

The photons

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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:

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

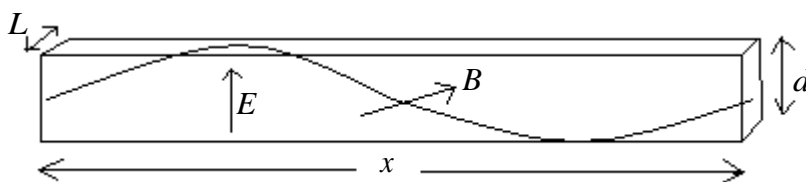
Photons don't travel at the light speed constant, they have lower speeds and variable:

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

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

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

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

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

The aether:

Electric superconductor: $R_E = 0 \dots; \dots q_e = 0$

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: $R_E = \infty \dots; \dots q_m = 0$

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: $R_m = 0 \dots; \dots m = 0$

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:

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

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

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

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

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

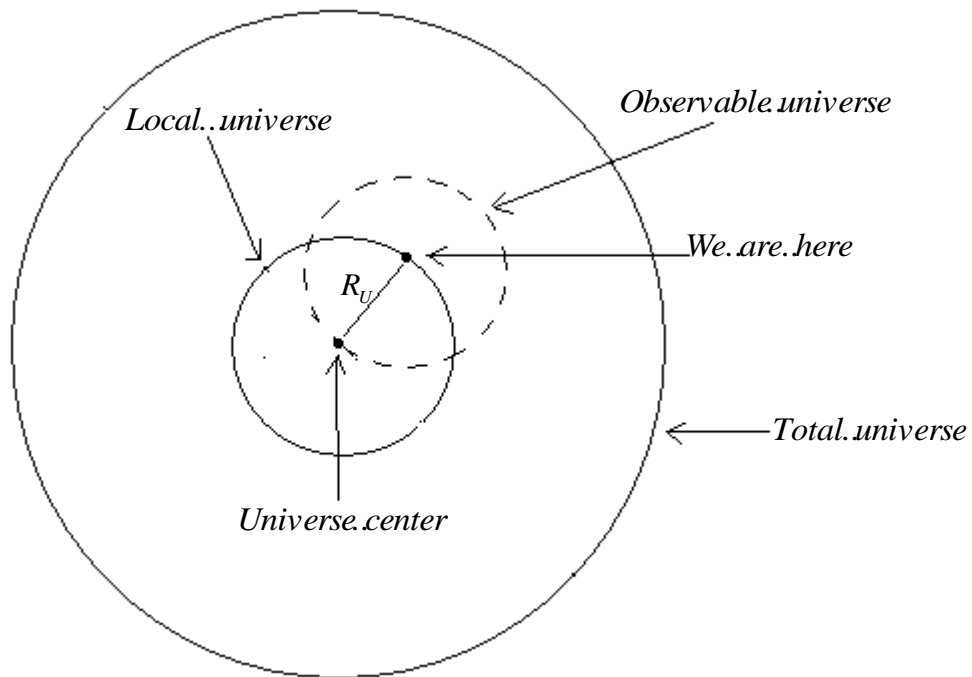
Mass resistance: $R_m = \sqrt{\frac{GR}{M}} = 8.44 \times 10^{-15}$

It's necessary to explain the matrix mechanics.

The radius matrix and the speed matrix are related:

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

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:

