

The Proton in the Force of Time

What the first particle is, how it is built, how it wears every quantity, how it raises the elements from the centre of the nucleus, and how — in the deepest sense — there is only one of it

Stephen Daubney · The Daubney Foundation · Rev 22 · 2026
thedaubneyfoundation@gmail.com

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 $d\Sigma T=0$ governs all change: T is never created or destroyed, only redistributed.

Abstract

The proton is the first particle — the bare nucleus of hydrogen, and the thing every heavier nucleus is built from. Modern physics measures it to exquisite precision and explains almost none of it: ninety-nine percent of its mass is attributed to the binding energy of an unseen field, its size comes in two disagreeing numbers, its magnetic moment is simply recorded. This paper is not a new measurement — every number here is the one already in the books. What is new is that the numbers stop being brute facts and become readings of a single structure. The Force of Time is not a patch on physics; it is a different way of seeing, so we build the picture from the ground up. The proton is one standing pattern of time — a seed — whose charge is a count of crossings (+1) and whose mass, **$1.672616359 \times 10^{-27}$ kg**, is a single lattice value carrying inside it the same ratio that fixes hydrogen and the planets. We show that the proton sits on the ground floor of a staircase whose next two steps are the wavelength of hydrogen's light (**434.0277778 nm**) and the energy that binds its electron (**$218.0325369 \times 10^{-20}$ J**); that it wears every quantity in turn; that it stands on a spin-orbital speed of spacetime — the ground dimension's, **300,000,000 m/s (= 300,000 km/s)**, not a universal 'speed of light' but one dimension's rate of turning — which is nothing but the Earth's daily fall squared; that it is bound to the atom it anchors and the star that forges it; that as time flows the Sun builds the proton and neutron up in the nucleus, floor by floor, while the electrons take their places as nodes on the turns — the periodic table built from the inside; and that, in the deepest sense, there is only one proton, re-instanced at every address. Throughout, the physical number leads and the {2,3,5, π } lattice form sits quietly behind it in brackets, and we mark plainly what is pinned, what is close, and what is still open.

I. The first particle, and a new way of seeing

Strip the single electron from a hydrogen atom and what is left is a proton — a bare nucleus, the lightest there is, and the brick every heavier nucleus is built from. It is the most-measured object in physics: its mass is known to twelve digits, its magnetic moment to eleven. And yet, for all that precision, physics cannot say *why* a single one of those numbers has the value it does. The quark masses inside it add up to about one percent of its weight; the other ninety-nine percent is booked to the binding energy of a field no one has seen, a number a supercomputer can grind out but no one can explain. Its size comes in two measurements that disagree. Its magnetism is simply written down.

What follows is not a new measurement. Every value here is the one already in the books. What changes is that the numbers stop being brute facts and become readings of one structure. But a warning before we start: this is not a small repair to existing physics, not a gap being filled. It is a different way of looking at the world — that there is one substance, time, and that everything is a pattern in it. So we will build the picture slowly, from things you can already see, and let each number arrive as the end of a short journey rather than an announcement. And we will be honest all the way through about which of those numbers are pinned to parts per million, which are merely close, and which are still open — because a paper meant for scientists earns its trust by marking its own edges.

II. What the proton is

Begin with what the proton *is*, because the new picture turns on it. In the Force of Time a particle is not a little object; it is a shape that the one substance — time — holds, a standing configuration that does not come apart. The proton is the simplest such shape: the seed (Fig. 1). Its three quarks are not three balls rattling in a bag, glued by a separate strong force. They are the only set of orientations that close on themselves at the boundary between two domains — a matter side and an antimatter side.

And its charge is not a substance it carries. Charge is a tally — the net number of crossings from the antimatter side into the matter side. Two of the proton's quarks cross outward, the third does not, and the count comes to **+1**. No glue is needed to bind it and no separate electric force is needed to charge it; both are the same time, read at the boundary. Its mass, in the same way, is not a sum of parts but a density of spin in the configuration — how hard it is to change the pattern. That is why physics finds ninety-nine percent of the mass 'missing' from the quarks: there was never a sum

to do. The configuration is the mass. Nothing is missing.

III. The mass, and the staircase it sits on

Now the first number, and it is the cleanest result in the whole subject. The proton's mass is a single lattice quantity: **$1.672616359 \times 10^{-27}$ kg** (on the lattice, $9375 \cdot \sqrt{(10^{11}/\pi)}$, where 9375 is the speed of light divided by 32) — and it agrees with the measured value to **3.3 parts per million** (Fig. 2). In energy units it reads **938.272 MeV**: the bare proton, hydrogen with its electron taken away. Square it and a ratio steps into the light — the fine-structure ratio, the same one that fixes hydrogen's binding energy and sits in the planets' orbital speeds. One ratio, carried inside the nucleus, the atom, and the star alike. (On the lattice: $m_p^2 = \alpha \cdot 5^{13} \cdot \pi \cdot 10^{11}$.)

But the deepest thing about the proton's mass is where it sits, and this is the picture that has never been told properly (Fig. 3). Imagine a staircase built from the day. Its ground floor is the number a day is cut into, **864**; you climb it by one fixed multiply over and over. Stand on the ground floor — turn zero — and what lives there is the proton, its mass anchored on **432**, the carrier, exactly half the day. Climb one step, to turn one, and the same staircase now reads not as a mass but as a length: **434.0277778 nm**, the wavelength of the light hydrogen pours out when it burns — the line you can find in any star. Climb one more, to turn two, and the quantity changes a third time, from a length into an energy: **$218.0325369 \times 10^{-20}$ J**, the exact energy it takes to tear the electron off a hydrogen atom — the binding of the atom itself. (We give that binding in joules, where it sits clean on the lattice as $5^{12}/(2^9 \cdot 3^7)$; the familiar '13.6 eV' is the very same energy dragged into another unit, a converted number, not the lattice-clean one.)

