

True Mass of the Proton

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See Unified Absolute Relativity Theory at:

www.wbabin.net/saraiva/saraiva305.pdf
www.wbabin.net/saraiva/saraiva306.pdf
www.wbabin.net/saraiva/saraiva307.pdf

The usual mass of the proton is wrong, because the energy momentum relation formula is also wrong.

Wrong formula:

$$E = \frac{E_0}{\sqrt{1 - v^2 / c^2}}$$

Correct formula:

$$E = E_0 \sqrt{1 - v^2 / c^2}$$

Wrong energy-momentum relation:

$$E^2 = E_0^2 + p^2 c^2$$

Correct relation:

$$E^2 = E_0^2 + 3v^2 p^2 - p^2 c^2$$

Derivation:

$$E^2 = E_0^2 (1 - v^2 / c^2) = E_0^2 - E_0^2 v^2 / c^2$$

$$E_0^2 = m_0^2 c^4 ; \quad m_0^2 = m^2 (1 - v^2 / c^2)^3 = m^2 (1 - 3v^2 / c^2)$$

$$\Leftrightarrow E^2 = E_0^2 + 3v^2 p^2 - p^2 c^2$$

When both formulas give the same result:

$$p^2 c^2 = 3v^2 p^2 - p^2 c^2 \quad \Leftrightarrow \quad v = \sqrt{2/3}c$$

The mass of the W boson is correct because: $w_W \approx \sqrt{2/3}c$

For the proton the correct mass is greater:

$$m_{02} \approx \frac{m_0 c}{\sqrt{c^2 - 2v^2}}$$

Mass of the hydrogen:

$$m_H = 1.00794u \quad \text{and} \quad u = 1.660538782 \times 10^{-27} \text{ kg}$$

Hydrogen deuterium abundance: the correct abundance is not 150ppm but 15ppm.

$$2.0135532127 \times 1.5 \times 10^{-5} + x(1 - 1.5 \times 10^{-5}) = 1.00794$$

Exact mass of the hydrogen:

$$m_H = 1.007925$$

Subtracting the electron we get the correct mass of the proton:

$$m_p = 1.6728 \times 10^{-27} \text{ kg} \quad \text{Not} \quad 1.6726 \times 10^{-27} \text{ kg}$$

Note that the mass spectrometer don't measure average masses but the true mass of each isotope.

Units variation with speed

Length, time and speed:

$$x = x_0 \sqrt{1 - v^2 / c^2}$$

$$t = t_0 / \sqrt{1 - v^2 / c^2} ; \quad f = f_0 \sqrt{1 - v^2 / c^2}$$

$$w = w_0 (1 - v^2 / c^2) ; \quad v = v_0 (1 - v^2 / c^2) \quad \Leftrightarrow \quad v = c \frac{-c + \sqrt{c^2 + 4v_0^2}}{2v_0}$$

Mass, acceleration and force:

$$m = m_0 / (1 - v^2 / c^2)^{3/2} ; \quad a = a_0 (1 - v^2 / c^2)^{3/2}$$

$$F = F_0$$

Electric and magnetic charge:

$$q = q_0 / (1 - v^2 / c^2) ; \quad q_m = q_{m0} (1 - v^2 / c^2)$$

Angular momentum and momentum:

$$h = h_0 ; \quad p = p_0 / \sqrt{1 - v^2 / c^2}$$

Energy:

$$E_Y = E_{Y0} \sqrt{1 - v^2 / c^2}$$

Permittivity and permeability:

$$\epsilon = \epsilon_0 / (1 - v^2 / c^2)^{7/8} ; \quad \mu = \mu_0 / (1 - v^2 / c^2)^{9/8}$$

Temperature:

$$T = T_0 / \sqrt{1 - v^2 / c^2}$$

Magnetic potential, magnetic field and electric field:

$$A = A_0 (1 - v^2 / c^2)^{3/2}$$

$$B = B_0 ; \quad E = E_0 (1 - v^2 / c^2)$$

Earth flyby anomaly

The flyby anomaly is a relativistic correction of our theory:

Angle correction:

$$\delta = \frac{3GM\epsilon \sin \theta}{c^2 a (1 - \epsilon^2)} ; \quad \theta = \pi / 2 ; \quad \Delta v = \delta . R$$

Speed variation:

$$\Delta v = \frac{3GM\epsilon R}{c^2 a (1 - \epsilon^2)}$$

We don't know the values of R, so we do R/a = 1

| | ϵ | $\Delta v (mm / s)$ | our Δv | a (km) |
|---------|------------|---------------------|----------------|----------|
| Galileo | 2.47 | 3.92 | 6.47 | 4977.0 |
| Near | 1.81 | 13.46 | 10.6 | 8493.3 |

$M = 6 \times 10^{24} \text{ kg}$; a – Semi major axis; c – Light speed.
 G – Gravitational constant; R – Local radius of the orbit; ε -- Eccentricity.

Speed of the forces

Light speed:

$$w = \frac{x}{t} = \sqrt{c^2 - Sf^2} ; \quad c^2 t^2 - x^2 = S = 1.9 \times 10^{-34} \text{ m}^2$$

Speed of the forces:

$$V = \frac{\Delta x}{\Delta t} \quad \text{and} \quad x = \sqrt{c^2 t^2 - S}$$

$$\Leftrightarrow \quad V = \frac{c^2 t}{x} = \frac{c^2}{w}$$

For the electron:

$$V_e = \sqrt{c^2 + Sf_e^2} \quad \text{and} \quad f_e = 1.236 \times 10^{20} \text{ Hz}$$

For the universe:

$$w^2 = \frac{hc}{\sqrt{SM}} \quad \text{and} \quad M \approx 1 \times 10^{53} \text{ kg}$$

$$w = 3.8 \times 10^{-31} \text{ m/s} \quad \Leftrightarrow \quad V = 2.4 \times 10^{47} \text{ m/s}$$

Delay to the centre of the universe:

$$t = \frac{R_U}{V} = 5.48 \times 10^{-22} \text{ s}$$

For the earth:

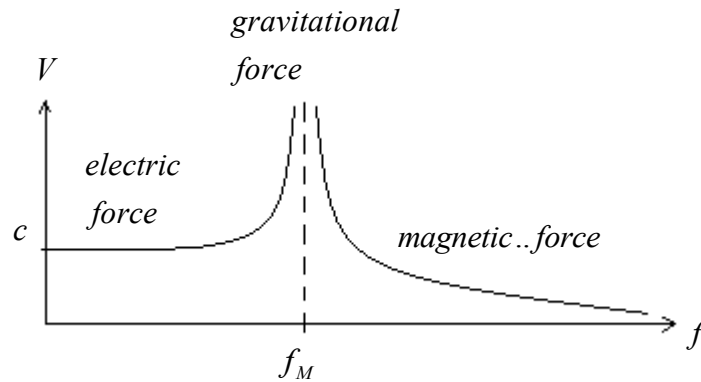
$$V = 1.84 \times 10^{33} \text{ m/s} ; \quad t = 3.5 \times 10^{-27} \text{ s}$$

Speed of the gravity with mass:

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

There is never aberration of the forces because both bodies have the same delay, relative to an average distance between them. The interactions happen at half way of the bodies.

If not the electrons orbits should be unstable.



All forces are electric.
f – Frequency.

Black holes

Acceleration field:

$$g = \frac{Sf^3}{w} ; \quad f = \frac{cf_0 \sqrt{c^2 - v^2}}{c^2 + vw_0} ; \quad w = c^2 \frac{w_0 + v}{c^2 + vw_0}$$

$$\Leftrightarrow g = \frac{Scf_0^3 (c^2 - v^2)^{3/2}}{(c^2 + vw_0)^2 (w_0 + v)}$$

The force at the surface of a black hole is zero.
Then it is imaginary, oriented to the poles.
The acceleration at the centre of a black hole is also zero.

Matter-antimatter asymmetry

There's no asymmetry.
The mass is the electric dipole moment, so it is a vector.
There are four kinds of mass:

Negative, positive and imaginary: positive and negative.

The total mass of the universe is equal to zero, as the charge.

The sixth sense

We have a stereoscopic sensor of acceleration or force and we can detect the variations of the moon's gravity.

