2007-01-20 JG Moxness: To within std. error of all current precision experiments

TheoryOfEverything.org

T=(1,i0)||(0,i1), i=√-1
L=T²=(1,i1)||(0,i2)
M=L³T⁻¹=T⁵=(3,i2)||(2,i3)||(1,i4)||(0,i5)
Q=ML⁻¹/²=MT⁻¹=T⁴=(3,i1)||((2,i2)||(1,i3)||(0,i4)

Time =1D Re(T¹)=t
3D Space =3D Re(L³)=l(x,y,z)
8D Charge=8D Im(T⁸=L³+SU5)=q²
11D M-Theory

$$\frac{\hbar(T^8)}{l_{Unit}\,m_{Unit}} = c = \frac{g_c^2}{G_N} = \frac{1}{4\pi H_0} = \alpha^{-8} t_{Unit}$$

Charge-Space Acceleration↔Time
Charge-Time Acceleration↔Space
Space-Time Acceleration↔Charge

$$where:\quad g_c^2 = \frac{\sqrt{1-2(\pi\alpha/2)^2}}{Cos\,\theta_W} = \sqrt{\frac{1-2(\pi\alpha/2)^2}{1-\sqrt[3]{\pi\alpha/2}}}$$

$$\bar{n}_i = \frac{g_i}{e^{\varepsilon_i/\hbar\nu}+1} \qquad \bar{n}_i = \frac{g_i}{e^{\varepsilon_i/\hbar\nu}-1}$$

$$CPT = [\not{C}\not{P}\_\not{T}] = [C\_P\_T] = [StaticParticles][DynamicMixing\_ForceParticles] = [ParticleFermions - Spin\_\hbar[\tfrac{1}{2},\tfrac{3}{2}]] \quad [ForceBosons - Spin\_\hbar[0,1,2]]$$

$$= \begin{bmatrix} Leptons \begin{bmatrix} UnCharged(Neutrinos) \\ Charged \end{bmatrix} \\ Quarks \end{bmatrix} \begin{bmatrix} Force\_Charge Type \begin{bmatrix} ElectroMagnetic[\gamma[\varepsilon_0,\mu_0]] \\ CP \leftrightarrow T\_WeakFlavor[W^+ \quad W^- \quad Z^0] \end{bmatrix} \\ Force\_Charge Type[CT \leftrightarrow P\_StrongColor[R \quad G \quad B]] \end{bmatrix} = \begin{bmatrix} Leptons \begin{bmatrix} q_\eta = 0 \\ q_e = -1 \end{bmatrix} \\ Quarks \begin{bmatrix} q_u = \frac{2}{3} \\ q_d = \frac{-1}{3} \end{bmatrix} \end{bmatrix} \begin{bmatrix} ElectroWeakForce[QED - U_{MNS} P_{MNS}] \\ StrongForce[QCD - V_{CKM} P_{CKM}] \end{bmatrix}$$

$$= \begin{bmatrix} Generations \begin{bmatrix} 1 & 2 & 3 \\ \begin{bmatrix} \nu_{Le} & \nu_{L\mu} & \nu_{L\tau} \end{bmatrix} \\ \begin{bmatrix} e & \mu & \tau \end{bmatrix} \\ \begin{bmatrix} u & c & t \end{bmatrix} \\ \begin{bmatrix} d & s & b \end{bmatrix} \end{bmatrix} \end{bmatrix} \begin{bmatrix} EM\_Boson[\gamma[\varepsilon_0,\mu_0]] \\ EW\_Bosons[W^+ \quad W^- \quad Z^0] - \begin{bmatrix} U_{\nu_e e} & U_{\nu_e \mu} & U_{\nu_e \tau} \\ U_{\nu_\mu e} & U_{\nu_\mu \mu} & U_{\nu_\mu \tau} \\ U_{\nu_\tau e} & U_{\nu_\tau \mu} & U_{\nu_\tau \tau} \end{bmatrix} [P_{MNS}] \\ Strong\_Gluons[R \quad G \quad B] - \begin{bmatrix} V_{ud} & V_{us} & V_{ub} \\ V_{cd} & V_{cs} & V_{cb} \\ V_{td} & V_{ts} & V_{tb} \end{bmatrix} [P_{CKM}] \end{bmatrix} \Rightarrow Photons[Radiation]$$

$$\Rightarrow ParticleDecay[RadioActivity[\alpha,\beta,\gamma \quad Particles]]$$

$$\Rightarrow Hadrons \begin{bmatrix} Bosonic - 2QuarkMesons\left[Pion\pi^{\pm}[u\bar{d},\bar{u}d], Pion\pi^0\left[\frac{u\bar{u}-d\bar{d}}{\sqrt{2}}\right]\right] \\ Fermionic - 3QuarkBaryons[Proton[uud], Neutron[udd]] \end{bmatrix}$$

