light color) circles in the square. On three steps from center and squaring, there are nine complete (light color) circles in the square and so on in the inverse square distance of the magnetic field. Moving diagonally from center in Figure 1(b), (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.

In Figure 1(b), 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 π and infinite from the open ended waves with π 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.

Gravity forces come from the magnetic waves around the atom Fig.1b (center) which is an inward attraction force at the nodes that help conserve the energy Fig.1a. The electro is an outward expanding wave from the source of energy while the magnetic is an inward contracting wave to conserve the source of 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 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, π is the result of gravity forces on mass regardless of mass size.

3 Conclusion

	<i>Left Side</i>		<i>Right Side</i>
Einstein's Equation:	E	$=$	MC^2

Expanded Equation:	$E = C = \infty = \text{Open Cir.}$		$= MC^2$
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Infinity is on the left side of the equation above because infinity is not a number. 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 coming from the same energy.

Zero times anything equal zero given mass on the right side of the equation above. Zero does not apply on the left side of the equation because there is no mass. As follows:

With Mass: $0 \times M = 0$ (right side of the equation above).
 With Mass: $0 \times C = 0$ (right side of the equation above).
 Without Mass: $0 \times C = \infty$ (left side of equation since zero does not apply).
 Without Mass: $E = \infty$ (left side of equation since zero does not apply).
 Therefore: $E = C = \infty$ (left side of equation above).

Velocity is distance divided by time; therefore any time frame relative to infinity will have a value of C or less. C^2 is the offset to the inverse square distance of the field where mass is equal to energy divided by C^2 . Mass and C^2 cancel out leaving energy to equal C and infinity. If there was no mass, the waves would be fixed or standing relative to infinity.

Time is relative only when mass is created where C is finite. Time is without mass in the form of photons always moving. 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. Time is the act of joining the three spatial dimensions together as part of time itself. 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 [3].

From the universal constant of energy time, the vacuum in free space is part of infinity. From this it can be concluded that energy in the form of photons is responsible for time, mass and gravity where energy is equal to the reality of forming mass in infinite time. Photons in the form of energy are infinitely small just as they are infinitely large; matter as nuclei energy is an intermediary and part of the 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 expansion distance in the field at different energy levels is the decay process of matter.

To finalize, the bridge between E and MC^2 is C where $C = MC^2$ and mass is the reciprocal or multiplicative inverse of C^2 where C is infinite on the left side of the equation. Infinity exist on the left side of the equation because mass would not exist without it. Reality is on the left side of the equation while mass is a projection of it at the speed of light on the right side of the equation. $C = MC^2$ can also be seen as time and matter. The electromagnetic field is fixed or static from open standing half waves and the mass in it is receding to look like expansion as a result of the different energy levels in the field. This supports the theory of general relativity and gravity at the quantum level.

References

- [1] R.P. Feynman, *QED, The Strange Theory of Light and Matter*, Princeton University Press, (1988) p129.
- [2] S. Hawking, *The Illustrated A Brief history of Time*, Bantam Books, (1996) p105.
- [3] Ibid, pp.40-42.