An Experimental Physicist's Measured Theory of Gravity

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Mass, Space, and Time are the three dimensions of our measured physical reality and Gravity is the fourth unmeasured dimension of our imagined conscious reality.

ABSTRACT

Mass, Space, Time, and Gravity = MS/T & G = MS/T²

Mass, Space, Time, and Gravity are the four basic metaphysical assumptions for the reality of physical measurement. They have no separate measurable definitions outside of these two equations. Their separate values can be measured but only as a part of the whole. This a unified principle of measurement for atoms, photons, gravity, and cosmology. This physical principle of the cosmos is not meant to be a physics "theory" of matter and gravity. It is merely measurements of absolute linear and angular momentum and contains no unmeasured metaphysical assumptions such as spacetime, aethers, or gravitational "fields". The following 14 equations contain the basic parameters in our measured reality. There are no measurements we can make that are not calculated by one or more of these equations. Gravity is measured and calculated as absolute momentum and requires no separate "theory" or additional metaphysical assumptions.

$$1 \, kg = T/S, \, 1 \, meter = T/M, \, 1 \, sec = MS$$

$$\text{Photon angular momentum } I\omega = m\lambda C/2\pi = 1.055 \times 10^{-34}$$

$$\text{Electron angular momentum } I\omega = m_e a_o \alpha C = 1.055 \times 10^{-34}$$

$$P_G = MS/T, \text{ and } g = MS/T^2$$

$$\text{momentum } p = ms/t = mv$$

$$\text{Force } F = ms/t^2 = ma$$

$$\text{Kinetic energy } e = ms/t^2/2 = mv^2/2$$

$$\text{Photon energy } e = mc^2/2 + e = mC^2/2 = mcC$$

$$\text{Lorentz transformations of Mass } m' = M/\sqrt{1-v^2/c^2}$$

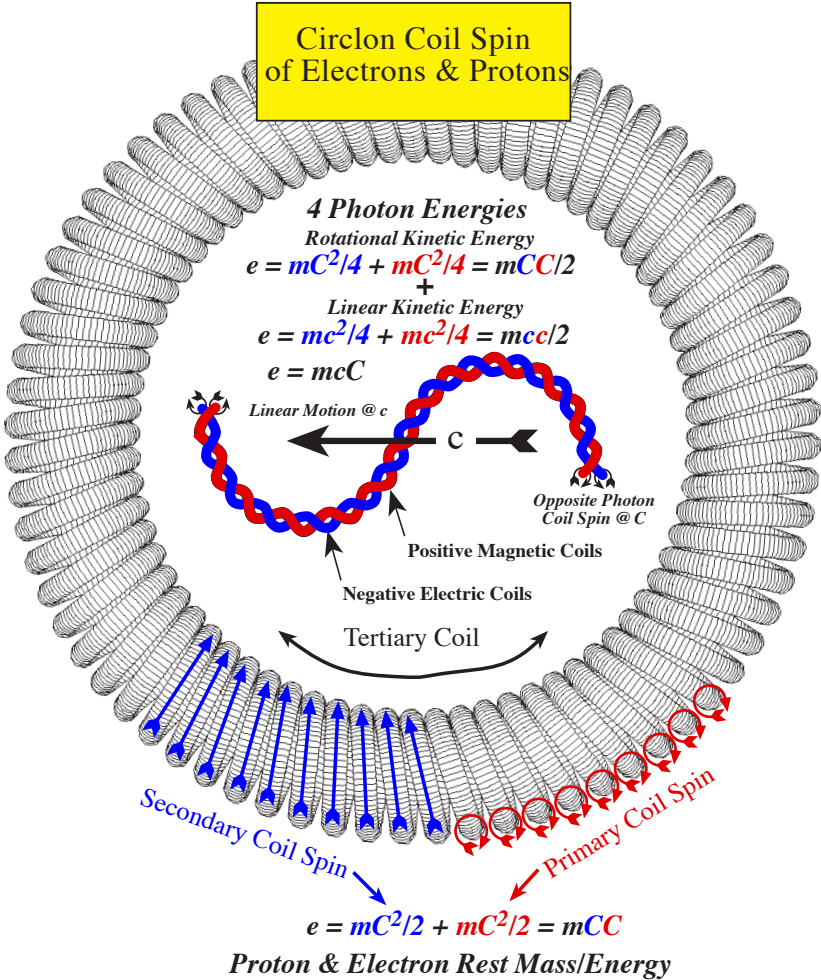$$\text{Lorentz transformations of Time } t' = T/\sqrt{1-v^2/c^2}$$

