

Unified Absolute Relativity Theory III

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Magnetic vector potential

$$A = \mu_0 I_E = \mu_0 \frac{\mu}{\pi \cdot R^2}$$

A – Magnetic vector potential; μ_0 -- Vacuum permeability; I_E -- Electric current; μ -- Magnetic momentum; R – Radius.

Sun magnetic reconnection

Sun true surface temperature (SI units):

$$T = 6.3 \times 10^7 \quad ; \quad \frac{T}{T_w} = 10^4$$

Conductivity:

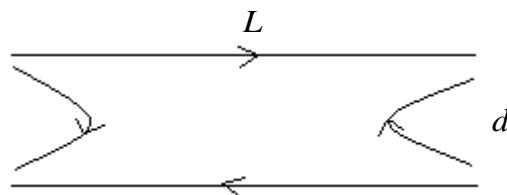
$$C_Y = v_e \dots ; \dots m_e v_e^2 = k_B T \dots \Leftrightarrow \dots C_Y = 3.1 \times 10^7$$

Electric field:

$$v_e = \frac{E}{B} \dots \Leftrightarrow \dots E = 9.3 \times 10^{10}$$

Magnetic field:

$$\frac{L}{d} = \frac{v_{out}}{v_{in}} = \frac{C_Y}{B} = 10^4 \dots \Leftrightarrow \dots B = 3 \times 10^3$$



$$L = 10^7 \dots; \dots d = 10^3 \dots; \dots R_C = 10^{-4} \dots; \dots v_{out} = 10^5 \dots; \dots v_{in} = 10$$

$$R_C = \frac{v_{in}}{v_{out}}$$

Frequency and number density:

$$2\pi \cdot f = \sqrt{\frac{n_e q_e^2}{m_e \epsilon_0}} \dots \Leftrightarrow \dots f = 9\sqrt{n_e}$$

$$k_B T = hf \dots \Leftrightarrow \dots f = 1.3 \times 10^{18} \text{ Hz} \dots \Leftrightarrow \dots n_e = 2.1 \times 10^{34} \text{ m}^{-3}$$

$$\rho = n_e m_e = 1.9 \times 10^4 \text{ kg} \cdot \text{m}^{-3}$$

Plasma conductivity with temperature:

$$C_Y = c \frac{\sqrt{m_e c^2 + 4k_B T} - c\sqrt{m_e}}{2\sqrt{k_B T}}$$

About time

Time is not a dimension.

Time is a derived unit like energy or electric charge.

The clocks give numbers and angles, with no units. They give time current: time over time or period.

$$I_t = \frac{t}{T} = n^\circ = \alpha$$

The used period is a convention.

There are only two fundamental units: distance or space and speed or velocity.

It's impossible to travel in time, as it's impossible to travel in energy or electric charge.

We only detect or see distance and speed, never time.

$$t = \frac{Q}{I_Q} = \frac{L}{V}$$

Only space has dimensions, three dimensions. Extra dimensions don't exist.

Minimum time measured: $\Delta t = 1.2 \times 10^{-17} s$

Time is the variation of a physical quantity over the current or speed of that quantity.

$$V \rightarrow \Delta L \dots \dots \dots ; \dots \dots \dots L \rightarrow \Delta V$$

Time is as real as energy or electric charge.

Time doesn't flow. We live in a continuous present.

What flows is time current.

The Vedas from the 2nd millennium BC gives the universe cycle of 4320 million years

$$= 1.36 \times 10^{17} s = T$$

Rotational period of the universe:

$$T_U = \frac{R_U}{c} = 4.34 \times 10^{17} s \quad ; \quad T_U / T = 3.19$$

How did the Indians know the period of rotation of the universe.

Time is always cyclic, and based on a cyclic phenomenon.

The universe has an infinite past, life and existence are eternal.

The universe is not expanding, it's rotating.

Time dilation and length contraction don't exist.

Planck time is a stupidity. Spacetime doesn't exist.

Sun magnetic reconnection II (SI units):

Time of the acceleration of the magnetic charge:

$$t = \frac{\pi \cdot d}{2B} = 0.5$$

Power radiated by an accelerated magnetic charge:

$$P_w = \frac{\epsilon_0 N_v^2 q_m^2 a^2}{6\pi \cdot c}$$

Temperature of the sun surface: $T = 6.3 \times 10^7$

Acceleration: $a = \frac{2B^2}{d}$

Conductivity with temperature:

$$C_Y = c \frac{\sqrt{m_e c^2 + 4k_B T} - c\sqrt{m_e}}{2\sqrt{k_B T}} = 3.06 \times 10^7$$

Magnetic field:

$$\frac{L}{d} = \frac{C_Y}{B} = 10^4 \dots \Leftrightarrow \dots B = 3.06 \times 10^3$$

Electron number density:

$$\frac{k_B T}{h} = 9\sqrt{n_e} \dots \Leftrightarrow \dots n_e = 2.1 \times 10^{34}$$

Volume: $V = 10^{13} \dots; \dots Ne = n_e V = 2.1 \times 10^{47}$

Resistivity: $R_Y = \frac{1}{C_Y} = 3.27 \times 10^{-8} ; \quad R_E = \frac{R_Y}{10^3} = 3.27 \times 10^{-11}$

Number of magnetic charges or neutrinos:

$$R_E = \frac{N_\nu q_m}{Neq_e} \dots \Leftrightarrow \dots N_\nu = 5.3 \times 10^{32}$$

Power value: $P_W = 6.6 \times 10^{23}$ --- Power of a reconnection event.

Energy:

$$E_Y = P_W t = 3.4 \times 10^{23}$$

Absolute clock:

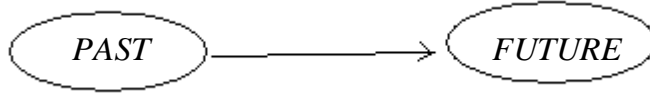
It's possible to detect the relative speed to a gravitational field so, it's possible to make a clock with invariant time.

The universe's entropy is constant.

The past and future exist only in our heads, the arrow of time is inside our brain. We must always to live in the present. If we live in the past we became depressed.

If we live in the future we became anxious.

Arrow of time inside our brains:



The past, the future and the arrow of time are inside our heads.
In nature there's no past and no future, but a resting present.

Why quasars show no time dilation:

The light of the quasars has time dilation but the intensity variation of that light has no time dilation, because that wave is not an electromagnetic wave.

There's no time dilation, what exists is the period dilation.

Lorentz's equations have nothing to do with space and time, but wavelength and period of a transversal wave.

There are only two fundamental units: distance or space and speed or velocity.
Time is a derived unit.

$$t = \frac{Q}{I_Q}$$

Time is the variation of any quantity over the quantity current.

Speed is the space current.

We detect or see movement. We detect distance and distance variation.

We detect if that variation is higher or lower than another one.

We don't detect time.

Capacitivity -- C_{EY}

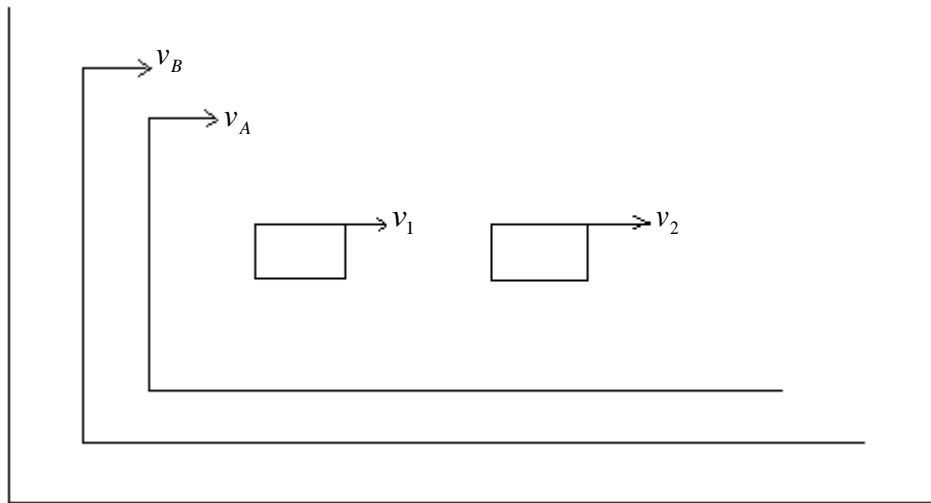
Capacitance of a sphere:

$$C_E = 4\pi \cdot \epsilon R \quad ; \quad C_E = C_{EY} \frac{A}{d} \quad ; \quad A = 4\pi \cdot R^2 \quad ; \quad d = R$$

$$\Leftrightarrow \dots\dots\dots C_{EY} = \epsilon$$

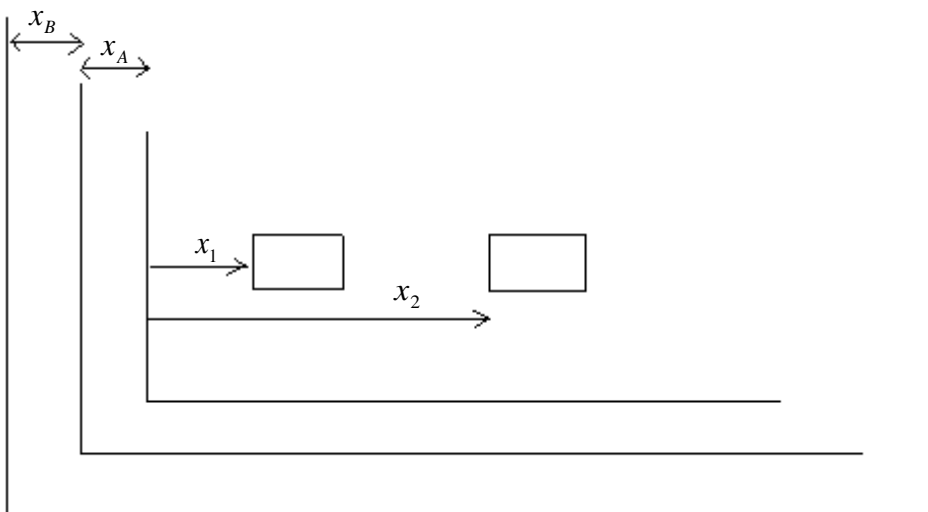
The permittivity is the electric capacity.

The capacity is the property of a material to has capacitance.



v_1 ...and... v_2 ...are...relative

$\Delta v = v_2 - v_1$...is...absolute



x_1 ...and... x_2 ...are...relative

$\Delta x = x_2 - x_1$...is...absolute

The rotation of a extended body is absolute because it has speed and space Δs .
A rotating body is a huge number of referentials or frames.

Quantum mechanics must be explained:

The wavefunction is the magnetic vector potential.

Correct Schrodinger equation:

$$i \frac{dA}{dt} = -A_0 \frac{d^2 A}{dx^2} + V^2 \dots; \dots A_0 = \frac{\lambda \cdot c}{2\pi}$$

$$V^2 = E \dots \text{or} \dots V^2 = P_G$$

$$A = A_0 \cdot \exp i(kx - \omega t) \dots; \dots k = \frac{2\pi}{\lambda} \dots; \dots \omega = 2\pi \cdot f$$

$$A^2 = \Phi_E \dots; \dots \frac{dA}{dt} = E_0 \dots; \dots \frac{d^2 A}{dx^2} = \frac{dB}{dx}$$

A – Magnetic vector potential; t – Time; x – Space; λ -- Wavelength; c – Light speed;
 f – Frequency; Φ_E -- Electric flux; E – Electric field; B – Magnetic field; V – Speed;
 P_G -- Gravitational potential.

Magnetic and electric fields of an electron moving with speed v:

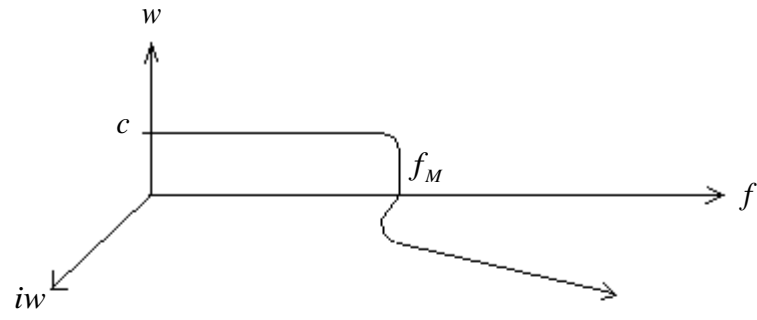
$$B = \frac{\pi \cdot \mu_0 q_e v}{\alpha \cdot x_e^2} = 14.724v \dots; \dots E = vB$$

$$E = \frac{\pi \cdot \mu_0 q_e v^2}{\alpha \cdot x_e^2} = 14.724v^2$$

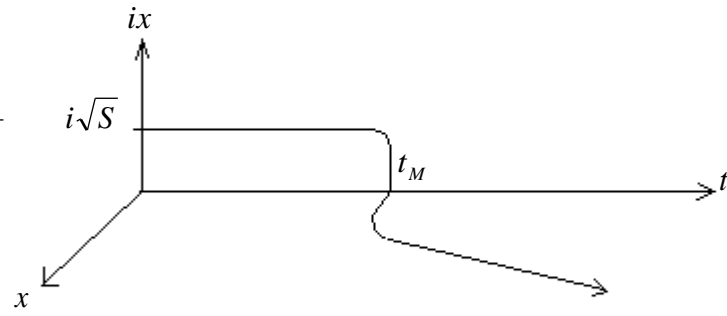
$$\mu_0 q_e = 2\alpha \cdot k_B' \dots; \dots k_B' = k_B \left(1 - \frac{\pi^3 \alpha^2}{2} \right)$$

$$B = \frac{2\pi \cdot k_B'}{x_e^2} v \dots; \dots E = \frac{2\pi \cdot k_B'}{x_e^2} v^2$$

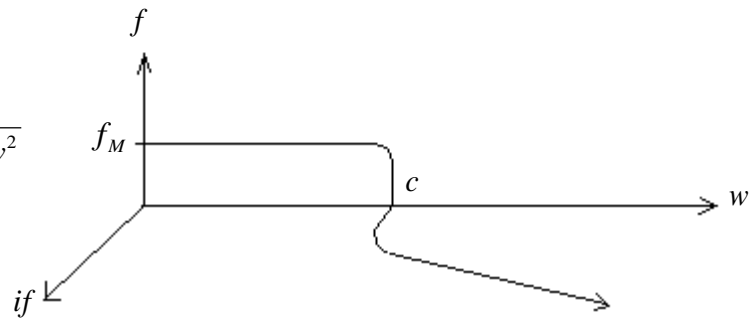
$$w = \sqrt{c^2 - S f^2}$$



$$x = i\sqrt{S - c^2 t^2}$$



$$f = \frac{1}{\sqrt{S}} \sqrt{c^2 - w^2}$$



Speed of the forces

There's only one force, the electric force.