Stand back and look at what just happened. Mass, then light, then binding energy — the proton, the spectral line, the ionization — are not three subjects that happen to concern the same atom. They are one staircase read at three heights: the mass on the ground, the light one step up, the binding one step above that, each step a single multiply by the helix ratio. Physics teaches these three things in three different rooms and never suspects they are the same flight of stairs. The proton at the bottom is not merely *near* the hydrogen atom. It is the first stair of it.

And here is the thing that turns a staircase into a universe. Double the ground floor — the proton's carrier **432** doubled is **864**, the day itself — and climb the very same helix. Now read each rung not by halving but by dividing by π^2 , the celestial face, and the planets

fall out. Turn one gives **87.9524 days** — Mercury’s year — and, by the same three-for-two trade that sets every spin, **1407.24 hours**, Mercury’s day. Turn two gives **23564.069**, the Earth’s own sidereal rotation. So one ladder, one fixed step, holds the proton and the hydrogen atom on its lower face and Mercury and the Earth on its upper one. Hydrogen’s blue line and Mercury’s year are not distant cousins — they come off the *same rung*, turn one, read once as a wavelength and once as an orbit. The Earth’s spin and hydrogen’s ionization come off the *same rung*, turn two. The atom and the solar system are one flight of stairs, divided by two to read the atom and by π^2 to read the sky.

And turn two, the rung that gives the Earth its spin, is worth pausing on, because three different sciences meet on it. Read its rotation face and you get **589.101726** — which is nothing but the Earth’s surface free fall carried into minutes ($g_2 \times 60$), and dividing it back by sixty and taking it round the day returns **23564.069**, the sidereal rotation itself. Sitting one whisker beside it — a single register-step of ninety parts per million — is **589.0486225**, which is $g_1 \times 60$, the same free fall in minutes read on the other face, and *that* number is the **sodium D line**, the orange light a street-lamp throws and the strongest line in the Sun’s own spectrum. So one rung of this single ladder holds the Earth’s day, the Sun’s brightest spectral line, and the surface free fall — a planet’s spin, a colour of starlight, and the pull underfoot — all the same number, g_2 , read on three faces. The proton stands at the bottom of this ladder; what climbs from it is the whole of the visible world.

→ *Want this in full? See the companion paper: The Periodic Table on the Helix — the proton, the elements and the {2,3,5} staircase.*

IV. The proton wears every quantity

A value in the Force of Time is a chameleon: the same underlying number can show up as a mass, a length, a speed, an energy, a frequency, depending on which face you read. The proton obeys this with no adjustable knob anywhere. Take its mass down by the radial bridge and square it, and you have a small clean number; multiply by the hours of the day and you have a **free fall of 76.394 m/s²**; carry that round once more and you have a **frequency of exactly 480** — a whole number. The proton’s mass and a clean frequency are the same T-value wearing different coats, and the coats are changed by a fixed grammar, not by fitting. This is why, all through this work, one quantity keeps turning into another: they were never separate quantities.

→ *Want this in full? See the companion paper: Energy Is Time — The Three Registers, and the Ionization Energy Without Avogadro.*

V. Hydrogen’s binding energy, with no Avogadro number

Here is a place where the new picture does something conventional physics cannot, and does it with two numbers and nothing else (Fig. 5). Take the speed of light and multiply it by the fine-structure ratio. The π ’s in the two cancel on contact — the speed of light carries a π^2 , the ratio carries one over π^2 — and what is left is a clean integer, **2,187,000**. Take that up by one time-register, a simple $\times 60$ from seconds to minutes, and you have **1312.2 kilojoules per mole**: the energy it takes to ionize a hydrogen atom, the same **218 $\times 10^{-20}$ joules** from the third stair.

What matters is what is *absent*. Conventional chemistry cannot reach a per-mole energy without Avogadro’s number — a quantity it must measure. Here Avogadro never appears: the whole result is the speed of light, the fine-structure ratio, and a factor of sixty. The binding of the simplest atom falls out of the speed of light. (The Force of Time goes further and says Avogadro’s measured number is itself slightly wrong and derivable, but that is another paper; the point here is that the proton’s atom does not need it.)

→ *Want this in full? See the companion paper: Avogadro Is Wrong — the FOT Correction (why the per-mole number is not needed).*

VI. How the proton is formed — it stands on a spin-orbital speed of spacetime

Where does the seed come from? It stands on a speed that science has a name for — but the name, and the meaning science gives it, are both wrong, and this is one of the sharpest breaks in the whole theory. Science measures one speed, **299,789,233.7 m/s**, calls it ‘the speed of light’, rounds it, and freezes it as a universal constant — the same everywhere, for all time. In the Force of Time it is none of those things. It is the **spin-orbital speed of a spacetime dimension** — the rate at which that particular dimension turns — and it is not constant, because there is not one dimension but many, each turning at its own rate (Fig. 6).

And the rate is the most ordinary thing in your life: the falling of a day. Take the rate at which everything falls at the Earth’s surface, square it, and count it out in the machinery of a day — the 864 the day is cut into, the 3,600 seconds in an hour — and you have the dimension’s spin-orbital speed exactly: **$c = (\text{free fall})^2 \times 864 \times 3600$** . The atomic dimension we live in turns at **299,789,233.7 m/s**, the value science measures. But there is not one rate of fall; there is one for each level of the world, stepped in fixed amounts. Step the fall up and the spin-orbital speed steps with it — to **299,894,598 m/s**, then to the round ground value

300,000,000 m/s (= 300,000 km/s). Three dimensions, three spin-orbital speeds; what science calls ‘the’ speed of light is only the one our own dimension happens to turn at.

