

Defining Inertial & Gravitational Mass

Atomic mass units about a 186-ether seed

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Toroidal photon rings align to form fibers measured as atomic mass units. The central core of the fiber tube is filled with ether. Ether is like air in a tyre. This mass of contained ether is obtained from the ether constant ratio. The ether inside the fiber tube is comprised of 186-ether torus units. An electron is a type of photon. Electron tori have mass and contained 186-ether. The 186-ether acceleration is gravity or voltage. Current squared is the force exerted by one 186-ether mass on an electron or photon mass that scaffolds it. The photon mass cocoons 186-ether. The photon mass is what scientists measure as atomic mass units, AMU. AMU is defined here as inertial mass. The 186-ether is defined here as the gravitational mass.

Introduction

Aether in ancient Greek represents a creative shining light. In the solid elastic theory of early modern science an ether was argued to be a homogenous medium responsible for everything from gravity and the transmission of light to heat and electric charge.

The *ether* I conceive of is a pre-existent medium *out of which* space-time's heavenly bodies are engendered, *basic to* light as electro-magnetism, to the atom, and so, basic to the gravitational forces in which bodies float suspended and in which we all exist in its dense etheric sea; thus the material world at any scale would have to be *less dense* than the etheric.

186-Ether [Gravitational mass]

$$E = \frac{Gmm}{r} = \frac{c^2 \times q \times q}{r} \quad [\text{Assumption}]$$

If elementary charge,

$$q = 1.60217653 \times 10^{-19} C$$

Then $m = 1.859222909 \times 10^{-9} kg$ ether

If charge, $q = 1.0C$

Then $m = 1.160435741 \times 10^{10} kg$ ether

In other words $6.24150948 \times 10^{18}$ particles of 186-ether comprises 1.0C charge and equals $1.160435741 \times 10^{10} kg$ etheric mass.

The first practical breakthrough in this understanding came when, *pace* Newton, I

observed that the universal gravitational constant, G , can be factored into the ratio, $G = R c^2 / M$ to produce an ether constant ratio, R / M . The ether constant ratio opened the gates on new correspondences and unities within the measurable physical world.

$$c^2 / G = M / R = 1.346611109 \times 10^{27} kg/m$$

The Etheric Field

Myriads of $1.859222909 \times 10^{-9} kg$ comprise the etheric sea and each particle is represented as,

$$\frac{M}{R} = \frac{1.859222909 \times 10^{-9}}{1.380668038 \times 10^{-36}} = 1.346611109 \times 10^{27} kg/m$$

The Gravitational constant, G is constant because of the above ratio involving 186-ether.

Ether as Charge, q

A charged particle

The parameters of mass and radius of this central two-mass body are represented as, $q^2 = M \times R \times 10^7$

$$(1.602176537 \times 10^{-19})^2 =$$

$$1.859222909 \times 10^{-9} \times 1.380668031 \times 10^{-36} \times 10^7$$

The radius of this 186-ether particle perfectly matches the Boltzmann Constant: it is this body of a radius of

$1.380668031 \times 10^{-36}$ and mass of $1.859222909 \times 10^{-9}$ kg that affords us an elegant solution to the deep problem of a unified gravitational and electric force.

Source of *Boltzmann's Constant*

The value of the 186-photon radius R is 10^{-13} meters less than the value of the Boltzmann's constant, k .

$k = 1.380668031 \times 10^{-36}$ m Boltzmann radius and

$k = 1.380668031 \times 10^{-23}$ dm Boltzmann constant

The apparent difference between Boltzmann's constant and the Boltzmann radius is one of units only. In the ideal gas equation, volume is measured in dm^3 or L so that the conversion to meters comes about by a factor of 10^{-3} . The conversion to kilograms from grams is by a factor of 10^{-3} . The factor appearing in the equation for charge squared is 10^{-7} so the powers add up to 10^{-13} . Thus the Boltzmann constant is identical with the photon radius.

In this paper, three test particles will be utilized for the elucidation of **inertial** and **gravitational** mass— an electron, 186-ether and a proton.

