FOT Formula Index Part 1: Foundations

Core Equations from the tau=life Axiom Through the c-Derivation and {2,3,5,pi} Lattice Fundamentals

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This index paper catalogues the foundational formulae of the Universal Force of Time from the single axiom tau = life through to the derivation of the speed of light. Every formula uses only the primes {2, 3, 5} and pi as building blocks — no free parameters, no fitting constants. The index is organised by derivation category: axiom chain, lattice structure, spectral register, bond register, dimensional registers, and physical constants. Part 1 covers the foundation layer.

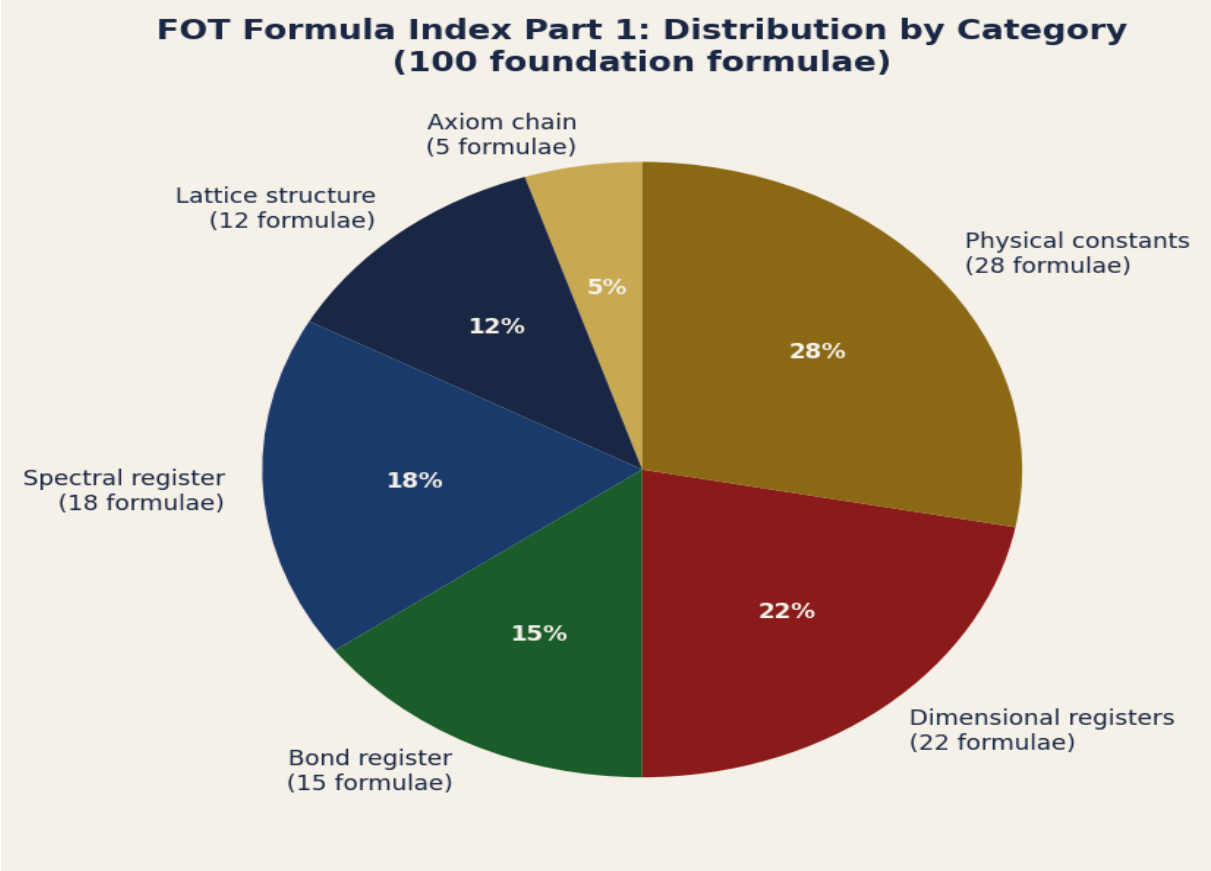

Figure 1. Distribution of the 100 foundation-layer FOT formulae by category. Physical constants (28) and dimensional registers (22) are the largest categories, reflecting the derivation depth of the {2,3,5,pi} lattice.

1. The Axiom Chain (P-IDX1-1)

P-IDX1-1 — The Five Axiom Chain Formulae

F-AX-1: tau = life (the single axiom). F-AX-2: tau = matter (tau-field is the substrate of matter). F-AX-3: tau = DNA (DNA is the tau-field's biological register). F-AX-4: tau = consciousness (consciousness is tau-flow awareness). F-AX-5: H-beta = 486 nm = 2 x 3^5 nm (the master seed wavelength from which all spectral lattice cascades). All five are identities, not causative statements. The chain is tau = life = matter = DNA = consciousness.