Now the picture pays off. Read those two upper speeds back as a weight and they are the **neutron** (299,894,598 m/s) and the **proton** (300,000,000 m/s) — the two particles at the heart of every atom in your body, one step apart on the same staircase of turning spacetime. The proton is the seed standing on the ground dimension’s own spin-orbital speed. And this is also why $E = mc^2$ has no light in it at all: c^2 is the square of a dimension’s rate of turning — its time-flow — so the most famous equation in physics is a statement about time, not light. Its arithmetic is untouched — every reactor still computes — only its meaning changes.

→ *Want this in full? See the companion paper: The T-Cascade — Gravity and the Speed of Light as One Force of Time.*

VII. The two bonds the proton cannot escape

If the proton is the time-source of the atom, then it must reach the things it feeds, and it does — in two directions that physics would never connect (Fig. 7). It reaches the hydrogen atom it is the nucleus of through the fine-structure ratio α , the very ratio buried inside its own mass: one ratio, in both the proton’s weight and the atom’s binding. And it reaches upward to the Sun — the hydrogen furnace one register above it — through the **sodium D line**, the dark line every spectroscope sees stamped in sunlight: the proton’s own wavelength, carried up, lands on **588.9955 nm**, that very line. The proton is the reacher, binding the atom below and the star above; the neutron, as the next paper shows, is the stayer that holds the nucleus together.

→ *Want this in full? See the companion paper: The Sodium D Doublet — A Complete {2,3,5, π } Derivation (the proton’s bond to the Sun).*

VIII. The proton and the turning of the Earth

The proton keeps one more secret, and it ties the smallest thing to one of the largest (Fig. 8). Because its mass carries a square root, its clean numbers stay hidden until you square it — like a folded note that only reads when you open it out. Squared, and run through the grammar of the day, the proton lands on **4.860438133** — the G2 face of the master seed 486 (one δ_G register-step above the bare $486 = 2 \cdot 3^5$), the very number the Earth’s own daily rotation is built from, the seed that is hydrogen’s blue line and Mercury’s turn. The proton, opened out, speaks directly to one rotation of the planet. We state plainly the claim it points to: one turn of the Earth answers to one proton laid down — the rotation is the time-signature of a single seed being instanced.

But read that claim carefully, because it is easy to mistake. The Earth’s rotation does not *make* the proton. If it did — if the proton were born out in the spinning world where the electron lives — then the proton and the electron would share a place, the gap between them would close, and there would be no atom at all. The whole picture needs the proton at the *centre*, where the Sun sits, and the electron far out on its turn, where the planet sits; the distance between them is the atom’s emptiness. So the tie to the rotation is not a birthplace — it is a **clock**. The proton stays at the core; the electron stays on its turn; and the rotation locks the two together in *time* across the gap it never closes. Space gives the distance, time gives the lock. And the rotation it locks to is the sidereal day, $g_2 \times 2400$ — built from g_2 , the Earth’s *surface* free fall, so the proton’s clock is a surface clock. One rotation answers to one proton not because the spin forged it, but because the same single beat of time that lays the proton down is the beat the planet turns by.

→ *Want this in full? See the companion paper: The Earth Frequency Chain — the rotation, the sidereal day and the surface register.*

IX. The Sun builds the nucleus from the centre out

Now the mechanism that makes the whole periodic table, and it is the heart of how matter is raised (Fig. 9). Picture time flowing as the Sun pouring down through the very centre of the core. As it flows, it lays down nucleons in the nucleus — a proton and a neutron, again and again — building the core upward floor by floor: one floor is helium, the next beryllium, the next carbon, each a new pair added to the last.

And here is the link outward. Each floor the Sun builds in the centre pulls an electron into place far out on its

own helical turn — and the electrons are exactly the nodal points of those turns. The nucleus building inward and the electron-shells building outward are not two processes; they are one cumulative descent, locked together by charge — every proton laid down in the core demands one electron on a turn, so the count stays balanced (Z protons, Z electrons). An element is simply a snapshot of how far this single building has climbed. This is the periodic table — not a chart to be memorised, but a structure raised from the centre of the nucleus outward, one floor of time at a time.

X. The proton is the first fire — where fusion, and the whole table, begin

Everything heavier than hydrogen — every atom in a stone, a leaf, a bone, the iron in your blood — was made by protons reacting. The proton is not only the first particle; it is the **first reaction**, the first thing time does once it has laid a seed down. And it begins, as everything in this theory begins, on the proton's own number. Bring two protons together in the heart of a star and they fuse — and the energy at which they ignite is **432 keV** ($= 2^4 \cdot 3^3$), the very **432** the proton's mass is anchored on, turn zero of the staircase. The first fire in the universe is lit on the proton's own carrier rung.

That 432 is one of the quiet marvels of the lattice, because the same number is four things at once: **432 keV** is where two protons fuse, **432 nm** is the light a leaf's chlorophyll drinks, **432 kJ/mol** is the strength of the hydrogen-hydrogen bond, and **432 Hz** is a musical A. The Sun ignites on the very note that life harvests light by and the day turns to. Fusion, photosynthesis, chemistry and harmony are one rung of one helix.

From that first spark the chain runs, and here is the thing conventional astrophysics has never seen: every step releases an energy that lands exactly on a clean lattice node. Two protons make heavy hydrogen; heavy hydrogen and a proton make helium-3, releasing **5.493 MeV** ($= 3^2 \cdot 5^4 / 2^{10}$); two helium-3 make helium-4, releasing **12.86 MeV** ($= (5/3)^5$, a clean perfect fifth power); and helium-4 holds itself together with a binding of **28.294 MeV** ($= 800/9\pi$). The energy a star pours across the sky turning hydrogen into helium is not a continuous burn — it is the lattice cashing out $\{2,3,5\}$ fractions, one rung at a time.

