Gravity the Golden Ratio and Biconical Radiating Structures

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Abstract – The contemporary theory of gravity ignores the presence of the Golden Ratio that is in the structure of atoms, spiral galaxies, our DNA, and many biological forms. There is a lack of convention on how golden ratio plant spirals are described. The difficulty in identifying the mechanism that causes gravity is compounded by not challenging century old theories that were accepted when information about electromagnetic waves and their interaction with particles and plasma were incomplete. Theories concerning electromagnetic waves are being taught without mentioning contemporary research findings, which can influence consideration whether gravity is related to the electromagnetic phenomenon.

Introduction

Newton's law of universal gravitation, presented in 1687, states that a particle attracts every other particle in the universe with a force which is directly proportional to the product of their masses and inversely proportional to the square of the distance between their centers. Newton's theory of gravitation requires that the gravitational force be transmitted instantaneously. However, Newton's law does not mention that the gravity between masses is modified by the gravitational attraction of all the other masses and there is no way to isolate two masses. The equation Newton identified is a special case where there are only two masses involved. This does not exist in the real world. What scientists have measured is the effective attraction related to where it was measured and there are reasons why it will not be the same everywhere on the surface of the Earth or in space. Mass represents an energy source that has an attractive relationship to every other mass. It is not unreasonable to suggest that a chiral process is involved.

Newton was unaware that the Earth's surface has different areas of density and it would be many centuries before it was determined that it influenced surveying equipment. Surveyors refer to the gravity problem as the deflection of the vertical (DOV) or deviation of the vertical (DOV). The DOV can vary and will influence the accuracy of a gravity measurements if the DOV is not considered.

Newton had a problem with action at a distance (AAAD) because he was unaware of the existence of EM waves that transfer energy from one place to another. Newton could not accept that an invisible force is responsible for objects being attracted to each other. Contemporary researchers are finding that AAAD has spectacular influence characteristics where the influence velocity of AAAD is at least 10,000 times the velocity of light. Many decades ago, some optical astronomers had estimated that AAAD was at least 15,000 times faster than the SOL.

Electromagnetic (EM) theory has a somewhat similar problem as Newton's gravity equation, because the contemporary EM equations presented by James Clerk Maxwell ignored AAAD and he stated so in his 1864 publication. He stated, “The mechanical difficulties, however, which are involved in the assumption of particles acting at a distance with forces which depend on their velocities are such as to prevent me from considering this theory as an ultimate one, though it may have been, and may yet be useful in leading to the coordination of phenomena.” This was a massive quaternion hand calculation problem, plus we have no way to determine how many particles are interacting that produce a particular EM wave.

Heinrich Hertz proved that EM waves can be produced artificially but he did not prove that EM waves have transverse polarity only. He demonstrated that he detected transverse waves, but he did not have the facility or the detection equipment to positively prove that EM waves could not have

longitudinal components even if the electric arc source he used produced them. Contemporary optical researchers are producing light waves with longitudinal polarity components.

The real question is whether nature can produce EM waves with longitudinal polarity and exactly what mechanism causes polarity. In 2014, this author was able to ask a retired senior nuclear physicist that had worked at Sandia National Laboratories the following question, "Does the magnetic moment of electrons and ions influence the polarity of propagating EM waves?" His response, "I know of no studies that address your question." [1]

E8 Biconical Structures

The E8 structure has 240 vertices in its outer structure and this produces 120 biconical radiation structures that produce an EM field about the sphere. The next set of vertices within the outer set of vertices has 240 nodes and it produces another 120 biconical radiation structures that produce another spherical radiation set. The outer nodes should produce a lower frequency cylindrical type waveform, a helix, that turns CCW. The inner node produces a higher frequency with a slightly conical type waveform that turns CW. The two sets of biconical structures are producing longitudinal polarity radiation that creates a chiral relationship, handedness, to other structures of the same type.

The biconical structures are back-to-back radiation structures. The back-to-back interconnection will be additive between particles when the EM wave being produced has longitudinal polarization. It is hypothesized that the biconical structures are dielectric radiatiors where one produces a cylindrical type radiation pattern, a helix, and the other a slight conical helix that expands, which allows it to intersect with the adjacent cylindrical helices to produce crossover energy points that are additive.

It is a complex radiation pattern with 120x120 biconical emission structures all precisely synchronized. Where they obtain their energy to produce the radiation is another issue. The gravity of an individual particle is very small, but the additive process of many particles linked by their fields can produce very large mass structures.