An Electron

Inertial Mass: As a photon

A photon obeys the charge squared equation.

$$(1.602176537 \times 10^{-19})^2 = 9.1093826 \times 10^{-31} \text{ kg} \times 2.817940325 \times 10^{-15} \times 10^7 \text{ m}$$

$$E = m \times c^2 = F \times r$$

$$F = 9.1093826 \times 10^{-31} \times \frac{(2.99792458 \times 10^8)^2}{2.817940325 \times 10^{-15}}$$

$$F = 29.05350661 \text{ N}$$

$$a = \frac{F}{m} = \frac{29.05350661}{9.1093826 \times 10^{-31}} \text{ m/s}^2$$

$$a = 3.1894 \times 10^{31} \text{ m/s}^2$$

Gravitational mass: As ether

Ether obeys the ether ratio equation.

The ether mass contained within an electron is obtained from the ether constant ratio {ref. 1}.

$$\frac{m}{r} = 1.3406611109 \times 10^{27} \text{ kg/m}$$

$$m = 2.817940325 \times 10^{-15} \times 1.346611109 \times 10^{27}$$

$$M = 3.794669746 \times 10^{12} \text{ kg ether}$$

This ether mass {ref. 1} is comprised of a quantum of $2.04099771 \times 10^{21}$ particles of 186-ether tori {ref. 6,7}.

This is **gravitational mass**.

$$a = \frac{F}{m} = \frac{29.05350661}{1.859222909 \times 10^{-9}} \text{ m/s}^2$$

$$a = 1.562669353 \times 10^{10} \text{ m/s}^2$$

$$v^2 = a \times r$$

$$v^2 = 1.562669353 \times 10^{10} \times 1.380668038 \times 10^{-36}$$

$$v = 1.468852484 \times 10^{-13} \text{ m/s}$$

[Eqn. 1]

This velocity, v , of 186-ether is responsible for wavelength, λ as described in {ref. 6}.

186-ether / photon

Inertial Mass: As a photon

$$(1.602176537 \times 10^{-19})^2 =$$

$$1.859222909 \times 10^{-9} \times 1.380668031 \times 10^{-36} \times 10^7$$

Gravitational mass: As 186-ether

$$\frac{M}{R} = \frac{1.859222909 \times 10^{-9}}{1.380668038 \times 10^{-36}} = 1.346611109 \times 10^{27} \text{ kg/m}$$

$$a = \frac{c^2}{r} = \frac{(2.99792458 \times 10^8)^2}{1.380668038 \times 10^{-36}} \text{ m/s}^2$$

$$a = 6.5095675 \times 10^{52} \text{ m/s}^2$$

$$F = m \times a$$

$$F = 1.859222909 \times 10^{-9} \times 6.5095675 \times 10^{52}$$

$$F = 1.210273708 \times 10^{44} \text{ N}$$

This super force of gravitation within the domain of ether is evidence that the force of gravity of 186-ether at, c is the **strongest** force in the universe.

Gravity appears as a weak force because we are measuring *inertial* force.

A Proton

Inertial Mass: As a photon

$$(1.60217653 \times 10^{-19})^2 =$$

$$1.672622216 \times 10^{-27} \times 1.534697799 \times 10^{-18} \times 10^7$$

$$E = m \times c^2 = F \times r$$

$$F = 1.672622216 \times 10^{-27} \times \frac{(2.99792458 \times 10^8)^2}{1.5347 \times 10^{-15}}$$

$$F = 9.79526966 \times 10^7 N$$

$$a = \frac{F}{m} = \frac{9.79526966 \times 10^7}{1.672622216 \times 10^{-27}} m/s^2$$

$$a = 5.856235536 \times 10^{34} m/s^2$$

How acceleration is voltage and related with 186-ether slowed velocity is described in {ref. 2,5}.

Gravitational mass: As ether

$$\frac{m}{r} = 1.3406611109 \times 10^{27} kg/m$$

$$m = 1.534697799 \times 10^{-18} \times 1.3406611109 \times 10^{27}$$

$$m = 2.066641105 \times 10^9 \text{ kg ether mass}$$

This ether mass that fills the proton torus tube (inertial mass) is gravitational mass. It must be remembered that 69 million Rydberg tori stack to form the proton fiber. {ref. 1, 7}

$$a = \frac{F}{m} m/s^2$$

$$F = 9.79526966 \times 10^7 N$$

$$a = \frac{9.79526966 \times 10^7}{1.859222909 \times 10^{-9}}$$

$$a = 5.268475132 \times 10^{16} m/s^2$$

The acceleration and hence velocity below is responsible for balancing the force of 186-ether and the photon mass scaffolding.

$$v^2 = 5.268475132 \times 10^{16} \times 1.380668038 \times 10^{-36}$$

$$v^2 = 7.274015224 \times 10^{-20} m/s^2$$

$$v = 2.697038232 \times 10^{-10} m/s \quad [\text{Eqn. 2}]$$

This velocity, v , of 186-ether is responsible for wavelength, λ as described in {ref. 6}.