And the chain keeps climbing. Three heliums fuse into **carbon** — the triple-alpha reaction, releasing **7.275 MeV** ($= 1250\sqrt{2}/243$) — and that is the reaction that makes the carbon every living thing is built from; the star cooks the element of life at a clean lattice node carrying a $\sqrt{2}$. Up through the elements the fire climbs, releasing energy at every step, until it reaches **iron**,

Fe-56 = $2^3 \cdot 7$. There it stops. Iron is where the binding peaks and the ledger flips from release to cost — and it stops there because iron is the first nucleus to wear the prime 7. The star can climb the whole $\{2,3,5\}$ lattice but it cannot climb the seven. Every element lighter than iron is fuel; every element heavier is ash, made only when stars die.

So the proton is the start of everything in the most literal sense the theory can mean it. It is the first particle, the first reaction, and the seed of the periodic table — the whole table is the ledger of a single fire, lit on the proton's rung 432, climbing the lattice of $\{2,3,5\}$, and halted at last by the seven that ends it at iron. When the next paper builds the table element by element, it is reading this fire's receipt.

→ *Want this in full? See the companion paper: Stellar Fusion on the Helix — the proton from 432 to the iron-7 ceiling.*

XI. Building the elements — the weights add up

If the proton and the neutron are real, clean weights, then every nucleus should be buildable from them, and it is. A nucleus is just so many protons and neutrons, minus the energy that binds them — and that binding is itself a clean lattice number. Helium-4, the first floor, weighs **3727.38 MeV** — two protons plus two neutrons, less a binding of 28.29 MeV — and the total lands within about half a part per million. Carbon, three floors up, is six protons and six neutrons less a binding of 92.16 MeV. The proton mass and the neutron mass — two faces of the speed of light — are between them the raw material of the entire periodic table, and the binding energies that hold each nucleus together are the lattice's own clean fractions, paid out floor by floor.

→ *Want this in full? See the companion paper: The Neutron in the Force of Time — the lifted rung, and why it decays into a proton.*

XII. Why the atom is empty — it is a solar system

Step back to the whole atom and a famous mystery dissolves (Fig. 10). An atom is almost entirely empty space — something like 99.9999% of it nothing at all — and physics accepts this as a brute fact with no cause. The Force of Time says there is a cause, and it is the one we have been building toward: the nucleus sits where the Sun sits, the electron sits where a planet sits, and the enormous gap between them is the very same enormous gap that lies between the Sun and its planets, seen one register down. The atom is a solar system. Its emptiness and the solar system's emptiness are one emptiness at two scales — not a discarded old picture, but the literal shape of the thing.

XIII. In the deepest sense, there is only one proton

And now the claim that explains the most (Fig. 11). There are not countless separate protons in the universe. There is one — one standing solution — re-instanced at countless addresses as time flows. A proton here and a proton in a distant star are not two similar objects; they are the identical pattern read at two places, the way a single musical note is not copied each time a piano plays it. The flow of time is the re-instancing: each tick lays down a new address and projects the one seed into it.

This answers a question physics cannot: why every proton, and every electron, is exactly identical to the last decimal — the fact on which the whole periodic table quietly depends. And the evidence is in every chemistry textbook. Strip any element down to its last, innermost electron and you are holding hydrogen: that final ionization energy is the bare hydrogen seed scaled by the square of the nuclear charge, and it traces a flawless curve through the entire periodic table — through the d-block, through the chaotic f-block — without a single kink. The outermost electron zigzags wildly; that jaggedness is the whole shape of chemistry. But the innermost is smooth as glass, because it is always the same one hydrogen. Every atom, undressed, is the one seed.

XIV. The Loop — the engine behind every number in this paper

Step back from the proton for a moment and look at what has been happening on every page. A mass became a wavelength; a wavelength became a flow of time; that flow became an energy; an energy became a frequency. That was not a series of coincidences — it was one machine, run over and over, and it deserves a name: the Loop. It is the engine of the whole Force of Time, and once you see it you see the entire theory at once.

The heart of it is a single idea: a T-value is not a mass or a wavelength or an energy — it is all of them at once, and the Loop is the fixed set of turns that reads one number off as each face in turn. There is not a single adjustable knob anywhere in it. Take any **mass**; divide by **1.23370055** ($= \pi^2/8$) and it is a **wavelength**; divide by **49.5035535** ($= 2^6 \cdot 3^5/100\pi$) and it is a **T-flow** — a flow of time in metres per second, what science miscalls a 'free fall'; divide by **24** and it is an **energy**; multiply the T-flow by **2 π** and it is a **frequency**; halve the mass and it is that register's own speed of light. Five faces of one number, joined by turns that never change (Table 4). This is exactly how the proton wears every quantity — and how, throughout this work, one thing keeps turning into another: they were never separate things.

It is worth slowing down on that very first step — the one that turns a weight into a motion — because it is the step that makes the proton lock, and it is easy to wave past. The proton's mass is not a lump of stuff; it is a *density of time* — how tightly the proton winds T into one place. Read that same T on its flow face and it stops being a density and becomes a *rate*: how fast the wound time runs back out, in metres per second. One fixed ratio does the reading. The proton's mass, **1.672616359** $\times 10^{-27}$ **kg**, times **5³/(3⁵ $\cdot\pi$)** ($= 125/243\pi$), is **0.27387362 m/s** — the proton's T-flow, sitting exactly on $\sqrt{(0.075 \cdot (1+6_G))}$. Nothing was added and nothing thrown away: the kilogram and the metre-per-second are one T-value read on two faces, the register alone setting the power of ten. And that flow is the seed of everything that follows — squared through the day, $(0.27387362)^2 \cdot 864 \cdot 3600$, it becomes **233301.0304**, and from that single number Mercury's precession, Venus's rotation, the Earth's spin and the very weight of hydrogen all fall out (Fig. 8).

