The Charge Conversion Factor in the Aether Physics Model: From Singular to Distributed Charge, with Rules, Exceptions, and Benchmarks

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October 25, 2025

Abstract

The Aether Physics Model (APM) expresses electromagnetism with distributed magnetic charge in Quantum Measurement Units (QMU). To ingest legacy expressions that use a single elementary charge, we define a species-anchored *charge conversion factor* (CCF) and provide exact rules for applying it. Incorporating results from our eddy-current ledger, we formalize: (i) numerator/denominator rules for one net power of charge; (ii) dynamic vs. substrate mappings; (iii) the squared-rule for MFR/MFF classes; and (iv) five unit *exceptions* (conductance, capacitance, inductance, permeability, permittivity) that require no CCF. A consolidated mapping table gives instrument-ready conversions entirely in QMU. As a benchmark, the QMU potential unit potn aligns exactly with the electron rest-energy per charge (the GRSEP anchor) when mapped to SI.

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1 Motivation: singular vs. distributed charge

QMU takes the *distributed* magnetic charge ${e_{\mathrm{emax}}}^2$ as the operative charge dimension, while many legacy formulas assume a *singular* charge e. To compare, reduce, or re-derive such formulas in QMU, we use a CCF that replaces every net power of e by the corresponding distributed-charge power, and we now explicitly display the SI side since conversion is the focus of this paper.

2 On mixed charge dimensions in SI and impedance bookkeeping

In SI, charge is treated as a *single* base dimension (C) and is commonly modeled as point-like; there is no geometric basis for this convention. In QMU, charge is *distributed/magnetic* with dimension ${e_{\mathrm{emax}}}^2$. Mixing a single-charge dimension (SI) with a distributed-charge dimension (required by field geometry) leads to *unit misalignment* in several legacy equations.

Ohm's law itself (potential = current × resistance) remains intact in QMU; however, equations that treat conductance as the reciprocal of *resistance* inherit a misalignment: in the QMU ledger $\mathrm{cond} = \mathrm{mflx}^{-1}$ (conductance is the reciprocal of *magnetic flux*, not resistance). Standard SI impedance formulas further resort to *imaginary numbers* to combine unlike terms (flux-like with resistance-like) under mismatched charge dimensions. In the QMU ledger, correcting the distributed nature of charge removes this bookkeeping artifact and yields real-unit expressions. This systematic correction reveals new, otherwise hidden relations in biological physics (see Section 7).

3 Definition and ledger forms of the CCF

Definition 1 (Charge conversion factor (species-anchored))**.** *For a particle or substrate label* $X \in \{\mathrm{e}, \mathrm{p}, \mathrm{n}, \mathrm{a}\}$*, define*

$$\mathrm{ccf}_X = \frac{{e_{\mathrm{Xmax}}}^2}{e}.$$

In particular, for the electron ($X = \mathrm{e}$)*,*

$$\frac{{e_{\mathrm{emax}}}^2}{e} = \frac{{e_{\mathrm{emax}}}^2}{e}. \tag{1}$$

CODATA-based $\frac{{e_{\mathrm{emax}}}^2}{e}$ (Form A). In APM, ${e_{\mathrm{emax}}}^2 = \dfrac{e^2}{8\pi\alpha}$, hence

$$\boxed{\frac{{e_{\mathrm{emax}}}^2}{e} = \frac{{e_{\mathrm{emax}}}^2}{e} = \frac{e}{8\pi\alpha}}. \tag{2}$$

Using CODATA (exact e, and $\alpha = 7.2973525643 \times 10^{-3}$) gives

$$\frac{{e_{\mathrm{emax}}}^2}{e} = \frac{1.602176634 \times 10^{-19}}{8\pi(7.2973525643 \times 10^{-3})} = \boxed{8.7358507336 \times 10^{-19}}.$$

Ledger equivalences. Using APM/QMU identities ($A_u \cdot \mathrm{curl} = {F_q}^2 {\lambda_C}^2$ and $\mathrm{curl} = {e_{\mathrm{emax}}}^2/(m_{\mathrm{e}}\lambda_C)$),

$$\frac{{e_{\mathrm{emax}}}^2}{e} = \frac{m_{\mathrm{e}}}{e}\,\frac{{\lambda_C}^3 {F_q}^2}{A_u}, \qquad \text{and generically} \quad \mathrm{ccf}_X = \frac{m_{\mathrm{e}}}{e}\,\frac{{\lambda_C}^3 {F_q}^2}{A_u}\Big|_{({e_{\mathrm{emax}}}^2 \to e^2_{X,\mathrm{max}})}. \tag{3}$$

These forms are equivalent in the QMU ledger; choose the one most convenient for a derivation.

4 How to apply the CCF: unified rules

There are two equivalent ways to state the application rule; we present both for clarity and then show their consistency.

4.1 Rule A (charge position): numerator vs. denominator

Let a quantity U carry one net power of singular charge, $U \propto e^{\pm 1}$.

- If e^{+1} appears *in the numerator*, replace it by distributed charge via

$$U_{\mathrm{QMU}} = \mathrm{ccf}_X \, U_{\mathrm{singular}}.$$

- If e^{-1} appears *in the denominator*, use

$$U_{\mathrm{QMU}} = \frac{U_{\mathrm{singular}}}{\mathrm{ccf}_X}.$$

4.2 Rule B (dynamic vs. substrate; MFR/MFF)

CCF application for one net power of charge

Dynamic: legacy $\to \dfrac{1}{\mathrm{ccf}_X} \times$ QMU (if charge appears in the denominator); legacy $\to \mathrm{ccf}_X \times$ QMU (if charge appears in the numerator).

Terminology. In the QMU ledger, *dynamic quantities* are tied to particle/field dynamics (e.g., potn, mflx, elfs), whereas *substrate quantities* describe aether substrate properties (e.g., curl, aefp, mfde). See the Appendix for the full classification.

For **MFR/MFF** classes (where the charge power effectively appears squared), apply the *squared rule*:

MFR/MFF dynamic: legacy $\to \dfrac{1}{{\mathrm{ccf}_X}^2} \times$ QMU, MFR/MFF substrate: legacy $\to {\mathrm{ccf}_X}^2 \times$ QMU.

These statements are algebraically equivalent to Rule A once the unit's charge power is identified.

4.3 Five unit exceptions (no CCF on the *unit*)

The following *units* are already expressed in distributed-charge dimensions. Their SI $\leftrightarrow$ QMU *unit* mapping does not carry a CCF factor:

Exceptions: cond, capc, indc, perm, ptty.

Why these are exceptions. Their QMU definitions (see Appendix) are ratios where the charge dimension is already in distributed form; when mapped to SI, the appearance of e in legacy definitions is *commensurate* so that an additional CCF on the *unit* is unnecessary (numerical values still differ because bases differ). Canonical anchors include perm $= 4\pi\mu_0$ and ptty $= \epsilon_0/4\pi$.

5 GRSEP: exact identity and SI evaluation

The QMU potential unit is

$$1\,\mathrm{potn} = \frac{m_\mathrm{e}\,{\lambda_C}^2 {F_q}^2}{{e_\mathrm{emax}}^2}, \qquad ccf_e = \frac{{e_\mathrm{emax}}^2}{e}.$$

Multiplying by the CCF converts to the legacy (singular-charge) potential:

$$1\,\mathrm{potn}\cdot ccf_e = \left(\frac{m_\mathrm{e}\,{\lambda_C}^2 {F_q}^2}{{e_\mathrm{emax}}^2}\right)\left(\frac{{e_\mathrm{emax}}^2}{e}\right) = \frac{m_\mathrm{e}\,{\lambda_C}^2 {F_q}^2}{e} = \frac{m_\mathrm{e}\,c^2}{e} \quad 510{,}998.95\,\mathrm{volt}. \tag{4}$$

Numerical evaluation (SI, CODATA). With $m_\mathrm{e} = 9.1093837015\times10^{-31}\,\mathrm{kg}$, $c = 2.99792458\times10^{8}\,\mathrm{m/s}$, $e = 1.602176634\times10^{-19}\,\mathrm{C}$, Thus

$$\boxed{1\,\mathrm{potn}\cdot ccf_e = \frac{m_\mathrm{e}c^2}{e} = 5.1099895\times10^{5}\ \mathrm{V}}.$$

Equivalently,

$$\boxed{1\,\mathrm{potn} = \frac{5.1099895\times10^{5}\ \mathrm{V}}{\frac{{e_\mathrm{emax}}^2}{e}}}.$$

This is the GRSEP anchor: potn is a whole-unit quantum constant in QMU.