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

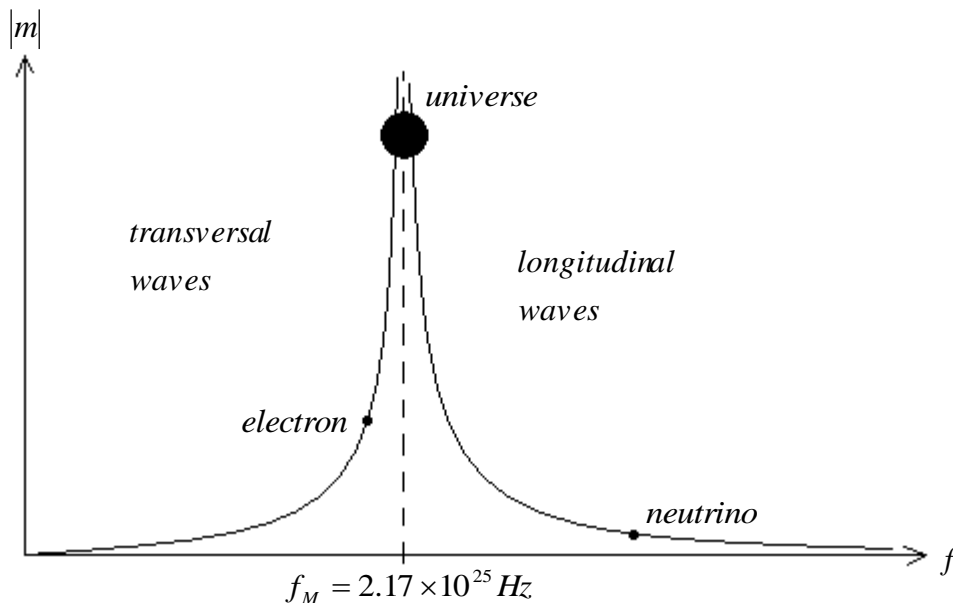
$$\Leftrightarrow \dots\dots g_e = \frac{\pi\alpha^2 q_e^2}{\epsilon_0 x_e^2 m_e n^2} = \frac{9.044 \times 10^{22}}{n^2}$$

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

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

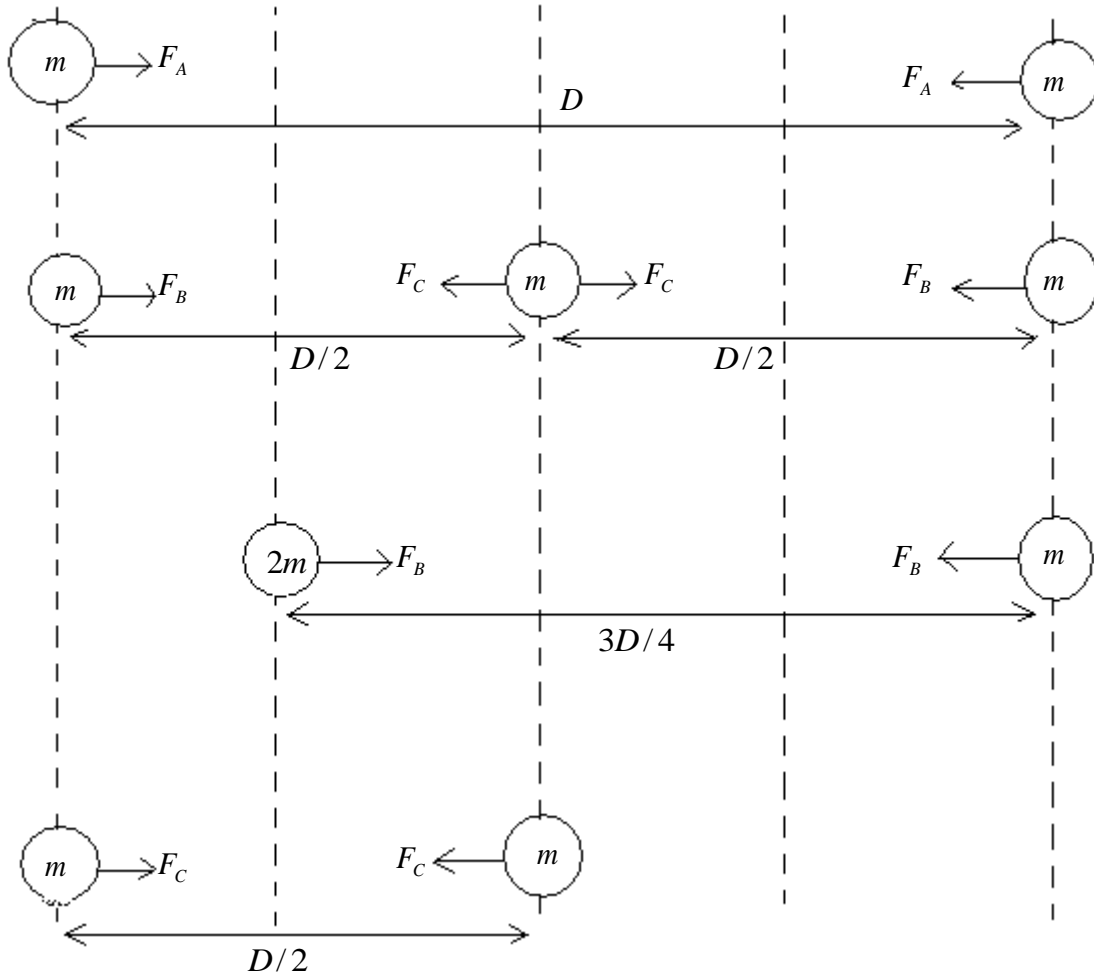
In nature there are no mysteries and paradoxes.
 In nature there is a lot of ignorance.
 God can't violate the laws of physics.
 The abstract mathematics is a bosh.
 The abstract physics is a swindle.

