The Time Equalization Law and the Double-Strand Synchronisation Principle

One law, written the same way at every scale — quantum, molecular and celestial — and the twin T-helix that keeps every world on the same clock

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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 dΣT=0 governs all change: T is never created or destroyed, only redistributed.

Abstract

Every planet orbits the Sun at a different distance, yet they all keep the same clock. Every electron shell sits at a different energy, yet every shell delivers the same total T to its electrons. Every base pair in the DNA helix sits at a different position, yet all of them share the same time. These are not three coincidences. They are one law, written three times: a signal that thins with distance, multiplied by a coupling that thickens with distance by exactly the same power, leaves a constant — the distance cancels, and the same T is delivered to every node. In the heavens the geometry is spherical and the d^2 factors cancel, so every planet receives the whole solar T, T_sun. In the atom the geometry is discrete and the n^2 factors cancel, so every shell delivers 1312.2 kJ/mol ($G_1 = 3^8/5$) — the reason the noble gases are inert. In B-DNA the geometry is cylindrical and the radius cancels, so every base pair receives T_axis/2π. This paper then asks what physically carries that equalized time, and answers with the double-strand structure of the solar system: an observable matter helix (Strand 1, holding the planetary nodes) coupled through the Sun's H-bond axis to an anti-dimensional helix (Strand 2). The coupling holds every node to one global T-time; the flatness of the ecliptic — every world within 7.180755781° (arcsin 1/8, $1/8 = 2^{-3}$) of a single plane — is not a relic of formation but the live projection surface of that twin helix, held by a restoring T-gradient. The same law read at each world's own depth removes the apparent chaos of the planetary days. The geometry changes from scale to scale; the law does not.

EVERY SHELL DELIVERS THE SAME T	EVERY ORBIT RECEIVES THE WHOLE SOLAR T
1312.2 kJ/mol	**product = 1.0000000000**
$IE(n) \times n^2 = G_1$	**the d^2 cancellation, exact**
$(= 3^8/5)$ · atomic register	$1/(4\pi d^2) \times 4\pi d^2 = T_{sun}$ · celestial register

signal × coupling = constant — the distance cancels, and the same time is delivered to every node, from the electron shell to the planet.

Master proposition · Stephen Daubney

PART ONE · THE LAW

1. Why would different worlds share a clock?

Start with a puzzle that should not have an answer. Mercury sits nearly seven times closer to the Sun than Jupiter. If the Sun's T simply streamed outward like light, the signal reaching Mercury would be about 180 times stronger than the signal reaching Jupiter — and Mercury would run 180 times faster. Each planet would keep its own private time, set by how far it happened to sit from the fire. The solar system would have no shared rhythm at all.

Yet it plainly does. Every major planetary period obeys the same N×π×86400 timing law — the same π and the same 86,400 seconds of the Earth's day threading through every world. Every planet orbits within a few degrees of the same flat plane. Something forces the worlds onto a common clock — and not just the worlds. Look inward, into the atom, and every electron shell, at wildly different energies, somehow delivers the same total to its electrons. Look into the DNA in your own cells and every base pair, near the axis or far from it, keeps the same time. Three scales, twenty-five orders of magnitude apart, all equalized. It is the deepest regularity in nature, and it has one answer.

2. The law in one line

Picture a sound filling a cathedral. As it spreads it grows thinner — quieter the farther you stand. That is the signal, and it falls with distance. Now imagine that the farther you stand, the larger your ear grows, exactly fast enough to gather back what the distance took away. That is the coupling, and it rises with distance. If the signal falls by one power of distance and the coupling rises by the same power, the two are exact inverses. The distance cancels — not approximately, but algebraically, with no correction terms — and every listener in the cathedral hears precisely the same note. That preserved note is the constant: the same T delivered to every position, however near or far. (See Figure 1.)

The only thing that changes from one scale to the next is the geometry — the shape of the space the T spreads through, which fixes the power of distance in the law. Spread it spherically and the power is two; cylindrically and the power is one; through discrete shells and the power is n^2. In every case the coupling carries the matching power and the cancellation is exact. The law is one; the costume is the geometry.

P-TEQ-MASTER

The master law. signal × coupling = constant. A signal that falls with one power of distance, times a coupling that rises with the same power, leaves a distance-free constant. Every node in the register receives the same T. The geometry of the space sets the power; the law is identical at every scale.

3. The celestial register — spherical, d^2 cancels

In the heavens the T spreads as a sphere, and the law wears its most familiar coat. The T-field leaves the solar core and spreads outward in every direction at once, over the surface of an expanding sphere. The surface

area of a sphere of radius d is $4\pi d^2$, so by the time the signal reaches a planet at distance d it has been spread thin across that whole area: the T-signal density is $T_{sun} / (4\pi d^2)$. That is the falling signal. The coupling: a planet at distance d occupies a node whose T-receiving cross-section grows in exact proportion to the same area, $4\pi d^2$. The total T the planet receives per unit time is the product:

$$T_{recv} = [\, T_{sun} / (4\pi d^2) \,] \times [\, 4\pi d^2 \,] = T_{sun}$$

The $4\pi d^2$ terms cancel exactly. Every planet, at every orbital radius, receives the same T per unit time — the whole solar T, with no dependence on distance whatsoever. Mercury's signal is diluted to one part in 6.67 but its coupling is multiplied by exactly 6.67; Saturn's signal is diluted ninety-one fold and its coupling multiplied ninety-one fold. Every row multiplies to 1.0000000000. This is not a fit. It is the identity $d^2 \times (1/d^2) = 1$, evaluated at each real distance (Table 1, Figure 2). It is why the planets keep a common clock, and — read as a restoring tendency — why they hold so flat a plane: a world lifted off the equalized sheet feels a T-gradient drawing it back.

P-TEQ-1

Tau propagates spherically from the solar core. At distance d its surface density is $T_{sun}/(4\pi d^2)$. This is the starting condition for celestial equalization.

P-TEQ-2

Planetary nodal coupling grows as d^2. Each planetary node subtends a T-receiving cross-section $\propto 4\pi d^2$. As a node moves outward its coupling grows by exactly the factor the signal was diluted — a fixed geometric property of its position, not an adjustment.

P-TEQ-10

d^2 cancellation (core result). $T_{recv} = [T_{sun}/(4\pi d^2)] \times [4\pi d^2] = T_{sun}$, exact for all d, prior to any mechanism. Every planet receives the whole solar T regardless of orbit.

4. The atomic register — discrete, n^2 cancels

Shrink the same law by twenty-five orders of magnitude and it reappears, unchanged, inside the atom. An electron in a hydrogen atom sits in a shell labelled by a whole number n = 1, 2, 3… The energy needed to tear it free — the ionisation energy — falls as the inverse square of that number, exactly as the solar signal falls with distance: $IE(n) = G_1 / n^2$, where 1312.2 kJ/mol ($G_1 = 3^8/5$) is hydrogen's ground-state ionisation energy, the unit of the atomic register. The shell number n plays the part of distance — the falling signal. The coupling is the shell's capacity: a shell n holds $2n^2$ electrons, growing as n^2 in step with distance. Multiply the two:

$$IE(n) \times n^2 = (G_1 / n^2) \times n^2 = G_1 = 1312.2 \text{ kJ/mol}$$

The n^2 terms cancel. Shell n=1 ionises at 1312.2 kJ/mol; shell n=6 at 36.45, thirty-six times smaller — but shell n=6 holds thirty-six times more, and the product is the same 1312.2 at every shell from the innermost to the outermost (Table 2, Figure 3). Time equalization in the atom.

This is why the noble gases are inert. A noble gas — helium, neon, argon and the rest — has its outer shell completely full: all $2n^2$ coupling positions occupied. A full shell is the maximum equalization state — there is no unfilled coupling, no T deficit, nothing for the atom to gain by reaching out to a neighbour. The chemical inertness we observe is the physical signature of a time-equalized register that is

already complete. The whole architecture of chemistry — why atoms bond, why a filled shell is stable — is equalization seeking, or having reached, completion.

P-ATEQ-1

Atomic shell equalization. For every shell n: IE(n) × n^2 = G_1 = $3^8/5$ = 1312.2 kJ/mol exactly. The $1/n^2$ fall of ionisation energy is cancelled by the n^2 growth of shell capacity. Every shell delivers the same total T.