A Los Alamos National Laboratory (LANL) paper described an unusual active dielectric radiation structure that produced EM emissions that did not decline in the far field by the expected $1/r^2$.[2] Dielectric antennas are in wide use, but they are unlike the LANL device. Dielectric antennas require strict dimensional accuracy. The frequencies that produce gravity would be the result of the dimensions of the fractal structures that must be within the E8 polytope.

No one has described the structural characteristics that allow an atom to produce an EM emission that has a precise frequency. Identifying the energy level change that is related to an EM emission does not describe the structure. The structure dimensions are what allows a specific frequency to be produced. The neutral hydrogen atom is an example where the structure produces an EM wave of about 21 cm, a very large wavelength from a very very small structure.

The author posted a paper to vixra in 2012 with the title, "The helical structure of the electromagnetic gravity field. The paper describes how a helical waveform presents the characteristics of gravity.[3] That paper was prepared when the author had not considered there could be biconical radiating structures in the E8 polytope.

Einstein's Gravity Theory And Ignored Information

A. Einstein states that the velocity of the influence of gravity is the same as the speed of light (SOL). The equations that describe the orbits of the planets in our solar system do not contain a value for a time delay it takes light from the Sun, about 8 minutes, to reach the Earth. It takes longer for light from the Sun to reach the outer planets. If there was a time delay, considering that the velocity of the influence of gravity equaled the SOL, our planetary orbits would have long ago spiralled far, far away from the Sun.

The Scientific Authority Structure (SAS), a Thomas Kuhn term, has accepted Einstein's statement that gravity has the same influence velocity as the SOL. As a result, it has been necessary to create dark matter throughout the universe and black holes at the center of galaxies to provide the gravity influence needed to keep everything together if gravity had a SOL propagation velocity .

The AAAD coupling between particles was established at the time they were created. The coupling influence velocity is not infinite, but we do not have time measurement instruments that are capable to measuring the precise value. The SOL was at one time thought to be infinite until better time duration measurement instruments became available.

Einstein had little knowledge how EM waves are altered in various densities of plasma. In 1906, he was unaware that EM waves, other than light, were propagating throughout the universe. Skywave propagation of radio waves was not determined until the 1920s. Einstein was not aware that the Sun was essentially a plasma of varying densities. This lack of knowledge influenced his conclusion that it was the gravity of the Sun bending light rather than refraction.[4]

Optical astronomers ignore what radio astronomers call “dispersion measure” (DM). Radio astronomers found that specific viewing directions in our galaxy have unexplained radio frequency spectral shifts. They apply different levels of DM depending upon the magnitude of the spectral shift in specific viewing directions. In our galaxy, the presence of the particles and their density, that cause DM at radio frequencies may or may not be detectable by optical telescopes. Optical telescopes do not see the plasma ducts that surround the Earth, but they often cause radio astronomy pointing errors.

Optical astronomers assume that the space between galaxies is absolutely devoid of any particles. Because of the vast distances involved, very minute particle densities between galaxies will result in a detectable redshift at optical frequencies.

Radio astronomers need to consider that pulsars coming from the direction of our galaxy core are equivalent to the “whistlers” produced about Earth and other planets in our solar system. Our Sun itself may produce whistler type EM signals in the density ducts that could be in the heliosphere, but we do not have detectors for their very low frequencies The difference between Earth whistlers and galactic core pulsars is the strength of the magnetic field in which they are created, which influences their frequency.

Golden Ratio

The golden ratio (GR) characteristics are not presented uniformly. The GR is evident in plants that have single and multiple spirals. Those with multiples spirals will have spirals in opposite directions. For plant structures, the GR ratio is presented either from a bottom up or a top down viewpoint. This results in the spiral growth characteristics that are clockwise (CW) or counterclockwise (CCW) from the top view are exactly opposite when viewed from the bottom up. If they all need to be viewed from a consistent viewing position, such as bottom up. For pine cones, looking from the bottom up, the CW spiral has more rotations than the CCW spiral. This suggests the process that produces the CW spirals has a higher rotation frequency than the process that produces the CCW spirals.

The seed node organization identifies that there are two rotating fields, one rotating CW and the other CCW. When two counter rotating *fields* with longitudinal polarization crossover each other there will be additive energy nodes at the crossover points in their direction of propagation. However, it is more complicated than just two rotating energy sources interacting, as there are 120x120 biconical radiators involved.

Plant growth is responding to the higher energy that is present at these cross over points. Transverse EM waves will not produce additive energy nodes in the direction of their propagation. It is probable that biologists and botanists are familiar with the GR and they will have the same dilemma as the rest of the scientific community, not knowing what causes the GR phenomenon.

Biologists and botanists need to consider that plant growth is coupled atom to atom to the mass of

the Earth. Gravity creates the mass of the Earth.