$$\begin{bmatrix} Generations \\ Leptons \\ Quarks \end{bmatrix} \begin{bmatrix} 1 & 2 & 3 \\ (m_{\nu_{e,\mu,\tau}}, \tau_{\nu_{e,\mu,\tau}}) = \left[\left(\frac{m_{Unit}^2}{m_e}, \tau_e\right) & \left(m_{\nu_\mu} \pm \frac{m_{Unit}^2}{m_\mu}, \tau_\mu\right) & \left(m_{\nu_\tau} \pm \frac{m_{Unit}^2}{m_\tau}, \tau_\tau\right)\right] \\ (m_{e,\mu,\tau}, \tau_{e,\mu,\tau}) = \left[\left(\frac{4\pi}{\alpha} m_{Unit}, 4\pi\alpha^{-8} t_{Unit}\right) & \left(\frac{3e}{2\alpha}, 2\left(\frac{8\alpha}{9\pi}\right)^2 t_{Unit}\right) & \left(\frac{\mu}{8\alpha}, \frac{(8\alpha^2)^3}{3\pi} t_{Unit}\right)\right] \\ (m_{d,s,b}, \tau_{d,s,b}) = \left[\left[(2\pi \cdot e, \tau_e) \quad (\mu(\pi/2)/2^1, \tau_\mu) \quad (\alpha^{-4}32, \tau_\tau)\right]\right] \\ (m_{u,c,t}, \tau_{u,c,t}) = \left[\left[(d/2, \tau_e) \quad (4\pi\mu, \tau_\mu) \quad (2^{3/4}\alpha^{-4}, \tau_t)\right]\right] \end{bmatrix}$$

$$EW\_Bosons \begin{bmatrix} \theta_W = Sin^{-1}(\sqrt{x_W} = \sqrt{\tfrac{1}{2}\sqrt[3]{4\pi\alpha}}) \quad e = m_{Higgs}\sqrt{\frac{4\pi\alpha}{2l_{Unit}}} = \sqrt{4\pi\alpha\hbar} = \sqrt{2h\alpha} \\ g = \frac{e}{\sqrt{x_w}} \quad g' = \frac{e}{\sqrt{1-x_w}} \quad e = \frac{gg'}{\sqrt{g^2+g'^2}} = gSin\theta_W = g'Cos\theta_W \\ m_\gamma = 0, \quad m_{W^\pm} = \sqrt{\sqrt{2}}\, g \cdot t_{Unit}, \quad m_{Z^0} = \frac{m_{W^+}}{Cos\theta_W} \\ m_{Higgs} = \sqrt{\hbar \cdot 2l_{Unit}} = \sqrt{2\hbar\alpha/R_\infty} = \hbar\sqrt{\frac{2\pi}{m_e c\alpha}} = \frac{\hbar}{\sqrt{m_{Unit}c/2}} \end{bmatrix}$$

$$Strong\_Gluons \begin{bmatrix} \alpha_s(m_{Higgs}) = \frac{g_s^2}{4\pi} \approx \frac{x_w}{2} = \frac{1}{2}\sqrt[3]{\frac{\pi\alpha}{2}} \\ g_s \approx \sqrt{2\pi x_w} = \sqrt{\pi\ \sqrt[3]{4\pi\alpha}} \quad [R \quad G \quad B] \end{bmatrix}$$

$$\begin{bmatrix} \Lambda^2\sqrt{3} & \Lambda^2 & 0 \\ -\Lambda^3 & \Lambda^3\sqrt{3} & \Lambda = \frac{1}{\sqrt{2}} \\ \Lambda^3 & -\Lambda^3\sqrt{3} & \Lambda \end{bmatrix} \begin{bmatrix} (\sigma_\rho = ?)e^{i\rho=\frac{2\pi}{1}} & 0 & 0 \\ 0 & (\sigma_\sigma = ?)e^{i\sigma=\pi-\rho} & 0 \\ 0 & 0 & (\sigma_\delta = 1)e^{i\delta=0} \end{bmatrix}$$

$$\begin{bmatrix} 1-\frac{\lambda^2}{2} & \lambda = x_W = \sqrt[3]{\frac{\pi\alpha}{2}} & \lambda^3 = \frac{\pi\alpha}{2} \\ -\lambda & 1-\frac{\lambda^2}{2} & \lambda^2 \\ \lambda^3 & -\lambda^2 & 1 \end{bmatrix} \begin{bmatrix} 0 & 0 & (\sigma_\gamma = \frac{1}{2})e^{i\gamma=\frac{\pi}{3}} \\ 0 & (\sigma_\alpha = 1)e^{i\alpha=\frac{13\pi}{24}} & 0 \\ (\sigma_\beta = 1)e^{i\beta=\frac{\pi}{8}} & 0 & 0 \end{bmatrix}$$

$$Baryons\left[Stable\left[m_{p_e} \approx \frac{m_e^2}{m_{Unit}}, \tau_{p_e} = 4\pi\alpha^{-8} t_{Unit}\right], Heaviest\left[m_{\Omega_{\tau-\tau-\tau}} = ?\, M_P = \alpha^{-12} m_{Unit}, \tau_{\Omega_{\tau-\tau-\tau}} = ?\, T_P = \alpha^{20} t_{Unit}\right]\right] \quad Mesons\left[Lightest\left[m_\pi \approx \sqrt[3]{\frac{\hbar^2}{c}} = \alpha^{-8/3} m_{Unit}, \tau_\pi \approx 4\pi^2\alpha^8 t_{Unit}\right]\right]$$