Four New Laws for the Measurement of Force and Motion

by James Carter

Principle of the Absolute Motion of Photon Mass
Principle of Absolute Gravitational Force and Motion
Principle of Electron/Proton Mass Transformation
The Circlon Shape of Electrons, Protons, and Photons

All experiments to measure the momentum, force and energy of moving bodies of mass, photons and gravity use the equations of these four laws to calculate their values. All experiments to measure force and motion use the Newtonian force equation of F = ma*d to calculate the relative values of acceleration and deceleration. (Force = mass times a combination of absolute acceleration and deceleration.)

Synchronicity in measured Motion

The Hubble photons that we measure from deep space have the exact same Newtonian momentum, wavelengths, energies, and velocities that they had when they were emitted from galactic atoms billions of years ago. These principles of circlon synchronicity are not new theories. You need theory like special relativity to calculate a massless photon, you need a theory like general relativity to calculate a downward pull of gravity and you need a theory like an expanding spacetime aether to explain a mechanism by which a photon's momentum, energy, wavelength or velocity can constantly shift as it travels through space for billions of years. You also need a theory like the Big Bang and the Hubble red shift expansion to explain why the Cosmic Blackbody Radiation has the temperature of 2.7° Kelvin.

The Principle of Absolute Force and Motion

The Principle of Absolute Force and Motion is not a new theory of physics, but rather just a law for the experimental scientific method. Experimental measurements are unquestioned facts of nature. Physics theories are just different mathematical and conceptual ways to interpret the results of experimental measurements. The law of absolute force and motion are no different from the old Newtonian laws of force and motion. The basic principles of Newtonian measurement are used to replace the underlying metaphysical assumptions of quantum mechanics and the special and general theories of relativity. Experiments analyzed at face value with Newtonian dynamics are not theories. You only need a theory to explain why you believe that certain parameters of experimental measurements must be different or even opposite from their Newtonian valves.

In terms of experimental physics, the measured results of absolute force and motion are the same as the calculated results of the various experiments that have been used as evidence to verify quantum electrodynamics and the relativity theories. With these standard model theories, the

fundamental and absolute quantity of nature is energy with momentum as its secondary relative quantity. In the principle absolute force and motion, nature's fundamental quantity is absolute momentum, whereas, energy is just a secondary relative quality of momentum.

The basic departure of the principle of absolute force and motion from the standard model theories is in their metaphysical assumptions for various types and descriptions of the multiple dimensional field phenomena that are needed for massless photons to move through and for gravitating bodies to move with. These theories make assumptions for different types of field structures that can pull and hold atoms and nuclei together or push them apart.

Absolute force and motion has just three non-field principles of measurement for the measurements of push and pull. The pushing force is the primary force of nature with a single point of action. Pulling force requires a connection to a secondary point of action. Centrifugal force is an example of a pushing force and centripetal force is a pulling force. The push force is the primary force in nature. All pull forces are secondary and require an exchange medium such as a rope or a field. *You can't push on a rope*. Absolute force and motion's primary push force is the opposite to standard model physics where pull is the primary force of nature and push is a secondary effect of the pulling medium.

