Gravity: The Subatomic Electrical Contraction of Space and It's Relationship to Einstein's General Theory of Relativity

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This description of gravity is based on the Ultra-Space Field Theory[1]. The Ultra-Space Field Theory is an associative field theory model, which describes the behavior patterns of kinetic energy, electrons, positrons, magnetic fields, gravity, and their predictable interactions. Joined positrons and electrons are described as the source of gravity. Additionally, Einstein's General Theory of Relativity is reexamined and compared with the USF Theory's model of gravity.

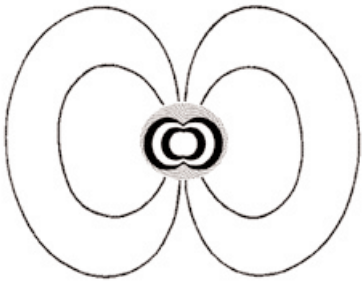
This thesis describes gravity as an electrically-based contraction of space. It differs from Albert Einstein's 'General Theory of Relativity', in that curved space is considered an effect of gravity, not the cause. Additionally, time is treated as a universal constant, not a frame of reference which varies depending on the observer's velocity. Gravity, as an electrical contraction of space, is a conclusion reached by the 'Ultra-Space Field Theory', an associative field theory model of physics (differing from the currently popular, reductionistic 'Standard Model', a particle theory paradigm favored by mathematicians).

In this new model, electrons and positrons are treated as subatomic energy fields, with no true surface area and no gravity field. They are not treated as negative and positive ones, but as east and west monopoles per the East-West Geomagnetic Effect. Their repulsive and attractive behaviors are consistent with the north and south poles of magnets. The forces electric (and magnetic) energy fields exert upon one another vary inversely with distance, as does gravitational attraction.

Positron Electron

Electrons and positrons, as energy fields lacking a true surface area, are predicted to join, creating an ultra-subatomic, coloumbic black hole. The two energy fields neutralize one another. They do not annihilate one another in an effort to equal zero. These joined electron-positrons contract in on one another, perpetually transforming their electrical energies into a magnetic field while simultaneously contracting the surrounding space. The resulting complex of energy fields is called a thermon. It transports electromagnetic waves and generates a very, very weak gravity field. (As it turns out, Paul Dirac developed a similar model in 1928 describing the process of pair production, predicting electrons were created simultaneously with anti-electrons.[2] This functional model of pair production was discarded because it did not support space as a vacuum and, consequently, light as photons.)

pair joining



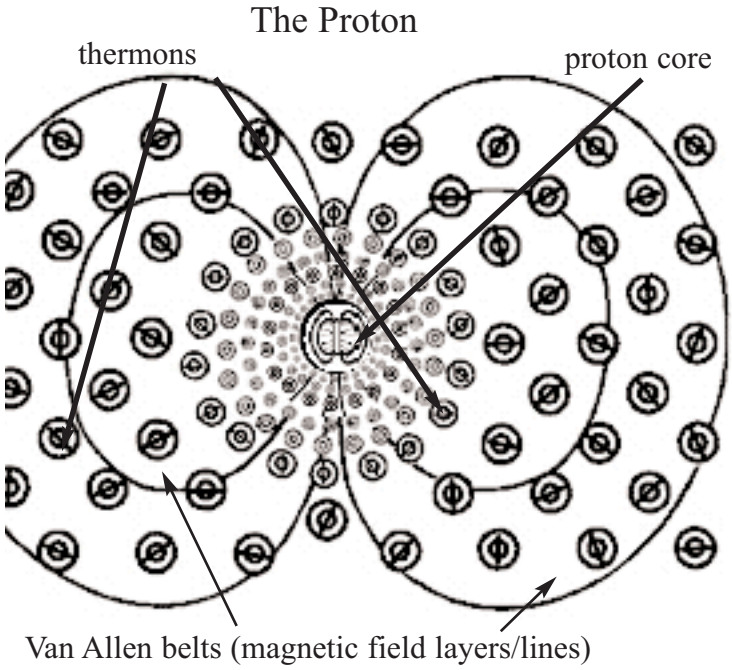
Thermon

In the emptiness of outer space, it is predicted thermons are very loosely organized and provide a foundation for the electromagnetic field and electromagnetic waves. In the space between galaxies, this model predicts thermons are significantly larger, and spread very thinly. Closer to a gravity core, thermons are more compressed and exist in higher concentrations. The event horizons of black holes are where thermons are being drawn in at faster than light speeds. Within matter, the EM field is called the thermal field, and thermons are much more compressed, due to the concentrated gravitational attraction of protons. The movement of loose thermons represents the flow of heat.