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.

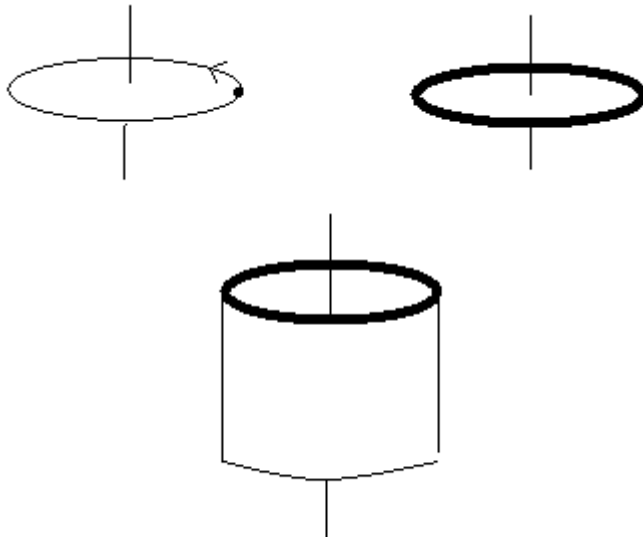
Everything measures everything all the time. Human measurement is not special.

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.

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

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

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:

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

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

Magnetic vector potential equation:

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

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

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

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

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

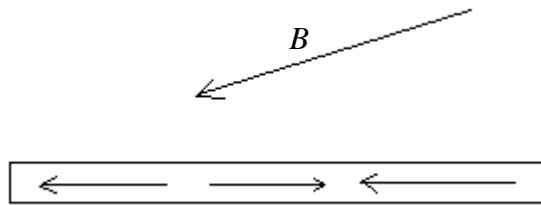
Electron corrections:

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

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

$$\pi 0.991402228531 = 3.11458196$$

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:

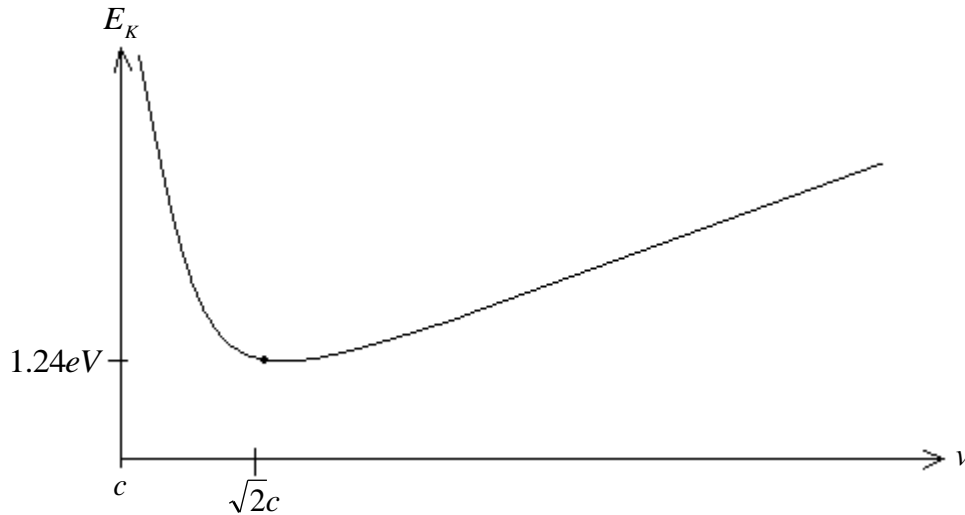
$$E_Y = \frac{1}{2} EDM \times E = \frac{h f}{2} \dots\dots\dots; \dots\dots\dots E = \frac{\pi \cdot q_e}{\alpha \epsilon_0 x^2}$$

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

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

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

OPERA – 2011

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

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

There are more confirmations.

SUPERNOVA – 1987A

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

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

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