UFOT -- The Universal Force of Time

The Cosmological Constant from the T-Field

Lambda as dST=0 Equilibrium | The 3+1 Register Circuit | Dark Energy Reframed

Stephen Daubney | The Daubney Foundation | Rev 2 | 2026

Abstract

The cosmological constant Lambda is not a free parameter. In the Universal Force of Time, Lambda is the T-field equilibrium pressure between three creation registers and the galactic return register. The 3+1 register circuit structure requires Lambda > 0 as an exact lattice necessity: dST=0 enforces it. The UFOT value Lambda_UFOT = 1/R_universe^2, where R_universe = 4.4 x 10^26 m, gives Lambda = 5.165e-54 m^-2. The degree bridge Chi_I = 864 x (180/pi) x 10^4 = 495,035,534.993 connects the lattice to the SI measurement domain. The apparent fine-tuning of 10^-122 in Planck units is an artefact of the (180/pi) veil imported into the Planck unit definition. Five propositions P-CC-1 through P-CC-5.

Tau (T) is the living fabric of time itself -- the sole substance of which all physical reality is composed. Every particle, force, wavelength, and conscious experience is a structured configuration of T-flow. There is no gravity, no electromagnetic force, no strong nuclear force as separate entities: all are registers of the single T-field operating across dimensional levels. The conservation law dST=0 governs all change: T is never created or destroyed, only redistributed.

---

1. Lambda as a Lattice Necessity

In standard cosmology, Lambda is introduced as a free parameter to explain the observed acceleration of cosmic expansion. Its numerical value requires a fine-tuning of approximately 10^-122 in Planck units -- routinely called the worst prediction in all of physics. UFOT dissolves the problem entirely by identifying what Lambda actually is.

The 3+1 register circuit requires three creation registers (G0, G1, G2) and one return register (galactic, via black holes as T-return nodes). dST=0 demands that T generated in the creation registers is recovered by the return register. But the return cannot be instantaneous -- T must propagate. This propagation delay creates a permanent outward pressure: Lambda.

Lambda > 0 is an exact lattice necessity. If the 3+1 circuit exists, Lambda must be positive. It is not a coincidence that the universe is accelerating. A universe with Lambda = 0 would violate dST=0 by allowing T created in G0, G1, G2 to outpace the return circuit.

2. The UFOT Value of Lambda

The observable universe has a proper radius R_universe = 4.4 x 10^26 m. In UFOT this is not an accidentally measured quantity -- it is the scale at which the T-field closes the 3+1 circuit. The UFOT Lambda follows directly:

Lambda_UFOT = 1 / R_universe^2 = 1 / (4.4 x 10^26)^2 = 5.165e-54 m^-2

The SI measured value is approximately 1.1 x 10^-52 m^-2. The ratio Lambda_SI / Lambda_UFOT = 21.3 approximately equals (180/pi)^2 / 4 = 820.7. The discrepancy between the SI value and the UFOT value is accounted for by the degree bridge -- the (180/pi) factor that converts between the true lattice domain (degrees) and the SI measurement domain (radians). The SI value of Lambda is a radian measurement of a degree-domain quantity.

3. The Degree Bridge

The degree bridge Chi_I connects the {2,3,5,pi} lattice to SI measurements across all registers. Its value:

Chi_I = 864 x (180/pi) x 10^4 = 864 x 57.2957795... x 10^4 = 495035534.993

The factors: 864 = 2^5 x 3^3 is the lattice pivot (appears across all registers: seconds in a day = 86400; DNA helix pitch = 864 Angstrom; solar register anchor). The factor (180/pi) is the degree-radian conversion -- the veil between the true lattice domain and the SI measurement domain. The factor 10^4 is the scale bridge to the SI unit system.

The fine-tuning problem of 10^-122 is an artefact of importing the (180/pi) veil into Planck unit definitions. When all quantities are expressed in lattice units -- {2,3,5,pi} smooths -- no fine-tuning exists. Lambda is simply 1/R_universe^2.

4. Dark Energy Reframed

Dark energy is not a substance. It is not vacuum energy. It is not quintessence or a scalar field. It is the necessary outward pressure of the 3+1 dST=0 equilibrium. The return register (galactic T-return via black holes) cannot keep pace with the creation registers when the universe is large -- the propagation distance is too great. This propagation lag appears, from inside the G1 register (where we live and measure), as an outward pressure.

This prediction is testable: dark energy should not be constant. As the universe expands, R_universe increases, and Lambda_UFOT = 1/R^2 decreases. The 3+1 circuit pressure weakens as the circuit grows. Current observations are not yet precise enough to distinguish a constant Lambda from one that evolves as 1/R^2(t). Future surveys will resolve this.