6 Exact identities, SI evaluations, and process links (ordered as in Appendix tables)

Below, $c = \lambda_C F_q$ and CODATA constants are used for SI values. **The units are presented in the same order as the Appendix classification (Dynamic first, then Substrate)** to make cross-referencing immediate.

Rotating Magnetic Field / Aether unit (A_u).

$$1\,A_u\cdot ccf_e = \left(\frac{m_\mathrm{e}\,{\lambda_C}^3 {F_q}^2}{{e_\mathrm{emax}}^2}\right)\left(\frac{{e_\mathrm{emax}}^2}{e}\right) = \frac{m_\mathrm{e}\,\lambda_C\,c^2}{e} = \frac{h\,c}{e} = \boxed{1.2398419843\times10^{-6}\ \mathrm{V\cdot m}}. \tag{5}$$

Quantum process. **Photoelectric effect:** $E = hc/\lambda = eV$ ($\approx 1240\ \mathrm{eV\,nm}$).

Magnetic field (`mfld`).

$$1\,\mathrm{mfld}\cdot ccf_e = \left(\frac{m_\mathrm{e}\,{\lambda_C}^3 F_q}{{e_\mathrm{emax}}^2}\right)\left(\frac{{e_\mathrm{emax}}^2}{e}\right) = \frac{m_\mathrm{e}\,c\,{\lambda_C}^2}{e} = B_\mathrm{cr}{\lambda_C}^3 = \boxed{1.0034412877\times10^{-26}\ \mathrm{Wb\cdot m}}. \tag{6}$$

Quantum process. **Volumetric strong-field QED:** uniform fields over Compton volumes.

Magnetic volume (`mvlm`).

$$1\,\mathrm{mvlm}\cdot ccf_e = \left(\frac{m_\mathrm{e}\,{\lambda_C}^3}{{e_\mathrm{emax}}^2}\right)\left(\frac{{e_\mathrm{emax}}^2}{e}\right) = \frac{m_\mathrm{e}\,{\lambda_C}^3}{e} = \frac{h}{e}\,\frac{{\lambda_C}^2}{c} = \boxed{8.1211511673\times10^{-47}\ \mathrm{Wb}\cdot\mathrm{m}\cdot\mathrm{s}}. \tag{7}$$

Quantum process. **Dynamic linear strong-field QED:** time-varying B over Compton scales.

Potential (`potn`, GRSEP).

$$1\,\mathrm{potn}\cdot ccf_e = \frac{m_\mathrm{e}c^2}{e} = \boxed{5.1099895\times10^{5}\ \mathrm{V}}. \tag{8}$$

Magnetic flux (`mflx`, flux quantum link).

$$1\,\mathrm{mflx}\cdot ccf_e = \frac{m_\mathrm{e}\,{\lambda_C}^2 F_q}{e} = \frac{h}{e} = 2\phi_0 = \boxed{4.1356676969\times10^{-15}\ \mathrm{Wb}}. \tag{9}$$

Quantum process. **Flux quantization / Josephson physics:** $\phi_0 = h/2e$.

Inductance (`indc`, exception for unit, SI numeric shown).

$$1\,\mathrm{indc}\cdot ccf_e = \left(\frac{m_\mathrm{e}\,{\lambda_C}^2}{{e_\mathrm{emax}}^2}\right)\left(\frac{{e_\mathrm{emax}}^2}{e}\right) = \frac{h}{e}\,\frac{\lambda_C}{c} = \boxed{3.3471198521\times10^{-35}\ \mathrm{H}}. \tag{10}$$

Quantum process. **Josephson effect:** inductive response linked to flux quantization.

Electric field strength (`elfs`).

$$1\,\mathrm{elfs}\cdot ccf_e = \frac{m_\mathrm{e}\,c^2}{e\,\lambda_C} = \boxed{2.1060742433\times10^{17}\ \mathrm{V/m}}. \tag{11}$$

Quantum process. **Schwinger field** (using h; $\hbar$-form is 1.323×10^{18} V/m).

Magnetic rigidity / velocity (`magr`).

$$1\,\mathrm{magr}\cdot ccf_e = \frac{m_\mathrm{e}\,c}{e} = \boxed{1.7045090240\times10^{-3}\ \mathrm{T}\cdot\mathrm{m}}. \tag{12}$$

Quantum process. $B_\mathrm{cr}\lambda_C$ strong-field scale.

Permeability scale (`perm`, exception for unit).

$$\mathrm{perm} = 4\pi\,\mu_0 = \boxed{1.5791367050\times10^{-5}\ \mathrm{N\,A^{-2}}}.$$

Quantum process. **Vacuum magnetic response.**

Diverging electric field (`dvef`).

$$1\,\mathrm{dvef}\cdot ccf_e = \frac{m_\mathrm{e}\,c^2}{e\,{\lambda_C}^2} = \boxed{8.6801523141\times10^{28}\ \mathrm{V/m^2}}. \tag{13}$$

Quantum process. **Gradient Schwinger** scale.

Magnetic flux density (`mfxd`).

$$1\,\mathrm{mfxd}\cdot ccf_e = \frac{{m_\mathrm{e}}^2 c^2}{e\,h} = \boxed{7.0251074939\times10^{8}\ \mathrm{T}}. \tag{14}$$

Quantum process. **Strong-field QED onset** ($B_\mathrm{cr}/2\pi$).

Magnetism / mass-to-charge (`mchg`).

$$1\,\mathrm{mchg}\cdot ccf_e = \left(\frac{m_\mathrm{e}}{{e_\mathrm{emax}}^2}\right)\left(\frac{{e_\mathrm{emax}}^2}{e}\right) = \frac{m_\mathrm{e}}{e} = \boxed{5.6856301036\times10^{-12}\ \mathrm{kg/C}}. \tag{15}$$

Quantum process. **Landau quantization & cyclotron dynamics.**

Magnetic field exposure (`mfde`, substrate).

$$1\,\mathrm{mfde}\cdot {ccf_e}^{-1} = \frac{e}{m_\mathrm{e}\,{\lambda_C}^3} = \boxed{1.231216\times10^{46}\ \mathrm{C/(kg\cdot m^3)}}. \tag{16}$$

Quantum process. **Volumetric supercriticality.**

Magnetic flux intensity ratio (`mfir`, substrate).

$$1\,\mathrm{mfir}\cdot {ccf_e}^{-1} = \frac{e}{m_\mathrm{e}\,{\lambda_C}^2 c} = \boxed{9.9665318\times10^{25}\ \mathrm{C/(kg\cdot m^2\cdot s)}}. \tag{17}$$

Quantum process. **Dynamic surface supercriticality.**

Permittivity scale (`ptty`, exception for unit, substrate).

$$\mathrm{ptty} = \frac{\epsilon_0}{4\pi} = \boxed{7.0459387874\times10^{-13}\ \mathrm{F/m}}.$$

Quantum process. **Vacuum electric response.**

Aether fluctuation potential (`aefp`, substrate).

$$1\,\mathrm{aefp}\cdot {ccf_e}^{-1} = \frac{e}{m_\mathrm{e}\,{\lambda_C}^2} = \boxed{2.9876432401\times10^{34}\ \mathrm{C/(kg\cdot m^2)}}. \tag{18}$$

Quantum process. **Supercritical Coulomb-area** scale.