$$\text{Gravitation momentum } {}_{es}V = \sqrt{2gR}$$

$$\text{Gravitation Force } g = {}_{es}V^2/2R$$

When experimental physicists look to the cosmos to find units of Mass, Space, Time, and Gravity to measure, they discover that all that can be ultimately detected and measured are the motions of the three fundamental particles of matter: protons, electrons, and photons. Each particle is composed of two separate quantities of the universally conserved cosmic substance of Energy/Mass = C. Energy & Mass are the inseparable components of matter

and photons. Energy/Mass is calculated as units of linear momentum $p = mc$ and angular momentum $I\omega = mrC = m\lambda C/2\pi$.

Each particle has two separate and equal quantities of Energy/Mass = c. In protons and electrons E/M = CC, the Mass of the primary coils of their circlon shaped structure is spinning a the rotational speed of light C and the same mass of their secondary coils is spinning at C in the opposite direction.

Circlon Coil Spin of Electrons & Protons

4 Photon Energies
Rotational Kinetic Energy
$$e = mC^2/4 + mC^2/4 = mCC/2$$
+
Linear Kinetic Energy
$$e = mc^2/4 + mc^2/4 = mcc/2$$
$$e = mcC$$

Linear Motion @ c

C

Opposite Photon Coil Spin @ C

Positive Magnetic Coils

Negative Electric Coils

Tertiary Coil

Secondary Coil Spin

Primary Coil Spin

$$e = mC^2/2 + mC^2/2 = mCC$$
Proton & Electron Rest Mass/Energy

In the case of the photon E/M = cC, the Mass of its physical wave-like structure is moving at the linear speed of light c and also spinning a C. The relative linear momentum $p = mv$ of moving atoms is measured with the Lorentz transformation $m' = M/\sqrt{1-v^2/c^2}$ and calculated as absolute linear momentum E/M = cc.

Photons are not separate particles in this cosmic electron/proton duality. Electrons and protons combine into atoms that then emit, reflect, and absorb photons accompanied with conserved changes in their momenta. Momentum

changes in atoms and photons are the sole empirical values available in the scientific method of experimental measurement.

Experimental Physics Without Theory

As an experimental physicist and not a theorist, I will show how the many experiments used to describe and verify the standard model relativity theories and the Big Bang are based on metaphysical assumptions and not on verifiable principles of experimental measurement. Relativity theories are based on three different metaphysical assumptions each with different interpretations Mass, Space, Time, and Gravity. These can be called the *theory of energy and mass,* the *theory of gravity,* and the *theory of inertial time*

The Metaphysical Theory of Energy and Mass

This is the unmeasured assumption of the separate equivalence of energy and mass used to calculate a massless photon $E = mc^2$ and an at rest atom $M = e/c^2$. These calculations purport to measure an aether-like medium called a spacetime continuum containing electric and magnetic fields in which to transport massless photons.

Neither a photon's mass nor energy can be measured independently. All that we actually measure are a photon's linear momentum and angular momentum and the photon's energy is then calculated from these measurements. Energy is the secondary value of a change in momentum. Energy is the effect of a change in momentum and not the cause. Momentum is a calculation of absolute motion and energy is the measurement of a relative change in motion.

The experimental physicist measures the atom $E/M = CC$ and the photon $E/M = cC$ as containing constant and equal quantities of Energy and Mass combined in a single inseparable unit. No experiment has ever been able to detect an actual separation of Energy and Mass into stand alone entities. When a body's momentum is accelerated, its kinetic energy $E = mv^2/2$ is increased. This energy increase is accompanied with a proportionate quantity of mass $m' = M/\sqrt{1-v^2/c^2}$. The Energy/Mass of any moving body is a single constant and conserved Yin/Yang dichotomy. When an atom emits a photon, a mass structure from the electron's electric field is combined with an equal and opposite mass structure from the proton's magnetic field to form a stationary electromagnetic photon spinning in opposite directions at the rotational speed of light C. One of these angular momenta then splits into the linear momentum $p = mc$ of two photons. The photons have equal quantities of kinetic energy from the their linear momentum at $p = mc$, $e = mc^2/2$ and from their angular momentum $Iw = mCr$, $e = mC^2/2$.