The gravitational force is the residual electric force between a great number of electric dipoles.

$$c^2 t^2 - x^2 = S \dots \Leftrightarrow \dots x = \sqrt{c^2 t^2 - S} \dots ; \dots w = \frac{x}{t}$$

$$V = \frac{dx}{dt} = \frac{c^2}{w} = \frac{c^2}{\sqrt{c^2 - S f^2}}$$

$$m w x = h \dots ; \dots x = \frac{w}{f_M} = \frac{w \sqrt{S}}{c} \dots \text{For macroscopic masses}$$

$$m \frac{w^2 \sqrt{S}}{c} = h \dots \Leftrightarrow \dots w = \sqrt{\frac{hc}{m \sqrt{S}}}$$

$$V = c^2 \sqrt{\frac{m \sqrt{S}}{hc}} = 7.5 \times 10^{20} \sqrt{m}$$

Speed of the sun gravity:

$$V_S = 1.061 \times 10^{36} \text{ m/s}$$

Speed of the earth gravity:

$$V_E = 1.84 \times 10^{33} \text{ m/s}$$

Speed earth-sun:

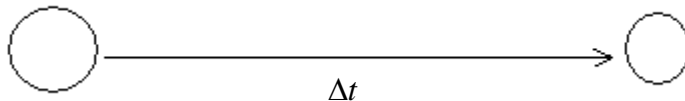
$$V_{ES} = 1.063 \times 10^{36} \text{ m/s}$$

c – Light speed; t – Period; x – Wavelength; $S = 1.9121 \times 10^{-34} \text{ m}^2$; w – Wave speed; V – Force speed; f – Frequency; m – Mass; h – Planck constant; f_M – Matter frequency.

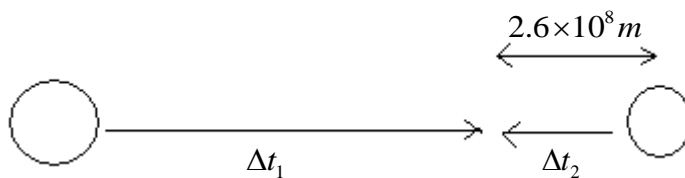
The forces have no aberration because the interaction happens at an intermediate position between the two bodies. The two bodies are equally delayed to that position, so there's no relative delay. Gravity has also a speed much greater than light speed.

Light aberration:

The light must do all the way between the two bodies



Gravity no aberration



Both bodies are equally delayed: $\Delta t_1 = \Delta t_2$

Distance earth-moon: $3.84 \times 10^8 m$

Magnetic field of the moon:

$$R = 1.74 \times 10^6 m \dots; \dots f = 4.24 \times 10^{-7} Hz \dots; \dots R_0 = 7.2 \times 10^{12} m$$

$$B = f \frac{R^2}{R_0} = 1.8 \times 10^{-7} T$$

Speed of the gravity with the mass (SI units):

$$V = 7.5 \times 10^{20} \sqrt{M}$$

Mass of the sun and earth: $M_S = 2 \times 10^{30}$; $M_E = 6 \times 10^{24}$

Distances sun-earth and earth-moon: $D_{ES} = 1.5 \times 10^{11}$; ... $D_{EM} = 3.8 \times 10^8$

Time delay of the gravity:

$$t_{ES} = \frac{D_{ES}}{V_S} = 1.4 \times 10^{-25} \text{ } \Leftrightarrow \text{ } f_{ES} = 7.07 \times 10^{24}$$

$$t_{EM} = \frac{D_{EM}}{V_E} = 2.1 \times 10^{-25} \text{ } \Leftrightarrow \text{ } f_{EM} = 4.8 \times 10^{24}$$

$$f_M = \frac{c}{\sqrt{S}} = 2.16 \times 10^{25} \text{ --- Matter frequency}$$

The gravity time delay or propagation time is almost equal to the period of the matter. Is this a coincidence or a proof of the gravity speed formula.

Note that f_M is a local value, is a value for the earth.

This relation is not correct for the sun-milky way, or the sun-universe:

Delay time sun-milky way: $t = 8.45 \times 10^{-22}$

Delay time sun-universe: $t = 4.48 \times 10^{-22}$

Some data:

Central mass of the milky way for the sun: $M = 1.4 \times 10^{41}$

Central distance of the sun: $D = 2.37 \times 10^{20}$

Sun rotation period: $t = 7.5 \times 10^{15}$

In physics we must use only one system of units.

If there's a relation between two phenomena, if we use different systems of units we can't see the relation. CGS units are wrong.

We can't simplify the formulae, because the physical laws can't change with units.

Some weird relations with correct units:

Gravitational acceleration of the sun at earth:

$$g_{SE} = \frac{GM_S}{D_{ES}^2} = \frac{Gh}{9cS^{3/2}} = 6 \times 10^{-3}$$

Neutrino frequency:

$$f_\nu = \frac{9cg_{SE}}{q_e G} = 1.56 \times 10^{36}$$

G – Gravitational constant; M_S -- Sun mass; D_{ES} -- Earth-sun distance;

h – Planck's constant; c – Light speed; S – Saraiva's constant; q_e -- Electron charge.

$$S = 1.9121 \times 10^{-34}$$

Theoretical radius and mass of the milky way:

$$R = 3.6 \times 10^{20} \dots \dots \dots ; \dots \dots \dots M = 2.1 \times 10^{41}$$

The international system of units is the only one that is correct. If we use only this system we don't need to write the units.

Gravity speed and tunneling time

Gravity speed of the universe:

$$V_U = 7.5 \times 10^{20} \sqrt{M_U} = 2.9 \times 10^{47} \text{ m/s}$$

Gravity speed and acceleration of the particles:

$$V = \frac{c^2 t}{x} \dots \dots \dots ; \dots \dots \dots a = \frac{-c^2 S}{x^3}$$

$$V = aT \dots \dots \dots \Leftrightarrow \dots \dots \dots T = -\frac{x^2 t}{S}$$

Electron tunneling time (Hartman time constant):

$$T_e = -\frac{x_e^3}{cS} = -2.5 \times 10^{-10} \text{ s}$$

Neutrino tunneling time:

$$T_\nu = -t_\nu = -6.4 \times 10^{-37} \text{ s}$$

Tunneling speed for a photon with frequency $f = 9.15 \times 10^9 \text{ Hz}$:

Longitudinal frequency: $f_L = \frac{c^2}{Sf} = 5.14 \times 10^{40} \text{ Hz}$

Speed: $w_L = \sqrt{S} f_L = 2.37 \times 10^{15} c$

Milky way visible matter:

$$M_V = 2 \times 10^{41} \text{ kg}$$

Milky way dark matter: $M_D = 2 \times 10^{42} \text{ kg}$

The Milky way dark matter doesn't exist.

Highly charged ions challenge QED because the electric charge increases with the speed with the formula:

$$Qe = \frac{Qe_0}{\left(1 - \frac{v^2}{c^2}\right)^{0.1}}$$

Original meaning of the Lorentz equations:

In 1887, Woldemar Voigt developed the equations of the transversal wave Doppler effect.

Universal propagation speed formula

This formula is correct for any wave propagation.

Speed: $c = \sqrt{\frac{\rho}{\varepsilon}}$

ρ -- Density; ε -- Grain; Vacuum permeability: $\mu_0 = \frac{1}{\rho_0}$; ε_0 -- Capacitivity (meter).

Air -- $\rho = 1.22$; $c = 343.2$ \Leftrightarrow $\varepsilon = 1.04 \times 10^{-5}$
 H_2O .. --..... $\rho = 10^3$; $c = 1480$ \Leftrightarrow $\varepsilon = 4.57 \times 10^{-4}$
 Fe ... --..... $\rho = 7870$;..... $c = 5100$ \Leftrightarrow $\varepsilon = 8.26 \times 10^{-5}$
 H_2 ... --..... $\rho = 0.09$; $c = 1270$ \Leftrightarrow $\varepsilon = 5.58 \times 10^{-8}$
 Ne --..... $\rho = 0.9$; $c = 936$ \Leftrightarrow $\varepsilon = 1.03 \times 10^{-6}$
 Au -- $\rho = 19300$;..... $c = 1740$ \Leftrightarrow $\varepsilon = 6.37 \times 10^{-3}$
 Diamond -- $\rho = 3500$ _ $c = 18350$ \Leftrightarrow $\varepsilon = 1.04 \times 10^{-5}$
 Si -- $\rho = 2330$;..... $c = 2200$ \Leftrightarrow $\varepsilon = 4.8 \times 10^{-4}$

Energy:
$$E_Y = \varepsilon^2 \rho^2 = \frac{\rho^4}{c^4}$$

Mass:
$$m = \rho \varepsilon^3$$

Is this a coincidence or not

With the correct units, the earth gravitational speed times the earth orbital period is equal to the light speed.

$$c = g_E T_E \dots \dots \dots T_E = \frac{2\pi \cdot D_{ES}^{3/2}}{\sqrt{GM_S}} \dots \dots \dots g_E = \frac{GM_E}{R_E^2}$$

c – Light speed; g_E -- Earth gravity; T_E -- Earth period; D_{ES} -- Earth sun distance;
 G – Gravitational constant; M_S -- Sun mass; M_E -- Earth mass; R_E -- Earth radius.

$$\Leftrightarrow \dots \dots \dots \varepsilon_0 \mu_0 = \frac{R_E^4 M_S}{4\pi^2 GM_E^2 D_{ES}^3}$$

ε_0, μ_0 -- Vacuum permittivity and permeability.

The vacuum at earth surface is the gravitational field of the earth, with a little contribution from the sun.

So, the electromagnetic properties of the vacuum depend of the earth gravitational field.

Supercurrent:

$$I_E = \frac{nq_e^2 A}{2m_e} \text{Area} \dots \dots \dots \text{Area} = \pi(5 \times 10^{-4})^2 = 7.85 \times 10^{-7} \text{ m}^2$$

Penetration distance:

$$d = \sqrt{\frac{2m_e}{\mu_0 n q_e^2}} = 2.75 \times 10^{-7} \text{ m} \dots \dots \dots A = \frac{x_e c}{2\pi} = 1.16 \times 10^{-4}$$

$$\Leftrightarrow \dots \dots \dots n = 7.47 \times 10^{26} \text{ m}^{-3} \dots \dots \dots ; \dots \dots \dots I_E = 9.6 \times 10^8 \text{ A}$$

A – Magnetic vector potential.

Go to the interior of a forest and stay still observing the nature. You will see that there's no time flowing or passing.

$$\varepsilon_0 = \frac{R_E^2 \sqrt{M_S}}{2\pi M_E \sqrt{GD_{ES}^3}} \frac{q_e^2}{2\alpha h} = \frac{1}{g_E T_E} \frac{q_e^2}{2\alpha h}$$

q_e -- Electron charge; α -- Fine structure constant; h – Planck constant.

$$\mu_0 = \frac{R_E^2 \sqrt{M_S}}{2\pi M_E \sqrt{GD_{ES}^3}} \frac{2\alpha h}{q_e^2} = \frac{1}{g_E T_E} \frac{2\alpha h}{q_e^2}$$

The vacuum permittivity and permeability varies with the local gravitational field.

Outside of a solenoid there's also a magnetic field.

The delayed choice quantum eraser has no mystery.

The noise of the seismic accelerometers has gravitational waves.

If we calculate the depth of the noise we see that it comes from the center of the earth.

So, seismic noise from the center of the earth is gravitational waves.

Vacuum electric density and permittivity or capacitivy:

$$\rho_0 = \frac{1}{\mu_0} = 7.96 \times 10^5 \text{ kg/m}^3 \dots \dots \dots ; \dots \dots \dots \varepsilon_0 = 8.854 \times 10^{-12} \text{ m}$$

Mass and energy of the electric vacuon:

$$\rho_0 = \frac{m_0}{\varepsilon_0^3} \dots \Leftrightarrow \dots m_0 = 5.53 \times 10^{-28} \text{ kg} \dots \dots \dots E_{Y0} = \frac{\varepsilon_0^2}{\mu_0} = m_0 c^2 = 310 \text{ MeV}$$

Electric vacuon number density:

$$n_e = \frac{\rho_0}{m_0} = 1.44 \times 10^{33} \text{ m}^{-3}$$

Magnetic vacuon density:

$$\mu_{0v} = \mu_0 \frac{c}{w_v} = 1.744 \times 10^{-17} \text{ m}^{-3} \text{ s}^2 \dots \Leftrightarrow \dots \rho_{0v} = 5.734 \times 10^{16} \text{ kg/m}^3$$

Magnetic vacuon permittivity or capacitivity:

$$\varepsilon_{0v} = \varepsilon_0 \frac{c}{w_v} = 1.23 \times 10^{-22} \text{ m}$$

Magnetic vacuon mass:

$$m_{0v} = \rho_{0v} \varepsilon_{0v}^3 = 1.064 \times 10^{-49} \text{ kg}$$

Number density:

$$n_v = \frac{\rho_{0v}}{m_{0v}} = 5.4 \times 10^{65} \text{ m}^{-3}$$

Vacuum DC resistance:

$$R_E = \frac{n_v q_m}{n_e q_e} = 4.83 \times 10^{36} \Omega$$

The vacuum is a magnetic superconductor.

Energies per cubic meter:

$$E_{Ye} = 310 \text{ MeV} \times n_e = 4.464 \times 10^{41} \text{ eVm}^{-3}$$

$$E_{Yv} = 310 \text{ MeV} \times n_v = 1.674 \times 10^{74} \text{ eVm}^{-3}$$

Volume of the universe:

$$V_U = \frac{4}{3}\pi.R_U^3 = 9.2 \times 10^{78} m^3$$

Total vacuum energies:

$$E_{YeT} = E_{Ye} V_U = 4.11 \times 10^{120} eV$$

$$E_{YvT} = E_{Yv} V_U = 1.54 \times 10^{153} eV$$

We think that the vacuons have no mass, only an equivalent energy, and it's why they are undetectable. We think that the vacuons have no electric dipoles, they are the perfect monopoles. The usual magnetic monopole is the neutrino but it's an electric dipole.

