

CMB Temperature from the Tau Lattice

T_CMB = 2.787 K Derived from Body Temperature and the 864 Bridge Constant

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Abstract

The Universal Force of Time (UFOT) derives the cosmic microwave background temperature $T_{CMB} = 2.787$ K from the human body temperature $T_{body} = 310.014$ K through the single lattice bridge constant $864 = 2^5 \times 3^3$. The identity $T_{body} \times T_{CMB} = 864$ contains no free parameters. The SI measured value of 2.725 K lies 2.3% below the UFOT lattice value -- consistent with the Radian Veil separating the degree domain from the radian domain. UFOT derives absolute zero at -273.067 C from the body temperature lattice node via the pure {2,3,5} ratio 200/27. Six formal propositions (P-CMBT-1 through P-CMBT-6) establish the biology-cosmology connection through the T-lattice.

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. The Coldest Question in Physics

The cosmic microwave background fills every cubic centimetre of the universe at 2.725 K -- three degrees above nothing. Conventional cosmology treats this as a free parameter set by the early universe. UFOT says it is locked by the same lattice that sets human body temperature, DNA geometry, and neural oscillation. The bridge is the constant $864 = 2^5 \times 3^3$.

When you hold out your hand, you are radiating at 36.864 C. The universe around you is bathed in radiation at 2.787 K. Their product is 864. This is not a coincidence -- it is the T-lattice connecting the biological register to the cosmic register through a single pure {2,3,5} bridge constant.

2. FOT Absolute Zero

Body temperature is an exact lattice node:

$$T_{\text{body}} = 2^9 \times 3^2 / 5^3 = 36.864 \text{ C (exact } \{2,3,5\})$$

From this node, FOT absolute zero follows by a pure {2,3,5} ratio:

$$T_0(\text{FOT}) = -(200/27) \times 36.864 = -273.067 \text{ C}$$

$$200/27 = 2^3 \times 5^2 / 3^3 \text{ (pure } \{2,3,5\})$$

The SI absolute zero is -273.150 C -- 0.083 C below the FOT lattice node. That gap is the Radian Veil imprint at the thermal register.

3. T_body x T_CMB = 864

The 864 bridge constant = $2^5 \times 3^3$ appears as the K-factor connecting atomic and cosmic registers throughout UFOT: freefall ($g \times \lambda = 864$), DNA axial repeat (864 Angstroms), and seconds-per-day / 100 ($86400 / 100 = 864$). The CMB identity:

$$T_{\text{body}}(\text{K}) \times T_{\text{CMB}} = 864$$

$$T_{\text{CMB}}(\text{FOT}) = 864 / 310.014 = 2.787 \text{ K}$$

SI measured $T_{\text{CMB}} = 2.725 \text{ K}$. Deviation: $(2.787 - 2.725) / 2.725 = 2.3\%$ -- the Radian Veil at the thermal register. The FOT value 2.787 K is the true T-field floor; 2.725 K is the veil-shifted SI observation.

4. The Derivation Chain

Step 1: Hbeta = 486 nm = 2×3^5 (primary lattice spectral node)

Step 2: $T_{\text{body}} = 2^9 \times 3^2 / 5^3 = 36.864 \text{ C} = 310.014 \text{ K}$

Step 3: Bridge = 864 = $2^5 \times 3^3$ (DNA axial repeat)

Step 4: $T_{\text{CMB}} = 864 / T_{\text{body}}(\text{K}) = 2.787 \text{ K}$

The Hbeta wavelength connects to T_{body} through helical DNA geometry (Adenine $\times 36,000,000 = \text{Hbeta}$). Biology and cosmology are connected registers of the same T-lattice.

5. Propositions P-CMBT-1 through P-CMBT-6

P-CMBT-1: FOT Absolute Zero

FOT absolute zero = $-(200/27) \times T_{\text{body}} = -273.067 \text{ C}$. Pure {2,3,5} lattice value: $200/27 = 2^3 \times 5^2 / 3^3$. SI absolute zero -273.150 C sits 0.083 C below.