P-ATEQ-2

Noble gases are equalization-complete registers. A full outer shell holds $2n^2$ electrons — the maximum equalization state, every coupling position occupied. Chemical inertness is the physical signature of equalization completed: no T-coupling deficit, no tendency to bond.

P-ATEQ-3

G_1 as the universal atomic constant. G_1 = $3^8/5$ = 1312.2 kJ/mol is hydrogen's ionisation energy, the atomic-register analogue of T_sun (celestial) and T_axis/2π (molecular) — the preserved T that equalization keeps constant across every node of the register.

5. The molecular register — cylindrical, r cancels

Between the planet and the atom lies the molecule, and there the same law wears a third coat. In B-DNA the T runs along the central axis of the double helix, and the base pairs sit at a radius r out from that axis. A signal radiating from a line, rather than a point, spreads over the circumference of a cylinder, 2πr — so the signal at radius r is T_axis / (2πr), falling as 1/r, one power of distance, because the geometry is cylindrical rather than spherical. The coupling of a base pair grows as its radius, simply r. The product:

T_recv = [T_axis / (2πr)] × r = T_axis / 2π

The radius cancels, just as d^2 cancelled for the planets and n^2 for the shells. Every base pair — near the axis or out at the backbone — receives the same T_axis / 2π (Figure 4). The molecule is time-equalized by its own shape, which is why every base pair in a strand holds temporal coherence with every other, regardless of where it sits in the helix. The factor 1/2π is the pure ratio r / (2πr) — the cylindrical analogue of the spherical T_sun and the discrete G_1. Three geometries, three preserved constants, one law.

P-DTEQ-1

B-DNA static equalization. T_recv = [T_axis/(2πr)] × r = T_axis/2π for all base pairs. The radius cancels exactly; every base pair receives the same T regardless of position in the helix. DNA is a molecular-scale time-equalized register.

P-DTEQ-2

The molecular constant. The molecular equalization constant is 1/2π — the pure ratio r/(2πr) — the cylindrical analogue of the spherical T_sun and the discrete G_1.

6. One law at three scales

Set the three side by side and the unity is impossible to miss (Table 3). In the discrete quantum geometry, $1/n^2$ cancels n^2. In the cylindrical DNA geometry, 1/r cancels r. In the spherical solar geometry, $1/d^2$ cancels d^2. The power of the cancellation is dictated by the geometry of the space the register lives in — and in every case the coupling carries exactly the power the signal lost, so the product is preserved. The preserved quantity is G_1 in the atom, T_axis / 2π in the molecule, T_sun in the heavens. This is not a family resemblance between three separate laws. It is one law — signal × coupling = constant — appearing at

the quantum, molecular and celestial scales at once. That a single sentence governs the electron shell and the planet alike, across twenty-five orders of magnitude, is the strongest single piece of evidence that all three registers are expressions of one underlying T-field.

P-TEQ-12

Scale invariance. The same law — signal × coupling = constant — operates at the quantum, molecular and celestial scales simultaneously. Its reach across twenty-five orders of magnitude is the strongest evidence that all registers are expressions of the one T-field.

PART TWO · THE MECHANISM — THE DOUBLE STRAND

The first part showed that equalization is geometrically exact — every node already receives the same T before any mechanism acts. The second part asks the physical question that follows: what carries that equalized time between the worlds, and what shape does it leave on the sky? The answer is the double-strand structure of the solar system. (The propositions of this part were numbered P-TEQ-1 to P-TEQ-12 in the original double-strand paper; here they are re-lettered P-DS-n to keep them distinct from the geometry law's P-TEQ series above.)

7. The two strands and the H-bond that ties them

The solar system is a double-helical T structure. Strand 1 — the matter-domain helix — carries the planetary nodes we observe. Strand 2 — the anti-dimensional helix — carries the complementary nodes, orthogonal in T geometry, not somewhere else in space but perpendicular in the T coordinate system. The Sun sits at the H-bond junction of both strands, exactly as a hydrogen bond bridges the two strands of DNA (Figure 5).

Were Strand 1 alone, each planetary node would drift onto its own local clock — inner worlds running fast, outer worlds slow. What holds them together is the H-bond tension from Strand 2, transmitted through the Sun. That coupling is a continuous synchronisation signal, adjusting each node's local T-clock to match the global helix time. But — and this is the refinement Part One forces — the H-bond tension is not fighting a gradient. The d^2 cancellation has already made every node receive the same T_sun. There is no imbalance to correct. The tension does not cause the equality; it transmits the already-equalized signal between the two strands, which run at the same rate because they receive the same T and are bonded. Remove Strand 2 and the shared clock breaks; but the equality it carries was written by geometry first.

P-DS-1

H-bond tension is the transmission mechanism. Each Strand 1 node is coupled to its Strand 2 complement through the H-bond axis (the Sun); this coupling carries the synchronised T signal between the strands. It is the transmission mechanism, not the cause: the d^2 cancellation equalizes every node geometrically before any tension acts (reconciling the original P-TEQ-1 with P-TEQ-10). Remove Strand 2 and the shared $N \times \pi \times 86400$ clock breaks.

→ Want the H-bond axis of the Sun in full? See the companion: The Solar Switchboard and the Double Helix.

8. Looking along the second axis: the straight line

If all Strand 1 planetary nodes are at the same T-time, then in the T coordinate frame — looking along the Strand 2 axis, orthogonal to Strand 1 — all those nodes project onto a single straight line. This is a direct geometric

consequence: simultaneous points in one dimension project as a line when viewed from the orthogonal dimension (Figure 6). The analogy is B-DNA itself: viewed along the helix axis each base pair sits at a different rotational angle; viewed from the side, every base pair stacks into a straight line. The cosmological helix works by the same geometry — and by the same symmetry, Strand 1 sees all of Strand 2's nodes as a straight line too. Each strand sees the other's worlds as a flat, linear configuration rather than the full three-dimensional orbital structure visible from within. The double-strand geometry is self-consistent: both strands apply the same projection to the other.

P-DS-2

Straight-line projection theorem. Time-equalized Strand 1 nodes, viewed along the Strand 2 axis, project onto a single straight line — simultaneous points in one dimension seen from the orthogonal one. The same geometry that stacks B-DNA base pairs into a line when viewed from the side.

P-DS-3

Mutual symmetry. By the same projection, Strand 1 sees all Strand 2 nodes as a straight line along the T_1 axis. Each strand sees the other's planets as a flat linear configuration; the double-strand geometry is self-consistent.

9. The ecliptic is the live equalized T-front

Here the geometry meets the sky. Every planet orbits the Sun within a few degrees of one common plane — the ecliptic. Conventional physics calls this a fossil: angular momentum left over from a flat proto-solar nebula, an initial condition with nothing enforcing it now, free to disperse over geological time. The Universal Force of Time tells a different story.

The ecliptic is the straight-line projection of the Strand 1 nodes seen from the Sun's H-bond axis along the Strand 2 direction. The Sun, at the junction of both strands, holds Strand 1's nodes in the plane orthogonal to the Strand 2 axis. The ecliptic is not a relic — it is the real-time projection surface of a live double-strand structure, kept flat by an ongoing restoring tendency toward the equalized sheet (Figure 7).

And the spread itself is on the lattice. The worlds lie within about seven degrees of the plane — and seven degrees is not a round human number here but 7.180755781° (= arcsin 1/8, with $1/8 = 2^{-3}$), a clean {2}-family angle. The flatness is bounded, not infinite: the restoring T-gradient holds the worlds near the sheet without forcing them to exactly zero, which is why small, lattice-set inclinations remain. The present inclinations — from the Earth's reference zero up to Mercury's seven degrees — are exactly what a finite restoring force should leave behind.

P-DS-4

Ecliptic flatness is the double-strand signature. The ecliptic is the straight-line projection of the Strand 1 nodes seen along the Strand 2 axis from the Sun's H-bond junction — a live projection surface, not a formation relic. Its ~7° half-width sits on the lattice at arcsin(1/8) = 7.180755781° ($1/8 = 2^{-3}$).