Supporting hard evidence for thermons includes:
*electromagnetic waves
*dark matter
*dark energy
*pair separation (pair production)
*pair joining (pair annhilation)

Supporting conclusions from others:
*Maxwell Planck's 'oscillators' which transport quanta
*Paul Dirac's model of pair production

Protons, however, are the primary source of gravity. A proton is described as two positrons joined to a single electron. Protons express the same behavior as positrons, save they cannot join (easily) with an electron, and they express detectable gravity fields and magnetic fields, which positrons do not. A combination of increasing thermon density and the proton's magnetic field layers keep electrons from reaching the proton's core.



Supporting hard evidence for protons as two positrons joined to an electron includes:
*the missing positrons (Electrons and positrons are created in equal numbers during the pair separation/creation process. Where are the missing positrons?)
*the attraction of electrons to protons
*protons imitate positrons in veering to the west of a magnetic field
*while sharing the attracting and repelling behaviors of positrons, proton's additionally display a gravity field and magnetic field, which positrons do not

It is not my intention to defend the aether model developed by the Ultra-Space Field Theory in this paper. I will simply point out that after over one hundred years of use, we still have no photon-based technologies. Additionally, modern diffraction experiments have shown individual, single photons/quanta tend to meander, rather than follow a straight line.[3] All of our modern technology is based on electromagnetic wave models, which include descriptions of frequency and amplitude. Research on light as electromagnetic waves, and the electromagnetic field in general, has been reduced to almost nothing, similar to the way Newton's model of corpuscles (an early version of photons) stunted research in the areas of optics and lenses.

Running contrary to our shared experience of the physical world, Einstein's Special and General Theories are primarily a faith-based system in which few claim to have a good understanding. There is little 'hard' supporting evidence for Einstein's Special and General Theories. What is available is weak and subject to interpretation. Additionally, the General Theory of Relativity does not provide a functional model for gravity at atomic and subatomic levels. The reductionist philosophy promoted by Einstein eliminates behavior patterns and characteristics. This philosophy, in turn, allowed him to confuse effects with causes, ending with his General Theory of Relativity providing a distorted description of gravity.

The first flaw in Einstein's model is the concept of the aether as an elastic solid, initiated in 1814. This was when Augustin Fresnel, experimenting with light passing through crystals, decided light was made up of transverse waves. Transverse waves involve up and down movements and typically form when compression waves pass through solid matter. Waves carried along a cracking whip, or a string, with the up-down undulations passing through an up-down slit, are commonly used in describing Fresnel's experiments. Fresnel concluded the aether (the medium believed to transport light waves) must be an elastic 'solid'.[4] The aether model that developed from these conclusions was an invisible, jello-like substance distributed uniformly through matter and empty space, used for transporting light waves, and which matter moved through without detectable resistance. This evolved into the 'luminiferous aether'.

The error Fresnel made was in projecting the characteristics of transverse waves onto polarized light. In the USFT model, polarized light waves are not described as transverse, but as electromagnetically aligned. The medium within Fresnel's crystals is electromagnetically aligned and only EM wavelets/quanta from sources with similar alignments can pass through. The crystal acts as a filter. After leaving the crystal, and passing into 'loose' thermons, this 'filtered' light transports the alignments and patterns until interference distorts them.

In 1632, Galileo Galilei developed a gravitational theory of relativity, noting that the time it took a cannon ball to strike the ground was not effected by horizontal velocity.[5] If the cannon ball were shot parallel to the ground, or if it simply fell from the from the cannon's mouth, it took the cannon ball the same amount of time to strike the ground. This is the result of gravitational attraction not being effected by horizontal kinetic energy. Gravity is a downward process of mutual attraction. Kinetic energy moving objects in directions other than the horizontal will impact the time taken for the cannonball to strike the ground.