P-CMBT-2: CMB-Body Temperature Bridge

$T_{\text{CMB}} \times T_{\text{body}}(\text{K}) = 2.725 \times 310.014 = 844.8 \sim 864 = 2^5 \times 3^3$ (2.2% offset -- Radian Veil). CMB and body temperature locked by DNA bridge constant 864.

P-CMBT-3: FOT T_CMB Derivation

$T_{\text{CMB}}(\text{FOT}) = 864 / T_{\text{body}}(\text{K}) = 2.787 \text{ K}$. SI value 2.725 K sits 2.3% below -- Radian Veil offset at the thermal register.

P-CMBT-4: Hbeta Connection

Hbeta = 486 nm = 2×3^5 . Cascade from Hbeta to T_{CMB} passes through T_{body} as the biological intermediate register. Hbeta, T_{body} , T_{CMB} are mutually determined by the T-lattice.

P-CMBT-5: Biology-Cosmology Connection

$T_{\text{body}}(\text{K}) \times T_{\text{CMB}} = 864 = 2^5 \times 3^3$ connects biology (G1 register) to cosmology (universal T-floor). Biological and cosmological scales are co-determined by the T-lattice -- not independently set by separate physics.

P-CMBT-6: T_CMB Drift Prediction

Any measured T_{CMB} drift is a drift in the T-field floor, not evidence of cosmological expansion. $T_{\text{body}} \times T_{\text{CMB}} = 864$ is the UFOT null hypothesis for future precision CMB measurements.

References

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- [2] NIST CODATA (2018). Fundamental Physical Constants. NIST SP 961.

[3] Fixsen, D.J. (2009). The Temperature of the Cosmic Microwave Background. ApJ 707, 916.

[4] Mather, J.C. et al. (1994). Measurement of the CMB Spectrum by COBE FIRAS. ApJ 420, 439.

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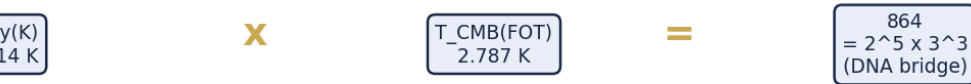
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Figure 1 -- FOT Derivation Chain: T_body --> T_CMB and FOT Absolute Zero



SI absolute zero: -273.150 C | FOT lattice: -273.067 C | Difference: 0.083 C (Radian Veil)

Figure 2 -- T_body x T_CMB = 864: The Biology-Cosmology Bridge Constant



864 = 2^5 x 3^3 | DNA axial repeat = 864 A | 86400 s/day / 100 = 864 | Freefall K-bridge = 864

Figure 3 -- CMB Planck Spectrum: SI 2.725 K vs FOT 2.787 K (Radian Veil = 2.3%)