Conductance (`cond`, exception for unit, substrate). In QMU, $\mathrm{cond} = \mathrm{mflx}^{-1}$. Numerically,

$$1\,\mathrm{cond}\cdot {ccf_e}^{-1} = \frac{1}{1\,\mathrm{mflx}\cdot\frac{{e_\mathrm{emax}}^2}{e}} = \frac{e}{h} = \boxed{2.4179892421\times10^{14}\ \mathrm{Wb}^{-1}}.$$

Quantum process. **Aharonov–Bohm effect:** the characteristic flux is h/e; its *inverse* sets the phase sensitivity scale.

Capacitance (`capc`, exception for unit, substrate).

$$1\,\mathrm{capc}\cdot {ccf_e}^{-1} = \frac{e}{m_\mathrm{e}\,{\lambda_C}^2 {F_q}^2} = \frac{e}{m_\mathrm{e}c^2} = \boxed{1.9569511836\times10^{-6}\ \mathrm{C/J}}. \tag{19}$$

Quantum process. **Pair production threshold scale** $e/(m_e c^2)$.

Curl (`curl`, substrate).

$$1\,\mathrm{curl}\cdot ccf_e{}^{-1} = \frac{e}{m_\mathrm{e}\,\lambda_C} = \boxed{7.2489493830\times10^{22}\ \mathrm{C/(kg\cdot m)}}. \tag{20}$$

Quantum process. **Line-charge/flux-tube supercriticality** (ec/h).

Exposure diffusion flux (`exdf`, substrate).

$$1\,\mathrm{exdf}\cdot ccf_e{}^{-1} = \frac{e}{m_\mathrm{e}\,c} = \boxed{5.86765024\times10^{2}\ \mathrm{C\cdot s/(kg\cdot m)}}. \tag{21}$$

Quantum process. **Point-source dynamics:** charge per relativistic momentum.

Acceptance (`accp`, substrate).

$$1\,\mathrm{accp}\cdot ccf_e{}^{-1} = \frac{e\,\lambda_C}{m_\mathrm{e}\,c^2} = \boxed{4.7471\times10^{-18}\ \mathrm{C\cdot s^2/(kg\cdot m^2)}}. \tag{22}$$

Quantum process. **Inverse Schwinger** field $1/E_\mathrm{cr}$.

Converging electric field (`cvef`, substrate).

$$1\,\mathrm{cvef}\cdot ccf_e{}^{-1} = \frac{e\,{\lambda_C}^2}{m_\mathrm{e}\,c^2} = \boxed{1.1526\times10^{-29}\ \mathrm{C\cdot s^2/kg}}. \tag{23}$$

Quantum process. **Inhomogeneous-field Schwinger** scale λ_C/E_cr.

Conductance density (`cden`, substrate).

$$1\,\mathrm{cden}\cdot ccf_e{}^{-1} = \frac{e\,\lambda_C}{m_\mathrm{e}\,c} = \boxed{1.4230\times10^{-9}\ \mathrm{C\cdot s/kg}}. \tag{24}$$

Quantum process. **Inverse magnetic Schwinger** scale $1/B_\mathrm{cr}$.

Exposure (`expr`, substrate).

$$1\,\mathrm{expr}\cdot ccf_e{}^{-1} = \left(\frac{{e_\mathrm{emax}}^2}{m_\mathrm{e}}\right)\left(\frac{e}{{e_\mathrm{emax}}^2}\right) = \frac{e}{m_\mathrm{e}} = \boxed{1.7588200108\times10^{11}\ \mathrm{C/kg}}. \tag{25}$$

Quantum process. **Charge-to-mass ratio:** Lorentz dynamics and plasma kinetics.

7 Biological mechanics in QMU (illustrative identities)

The following relations illustrate how QMU units clarify biological electricity without resorting to mismatched charge dimensions or imaginary impedances:

$$\mathrm{cond}\cdot\mathrm{enrg} = \mathrm{curr} \tag{26}$$

Quantum process. Exercise and metabolic work convert stored chemical energy into electric current along conductive cellular pathways; cond quantifies pathway efficiency, turning energy dissipation into charge transport.

$$\mathrm{capc}\cdot\mathrm{freq} = \mathrm{cond} \tag{27}$$

Quantum process. Daily charge–discharge cycles of lipid membranes (capacitance) modulated at a physiological frequency replenish effective tissue conductance, enabling sustained current generation.

$$\text{angm} \cdot \text{velc} = \text{phtn} \tag{28}$$

Quantum process. Planck–Einstein emission: electronic angular momentum couples to the Aether substrate and, at velocity c, is emitted as a photon quantum.

$$\text{phtn} \cdot \text{freq} = \text{ligt} \tag{29}$$

Quantum process. Photons emitted at a given frequency accumulate into a light state (photon flux field); frequency sets spectral content while flux sets intensity.

$$\text{ligt} \cdot \text{cond} = \text{accl} \cdot \text{chrg} \tag{30}$$

Quantum process. Photo-bioelectrics: incident light acting through tissue conductance accelerates ionic charge, driving electrochemical transport and reaction kinetics (e.g., ion pumping, vitamin-D synthesis).

Here enrg is a QMU energy symbol (kept symbolic for ledger consistency), phtn denotes a photon quantum, freq is F_q, ligt is a photon flux/field state, angm is h (Planck's constant), velc is c (speed of photons), and chrg is an electrostatic/ionic charge carrier.

8 Consolidated CCF mapping table (units of dimensions)

Take ccf_X for the appropriate species (electron default). All entries are *unit* relations in QMU.

Quantity	**Legacy unit (symbolic)**	**QMU unit**	**Rule**
Potential	volt	potn	denominator ⇒ divide by ccf_X: potn = volt/ccf_X.
Current	ampere	curr	numerator ⇒ multiply by ccf_X: curr = $\mathrm{ccf}_X \cdot$ ampere.
Magnetic flux	weber	mflx	denominator (one charge) ⇒ divide: mflx = weber/ccf_X.
Flux density	tesla	mfxd	denominator (one charge) ⇒ divide: mfxd = tesla/ccf_X.
Electric field strength	V/m	elfs	denominator ⇒ divide: elfs = (V/m)/ccf_X.
Magnetic rigidity	T·m	magr	denominator ⇒ divide: magr = $(\mathrm{T} \cdot \mathrm{m})/\mathrm{ccf}_X$.
Diverging E-field	$\mathrm{V/m}^2$	dvef	denominator ⇒ divide: dvef = $(\mathrm{V/m}^2)/\mathrm{ccf}_X$.
Inductance	henry	indc	**Exception** (no CCF).
Permeability	μ_0-type	perm	**Exception** (no CCF).
Resistance (MFR)	ohm	resn	squared rule: resn = $\Omega/{\mathrm{ccf}_X}^2$.
Reluctance (MFF)	At/Wb	mrlc	squared rule (substrate): mrlc = $(\mathrm{At/Wb}) \times {\mathrm{ccf}_X}^2$.
Capacitance	farad	capc	**Exception** (no CCF).
Conductance	siemens	cond	**Exception** (no CCF), and cond = mflx^{-1}.
Permittivity	ϵ_0-type	ptty	**Exception** (no CCF).
Curl (substrate)	$\mathrm{C}/(\mathrm{kg\,m})$	curl	substrate: legacy→QMU multiplies by ccf_X.
Aether fluct. potential (substrate)	$\mathrm{C}/(\mathrm{kg\,m}^2)$	aefp	substrate: legacy→QMU multiplies by ccf_X.