Gravitational mass is Ether mass

Gravity arises from acceleration of ether

The ether mass contained within a proton is shown to accelerate at 9.8 m/s^2 if the 186-ether torus pulsates at a slowed velocity of $v = 3.878148841 \times 10^{-9} \text{ m/s}$.

Proof - a proton

$$\text{Acceleration, } a = \frac{v^2}{r}$$

$$v^2 = a r = 9.8 \times 1.5347 \times 10^{-18}$$

$$v = 3.878148841 \times 10^{-9}$$

$$I = m \times v \text{ Amp } \{\text{ref. 2}\}$$

The current created by one coulomb ether mass,

$$I = 1.160435741 \times 10^{10} \times 3.878148841 \times 10^{-9}$$

$$I = 45.00342524 A$$

$$I^2 = 2025.308283 N$$

$$F = I^2 \times 10^7 N = 2.025308283 \times 10^{10} \quad \{\text{ref. 2}\}$$

$$M = \frac{F}{a} = \frac{2.025308283 \times 10^{10}}{9.8}$$

$$M = 2.066641105 \times 10^9 \text{ kg [the ether mass]}$$

The ether mass contained within a proton is obtained from the ether constant ratio {ref. 1, 2}.

$$\frac{m}{r} = 1.3406611109 \times 10^{27} kg/m$$

$$m = 1.534697799 \times 10^{-18} \times 1.3406611109 \times 10^{27}$$

$$m = 2.066641105 \times 10^9 \text{ kg ether}$$

Gravity arises from acceleration of ether

Method 2

$$q^2 = m \times r \times 10^7 \text{ and } a = \frac{v^2}{r}$$

$$q^2 \times a = m \times r \times 10^7 \times \frac{v^2}{r}$$

$$q^2 \times a = F \times r = \text{Energy of a proton}$$

Substitute the $1.160435741 \times 10^{10} \text{ kg}$ ether velocity, $v = 3.878148841 \times 10^{-9}$,

$$(1.60217653 \times 10^{-19})^2 \times 9.8 \times 10^7 = 1.67 \times 10^{-27} \times (3.878148841 \times 10^{-9})^2$$

The above math clearly establishes the velocity, v of ether with acceleration due to gravity.

Gravity arises from acceleration of ether.
It can therefore be concluded that ether is gravitational mass.

Evidence of Ether

$$E = F \times R$$

Input the value for the radius of a hydrogen atom with radius, $r \times 10^7$ Eq. (13),

$$E = 6.052666891 \times 10^{-25} \times 1.534697788 \times 10^{-11}$$

$$E = 9.289014489 \times 10^{-36} \text{ J}$$

$$E = m \times v^2 = 9.289014489 \times 10^{-36} \text{ J}$$

Substitute the velocity, v ,

$$m = \frac{E}{v^2} = \frac{9.289014489 \times 10^{-36}}{(6.70428225 \times 10^{-23})^2} \text{ kg}$$

$$m = 2.066641105 \times 10^9 \text{ kg} \quad [\text{the ether mass}]$$

The ether mass contained within a proton is obtained from the ether constant ratio {ref. 1}.

$$\frac{m}{r} = 1.3406611109 \times 10^{27} \text{ kg/m}$$

$$\frac{2.066641105 \times 10^9}{1.534697788 \times 10^{-18}} = 1.346611109 \times 10^{27} \text{ kg/m}$$

Thus, the existence of ether is proven.

$$F = 6.052666891 \times 10^{-25} \text{ N}$$

$$a = \frac{F}{m} = \frac{6.052666891 \times 10^{-25}}{1.672622228 \times 10^{-27}} \text{ kg}$$

$$a = 361.866941 \text{ m/s}^2$$

As calculations proceed, you will notice that the force experienced here by the H-atom is equal to that of the 186-ether.

The Radius of a Hydrogen Atom

$$r = \frac{q^2}{m \times 10^7}$$

$$r = \frac{(1.60217653 \times 10^{-19})^2}{1.672622228 \times 10^{-27} \times 10^7} \text{ m}$$

$$r = 1.534697788 \times 10^{-18} \text{ m}$$

The radius of a H-atom is thus calculated.