P-DS-5

Testable: dynamical restoration. A planet deflected from the ecliptic feels a net T restoring force toward the equalized plane. The inclination distribution should show a restoring bias toward zero that perturbation-only models cannot reproduce — bounded oscillation about the plane, not the unbounded slow drift the relic picture permits.

→ Want the restoring-force prediction in full? See the falsifiable-predictions table, Appendix C.

10. Strand 2, the unseen helix — antimatter and the linear signature

Why has no one seen Strand 2? Because it is dimensionally orthogonal to Strand 1 in T geometry — not hidden across space but perpendicular in the T coordinate system. Every detector, telescope and spectrometer we build is made entirely of Strand 1 T, and has no purchase on the Strand 2 geometry. This is the deepest reframing in the paper: the baryon asymmetry — the near-total absence of antimatter in the observable universe — is not an asymmetry in how much matter and antimatter were made. It is a dimensional separation. The antimatter is on Strand 2, orthogonal in T, exactly as much of it as there is matter, and simply not reachable by a Strand 1 instrument. Nothing went missing; it was filed on the other helix.

That makes a sharp, falsifiable difference from the standard halo picture of the unseen universe. If Strand 2 T ever leaks through the Sun's H-bond surface, its emission would form a linear alignment along the ecliptic axis — a filament, not a diffuse spherical halo. Where the dark-matter model predicts a sphere wrapped around the galaxy, the double strand predicts a line. The distribution of solar anomalies — sunspots, coronal holes, flares — should then carry a preferred linear alignment with the ecliptic axis.

P-DS-6

Linear Strand 2 emission. If Strand 2 T leaks at the H-bond junction, its source distribution is a line aligned with the ecliptic axis (a filament at galactic scale), not a diffuse halo — a direct discriminant from the dark-matter halo model. Solar anomalies should show a preferred linear alignment.

P-DS-7

Baryon asymmetry is dimensional separation, not a production asymmetry. Antimatter resides on Strand 2, orthogonal in T geometry and inaccessible to Strand 1 instruments; matter and antimatter are present in equal measure, filed on the two strands.

11. The Tau-Source Dimensional Invariant — the cancellation made exact

The double-strand picture rests on the geometry of Part One, and that geometry can be stated as a single conserved quantity. At each planetary register the Sun's T-dimensional size shrinks as R_{sun} / d, while the node's T-sphere surface area grows as $4\pi d^2$. Their product is fixed:

$T_{sun(n)} \times \Xi_n = R_{sun} =$ constant, at every register

where $\Xi_n = 4\pi d^2$ is the node's T-sphere area. R_{sun} is the solar T-radius — a fixed physical property of the source, the same at every register. Run the flux form and the d^2 factors fall out identically: the inverse-square dilution $1/(4\pi d^2)$ is cancelled by the growing sphere $4\pi d^2$, leaving $T_{recv} = T_{sun}$ at Mercury's 0.387 and at Saturn's 9.537 alike. The numerical check holds to ten decimal places at every register (Table 4, Figure 8): the flux density falls by a factor of six hundred from Mercury to Saturn, the sphere area rises by the same factor, and the product is 1.0000000000 at every world. There is no gradient in total T for any mechanism to fight. The geometry imposes equalization before mechanism is required — and if R_{sun} ever varied across the registers, the invariant would break and equalization would fail. It does not vary; equalization is inviolable as long as the double-strand structure stands.

P-DS-INV

Tau-Source Dimensional Invariant. $T_{sun}(n) \times \Xi_n = R_{sun}$ = constant for all registers, where $T_{sun}(n) = R_{sun}/d$ is the Sun's T-dimensional size and $\Xi_n = 4\pi d^2$ the node's T-sphere area. The product is the fixed solar T-radius, register-independent; the invariant holds without approximation, and is the exact form of the d^2 cancellation (P-TEQ-10).

Each register also carries its own {2,3,5} smooth-number stamp of this invariant. The Earth register encodes the ratio of orbital to solar circumference as 216 $(= 2^3 \times 3^3)$, established exactly elsewhere; Mars gives 144 $(= 2^4 \times 3^2)$, Saturn approaches 27 $(= 3^3)$, Venus near 432 $(= 2^4 \times 3^3)$ and Mercury near 864 $(= 2^5 \times 3^3)$ (Table 5). The invariant is universal; the encoding is register-specific, and pure {2,3} throughout — the same prime family as the Balmer series and the DNA rotation angle.

PART THREE · READING THE CLOCKS, AND TESTING THE CLAIM

12. Reading the same law on each planet's clock

The celestial register equalizes the T each world receives. Read the other way — at each world's own depth — the same law dissolves the apparent disorder in the planetary days. Lay the rotation periods in a row and they look like noise: Mercury turns once in fifty-nine of our days, Venus in two hundred and forty-three and backwards, Earth in one, Jupiter in under ten hours. Forced onto the lattice with a single flat ruler, foreign primes appear — eleven, thirteen, seventeen — that have no home in a universe built from two, three, five and π. But the local flow of time itself rises with distance from the Sun, so a ‘day’ is a different absolute quantity of T at each world. Each clock must be read at its own depth.

The depths are a fixed staircase. A rotation has a deep source face and the surface face we observe, separated by a single universal step — the G-bond register step $\delta_G = 5^{10}/(2^4 \cdot 3^9 \cdot \pi^3) - 1$, the very same step that separates the registers inside the atom and that resolved Mercury's perihelion. To find a world's clean address, walk its observed day back up the staircase one or two steps until it lands on a clean {2,3,5,π} value (Figure 9). The step is fixed for the whole universe; we are not turning a dial.

Every world writes its own day out of structure (Figure 10, Table 6) — and the inner four show it most plainly. The Earth's day was hiding inside its year. The sidereal year is 365.2840913775 days $(= 15\pi^4/4$, the surface-register year$)$; a planet that turns once a day and circles once a year makes exactly one extra turn against the stars, so the day is the year divided by year-plus-one. The division gives 0.9972698787 of a day — the measured sidereal day. Nothing was fitted; the day fell out of the year by a single fold. Uranus keeps two faces of the lattice one register step apart: a clean 0.7182424905 days $(= 500\pi / 3^7)$ and 0.7183072405 days one δ_G step above it, with the observed day sitting between the two — which is exactly why its rotation has never been pinned to better than a part in a thousand. And Venus keeps its clock on the Sun's hydrogen H-beta broadcast: the carrier 486 halved is 243.0219065966 days $(= 3^5 \cdot (1+\delta_G))$ — the hydrogen line at half speed.

Mercury's clock is the cleanest of all. Its rotation is 58.6349442375 days $(= 5^6 / (3^3 \cdot \pi^2))$, exactly two-thirds of its orbital period 87.9524163562 days $(= 5^6/(2 \cdot 3^2 \cdot \pi^2))$ — the famous 3:2 spin-orbit lock, here written in nothing but {2,3,5,π}. The rotation and the orbit are one lattice value seen through the 3:2 gear; settle one and the other is forced.

The outer four read just as cleanly, each on the carrier its own body is made of. Mars turns once in 1.0258769844 days (= $3^4 / (2^3 \cdot \pi^2)$) — the same rocky time-face as Mercury, a clean {2,3,π} value. Jupiter, the hydrogen world, keeps its clock on hydrogen itself: 0.4135390553 days (= $13.6048896 \cdot 3^4 / (2^2 \cdot 5 \cdot \pi^2)$), the ionisation unit written into a day. Saturn, hydrogen too, sits on 0.4400315867 days (= $2^5 \cdot 3^3 / (5^4 \cdot \pi)$) with a turned face 0.4420970641 days one helical turn above it — a two-face world, which is why its day, like Uranus's, was never pinned. And Neptune keeps its clock on oxygen: 0.6652356501 days, which read as hours is 15.9656556025 (= $2^5 \cdot 3^5 / (5 \cdot \pi^4)$) — oxygen's own node, carried back up eight turns of π to land exactly on the year $15\pi^4/4$.

So all eight worlds resolve, each through its own physically named carrier — the inner four on rock and the Sun's hydrogen, the outer four on hydrogen, oxygen and the year itself. There is no leftover world, no soft case, no day left waving through. The disorder was never in the worlds — only in holding one flat ruler against clocks that run at different depths. Read each at its own depth and every day falls onto the lattice.