Whenever an atom emits, reflects, or absorbs a photon, there is a transfer of momentum but there is no measured conversion between Mass and Energy. Moving photons do not contain "pure energy" and stationary atoms do not contain "pure mass". They both contain "pure" Energy/Mass and the sole measured parameters of both are linear and angular momentum.

The Metaphysical Theory of Gravity

All theories of gravity are based on the metaphysical assumption of equivalent downward force and momentum and not on the physical measurement of upward gravitational force and its calculation of gravitational momentum. This unmeasured assumption calculates a gravitational aether field called a 4-dimensional spacetime continuum. In opposition to all principles of measurement, this assumption requires that the active force of gravity points down while the passive force of gravity points up.

The theoretical equation derived for calculating gravitational force ($F = ms/t^2 = Gm_1m_2/r^2$) is upside down and backwards. It causes the direction of the force and motion of gravity to point down and it reverses the temporal direction of cause and effect. When we measure gravity, we use the measured upward force at Earth's surface to calculate its upward momentum. A force produces an opposite acceleration and deceleration that represent changes in momentum. A force is always the effect of the causes of equal changes in momentum between two bodies of mass. Energy is merely the calculation used to quantify separate changes in momentum.

A Force is the Effect of two changes in momentum and never their Cause.

The Experimental Principle of Gravity

Gravity is nothing more that what we feel and measure. It is not what we might want to imagine beyond the feeling of our senses. Because we feel gravity constantly pushing us up, there is no logical reason to believe that we could "fall" down.

The experimental equations for measuring the momentum and force of the gravitational interaction are based on the measurement of gravitational force and the calculation of gravitational momentum. The true gravitational constant G for Earth is not a downward force but an upward velocity. It is the upward momentum of Earth's escape/surface velocity ($_{es}V = \sqrt{2gR} = 11{,}200$ m/s). It is quantified as decelerating upward momentum ms/t that produces a measured upward Force of ($g = {}_{es}V^2/2R = 9.8$ m/s^2). It is decelerating gravitational momentum at Earth's surface that produces the measured upward gravitational Force. Gravity is a cause and effect interaction in which a constant deceleration of upward gravitational momentum is measured as a constant upward force.

General Relativity's unmeasured downward equivalent force is produced without a physical force's cause of decelerated momentum. This assumed pseudo force without a cause is imagined to produce the effect of unmeasured downward equivalent momentum.

General Relativity's False Gravitational Constant

The philosophical problem with General Relativity's gravity calculation ($ms/t^2 = Gm_1m_2/r^2$) is that Mass exists on both sides of the equation and as such cannot be experimentally quantified. The force of Newtons gravitational constant G is an effect of gravity not its cause. Mass is not an active component in the calculation of gravitational force ($F = ms/t^2 = {}_{es}V^2/2R$) or in the measurement of gravitational momentum ($_{es}V = ms/t = \sqrt{2gR}$). Earth's mass is not used in the calculation of its escape/surface velocity. Earth's mass is an unknown that cannot be calculated until after Earth's gravitational momentum V_{es} has been measured to determine Earth's density. Earth's gravitational interactions are quantified by the overall density gR of its electrons and protons and not by just their mass alone.

Gravitational force theories falsely use the metaphysical assumption of an attraction by "gravitational mass" as the cause of gravity and the equivalent energy of falling bodies as its effect. All bodies in the cosmos with gravitational mass are imagined to be inter-connected by the curvature of a universal medium (aether) called Space/Time. The fact that this metaphysical continuum cannot be experimentally detected is required by the principle for the equivalence of gravitational force and motion and with measured force and motion.

Gravity is measured to be the acceleration of Mass through Space combined with the deceleration of gravity's fourth dimension of Time. In this way, the gravitational momentum at Earth's surface appears to remain constant because Gravitational Space is accelerating and Gravitational Time is decelerating at proportionate rates.

The Theory of Static Inertial Time

The final metaphysical assumption of the relativity theories mostly applies to the Big Bang theory of the creation and evolution of the cosmos. Without any experimental verification, all standard model theories make the fundamental assumption that both electron/proton and positron/antiproton mass ratios are 1/1836. It seems to be the unquestioned belief of all theoretical physicists that these equal ratios are constant and eternal and have not changed since the beginning of cosmological time. This assumption is the foundation of all interpretations of quantum mechanics and all theories of electrodynamics and atomic structure.