Substituting the value for, $r \times 10^7$ m and acceleration, a into $a = \frac{r \times 10^7}{t^2}$ yields,

$$t^2 = \frac{r \times 10^7}{a} = \frac{1.534697788 \times 10^{-11}}{361.866941} \text{ s}^2$$

$$t^2 = 4.241055521 \times 10^{-14} \text{ s}^2$$

$$t = 2.059382315 \times 10^{-7} \text{ s}$$

Frequency, f , is the inverse of time period:

$$f = \frac{1}{t} = \frac{1}{2.059382315 \times 10^{-7}} \text{ s}^{-1}$$

$$f = 4.855824936 \times 10^6 \text{ s}^{-1}$$

Frequency is the signature for action via field ether at a distance.

The Velocity, v , of a Hydrogen Atom

$$v = \frac{r}{t} = \frac{1.534697788 \times 10^{-11}}{2.059382315 \times 10^{-7}}$$

$$v = 7.452222254 \times 10^{-5} \text{ m/s}$$

$$\text{Velocity, } v = \frac{r}{t} = \frac{1.380668031 \times 10^{-29}}{2.059382315 \times 10^{-7}} \text{ m/s}$$

$$v = 6.70428225 \times 10^{-23} \text{ m/s}$$

$$m \times v^2 = k \times T \quad \text{or force, } T = \frac{mv^2}{k}$$

$$T = \frac{1.859222909 \times 10^{-9} \times (6.70428225 \times 10^{-23})^2}{1.380668031 \times 10^{-29}}$$

Here the Boltzmann radius is $k = r \times 10^7$ m,

$$T = 6.052666891 \times 10^{-25} \text{ N}$$

Absolute temperature, T , is force. {ref. 1}

The inertial force of one hydrogen atom of, $F = 6.052666891 \times 10^{-25} \text{ N}$ equals the gravitational force of 186-etheric mass.

For 186

Squared charge of the rest mass of 186,

$$(1.602176537 \times 10^{-19})^2 = 1.85922209 \times 10^{-9} \times 1.380668031 \times 10^{-36} \times 10^7$$

Substituting the value of the Boltzmann radius, $r \times 10^7$ and the value of time squared, t^2 yields,

$$a = \frac{r}{t^2} = \frac{1.380668031 \times 10^{-29}}{4.241055521 \times 10^{-14}}$$

$$a = 3.25548209 \times 10^{-16} \text{ m/s}^2$$

$$F = m \times a = 1.859222909 \times 10^{-9} \times 3.25548209 \times 10^{-16}$$

$$F = 6.052666891 \times 10^{-25} \text{ N } \textit{force of gravity}$$

Normally, the locomotion of particles is associated with *convection* currents; that is to say, showers of particles that travel in locomotion through space can be treated as a convection current and not radiation. Cosmic rays are the well-known example of convection. A point to note here is that these showers or swarms of particles travel as matter waves and arrive, as they are meant to, as particles. This must be visualized in stark contrast to the phenomenon of light *radiation* where 186-field particles change shape about a mean position, that is, undergo mass contraction and expansion realized as a wave front of the etheric sea.

The ether wave front travels at the speed of light, c .

The math clearly establishes a correlation between the speed of light, c , and the pulsation of the source photon (or electron, which is a type of photon). This source photon vibrating at a particular frequency, f , ripples ether at-large.

The ether model resolves the concept of charge, q , as photon mass or electron mass pulsating about a mean volumetric radius.

Furthermore, the effects of this charge, q , as pulsation, bring about the rippling of the ether contained within the photon body and also at the same time bring about the rippling of the ambient ether outside the photon in erstwhile "empty space". This outgoing rippling is what we call *etheric waves or gravitational waves*. These waves have a wavelength, frequency, and travel at

the speed of light, c . The wave front *radiates* through 186-field ether mass or etheric sea.

Essential for the right wavelength propagation through ether is the slowed velocity, v , of pulsation of the 186-ether masse pulsating as gravitational mass and also comprising the field. {ref. 2}

$$\lambda = \frac{h}{186 \times v}$$

The wavelength for a wave is $\lambda = 2\pi \times r \times 137.036$ where r is the radius of the photon body that experiences the 186 force due to pulsate velocity, v . {ref. 1}

$$186 \times v \times \lambda = m \times c \times \lambda$$

$$186 \times v = m \times c$$

The momentum of gravitational mass which is 186-ether equals that of the inertial mass, m . Here the slowed velocity, v is got from [Eqn. 1,2].