These differences between push and pull are fundamental, but the mathematical calculations and measurements for their Newtonian dynamics are the same either way. The difference between the standard model's pulling forces and absolute motion's pushing forces has nothing to do with experimental measurements or equations on paper. These are the same. The sole difference is the much clearer image of the atom and the photon that we can see in our mind's eye. The the effects quantum mechanical interactions that we calculate and measure are the same.
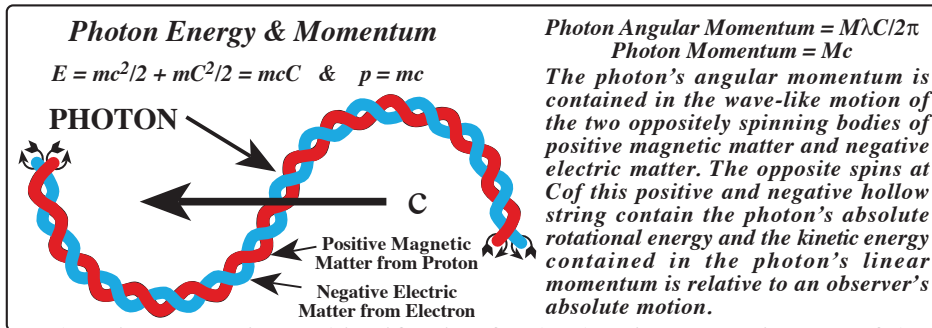
In the principle of absolute force and motion there are no metaphysical points or field interactions. The whole concept of the metaphysical point is discarded along with the metaphysical concept of infinity since neither can be imagined. Photons and particles of matter have intricate circlon-shaped mass structures and their energies are parameters of the various motions of the components of their mass structures. These particles do not exist at a point but at a location defined by the size of their circlon shapes of $h/2\pi = m\lambda c/2\pi$. The only interactions are the structure and motion of one atom coming in contact with and exerting a force on the structure of another atom.

The *strong force* is a non-field mechanical coupling of protons, neutrons, and mesons. The *weak force* is a mechanical non-field coupling at the next fractal layer of atomic structure. The *electromagnetic force* is the mechanical non-field coupling between the outer structural layers of the proton and electron charge chains. *Gravitational force and motion* is just one slowly expanding atom coming into mechanical contact with and pushing against other slowly expanding atoms. The *photon interaction* is between a photon's mass structure moving at c and a stationary photon's mass structure held within an atom.

Principle of the Absolute Motion of Photon Mass

In all instruments designed to measure photons, Planck's constant is used as the unchanging relationship between the mass, wavelength, velocity and angular momentum of all photons. $h = m\lambda c$ $I\omega = m\lambda C/2\pi$.

Planck's equation for photon energy $e = hf = hc/\lambda = m\lambda cC/\lambda = mcC$ *is the same as Einstein's when the photon's mass is considered in the equation. The photon's energy is the combination of its relative linear momentum* mc *and its rotational kinetic energy* $e = mC^2/2$. *c is a photon's relative velocity and C is its absolute rotational velocity.*

Photon Energy & Momentum

$E = mc^2/2 + mC^2/2 = mcC$ & $p = mc$

PHOTON

c

Positive Magnetic Matter from Proton

Negative Electric Matter from Electron

Photon Angular Momentum = $M\lambda C/2\pi$
Photon Momentum = Mc
The photon's angular momentum is contained in the wave-like motion of the two oppositely spinning bodies of positive magnetic matter and negative electric matter. The opposite spins at C of this positive and negative hollow string contain the photon's absolute rotational energy and the kinetic energy contained in the photon's linear momentum is relative to an observer's absolute motion.

There is no experimental justification for the theories supporting any of the imaginary ideas and assumptions for massless photons. Many of the aether and field theorists have strong beliefs in their ideas about massless photons. Einstein insisted on a massless photon to make it compatible with his pet theories for transforming mass into electromagnetic fields of pure energy. The problem with "pure energy" is that it is a metaphysical concept with no experimental handles to measure. There are no fields that can be directly measured except by first quantifying the measured forces and motions of mass.

From a mathematical point of view, it doesn't matter whether the photon has mass or not as long as it is considered to have momentum. The equations can be manipulated so the results always come out the same either way. A photon with mass doesn't change special relativity's calculations but it does change the conceptional conclusions by which a photon is pictured in one's mind. A photon with mass can no longer have uncertain relative motion and it must always move at c through the same absolute inertial space occupied by all other photons.

In the standard model of physics, quantum mechanics has many different interpretations with no definitive mechanical models beyond its ultimate metaphysical layer of intrinsic uncertainty. In absolute force and motion, there is no uncertainty and each component of reality has its own mechanical circlon structure with an absolute physical location. This is the *absolute circlon interpretation of quantum mechanics*. It is just one of several different interpretations of quantum mechanics that have been proposed in the standard quantum mechanical models and theories.