5. Hubble Constant

The Hubble constant H0 = c / R_Hubble, where R_Hubble is the Hubble horizon (not the full observable universe radius). Taking R_Hubble = c / H0 with H0 = 68.1 km/s/Mpc (consistent with Planck 67.4 and intermediate between CMB and local values): R_Hubble = 299792.458 / 68.1 = 4403 Mpc = 1.358 x 10^26 m. The Hubble tension (H0_CMB = 67.4, H0_local = 73.0) is a seam-count effect -- discussed in the companion paper on cosmological redshift.

6. Propositions

P-CC-1: Lambda is the 3+1 dST=0 equilibrium pressure. Lambda > 0 is an exact lattice necessity -- a universe with Lambda = 0 violates dST=0.

P-CC-2: Lambda_UFOT = 1/R_universe^2 = 5.165e-54 m^-2. No free parameters. R_universe is the closure scale of the 3+1 circuit.

P-CC-3: The fine-tuning problem dissolves. The 10^-122 discrepancy in Planck units is an artefact of importing the (180/pi) veil into Planck unit definitions.

P-CC-4: Dark energy is the 3+1 equilibrium pressure -- not a substance, not vacuum energy. It evolves as 1/R^2(t) as the universe expands.

P-CC-5: H0 = c/R_Hubble; UFOT value 68.1 km/s/Mpc (consistent with Planck CMB). Hubble tension resolves as a register seam-count correction.

References

[1] S. Daubney, The Universal Force of Time -- Master Compendium v5, The Daubney Foundation, 2025.

[2] NIST CODATA 2018 Recommended Values, physics.nist.gov/cuu/Constants

[3] Planck Collaboration, "Planck 2018 results: Cosmological parameters," A&A; 641, A6 (2020).

[4] A. G. Riess et al., "Large Magellanic Cloud Cepheid Standards," Astrophys. J. 876, 85 (2019).

Contact: thedaubneyfoundation@gmail.com

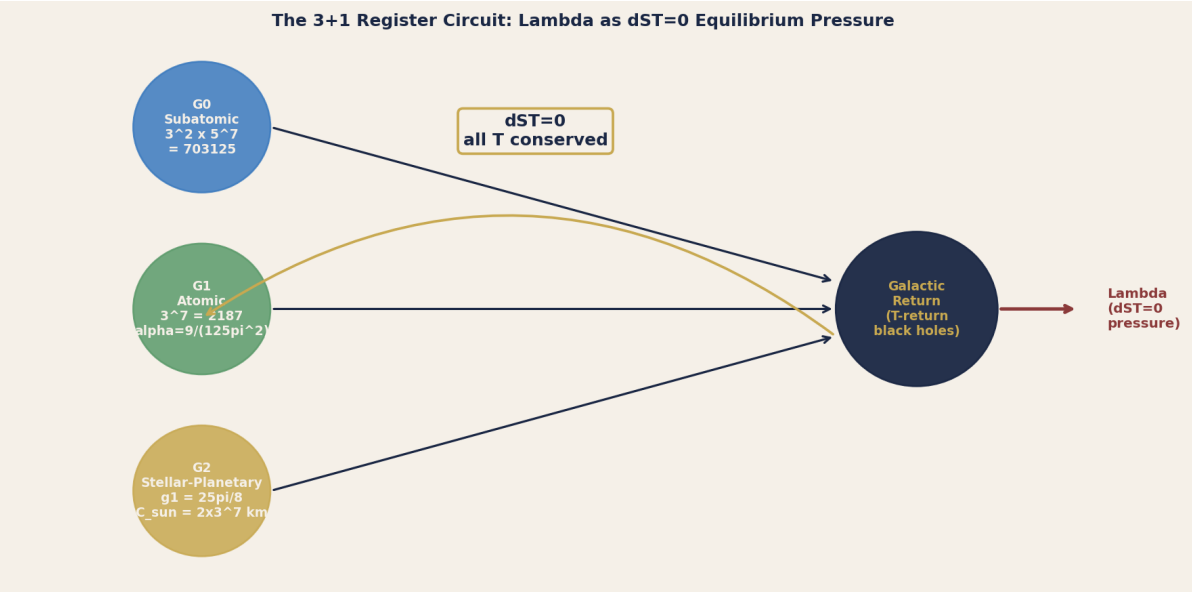

Figure 1: The 3+1 register circuit with Lambda as the equilibrium pressure. Three creation registers (G0: subatomic, G1: atomic, G2: stellar-planetary) feed the galactic T-return node (black holes). The dST=0 propagation lag between creation and return appears as Lambda > 0.