Additionally, he noted if he traveled in the same direction in which the horizontal cannon ball was shot, at the same speed, the cannon ball appeared to fall straight down (minus any nonmoving points of reference in the background). From this, Galileo Galilei concluded all steady, smooth motion is relative, and cannot be detected without reference to an outside point. This conclusion state's that without environmental reference points, a person cannot determine whether she is stationary, or whether she is moving smoothly. This is Galileo Galilei's 'Principle of Relativity', which becomes the starting point for Einstein's Special Theory of Relativity.

In 1905, Einstein published his 'Special Theory of Relativity',[6] which he later combined with the Lorentz transformations to lay the foundation for his 'General Theory of Relativity'.[7] In his Special Theory, Einstein starts with the premise, based on the Principle of Relativity, that a person should be able to see himself in a mirror while traveling at the speed of light. Remember, Galileo stated all steady motion is relative, and cannot be detected without reference to an outside point. Einstein argues that if you are moving at the speed of light with no outside reference points, and your image disappeared from the mirror, you could tell you were moving and describes this as a violation of the Principle of Relativity.

Einstein's position on the Galileo Galilei's 'Principle of Relativity' conflicted directly with the popular elastic solid aether model, which should 'not' allow him to see his face in the mirror if he is traveling at the speed of light. In his paper, 'On the Electrodynamics of Moving Bodies', often referred to as his 'Special Theory of Relativity', Einstein explains his position, stating the 'luminiferous aether' is unnecessary for his descriptions. He also introduces a new postulate, stating 'Light moving through empty space will travel at the consistant velocity of c, regardless of the source's state of motion.'

Einstein translated the Principle of Relativity to mean regardless of how light travels when you are standing still, it still travels the same way when you are moving. In essence he is saying, light traveling through empty space will be received at the consistant velocity of c, regardless of the source's state of motion. From this point, Einstein argued that the speed of light is based on the observer's frame of reference, which would allow him to see his face in a mirror while traveling at the speed of light. This position has absolutely no hard supporting evidence, but by describing the speed of light as dependent on the observer, and not the luminiferous aether transporting it, Einstein has resolved his issue with the speed of light conflicting with the Principle of Relativity.

Einstein's extension of the Principle of Relativity is flawed at the beginning. Unlike the irrefutable simplicity of 'the Principle', his experiment exists outside of reality and includes unrealistic expectations in its purity. The violation he presumes exists does not consider light to be an environmental reference source, nor does he seem to consider the 'speed' of light to be an environmental reference point, (paradigm-based selective information screening?). His 'solution' uses a form of circular logic on the speed of light, which comes full circle by describing time as a dimension in his General Theory.

The Ultra-Space Field Theory predicts within a contained environment, such as a spaceship, the electromagnetic field within the spaceship is separated from the EM field outside the ship. A person would see their own reflection from a mirror, even if that ship were traveling at the speed of light. Flying superman style at the speed of light, without a contained environment, you would not see your reflection in a mirror, because 'you' would be moving through the electromagnetic field. This differs from the the luminferous aether which would not be contained or separated by the ship's walls. Einstein's path of logic in reaching his conclusions does not include the aether, hence, it is not necessary.

A series of events followed the publication of Einstein's Special Theory which put him in the position of developing his General Theory of Relativity.

His Special Theory was immediately applied by members of the physics community to the Michelson-Morley experiment,[8] effectively turning him into a overnight celebrity. Earlier, in 1887, two scientists (Albert Michelson and Edward Morley) made a discovery which threw the scientific community into very subtle chaos. In an effort to prove the existence of aether, they accidentally discovered regardless of how fast, or what direction, an object was traveling in relationship to a light source, for example the Sun, the light registered as traveling at the same speed. They performed their experiment under a variety of circumstances, as did other scientists, always with the same inconceivable conclusion. According to their model of the luminiferous aether, the speed of light should register as faster if Terra is moving toward the light source, and slower if moving away from it.

The question raised by the Michelson-Morley experiment is, 'Why would light (EM pulses) always register at the same speed, regardless of the speed and direction of the moving measuring device?'[8] Supporters of Newton's corpuscule model promoted the conclusion this was evidence the aether didn't

exist. (Einstein's assumption the speed of light adjusts to the observer's velocity provides an explanation which does not include the aether.)