A photon with a masslength $m\lambda$ eliminates the assumption of a point particle for either pho-

tons or the other components of atoms. Without the point particle, there is no need for the Heisenberg uncertainty principle's assumption that a particle's mass and fields are located at a point. The location of Heisenberg's uncertain point of $h/2\pi$ becomes the certain location of $m\lambda c/2\pi$. Photon frequency $f = \lambda/c$ is merely the time that takes for a photon's masslength to pass a point. Photons have mass whether they are traveling through space at c or whether they are spinning at C while held between an electron and proton within the structure of an atom.

A photon's mass is moving at c and spinning at C and matter is mass spinning at C in two different directions. This means that the mass containing structures of photons and atoms must be eternal because they can never be transformed back and forth between "pure" energy and "pure" rest mass. The annihilation of mass to energy is simply the conversion of atomic mass and energy into photon energy and mass.

The annihilation process is basically the same whether a positron and electron combine and then split into photons or whether a proton and electron couple together and emit photons. In both cases, they produce photons containing their mass until all of their units of angular momentum $h/2\pi$ is gone. Because they have identical mass and wavelengths, the electron and positron are able the convert completely into photons. With their different masses and wavelengths of 1836/1 the proton and electron annihilation process stops when the atom runs out of angular momentum.

When a photon with mass is absorbed by an atom, its mass and structure remains intact as a stationary photon within the atom until it bifurcates and a second photon is emitted. There is no transformation between mass and energy. Mass and energy are just two sides of the same coin. They cannot be separated. All atoms and photons have the same relationship between their mass and energy. All of an atom's kinetic energy is contained within its relative motion with other atoms and the energy of its internal mass spinning at C and C in two different directions. Half of a photon's kinetic energy is contained in the relative motion of its mass at c and the other half is contained in the absolute rotational energy of its mass spinning at C.

Doppler effects measure a photon's momentum, wavelength and energy relative to the observer's absolute motion. For this reason, it is impossible to measure a body's absolute motion except relative to the absolute motion of photon mass. The Doppler effects make it impossible to determine a body's intrinsic location of rest and this leads to the standard model's metaphysical assumption that all linear motion is intrinsically both relative and uncertain. The motions of both the photon and observer are absolute, but because of the Doppler effect, it is impossible to separate the motion of a photon's source from the observer's motion.

The Principle of Absolute Gravitational Force and Motion
The principle of absolute gravitational force and motion is directly opposite to but mechanically and mathematically complementary to General Relativity theory's metaphysical assumption of equivalent gravitational force and motion. Gravity either points up or down and this determines whether gravity is a push or a pull. Newton made the arbitrary choice that gravity was the downward pull of an attraction and Einstein assumed it to be the downward push of the curving spacetime continuum. Neither was willing to consider that gravity was the upward push that they

had both always felt as children and measured as adults. Mathematically, gravity's calculations for its dynamics are equivalent and come out the same whether one imagines the direction for the force and motion of gravity to be up or down.

The first principle to be determined for any theory describing gravity must be the measurement of the direction and magnitude of its force and motion. Ignoring all measurements to the contrary, Newton imagined and then postulated that the force creating the observed motion of falling bodies was a pull directed downward toward Earth's center. Newton offered no physical explanation that could account for this downward pull of gravity. Some three hundred years later, Einstein constructed a very precise and complex mathematical system that filled the whole universe with varying quantities of gravitational potential forces that were connected together with an otherwise undetectable gravitational field. In his system, all mass in the universe was directly connected by this potentially infinite and eternal gravitational spacetime continuum field.

Unlike Einstein's imaginary choice for gravity's nature and direction, the scientific method of measurement, with its guiding principles of cause and effect, does not permit such an arbitrary choice for the direction of gravitational force and motion. Since the readings of accelerometers are the basis of experimental truth in all of physics, the measurement of gravity's true upward force and motion must be considered as absolute and there is no physical reason to believe that gravity is either a downward push or pull. It is always measured to be an upward push!