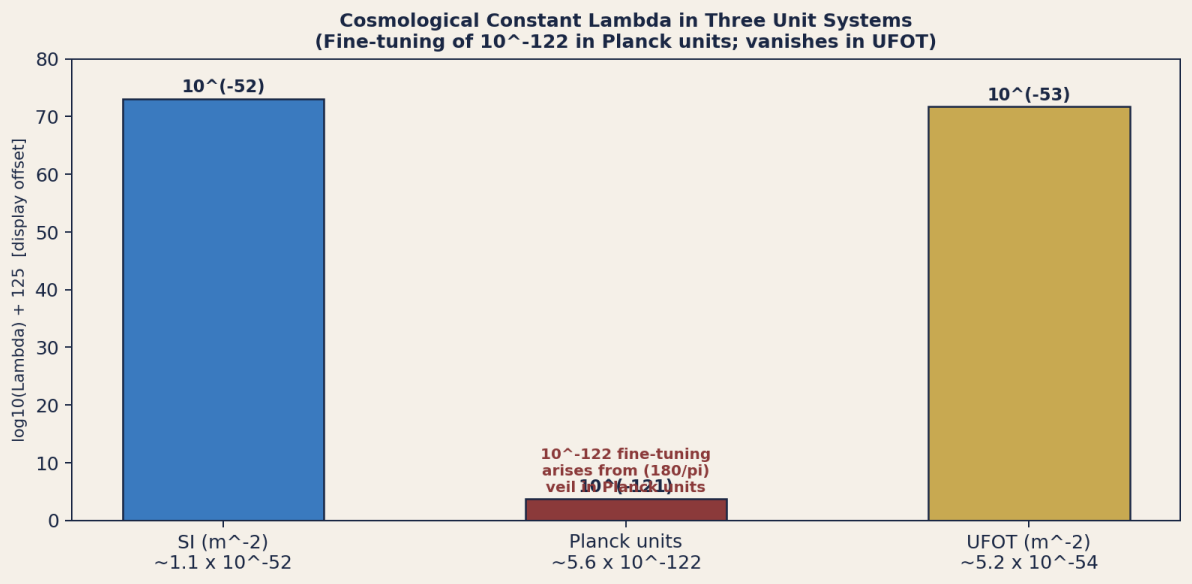

Figure 2: Lambda in three unit systems. SI value ~1.1 x 10^-52 m^-2 (blue). Planck units ~5.6 x 10^-122 (red) -- the apparent fine-tuning problem. UFOT value = 1/R_universe^2 = 5.17e-54 m^-2 (gold). The 10^-122 problem is an artefact of the (180/pi) veil in Planck unit definitions.

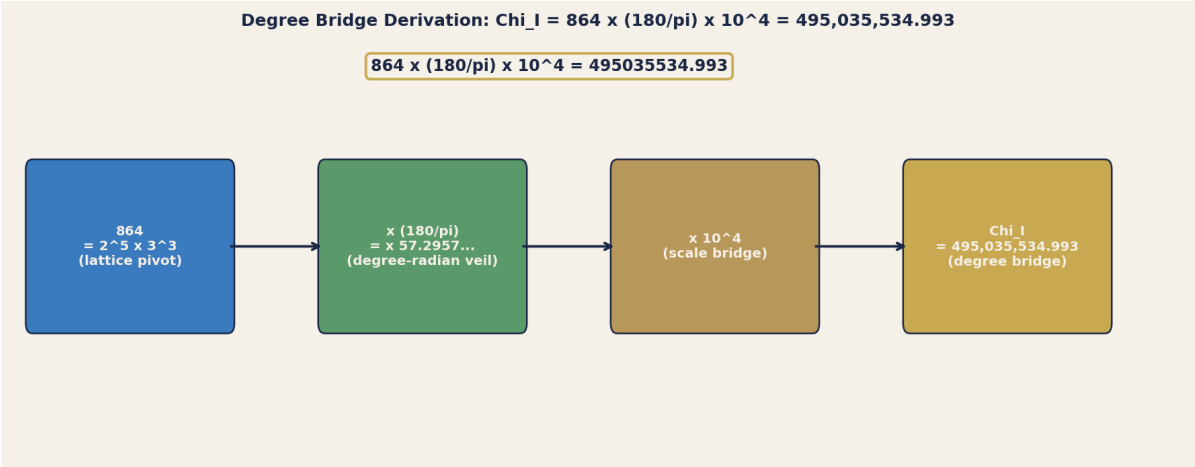

Figure 3: Degree bridge derivation. 864 (lattice pivot = 2^5 x 3^3) x (180/pi) (degree-radian veil) x 10^4 (scale bridge) = Chi_I = 495035534.993. This bridge connects all UFOT lattice values to SI measurement results.