There are at least three flaws with the conclusion assigned to the Michelson-Morley experiment. An absence of evidence/information was used as proof something did not exist. The Doppler effect wasn't applied to light waves until 1929.[9] Had it been used in 1887, another conclusion would have been reached. The lensing effect of gravity provides a third flaw by establishing that the speed of light is effected by gravity fields.

The Ultra-Space Field Theory predicts Terra's condensing electromagnetic field adjusts the speed of light. Terra's gravity field is another kind of a contained environment, but rather than the dividing line of walls on a spaceship, there is a graduation of containment. Light traveling through matter, such as Terra's atmosphere, provides another buffering factor in adjusting the speed of light. The atmosphere also condenses with proximity to Terra's gravity core. The density of the medium (EM/thermal field) controls the speed of light, with gravity condensing the medium.

Einstein's celebrity led to his moving into a community of elite physicists, one of whom was Maxwell Planck, the discoverer of quanta.[10] Einstein performed photoelectric experiments, and used Planck's quanta in explaining the results of his experiments. However, Einstein described Planck's quanta, not as subatomic pulses of energy traveling through an electromagnetic field, but as massless, chargeless particles that exist only while traveling at the speed of light. Maxwell Planck never spoke to Einstein again. This also happened in 1905.

After the Michelson-Morley experiment's results were published, and before Einstein's Special Theory, several physicists made an effort to explain why electromagnetic waves from all directions traveled at the same speed, regardless of Terra's movement. In 1895, H. A. Lorentz developed the Lorentz transformation system,[11] which mathematically describes a contraction process as objects move through the aether and meet with resistance. According to Lorentz, Terra contracted as it met resistance with the aether. However, the math involved in supporting this conclusion also requires time become a variable based on the velocity of the moving object.

The Ultra-Space Field Theory predicts resistance from the electromagnetic field, but much less than Lorentz predicted, and certainly not enough to compress Terra as it orbits Sol. Resistance to movement will vary, depending on the proximity and strength of influencing gravity cores. The space between solar systems and galaxies will have the least resistance. Compression and heating at the front of a spaceship will take place at high speeds, but there will be no time dilation. At higher speeds, the ship will simply rip apart (without protection).

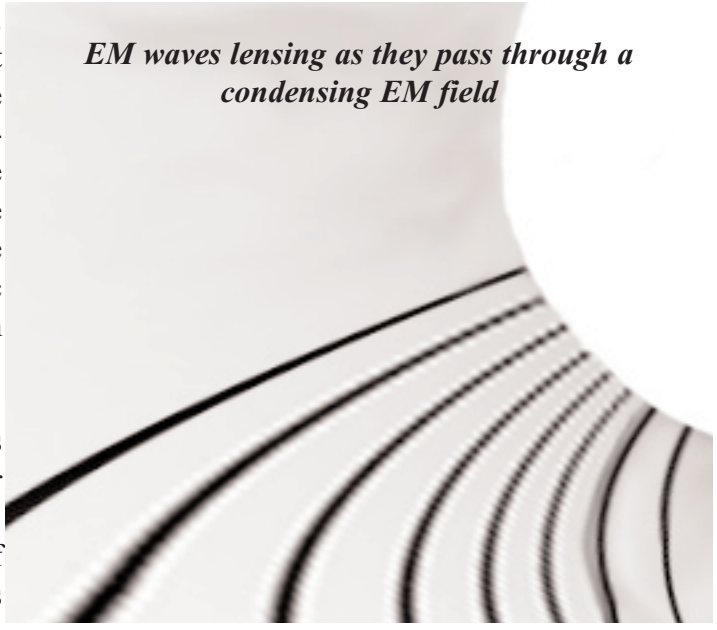
Lorentz's transformation model melds well with Einstein's Special Theory and Einstein became very attracted to it. The variability of time, based on velocity, supports his assumption the speed of light is based on the observer's frame of reference. He decides to apply his Special Theory to the movement of objects in space, and in the course of his research, realizes he must include gravity as a force in his equations. The concept of time as a variable leads Einstein to the logical 'reductionistic' conclusion time can be treated as a dimension. Additionally, I have concluded from his behavior Einstein is a Newtonian who prefers to think of light as particles (corpuscles/photons traveling through a vacuum, rather than electromagnetic waves being transported through a medium that exists in space). Eliminating the aether allows for the existence of photons (formerly, Maxwell Planck's quanta).