Contrary to Newton's and Einstein's metaphysical theories, this physical principle of upward gravitational force and motion is not a theory of gravity because it makes no assumption for an unmeasured force. This is a principle of measurement for gravity's force and motion and no assumptions are made other than the accuracy of the instruments. From this simple experiment, we can imagine and learn that we have always been able to feel Earth's upward force and motion with our own sense of balance. We must now realize that the force of gravity is the upward push from the ground that we have always felt rather than a downward pull that we have always only imagined.

Newton and Einstein's beliefs in gravity's downward direction are just their ideas for an imaginary downward force that produces a calculated but unmeasured downward acceleration in falling bodies. Whether this force is imagined to be a push or a pull, the postulated changing motions of falling bodies cannot be directly measured in any way. This motion can only be measured indirectly with the Doppler effect of a traffic radar gun but such a measurement only determines the relative velocity changes between the falling body and the ground and not the intrinsic changing motion of either. However, the readings of accelerometers always show that the absolute direction and nature of gravitational force is an upward push.

Newton and Einstein spent their whole lives knowing with their bodies that the direction of gravity's force and motion was up. Each of their subconscious minds constantly directed their muscles to maintain a position of balance with the upward force of gravity that was monitored by accelerometers in their inner ears. They both always felt the true push of gravity within their senses of balance and they certainly understood this pushing force completely as infants and

children. However, as they became adults, they were able to use the imagination of their conscious minds to ignore the sensual feelings of their subconscious minds that constantly adjusted the balance their bodies to upward gravitational force and motion. They consciously imagined a downward pull instead of the upward push that they had always felt. Once they had invented their metaphysical equations to calculate and quantify this pull, they imagined it stretching across the universe. They seemed to forget completely the upward push of gravity that they felt as children before they ever began theorizing about a downward gravitational pull.

Except for this simple reversal of the direction of gravitational force and motion, the principle of gravitational expansion of mass, space, and time is structurally identical to General Relativity in terms of the results of calculations for the measurement of physical events. In both systems, gravity is explained as changes in the geometry of mass, space and time. In general relativity theory, it is the geometry of a constantly curving spacetime continuum that surrounds inert and unchanging bodies of mass and pushes them together. In the principle of the gravitational expansion of mass, space, time it is the geometry of mass and time that change, while space remains an absolute, constant, eternal and dimensionless imaginary void.

All measurements and calculations for falling bodies and orbiting satellites come out the same whether your believe gravity is a local expansion of atoms or an intimate non-local connection between all atoms in the universe. The only "connection" between distant atoms in the Living-Universe is the requirement of Circlon Synchronicity that all matter and photons expand gravitationally at exactly the same rate. Earth and the moon expand toward one another at their inherent escape/surface velocities at the same rate that the moon's orbital velocity carries it away.

Principle of Absolute Electron Mass and Size Transformation

Today the Electron/Proton Mass to Size Ratio is $M_E/M^P = 1/1836$. Yesterday and tomorrow this ratio was and will be $M_E/M_P = 1/n$

The laws of electrodynamics require that the photons we measure from the most distant galaxies are the same photons that were emitted by atoms in those in those galaxies many billions of years ago. Electrodynamics does not allow for any changes in a photon's parameters even after billions of years of travel. We measure the same momentum, wavelength, energy and angular momentum that they had when they were emitted long ago. From this we can conclude that the Hubble shifted photons were emitted from atoms that had spectra with longer wavelengths than the spectra of those same atoms today. The Hubble shift is an effect that is caused by the evolving mass of the electron.

Electron mass decrease is a second order effect of the gravitation expansion of mass, space and time. It is a law of the universe that the gravitational expansion of the electron moves just slightly faster than the gravitational expansion of the proton. Over periods of cosmological time, this slight defect in gravitational expansion rates between matter and antimatter (positive magnetic and negative electric particles) changes the emission spectrum of atoms.

