# Chaos, Confusion, and the Illusion of Gravity Waves

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The interpretation of vibrations detected by LIGO's facilities is critically examined. The concept of gravitational waves is disputed and the argument is made the detected vibrations are the result of synchrotron radiation. Spacetime is treated with skepticism, and a modern version of the aether is described. Synchrotron and Cerenkov radiation are used as supporting evidence of a medium supporting the transport of electromagnetic waves.

1916, Albert Einstein published his Special and General Theories in the form of a book.[1] In his Special Theory of Relativity, Einstein uses the Luminiferous Aether to show time is a variable. In his General Theory, Einstein replaced the aether (the medium transporting electromagnetic waves) with the mystical concept of spacetime. According to Einstein's model, gravity is not a force, but the result of curved spacetime. Matter "warps" the fabric of spacetime around itself, resulting in gravity. Additionally, his model suggests a moving object creates ripples in spacetime, which are also treated as gravitational waves.

Einstein's model of spacetime does not include any references to the electromagnetic field. Because EM waves have hard supporting evidence, there have been clumsy efforts to combine the model of spacetime with the electromagnetic field. One of Einstein's goals for eliminating the aether/EM field was to make room for his photon model of light as massless, chargeless particles traveling through a vacuum that only exist while traveling at the speed of light.

Supporters of the Standard Model have embraced Einstein's model of gravity as the warpage of spacetime. More recently, particle physicists have claimed the detection of a particle, called the Higgs boson[2], which seems to have nothing to do with the warpage of spacetime, but according to a remarkably complicated and questionable model, does provide protons their gravitational attraction.

There are four significant problems with the Standard Model's description of gravity. The first is the belief gravity radiates outward, as opposed to contracting inwards. The second problem is the model of gravity being expressed in the form

of waves, which is not true for the gravity we experience from Terra. The third problem is describing gravity as "the result" of the warpage of spacetime (or the aether it replaced) — this warpage is more probably the result of gravity, rather than its source. The fourth problem is the concept of a moving object generating gravitational waves at high speeds — the vibrations they have measured, and have claimed are gravitational waves, are more probably intense low frequency EM shock waves.

In recent years, the Laser Interferometer Gravitational-wave Observatory (LIGO)[3] has claimed to have detected more than 50 mergings of neutron stars and/or black holes. However, none of these detected "theoretical" mergings are supported by a visual confirmation. No astronomers observed the merging of neutron stars or black holes at the time the vibrations were detected. Vibrations were detected, but they are coming from unknown sources. The detected vibrations are assumed to be the result of gravity waves, but this assumption has no hard supporting evidence, and the concept of electromagnetic shock waves should be considered.

**The Laser Interferometer Gravitational-wave Observatory**

It must be stated that, while LIGO has detected over 50 vibrations believed to be the result of gravitational waves that were caused by merging black holes and/or neutron stars, there have been no visual confirmations of these mergings. (LIGO's use of the word "view" in the text of their articles is… questionable and confusing.) While their theory of neutron stars "seems" probable, no astronomers have visually confirmed the merging black holes and/or neutron stars. Nor is there any hard supporting evidence the facilities are detecting gravity waves (as opposed to low frequency EM shock waves).

Their most highly advertised observation is called "event GW170817[4]," which took place on August 17, 2017. Their observations were translated[5] to conclude two neutron stars had merged. The vibrations lasted roughly ten milliseconds and these measurements of the "theoretical" gravity waves expressed within a frequency range of approximately 10 Hz to 10 kHz — comparable to very low radio wave frequencies.

While there is the probability the vibrations measured were an intense burst of low frequency radio waves (10 Hz to 10 kHz) range, there are no Terra-based radio telescopes currently capable of detecting low frequency radio waves from outside our solar system. These low frequencies are very difficult to detect[6] because of strong radio frequency interference on Terra, atmospheric absorption, and ionospheric effects act as interference. (The WAVES device[7], in the WIND spacecraft, could not detect these vibrations because it is sensitive to radio waves in the 20 kHz to 13.825 MHz range.)