9 QMU ledger identities remain intact

Once e powers are replaced by ccf_X according to Section 4, the standard QMU impedance web holds identically:

$$\mathrm{potn} = \mathrm{curr} \cdot \mathrm{resn} = \mathrm{mflx} \cdot \mathrm{rson}^{1/2} = \mathrm{perm} \cdot \mathrm{accl} = \frac{1}{\mathrm{capc}}, \tag{31}$$

with the usual rson = ${F_q}^2$, mflx relations, and accl = $\lambda_C \, {F_q}^2$ is acceleration. No further CCFs are required after the first pass.

10 Metrology protocol (instrument ingest, QMU-only)

1. **Identify net charge power.** For each measured/derived quantity, determine the net power of e.
2. **Apply** ccf_X **once.** Use Rule A (numerator/denominator) or the squared rule for MFR/MFF.
3. **Reduce to QMU units.** Express final results in $\{A_u, \mathrm{mfld}, \mathrm{mvlm}, \mathrm{potn}, \mathrm{mflx}, \mathrm{indc}, \mathrm{elfs}, \mathrm{magr}, \mathrm{perm}, \mathrm{dvef}, \mathrm{mfxd}, \mathrm{mchg}, \mathrm{mfde}, \mathrm{mfir}, \mathrm{ptty}, \mathrm{aefp}, \mathrm{cond}, \mathrm{capc}, \mathrm{curl}, \mathrm{exdf}, \mathrm{accp}, \mathrm{cvef}, \mathrm{cden}, \mathrm{expr}\}$.
4. **Benchmark** potn**.** Compare potn against the GRSEP anchor (single-escape peak) for scale validation in spectra.

A Appendix

Further QMU unit families. Beyond the two charge-related tables shown here, the QMU ledger contains several additional families of units built from the same $(m_\mathrm{e}, \lambda_C, F_q, {e_\mathrm{emax}}^2)$ bases and governed by the identical CCF rules and exceptions summarized in Section 4. These families cover many quantities absent from SI/MKS; in total, the QMU catalog includes *more than an order of magnitude* (i.e., over ten times) as many distinct units as the traditional systems. Each retains clean dimensional alignment, many under distributed charge, inviting systematic exploration to identify laboratory anchors, cross-domain invariants, and potential scientific applications that are otherwise obscured in single-charge frameworks.

Electromagnetic Field and Interaction Units

Dynamic Units

1. Rotating Magnetic Field 2. Aether Unit 3. Electron Flux	**Magnetic Field**	**Magnetic Volume**
$A_u = \dfrac{m_\mathrm{e} \cdot {\lambda_C}^3 \cdot {F_q}^2}{{e_\mathrm{emax}}^2}$ (also rmfd)	$\mathrm{mfld} = \dfrac{m_\mathrm{e} \cdot {\lambda_C}^3 \cdot F_q}{{e_\mathrm{emax}}^2}$	$\mathrm{mvlm} = \dfrac{m_\mathrm{e} \cdot {\lambda_C}^3}{{e_\mathrm{emax}}^2}$
1. Electric Potential 2. Electromotive Force	**Magnetic Flux**	**Inductance**
$\mathrm{potn} = \dfrac{m_\mathrm{e} \cdot {\lambda_C}^2 \cdot {F_q}^2}{{e_\mathrm{emax}}^2}$	$\mathrm{mflx} = \dfrac{m_\mathrm{e} \cdot {\lambda_C}^2 \cdot F_q}{{e_\mathrm{emax}}^2}$	$\mathrm{indc} = \dfrac{m_\mathrm{e} \cdot {\lambda_C}^2}{{e_\mathrm{emax}}^2}$
Electric Field Strength	1. Magnetic Rigidity 2. Magnetic Velocity	**Permeability**
$\mathrm{elfs} = \dfrac{m_\mathrm{e} \cdot \lambda_C \cdot {F_q}^2}{{e_\mathrm{emax}}^2}$	$\mathrm{magr} = \dfrac{m_\mathrm{e} \cdot \lambda_C \cdot F_q}{{e_\mathrm{emax}}^2}$	$\mathrm{perm} = \dfrac{m_\mathrm{e} \cdot \lambda_C}{{e_\mathrm{emax}}^2}$
1. Diverging Electric Field 2. Surface Tension Charge 3. Magnetic Resonance	**Magnetic Flux Density**	1. Magnetism 2. Mass to Charge Ratio
$\mathrm{dvef} = \dfrac{m_\mathrm{e} \cdot {F_q}^2}{{e_\mathrm{emax}}^2}$ (also stnc or spcd)	$\mathrm{mfxd} = \dfrac{m_\mathrm{e} \cdot F_q}{{e_\mathrm{emax}}^2}$	$\mathrm{mchg} = \dfrac{m_\mathrm{e}}{{e_\mathrm{emax}}^2}$

Substrate Units

Magnetic Field Exposure	**Magnetic Flux Intensity Ratio**	**Permittivity**
$\text{mfde} = \frac{{e_{\text{emax}}}^2}{m_\text{e} \cdot {\lambda_C}^3}$	$\text{mfir} = \frac{{e_{\text{emax}}}^2}{m_\text{e} \cdot {\lambda_C}^3 \cdot F_q}$	$\text{ptty} = \frac{{e_{\text{emax}}}^2}{m_\text{e} \cdot {\lambda_C}^3 \cdot {F_q}^2}$
Aether Fluctuation Potential	**Conductance**	**Capacitance**
$\text{aefp} = \frac{{e_{\text{emax}}}^2}{m_\text{e} \cdot {\lambda_C}^2}$	$\text{cond} = \frac{{e_{\text{emax}}}^2}{m_\text{e} \cdot {\lambda_C}^2 \cdot F_q}$ (also Cd)	$\text{capc} = \frac{{e_{\text{emax}}}^2}{m_\text{e} \cdot {\lambda_C}^2 \cdot {F_q}^2}$
Curl	**Exposure Diffusion Flux**	**Acceptance**
$\text{curl} = \frac{{e_{\text{emax}}}^2}{m_\text{e} \cdot \lambda_C}$	$\text{exdf} = \frac{{e_{\text{emax}}}^2}{m_\text{e} \cdot \lambda_C \cdot F_q}$	$\text{accp} = \frac{{e_{\text{emax}}}^2}{m_\text{e} \cdot \lambda_C \cdot {F_q}^2}$
Exposure	**Conductance Density**	**Converging Electric Field**
$\text{expr} = \frac{{e_{\text{emax}}}^2}{m_\text{e}}$	$\text{cden} = \frac{{e_{\text{emax}}}^2}{m_\text{e} \cdot F_q}$	$\text{cvef} = \frac{{e_{\text{emax}}}^2}{m_\text{e} \cdot {F_q}^2}$

Magnetic Field Resistance and Flow Units

Dynamic Units

Friction	**Magnetic Flow Impedance**	**Flux Flow Equilibrium**
$\text{fric} = \frac{m_\text{e} \cdot {\lambda_C}^3 \cdot {F_q}^2}{{e_\text{emax}}^4}$	$\text{mgfi} = \frac{m_\text{e} \cdot {\lambda_C}^3 \cdot F_q}{{e_\text{emax}}^4}$	$\text{ffeq} = \frac{m_\text{e} \cdot {\lambda_C}^3}{{e_\text{emax}}^4}$
Kinetic Friction	**Resistance**	**Magnetic Permeance**
$\text{kfcn} = \frac{m_\text{e} \cdot {\lambda_C}^2 \cdot {F_q}^2}{{e_\text{emax}}^4}$	$\text{resn} = \frac{m_\text{e} \cdot {\lambda_C}^2 \cdot F_q}{{e_\text{emax}}^4}$	$\text{magp} = \frac{m_\text{e} \cdot {\lambda_C}^2}{{e_\text{emax}}^4}$
Magnetic Flux Density Wave	**Magnetic Diffusion Impedance**	**Thermal Magnetic Friction**
$\text{mfdw} = \frac{m_\text{e} \cdot \lambda_C \cdot {F_q}^2}{{e_\text{emax}}^4}$	$\text{mdif} = \frac{m_\text{e} \cdot \lambda_C \cdot F_q}{{e_\text{emax}}^4}$	$\text{thmf} = \frac{m_\text{e} \cdot \lambda_C}{{e_\text{emax}}^4}$
Aether Resistance Stability Factor	**Potential Charge Concentration Factor**	**Magnetic Opposition**
$\text{arsf} = \frac{m_\text{e} \cdot {F_q}^2}{{e_\text{emax}}^4}$	$\text{pccf} = \frac{m_\text{e} \cdot F_q}{{e_\text{emax}}^4}$	$\text{mopp} = \frac{m_\text{e}}{{e_\text{emax}}^4}$