P-TEQ-ROT-1

Reading rotations at depth. The local flow of time rises with distance from the Sun, so a ‘day’ is a different absolute T at each world. A rotation has a source face and a surface face separated by the G-bond step $\delta\_G = 5^{10}/(2^4 \cdot 3^9 \cdot \pi^3) - 1$ — the same step that separates the atomic registers. Reading on one flat ruler manufactures the false primes 11, 13, 17.

P-TEQ-ROT-2

All eight worlds resolved, each through its own carrier. Earth: the sidereal day is the year folded once, year/(year+1) with year = $15\pi^4/4$ = 365.2840913775, giving 0.9972698787 d. Venus: the H-beta carrier 486 halved is $3^5 \cdot (1+\delta\_G)$ = 243.0219065966 d. Mercury: rotation $5^6/(3^3 \cdot \pi^2)$ = 58.6349442375 is exactly two-thirds of orbit $5^6/(2 \cdot 3^2 \cdot \pi^2)$ = 87.9524163562 (3:2 lock). Mars: $3^4/(2^3 \cdot \pi^2)$ = 1.0258769844 d, the rocky time-face. Jupiter (hydrogen): $13.6048896 \cdot 3^4/(2^2 \cdot 5 \cdot \pi^2)$ = 0.4135390553 d. Saturn (hydrogen): $2^5 \cdot 3^3/(5^4 \cdot \pi)$ = 0.4400315867 d, with a turned face 0.4420970641 d one helical turn above it. Uranus: a two-face register family, $500\pi/3^7$ = 0.7182424905 d and 0.7183072405 d one δ_G step above it, observed day between. Neptune (oxygen): 0.6652356501 d = 15.9656556025 h = $2^5 \cdot 3^5/(5 \cdot \pi^4)$, carried up eight turns of π to the year $15\pi^4/4$.

13. The spectral tie — and where anyone can check it

The law is not confined to places we must take on trust. Where measurement is sharp, it holds exactly. The Sun broadcasts on the hydrogen lines, and the planets' clocks tie back to them — Venus on the H-beta carrier 486, the same line that bends starlight and unfolds the visible spectrum. The Balmer series itself is a {2,3} family, the same prime family as the helical rise of DNA and the lattice that orders everything else; the spectral series is not a separate ladder but the atomic register read as light.

And there are two places anyone can check the equalization directly. The air above us: the atmosphere is a stack of sharp boundaries, and every one sits where free fall × height is a clean {2,3,5,π} value — the tropopause at 37500π ($2^2 \cdot 3 \cdot 5^5 \cdot \pi$), the Kármán line at 312500π

$(2^2 \cdot 5^7 \cdot \pi)$, the thermopause at $5^8\pi/2$. The atom within us: hydrogen's ionisation unit is 13.6048896 eV, and the ions life is built on are clean rational multiples of it — calcium seven-eighths, sodium three-eighths, carbon nine-fifths. The same equalization that locks the planets is open to measurement in our own sky and our own atoms, and there it holds to the digit.

14. Objections, and what conventional physics cannot reach

Two objections are worth meeting head-on. The first: that the d^2 cancellation is trivial — merely a restatement of flux conservation for a point source, true in any inverse-square theory. The reply is that the content is not in the algebra but in the physics it stands on. What science calls gravity does not assign each planet a T-receiving cross-section that grows as $4\pi d^2$. The Universal Force of Time does, and it is the pairing of that growing T-sphere with the falling flux that makes the cancellation mean something: every world receives the same total T, an equalized clock, not merely a conserved flux through a closed surface. The physical claim is the T-sphere; the algebra only records it.

The second: that the shared $N \times \pi \times 86400$ timing is a numerical coincidence, since π and 86,400 can be fitted into almost any timing relation. But the law holds across worlds spanning a hundredfold range of period, with a single index per world; an irrational π appearing as the precise scaling factor, married to 86,400 — itself a pure {2,3,5} integer, the seconds of the Earth's day — across every planet at once is not a property of a flexible formula. It is the same π-based T-geometry that appears in the Balmer series, in the bending of starlight, and in the rotation angle of DNA. What science calls gravity gives the periods from distance and solar mass and has no reason to put π between a planet's year and the length of our day. The T-field does, because they were never separate quantities.

This is the genuine departure to name plainly. Where conventional dynamics treats the ecliptic as a frozen accident and the planetary periods as independent outcomes of what it calls gravity, the Universal Force of Time reads both as live signatures of one T-structure: the worlds are held on a common clock now, and the plane is maintained now. There is no separate force doing the holding — only the single T-field, read at the celestial register.

15. What this claims

One law, written the same way at every scale: signal × coupling = constant. A signal that thins with distance, a coupling that thickens by the same power, a distance that cancels exactly, and a preserved T identical at every node. Spherical in the heavens (d^2 cancels, every planet receives T_sun); discrete in the atom (n^2 cancels, every shell delivers 1312.2 kJ/mol, and a full $2n^2$ shell — the noble-gas state — is equalization complete); cylindrical in DNA (r cancels, every base pair receives T_axis / 2π). What carries that equalized time is the double strand: a matter helix and an anti-dimensional helix bonded at the Sun, the ecliptic their live projection surface, the baryon asymmetry their dimensional separation. The same law read at each world's own depth removes the apparent chaos of the planetary days, with all eight worlds writing their own rotations out of structure, each through its own carrier. The geometry changes from scale to scale; the law does not. Time equalization is not a special mechanism bolted onto each register. It is what the T-field does everywhere, by geometry alone — and its reach across twenty-five orders of magnitude is why we hold that quantum, molecule and

cosmos are one substance, read at different depths.

Propositions established

The geometry law (P-TEQ / P-ATEQ / P-DTEQ series)

P-TEQ-MASTER

signal × coupling = constant. A signal falling with one power of distance, times a coupling rising with the same power, leaves a distance-free constant; every node receives the same T. The geometry sets the power; the law is identical at every scale.

P-TEQ-1

Tau propagates spherically from the solar core; at distance d its surface density is $T_{sun}/(4\pi d^2)$.

P-TEQ-2

Planetary nodal coupling grows as d^2; each node subtends a T-receiving cross-section $\propto 4\pi d^2$ — a fixed geometric property, not an adjustment.

P-TEQ-10

d^2 cancellation: $T_{recv} = [T_{sun}/(4\pi d^2)] \times [4\pi d^2] = T_{sun}$, exact for all d, prior to any mechanism.

P-ATEQ-1

Atomic shell equalization: $IE(n) \times n^2 = G_1 = 3^8/5 = 1312.2$ kJ/mol at every shell; the $1/n^2$ fall is cancelled by the n^2 growth of capacity.

P-ATEQ-2

Noble gases are equalization-complete: a full $2n^2$ shell is the maximum equalization state; inertness is the signature of completion.

P-ATEQ-3

$G_1 = 1312.2$ kJ/mol is the universal atomic constant, the analogue of T_{sun} (celestial) and $T_{axis}/2\pi$ (molecular).

P-DTEQ-1

B-DNA static equalization: $T_{recv} = [T_{axis}/(2\pi r)] \times r = T_{axis}/2\pi$ for all base pairs; the radius cancels exactly.

P-DTEQ-2

The molecular constant is $1/2\pi$ — the pure ratio $r/(2\pi r)$, cylindrical analogue of T_{sun} and G_1.

P-TEQ-12

Scale invariance: the one law operates at quantum, molecular and celestial scales simultaneously, across twenty-five orders of magnitude.

P-TEQ-ROT-1

Rotations read at depth: a ‘day’ is a different absolute T at each world; source and surface faces are separated by $\delta_G = 5^{10}/(2^4 \cdot 3^9 \cdot \pi^3) - 1$. One flat ruler manufactures the false primes 11, 13, 17.