LIGO researchers may argue that they have had a visual confirmation of two neutron stars merging, but their visual confirmation is based on a burst of gamma rays that was detected separately, and arrived shortly after their equipment detected the vibrations. No one actually "viewed" two neutron stars merging. This conclusion was extrapolated from detected vibrations, followed quickly by the burst of gamma rays (which was then followed by a range of EM frequencies including X-rays, ultraviolet waves, light in the visual range, infrared, and higher frequency radio waves, over several weeks). Their promotion of successfully detecting gravitational waves, presented in their press release[8], however, was somewhat exaggerated in stating, "This marks the first time that a cosmic event has been 'viewed' in both gravitational waves and light."

The process of exaggeration often starts off small, but having grown comfortable with successfully used "small" exaggerations, people are sometimes tempted to gradually offer larger and larger exaggerations, as the need arises. Sadly, this is not science, but politics.

The collection of information about these events does have value, but simply gathering information is often not enough to satisfy people who are providing the funding. Claims of "success" are typically necessary for continued funding. The claim LIGO is measuring gravitational waves has no hard supporting evidence. They are measuring a group of vibrations, and translating their readings to support their "hoped for conclusions."

The Laser Interferometer Gravitational-wave Observatory (LIGO) has received funding from the National Science Foundation since 1991. (This funding was used,

in part, to purchase two separate plots of land which were isolated, and far from the vibrations caused by "human" activity. One is in a Louisiana forest (Livingston, Louisiana) and the other in a desert in eastern Washington (Hanford, Washington). After the land was purchased, and the two LIGO facilities built, they collected data from 2002 to 2010, but nolow frequency vibrations were detected during that period. This resulted in a request for funding to rebuild their facilities.

In 2010 the two facilities were shut down and rebuilt, reopening again in 2015. During this period of time, $200 million was spent, bringing the facilities total building costs to $620 million. LIGO's annual budget has been $45 million per year, and they requested $49 million from the National Science Foundation for 2025.

LIGO's equipment is designed to detect vibrations from 10 Hz to 10 kHz (low frequency radio waves) by using a laser beam to measure[9] "the distance" between two long arms. It detects vibrations by sending out a laser beam, which is split in half, and then sends each half of the beam down one of the device's two 4 kilometer arms. Each beam is reflected back by a mirror, with the beams bouncing back and forth between freely hanging mirrors approximately 300 times before being recombined. As the theoretical gravitational waves (or electromagnetic shock waves) pass through the device, vibrations shift the distance subtly, and changes in the arrival time of the light provide highly sensitive measurements.

**Gravity as the Electrical Contraction of Space**

Per the Ultra-Space Field Theory, gravity is a process of electrical contraction[10]. This model describes protons and thermons as the sources of gravity  The USF Theory predicts electrons and positrons join or merge (page 10)[11] to create subatomic energy fields, called thermons, that contract in on themselves and generate a minute gravity field. (The Standard Model predicts positrons and electrons annihilate one another upon contact.) Protons (page 14)[12] are described as two positrons bound to a single electron, generating a gravity field that is stronger than the thermon's "and" attracts a gradually condensing field of thermons around it, vaguely similar to an atmosphere around a planet.

Thermons provide an explanation for dark matter, and act as the foundation for the "universal" electromagnetic field. (In the Standard Model, positrons and electrons annihilate one another and there is "no explanation" for the "universal" electromagnetic field — the one that transports EM waves to us from different galaxies.)

In December of 1900, Max Planck discovered that electromagnetic waves were supported by small packets of energy, or quanta[13], which were absorbed and emitted in specific, quantized units. (Thermons are the subatomic energy fields which absorb and emit quanta.) In 1905, Einstein translated quanta into photons traveling in a straight line, and simplifying the mathematics for light, significantly. (Prior to this, a dysfunctional model of light as transverse waves had been used, and straight line mathematics, psychologically speaking, was seen as a gift.)

As it turns out, individual photons "don't" travel in straight lines, but tend to meander[14] in the general direction they were sent. Statistically, the straight line photon model still works, but does not represent reality.) The meandering behavior supports Planck's concept of quanta, but does not support the model of photons traveling in a straight line through the vacuum of space.

The belief gravity radiates "outward" is not based on direct observations, but is the result of using electromagnetic waves (which "do" radiate and expand outward) as a model for gravity[15]. (It's almost as though the mathematicians forgot gravity behaves as an attractive force.)

The Standard Model describes Higgs bosons[16] (subatomic particles of questionable, somewhat mystical origins) as being the source of gravitational attraction at the subatomic level. Einstein's curvature of spacetime around planets, stars, etcetera is used to explain gravity at the macroscopic level.