In {ref. 5} it has been shown how the surface area of a photon body is the product of two wavelengths. One wavelength is a contribution from the gravitational mass and the other, the inertial mass.

For an *etheric wave*, the speed of light, c , is generated by wavelength, λ , within the time-period, t . The time-period, t , is the same as that of the pulsation of the source photon.

The speed of light in ether is $c = \frac{\lambda}{t}$.

Gravity travels at the speed of light, c .

Ether Force & Magnetic Flux Quantum

Energy, $E = mc^2$

Substitute the mass of 186-ether for m ,

$$E = 1.859222909 \times 10^{-9} \times (2.99792458 \times 10^8)^2 \text{ J}$$

$$E = 1.670986218 \times 10^8 \text{ J}$$

$$E = F \times R$$

Substitute the value for energy and 186 radius,

$$F = \frac{E}{R} = \frac{1.670986218 \times 10^8}{1.380668031 \times 10^{-36}}$$

$F = 1.210273708 \times 10^{44} \text{ N}$, force of gravity at, c

The huge ether force of $1.210273708 \times 10^{44} \text{ N}$ is associated with 186-ether.

The root of this 186-ether force is current, I .

$$\Phi_0 = BA$$

Substitute B with current, I , per 186 radius, r ,

$$\Phi_0 = \frac{I}{r} \times A$$

$I = \text{root of } 1.210273708 \times 10^{44} \times 10^{-7} \text{ \{ref. 5\}}$

This is evidence - that the magnetic flux quantum is measured due to the existence of gravitational mass called 186-ether.

Gravity arises from acceleration of ether

The ether mass contained within an electron is shown to accelerate at 9.8 m/s^2 .

Proof

$$\text{Acceleration, } a = \frac{v^2}{r}$$

$$v^2 = a r = 9.8 \times 2.817940325 \times 10^{-15}$$

$$v = 1.661800686 \times 10^{-7} \text{ m/s}$$

Variation in, g is due to, v . I would replace acceleration, g to symbol, i for inertia.

$$I = 1.160435741 \times 10^{10} \times 1.661800686 \times 10^{-7}$$

$$I = 1928.41291 \text{ A}$$

$$I^2 = 3718776.351 \text{ N}$$

S.I. Values CODATA Recommended

Parentheses indicate uncertainty in the last digits of the value

Descriptor, Symbol (if any)

Rest Mass of an Electron, M_0

Planck's constant, h

Speed of light in vacuum, c

Elementary charge, q_e

Classical electron radius, R_e

Proton mass

Universal Gravitational constant, G

Dielectric constant, k

Magnet flux quantum Φ_0

$$F = I^2 \times 10^7 \text{ N} = 3.718776351 \times 10^{13} \text{ N}$$

$$M = \frac{F}{a} = \frac{3.718776351 \times 10^{13}}{9.8}$$

$$M = 3.794669746 \times 10^{12} \text{ kg [the ether mass]}$$

{ref. 1, 2}

The ether mass contained within an electron is obtained from the ether constant ratio {ref. 1}.

$$\frac{m}{r} = 1.3406611109 \times 10^{27} \text{ kg/m}$$

$$m = 2.817940325 \times 10^{-15} \times 1.346611109 \times 10^{27}$$

$$M = 3.794669746 \times 10^{12} \text{ kg}$$

Gravity arises from acceleration of ether

Conclusion

Atomic mass unit, **AMU** is defined as **inertial mass**, whereas **186-ether** is defined as **gravitational mass**.

References

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Value, Units

$$9.1093826(16) \times 10^{-31} \text{ kg}$$

$$6.6260693 \times 10^{-34} \text{ Js}$$

$$2.99792458 \times 10^8 \text{ m/s}$$

$$1.602176537 \times 10^{-19} \text{ C}$$

$$2.817940325 \times 10^{-15} \text{ m}$$

$$1.672622216 \times 10^{-27} \text{ kg}$$

$$6.6742(10) \times 10^{-11} \text{ m}^3 / \text{kg s}^2$$

$$8.987551787 \times 10^9 \text{ Nm}^2 / \text{C}^2$$

$$2.067 833 667(52) \times 10^{-15} \text{ Wb}$$