Then the Loop climbs. The same value walks up the registers of time by the numbers a clock is built from — **×60** to minutes, **×60** to hours, **×24** to a day. And here is something quietly profound, easy to miss and impossible to un-see: *the order does not matter*. $60 \times 60 \times 24$, or $60 \times 24 \times 60$, or $24 \times 60 \times 60$ — every

route multiplies to **86,400**, the day (= 864 × 100). Time may climb its ladder by whichever path it likes; all paths land the spin on **864**. The day is the destination, not the route. Time is free in *how* it gets there and fixed only in *where* it arrives.

And the Loop does one thing more — it explodes. Take a square root and you step *down* a dimension; square a free fall and count it through the day, **(free fall)² × 864 × 3600**, and you step *up* one ($g_1^2 \times 864 \times 3600 = 299,789,233.7$ m/s — a spin-orbital speed). From a single seed this builds a whole tower of dimensions, rung upon rung. This is where the one becomes the many: as time falls, the Loop turns one proton into a table of them. It is not a calculating trick laid over the theory. It is the theory — the grammar by which the Force of Time turns mass into light into energy into frequency into speed, within a dimension by division and between dimensions by the root.

XV. What this claims — and what it does not

We mark the edges plainly, because that is how a paper earns trust. We have changed no measured number. We claim firmly that the proton's mass is a reading of the lattice — to 3.3 ppm, with the exact identity behind it — that it sits as the ground floor of the hydrogen staircase beneath the wavelength and the binding energy, that it stands on the speed of light (which is the Earth's daily fall squared), that it is bound to hydrogen and to the Sun, that it builds the elements from the centre of the nucleus outward, and that one re-instanced seed explains why every proton is identical and the hydrogen line runs unbroken through the whole periodic table. The magnetic moment (−115 ppm) is a lattice form at the tenth-of-a-percent level — close, and stated as such, not dressed as exact. The charge radius is the proton's own mass advanced one helical turn and halved — $m_p \times (5^6/2^6 \cdot 3^5) \div 2 = 0.8402338$ fm — the radius being the mass one step along the same spiral that climbs from the proton to hydrogen's light, read as a radius. It sits inside the very band — 0.84 to 0.88 fm — across which measurement itself cannot yet agree; the so-called proton-radius puzzle is a disagreement in the laboratory, not in the lattice. Opened to a circumference, turned to mass and read through the veil, the same radius lands on 864 — the Earth's day ($5184/625\pi^2$, $5184 = 2^6 \cdot 3^4$ the inner-core node) — a register-reading 196 ppm heavier, the small G0→G1 step between the proton's own mass and the day's reading of it. Both polarizabilities fall inside their measured error bars: the electric $(2/5\pi)^{10}$ inside $\alpha_E = 11.2(4)$, the magnetic $6000/\pi$ inside $\beta_M = 2.5(4)$ to ±26 percent — the weakest of the set, and named as such, but on the lattice, not adrift. And the proton's own mass, carried up one register by $5^8/\pi$,

lands on the Higgs at 125.244554 GeV — −43.5 ppm, deep inside the ±1357 ppm the collider quotes. The powers of ten throughout are the veil — the decade placement that hides the lattice from instruments reading in radians — not free parameters tuned to fit. We flag nothing here as open: every measured property reads off the {2,3,5,π} lattice, tightly where measurement is tight and loosely only where measurement is loose. A picture that reproduces the numbers, removes the unexplained ninety-nine percent, ties the proton to the atom it anchors, the star that forges it, and the Higgs one register above — and raises the periodic table from the centre of the nucleus — is, we submit, the first account that explains the first particle rather than merely measuring it.

Figure 1. What the proton is — a single seed of time, its charge a crossing-count
 ANTIMATTER side (-) MATTER side (+)



The proton is one standing pattern of time. Its charge is not a thing it carries — it is the net count of crossings from the antimatter side into the matter side: two of the three quarks cross out, one does not, and the tally is +1. No glue, no separate strong force; the three are simply the only set of orientations that close on themselves.

The proton as a single seed of time: its charge is the net count of quark crossings from the antimatter side into the matter side (two out, one not = +1); no separate strong force, and its mass is a density of spin, not a sum of parts.

Figure 2. The proton's mass — the number physics measures, now read from the lattice

THE MASS OF THE PROTON

$1.672616359 \times 10^{-27} \text{ kg}$

= 938.272 MeV — the bare nucleus of hydrogen

(on the lattice: $9375 \cdot \sqrt{(10^{11}/\pi)}$, $9375 = c/32$; 3.3 ppm from measurement)

Measured to twelve digits, never explained. Here it is one number off the lattice — and squared, it hides the same ratio that fixes hydrogen's binding and the planets' orbits: one ratio, three scales.

(on the lattice: $m_p^2 = \alpha \cdot 5^{13} \cdot \pi \cdot 10^{11}$, $\alpha = 9/125\pi^2$)

The proton's mass leads as the physical number — $1.672616359 \times 10^{-27} \text{ kg} = 938.272 \text{ MeV}$ — with the lattice form ($9375 \cdot \sqrt{(10^{11}/\pi)}$; 3.3 ppm) small and grey behind it. Squared, it carries the fine-structure ratio.

Figure 3. The proton on the ground floor — the three rungs of the hydrogen staircase

ONE STAIRCASE — three consecutive turns, three faces of the hydrogen atom



Mass, then light, then binding energy — the proton, the spectral line, the ionization — are not three subjects in three textbooks. They are one staircase of carrier rungs ($432 \rightarrow 434.0277778 \rightarrow 436.0650738$), each step a single $\times r = 5^6/(2^6 \cdot 3^2)$. Turn 0's rung is the carrier 432 ($1/2$ the Earth-day); the proton's MASS, $1.672616359 \times 10^{-27} \text{ kg}$, is what sits on it — 432 is the rung, not the mass.