Einstein's General Theory is a combination of his Special Theory and the Lorentz transformations. It describes gravity as a warpage of time and space around matter. Matter ranges from a single proton, to a star, to a to a galactic core (the black hole at the center of a galaxy). Additionally, per the combination of Einstein's Special Theory and the Lorentz transformations, gravity fields warp time, effectively slowing it down more and more as gravity increases. According to this model, time should move more quickly on the moon than on Terra, and more slowly on Jupiter. Einstein takes the aether theory model and replaces the aether with 'the warpage of time and space'.

In his General Theory Einstein makes certain assumptions and predictions which should be examined with a skeptical eye. Einstein makes the assumption the speed of light is a speed limit and nothing, gravity included, can travel faster than this speed limit. Modern experiments, such as Cerenkov radiation, electric wave packets, and cosmic rays prove that faster than light speeds can be achieved.[12] Einstein predicted gravity waves, and made three additional predictions which he offered as tests for his General Theory. The test referred to most in supporting the General Theory is the gravitational lensing of light. This theory was first developed in 1804, by Johann Soldner and is not a direct product of Einstein's General Theory. The second test involved the accuracy of his mathematical predictions on 'the perihelion precession of Mercury's orbit'. Initially, his equations seemed to explain Mercury's peculiar orbit. However, increasingly accurate measurements have shown problems. The third test suggested by Einstein was known as the gravitational redshifting of light. Einstein predicted as light entered a gravity field, the speed of light would remain constant to observers, but the light itself would undergo a slowing of time, expressed as a redshifting of the light. As it turns out, the opposite is true. Light blueshifts as it enters a gravity field. Efforts to twist this failure into a success used the Mössbauer effect and a series of energy equations.[13]

The Ultra-Space Field Theory explains the blueshifting of light as similar to when light passes through air, or through glass. As the density increases, the speed of light slows down and the frequency increases (blueshifting). This is a well-established fact.

The efforts by members of the physics community to prove Einstein's theories, and to obscure his failures, speak of a desire to maintain a uniform, agreed-to physics model based on mathematics, but not on understanding. Most editors of reputable physics journals will automatically reject articles arguing against Einstein's Special and General Theories. This policy was initially adopted after the Herbert Dingle controversy. Professor Dingle, at the University of London, had written a book popularizing Special Relativity, but by the 1960's he had become convinced the theory couldn't be true. So he wrote another book, 'Science at the Crossroads', contradicting his first one. Scientific journals, especially Nature, were bombarded with letters.



EM waves lensing as they pass through a condensing EM field

The Ultra-Space Field Theory model of gravity is not based on the Lorentz transformations, nor does it incorporate Einstein's Special Theory. Like Einstein's model, it predicts a curvature of space, but this curvature around a gravity core is

the result of the electromagnetic field/thermal field compressing toward the common center. Both models predict gravitational lensing, but in the General Theory model the lensing is caused by a contraction of space, per the warpage of time and space. In the USF Theory, it results from curvature and density variations in the electromagnetic field, similar to the way glass lenses work.

The Ultra-Space Field Theory model predicts gravity does not travel in waves, but exists as a perpetual state of contraction. As our moon orbits Terra, the moon's gravity field moves with it. There is no detectable delay in the impact of the moon's gravity as it orbits. There is absolutely no supporting evidence for the concept of gravity traveling in waves. Gravity is generated by matter. Unless matter is being created, there are no new sources of gravity, and, as a consequence, there is no speed of gravity. As a perpetual state of contraction, gravity could be described as instantaneous. Tom Van Flandern provides a supporting conclusion in his article, 'The Speed of Gravity - What the Experiments Say'. His article was Published in Physics Letters A (December 21, 1998) with 'special permission' from one of the editors. (He argued with Einstein's Special Theory. Special permission was necessary.) The article claims the speed at which gravity propagates must be at least twenty billion times faster than the speed of light, contradicting the Special Theory of Relativity, which asserts that nothing can move faster than light.