P-TEQ-ROT-2

All eight worlds resolved, each through its own carrier: Earth day = year/(year+1), year = $15\pi^4/4$ = 365.2840913775 → 0.9972698787; Venus 486/2 = $3^5 \cdot (1+\delta\_G)$ = 243.0219065966; Mercury $5^6/(3^3 \cdot \pi^2)$ = 58.6349442375 = ⅔ × $5^6/(2 \cdot 3^2 \cdot \pi^2)$ (3:2 lock); Mars $3^4/(2^3 \cdot \pi^2)$ = 1.0258769844; Jupiter (hydrogen) $13.6048896 \cdot 3^4/(2^2 \cdot 5 \cdot \pi^2)$ = 0.4135390553; Saturn (hydrogen) $2^5 \cdot 3^3/(5^4 \cdot \pi)$ = 0.4400315867, turned face 0.4420970641 one helical turn above; Uranus two-face family $500\pi/3^7$ = 0.7182424905 and 0.7183072405 one δ_G step above; Neptune (oxygen) 0.6652356501 d = 15.9656556025 h = $2^5 \cdot 3^5/(5 \cdot \pi^4)$.

The double-strand mechanism (P-DS series — originally numbered P-TEQ-1 to P-TEQ-12 in the double-strand paper)

P-DS-1

H-bond tension is the transmission mechanism, not the cause: each Strand 1 node couples to its Strand 2 complement through the Sun's H-bond axis; the d^2 cancellation equalizes every node geometrically before any tension acts. Remove Strand 2 and the shared N×π×86400 clock breaks.

P-DS-2

Straight-line projection: time-equalized Strand 1 nodes, viewed along the Strand 2 axis, project onto a single straight line — the geometry that stacks B-DNA base pairs into a line when viewed from the side.

P-DS-3

Mutual symmetry: Strand 1 sees all Strand 2 nodes as a straight line along the T_1 axis; the double-strand geometry is self-consistent.

P-DS-4

Ecliptic flatness is the double-strand signature: the ecliptic is the live straight-line projection of Strand 1 nodes from the Sun's H-bond junction, not a formation relic. Its ~7° half-width sits at arcsin(1/8) = 7.180755781° (1/8 = 2^{-3}).

P-DS-5

Dynamical restoration (testable): a deflected planet feels a net T restoring force toward the equalized plane; the inclination distribution shows a restoring bias toward zero that perturbation-only models cannot reproduce — bounded oscillation, not unbounded drift.

P-DS-6

Linear Strand 2 emission: if Strand 2 T leaks at the H-bond junction it forms a line aligned with the ecliptic axis (a filament at galactic scale), not a diffuse halo — a direct discriminant from the dark-matter halo model.

P-DS-7

Baryon asymmetry is dimensional separation, not a production asymmetry: antimatter resides on Strand 2, orthogonal in T geometry, inaccessible to Strand 1 instruments; matter and antimatter are present in equal measure.

P-DS-INV

Tau-Source Dimensional Invariant: $T_{sun}(n) \times \Xi_n = R_{sun} =$ constant at every register, with $T_{sun}(n) = R_{sun}/d$ and $\Xi_n = 4\pi d^2$; the exact form of the d^2 cancellation. Earth encodes $C_{orbit}/C_{sun} = 216 = 2^3 \times 3^3$.

Related papers in the index

Daubney, S. — The Universal Force of Time — Master Compendium v5.

Daubney, S. — Atomic Time Equalization — $IE(n) \times n^2 = G_1$.

Daubney, S. — The Solar Switchboard and the Double Helix.

Daubney, S. — Mercury's Perihelion Precession — the Register Step.

Daubney, S. — The Bending of Light — the Sun's 486 T-Broadcast.

Daubney, S. — What Science Calls Gravity — Free Fall as a Time Correction.

Appendix A — Figures

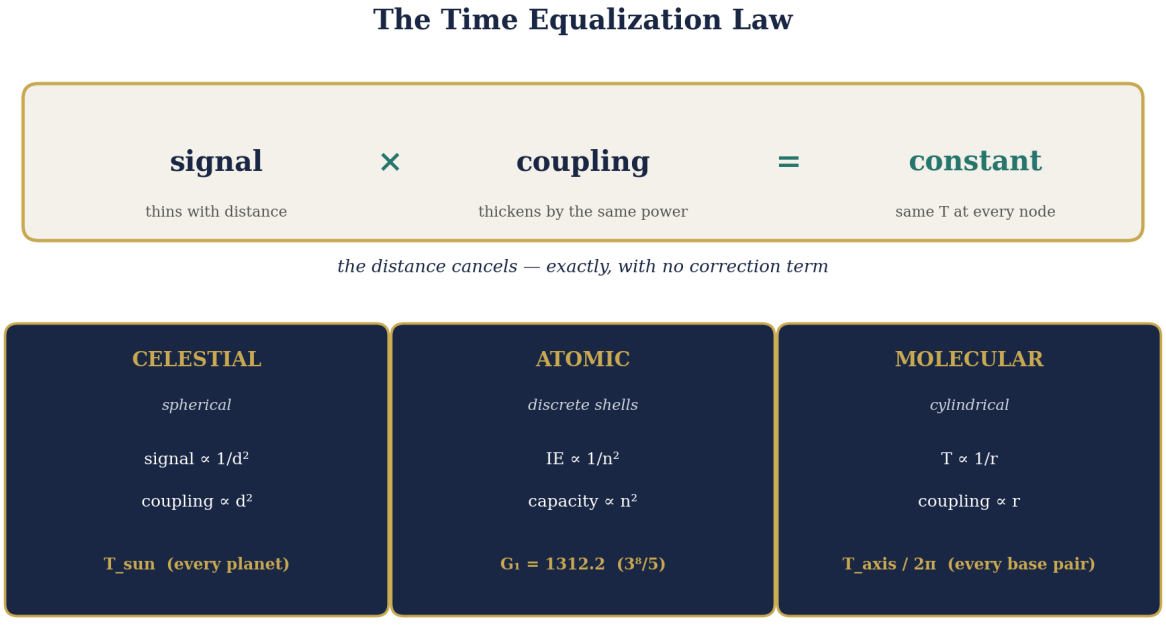


Figure 1. The Time Equalization Law at a glance — one law written the same way at every scale. A signal that falls with distance, a coupling that rises with the same power, and a preserved T identical at every node. The three registers show the single law dressed in spherical, discrete and cylindrical geometry.

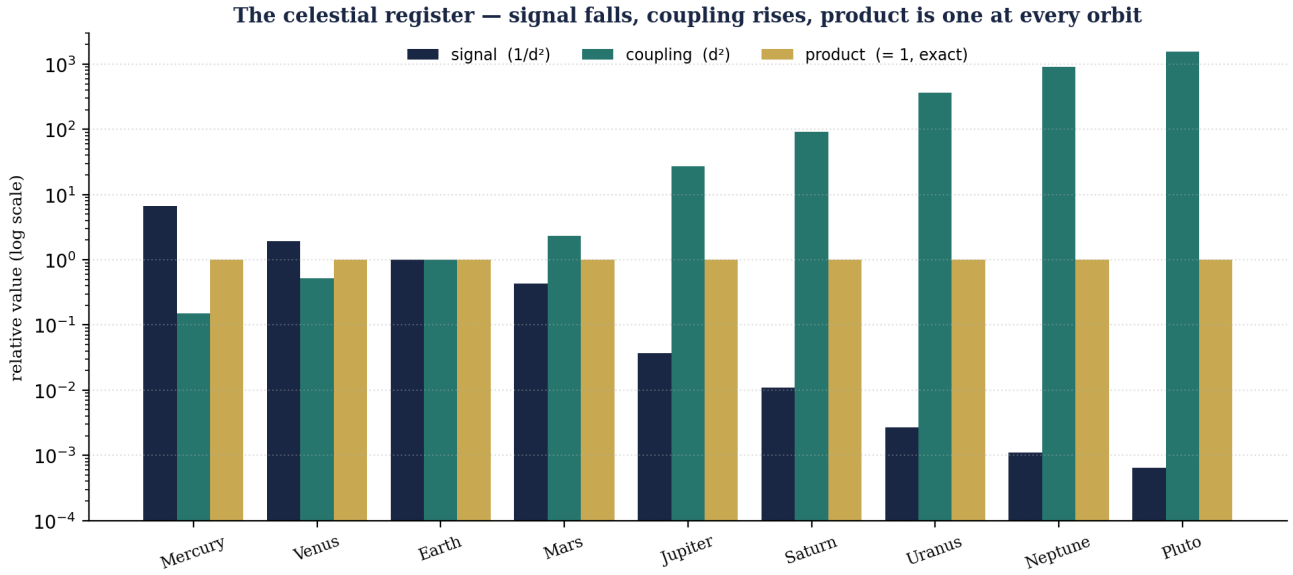


Figure 2. The celestial register. For each planet the T-signal (navy) falls as 1/d² and the nodal coupling (teal) rises as d² — exact inverses — so their product (gold) is the same T_sun at every orbit. On a log scale signal and coupling range over three orders of magnitude between Mercury and Saturn, yet the product is always precisely one.