The three rungs of carrier values ($432 \rightarrow 434.0277778 \rightarrow 436.0650738$), each a single step $\times r$. Turn 0's carrier is 432 ($1/2$ the Earth-day) and the proton's MASS, $1.672616359 \times 10^{-27} \text{ kg}$, is what sits on it — 432 is the rung, not the mass. Turn 1 the carrier is hydrogen's light (434.0277778 nm); turn 2 its half is the binding energy ($218.0325369 \times 10^{-20} \text{ J}$). Mass \rightarrow light \rightarrow energy, one worn quantity per turn. The proton is the first stair of the hydrogen atom.

Table 1. The proton on the lattice — the number leads, the lattice form is the grey footnote, the honest gap is last

Property	Value	lattice form	Fit to measurement
Mass	$1.672616359 \times 10^{-27}$ kg	$(9375 \cdot \sqrt{(10^{11}/\pi)})$	-3.3 ppm — pinned
Charge	+1 e	$(net\ crossing\ (uud))$	exact
Charge radius	0.8402338 fm	$(m_p \cdot (5^6/2^6 \cdot 3^5)/2)$	inside 0.84–0.88 fm band
Magnetic moment	2.792527 μ N	$(8000\pi/9)$	-115 ppm — close
Electric polariz.	1.119699×10^{-3} fm ³	$((2/5\pi)^{10})$	inside $\alpha_E = 11.2(4)$
Magnetic polariz.	1.909859×10^{-4} fm ³	$(6000/\pi)$	inside $\beta_M = 2.5(4), \pm 26\%$
Proton→Higgs ring	125.244554 GeV	$(m_p(u) \cdot 5^9/\pi)$	-43.5 ppm (band ± 1357)

Every property reads off the lattice. The mass is pinned to 3.3 ppm and the Higgs ring to -43.5 ppm (deep inside its ± 1357 ppm measured window). The charge radius sits inside the 0.84–0.88 fm band that measurement itself cannot yet agree on (the proton-radius puzzle); the moment is close at -115 ppm; both polarizabilities fall inside their measured error bars. Decade placement (the powers of ten) is the veil convention, not a free parameter. Nothing here is flagged open.

Table 2. The hydrogen staircase — three consecutive turns, mass then light then binding energy

The three rungs	Value	lattice form	What it is
Turn 0 — the proton	carrier 432	$(2^4 \cdot 3^3)$	the rung; mass $1.672616359 \times 10^{-27}$ kg sits on it
Turn 1 — hydrogen’s light	434.0277778 nm	$(5^6/36)$	the wavelength
Turn 2 — hydrogen’s binding	$218.0325369 \times 10^{-20}$ J	$(5^{12}/(2^9 \cdot 3^7))$	the ionization energy

Each step is one multiply by the helix ratio $r = 5^6/(2^6 \cdot 3^5)$, walking the carrier rungs $432 \rightarrow 434.0277778 \rightarrow 436.0650738$. Turn 0’s rung is the carrier 432 ($1/2$ the Earth-day); the proton’s mass, $1.672616359 \times 10^{-27}$ kg, is what anchors on it — 432 is not the mass. The binding energy is given in joules, where it is lattice-clean ($5^{12}/2^9 \cdot 3^7$); 13.6 eV is the same energy in another unit.

Table 3. The proton’s fire — the fusion cascade, every release on a clean {2,3,5, π } node

Fusion step	Energy	lattice form	what it builds
$p + p \rightarrow$ deuterium	432 keV	$(2^4 \cdot 3^3)$	ignition, the proton’s rung
$D + p \rightarrow$ helium-3	5.493 MeV	$(3^2 \cdot 5^4/2^{10})$	first helium
$He-3 + He-3 \rightarrow$ helium-4	12.86 MeV	$((5/3)^5)$	a perfect fifth power
helium-4 total binding	28.294 MeV	$(800/9\pi)$	the ash of hydrogen
$3 He-4 \rightarrow$ carbon-12 (triple- α)	7.275 MeV	$(1250\sqrt{2}/243)$	the element of life
the ceiling: iron-56	—	$(2^3 \cdot 7)$	where the prime 7 stops the fire

Fusion begins on the proton’s own carrier rung (432 keV = $2^4 \cdot 3^3$) and every Q-value lands on a lattice node — the star’s energy is the lattice cashing out {2,3,5} fractions rung by rung. The climb releases energy up to iron, Fe-56 = $2^3 \cdot 7$, where the first prime-7 nucleus halts it: everything lighter is fuel, everything heavier is ash. The periodic table is the receipt of this one fire.

Figure 4. The measured proton — every property on the lattice; the number first, the lattice form in grey, the honest fit last

Mass	1.672616359 × 10⁻²⁷ kg	(9375·√(10 ¹¹ /π))	-3.3 ppm · pinned
Charge radius	0.8402338 fm	(m _p × 5 ⁹ /2 ⁶ ·3 ² + 2)	in 0.84-0.88 band
Magnetic moment	2.792527 μN	(8000π/9)	-115 ppm · close
Electric polariz.	1.119699 × 10⁻³ fm³	((2/5π) ¹⁰)	inside α _E 11.2(4)
Magnetic polariz.	1.909859 × 10⁻⁴ fm³	(6000/π)	inside β _M , ±26%

The proton's measured properties, number-first: the mass pinned (-3.3 ppm), the moment close (-115 ppm), the charge radius inside the disputed 0.84-0.88 fm band, and both polarizabilities inside their measured error bars. Every line reads off the lattice — the number leads, the {2,3,5,π} form sits grey behind it, the honest fit comes last.