The photon

The photon is an individual wave:



The photons are not quantized because there are photons of any energy. There are continuous spectrums.

The photons have a constant amplitude and that amplitude is a space.

The magnetic field or induction is a speed, the electric field is a squared speed.

The photons are mechanical oscillations and the fields also oscillate.

Magnetic vector potential:

$$A = A_0 \exp i(kx - wt)$$

Instead of the electric and magnetic fields we can define all the wave by the oscillation of the magnetic vector potential.

$$A = A_0 \cos(kx - wt) + iA_0 \sin(kx - wt)$$

$$i \frac{dA}{dt} = -A_0 \frac{d^2 A}{dx^2} + E$$

When a photon reaches one maximum value of energy it became rotating on its own magnetic field. This photon is an electron.
 Particles are rotating waves. Particles can also became waves.
 Photons do have mass:

$$m = \frac{hf}{c^2 - Sf^2}$$

The photons speed is lower than light speed constant.

$$w = \sqrt{c^2 - Sf^2} \quad ; \quad \Delta c = \frac{Sf^2}{2c}$$

For frequencies higher than $f = 2.17 \times 10^{25} \text{ Hz}$ the photons waves became longitudinal.

Volume of the magnetic and electric fields of the electron

Energy and magnetic field:

$$E_Y = \frac{B^2}{2\mu_0} V_e = hf_e \dots \dots \dots ; \dots \dots \dots B = \frac{4\pi \cdot q_m}{x_e^2}$$

$$V_e = \frac{\mu_0 x_e^3 c q_e^2}{2\pi^2 h} = 1.0561 \times 10^{-38} m^3$$

Energy and electric field:

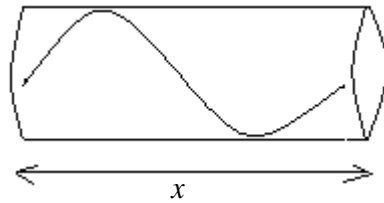
$$E_Y = \frac{\epsilon_0 E^2}{2} V_e \dots \dots \dots ; \dots \dots \dots E = \frac{\pi \cdot q_e}{\alpha \epsilon_0 x_e^2}$$

$$V_e = \frac{2ch\alpha^2 \epsilon_0 x_e^3}{\pi^2 q_e^2} = 1.0561 \times 10^{-38} m^3$$

Volume of the energy of a visible photon:

$$f = 3 \times 10^{14} \text{ Hz} \dots \dots \dots \Leftrightarrow \dots \dots \dots x = \frac{c}{f} = 10^{-6} m$$

$$V = \frac{\mu_0 x^3 c q_e^2}{2\pi^2 h} = 7.4 \times 10^{-22} m^3$$



$$V = x\pi.R^2 \dots\dots\dots \Leftrightarrow \dots\dots\dots R = 1.534 \times 10^{-8} m$$

$$V_e = x_e\pi.R_e^2 \dots\dots\dots \Leftrightarrow \dots\dots\dots R_e = 3.72 \times 10^{-14} m$$

The waves are quantized.

Everything is entangled with everything at almost infinite velocity, by longitudinal waves (virtual photons or magnetic photons).

Causality is linked not with light speed constant but with a much more great velocity.

In the delayed choice quantum eraser any pieces of the apparatus are entangled almost instantaneously. Light speed constant is a very low speed.

In the double slit experiment the slits and the distance between them are of the size of the wavelength. The size and distances of the slits are fundamental. With large slits and distances nothing happens.

If we put anything on one slit, is evident that we destroy the interference classically.

A particle is a rotating wave. Particles can change to waves and waves can change to particles.

The electromagnetic waves are quantized in space. The photon is an individual wave.

So, the particles are not hard objects, they are like waves with nothing in the center but with a constant magnetic field.

The double slit experiment is classical.

There's not a classical and quantum physics, there's only one physics. Small and fast things behave different, that's all.

All things have a precise state all the time, not only when we measure them.

Quantum entanglement is classical.

Magnetar magnetic field

$$B = f \frac{R^2}{R_0} \dots\dots\dots; \dots\dots\dots R_0 = 7.2 \times 10^{12} m \dots\dots\dots; \dots\dots\dots R = 2 \times 10^4 m \dots\dots\dots; \dots\dots\dots B = 10^{10} T$$

$$\Leftrightarrow \dots\dots\dots .f = 1.8 \times 10^{14} Hz$$

Rotational speed:

$$v = 2\pi.Rf = 2.26 \times 10^{19} \text{ m/s} \dots\dots\dots; \dots\dots\dots w_v = 2.16 \times 10^{19} \text{ m/s}$$

$$B = \frac{\mu_0 Q e f}{2R} \dots\dots\dots \Leftrightarrow \dots\dots\dots Q e = 1.77 \times 10^6 \text{ C}$$

Magnetic vector potential Schrodinger equation

$$i \frac{dA}{dt} = -A_0 \frac{d^2 A}{dx^2} \dots\dots\dots; \dots\dots\dots \frac{dA}{dt} = E \dots\dots\dots; \dots\dots\dots \frac{dA}{dx} = B \quad ; \quad A_0 = \frac{xc}{2}$$

$$\frac{d^2 A}{dx^2} = \frac{dB}{dx} \dots\dots\dots \Leftrightarrow \dots\dots\dots iE = -A_0 \frac{dB}{dx}$$

$$E = \frac{\pi \cdot q_e}{\alpha \epsilon_0 x^2} \dots\dots\dots; \dots\dots\dots B = i \frac{4\pi \cdot q_m}{x^2} \dots\dots\dots; \dots\dots\dots \frac{dB}{dx} = -i \frac{8\pi \cdot q_m}{x^3}$$

$$\Leftrightarrow \dots\dots\dots \frac{\pi \cdot q_e}{\alpha \epsilon_0 x^2} = \frac{xc}{2} \frac{8\pi \cdot q_m}{x^3} \dots\dots\dots \Leftrightarrow \dots\dots\dots \frac{q_e}{\alpha \epsilon_0} = 4c q_m \quad ; \quad q_m = \frac{h}{2q_e}$$

$$\Leftrightarrow \dots\dots\dots \alpha = \frac{q_e^2}{2\epsilon_0 c h}$$

Surface electric field of a planet:

$$E = \frac{R \cdot c^2}{2\pi \cdot R_0} \quad ; \quad R_0 = 7.2 \times 10^{12} \text{ m}$$

Earth:

$$E = 1.27 \times 10^{10} \text{ V/m}$$

Earth gravitational potential:

$$v^2 = \frac{GM}{R} = 6.26 \times 10^7 \text{ m}^2 / \text{s}^2$$

$$\frac{E}{v^2} = \frac{2}{3\alpha} \quad ; \quad g = \frac{E}{R} = \frac{c^2}{2\pi \cdot R_0} = 2 \times 10^3 \text{ ms}^{-2}$$

Electron neutrino speed:

$$v = c.(1 + n) \dots \Leftrightarrow \dots n = \frac{2 \times 10^{-38}}{E_y^2}$$

Magnetic field of a black hole:

$$B = f \frac{R^2}{R_0} \dots ; \dots R = G^{-1/3} \dots ; \dots f = \frac{c.G^{1/3}}{2\pi}$$

$$B = \frac{c}{2\pi.R_0.G^{1/3}} = 1.63 \times 10^{-2} T$$

Black hole electric and magnetic charges:

$$Q_e = \frac{2}{\mu_0 G R_0} = 3.3 \times 10^3 C$$

$$Q_m = \frac{c G^{1/3}}{2 R_0} = 8.44 \times 10^{-9} \text{ Weber}$$

Resistance:

$$R_E = \frac{Q_m}{Q_e} = 2.55 \times 10^{-12} \Omega$$

Earth magnetic charge:

$$E = \frac{Q_m v}{\pi.R^2} = 1.27 \times 10^{10} V / m$$

$$Q_m = \frac{\pi.R^{5/2} E}{\sqrt{GM}} = 2 \times 10^{20} \text{ Weber}$$

$$2Q_m Q_e = H = \sqrt{GM^3 R} ; \quad Q_e = \frac{2R^3}{\mu_0 R_0} = 5.6 \times 10^{13} C$$

$$Q_m = 2.7 \times 10^{21} \text{ Weber}$$

Resistance:

$$R_E = \frac{Q_m}{Q_e} = 3.6 \times 10^6 \Omega$$

Sound speed in sand

$$v_L = \sqrt{\frac{\rho}{\varepsilon}}$$

v_L -- Speed of longitudinal waves; ρ -- Density; ε -- Grain size.

Some experimental data:

$$\rho = 1820 \text{ kg/m}^3 \dots\dots; \dots\dots v_L = 1420 \text{ m/s} \dots\dots \Leftrightarrow \dots\dots \varepsilon = 9 \times 10^{-4} \text{ m}$$

$$\rho = 2090 \dots\dots; \dots\dots v_L = 2320 \dots\dots \Leftrightarrow \dots\dots \varepsilon = 3.9 \times 10^{-4}$$

Transversal speed:

$$v_T = 0.6 \sqrt{\frac{\rho}{\varepsilon}}$$

$$\rho = 1820 \dots\dots; \dots\dots v_T = 853 \dots\dots \Leftrightarrow \dots\dots \varepsilon = 9 \times 10^{-4}$$

$$\rho = 2090 \dots\dots; \dots\dots v_T = 1390 \dots\dots \Leftrightarrow \dots\dots \varepsilon = 3.9 \times 10^{-4}$$

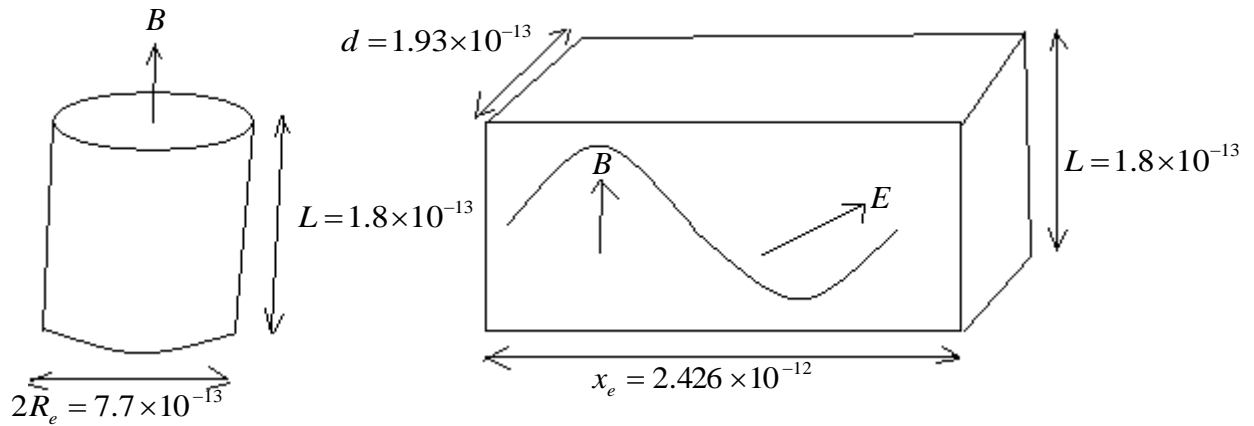
Equation for the rocky planets:

$$Q_m Q_e = 5\alpha \sqrt{GM^3 R} \quad ; \quad 2q_m q_e = h$$

Q_m -- Magnetic charge of the planet; Q_e -- Electric charge; α -- Fine structure constant; G – Gravitational constant; M – Mass of the planet; R – Radius.

Dimensions of the waves and particles

Electron:



The amplitude has the direction of the electric field.

$$E_Y = hf_e = \frac{B^2}{2\mu_0} L\pi \frac{x_e^2}{4\pi^2} \dots\dots\dots B = \frac{2\pi \cdot h}{q_e x_e^2}$$

$$L = \frac{32\alpha x_e}{\pi} = 1.8 \times 10^{-13}$$

$$V = L\pi \cdot R_e^2 = 8.43 \times 10^{-38} = x_e L d \dots\dots\dots \Leftrightarrow \dots\dots d = 1.93 \times 10^{-13} = \frac{x_e}{4\pi}$$

$$A_e = \frac{x_e}{2\pi} = R_e \dots\dots\dots d = \frac{A_e}{2}$$

Visible photon:

$$f = 3 \times 10^{14} \text{ Hz} \quad \Leftrightarrow \dots\dots x = \frac{c}{f} = 10^{-6} \dots\dots \Leftrightarrow \dots\dots L = \frac{32\alpha \cdot x}{\pi} = 7.43 \times 10^{-8}$$

$$V = 6 \times 10^{-21} = x L d = L \frac{x^2}{4\pi} \dots\dots \Leftrightarrow \dots\dots d = \frac{x}{4\pi} = 7.96 \times 10^{-8}$$

$$E_Y = \frac{hf}{2} = \frac{1}{2} k A^2 \dots\dots\dots k = 4\pi^2 f^2 m$$

$$f = \frac{c}{x} \dots\dots\dots m = \frac{h}{cx}$$

$$\Leftrightarrow \dots\dots\dots A = \frac{x}{2\pi} \dots\dots\dots \Leftrightarrow \dots\dots\dots \frac{A}{2} = 7.96 \times 10^{-8} = d$$

CORRECTION: The amplitude of a photon is not constant, depends of the wavelength.

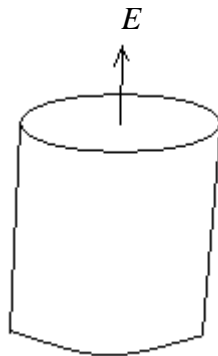
E_γ -- Energy; h -- Planck constant; f_e, x_e -- Electron Compton frequency and wavelength; B -- Magnetic field; μ_0 -- Vacuum permeability; q_e -- Electron charge; α -- Fine structure constant; R_e -- Electron radius; V -- Volume; A -- Amplitude; c -- Light speed constant.

Photons are mechanical waves. The particles are rotating waves and they are made of fields.