Substrate Units

Electromagnetic Ratio	**Electromagnetic Interaction Coefficient**	**Current Flow Facillitation Factor**
$\text{emro} = \frac{{e_\text{emax}}^4}{m_\text{e} \cdot {\lambda_C}^3 \cdot {F_q}^2}$	$\text{emic} = \frac{{e_\text{emax}}^4}{m_\text{e} \cdot {\lambda_C}^3 \cdot F_q}$	$\text{cfff} = \frac{{e_\text{emax}}^4}{m_\text{e} \cdot {\lambda_C}^3}$
Magnetic Spatial Compliance	**Admittance**	**Magnetic Reluctance**
$\text{masc} = \frac{{e_\text{emax}}^4}{m_\text{e} \cdot {\lambda_C}^2 \cdot {F_q}^2}$	$\text{admt} = \frac{{e_\text{emax}}^4}{m_\text{e} \cdot {\lambda_C}^2 \cdot F_q}$	$\text{mrlc} = \frac{{e_\text{emax}}^4}{m_\text{e} \cdot {\lambda_C}^2}$
Magnetic Current Impedance	**Magnetic Field Resistance**	**Magnetic Field Energy**
$\text{mcri} = \frac{{e_\text{emax}}^4}{m_\text{e} \cdot \lambda_C \cdot {F_q}^2}$	$\text{mfdr} = \frac{{e_\text{emax}}^4}{m_\text{e} \cdot \lambda_C \cdot F_q}$	$\text{mfen} = \frac{{e_\text{emax}}^4}{m_\text{e} \cdot \lambda_C}$
Magnetic Charge per Unit Potential	**Magneto-Spatial Impedance Ratio**	**Electromagnetic Interaction Density**
$\text{mcup} = \frac{{e_\text{emax}}^4}{m_\text{e} \cdot {F_q}^2}$	$\text{msir} = \frac{{e_\text{emax}}^4}{m_\text{e} \cdot F_q}$	$\text{emid} = \frac{{e_\text{emax}}^4}{m_\text{e}}$

Quantum Electrodynamic Foundational Units

Dynamic Units

Quantum Photomagnetic Density	**Magnetic Charge per Photon**	**Magnetic Charge Density per Rotation**	**Magnetic Charge Rotational Density**
qpmd $= \frac{1}{{e_{\text{emax}}}^2 \cdot {\lambda_C}^3 \cdot {F_q}^3}$	mcpp $= \frac{1}{{e_{\text{emax}}}^2 \cdot {\lambda_C}^3 \cdot {F_q}^2}$	mcdr $= \frac{1}{{e_{\text{emax}}}^2 \cdot {\lambda_C}^3 \cdot F_q}$	mcrd $= \frac{1}{{e_{\text{emax}}}^2 \cdot {\lambda_C}^3}$
Quantum Illumination Density	**Quantum Electric Charge Flux**	**Charge Surface-Temporal Confinement Coefficient**	**Charge Surface Confinement Coefficient**
qild $= \frac{1}{{e_{\text{emax}}}^2 \cdot {\lambda_C}^2 \cdot {F_q}^3}$	qecf $= \frac{1}{{e_{\text{emax}}}^2 \cdot {\lambda_C}^2 \cdot {F_q}^2}$	cscc $= \frac{1}{{e_{\text{emax}}}^2 \cdot {\lambda_C}^2 \cdot F_q}$	chcc $= \frac{1}{{e_{\text{emax}}}^2 \cdot {\lambda_C}^2}$
Quantum Electric Charge Jerk	**Quantum Electric Charge Acceleration**	**Quantum Electric Charge Drift**	**Quantum Electric Charge Displacement**
qecj $= \frac{1}{{e_{\text{emax}}}^2 \cdot \lambda_C \cdot {F_q}^3}$	qeca $= \frac{1}{{e_{\text{emax}}}^2 \cdot \lambda_C \cdot {F_q}^2}$	qecd $= \frac{1}{{e_{\text{emax}}}^2 \cdot \lambda_C \cdot F_q}$	ecdp $= \frac{1}{{e_{\text{emax}}}^2 \cdot \lambda_C}$
Quantum Electric Charge Intensity	**Quantum Electric Charge Oscillation**	**Quantum Electric Charge Fluctuation**	**Magnetic Charge Affinity**
qeci $= \frac{1}{{e_{\text{emax}}}^2 \cdot {F_q}^3}$	qeco $= \frac{1}{{e_{\text{emax}}}^2 \cdot {F_q}^2}$	ecfx $= \frac{1}{{e_{\text{emax}}}^2 \cdot F_q}$	mcaf $= \frac{1}{{e_{\text{emax}}}^2}$

Substrate Units

Quantum Electric Field Volumetric Resonance	**Quantum Electric Field Volumetric Adaptability**	**Quantum Electric Field Volumetric Compliance**	**Charge Volume**
efvr $= {e_{\text{emax}}}^2 \cdot {\lambda_C}^3 \cdot {F_q}^3$	efva $= {e_{\text{emax}}}^2 \cdot {\lambda_C}^3 \cdot {F_q}^2$	efvc $= {e_{\text{emax}}}^2 \cdot {\lambda_C}^3 \cdot F_q$	chvm $= {e_{\text{emax}}}^2 \cdot {\lambda_C}^3$
Ball Lightning	**Plasma**	**Magnetic Moment**	**Surface Charge**
ball $= {e_{\text{emax}}}^2 \cdot {\lambda_C}^2 \cdot {F_q}^3$	plsm $= {e_{\text{emax}}}^2 \cdot {\lambda_C}^2 \cdot {F_q}^2$	magm $= {e_{\text{emax}}}^2 \cdot {\lambda_C}^2 \cdot F_q$	sfch $= {e_{\text{emax}}}^2 \cdot {\lambda_C}^2$
Quantum Electric Field Dynamic Responsivity	**Accelerating Charge**	**Charge Velocity**	**Charge Length** (Charge Displacement)
efdr $= {e_{\text{emax}}}^2 \cdot \lambda_C \cdot {F_q}^3$	acch $= {e_{\text{emax}}}^2 \cdot \lambda_C \cdot {F_q}^2$	chvl $= {e_{\text{emax}}}^2 \cdot \lambda_C \cdot F_q$	chgl $= {e_{\text{emax}}}^2 \cdot \lambda_C$
Quantum Electric Field Temporal Intensity	**Charge Resonance** (Electric Coupling)	**Current**	**Charge**
efti $= {e_{\text{emax}}}^2 \cdot {F_q}^3$	chrs $= {e_{\text{emax}}}^2 \cdot {F_q}^2$ (also ecup)	curr $= {e_{\text{emax}}}^2 \cdot F_q$	chrg $= {e_{\text{emax}}}^2$