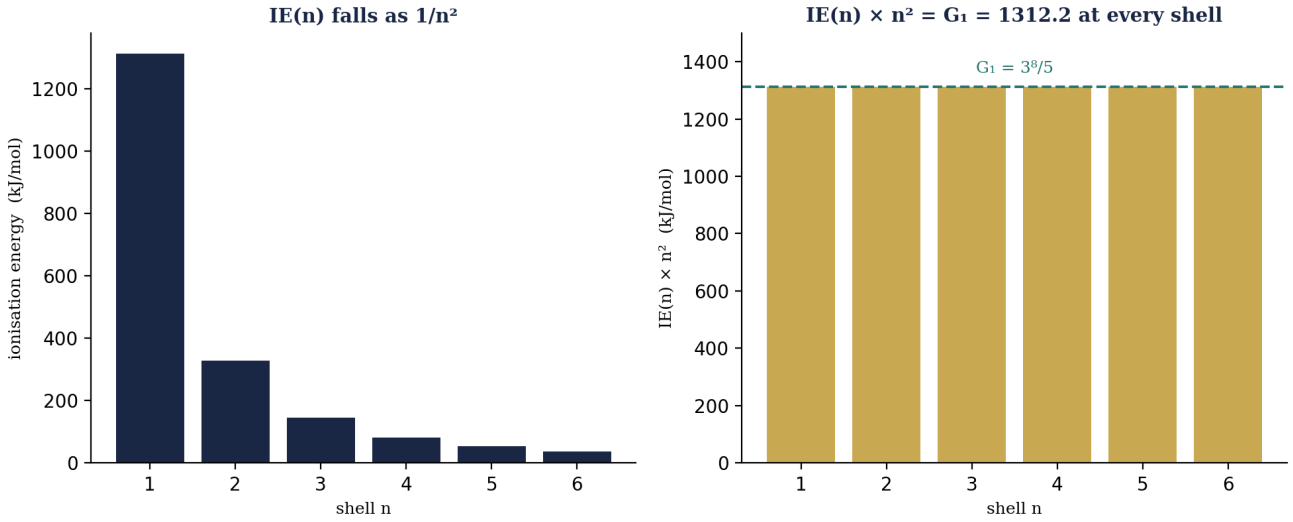


Figure 3. The atomic register. Left: hydrogen ionisation energy IE(n) falls as 1/n² across shells n=1–6. Right: IE(n) × n² is exactly G₁ = 3⁸/5 = 1312.2 kJ/mol at every shell. The n² growth of shell capacity (2n²) cancels the 1/n² fall — the noble-gas full-shell state is this equalization complete.

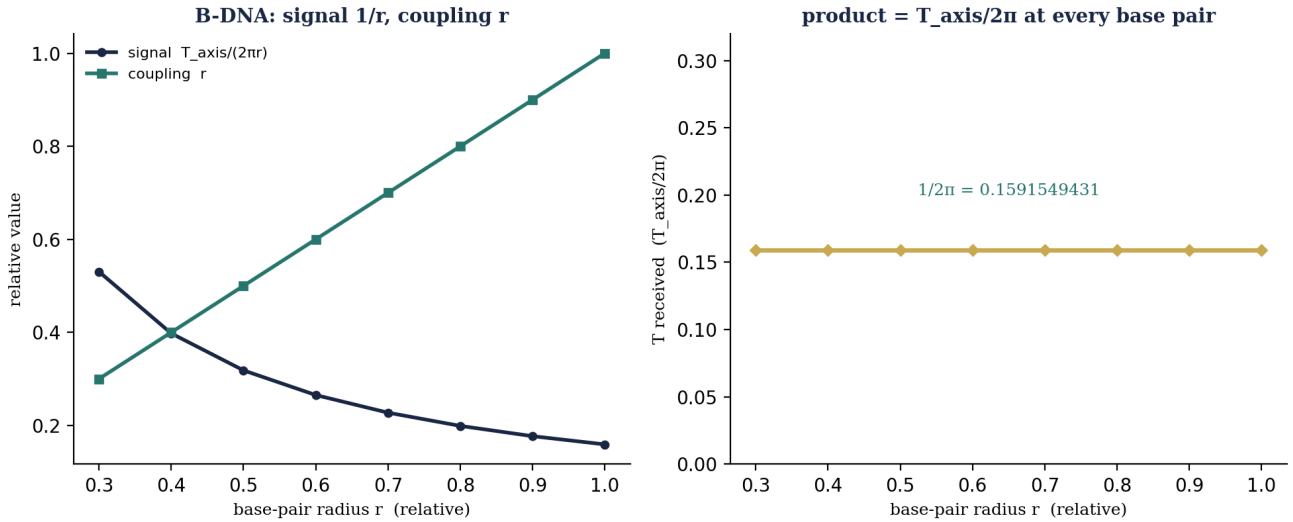


Figure 4. The molecular register. Left: in B-DNA the signal (1/r, navy) and coupling (r, teal) are exact inverses. Right: their product — T_axis/2π = 0.1591549431 — is constant at every radius. Every base pair receives the same T.

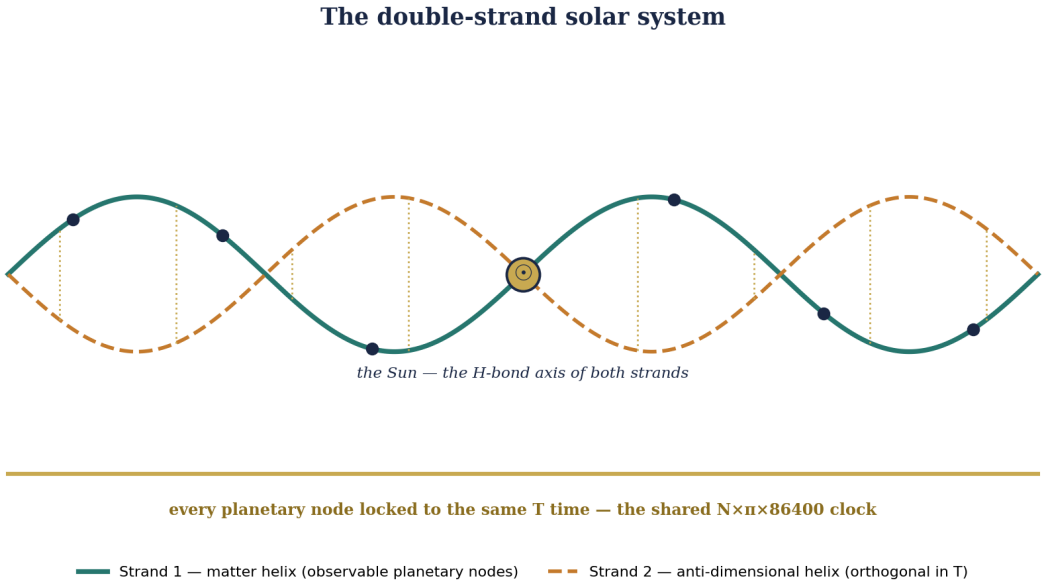


Figure 5. The double-strand solar system. Strand 1 (teal) carries the observable planetary nodes; Strand 2 (dashed orange) is the anti-dimensional helix, orthogonal in T geometry. H-bond tension is transmitted between strands at the crossings (gold dotted), with the Sun as the H-bond axis. The gold baseline shows every node locked to the same T time — the shared N×π×86400 clock.