The Ultra-Space Field Theory describes gravity as the subatomic electrical contraction of space, with protons as currently the smallest detectable source of gravity. On a cosmological scale, gravity warps the electromagnetic field surrounding planets and stars, and allows for the lensing of EM waves. Gravity exists as a perpetual state of contraction, with gravity cores moving through the electromagnetic field. The condensing electromagnetic field caused by the gravity of a planet, or star, etc, adjusts the speed of light to match the field's density. A planet's gravity field creates a contained environment.

Two physics paradigms have been competing with one another since the late 1600's. These could be called the particle theory camp and the wave theory camp. The particle theory camp is led by mathematicians, who are reductionistic by their very nature, and the wave camp is made up primarily of people with strong visualation and association skills. The particle theorists focus on finding ever smaller mathematical units, and often describe 'events' as particles as a way to reduce them to a mathematical unit. The wave/field theorists tend to be associative and seek out big picture patterns. Currently, the pendulum of popularity has reached its zenith. The particle theorists have developed their model to a level of dysfunctionality. This happens when flaws in early basic assumptions can no longer support the structure of the model. The photon model and modern light experiments provide an excellent example of assumptions gone wrong. The elastic solid, 'luminiferous aether' also provides an example of flawed interpretations evolving to the point of becoming dysfunctional.

References

[1] 'Ultra-Space Field Theory', K. Foote, Cosmos Books, Ann Arbor, 2005. (Available at Google Books.)

[2] 'Physics for the Modern Mind', Fuchs, Walter R., English version- MacMillan Company, 1967, pages 261-265.

[3] 'Quantum Interference': http://whatis.techtarget.com/definition/0,,sid9_gci815065,00.html and ' Lab 2. Single Photon Interference' www.optics.rochester.edu/.../2007_stud_rep_Lab2_Report_MalikLi_F07.pdf

[4] 'Principles of Physical Science', Francis T. Bonner & Melba Phillips, Addison-Wesley Publishing Company, Inc, pages 360-1 or 'Physics For Scientists and Engineers, With Modern Physics', Douglas C. Giancoli, Second Edition, Prentice Hall, 1989, pages 826-835 (I couldn't find any good descriptions of light as transverse waves on the internet, which may be due to its uselssness as a functional model.)

[5] 'The Principle of Relativity', Galileo Galilei, 1632, Dialogue Concerning the Two Chief World Systems or http://www.cfluid.com/batch.download.php?aid=708.

[6] 'On the Electrodynamics of Moving Bodies' (English translation) or 'Zur Elektrodynamik bewegter Körper', in Annalen der Physik. 17:891, 1905 or http://www.fourmilab.ch/etexts/einstein/specrel/www/

[7] 'The Foundation of the General Theory of Relativity' (Die Grundlage der allgemeinen Relativitätstheorie) Albert Einstein, Annalen der Physik, 1916 or http://www.alberteinstein.info/gallery/pdf/CP6Doc30_English_pp146-200.pdf

[8] On the Relative Motion of the Earth and the Luminiferous Ether (1887), Albert Abraham Michelson and Edward Morley, Relativity. American Journal of Science, 1887, 34 (203): pages 333–345 or http://en.wikisource.org/wiki/On_the_Relative_Motion_of_the_Earth_and_the_Luminiferous_Ether

[9] "A Relation between Distance and Radial Velocity among Extra-Galactic Nebulae" Edwin Hubble, (1929) Proceedings of the National Academy of Sciences of the United States of America, Volume 15, March 15, 1929: Issue 3, pages 168-173 or 'Evidence Against the Expanding Universe Hypothesis' http://www.etheric.com/Cosmology/redshift.html

[10] 'On the Law of Distribution of Energy in the Normal Spectrum', Maxwell Planck, Annalen der Physik, vol. 4, page 553, or http://www.thebigview.com/spacetime/quantumtheory.html

[11] 'The Relative Motion of the Earth and the Aether', Lorentz, Hendrik A., Zittingsverslag Akad. v. Wet., Amsterdam 1: 74 or http://en.wikisource.org/wiki/The_Relative_Motion_of_the_Earth_and_the_Aether

[12] 'Ultra-Space Field Theory', K. Foote, Cosmos Books, Ann Arbor, 2005, pages 171-173. (Available at Google Books.)

[13] 'The Physical Foundations of General Relativity', Sciama, D.W., Doubleday & Co., 1969, pages 44-53