

Prediction of the Six Quark Masses

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The truth is that the “Standard Model “predicts not a single particle mass, because for each prediction there is an arbitrary value that is determined experimentally. The Unified Absolute Relativity predicts by itself, the masses of the six quarks which are the only fundamental particles. The electron and the neutrino are not fundamental, they must also be made of quarks.

General equations

(See Unified Absolute Relativity III)

$$\begin{cases} (c^2 - w_0^2)^3 (c^2 - v^2)^3 = \frac{g^2 k}{c^2} (c^2 + vw_0)^4 (w_0 + v)^2 \\ (c^2 - w_0^2)(c^2 - v^2)(c^2 + vw_0)^2 = \frac{m^2 c^6 k}{h^2} (w_0 + v)^4 \end{cases} \Leftrightarrow$$

$$w_0 = \sqrt{c^2 - kf_0^2} = i\sqrt{kf_0^2 - c^2} = iV_0 \quad \text{and } v \text{ must be real}$$

$$\Leftrightarrow \begin{cases} v^4 (V_0^4 - 2c^2 V_0^2) + v^2 (2c^2 V_0^2 + 2c^6 - 6V_0^2 c^4) + c^8 - 2c^6 V_0^2 = 0 \\ v^4 (c^2 + 2V_0^2) - v^2 (6c^2 V_0^2 + 2V_0^4 + 2c^4) + c^2 V_0^4 + 2c^4 V_0^2 = 0 \end{cases}$$

Solutions (SI units)

$$V_{0A} = 1.45659643 \times 10^8 \quad \text{and} \quad v_A = 7.48645336 \times 10^8$$

$$V_{0B} = 2.004833 \times 10^8 \quad \text{and} \quad v_B = 1.98664177 \times 10^9$$

$$w_{0C} = 1.45659643 \times 10^8 \quad \text{and} \quad v_C = 2.38423306 \times 10^8$$

$$w_{0D} = 2.004833 \times 10^8 \quad \text{and} \quad v_D = 8.81888424 \times 10^7$$

$$V_{0E} = 1.45659643 \times 10^8 \quad \text{and} \quad v_E = 2.004833 \times 10^8$$

$$V_{0F} = 2.004833 \times 10^8 \quad \text{and} \quad v_F = 6.17024151 \times 10^8$$

$$A \text{ --} \quad kf_0^2 = c^2 + V_0^2 \quad \text{and} \quad f = \frac{cf_0 v V_0 \sqrt{v^2 - c^2}}{c^4 + v^2 V_0^2}$$

$$m = \frac{hf}{c^2 - kf^2} \quad \text{and} \quad E = hf$$

$$f_A = 2.57746679 \times 10^{25} \quad ; \quad m_A = -3.39924631 \times 10^{-25}$$

$$\underline{E_A = 106.6 \text{ GeV}} \quad \text{-- Bottom quark}$$

(c – “light speed “; h – Planck’s constant; $k = h/\pi$ (squared meter); f – frequency; m – mass; V, w, v – speeds; E -- energy)

$$B \text{ --} \quad f_B = 3.49305003 \times 10^{25} \quad ; \quad m_B = -1.3820544 \times 10^{-25}$$

$$\underline{E_B = 144.5 \text{ GeV}} \quad \text{-- Top quark}$$

$$C \text{ --} \quad kf_0^2 = c^2 - w_0^2 \quad \text{and} \quad f = \frac{cf_0 \sqrt{c^2 - v^2}}{c^2 + vw_0}$$

$$f_C = 1.78257643 \times 10^{25} \quad ; \quad m_C = +5.16781773 \times 10^{-25}$$

$$\underline{E_C = 73.7 \text{ GeV}}$$

$$D \text{ --} \quad f_D = 1.82610642 \times 10^{25} \quad ; \quad m_D = +6.19153566 \times 10^{-25}$$

$$\underline{E_D = 75.5 \text{ GeV}}$$

$$E \text{ --} \quad f = \frac{c^3 f_0 \sqrt{c^2 - v^2}}{c^4 + v^2 V_0^2}$$

$$f_E = 1.54340591 \times 10^{25} \quad ; \quad m_E = +2.58031586 \times 10^{-25}$$

$$\underline{E_E = 63.8 \text{ GeV}}$$

$$F \text{ -- } f = \frac{cf_0 v V_0 \sqrt{v^2 - c^2}}{c^4 + v^2 V_0^2}$$

$$f_F = 2.12431599 \times 10^{25} \quad ; \quad m_F = -2.6537292 \times 10^{-24}$$

$$\underline{E_F = 87.8 GeV} \quad \text{-- Monopole}$$

The “neutral” particles have negative mass and the “charged” particles have positive mass, but it is the opposite for anti-particles. The “Standard Model” quark masses are clearly wrong because we know that the length of the quarks is smaller than 1×10^{-18} meters.