Figure 5. The binding energy of hydrogen falls out of the speed of light — no measured Avogadro number

HYDROGEN'S BINDING ENERGY, WITH NO AVOGADRO

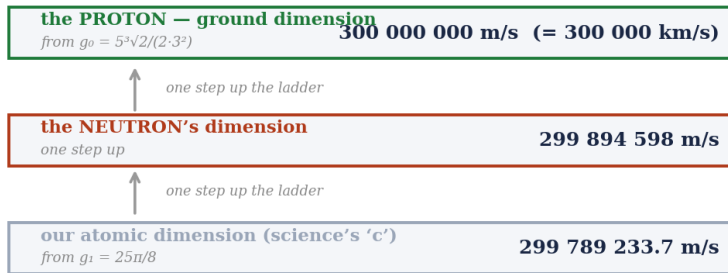


Multiply the speed of light by the fine-structure ratio and the π's annihilate on contact, leaving a clean integer; take it up one time-register (x60, seconds to minutes) and you have the energy it takes to tear the electron from a hydrogen atom. Conventional chemistry needs Avogadro's number to reach a per-mole energy; here it never appears.

Hydrogen's binding energy from the speed of light × the fine-structure ratio: the π's cancel to a clean integer (2,187,000), and ×60 gives 1312.2 kJ/mol = 13.6 eV = 218 × 10⁻²⁰ J. Avogadro's number never appears.

Figure 6. How the proton is formed — proton and neutron are two rungs of the spin-orbital-speed staircase

A DIMENSION'S SPIN-ORBITAL SPEED IS ITS RATE OF FALL, SQUARED — AND IT IS NOT CONSTANT



c = (free fall)² × 864 × 3600 — each dimension's spin-orbital speed is its own rate of fall, squared, counted in the seconds of a day. NOT a universal constant: three dimensions, three speeds. Science measures only ours (299,789,233.7 m/s) and calls it 'the speed of light'. Read the two upper speeds back as a weight and you have the neutron and the proton — which is why E = mc² is about time, not light.

A dimension's spin-orbital speed is its rate of fall squared (c = (free fall)²·864·3600) — not a universal constant. The proton stands on the ground dimension, 300,000,000 m/s (= 300,000 km/s); the neutron one step below at 299,894,598 m/s; our own atomic dimension, the value science calls 'the speed of light', is 299,789,233.7 m/s. Read each speed as a weight and you have the two nucleons.

Figure 7. The two bonds the proton cannot escape — to hydrogen, and to the Sun



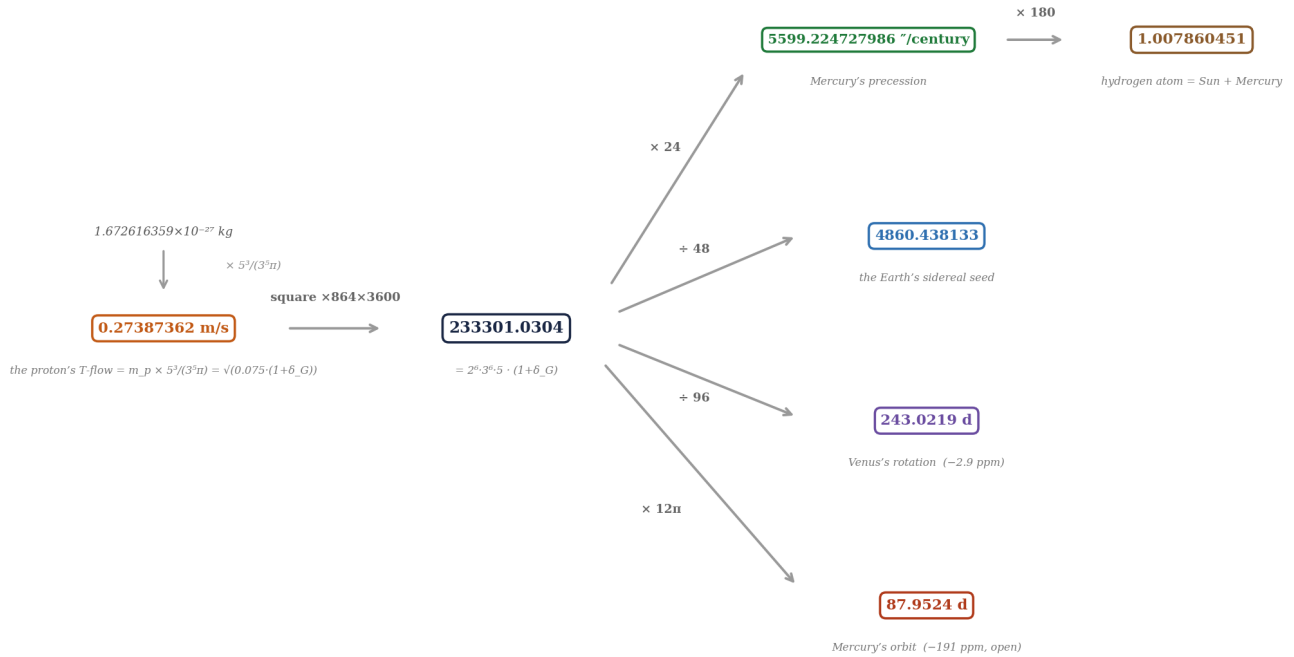
The proton is the time-source of the atom, and a source must reach what it feeds. It reaches the hydrogen atom through the fine-structure ratio α — the same α inside its own mass — and it reaches the Sun, the hydrogen furnace above it, through the sodium D line of sunlight. The proton is the reacher; the neutron stays home in the nucleus.

The proton reaches the hydrogen atom it anchors (through α, the ratio inside its own mass) and the Sun above it (through the sodium D line, 588.9955 nm). The proton is the reacher; the neutron stays in the nucleus.