Neutrino:

$$hf = \frac{B^2 w}{2\mu_0 c} L\pi \frac{S}{4\pi^2} \dots\dots\dots; \dots\dots\dots B = \frac{2\pi \cdot h}{q_e S} = 2\pi \cdot w$$

$$L = \frac{4\alpha \sqrt{S}}{\pi} = 1.285 \times 10^{-19} \dots\dots\dots; \dots\dots\dots d = \frac{\sqrt{S}}{4\pi} = 1.1 \times 10^{-18}$$



$$x = \sqrt{S}$$

The photons

The photons are waves, not quantized because there's not one photon. Photons can have any energy with a continuous spectrum. But the waves can be individual.

Waves can change to particles and particles to waves.

The photons have mass:

$$m = \frac{hf}{c^2} ; \quad \left(m = \frac{hf}{c^2 - Sf^2} \right)$$

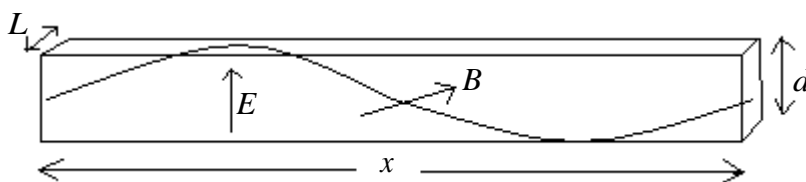
Photons don't travel at the light speed constant, they have lower speeds and variable:

$$w = \sqrt{c^2 - Sf^2}$$

m – Mass; h – Planck constant; f – Frequency; c – Light speed constant;
 $S = 1.9121 \times 10^{-34} m^2$ -- Saraiva constant; w – Wave speed.

An individual photon:

$$f = 3 \times 10^{14} \text{ Hz}; \dots; \dots x = \frac{c}{f} = 10^{-6} m \text{ -- Wavelength}$$



Volume of the photon: $V = \frac{\alpha \cdot x^3}{\pi^2}$

α -- Fine structure constant; E, B – Electric and magnetic fields.

Distance on the direction of the electric field and amplitude: $d = \frac{x}{4\pi}$

Orthogonal distance: $L = \frac{4\alpha \cdot x}{\pi}$

The two fields maximums are not in phase.
 They have a $\pi/2$ shift.
 The waves can't propagate in the nothing.
 The aether does exists.

Surface tension:

$$S_T = 4\pi^2 m f^2$$

Water (20°): $S_T = 7.3 \times 10^{-2}$;..... $m = 3 \times 10^{-26}$ \Leftrightarrow $f = 2.5 \times 10^{11}$

Mercury (20°): $S_T = 0.487$;... $m = 3.4 \times 10^{-25}$ \Leftrightarrow $f = 1.9 \times 10^{11}$

HCl (1073°): $S_T = 0.12$;.. $m = 6.1 \times 10^{-26}$ \Leftrightarrow $f = 2.24 \times 10^{11}$

KClO₃ (20°): $S_T = 8.1 \times 10^{-2}$;..... $m = 2 \times 10^{-25}$ \Leftrightarrow $f = 10^{11}$

The aether:

Electric superconductor: $R_E = 0$;.. $q_e = 0$

In a electric superconductor the electric resistance is zero and the electric charge appears to be also zero, there are no potential differences.

Magnetic superconductor: $R_E = \infty$;.. $q_m = 0$

In a magnetic superconductor the magnetic resistance is zero or the electric resistance is infinite and the magnetic charge appears to be zero, there are no potential differences.

Supersolid: $R_m = 0$;.. $m = 0$

In a supersolid the mass resistance is zero and the mass appears to be zero.

The aether is a supersolid and a magnetic superconductor. A double cristal of vacuons. It's why we can't detect the magnetic charge.

Magnetic vector potential and energy:

$$A = \frac{x_e c}{2} \dots\dots\dots ; \dots\dots\dots E_Y = \frac{hc}{x_e}$$

$$E_Y \approx A^4 \dots\dots\dots \Leftrightarrow \dots\dots\dots \frac{x_e^3 c^3 k_B}{8h} = 1.00156639$$

Energy of the vacuons:

$$E_{Y0} = \frac{\epsilon_0^2}{\mu_0^2} = 310MeV$$

Density of the electric vacuum:

$$\rho_0 = \frac{1}{\mu_0} = 7.96 \times 10^5 kg / m^3$$

The absolute aether is the gravitational field of the universe:

$$g_U = 6.9 \times 10^{-10} ms^{-2}$$

$$\epsilon_0 = g_U t^2 ; \quad \rho_0 = g_U l^2 ; \quad \frac{l}{t} = c$$

$$l = 3.4 \times 10^7 m ; \quad t = 0.1133s$$

Stellar black holes are made of neutrinos and have polar electric fields that powers the polar jets.

Electric field of a rotating magnetic charge:

$$E = \frac{Q_m \cdot v}{\pi \cdot R^2}$$

E – Electric field; Q_m -- Magnetic charge; v – Speed; R – Radius.

Magnetars are not magnetic. The lines split is due to the Stark effect and not the Zeeman effect. Magnetars have huge electric fields.

$$E = cB = 3 \times 10^{18} V / m$$

The higher magnetic field in nature has a value near 5×10^9 T.

$$E_Y = \mu_B B \dots\dots\dots; \dots\dots\dots E_Y = d_E E$$

$$\mu_B = \frac{q_e X_e C}{4\pi} \dots\dots\dots; \dots\dots\dots d_E = \frac{q_e X_e}{4\pi}$$

Magnetic charge of a magnetar:

$$Q_m = 1.5 \times 10^{23} \text{ Weber}$$

As magnetars have a period of rotation of 5s they generate a very low magnetic field, near the value of the earth.

Is it possible to differentiate between the Zeeman and the Stark effects?

Earth charges and angular momentum

$$B = f \frac{R^2}{R_0} \dots; \dots f = \frac{1}{24h} = 1.16 \times 10^{-5} \text{ Hz} \dots; \dots R_0 = 7.2 \times 10^{12} \text{ m}$$

$$B = \frac{\mu_0 Q_e f}{2R} \dots \Leftrightarrow \dots Q_e = \frac{2R^3}{\mu_0 R_0} = 5.8 \times 10^{13} \text{ C}$$

$$E = \frac{Q_e}{4\pi\epsilon_0 R^2} = 1.27 \times 10^{10} \text{ V / m}$$

$$E = \frac{Q_m v}{\pi R^2} \dots; \dots v = 2\pi R f$$

$$Q_m = \frac{ER}{2f} = 3.52 \times 10^{21} \text{ Weber}$$

Angular momentum:

$$H = Q_e Q_m = 2 \times 10^{35} \dots; \dots H = MvR = 1.8 \times 10^{34}$$

$$2q_e q_m = h$$

$$\sqrt{\alpha} Q_e Q_m = 2\pi \cdot f M R^2$$

There's a relation between the charges of a planet and its angular momentum.

The existence is eternal.

Life is eternal.

God is a person from the world of the spirits.

Bohr atom of hydrogen:

Usual and wrong -- $mvR = \frac{nh}{2\pi}$

Correct -- $m = \frac{h}{cx_e} \dots; \dots v = \frac{\alpha.c}{n} \dots; \dots R = \frac{nx_e}{2\pi\alpha}$

$$\Leftrightarrow \dots mvR = \frac{h}{2\pi}$$

The angular momentum of any orbit is constant.

Wrong radius: $R = \frac{n^2 x_e}{2\pi\alpha}$

The discovery of the meson was a coincidence.

Earth:

Mass current: $I_m = \sqrt{\frac{GM^3}{R^3}} = 7.42 \times 10^{21}$

Mass voltage: $V_m = \frac{GM}{R} = 6.26 \times 10^7$

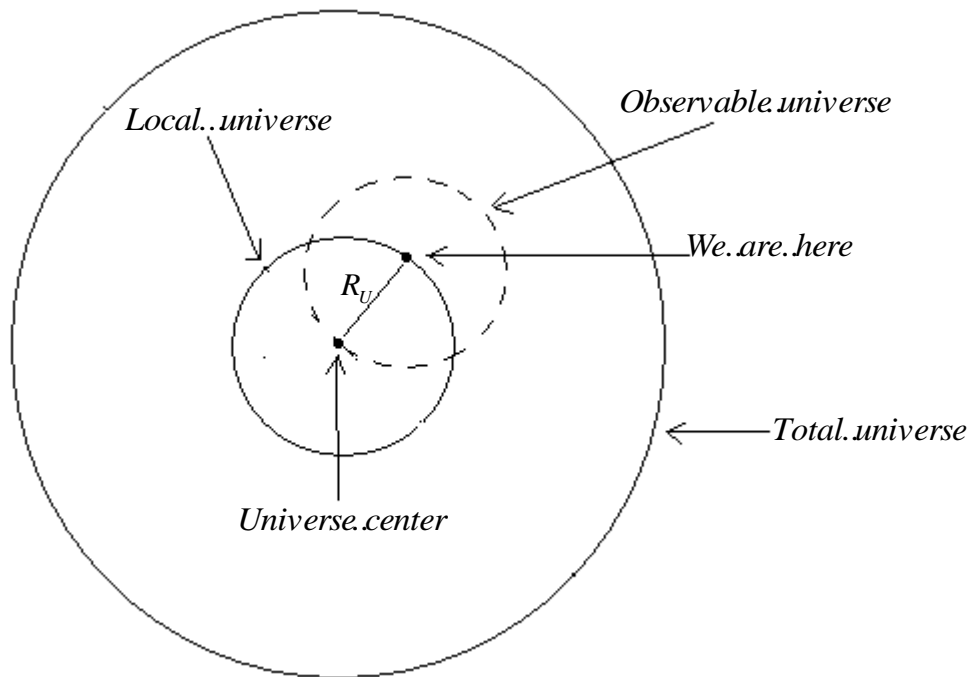
Mass resistance: $R_m = \sqrt{\frac{GR}{M}} = 8.44 \times 10^{-15}$

It's necessary to explain the matrix mechanics.

The radius matrix and the speed matrix are related:

$$R.v - v.R = \frac{A_e}{2\pi} = \frac{x_e.c}{4\pi}$$

Our universe:



Hubble constant: universe rotation frequency

$$H_0 = f_U = 69.32 = 2.246 \times 10^{-18} \text{ Hz}$$

Universe radius: $R_U = \frac{c}{H_0} = 1.3345 \times 10^{26} \text{ m}$

Gravitational acceleration: $g_U = \frac{c^2}{R_U} = 6.735 \times 10^{-10} \text{ ms}^{-2}$

We are living at the surface of a black hole that rotates at light speed constant.

Mass of the universe: $M_U = \frac{c^2 R_U}{G} = 1.8 \times 10^{53} \text{ kg}$

The absolute aether is the gravitational field of the universe:

$$\epsilon_0 = g_U t^2 \dots \Leftrightarrow \dots t = 0.11466 \text{ s} \dots \Leftrightarrow \dots f = 8.72 \text{ Hz}$$

$$\rho_0 = \frac{1}{\mu_0} = g_U l^2 \dots \Leftrightarrow \dots l = 3.44 \times 10^7 \text{ m}$$

Universe density: $\rho_U = 1.81 \times 10^{-26} \text{ kg/m}^3$

There are 10^{24} universes.

The Einstein's derivation of the Lorentz equations and the Heisenberg first paper are two swindles.

Local electric and magnetic fields of the universe

Charges and angular momentum:

$$Q_e Q_m \sqrt{\alpha} = M_U c R_U = 7.2 \times 10^{87}$$

$$Q_e Q_m = 8.4 \times 10^{88} \dots\dots \text{and} \dots\dots \frac{Q_m}{Q_e} = \sqrt{\frac{\mu_0}{\epsilon_0}}$$

$$\Leftrightarrow \dots\dots Q_e = 1.5 \times 10^{43} \text{ C} \dots\dots; \dots\dots Q_m = 5.6 \times 10^{45} \text{ Weber}$$

$$E = \frac{Q_e}{\pi \epsilon_0 R_U^2} = 30.0 \text{ V/m}$$

$$B = \frac{Q_m}{\pi \cdot R_U^2} = 10^{-7} \text{ T}$$

$$V = \epsilon_0 E = 2.65 \times 10^{-10} \text{ Volt} ; \quad H = \frac{B}{\mu_0} = \frac{1}{4\pi}$$

$$B = \frac{\omega}{\gamma} = 2\pi \cdot f_U \frac{M_U}{Q_e} = 1.7 \times 10^{-7} \text{ T}$$

Magnetars fields

The objects made of neutrons and neutrinos, like neutron stars and black holes, have polar electric fields that powered the polar jets.

The rotation of neutral particles (or magnetic particles) generate polar electric fields.

General formulae:

$$\sqrt{\alpha} Q_e Q_m = 2\pi \cdot f M R^2$$

$$E = 2\pi \cdot f B \dots \dots \dots E = \frac{2Q_m f}{R}$$

$$B = \frac{\mu_0 Q_e f}{2R} \dots \dots \dots Q_e = \frac{2\pi \cdot f M R^2}{\sqrt{\alpha} Q_m}$$

Magnetic field:

$$B^2 = \frac{\mu_0 M f^2}{R \sqrt{\alpha}} \dots \dots \dots \Leftrightarrow \dots \dots \dots B = 3.8 \times 10^{11} T$$

$$E = 1.42 \times 10^{17} V / m \dots \dots \dots Q_e = 1.45 \times 10^{21} C \dots \dots \dots Q_m = 1.7 \times 10^{20} \text{ Weber}$$

α -- Fine structure constant; Q_e – Electric charge; Q_m – Magnetic charge;
 f – Rotation frequency; M – Mass; R – Radius; E – Electric field; B – Magnetic field;
 μ_0 -- Vacuum permeability.

If we make a total vacuum in a box at the earth surface, what remains in the box?
 It remains the gravitational field of the earth, if we shield the electric and the magnetic fields.

If we forgete the other planets we find a place with zero gravity between the sun and the earth at a distance $2.6 \times 10^8 m$. But we have the field of the universe $g_U = 6.9 \times 10^{-10} ms^{-2}$. Alpha centauro generate a value $g_A = 9.3 \times 10^{-14}$.

In any possible experiment we always sees the light propagating in a gravitational field. So, we don't know if light propagates in nothing.