Several measurements have shown conclusively that the electron/proton mass ratio has been

constantly changing over the history of the universe. This evolution of matter in the Living-Universe is driven by the gradual measured decrease in the rest mass of the electron. Decreasing electron mass has slowly continued from before the time of the Big Bang when the masses of the proton and electron were equal. As the mass of the electron gradually decreases, it also decreases the value of the Bohr radius a_o and increases the ratio of the fine structure constant α. Over periods of cosmological time, this causes atoms to gradually emit spectral photons with decreasing wavelengths and increasing in energies.

A basic departure of the principle of absolute force and motion from the measurable constants and parameters of quantum field mechanics is that theory's assumption of a constant proton and electron mass and size ratio of 1836 to 1. Once the Big Bang theorists allow the mass of the electron to decrease with time, the measured history of the universe will come together in a graceful evolutionary dance basically choreographed by the measured decrease in electron mass and the complementary changes in the Bohr radius and the fine structure constant. The true expansion of the Living-Universe is in the measured internal expansion of its atoms and not in the assumed external universal expansion of receding galaxies.

Decreasing electron mass can also be used to predict the exact and constant 2.7°K temperature of the Cosmic Blackbody Radiation that occurred near the beginning of the universe when today's neutron stability constant of $M_P/M_E\sqrt{\alpha} = 156$ was less than one $M_P/M_E\sqrt{\alpha} = 1$. This effect also provides an electrodynamic way to create the protons and electrons at the beginning of the universe when the masses of the proton and electron were equal $M_P/M_E = 1/1$ and they were a matter/antimatter pair.

This electron mass transformation model of the Living-Universe also resolves the difficult paradoxes of the Big Bang model's metaphysical assumptions such as cosmic inequality between matter and antimatter and the inertial and dark energy expansions of the universe. It explains the history of the universe as an evolutionary process in which the interactions between protons and electrons change in character as the differences in their mass and size gradually increase. As the electron's circlon shape grows larger, it changes the nature of its mechanical interaction with the circlon shape of the smaller proton. This evolving coupling between protons and electrons produces photons with greater energies and shorter wavelengths as time goes on.

In the Living-Universe model of Big Bang dynamics, all particle interactions are explained in terms of standard experimental atomic physics and Newtonian dynamics. No exotic metaphysical assumptions or calculations are made such as an initial singularity, the Higgs Boson, the Guth inflation, Dark Energy, Dark Matter, expanding spacetime or with any kind of quantum field interaction or aether. Instead of the chaotic, zero point explosion of a quantum mechanical spacetime singularity field, the principle of absolute circlon synchronicity is able to create each of the Living-Universe's circlon shaped protons and electrons in a precise and orderly electrodynamic reproductive process that is more akin to the continual and repeated single cell divisions of living organisms like occurs in an algae bloom.

All of today's eternal proton and electron pairs had to have been formed from the decay of neutrons because this is the only known spontaneous process that produces a proton and elec-

tron. All of today's electrons and protons were formed in a great spontaneous serial bifurcation of neutrons and then the later decay of these 2^{256} neutrons. Unlike the chaos of a hot Big Bang producing myriad, exotic, ephemeral and etherial particles of matter and antimatter, the neutron bifurcation of the cold Living-Universe model produced permanent and equal numbers of eternal protons and electrons. The universe was formed not from the incomprehensible chaos of an exploding and inflating singularity but from the precisely synchronous reproduction process of the same ordinary quantum mechanical dualities (electrons and protons) that populate the universe today.
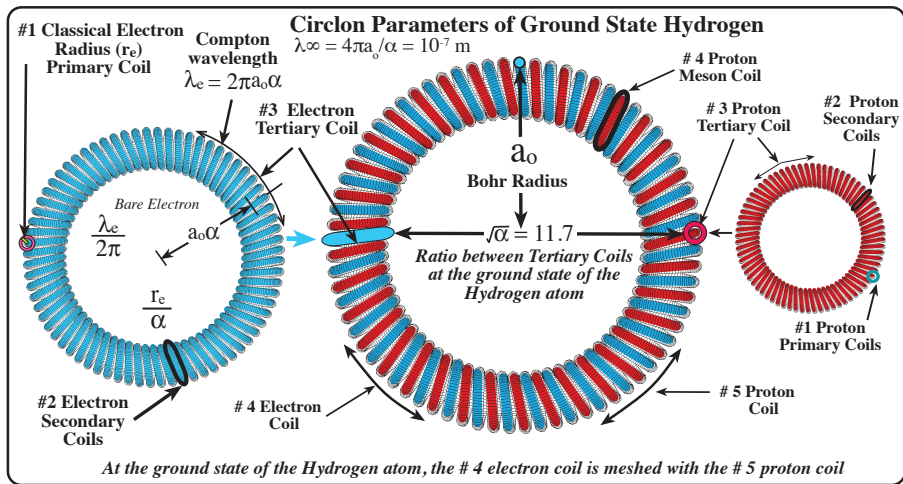
The Circlon Shape of the Physical Structure of Electrons, Protons, Mesons, Atoms and Photons