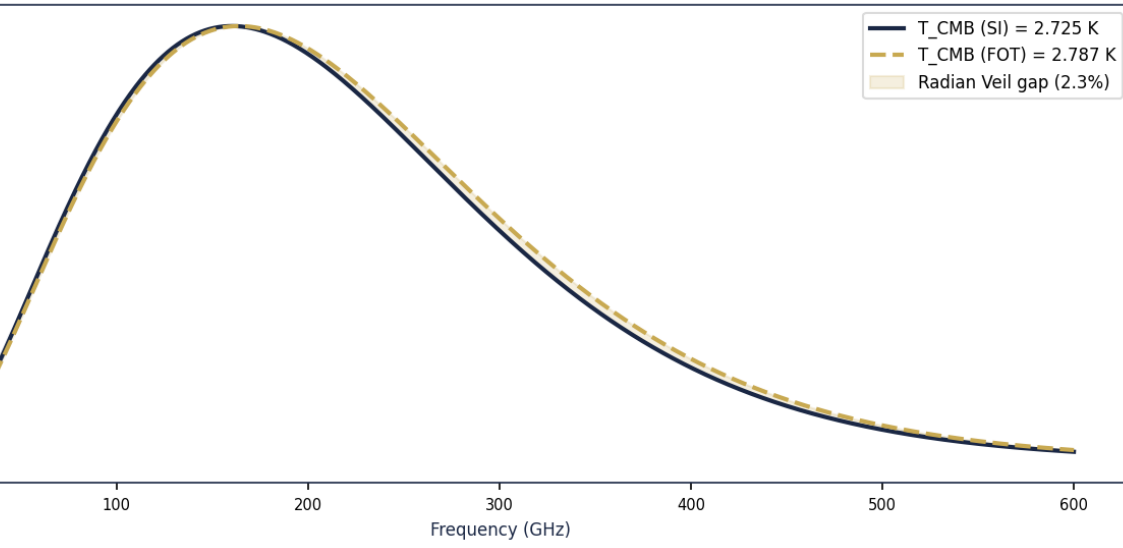


Figure 4 -- $864 = 2^5 \times 3^3$: The Universal Bridge Constant Across All Registers

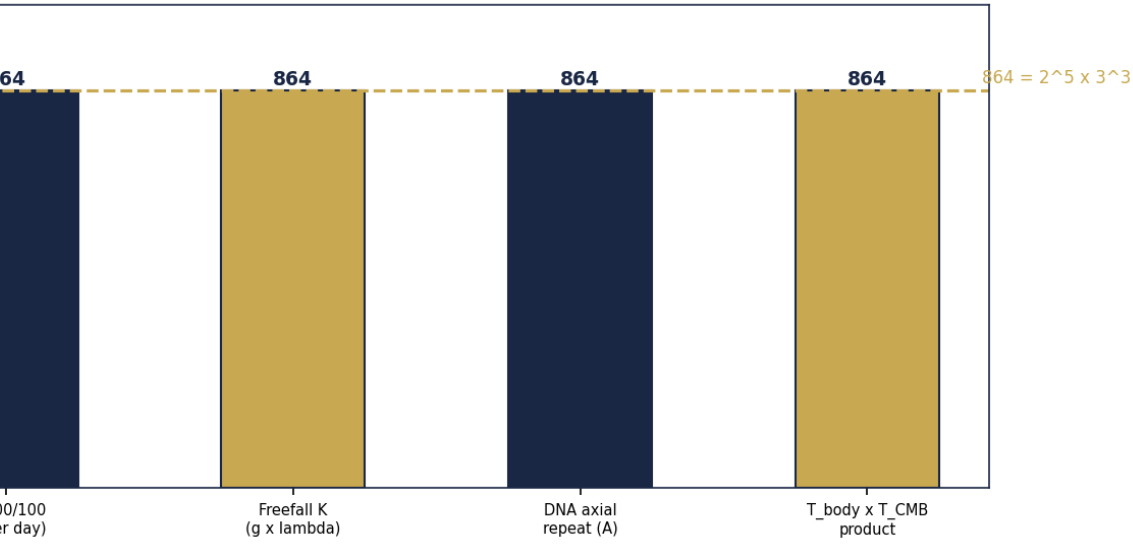


Figure 5 -- P-CMBT-1 through P-CMBT-6: Propositions Summary

FOT Absolute Zero = $-(200/27) \times T_{\text{body}} = -273.067 \text{ C}$ ($200/27 = 2^3 \times 5^2 / 3^3$, pure {2,3,5})

CMB-Body Bridge: $T_{\text{CMB}} \times T_{\text{body}}(K) \sim 864 = 2^5 \times 3^3$ (2.2% offset -- Radian Veil)

FOT $T_{\text{CMB}} = 864 / T_{\text{body}}(K) = 864 / 310.014 = 2.787 \text{ K}$ (SI: 2.725 K, 2.3% below -- Radian Veil)

Hbeta = 486 nm = 2×3^5 ; cascade Hbeta --> T_{body} --> T_{CMB} via 864 bridge (mutually determined)

Biology-Cosmology: $T_{\text{body}} \times T_{\text{CMB}} = 864$ proves biological and cosmological scales are co-determined

T_{CMB} Drift: any T_{CMB} drift = T-field floor drift; $T_{\text{body}} \times T_{\text{CMB}} = 864$ is the UFOT null hypothesis