Quantum Electrodynamic Distribution Units

Dynamic Units

Quantum Volumetric Charge Inertia	**Quantum Volumetric Charge Reluctance**	**Quantum Volumetric Charge Persistence**	**Specific Charge**
$\text{qvci} = \frac{{\lambda_C}^3}{{e_{\text{emax}}}^2 \cdot {F_q}^3}$	$\text{qvcr} = \frac{{\lambda_C}^3}{{e_{\text{emax}}}^2 \cdot {F_q}^2}$	$\text{qvcp} = \frac{{\lambda_C}^3}{{e_{\text{emax}}}^2 \cdot F_q}$	$\text{spch} = \frac{{\lambda_C}^3}{{e_{\text{emax}}}^2}$
Quantum Charge Distribution Resistance	**Quantum Charge Distribution Periodicity**	**Quantum Charge Distribution Dynamics**	1. Charge Distribution 2. Stroke
$\text{qcdr} = \frac{{\lambda_C}^2}{{e_{\text{emax}}}^2 \cdot {F_q}^3}$	$\text{qcdp} = \frac{{\lambda_C}^2}{{e_{\text{emax}}}^2 \cdot {F_q}^2}$	$\text{qcdd} = \frac{{\lambda_C}^2}{{e_{\text{emax}}}^2 \cdot F_q}$	$\text{chds} = \frac{{\lambda_C}^2}{{e_{\text{emax}}}^2}$ (also strk)
Quantum Charge Radius Resistance	**Quantum Charge Radius Periodicity**	**Quantum Charge Radius Dynamics**	**Charge Radius**
$\text{qcrr} = \frac{\lambda_C}{{e_{\text{emax}}}^2 \cdot {F_q}^3}$	$\text{qcrp} = \frac{\lambda_C}{{e_{\text{emax}}}^2 \cdot {F_q}^2}$	$\text{qcrd} = \frac{\lambda_C}{{e_{\text{emax}}}^2 \cdot F_q}$	$\text{chgr} = \frac{\lambda_C}{{e_{\text{emax}}}^2}$

Substrate Units

Quantum Charge Density Intensity	**Quantum Charge Density Resonance**	**Quantum Charge Density Oscillation**	**Charge Density**
$\text{qcdi} = \frac{{e_{\text{emax}}}^2 \cdot {F_q}^3}{{\lambda_C}^3}$	$\text{cdrs} = \frac{{e_{\text{emax}}}^2 \cdot {F_q}^2}{{\lambda_C}^3}$	$\text{cdos} = \frac{{e_{\text{emax}}}^2 \cdot F_q}{{\lambda_C}^3}$	$\text{chgd} = \frac{{e_{\text{emax}}}^2}{{\lambda_C}^3}$
Quantum Electric Surface Intensity	**Quantum Electric Field Resonance**	**Current Density**	**Electric Flux Density**
$\text{qesi} = \frac{{e_{\text{emax}}}^2 \cdot {F_q}^3}{{\lambda_C}^2}$	$\text{qefr} = \frac{{e_{\text{emax}}}^2 \cdot {F_q}^2}{{\lambda_C}^2}$	$\text{cdns} = \frac{{e_{\text{emax}}}^2 \cdot F_q}{{\lambda_C}^2}$	$\text{efxd} = \frac{{e_{\text{emax}}}^2}{{\lambda_C}^2}$
Quantum Electric Gradient Intensity	**Quantum Electric Gradient Resonance**	**Magnetic Field Intensity**	**Electric Charge Gradient**
$\text{qegi} = \frac{{e_{\text{emax}}}^2 \cdot {F_q}^3}{\lambda_C}$	$\text{qegr} = \frac{{e_{\text{emax}}}^2 \cdot {F_q}^2}{\lambda_C}$	$\text{mfdi} = \frac{{e_{\text{emax}}}^2 \cdot F_q}{\lambda_C}$	$\text{elcg} = \frac{{e_{\text{emax}}}^2}{\lambda_C}$

Electromagnetic Behavioral Units

Dynamic Units

Trivariate Magnetic Oscillation	**Varying Electric Field**	**Electric Field**	**Specific Charge**
trmo $= \frac{{\lambda_C}^3 \cdot {F_q}^3}{{e_{\text{emax}}}^2}$	vefd $= \frac{{\lambda_C}^3 \cdot {F_q}^2}{{e_{\text{emax}}}^2}$	efld $= \frac{{\lambda_C}^3 \cdot F_q}{{e_{\text{emax}}}^2}$	spch $= \frac{{\lambda_C}^3}{{e_{\text{emax}}}^2}$
Dynamic Electric Field Intensity	**Charge Temperature**	**Charge Sweep**	1. Charge Distribution 2. Stroke
defi $= \frac{{\lambda_C}^2 \cdot {F_q}^3}{{e_{\text{emax}}}^2}$	chgt $= \frac{{\lambda_C}^2 \cdot {F_q}^2}{{e_{\text{emax}}}^2}$	chgs $= \frac{{\lambda_C}^2 \cdot F_q}{{e_{\text{emax}}}^2}$	chds $= \frac{{\lambda_C}^2}{{e_{\text{emax}}}^2}$ (also strk)
Dynamic Electric Field Flux	**Charge Acceleration**	**Charge Velocity**	**Charge Radius**
deff $= \frac{\lambda_C \cdot {F_q}^3}{{e_{\text{emax}}}^2}$	chga $= \frac{\lambda_C \cdot {F_q}^2}{{e_{\text{emax}}}^2}$	chgv $= \frac{\lambda_C \cdot F_q}{{e_{\text{emax}}}^2}$	chgr $= \frac{\lambda_C}{{e_{\text{emax}}}^2}$
Dynamic Electric Field Oscillation	**Charge Resonance**	1. Magnetic Current 2. Charge Frequency	**Magnetic Charge Affinity**
defa $= \frac{{F_q}^3}{{e_{\text{emax}}}^2}$	crsn $= \frac{{F_q}^2}{{e_{\text{emax}}}^2}$	mcur $= \frac{F_q}{{e_{\text{emax}}}^2}$ (also chgf)	mcaf $= \frac{1}{{e_{\text{emax}}}^2}$

Substrate Units

Quantum Electric Field Susceptibility	**Quantum Electric Field Receptivity**	**Quantum Electric Field Compliance**	**Charge Density**
qefs $= \frac{{e_{\text{emax}}}^2}{{\lambda_C}^3 \cdot {F_q}^3}$	qerc $= \frac{{e_{\text{emax}}}^2}{{\lambda_C}^3 \cdot {F_q}^2}$	qefc $= \frac{{e_{\text{emax}}}^2}{{\lambda_C}^3 \cdot F_q}$	chgd $= \frac{{e_{\text{emax}}}^2}{{\lambda_C}^3}$
Quantum Electric Field Intensity	**Quantum Electric Field Resonance**	**Magnetic Charge Density Frequency**	**Electric Flux Density**
qefi $= \frac{{e_{\text{emax}}}^2}{{\lambda_C}^2 \cdot {F_q}^3}$	efrs $= \frac{{e_{\text{emax}}}^2}{{\lambda_C}^2 \cdot {F_q}^2}$	mcdf $= \frac{{e_{\text{emax}}}^2}{{\lambda_C}^2 \cdot F_q}$	efxd $= \frac{{e_{\text{emax}}}^2}{{\lambda_C}^2}$
Quantum Electric Field Plasticity	**Quantum Electric Field Elasticity**	**Quantum Electric Field Conductance**	**Electric Charge Gradient**
qefp $= \frac{{e_{\text{emax}}}^2}{\lambda_C \cdot {F_q}^3}$	qefe $= \frac{{e_{\text{emax}}}^2}{\lambda_C \cdot {F_q}^2}$	efcd $= \frac{{e_{\text{emax}}}^2}{\lambda_C \cdot F_q}$	elcg $= \frac{{e_{\text{emax}}}^2}{\lambda_C}$
Quantum Electric Field Permeability	**Quantum Electric Field Susceptibility**	**Quantum Electric Field Permittivity**	**Charge**
efpm $= \frac{{e_{\text{emax}}}^2}{{F_q}^3}$	efsu $= \frac{{e_{\text{emax}}}^2}{{F_q}^2}$	efpt $= \frac{{e_{\text{emax}}}^2}{F_q}$	chrg $= {e_{\text{emax}}}^2$

