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More about the Unified Absolute Relativity Theory

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Fundamental particles prediction

Some equations of the theory:

$$\begin{cases} \dfrac{kh(c^2-v^2)^2 f_0^{\,4}}{c^2(c^2+vw_0)(w_0+v)^3} = \dfrac{khf^4}{w^3} \\ \dfrac{khf^4}{w^3} = G\dfrac{m_0^{\,2}}{x_0^{\,2}} \\ \dfrac{kh(c^2-v^2)^2 f_0^{\,4}}{c^2(c^2+vw_0)(w_0+v)^3} = G\dfrac{m_0^{\,2}}{x_0^{\,2}} \\ (v+c)^2 = \dfrac{Gm_0}{2x_0} \\ x_0 = \dfrac{\sqrt{k}w_0}{\sqrt{c^2-w_0^{\,2}}} \\ f_0^{\,2} = \dfrac{c^2-w_0^{\,2}}{k} \\ m_0 = \dfrac{h\sqrt{c^2-w_0^{\,2}}}{\sqrt{k}w_0^{\,2}} \\ f^2 = \dfrac{c^2-w^2}{k} \\ v = c^2\dfrac{w-w_0}{c^2-ww_0} \end{cases}$$

$$\Leftrightarrow$$

$$\Leftrightarrow \qquad (c^2-ww_0)^2(c-w)^2 w_0^{\,3} = 2c^2w^3(c-w_0)^2(c^2-w_0^{\,2})$$

This is the general equation for all the particles of the theory.

We are using a method that gives one possible solution, and we get an approximated scale of some particles:

Doing $w_0 = iV_0$ $\Leftrightarrow$

$$\Leftrightarrow \qquad (2w-c)\left[c(c-w)^2+4w^3\right]^2 c^3 = \left[4c^2(2w-c)+w(c-w)^2\right]^2 w^4$$

$\Leftrightarrow$

$$w_1 = -1.43\times10^8 \pm i1.2\times10^8\, ms-1$$

$$w_2 = -4.25\times10^7 \pm i1.26\times10^9$$

$$w_3 = 7.97\times10^7 \pm i7.4\times10^7$$

$$w_4 = 1.5\times10^8$$

$w_5 \approx c$ -- Electron

The mass is: $$m = \frac{h\sqrt{c^2-w^2}}{\sqrt{k}\,w^2}$$

Only the real part:

$$m_1 = 6.1\times10^{-25}\, kg$$

$$m_2 = 7.7\times10^{-24}$$

$$m_3 = 2.1\times10^{-24}$$

$$m_4 = 5.4\times10^{-25}$$

$$m_5 \approx 9.11\times10^{-31}$$

Proton Spin Problem

$$mwx = h$$

The mass of a particle times it propagation speed times it wavelength is equal to Planck's constant, that is a spin value.

For the proton made of quarks:

Wavelength of the quark, $x_Q \approx 1\times10^{-19}\,m$

$$w = \frac{xc}{\sqrt{k + x^2}} = 2.1\times10^{6}$$

True mass of the quark:

$$m = \frac{h}{wx} = 3\times10^{-21}$$

Using the wrong mass of the quark: $m_Q = 7\times10^{-30}$

$$m_Q c x_Q < h$$

This is an approximated justification for the fact that the spin of the wrong quark just make 12% of the proton spin.
Is evident that the orthodox mass of the quark is too small for it length scale.

Graviton mass

$w_0 = ic$ and

$$(c^2 - ww_0)^2 (c - w)^2 {w_0}^3 = 2c^2 w^3 (c - w_0)^2 (c^2 - {w_0}^2)$$

$$\Leftrightarrow \qquad -4c^2 w^2 (c - w)^4 = \left[8cw^3 - (c^2 - w^2)(c - w)^2\right]^2 \qquad \Leftrightarrow$$

$$w_1 = \pm ic \quad ; \quad m_1 = 2.2\times10^{-25}\,kg$$

$$w_2 = -0.08c \pm i0.4c \quad ; \quad m_2 = 2.4\times10^{-23}$$

$$w_3 = 0.4c \pm i0.07c \quad ; \quad m_3 = 9\times10^{-25}$$

Neutral Top Quark

$$E = hf = 174.2GeV \quad \Leftrightarrow \quad f = 4.2\times10^{25}\,Hz$$

$$m = \frac{hf}{c^2 - kf^2} = -1.1\times10^{-25}\,kg$$

The Top Quark is a neutral particle.

Unified Force

Electric force relation between two electrons:

$$F = \frac{q_e^{\,2}}{4\pi\varepsilon_0 R^2} = \frac{khf_e^{\,4}}{c^3} \quad \Leftrightarrow \quad R = 1.5067762\times10^{-8}\,m \;;\quad f_e = 1.2\times10^{20}\,Hz$$

$$R = \frac{1}{2\pi R_H} \quad \text{and} \quad R_H = \frac{\alpha^2}{2x_e} = \frac{1}{2(137)^2 x_e}$$

$R_H = 1.1\times10^{7}\,m^{-1}$ -- Rydberg constant

$$\Leftrightarrow \quad \frac{q_e^{\,2} R_H^{\,2}\pi}{\varepsilon_0} = \frac{khf_e^{\,4}}{c^3}$$

Old $k = 1.99257\times10^{-34}\,m^2$

Exact value of *k*

$$k = \frac{q_e^{\,2} R_H^{\,2}\pi c^3}{\varepsilon_0 hf_e^{\,4}} \quad \Leftrightarrow \quad k = 1.91132245\times10^{-34}$$

So, we have proved that our unified force is equivalent to the electric force for the electron.

$$F = \frac{\pi q_e^{\,2}}{4\varepsilon_0 137^4 x_e^{\,2}} = 1.1\times10^{-12}\,N \qquad \text{and} \qquad x_e = 2.426\times10^{-12}\,m$$

The value $\frac{1}{R_H} = 2\pi R$ is the orbit perimeter.

The Hydrogen atom

Orbital frequency:

$$f_{OR} = \frac{v}{2\pi R} = \frac{v}{137 x_e}$$

$$E = \frac{h}{2} f_{OR} = 13.6eV$$

Rydberg frequency:

$$f_H = cR_H = \frac{f_{OR}}{2}$$

Centript acceleration:

$$g = \frac{v2}{R} = 9.13\times10^{22} \quad ; \qquad R = 5.3\times10^{-11}\,m$$

Masses and accelerations of the electron and the proton:

$$m_e = 9.11\times10^{-31} \quad ; \qquad g_e = 1.327\times10^{18}$$

$$m_p = 1.673\times10^{-27} \quad ; \qquad g_p = 7.762\times10^{27}$$

$$g = \sqrt{g_e . g_p} = 9.13 \times 10^{22} ms^{-2}$$

$$g = \frac{k f_g^{\ 3}}{c} \qquad \Leftrightarrow \qquad f_g = 5.16 \times 10^{21}$$

Force between the proton and the electron:

$$F = mg = 8.24 \times 10^{-8} N \qquad \Leftrightarrow \qquad m = 9.03 \times 10^{-31}$$

$$\Leftrightarrow \qquad f_g = \sqrt{f_e . f_p}$$

$$f_m = \frac{f_e . f_p}{f_p - f_e} = 1.2 \times 10^{20}$$

$$m = \frac{m_e . m_p}{m_e + m_p} = 9.1 \times 10^{-31}$$

Those are the rules for conjugating the values of the masses and accelerations of the electron and the proton to get the unified force, that is equal to the electric force.