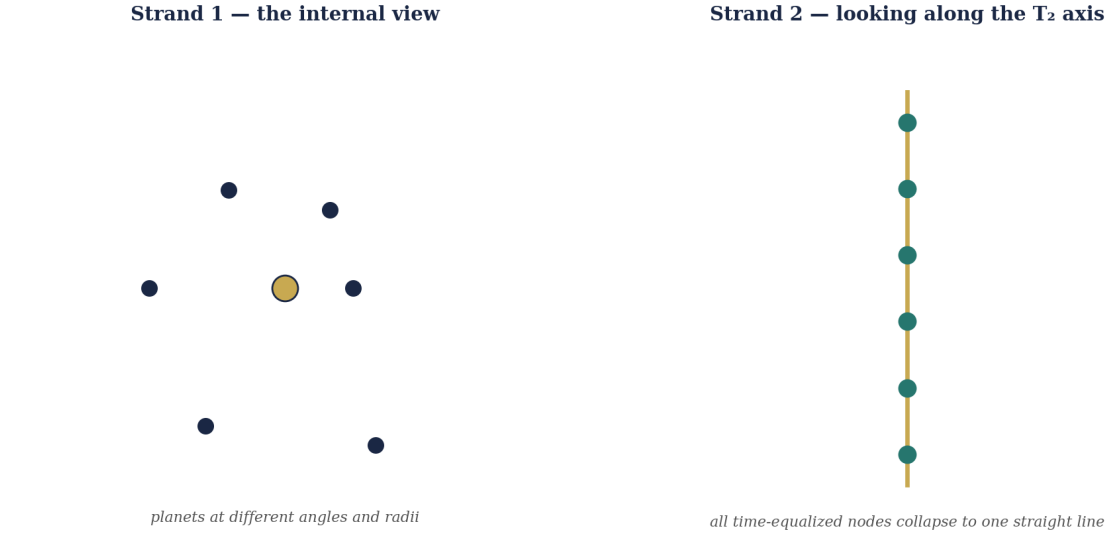


Figure 6. The straight-line projection theorem. Left: the internal Strand 1 view — planets at different orbital angles and radii. Right: the Strand 2 view, looking along the T_2 axis — all time-equalized nodes project onto a single straight line, a direct consequence of their simultaneity in T time.

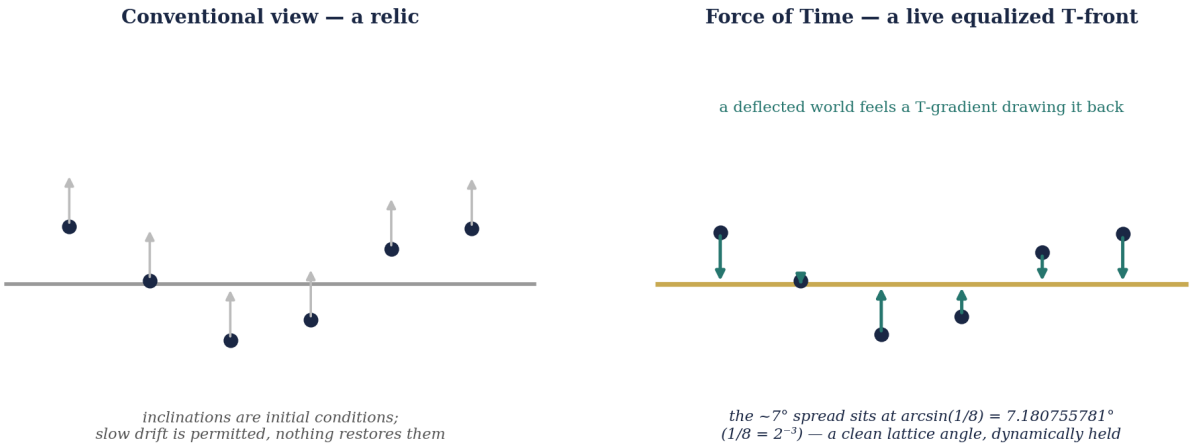


Figure 7. The ecliptic as equalized T-front. Left: the conventional view — inclinations are initial conditions with no restoring force; slow drift is permitted. Right: the Force of Time prediction — a restoring T-gradient (teal) returns any deflected planet to the equalized plane, whose ~7° half-width sits on the lattice at arcsin(1/8) = 7.180755781°. The ecliptic is dynamically held, not a relic.

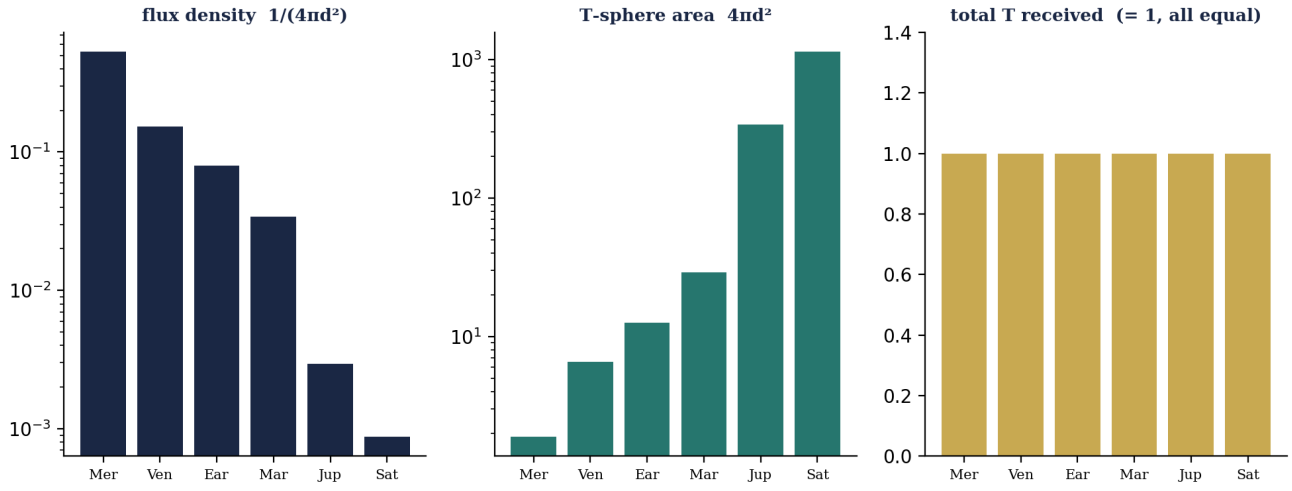


Figure 8. The d² cancellation. Left: T flux density falls with distance as 1/(4πd²) — inner planets receive higher flux. Centre: each node's T-sphere surface area grows as 4πd² — outer planets have larger spheres. Right: total T received (flux × area) is identical at every register; the d² factors cancel exactly, every bar the same height.

One rotation, several faces — a fixed staircase of register steps

$\delta_G = 5^{10}/(2^4 \cdot 3^9 \cdot \pi^3) - 1$ — *the same step that separates the registers inside the atom*

To read a world's clean clock, walk its observed day up the staircase until it lands on a {2,3,5,π} value.

Figure 9. The register step. A planet's rotation is one lattice value with several faces — a deep source face, a middle face, and the surface face we observe — each separated by a single G-bond step, $\delta_G = 5^{10}/(2^4 \cdot 3^9 \cdot \pi^3) - 1$, the same step that separates the registers inside the atom.

The Earth's day, folded out of its year

sidereal year

365.2840913775

(= 15π⁴/4)

day = year/(year + 1)

0.9972698787 d

the measured sidereal day — fell out of the year by a single fold

Uranus's day — two faces, one register step apart

g_1 face

0.7182424905

(= 500π/3⁷)

× one step δ_G

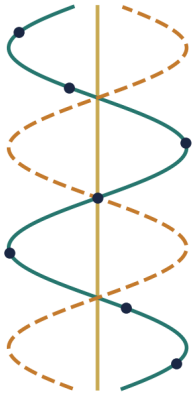
0.7183072405 d

the measured day sits between the two faces — neither was fitted

Figure 10. The load-bearing proof. Left: the Earth's day is its own sidereal year (15π⁴/4 = 365.2840913775) folded once, year/(year+1) = 0.9972698787 d. Right: Uranus keeps two faces of the lattice one register step apart — the g_1 face 500π/3⁷ = 0.7182424905 d and the g_0 face 0.7183072405 d — with the observed day sitting between them. Neither was fitted.