The absolute ether is the gravitational field of the universe. The local ether at earth surface is it gravitational field.

We think that: in nothing nothing propagates.

The ether is the point of connection between the micro and the macro cosmos.

Everything is made of the ether and the ether is made by everything.

The ether is a double crystal of vacuons with no mass and an energy of 310MeV.

It is a supersolid and a magnetic superconductor.

It's possible to measure the relative speed to a gravitational field, it's possible to measure the absolute speed in the universe. Everything is relative.

There are no closed systems for gravity.

$$m_e x_e = \frac{h}{c}$$

A formula with only the electron Compton wavelength is never exact.

Physics must be based on the old logic and common sense.

The existence is eternal.

Why do we exist? Because the nothing never existed.

We are the existence studying itself.

The existence is intelligent.

There was no beginning neither an end.

Physics will explain everything, including god and the world of the spirits, the world of the longitudinal waves.

Everything is physics. The metaphysics doesn't exist.

Nothing is outside the reason.

The total knowledge is possible.

Planck units scale is a bosh. There's no Planck time, length, mass, charge, etc.

Why should they exist? Only because the units are correct?

We are immortal. And we must live according to that.

The sum of all that exists is equal to zero but the opposing signs are set distanced.

The world is simple and naïve.

Quasars don't show time dilation?

The quasars light is redshift according the Hubble law, so they show time dilation of the light. But that light oscillates in intensity. Is this oscillation that has no time dilation or no redshift.

So, the period of the light has time dilation, but the oscillation in the macroscopic time doesn't.

So, time dilation doesn't exist, what exists is the dilation of the period of an electromagnetic wave.

Lorentz equations give the Doppler shift for transversal waves. They are valid for water surface waves.

All trash is culture.

The electrical mobility is the inverse of a magnetic field.

Electron electric field:

$$E_e = 2\pi k_B' f_e^2 \quad ; \quad k_B' = k_B \left(1 - \frac{\pi^3 \alpha^2}{2} \right)$$

Electron acceleration and Saraiva's constant:

$$E_p = m_e g_e R = \frac{q_e^2}{4\pi\epsilon_0 R} \dots\dots; \dots\dots R = \frac{nx_e}{2\pi\alpha}$$

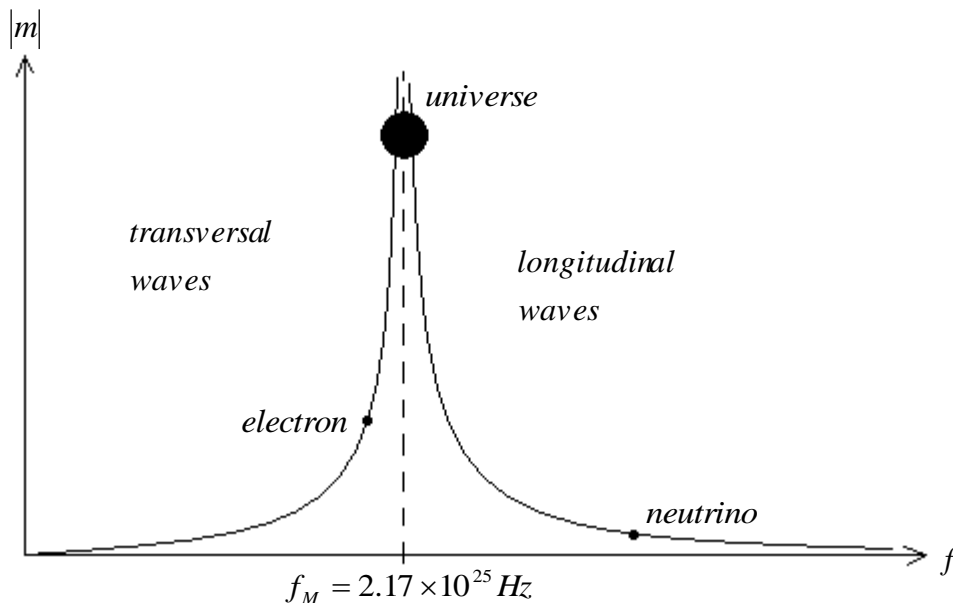
$$\Leftrightarrow \dots\dots g_e = \frac{\pi\alpha^2 q_e^2}{\epsilon_0 x_e^2 m_e n^2} = \frac{9.044 \times 10^{22}}{n^2}$$

$$g_e = \frac{S \cdot c^2}{x_e^3} \frac{4}{\alpha^2 n^2}$$

$$S \approx \frac{\pi\alpha^4 q_e^2 x_e}{4c^2 \epsilon_0 m_e} \left(1 - \frac{\alpha}{3\pi}\right)$$

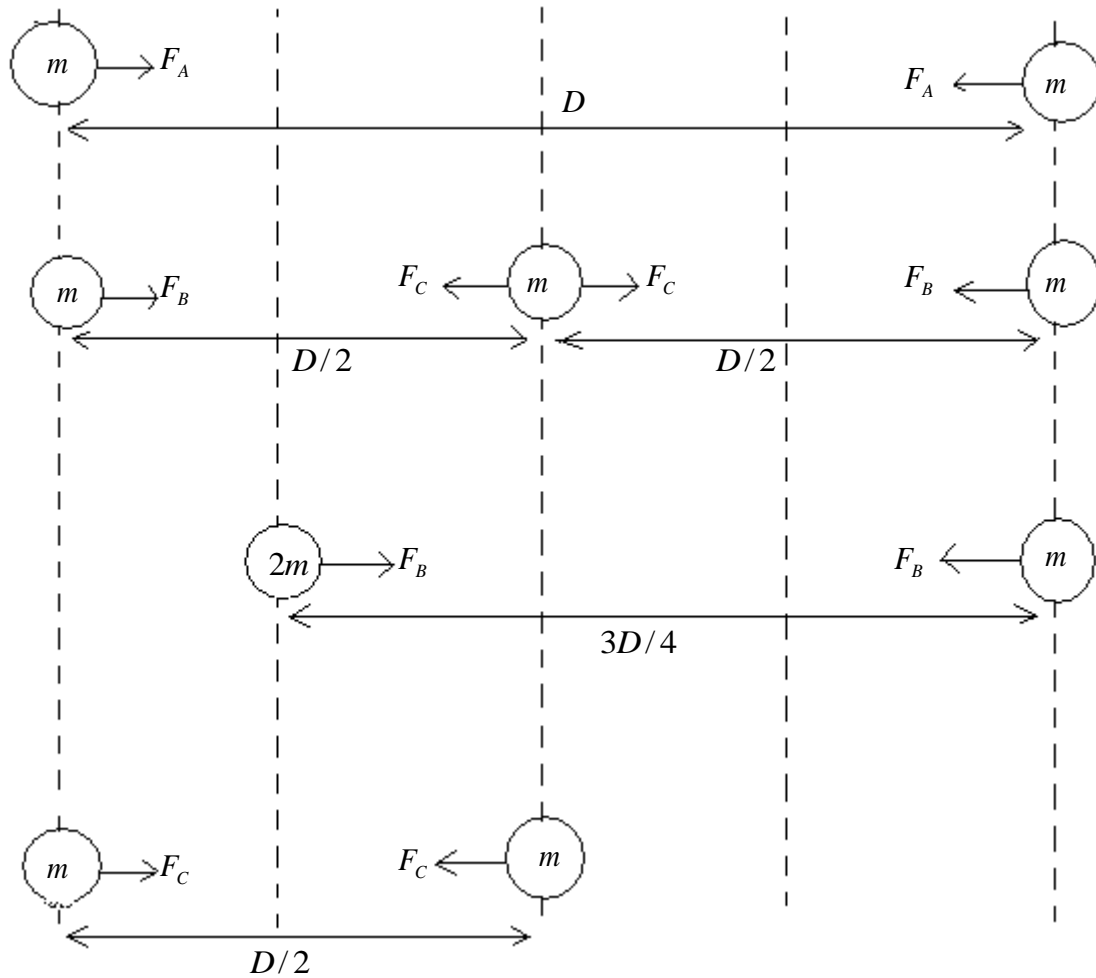
In nature there are no mysteries and paradoxes.
 In nature there is a lot of ignorance.
 God can't violate the laws of physics.
 The abstract mathematics is a bosh.
 The abstract physics is a swindle.

Mass of everything that exists:



The absolute aether is the gravitational field of the universe.
 The particles are rotating waves.

The gravitational force, it's an electric force between a great number of electric dipoles and it, **can be shielded**. No comments:



$$F_A = \frac{Gm^2}{D^2} ; \quad F_B = \frac{G2m^2}{(3D/4)^2} = \frac{32}{9} F_A$$

$$F_C = \frac{Gm^2}{(D/2)^2} = 4F_A ; \quad F_{B2} = \frac{Gm^2}{D^2} + \frac{Gm^2}{(D/2)^2} = 5F_A$$

$$F_C - F_B = \frac{4}{9} F_A ; \quad \Delta F = F_{B2} - F_B = \frac{13}{9} F_A$$

Any shield have mass. The amount of the shielding force is equal to the amount of the force that the shield generates. So, everything behaves as there is no shielding effect.

About quantum mechanics

A particle is a rotating wave, it's not solid as a macroscopic particle.

The quantum mechanics is non deterministic because of the fault of information.

The entanglement is totally classic.

We make confusion between measurement and interaction. A measurement is possible without disturb the state.

The wavefunction is the magnetic vector potential.

There are not a quantum and a classic physics. There's only one physics.

Quantum mechanics is a particular case of the classic physics.

The virtual photons have speeds much greater than light speed constant, what appears as non locality.

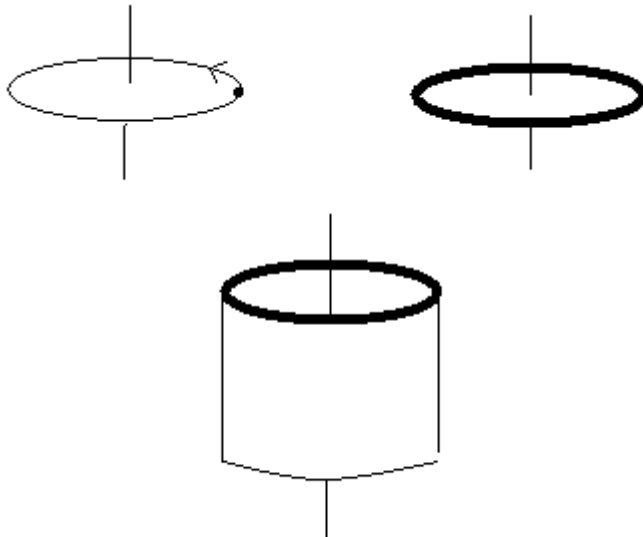
Everything measures everything all the time. Human measurement is not special.

A particle or a wave has a precise state all the time, measured or not by a human.

Electron moment of inertia:

$$I_e = m_e \frac{x_e^2}{4\pi^2} = m_e R_e^2 = 1.358 \times 10^{-55}$$

Mass configuration:



$$I = mR^2$$

Is not a solid configuration.

The mass is a vector that is rotating.

$$E_\gamma = m_e c^2 = m_e 4\pi^2 R_e^2 f_e^2 = m_e R_e^2 \times 4\pi^2 f_e^2 = I_e \omega_e^2$$

$$\frac{h}{4\pi} = \frac{mecxe}{4\pi} = \frac{meRe c}{2} \dots\dots\dots \Leftrightarrow \dots\dots\dots I_e = m_e R_e^2 = \frac{hx_e}{4\pi^2 \cdot c}$$

Electron electric field:

$$E_e = c^2 \frac{2\pi \cdot k_B'}{x_e^2} = \frac{\pi \cdot q_e}{\alpha \epsilon_0 x_e^2} ; \quad k_B' = k_B \left(1 - \frac{\pi^3 \alpha^2}{2} \right)$$

Power of the transition n1=1 to n2=3:

$$P_W = \frac{q_e^2 \alpha^6 c}{6\pi \epsilon_0 x_e^2 n_1^2 n_2^2 (n_1 + n_2)^2} = 8.2 \times 10^{-12} W$$

$$D = 0.1m \quad \Leftrightarrow \dots\dots\dots I = \frac{P_W}{4\pi \cdot D^2} = 6.53 \times 10^{-11} W / m^2$$

Magnetic vector potential equation:

$$A = A_0 \exp i(kx - wt)$$

$$\log A = \log A_0 + ik|x - ct|$$

$$\log A = \sqrt{\log^2 A_0 + k^2 |x - ct|^2}$$

$$w = c ; x = \lambda ; t = T$$

$$\log A = \sqrt{\log^2 A_0 + 4\pi^2 S^2 / x^6}$$

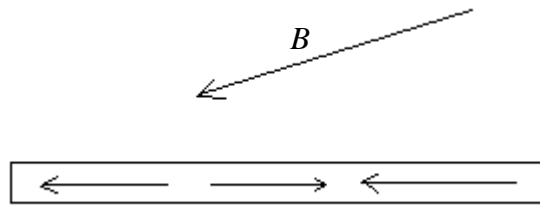
Electron corrections:

$$x_e = \frac{\pi \cdot k_B'}{\epsilon_0} \left(1 - \frac{\sqrt{\alpha}}{10} \right) (1 - \alpha^2) (1 - 2\pi \cdot \alpha^3) (1 - 3\alpha^{7/2}) \left(1 - \frac{\alpha^4}{2} \right)$$

$$x_e = \frac{\pi \cdot k_B'}{\epsilon_0} 0.9914022285 \quad 31$$

$$\pi 0.991402228531 = 3.11458196$$

Magnetization of iron with the earth field:



A bar of iron doesn't magnetize on all the same direction. It takes opposing fields with some distance.

It's this effect that generates the wrong idea that the earth magnetic field reverses the polarity.

Nature is deterministic, classical and naïve, our knowledge is always limited.

About implicate order, Bohm is totally wrong.

The physics laws are above all things, god is just a person.

Everything is entangled with everything.

Abstract mathematics doesn't describe nature.

Light is not quantized, its emission and absorption by matter is, but not always.