Fundamental Inertial and Behavioral Units

Dynamic Units

Light	**Photon**	**Quantum Angular Reach**	**Vortex**
ligt $= m_\mathrm{e} \cdot {\lambda_C}^3 \cdot {F_q}^3$	phtn $= m_\mathrm{e} \cdot {\lambda_C}^3 \cdot {F_q}^2$	qanr $= m_\mathrm{e} \cdot {\lambda_C}^3 \cdot F_q$	vrtx $= m_\mathrm{e} \cdot {\lambda_C}^3$
Power	**Energy**	**Angular Momentum**	**Moment of Inertia**
powr $= m_\mathrm{e} \cdot {\lambda_C}^2 \cdot {F_q}^3$	enrg $= m_\mathrm{e} \cdot {\lambda_C}^2 \cdot {F_q}^2$	angm $= m_\mathrm{e} \cdot {\lambda_C}^2 \cdot F_q$ (also h)	minr $= m_\mathrm{e} \cdot {\lambda_C}^2$
1. Shock Frequency 2. Light Intensity	**Force**	**Momentum**	**Torque**
lint $= m_\mathrm{e} \cdot \lambda_C \cdot {F_q}^3$	forc $= m_\mathrm{e} \cdot \lambda_C \cdot {F_q}^2$	momt $= m_\mathrm{e} \cdot \lambda_C \cdot F_q$	torq $= m_\mathrm{e} \cdot \lambda_C$
Irradiance	**Surface Tension**	**Intensity**	**Mass**
irrd $= m_\mathrm{e} \cdot {F_q}^3$	sten $= m_\mathrm{e} \cdot {F_q}^2$	ints $= m_\mathrm{e} \cdot F_q$	mass $= m_\mathrm{e}$

Substrate Units

Optical Compliance	**Innate Particulate Resolvability**	**Quantum Volumetric Receptivity**	**Quantum Volumetric Inertia**
ocmp $= \dfrac{1}{m_\mathrm{e} \cdot {\lambda_C}^3 \cdot {F_q}^3}$	inpr $= \dfrac{1}{m_\mathrm{e} \cdot {\lambda_C}^3 \cdot {F_q}^2}$	qvrc $= \dfrac{1}{m_\mathrm{e} \cdot {\lambda_C}^3 \cdot F_q}$	qvoi $= \dfrac{1}{m_\mathrm{e} \cdot {\lambda_C}^3}$
Quantum Surface Receptivity	**Quantum Surface Inertia**	**Quantum Angular Receptivity Gauge**	**Quantum Area Inertia**
qsrc $= \dfrac{1}{m_\mathrm{e} \cdot {\lambda_C}^2 \cdot {F_q}^3}$	qusi $= \dfrac{1}{m_\mathrm{e} \cdot {\lambda_C}^2 \cdot {F_q}^2}$	qarg $= \dfrac{1}{m_\mathrm{e} \cdot {\lambda_C}^2 \cdot F_q}$	qari $= \dfrac{1}{m_\mathrm{e} \cdot {\lambda_C}^2}$
Quantum Inverse Light Intensity	**Spatial Tensility**	**Quantum Mobility**	**Quantum Flexibility**
qili $= \dfrac{1}{m_\mathrm{e} \cdot \lambda_C \cdot {F_q}^3}$	sptn $= \dfrac{1}{m_\mathrm{e} \cdot \lambda_C \cdot {F_q}^2}$	qmob $= \dfrac{1}{m_\mathrm{e} \cdot \lambda_C \cdot F_q}$	qflx $= \dfrac{1}{m_\mathrm{e} \cdot \lambda_C}$
Quantum Opacity	**Quantum Spreadability**	**Displacement Field**	**Quantum Existential Limit**
qopq $= \dfrac{1}{m_\mathrm{e} \cdot {F_q}^3}$	qspr $= \dfrac{1}{m_\mathrm{e} \cdot {F_q}^2}$	dfld $= \dfrac{1}{m_\mathrm{e} \cdot F_q}$	qexl $= \dfrac{1}{m_\mathrm{e}}$

Density and Distributional Behavioral Units

Dynamic Units

Quantum Mass Frequency Activity	**Quantum Mass Resonance Occupation**	**Quantum Mass Frequency Oscillation**	**Mass Density**
qmfa $= \frac{m_e \cdot {F_q}^3}{{\lambda_C}^3}$	qmro $= \frac{m_e \cdot {F_q}^2}{{\lambda_C}^3}$	qmfo $= \frac{m_e \cdot F_q}{{\lambda_C}^3}$	masd $= \frac{m_e}{{\lambda_C}^3}$
Quantum Surface Activity	**Force Density**	**Momentum Density**	**Surface Density**
qsac $= \frac{m_e \cdot {F_q}^3}{{\lambda_C}^2}$	fdns $= \frac{m_e \cdot {F_q}^2}{{\lambda_C}^2}$	momd $= \frac{m_e \cdot F_q}{{\lambda_C}^2}$	sfcd $= \frac{m_e}{{\lambda_C}^2}$
Pressure Diffusion Rate	**Pressure**	**Viscosity**	1. Rebound 2. Length Density
pdrt $= \frac{m_e \cdot {F_q}^3}{\lambda_C}$	pres $= \frac{m_e \cdot {F_q}^2}{\lambda_C}$	visc $= \frac{m_e \cdot F_q}{\lambda_C}$	ldns $= \frac{m_e}{\lambda_C}$ (also rbnd)

Substrate Units

Quantum Volume Fluctuation Impedance	**Quantum Volume Temporal Compliance**	**Quantum Volume Dynamic Flux**	**Specific Volume**
qvfi $= \frac{{\lambda_C}^3}{m_e \cdot {F_q}^3}$	qvtc $= \frac{{\lambda_C}^3}{m_e \cdot {F_q}^2}$	qvdf $= \frac{{\lambda_C}^3}{m_e \cdot F_q}$	spcv $= \frac{{\lambda_C}^3}{m_e}$
Quantum Surface Frequency Response	**Quantum Area Resonance Compliance**	**Quantum Surface Dynamic Compliance**	**Specific Area**
qsfr $= \frac{{\lambda_C}^2}{m_e \cdot {F_q}^3}$	qarc $= \frac{{\lambda_C}^2}{m_e \cdot {F_q}^2}$	qsdc $= \frac{{\lambda_C}^2}{m_e \cdot F_q}$	spar $= \frac{{\lambda_C}^2}{m_e}$
Quantum Linear Oscillation Density	**Quantum Linear Dynamic Compliance**	**Quantum Linear Temporal Compliance**	**Specific Length**
qlod $= \frac{\lambda_C}{m_e \cdot {F_q}^3}$	qldc $= \frac{\lambda_C}{m_e \cdot {F_q}^2}$	qltc $= \frac{\lambda_C}{m_e \cdot F_q}$	spln $= \frac{\lambda_C}{m_e}$