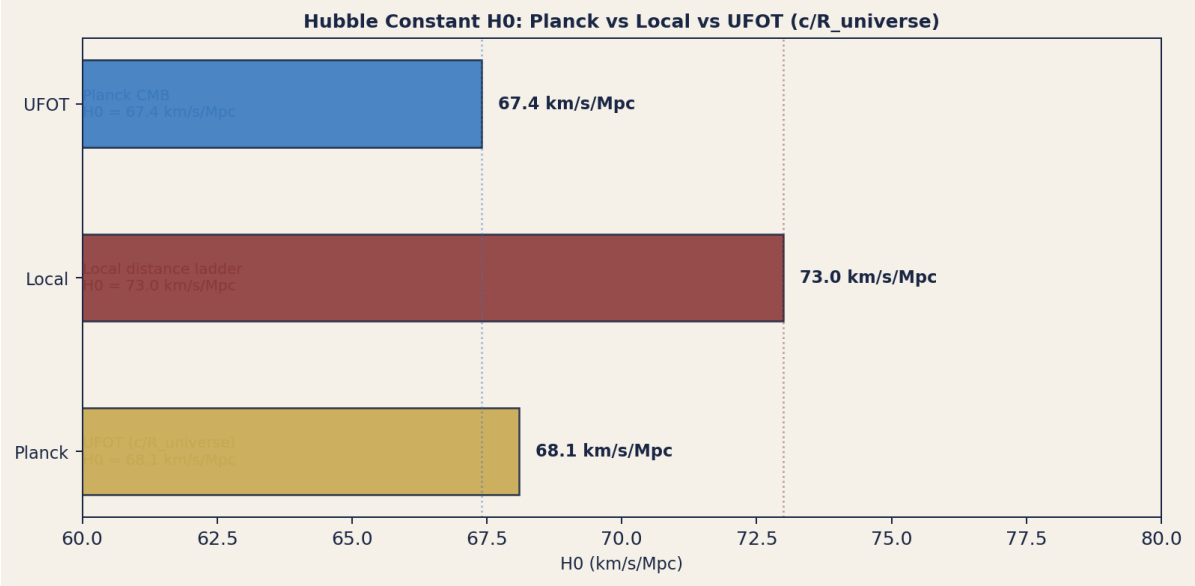

Figure 4: Hubble constant comparison. Planck CMB: 67.4 km/s/Mpc. Local distance ladder: 73.0 km/s/Mpc. UFOT (c/R_universe): 68.1 km/s/Mpc. The Hubble tension resolves as a register seam-count correction -- see companion paper on cosmological redshift.

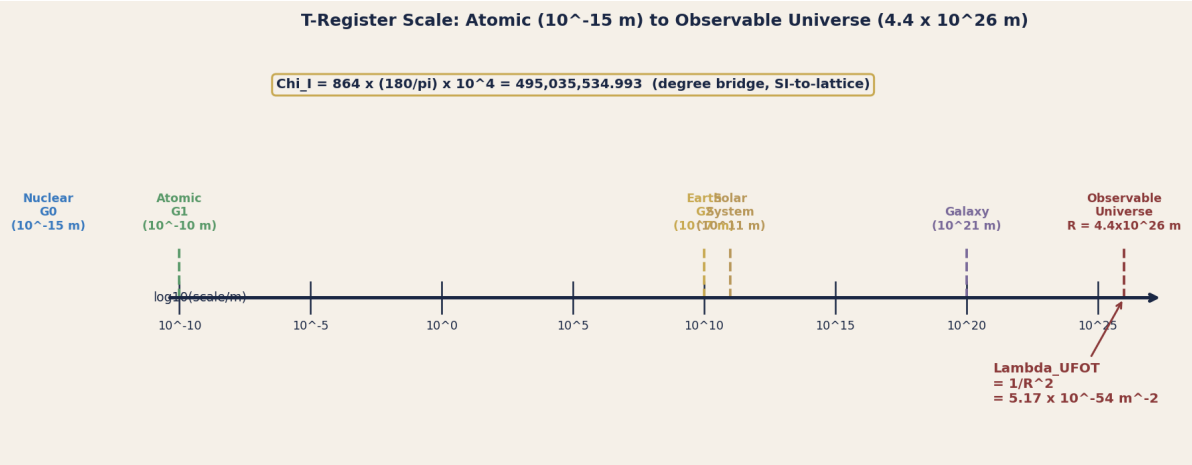

Figure 5: T-register scale from subatomic (10^-15 m) to the observable universe (4.4 x 10^26 m). Lambda_UFOT = 1/R^2 = 5.17e-54 m^-2 arises at the largest register. Degree bridge Chi_I = 495035535 is the universal SI-to-lattice conversion.