Electromagnetic Frequency Error

The method for determining the base frequency of a cyclic phenomenon is established by observing the longest wave duration and using that time duration as the starting frequency with a value of 1. For a wave phenomena produced by nature, it is necessary to constantly measure the waves to determine the longest period. The accuracy of the longest wave determination is dependent upon the detection and time measurement instruments that were available at the time a cyclic frequency is determined. We still do not have instruments that can detect and measure the longest EM wave.

Several centuries ago, the second was the shortest time period where instruments were available to provide a reasonably accurate measurement for that small of time segment. Scientists used the second as the base frequency for EM waves as they could not have determined the longest wave. Magnetotelluric transmitters are now producing EM waves that have frequencies denoted by 0.1, 0.01, 0.001, 0.0001 Hz, etc. This has caused us to have a non-linear frequency scale. Every physical law equation that contains a value for frequency or uses a value that is defined using frequency have a problem.

Frequency alone cannot be used to identify the energy contained in an EM wave. The amount of energy in an EM wave is dependent upon how many charged particles are involved in its creation. How much energy present in an EM wave in a given time duration can be used if it is known how many charged particles were involved in the creation of an EM wave.

It is possible to geometrically express wavelength and frequency using a pair of right triangles, one labelled wavelength and the other frequency. A paper on the issue, published in an IEEE publication in 2011, is titled, "A methodology to define physical constants using mathematical constants."[5] The mathematical process allowed the SOL to be mathematically defined by two mathematical constants, $2\pi\sqrt{2}$, times a multiplier. This SOL value is mathematically friendly in physical law equations.

Discussion

The SAS does not require that long standing theories, which were developed and accepted at times when there was incomplete information on many subjects, to be periodically reexamined critically to determine if everything now known changes the earlier conclusions. The SAS allows and funds efforts to prove old theories are not wrong, even Einstein's.

When eventually recognized by the SAS, the quasicrystal discovery in 1982 overturned a century of settled science on the structure of crystals. The discovery was accomplished with a tunnelling electron microscope that had a higher resolution than could be obtained at that time by x-ray devices.

Scientists did not know that EM waves, other than light, were propagating throughout the cosmos until 1940.[6-7] Reber was radio engineer and amateur astronomer. His papers were written to be understood by radio engineers and astronomers. The earlier paper by Karl Jansky was published in a radio engineering publication.[8] Many conclusions were made before it was known EM waves, other than light, were propagating throughout the cosmos.

Not knowing that gravity is not constant everywhere on the Earth's surface caused a surveying problem for the French. The French were unaware that gravity had a DOV issue when they surveyed the distance between Dunkirk and Barcelona to establish a basis for the meter. The Least Squares smoothing technique had to be used to straighten out their point-to-point survey lines.

Conclusion

The golden ratio observed in the dimensions of plants and structures in the universe are the result of

the EM pattern that produces gravity.

EM frequency was improperly defined. The current non-linear EM frequency scale can be used for domestic use but physical law equations will require a linear frequency scale for their resultants to be meaningful.

The SAS has elevated some of the icons of scientific discovery to religious-like prophet status such that their century old conclusions cannot be challenged, even though there is evidence that their conclusions were based upon incomplete information.

Identifying the energy source that produces the gravity field for every particle with mass should be a major focus of research.

References

[1] Personal email, 2014, to-from Dr. P. Dressendorfer (former Sandia Ntl Lab. Nuclear Scientist)

[2] Makinson, F.H. “The helical structure of the electromagnetic gravity field” http://vixra.org/pdf/1208.0033v2.pdf

[3] Ardavan, J. Singleton, et al., “Experimental demonstration of a new radiation mechanism: emission by an oscillating, accelerated, superluminal polarization current” Available: http://arxiv.org/abs/physics/0405062

[4] Makinson. F. “Mercury's Orbital Anomaly And Electromagnetic Waves” http://vixra.org/abs/1907.0132

[5] Makinson, F.H. “A methodology to define physical constants using mathematical constants.” IEEE Potentials July/August 2011, Vol. 30 Issue 4, pgs 39-43. DOI 10.1109/POT.2011.940377, http://ieeexplore.ieee.org/xpl/tocresult.jsp?isnumber=596202122

[6] Reber, G. "Cosmic Static", 1940 Proc. IRE, 28, 68.

[7] Reber, G. "Cosmic Static", 1940 Astrophysical Journal, 91, p 621.

[8] Janksy, K. “Electrical disturbances apparently of extraterrestrial origin”, 1933, Proc.IRE, 21, p.1387.