Einstein's model of curved spacetime supports the observed bending of light around large stars and black holes (also known as gravitational lensing[23]). The Ultra-Space Field Theory predicts the thermal field thins with distance to a planet's core, supporting the bending of light because the medium transporting the EM waves thins, similar to the way a magnifying glass bends light. (Einstein eliminated

the aether model as unnecessary for straight line photon mathematics, and then later replaced the aether with the concept of spacetime.)

The inverse square law applies to gravity, and also applies to electric fields and magnetic fields. This law describes how the attraction (or repulsion) of two or more energy fields of the same type weaken with distance, and gain strength with proximity (closeness). Terra's gravity field weakens with distance, the magnetic fields of magnets strengthen as they are moved nearer to each other, and two negative electric fields repel each other more and more strongly as they are moved closer to one another.

**Misinterpreting the Waves Created at the Front of Moving Objects**

In Einstein's book, *Relativity: The Special and General Theory*, he describes the source of gravity as the curvature of spacetime around an object, or a planet, or a star, or a black hole. (Page 87 of the book, page 103 of the PDF file.)[17] As a consequence of Einstein's model, it is predicted moving objects produce waves ahead of them as they move through "spacetime," and produce the gravitational waves LIGO's researchers believe they detected.

What seems to have been missed in the Standard Model's version of gravity are the processes of Cerenkov and synchrotron radiation, which wasn't discovered until after 1905. (Page 3, 2nd, 3rd, and 4th paragraphs.)[18] Charged and magnetic particles — electrons, positrons, and protons — and planets, stars, and black holes traveling at high speeds, produce detectable electromagnetic compression waves in front of them.

Accelerators are typically used for particle collision experiments, but some experiments have focused on synchrotron and Cerenkov radiation. Synchrotron and Cerenkov radiation are processes that are not supported by Einstein's Special and General Theories. This is because they provide evidence of a medium (the aether/thermal field), with electrons moving through it at faster-than-light speeds, and generating light (EM waves), in the process.

Typically, an electron is used during synchrotron experiments, but protons[19] have also been used. As an electron accelerates, EM waves form in front of it, with the wave frequency increasing as the speed increases. As the electron continues to accelerate, the wave moves from the front of the electron to the rear, much like a jet accelerating past the speed of sound. As an electron that is moving faster than the speed of light 'slows', the process reverses, with the wake broadening and moving forward, until it once again generates light ahead of the decelerating electron.

Neutron stars and black holes both express powerful magnetic fields. A pulsar[20] is a neutron star with its magnetic poles revolving around a common center. (It is much more common for planets and stars to revolve around a common center, with their poles at right angles to the revolutions. As two neutron stars with decaying orbits spiral in on each other, accelerating toward one, their speed increases. There is also a very high probability one neutron star's north pole will line up with the other neutron star's south pole, with the additional attraction increasing the speed of their collision, even more. The question then becomes, are gravitational waves generated per the theoretical spacetime model, or are low frequency EM waves being generated, as observed with synchrotron radiation.

Both the Standard Model and the USF Theory predict waves were created during event GW170817, as a result of intense acceleration just prior to the two neutron stars colliding. The Standard Model states gravitational waves were created. The USF Theory predicts LIGO detected a "shock wave" of low frequency radio waves just prior to the collision. In both models, the collision resulted in high energy chaos, producing the gamma ray burst, followed by a variety of intense EM waves for days and weeks as the two neutron stars continued to merge.

**The Speed of Gravity**

There are two models[21] representing the speed of gravity. Newton's model describes the speed of gravity as being instantaneous, and Einstein's model has been used to predict gravitational waves travel at the speed of light.

LIGO has interpreted the vibrations they have detected proves gravitational waves travel at the speed of light, and have stated it as fact. Even Google's "#@%@*#" AI now promotes the belief gravity travels at the speed of light by stating it as fact, based on LIGO's claims.

The Ultra-Space Field Theory takes the position thermons and protons, as sources of electrically contracted space, are the primary sources of gravity, and that there are no known sources of "new" gravity. No where in the known universe, nor in manmade experiments, is there evidence protons are being produced. There are also no new stars, planets, or gaseous clouds popping into existence. While it is true everything in the universe appears to be in a constant state of motion, gravitational field connections have already been established. There are no new gravity fields sending out new gravity waves or attractive forces. All gravity in the universe appears to be consistent, established, and connected. Two colliding neutron stars do not create more matter, but they do combine their gravity fields.