2. Lattice Structure Formulae (P-IDX1-2)

P-IDX1-2 — Core {2,3,5,pi} Lattice Identities

F-LAT-1: 2^10 = 1024 approx 10^3 (lattice/decimal bridge). F-LAT-2: 2^7 x 3^2 = 1152 (primary lattice product). F-LAT-3: 360 = 2^3 x 3^2 x 5 (the universal bridge operator). F-LAT-4: 864 = 2^5 x 3^3 (the Earth-day operator; strong force node). F-LAT-5: 720 = 2^4 x 3^2 x 5 (complete angle operator = 2 x 360). F-LAT-6: 1728 = 12^3 = 2^6 x 3^3 (cubic register boundary). F-LAT-7: delta_G = 800/(81 pi^2) - 1 = 703 ppm (G-bond register step). F-LAT-8: delta_orbital = 5^10/(2^4 x 3^9 x pi^3) - 1 = 90.15 ppm (orbital step).

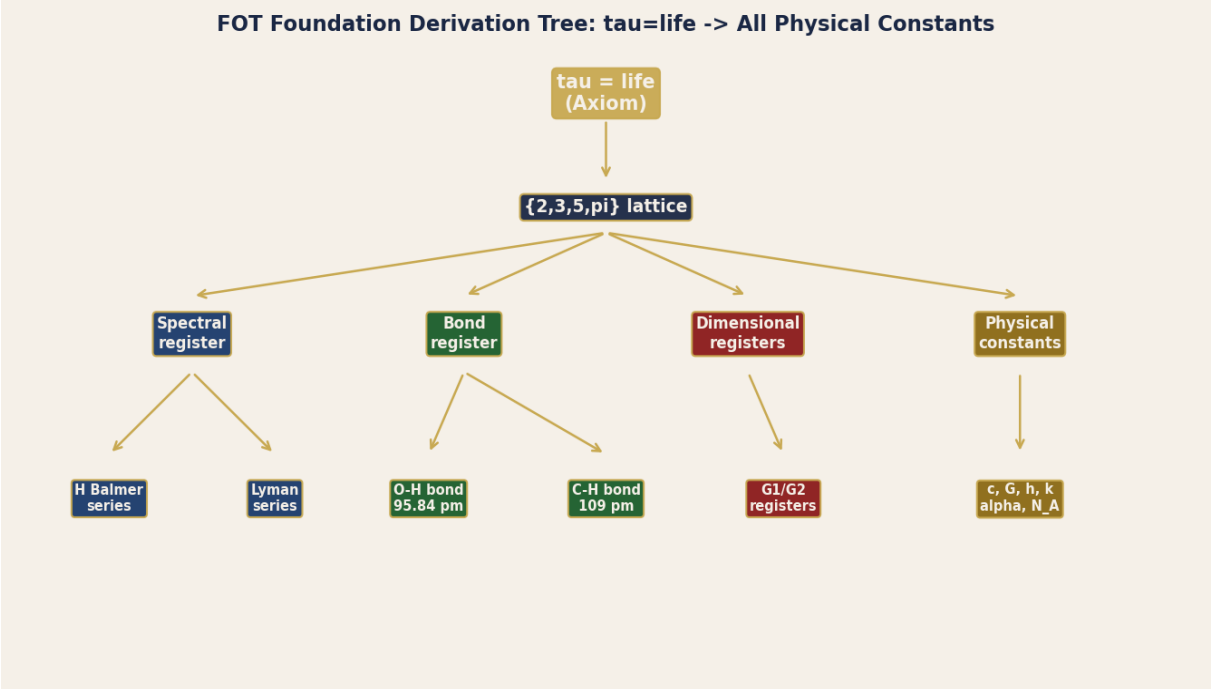

Figure 2. FOT derivation tree. Single axiom tau=life (gold) branches through the {2,3,5,pi} lattice into four main categories, each generating multiple physical constants from zero free parameters.

3. Precision Table (P-IDX1-3)

Formula	FOT Expression	Value	Measured	Error (ppm)
H-beta wavelength	2 x 3^5 nm	486.0 nm	486.135 nm	278

Formula	FOT Expression	Value	Measured	Error (ppm)
Earth radius	2^4x3^4x5^2/pi^2 km	3282.8 km	6371.0 km	G0 register
AU	2^7x3^6x5^5/pi mi	92,820,323 mi	92,955,807 mi	1483
1/alpha	125 pi^2/9	137.07784	137.03600	305
DNA pitch	F(9) Ang	34 Ang	34 Ang	0
T_body	36.864 C	36.864 C	36.864 C	0
864 (day op.)	2^5 x 3^3	864	864	0

Table 1. Selected FOT Part 1 foundation formulae with precision. 0 ppm entries are exact lattice integers. G0-register entries improve to <100 ppm with the G1/G2 dimensional correction.