Amplitude of a photon:

$$E_Y = \frac{1}{2} k A^2 \dots\dots\dots; \dots\dots\dots k = 4\pi^2 m f^2$$

$$E_Y = \frac{1}{2} 4\pi^2 m f^2 A^2 = \frac{h f}{2}$$

$$4\pi^2 m f A^2 = h \dots\dots\dots; \dots\dots\dots m = \frac{h f}{c^2}$$

$$\Leftrightarrow \dots\dots\dots A = \frac{c}{2\pi \cdot f} = \frac{x}{2\pi} = R$$

The square root of an intensity doesn't exist and is not an amplitude.

Electric dipole moment and mass:

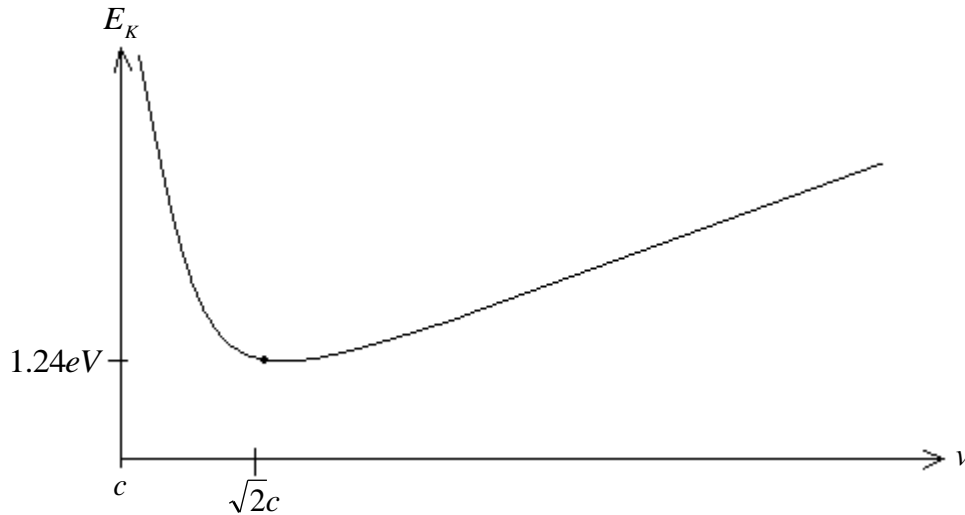
$$E_Y = \frac{1}{2} EDM \times E = \frac{h f}{2} \dots\dots\dots; \dots\dots\dots E = \frac{\pi \cdot q_e}{\alpha \epsilon_0 x^2}$$

$$EDM = \frac{q_e x}{2\pi} = q_e R \dots\dots\dots; \dots\dots\dots m = \frac{q_e k_B}{x} \left(1 - \frac{\pi^3 \alpha^2}{2} \right)$$

Electron neutrino kinetic energy

$$E_K = \frac{cq_e \sqrt{S} v^2}{2\sqrt{v^2 - c^2}} \dots; \dots v \geq 10c \dots \Leftrightarrow \dots E_K = \frac{cq_e \sqrt{S}}{2} v$$

The neutrinos travel always faster than light speed constant.



$$E_K \text{ min} = q_e \sqrt{S} c^2 = \text{rest..energy}$$

$$v = c + \Delta c \dots \text{and} \dots \Delta c \leq c$$

$$E_K = \frac{q_e \sqrt{S} c^3}{2\sqrt{2c\Delta c}} = \frac{2.1105 \times 10^{-11}}{\sqrt{\Delta c}} \text{ (J)} = \frac{131.73}{\sqrt{\Delta c}} \text{ (MeV)}$$

For muon neutrinos, mass = $m_{\mu\nu}$

$$E_K = \frac{m_{\mu\nu} c^3}{2\sqrt{2c\Delta c}}$$

Experimental confirmation:

FERMILAB – 1970

$$E_K = 115 \text{ GeV} \dots \dots \dots ; \dots \dots \dots \Delta c \leq c 4 \times 10^{-5} \text{ m/s}$$

$$\Leftrightarrow \dots \dots m_{\mu\nu} = 3.67 \times 10^{-27} \text{ kg}$$

MINOS – 2007

$$\Delta c \leq c 12.6 \times 10^{-5} \dots\dots\dots \Leftrightarrow \dots\dots\dots E_K = 64.8 \text{ GeV}$$

OPERA – 2011

$$E_K = 17 \text{ GeV} \dots\dots\dots; \dots\dots\dots \Delta c \leq c 2.7 \times 10^{-6}$$

$$\Leftrightarrow \dots\dots\dots m_{\mu\nu} = 1.4 \times 10^{-28}$$

There are more confirmations.

SUPERNOVA – 1987A

$$\Delta t = 3h = 1.08 \times 10^4 \text{ s} \dots\dots\dots; \dots\dots\dots D = 1.485 \times 10^{21} \text{ m}$$

$$E_K = 21.25 \text{ MeV} \quad ; \quad \Delta c = \frac{\Delta t c^2}{D} = 0.6536 \text{ m/s}$$

$$\Leftrightarrow \dots\dots\dots E_K = 163 \text{ MeV}$$

Muon neutrino mass

MINOS muon neutrino experiment:

$$E_K = 3\text{GeV} \dots\dots; \dots\dots \Delta c = c1.26 \times 10^{-4} \text{ m/s}$$

$$\Leftrightarrow \dots\dots m_{\mu\nu} = 1.7 \times 10^{-28} \text{ kg}$$

Thermal resistance quantum

$$R_{THQ} = \frac{3h}{\pi^2 k_B^2 T} (m^2 / s) = \frac{h}{2Q_e^2} = \frac{1.058 \times 10^{12}}{T}$$

$$T_Q = \frac{6q_e^2}{\pi^2 k_B^2} = 8.2 \times 10^7 \text{ S}$$

Sun surface temperature: $T_s = 6.73 \times 10^7 \text{ S}$

Distance and speed:

$$L = \Delta V \dots\dots; \dots\dots V = \Delta L$$

A variation of speed defines a distance and a distance variation defines a speed.

All that exists is distance and speed.

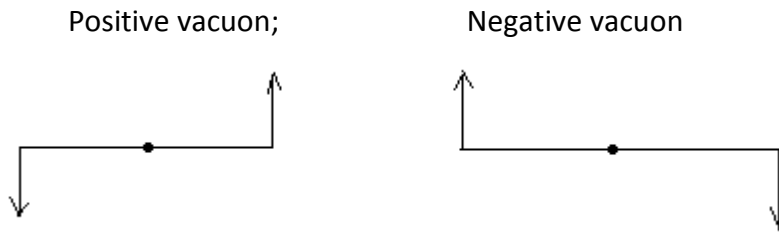
Time is a derived unit.

We can't travel in time physically as we can't travel in electric charge or energy.

Using our memory or an artificial memory we can travel to the past and to the future but only in our heads, not physically.

Vacuons:

$$x = 4 \times 10^{-15} \text{ m} = 2\pi.R \dots\dots \Leftrightarrow \dots\dots R = 6.37 \times 10^{-16} \text{ m}$$



The vacuons are vortices of speed and distance. The vacuons are the quantum of the gravitational fields.

Wiedemann-Franz law:

$$\frac{R_{YE}}{R_{YT}} = \frac{T}{T_0} \dots\dots\dots; \dots\dots\dots T_0 = \frac{3q_e^2}{\pi^2 k_B^2} = 4.1 \times 10^7 S \cdot (L^2 V^4)$$

R_{YE} – Electric..resistivity; .. R_{YT} – Thermal ..resistivity; .. T, T_0 – Temperatures.

- Are there mega-universes made of universes?
- Are there smaller things than vacuons or quarks?
- Did small things are made of smaller things to infinite (the zero), or is there a limit?
- Did big things are made of bigger things to infinite, or is there a limit?

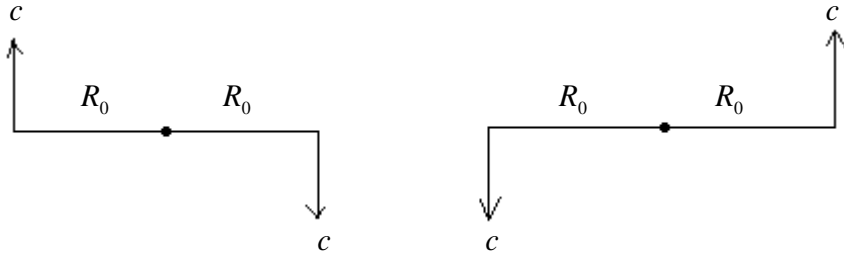
Infinite is equal to zero. Is as difficult to reach the infinite as the zero.
Flying saucers are alien spacecrafts that travel faster than light.

The spirits parasitizes animals to evolve.
We are spirits inside animals. Spirits are immortals.
The spirits choose to live inside animals to learn.
Spirits have sex. Some times a male spirit chooses a female body, and the opposite.
Spirits are treated to forget the past lives.
Spirits live in the longitudinal waves worlds.
Is the existence scales fractal to infinite, or self-similar?
Now there are no quasars. They exist in the past for more than 6.3 billions years.
When we see very small things, we see the future.
Supernovae fading don't have time dilation as quasars.

To prove that neutrinos are tachyons, they must have the minimum possible kinetic energy. For the minimum kinetic energy (1.243eV) they move at 1.41c.

There are four vacuons: two electric and two magnetic.

Electric vacuons: $R_0 = 6.37 \times 10^{-16} m$



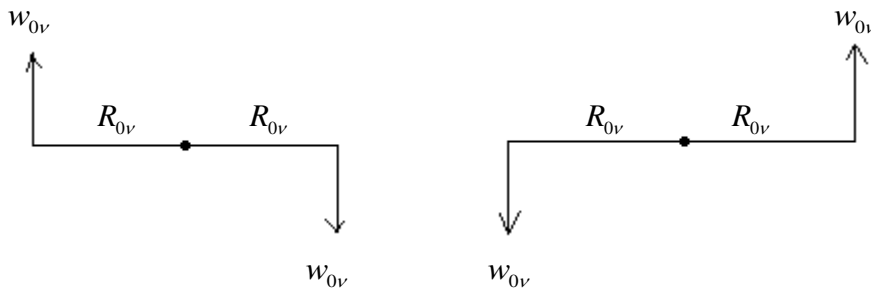
Magnetic vacuons:

$$\mu_{0v} = \mu_0 \frac{cq_e S}{h} = 1.74 \times 10^{-17} \dots; \dots \epsilon_{0v} = \epsilon_0 \frac{cq_e S}{h} = 1.23 \times 10^{-22}$$

$$\frac{1}{\mu_{0v}} = \frac{m_{0v}}{\epsilon_{0v}^3} \dots \Leftrightarrow \dots m_{0v} = 1.06 \times 10^{-49} kg$$

$$m_{0v} w_{0v} \sqrt{S} = h \dots \Leftrightarrow \dots w_{0v} = 4.52 \times 10^{32} m/s$$

$$R_{0v} = \frac{\sqrt{S}}{2\pi} = 2.2 \times 10^{-18} m$$



The vacuons have no mass, but have energy:

$$E_0 = \frac{\epsilon_0^2}{\mu_0^2} = 310 MeV$$

The proton and the neutron are made of three vacuons.

Neutrino fine structure constant

$$\alpha_\nu = \frac{2.\alpha.S}{q_e.\mu_0} = \frac{S}{k_B'} = 1.38607445 \times 10^{-11}$$

God want us to be ignorant.
Working with no salary is slavery.

Exact value of the fine structure constant:

$$\alpha = \frac{1}{\sqrt{137^2 + \pi^2}} \left(1 + \frac{\pi.\alpha^3}{10} \right) \dots\dots\dots \Leftrightarrow$$

$$\Leftrightarrow \dots\dots\dots \alpha = \frac{1}{137.035998529} = 7.29735259884 \times 10^{-3}$$

Basic program: $1/\alpha = 137.036 - \Delta n$

$$\Delta n = 10^{-6}$$

$$a = 137.036$$

$$p = 3.14159265$$

$$b = \text{SQR}(137^2 + p^2)$$

$$\text{FOR } m = 1.\text{TO} .10000$$

$$\Delta n = (p/10 - ba^2 + a^3) / (\Delta n^2 + \Delta n(b + a) - 2ba + 3a^2)$$

PRINT. Δn

NEXT. m

$$\Leftrightarrow \dots\dots\dots \Delta n = 1.470619 \times 10^{-6}$$

Constants, SI units (2013)

$$\alpha = 7.29735259884 \times 10^{-3}$$

$$c = 2.997924562 \times 10^8$$

$$\mu_0 = 1.2566374324 \times 10^{-6}$$

$$q_e = 1.602176462 \times 10^{-19}$$

$$\varepsilon_0 = \frac{1}{c^2 \mu_0} = 8.8541853099 \times 10^{-12}$$

$$k_B' = \frac{q_e \mu_0}{2\alpha} = 1.37951050621 \times 10^{-23}$$

$$k_B = k_B' \left(1 - \frac{\pi^3 \alpha^2}{2} \right) = 1.3806503202 \times 10^{-23}$$

$$S = \left(\frac{q_e \mu_0 \alpha}{12 \varepsilon_0} \right)^2 = 1.91210455032 \times 10^{-34}$$

$$h = \frac{q_e^2}{2\alpha \varepsilon_0 c} = 6.62607061331 \times 10^{-34}$$

$$R_\infty = 1.0973731568 \times 10^7$$

$$x_e = \frac{\alpha^2}{2R_\infty} = 2.42631025852 \times 10^{-12}$$

Saraiva's constant:

$$S = \frac{h \alpha^3}{72 \varepsilon_0^3 c^3} = 1.91210455040 \times 10^{-34} \text{ m}^2$$

$$S = \left(\frac{\alpha^2 k_B'}{6 \varepsilon_0} \right)^2 = 1.91210455035 \times 10^{-34}$$

There are more formulas. I don't remember the derivations.

Some approximated derivations:

From the electron Cooper pairs

$$F = g_e m_e = \frac{q_e^2}{4\pi \varepsilon_0 R^2} \dots; \dots g_e = \frac{Sc^2}{x_e^3} \dots; \dots m_e = \frac{h}{cx_e} \dots; \dots R = \frac{nx_e}{2\pi}$$

$$n \approx \frac{2}{\alpha^2} ; \quad S \approx \frac{\pi}{2} x_e^2 \alpha^5 = 1.914 \times 10^{-34}$$

From the neutrino Cooper pairs:

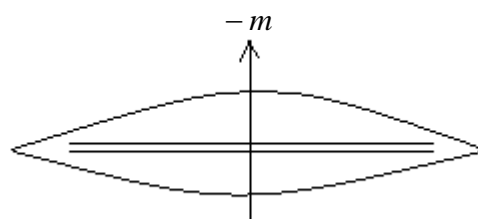
$$S \approx \sqrt{\frac{\pi^3 h \alpha^{10} \mu_0}{c}} = 1.92 \times 10^{-34}$$

How flying saucers work



Energy source – The flying saucers generate electricity with Josephson junctions that catch the sun and galactic neutrinos.