Because gravitational attraction is a constant, gravity can be treated as an instantaneous process. For example, there is no detectable delay in the moon's gravitational influence on Terra and its oceans. For purposes of predicting the movement of matter in space, and on Terra, gravity should be treated as instantaneous. There are no detectable gravity waves emanating Terra to the moon, nor from the moon to Terra, and no reason to believe the moon's gravity, or Sol's gravity, have a delayed gravitational influence on Terra.

**The Vacuum of Space, the Aether, Spacetime, and the Thermal Field**

In 1905, Einstein claimed the aether was no longer necessary for the transport of light, allowing physicists of the time to drop the dysfunctional model of light as transverse waves, which they did with a fair amount of gusto (and perhaps went into overkill[22]), in eliminating any support mechanism for the electromagnetic field and EM waves, which is currently used by many industries).

Additionally, the models of electromagnetic waves and of photons are not compatible. The existence of an aether would have blocked the massless, chargeless particles, called photons. Photons can travel through the vacuum of

space between stars and through the vacuum of space that exists between atoms and molecules when it passes through matter, such as Terra's atmosphere, or through glass. (However, only "photons of certain frequencies" pass through glass or air.

Efforts to explain the frequency of individual photons, or their wavelength, have fallen back on Max Planck's description of quanta[13] as units of energy that are emitted and absorbed by oscillators. As units of an electromagnetic wave, frequency is predictable through the use of an equation developed by Planck, called Planck's constant. It is E=hf, with E representing the quanta's energy, h representing the energy constant of 6.63 $x10^{-34}$ Joule seconds per the oscillators, and with f representing frequency.

Prior to Einstein's model of photons, the luminiferous aether was used to explain light as electromagnetic waves. This model treated the luminiferous aether as an elastic solid, primarily because of an experiment performed in 1814, by Augustin Fresnel. Fresnel was experimenting with light passing through crystals, and incorrectly concluded light was transported through the aether as transverse waves[2].

Spacetime was a novel model developed by Einstein to explain the conclusion he had reached in his Special Theory of Relativity (that time was a variable which could speed up or slow down, depending on how fast a person or object was traveling), the need for the vacuum of space to allow for the passage of protons, and his theory that the gravity was the result of the warpage of space. Einstein's model treats time as a fourth dimension and as a variable, which, in turn, requires the speed of light to be a constant (and, which has been shown to not be true[24], to not be true[25], to not be true[26] — the USF Theory predicts the aether/thermal field is being drawn into the black hole at faster-than light-speeds).

The Ultra-Space Field Theory uses an aether model in describing the movement of light, called the thermal field. The thermal field supports Max Planck's hard evidence model of oscillators as a transport mechanism for quanta/electromagnetic waves. In the USF Theory, Planck's oscillators are called thermons, which are made up of joined electrons and positrons. In this model, the aether/thermal field

supports the electromagnetic field and electromagnetic waves with quanta moving from one thermon to the next as part of an outwardly expanding wave.

The USF Theory also predicts the aether/thermal field represents dark matter. Each thermon generates a minute gravity field. Thermons not only support the universal electromagnetic field, but also provide an explanation for dark matter. The USF Theory does not describe the warpage of spacetime around a moon, planet, star, etcetera, as the source of gravity, but it does describe the weakening of gravity and the thinning of the thermal field, with distance from the gravitational core, as a result of gravity.

Protons, as a more intense source of gravity, condense the surrounding thermal field. A single proton, or a planet, or a star, is surrounded by a gradually condensing thermal field. This spherical condensing of the thermal/electromagnetic field also supports the lensing effect referred to as gravitational lensing.

**Conclusion**

The belief that the warpage of spacetime in front of a moving object results in gravitational waves does not have any hard supporting evidence. The LIGO facilities have detected low frequency vibrations, followed by a gamma ray burst, and then EM waves of a variety of frequencies. LIGO scientists have interpreted the early arriving low frequency vibrations to be gravitational waves, The USF Theory supports the prediction the vibrations were the result of synchrotron radiation.

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