The Invention of the Circlon Shape
The assumption of the circlon shape begins as an invention to illustrate the physical shape of the dynamic motions of the structure of matter. All data on the discoveries of the electron and proton show that they have mass, size and shape. In the standard model their shapes are defined by the invention and equations of the electromagnetic field but their ultimate shape and sizes are hidden behind the point particle invention of the Heisenberg Uncertainty Principle. The size of Heisenberg's hiding place is h/2π *and the size of the circlon shape, is* mλC/2π *for the size of the photon and is* $M_E a_o \alpha C$ *for the size and shape of the Hydrogen atom.*

The circlon shape is a mechanical structure built around the various measured parameters of the hydrogen atom. The circlon shapes of electrons and protons are identical except that the electron is 1836 time larger. In the hydrogen atom, the last circlon-shaped link in the positive magnetic charge chain of the proton is connected to the edge of the electron's negative electric charge chain. These two charged links combine to form the neutral circlon-shaped Bohr link that holds the atom together and emits and absorbs photons. When this link is broken, a photon is emitted that carries away an equal amount of mass/energy from each particle.

Circlon Parameters of Ground State Hydrogen

At the ground state of the Hydrogen atom, the # 4 electron coil is meshed with the # 5 proton coil

The basic structure of the circlon-shape consists of three concentric sets of coils constructed on layers of scale defined by the square root of the fine structure constant $\sqrt{\alpha} = 11.7$. The the secondary coils are 11/7 times bigger than the primary coils and the tertiary coil is 11.7 times bigger than the secondary coils.

The shape and size of a spinning ground state Hydrogen is defined its angular momentum $I\omega = M_E a_o \alpha C$. The electron's primary coil circlon structure has a radius of $r_e = a_o \alpha^2$, and its tertiary coil structure has a radius of $r = a_o \alpha$ and the next link in the atom's circlon charge chain has a tertiary coil radius of $r = a_o$. The third link in the atom's charge chain emits spectral photons and has a ground state radius of a_o/α. When this link splits in half, it emits a pair of photons with wavelengths of $_{Ly}\lambda\infty = 4\pi a_o/\alpha$. One photon is emitted into space and the other usually remains as the last link in the atom's charge chain.

The circlon shape of the Hydrogen atom is constructed from the Bohr Radius a_o, the classical electron radius R_e, the mass of the electron M_E, the mass of the proton M_p, the masslength of the photon $M\lambda$. The scaling dimension that gives the atom's circlon shapes their size and shape is the fine structure constant α.

The circlon shape allows the dynamic motions of the Hydrogen atom to be illustrated with three sets of concentric coils. The size ratio between these consecutive coils is the square root of the fine structure constant $\sqrt{\alpha} = 1/11.7$, while the size ratio between the primary coils and the tertiary coil is $\alpha = 1/137$. The classical electron radius, Bohr radius, Compton wavelength, Hydrogen intrinsic photon and fine the structure constant give the electron both its size and the dynamics to its circlon shape.