Propulsion system – A flying saucer is basically a plane capacitor (10^6 capacitors) that generate a negative mass (mass is a vector). The mass is an electric dipole moment.



$$m = \frac{Q \cdot k_B}{d}$$

m – Mass; Q – Electric charge of the capacitor; k_B -- Boltzmann constant;
d – Distance between the plates of the capacitor.

$$Q = CV \dots; \dots C = \epsilon \frac{A}{d} \dots \Leftrightarrow \dots Q = \frac{\epsilon AV}{d} \dots \Leftrightarrow$$

$$\Leftrightarrow \dots m = \frac{n \epsilon AV k_B}{d^2}$$

$$A = \pi \cdot R^2 \dots; \dots R = 3m \dots; \dots V = 10^6 \text{ Volt} \dots; \dots \epsilon = 3 \times 10^{-5} \text{ m} \dots; \dots d = 10^{-9} \text{ m}$$

$$m = 12 \text{ Tons}$$

Acceleration-off system – The flying saucers travel at speeds much greater than light speed, so they must do very high accelerations. The humans inside don't feel any acceleration because the forces are transmitted to each atom of the body by a strong magnetic field. The bodies are diamagnetic so they become trapped in the field.

The flying saucers must be very aerodynamic because at very high speeds the vacuum becomes very dense. Speeds as a thousand light speed or greater can be reached. The neutral macroscopic masses don't have the light speed limit.

There are hundreds of civilizations in our galaxy.

Some flying saucers come from the world of the spirits, also our world. Flying saucers have been seen at Fátima during Mary apparitions.

Supernovae don't have time dilation because time dilation doesn't exist.

What exists is period dilation of an electromagnetic wave, as is confirmed by the quasars.

There are too many types of supernovae, what is there are more.

Very far supernovae don't show time dilation for the known types.

Our universe is not isotropic and is not expanding. It's rotating and the redshifts come from the transversal Doppler effect, predicted by Einstein. Instead of seeing far types IA supernovae they are seeing another type of supernova.

Tired light doesn't exist, as is evident.

There are 12 types of supernovae, why not 24? For so far objects nothing is sure.

The Planck law is wrong

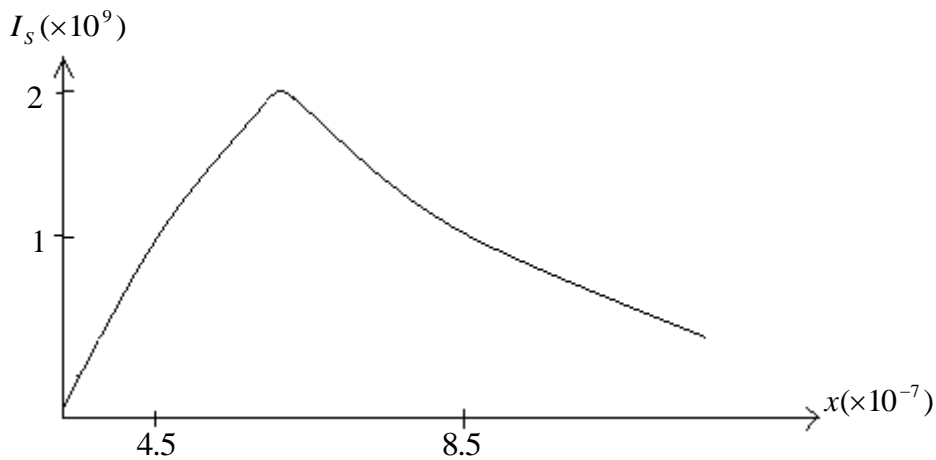
Sun spectral irradiance

$$I_s = \frac{kTx^2}{(x_M^{1.5} - x^{1.5})^2 + p} \dots (W / m^3)$$

$x_M = 4.5 \times 10^{-7} m$ – Wavelength..at..the..max imum ;

$p = 3.78 \times 10^{-20} m^3$; $k = 5.55 \times 10^{-6}$

$T = 6.73 \times 10^7 S$ – Temperature..of ..the..sun..surface(equal..to..int ensity)



$$I_s = \frac{I}{x} = \frac{T}{x} \dots; \dots I - Intensity$$

$$kT = 373.5S \dots; \dots TR_s^2 = 373.5D_{TS}^2 4$$

The god's creation never happens.
 Life and nature are eternal.
 Maybe god creates the human life on the earth.
 Maybe men are not natural.

We have 6 senses, 5 more the sense of acceleration. As it is stereoscopic we can detect gravitational waves.

The total energy of the universe is equal to zero:

Positive kinetic energy:

$$E_{YK} = M_U c^2 = 1.62 \times 10^{70} J$$

Negative potential energy:

$$E_{yp} = M_U g_U R_U = 1.62 \times 10^{70} J$$

M_U – Mass of the universe; c – Light speed constant; g_U -- Universe acceleration;
 R_U -- Universe radius.

Why the existence exists?

Because the nothing can't exist.

The nothing is unstable because it doesn't admit its own existence.

If nothing exists the nothing can't exist.

The existence is eternal, with no beginning and no end.

Human life at earth is artificial. God creates the human life at earth.

God is a person from the world of the spirits, it is a dictator, that reaches its power by force. God can't violate the natural laws.

The world of the spirits is the world of the electromagnetic longitudinal waves.

There we are eternal or immortal.

Physics is the science of all sciences. Physics must explain everything, including god.

The de Broglie-Bohm theory or pilot wave theory is the correct interpretation of quantum mechanics.

Nonlocality means that the particles communicate with longitudinal waves with speeds much greater than light speed.

The wavefunction is the magnetic vector potential. The squared wavefunction is the electric flux. The wavefunction to the fourth power is the energy.

This is very important to understand the modern physics exotic mathematical theories. Two ways of writing an equation of a phenomenon with four solutions:

Solutions: $x = a, b, c, d$

$$x^4 - Ax^3 + Bx^2 - Cx + D = 0 \quad \Leftrightarrow$$

$$\Leftrightarrow \begin{cases} a + b + c + d = A \\ ab + ac + ad + bc + bd + cd = B \\ abc + abd + acd + bcd = C \\ abcd = D \end{cases}$$

This is the basis for explaining quantum mechanics, the standard model and quantum electrodynamics. Because we have only relations between solutions or observables.

More exact formula for spectral irradiance out of the earth atmosphere:

$$I_s = \frac{T.k.x^3}{(x_M^2 - x^2)^2 + p}$$

$$x_1 = 3 \times 10^{-7} m.; \dots x_2 = 1.2 \times 10^{-6} m... \rightarrow \dots I_s = 5 \times 10^8 W / m^3$$

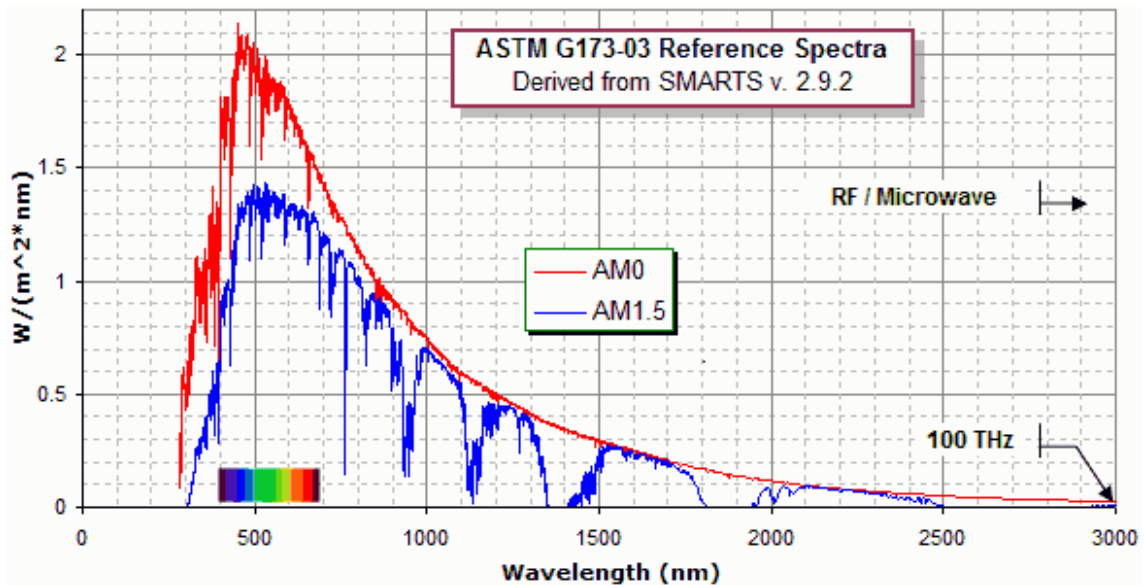
$$x_M = 4.5 \times 10^{-7} m.... \rightarrow \dots I_s = 2.1 \times 10^9 W / m^3$$

$$\Leftrightarrow \dots \dots p = 1.1451 \times 10^{-26} m^4 \dots \dots; \dots \dots k = 3.92 \times 10^{-6}$$

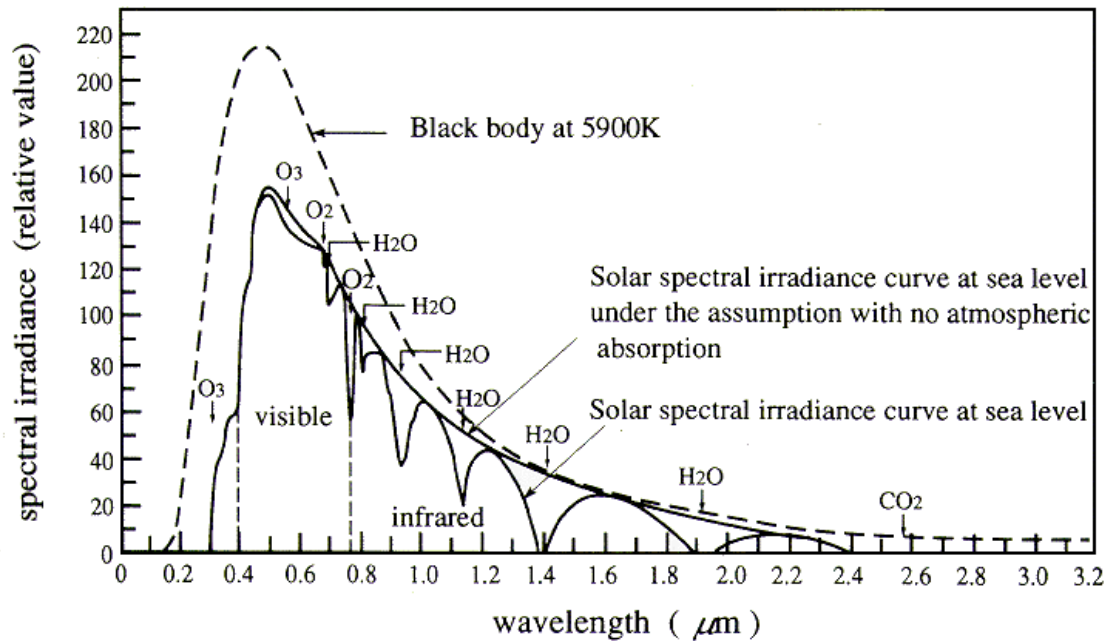
$$T.k = 263.9S = 261.2K$$

We are using the temperature at the sun surface and the irradiance at earth.
The exact value k must be:

$$6.73 \times 10^7 R_s^2 = 1465.6 D_{TS}^2 \dots \dots \Leftrightarrow \dots \dots k = \frac{1465.6}{T} = 2.2 \times 10^{-5}$$



The red line is at earth out of the atmosphere. The blue line is at earth surface with the atmosphere absorption.



As we see the Planck law is wrong because we can't reach the correct value only by using a constant emissivity because the difference between the values is not a constant.

God doesn't know that it existed dinosaurs at earth.

Spectral irradiance maximum: $x_M = 4.5 \times 10^{-7} m \dots \rightarrow \dots I_{SM} = 2.1 \times 10^9 W / m^3$

$$I_s = \frac{T.k.x^3}{(x_M^2 - x^2)^2 + p} \quad ; \quad p = 1.1451 \times 10^{-26} = (3.27 \times 10^{-7})^4$$

$$\frac{dI_s}{dx} = 0 \dots \Leftrightarrow \dots x^4 + 2x_M^2 x^2 - 3x_M^4 - 3p = 0$$

$$\Leftrightarrow \dots x = x_M = 4.93 \times 10^{-7} \approx 4.5 \times 10^{-7}$$

The equation is very good but is not exact. The Planck formula is totally wrong.

Sun intensity at the top of the earth atmosphere (I_T):

Intensity or temperature at the sun surface -- $I = T = 6.73 \times 10^7 W / m^2$..or..S

$$I \cdot R_S^2 = I_T \cdot D_{TS}^2 \dots\dots \Leftrightarrow \dots\dots I_T = 1465.6 W / m^2 \text{ or temperature} = 401 \text{ Kelvin}$$

$$R_S = \text{sun..radius.}; \dots\dots D_{TS} = \text{dis tan ce..earth - sun}$$

Maximum intensity at surface: $I_{TS} = 1004 W / m^2$

$$\frac{I_{TS}}{I_T} = 68.5\% \dots\dots \rightarrow \dots\dots \text{Blocked..}30\%$$

The Sakuma-Hattori equations are all wrong, totally wrong.

Modern economics is a scam. Money can't make money with no work, so the workers are being stolen. Interest is a scam.

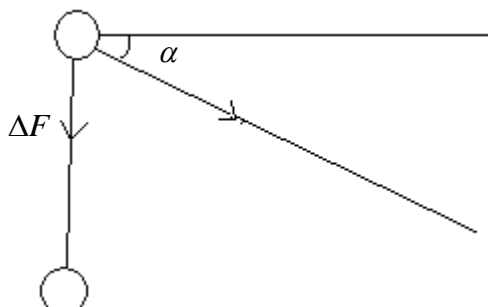
The money is the unit of energy of the societies.