Coupling and Interactional Behavioral Units

Dynamic Units

Quantum Density Intensity Resistance	**Mass-Resonance Coupling Ratio**	**Mass Frequency Distribution Ratio**
$\text{qdir} = \frac{m_\text{e}}{{\lambda_C}^3 \cdot {F_q}^3}$	$\text{mrcr} = \frac{m_\text{e}}{{\lambda_C}^3 \cdot {F_q}^2}$	$\text{mfrd} = \frac{m_\text{e}}{{\lambda_C}^3 \cdot F_q}$
Surface Charge Intensity Ratio	**Surface Charge Orbital Coefficient**	**Surface Charge Temporal Factor**
$\text{scir} = \frac{m_\text{e}}{{\lambda_C}^2 \cdot {F_q}^3}$	$\text{scoc} = \frac{m_\text{e}}{{\lambda_C}^2 \cdot {F_q}^2}$	$\text{sctf} = \frac{m_\text{e}}{{\lambda_C}^2 \cdot F_q}$
Length Density Quantum Ratio	**Length Density Orbital Coefficient**	**Length Density Temporal Factor**
$\text{ldqr} = \frac{m_\text{e}}{\lambda_C \cdot {F_q}^3}$	$\text{ldoc} = \frac{m_\text{e}}{\lambda_C \cdot {F_q}^2}$	$\text{ldtf} = \frac{m_\text{e}}{\lambda_C \cdot F_q}$
Quantum Mass Intensity Resistance	**Quantum Mass Orbital Period**	**Quantum Mass Temporal Coefficient**
$\text{qmir} = \frac{m_\text{e}}{{F_q}^3}$	$\text{qmop} = \frac{m_\text{e}}{{F_q}^2}$	$\text{qmtc} = \frac{m_\text{e}}{F_q}$

Substrate Units

Quantum Volume Oscillation Density	**Quantum Aether Gravitational Mobility**	**Quantum Aether Volumetric Flux Mobility**
$\text{qvod} = \frac{{\lambda_C}^3 \cdot {F_q}^3}{m_\text{e}}$	$\text{qagm} = \frac{{\lambda_C}^3 \cdot {F_q}^2}{m_\text{e}}$	$\text{qavm} = \frac{{\lambda_C}^3 \cdot F_q}{m_\text{e}}$
Quantum Aether Surface Oscillation Mobility	**Quantum Aether Thermal Mobility**	**Quantum Aether Angular Mobility**
$\text{qasm} = \frac{{\lambda_C}^2 \cdot {F_q}^3}{m_\text{e}}$	$\text{qatm} = \frac{{\lambda_C}^2 \cdot {F_q}^2}{m_\text{e}}$	$\text{qaam} = \frac{{\lambda_C}^2 \cdot F_q}{m_\text{e}}$
Quantum Aether Dynamic Intensity	**Quantum Aether Dynamic Mobility**	**Quantum Aether Mobility**
$\text{qadi} = \frac{\lambda_C \cdot {F_q}^3}{m_\text{e}}$	$\text{qadm} = \frac{\lambda_C \cdot {F_q}^2}{m_\text{e}}$	$\text{qamo} = \frac{\lambda_C \cdot F_q}{m_\text{e}}$
Specific Quantum Intensity Factor	**Specific Quantum Resonance**	**Specific Quantum Frequency**
$\text{sqif} = \frac{{F_q}^3}{m_\text{e}}$	$\text{sqre} = \frac{{F_q}^2}{m_\text{e}}$	$\text{sqfr} = \frac{F_q}{m_\text{e}}$

Oscillation and Spatial Dynamics Units

Dynamic Units

Quantum Volume Oscillation	1. Double Toroid 2. Volume-Resonance	**Flow**	**Volume**
qvos = $\lambda_C{}^3 \cdot F_q{}^3$	dtrd = $\lambda_C{}^3 \cdot F_q{}^2$	flow = $\lambda_C{}^3 \cdot F_q$	volm = $\lambda_C{}^3$
Quantum Surface Oscillation	1. Radiation Dose 2. Temperature	1. Sweep 2. Angular Velocity	**Area**
qsfo = $\lambda_C{}^2 \cdot F_q{}^3$	temp = $\lambda_C{}^2 \cdot F_q{}^2$ (also rdtn)	swep = $\lambda_C{}^2 \cdot F_q$	area = $\lambda_C{}^2$
Quantum Dynamic Frequency	**Acceleration**	**Velocity**	**Length**
qdyf = $\lambda_C \cdot F_q{}^3$	accl = $\lambda_C \cdot F_q{}^2$	velc = $\lambda_C \cdot F_q$	leng = λ_C
Quantum Intensity Factor	**Resonance**	**Frequency**	
qinf = $F_q{}^3$	rson = $F_q{}^2$	freq = F_q	

Substrate Units

Quantum Volume Oscillation Resistance	**Inverse Volume Resonance**	**Volumetric Field Density**	**Field Intensity**
qvor = $\frac{1}{\lambda_C{}^3 \cdot F_q{}^3}$	invr = $\frac{1}{\lambda_C{}^3 \cdot F_q{}^2}$	vfdn = $\frac{1}{\lambda_C{}^3 \cdot F_q}$	fint = $\frac{1}{\lambda_C{}^3}$
Quantum Surface Frequency Impedance	**Quantum Surface Intensity**	**Surface Flux Resistance**	**Bending Radius**
qsfi = $\frac{1}{\lambda_C{}^2 \cdot F_q{}^3}$	qsin = $\frac{1}{\lambda_C{}^2 \cdot F_q{}^2}$	sfrs = $\frac{1}{\lambda_C{}^2 \cdot F_q}$	bndr = $\frac{1}{\lambda_C{}^2}$
Quantum Dynamic Frequency Resistance	**Momentum Resistance Coefficient**	**Quantum Inertial Density**	**Wave Number**
qdfr = $\frac{1}{\lambda_C \cdot F_q{}^3}$	morc = $\frac{1}{\lambda_C \cdot F_q{}^2}$	quid = $\frac{1}{\lambda_C \cdot F_q}$	wavn = $\frac{1}{\lambda_C}$
Quantum Intensity Resistance	**Orbit**	**Time**	
qire = $\frac{1}{F_q{}^3}$	orbt = $\frac{1}{F_q{}^2}$	time = $\frac{1}{F_q}$	

Spatio-Temporal Dynamics Units

Dynamic Units

Orbital Volume Evolution	**Volumetric Orbital Coherence**	**Volume-Time**
ovev $= \dfrac{{\lambda_C}^3}{{F_q}^3}$	voco $= \dfrac{{\lambda_C}^3}{{F_q}^2}$	vlmt $= \dfrac{{\lambda_C}^3}{F_q}$
Temporal Area Flux	**Area-Time Flux**	**Active Area**
tafx $= \dfrac{{\lambda_C}^2}{{F_q}^3}$	atfx $= \dfrac{{\lambda_C}^2}{{F_q}^2}$	acta $= \dfrac{{\lambda_C}^2}{F_q}$
Helical Path Length	**Quantum Trajectory Length**	**Dynamic Length**
hepl $= \dfrac{\lambda_C}{{F_q}^3}$	qtrl $= \dfrac{\lambda_C}{{F_q}^2}$	dynl $= \dfrac{\lambda_C}{F_q}$

Substrate Units

Volumetric Quantum Oscillation	**Volumetric Resonance**	**Volumetric Wave** Frequency per Volume
voqo $= \dfrac{{F_q}^3}{{\lambda_C}^3}$	vlmr $= \dfrac{{F_q}^2}{{\lambda_C}^3}$	vlmw $= \dfrac{F_q}{{\lambda_C}^3}$
Transverse Quantum Oscillation Density	**Transverse Resonance**	**Transverse Wave** Frequency per Area
tqod $= \dfrac{{F_q}^3}{{\lambda_C}^2}$	tvsr $= \dfrac{{F_q}^2}{{\lambda_C}^2}$	tvsw $= \dfrac{F_q}{{\lambda_C}^2}$
Scalar Quantum Oscillation Density	**Scalar Resonance**	**Scalar Wave** Vorticity
sqod $= \dfrac{{F_q}^3}{\lambda_C}$	sclr $= \dfrac{{F_q}^2}{\lambda_C}$	sclw $= \dfrac{F_q}{\lambda_C}$

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