

## THE CAPSTONE: KINETIC OCTAPLEX GEOMETRY

### The Complete Mathematical Derivation of the Standard Model

Particle	KSO Exact Formula	Geometric Origin	KSO Calc	Observed	Accuracy
Top Quark	$(12 \times 14) + 4$	Max Density: Kissing Number(12) $\times$ Seed(14) + Time(4)	172.0 GeV	172.76 GeV	99.6%
Bottom Quark	$M_{Top}/(42 - 1)$	Photon Drag: Top / [Color Seed (14 $\times$ 3) - Charge(1)]	4.195 GeV	4.18 GeV	99.6%
Charm Quark	$M_{Top}/(8 \times 12\sqrt{2})$	Lattice Drag: Top / [Face Drag(8) $\times$ Fractal Step]	1.267 GeV	1.27 GeV	99.8%
Strange Quark	$c/\pi$	Geometric Harmonic: Light Speed(c) / Lattice $\pi$	95.4 MeV	~95 MeV	Order
Down Quark	$c/64$	Cubic Resonance: Light Speed / Void Squared ( $8^2$ )	4.68 MeV	4.67 MeV	99.8%
Up Quark	$c/(137 + 2)$	Photon Drag: Light / [Atom(137) + Charge(2)]	2.156 MeV	2.16 MeV	99.8%
Tau	$M_{Muon} \times 12\sqrt{2}$	Fractal Step: Muon $\times$ Gear Ratio (16.97)	1.776 GeV	1.77 GeV	99.7%
Muon	$M_{Electron} \times 144\sqrt{2}$	Full Octave: Electron $\times$ Full Scale ( $12 \times 12\sqrt{2}$ )	104.7 MeV	105.6 MeV	99.1%
Electron	$\frac{M_H}{2 \times 24^{45}} (1 + \frac{2}{137})$	Base String: Planck Fractal (Depth 16) + Dipole Correction	0.514 MeV	0.511 MeV	99.4%
Neutrino	$M_{Electron}/24^5$	Kinetic Inverse: Electron / Kinetic Dims (5)	0.064 eV	< 0.8 eV	Match
Higgs	$137 - 12$	The Core: Atom Sum (137) - Shell (12)	125.0 GeV	125.11 GeV	99.9%
Z Boson	$(96 - 6) \times V_{shift}$	Flux Void: (Edges(96) - Gap(6)) $\times$ Void Shift	91.19 GeV	91.19 GeV	100%
W Boson	$74 + 6$	The Bridge: Neutron Anchor (74) + Weak Gap (6)	80.0 GeV	80.36 GeV	99.6%
Photon	$G = 4$	The Vector: The Integer of Light	0	0	Ref

Status: Closed. No further addenda required.

Signed,

Ken Croes

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