Energy can't make more energy without any work, even if the first energy is free, like the sun energy. It is needed work to catch the sun's energy.

The Higgs doesn't exist.

The particle found mass: $m = \frac{\sqrt{2}h}{c\sqrt{S}} = 126.8 \text{ GeV}$

When we add mass its total value is lower than the sum of the masses, because:



The true directions of the forces are opposite.

$$\Delta F = \frac{q_e^2}{4\pi\epsilon_0(D^2 + d^2)} \sin \alpha = \frac{q_e^2}{4\pi\epsilon_0(D^2 + d^2)^{3/2}}$$

$$D = d \quad \Leftrightarrow \dots \Delta F = \frac{q_e^2}{16\pi\epsilon_0 d^2}$$

$$\Delta mc^2 = \Delta F d = \frac{q_e^2}{16\pi\epsilon_0 d} \dots \Leftrightarrow \dots \Delta m = \frac{q_e^2 \mu_0}{16\pi \cdot d}$$

$$d = 2\sqrt{S} \dots \Leftrightarrow \dots \Delta m = 2.32 \times 10^{-29} \text{ kg}$$

$$d = x_p \dots \Leftrightarrow \dots \Delta m = 4.86 \times 10^{-31} \text{ kg}$$

Correct value of the gravitational constant:

$$G = \frac{h\alpha^7 \mu_0^3 c^3}{216\pi \cdot \epsilon_0^3} = 8.288 \times 10^{-11} \text{ m}^{-3}$$

A flying saucer takes 3 days to travel to Alpha-Centauro:

$$D = 9.46 \times 10^{15} \text{ m} \dots; \dots t = 2.6 \times 10^5 \text{ s} \dots \Leftrightarrow \dots v = 3.65 \times 10^{10} \text{ m/s}$$

Only charged particles have a speed limit. Neutral macroscopic mass has no limit.



Magnetic field of a flying saucer:

$$B = 10^4 T \dots\dots\dots; \dots\dots\dots R = 3m$$

Acceleration off system:

$$g = B \frac{dB}{dR} = \frac{\mu_0^2 I_E^2}{4R^3} \dots\dots\dots; \dots\dots\dots I_E = \frac{2RB}{\mu_0} = 4.77 \times 10^{10} A$$

$$g = 3.33 \times 10^7 ms^{-2} \dots\dots\dots \Leftrightarrow \dots\dots\dots t = \frac{v}{g} = 18.3'$$

It takes 18 minutes to reach the speed of $3.65 \times 10^{10} m/s$ and the passengers don't feel any acceleration. The needed energy is very little because the ship has negative mass.

Stellar black hole

Electric charge: $T = gQ_e \dots\dots\dots; \dots\dots\dots Q_e = 1C$

T – Temperature; g – Gravitational acceleration; Qe – Electric charge.

$$T = 3.1 \times 10^{13} S \dots\dots\dots; \dots\dots\dots R = G^{-1/3}$$

G – Gravitational constant; R – Radius of the black hole.

Magnetic field:

$$B = \frac{\mu_0 c G^{2/3}}{4\pi} = 5.66 \times 10^{-6} T$$

Magnetic field constant:

$$R_0 = \frac{cG^{-1/3}}{2\pi.B} = 1.94 \times 10^{16} m = 2 LY$$

$$B = f \frac{R^2}{R_0} \dots\dots\dots; \dots\dots\dots f = \frac{cG^{1/3}}{2\pi} = 2.1 \times 10^4 Hz$$

Polar electric field:

$$E = \frac{Q_m c}{G^{-2/3}} = Bc \dots \Leftrightarrow \dots Q_m = 30.0 \text{ Weber}$$

$$E = 1.7 \times 10^3 \text{ V/m}$$

Polar jets accelerations for the electron and the proton:

$$Eq_e = m_e a_e \dots \Leftrightarrow \dots a_e = 3 \times 10^{14} \text{ ms}^{-2}$$

$$Eq_p = m_p a_p \dots \Leftrightarrow \dots a_p = 1.6 \times 10^{11}$$

Jets speeds:

$$v_e = c \dots ; \dots v_p = 7.7 \times 10^6 \text{ m/s}$$

Take mathematics out of the physics.

Precession of the particles

$$f_P f_R = \frac{mgR}{4\pi^2 I_S} \dots ; \dots I_S = mR^2 \dots \rightarrow \dots \text{For fermions}$$

$$f_P f_R = \frac{g}{4\pi^2 R} \dots ; \dots g = \frac{v^2}{R}$$

$$f_P f_R = \frac{v^2}{x^2} = \frac{c^2}{S} = f_M^2$$

f_P -- Frequency of precession; f_R -- Frequency of rotation or Compton frequency;
 I_S -- Moment of inertia; g -- Acceleration; R -- Radius; v -- Speed; x -- Compton wavelength.

The particles and waves emit a longitudinal wave with the frequency of precession – that's the pilot wave.

For the electron:

$$f_P = \frac{c^2}{S f_R} \dots ; \dots f_R = \frac{c}{x_e} = 1.2356 \times 10^{20} \text{ Hz}$$

$$f_P = 3.8 \times 10^{30} \text{ Hz}$$

Pilot wave speed of the electron:

$$w = \sqrt{S} f_p = 5.25 \times 10^{13} \text{ m/s}$$

Causality is not related to light speed because there are very high speeds of the longitudinal waves. Causality is never violated.

For the neutrino (longitudinal particle):

$$f_R = \frac{h}{q_e S^{3/2}} = 1.564 \times 10^{36} \text{ Hz}$$

$$f_p = 3 \times 10^{14} \text{ Hz} \dots \Leftrightarrow \dots w = c$$

For a visible photon:

$$f_R = 3 \times 10^{14} \text{ Hz} \dots \Leftrightarrow \dots f_p = 1.564 \times 10^{36} \text{ Hz} \dots \Leftrightarrow \dots w = 2.16 \times 10^{19} \text{ m/s}$$

The photons pilot waves are very fast what explains the delayed quantum experiments.

$$\frac{v^2}{x^2} = \frac{c^2}{S}$$

$$v = c \dots \Leftrightarrow \dots x = \sqrt{S}$$

$$v = w_v = \frac{h}{q_e S} \dots \Leftrightarrow \dots f = \frac{c}{x} = 3 \times 10^{14} \text{ Hz}$$

w_v -- Wave speed of the neutrino or wave speed of the pilot wave of a visible photon.

Larmor precession:

$$2\pi \cdot f_p = \frac{q_e}{m_e} B \dots \dots \dots f_p = \frac{f_M^2}{f_e}$$

$$\Leftrightarrow \dots B_v = 1.36 \times 10^{20} \text{ (T)} = 2\pi \cdot w_v \text{ (m/s)} \text{ -- Magnetic field of the neutrino}$$

$$2\pi \cdot f_e = \frac{q_e}{m_e} B_e$$

Earth precession formula

$$t_p = 26000 \text{ years} = 8.2 \times 10^{11} \text{ s} \dots \Leftrightarrow \dots f_p = 1.22 \times 10^{-12} \text{ Hz}$$

$$f_R = \frac{1}{24h} = 1.1574 \times 10^{-5} \text{ Hz}$$

$$g_S = \frac{GM_S}{D_{ES}^2} = 5.93 \times 10^{-3} \text{ ms}^{-2} \dots; \dots g_M = \frac{GM_M}{D_{EM}^2} = 3.33 \times 10^{-5} \text{ ms}^{-2}$$

$$4\pi^2 f_p f_R = \frac{\alpha \cdot g}{D} = 5.574 \times 10^{-16}$$

$$f_{PS} = \frac{\alpha \cdot g_S}{4\pi^2 f_R D_{ES}} = 6.3 \times 10^{-13} \text{ Hz} \dots; \dots f_{PM} = \frac{\alpha \cdot g_M}{4\pi^2 f_R D_{EM}} = 1.39 \times 10^{-12} \text{ Hz}$$

$$f_{PM} - f_{PS} = 7.55 \times 10^{-13} \text{ Hz} \dots; \dots f_{PM} + f_{PS} = 2 \times 10^{-12} \text{ Hz}$$

$$\frac{\alpha \cdot g_S}{D_{ES}} = 2.9 \times 10^{-16} \dots; \dots \frac{\alpha \cdot g_M}{D_{EM}} = 6.33 \times 10^{-16}$$

α -- Fine structure constant; g – Acceleration of the sun and the moon at earth;
 D – Distance earth-moon and earth-sun; f_{PS}, f_{PM} -- Frequencies of precession of the earth from the sun and the moon.

The accelerating universe is a bosh, and there's no proof of that. The observation of supernovas can be explained with several other hipotesis.

Einstein's field equations are all wrong. Spacetime doesn't exist.

Cosmological constant is also a bosh.

Sun precession

$$4\pi^2 f_p f_R = \frac{\alpha \cdot g}{D} \dots; \dots g = \frac{GM}{D^2}$$

$$f_p = \frac{\alpha \cdot GM}{4\pi^2 f_R D^3} \dots; \dots f_R = \frac{1}{25.5d} = 4.54 \times 10^{-7}$$

$$\text{Mercury -- } M = 3.3 \times 10^{23} \text{ kg} \dots; \dots D_{MS} = 5.8 \times 10^{10} \text{ m}$$

$$f_p = 4.6 \times 10^{-17} \text{ Hz} \dots\dots \Leftrightarrow \dots\dots t_p = 6.9 \times 10^8 \text{ years}$$

Venus -- $M = 4.9 \times 10^{24} \dots\dots; \dots\dots D_{VS} = 1.1 \times 10^{11}$

$$f_p = 10^{-16} \dots\dots \Leftrightarrow \dots\dots t_p = 3.2 \times 10^8 \text{ years}$$

Earth -- $M = 6 \times 10^{24} \dots\dots; \dots\dots D_{ES} = 1.5 \times 10^{11}$

$$f_p = 4.85 \times 10^{-17} \dots\dots \Leftrightarrow \dots\dots t_p = 6.5 \times 10^8 \text{ years}$$

Jupiter -- $M = 1.9 \times 10^{27} \dots\dots; \dots\dots D_{JS} = 7.8 \times 10^{11}$

$$f_p = 1.14 \times 10^{-16} \dots\dots \Leftrightarrow \dots\dots t_p = 2.8 \times 10^8 \text{ years}$$

Period of precession of the sun:

$$t_p = 300 \text{ ..million..years}$$

Period of the sun in the galaxy:

$$t = 250 \text{ ..million..years}$$



There are a lot of civilizations in the galaxy.

Correct density of the air:

$$Pm_0 = \rho \cdot k_B T_S \dots; \dots P = 10^5 \text{ Pa} \dots; \dots m_0 = 4.81 \times 10^{-26} \text{ kg}$$

$$20\text{C} \text{ --- } 418.74\text{S} \text{ --- } \rho = 0.8327$$

$$0\text{C} \text{ --- } 315.68\text{S} \text{ --- } \rho = 1.1045$$

$$-25\text{C} \text{ --- } 215.0\text{S} \text{ --- } \rho = 1.6217$$



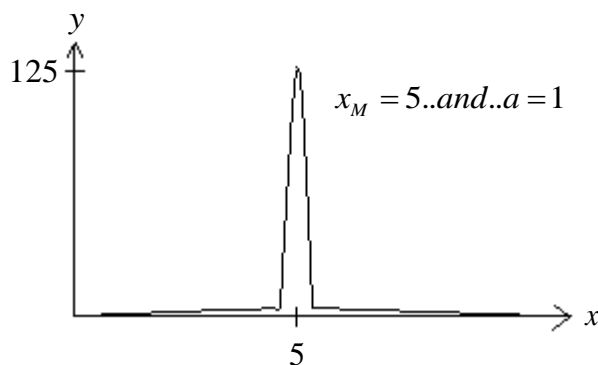
Problem of the spectral irradiance formula:

The constant p must be positive and it controls the maximum value. Mathematically p must be equal to zero.

$$I_s = \frac{T \cdot k \cdot x^3}{(x_M^2 - x^2)^2 + p} ; \quad \frac{dI_s}{dx} = 0 \dots \Leftrightarrow \dots p = 0$$

Study of the equation:

$$y = \frac{x^3}{(x_M^2 - x^2)^2 + a}$$



Aharonov-Bohm solenoid effect:

Outside a solenoid there's also a magnetic field.

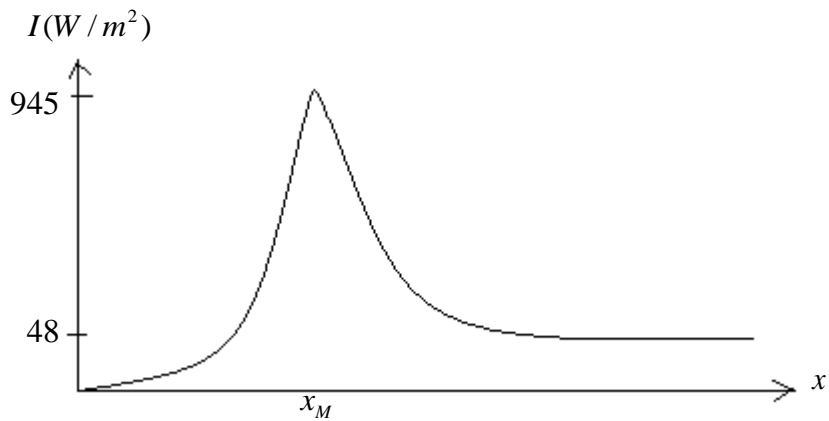
Another equation for the sun intensity at earth

Spectral irradiance:

$$I_s = \frac{T.k.x^3}{(x_M - x)^4 + p} \dots\dots\dots p = 2.072 \times 10^{-27} \dots\dots\dots k = 7.094 \times 10^{-7}$$

Intensity:

$$\frac{I}{x} = \frac{T.k.x^3}{(x_M - x)^4 + p} \dots\dots\dots \Leftrightarrow \dots\dots\dots I = \frac{T.k.x^4}{(x_M - x)^4 + p}$$



$$x \rightarrow \infty \dots\dots\dots \Leftrightarrow \dots\dots\dots I = T.k$$