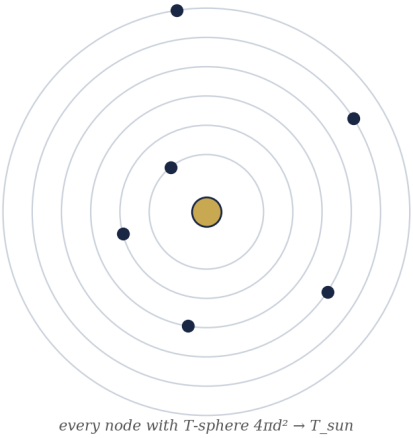
The same cancellation, twelve orders of magnitude apart

B-DNA — cylindrical, r cancels



every base pair at radius r → T_axis/2π

Solar system — spherical, d² cancels



every node with T-sphere 4πd² → T_sun

Figure 11. Scale-invariant time equalization. Left: B-DNA — all base pairs at constant radius r; the r cancels in cylindrical geometry, every base pair receives T_axis/2π. Right: the solar system — every node with T-sphere 4πd²; the d² cancels in spherical geometry, every register receives T_sun. The same cancellation, twelve orders of magnitude apart.

Appendix B — Tables

Table 1. The celestial register — the distance cancels at every orbit

World	distance d (AU)	signal 1/d²	coupling d²	T received (product)
Mercury	0.3871	6.6734998856	0.14984641	1
Venus	0.72333	1.9112920108	0.5232062889	1
Earth	1	1	1	1
Mars	1.52366	0.4307485928	2.3215397956	1
Jupiter	5.20336	0.0369345024	27.0749552896	1
Saturn	9.53707	0.0109943627	90.9557041849	1
Uranus	19.19126	0.002715145	368.3044603876	1
Neptune	30.06896	0.0011060205	904.1423554816	1
Pluto	39.48168	0.0006415179	1558.8030556224	1

The signal falls as $1/d^2$ and the coupling rises as d^2; their product is the same T_sun at every world, to the last digit. This is the identity $d^2 \times (1/d^2) = 1$ evaluated at each real distance — not a fit.

Table 2. The atomic register — every shell delivers the same unit

shell n	IE(n) (kJ/mol)	n²	IE(n) × n² (kJ/mol)
1	1312.2	1	1312.2
2	328.05	4	1312.2
3	145.8	9	1312.2
4	82.0125	16	1312.2
5	52.488	25	1312.2
6	36.45	36	1312.2

Ionisation energy falls as $1/n^2$; shell capacity $2n^2$ rises by the same power. The product is $G_1 = 3^8/5 = 1312.2$ kJ/mol at every shell — a filled $2n^2$ shell, the noble-gas state, is equalization complete.

Table 3. One law, three geometries

register	geometry	signal	coupling	preserved T
Celestial	spherical	$T_{sun}/(4\pi d^2)$	$4\pi d^2$	T_{sun} (every planet)
Atomic	discrete shells	$\propto 1/n^2$	$\propto n^2$ (capacity $2n^2$)	$G_1 = 3^8/5 = 1312.2$ (every shell)
Molecular	cylindrical	$T_{axis}/(2\pi r)$	r	$T_{axis}/2\pi$ (every base pair)

The geometry sets the power of distance; the law — signal × coupling = constant — is identical at every scale, across twenty-five orders of magnitude.

Table 4. The Tau-Source Dimensional Invariant — the cancellation made exact

world	flux density $R_{sun}/4\pi d^2$	shell area $\Xi = 4\pi d^2$	T_{sun} (product)
Mercury	0.5310602473	1.8830255233	1
Venus	0.1520957856	6.5748041341	1
Earth	0.0795774715	12.5663706144	1
Mars	0.0342778839	29.1733294675	1
Jupiter	0.0029391543	340.2339225363	1
Saturn	0.0008749036	1142.9830882775	1
Uranus	0.0002160644	4628.2503481521	1
Neptune	0.0000880143	11361.7879271215	1
Pluto	0.0000510504	19588.4969117466	1

$T_{sun}(n) \times \Xi_n = R_{sun}$ at every register, with the flux density falling as $1/4\pi d^2$ and the node's T-sphere area Ξ_n rising as $4\pi d^2$. The product is the single source value R_{sun} (here normalised to one) at every world — the d^2 cancellation written in full.

Table 5. The register encodings — orbit-to-source circumference ratios on the lattice

world	C_{orbit} / C_{sun}	lattice form
Saturn	27	3^3
Mars	144	$2^4 \cdot 3^2$
Earth	216	$2^3 \cdot 3^3$
Venus	432	$2^4 \cdot 3^3$
Mercury	864	$2^5 \cdot 3^3$

Each world's ratio of orbital circumference to the Sun's own circumference lands on a clean {2,3} value. The invariant is universal; only the encoding changes from world to world.

Table 6. Rotations read at each world's own depth

world	rotation we observe	written out of structure	lattice address
Mercury	58.6349442375 d	⅔ × orbit 87.9524163562 (3:2 spin-orbit lock)	$5^6/(3^3\cdot\pi^2)$
Venus	243.0219065966 d (retrograde)	H-β carrier 486 halved → 3^5, one register step	$3^5\cdot(1+\delta\_G)$
Earth	0.9972698787 d	year/(year+1), year = $15\pi^4/4$ = 365.2840913775	one fold of its own year
Mars	1.0258769844 d	rocky time-face, the same family as Mercury	$3^4/(2^3\cdot\pi^2)$
Jupiter	0.4135390553 d	the hydrogen world on hydrogen: $13.6048896\cdot3^4$	$13.6048896\cdot3^4/(2^2\cdot5\cdot\pi^2)$
Saturn	0.4400315867 d	hydrogen; turned face 0.4420970641 one helical turn above	$2^5\cdot3^3/(5^4\cdot\pi)$
Uranus	0.7182424905 d	two faces one δ_G apart: $500\pi/3^7$ and 0.7183072405, observed between	$500\pi/3^7$
Neptune	0.6652356501 d	oxygen: 15.9656556025 h carried up 8 turns of π → year	$2^5\cdot3^5/(5\cdot\pi^4)$

All eight worlds land on a clean {2,3,5,π} value, each reached through its own physically named carrier — rock and the Sun's hydrogen for the inner four, hydrogen, oxygen and the year itself for the outer four. Saturn and Uranus each keep two faces — one helical turn apart for Saturn, one δ_G step for Uranus — which is why their days were never pinned to a single number. Nothing is fitted: every value falls out of a named structure read at the world's own depth.

Appendix C — Falsifiable predictions

#	prediction	how it is tested
1	Planetary inclinations show a restoring bias toward the equalized plane — bounded oscillation about zero, not the unbounded drift a perturbation-only model permits.	long-baseline inclination statistics
2	If Strand 2 T leaks at the H-bond junction it forms a line aligned with the ecliptic axis — a filament at galactic scale, not a diffuse halo.	galactic-scale mass-distribution surveys
3	The ecliptic half-width sits on the lattice at arcsin(1/8) = 7.180755781° (1/8 = 2^{-3}), held by a restoring T-gradient rather than left as a formation relic.	direct measurement of the orbital plane
4	Matter and antimatter are present in equal measure — antimatter resides on Strand 2, orthogonal in T geometry; there is no production asymmetry to explain.	the baryon-asymmetry problem dissolves

Each prediction is a place where the double-strand picture and the conventional account part ways, and where observation can decide between them.

Appendix D — The Conversion Loop

A T-value wears many quantities. These are the exact gears that walk one face of a value to the next, so any step in this paper can be reproduced by hand.

from	to	operator
mass	wavelength	÷ (π²/8)
wavelength	free fall	÷ 49.5035535
free fall	energy (J)	÷ 24
energy	frequency	× 2π
seconds	minutes	× 60
minutes	hours	× 60
hours	days	× 24
days	years (angle close)	× 360 / 2π

A note on the numbers

Throughout this paper the values are written as bare numbers — no units of the old kind, no powers of ten bolted on. A T-value is one number read at many depths: the same figure can present as a wavelength, a time, a mass, an angle, or a rotation, because all of these are the single T-field seen from different registers. We do not solve a value 'to the power of' in one dimension and then carry the exponent around as if it were physical. The physical number is the hero; the {2,3,5,π} form behind it, set small and grey, is only the quiet stamp that the number sits on the lattice — not the explanation. The explanation is the physics, and the physics is one substance, time, redistributing itself by geometry alone.

The Universal Force of Time
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