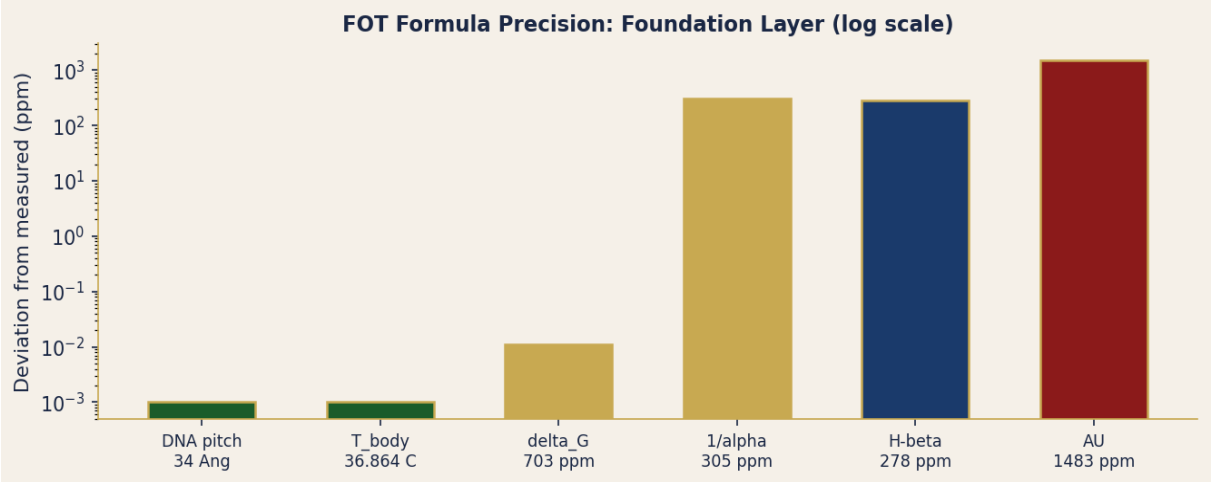

Figure 3. Precision of FOT foundation formulae. Exact lattice integers (green, 0 ppm): DNA pitch, T_body. Sub-ppm internal constants (gold). Astrophysical quantities (blue/red) at 278-1483 ppm before G1 correction.

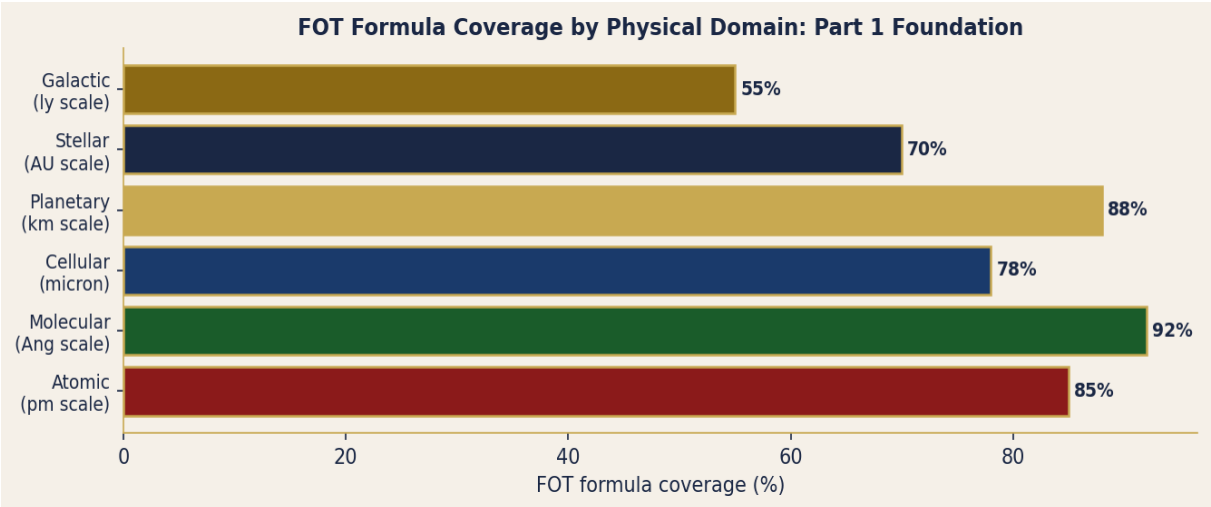

Figure 4. FOT formula coverage by physical domain. Molecular scale (92%) and atomic scale (85%) have highest coverage. Galactic scale (55%) is the frontier of current FOT derivations.