Belief in this unquestioned universal constant has caused theoretical cosmologists to construct many false calculations for their measurements of gal-

axy and star formation, the creation of neutrons and atoms, the Hubble red shifts, Dark Energy, the changing momentum and temperature of the cosmic blackbody photons, the matter/antimatter paradox, the enormous energy of cosmic rays, the constant energy output of the sun, the large size of dinosaur bones, and the cause of Earth's plate tectonics.

What this theory assumes is a single arrow of inert cosmological time that has no effect on the structure and properties of electrons and protons. Inertial time passes without any physical effect on matter. Theorists deny the existence of the opposite arrow of active gravitational time that produces real and lasting changes in the physical parameters of atoms.

Inertial Time

Units of inertial time can be quantified and measured as the linear motion of photons (light years) or the rotational motion of Earth (days). Inertial time is easily divided into naturally repetitive intervals like the frequency of Cesium-133 atoms or the rotation of Earth. Inertial clocks increase the length of their intervals when their momentum is increased.

Gravitational Time

Gravitational time is the opposite of inertial time. It is continuous and provides no phenomena by which it can be divided into consecutive intervals corresponding to intervals of inertial time. The only clock that can show consecutive intervals of gravitational time is the Living-Cosmos clock for monitoring the progression of the cosmic evolution of the 1/1836 electron/proton mass ratio from 1/1 near the beginning of the cosmos to its value today. Gravitational time is the rate of the gravitational expansion of mass, space, and time. Gravitational time cannot be directly measured because intrinsic changes in mass, space, and time cancel the calculated values.

Measuring Gravitational Time in the Cosmos

As astrophysicists use electrodynamics to make cosmic calculations through the lens of a gradually increasing electron/proton mass ratio, it is quite easy to see that the sudden blast of photons that became the 2.7 K Cosmic Blackbody Radiation occurred at an early stage of the cosmos when the electron/proton mass ratio was 1/146.5.

In the distant universe, observers calculate the progression of the gradually increasing e/p mass ratio from the increasing red shifts of more and more distant galaxies. Light from distant galaxies is not Doppler shifted to red by their outward motion. It is just that the increasing e/p mass ratio has caused spectral photons in the Milky Way to become blue shifted by the decreasing mass of the electron and the proportional decrease in the Bohr radius.

If we go back in time to when the e/p mass ratio was less than 1/146.5, only neutrons were able to form from the coupling of electrons and protons. Prior to this point in cosmic evolution, there were no photons because electrons and protons were unable to couple into atoms. The electron's Primary coils were too small to attach to the outside of the proton's Secondary coils and form an atom. They could only attach to the inside to form a neutron.

If we go all the way back to the cosmic beginnings, when the e/p ratio was 1/1, the protons and electrons were matter/antimatter pairs, and the universal balance between matter and antimatter was perfect. As the increasing e/p mass ratio progressed, bifurcating semi-stable neutrons were formed in a very long process that spread them to the far reaches of the cosmos. As this process continued the antineutrons were first concentrated into galaxies and then into stars. Then as the e/p mass ratio reached 1/146.5, electrons could now attach to the outside of protons to form atoms. At this transition, the neutrons all decayed simultaneously into electrons and protons that then coupled into atoms and emitted the photons of the cosmic blackbody radiation at a blackbody spectrum temperature of 2.726 K.

Conclusion

The gravitational interactions that we calculate from physical measurements of momentum is upsidedown and backwards from Newton's and Einstein's calculations of an imaginary downward force based on their unmeasured principle of equivalence. The cause of a body's gravity is its changing absolute gravitational momentum and not its constant relative gravitational force.

Force is a two-way entity. Change in momentum creates a Force that simultaneously produces an equal and opposite change in momentum. General Relativity's gravity violates the conservation laws of both momentum and energy because its calculations of gravity produce change in momentum without energy in falling bodies and then produce energy is without change in momentum when bodies are lifted. Gravitational theorists try to imagine that the temporal direction of experimental Cause & Effect can be reversed when measuring gravitational Force & Momentum.

With the Gravitational Expansion of Mass, Space, and Time, it is "What you see is what you get". The gravity that we all feel is a very simple mechanical interaction caused by a constant upward velocity measured at Earth's surface.

This is all that we measure gravity to be. Calculations of gravitational interactions can be used to explain the complex details of cosmic creation and evolution. There can be no "theory" of gravity beyond these experimental principles of measurement. Theoretical physicists are at a complete loss to imagine an attraction theory of gravity that does not violate the Cause & Effect conservation laws of the scientific method of physical measurement.

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