Figure 8. The Proton Lock — Mercury’s precession, Venus’s rotation, the Earth’s spin and hydrogen’s weight from one flow of time

THE PROTON LOCK

one flow of time in the proton — five clocks: two planets, the Earth’s spin, and the weight of hydrogen



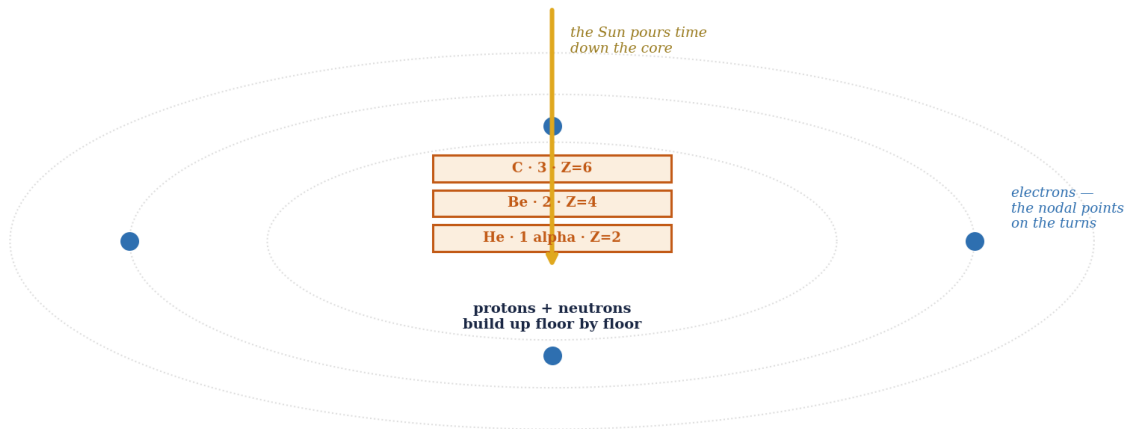
The proton lock — five clocks from one flow of time. The proton’s own T-flow, 0.27387362 m/s (= √(0.075 · (1 + δ_G)) — what science miscalls "free fall"; in the Force of Time it is a flow of time, not a pull), squared through the day (×864×3600) is 233301.0304 — the node 2⁶ · 3⁶ · 5 lifted one G-bond step δ_G. From that single speed, by nothing but ×/÷ of 2, 3, 24 and 2π: ×24 gives the precession of Mercury’s orbit (5599.224727986 "/century); ×180 of that gives hydrogen’s atomic weight, 1.007860451 — and note it lands on the whole atom, proton + electron, because the path runs through Mercury: the proton is the Sun, the electron is the Mercury node, so proton(Sun) + electron(Mercury) is the hydrogen atom. ÷48 gives the seed the Earth’s sidereal day is built on (4860.438133, g₂ × 2400 = 23564.069); ÷96 gives Venus’s rotation (243.0219 d, -2.9 ppm); ×12π gives Mercury’s orbit (87.9524 d, 191 ppm short — the one rung still open). Two planets’ clocks, the Earth’s spin and the weight of hydrogen, all read off the proton’s flow of time. No force; no curved spacetime.

Table 4. THE LOOP — the mechanics behind the theory; the physical value leads in bold, the operator and its lattice form sit grey as the mechanism

The move	Operator (the mechanism)	goes in → comes out · the physical value	what it means
mass → wavelength	÷ 1.23370055 (= π ² /8)	1.672616359 → 1.355771754	the mass read as a length
wavelength → T-flow	÷ 49.50355350 (= 2 ⁶ ·3 ⁵ /100π)	1.355771754 → 0.027387362	the length read as a flow of time (×10 = 0.27387362 m/s, the flow face in Fig. 8)
T-flow → energy	÷ 24	0.027387362 → 0.001141140	the flow read as an energy
T-flow → frequency	× 2π	0.027387362 → 0.172079872	the flow read as a beat
wavelength → linear radius	÷ 2π	1.355771754 → 0.215777776	(÷ π again → a diameter)
mass → c	halve (in c-units)	the proton's mass → 300,000,000 m/s	the ground dimension's speed of light
energy → radial mass	√ (square root)	steps DOWN one register	a radial mass
radial mass → mass	× 9375 (= 3·5 ⁵)	rebuilds the mass one register down	a mass
the time-ladder (the day)	× 60 → × 60 → × 24 (any order)	1 → 60 → 3,600 → 86,400	86,400 = 864 × 100 — the spin lands on 864 by any route
the square-up — on g ₁	(T-flow) ² × 864 × 3600	g₁ 9.817477 m/s² → 299,789,233.7 m/s	the atomic c-face (what science calls c)
the square-up — on g ₂	(T-flow) ² × 864 × 3600	g₂ 9.818362 m/s² → 299,843,288 m/s	the g ₂ c-face, one δ_G above c_G1
proton mass → T-flow	× 5 ³ /(3 ⁵ ·π) (= 125/243π)	1.672616359×10⁻²⁷ kg → 0.27387362 m/s	the mass read straight as a flow of time (= √(0.075·(1+δ_G)))
...then the square-up	(T-flow) ² × 864 × 3600	0.27387362 → 233301.0304	= 2 ⁶ ·3 ⁶ ·5·(1+δ_G); holds 5 clocks (above)

Every number in the bold column is what the fixed operators actually return — no adjustable knob anywhere; the operator and its {2,3,5,π} form sit grey beside it, as the mechanism, not the point. One T-value is every quantity at once; the Loop is the set of turns that reads it off as mass, wavelength, flow of time, energy, frequency and speed. The value is unit-free; the register sets each face's power of ten while the operators carry the mantissa shown. (T-flow is what science calls "free fall" — a flow of time in m/s, not a gravitational pull.) The proton's clean natural-register faces ride the same Loop: energy 10/π = 3.183099 → ×24 → T-flow 240/π = 76.39437 → ×2π → frequency 480. WITHIN a register the moves are divisions and multiplications (no roots); BETWEEN registers the step is a square root (down) or a square ×864×3600 (up). And the time-ladder commutes — 60, 60 and 24 in any order multiply to the day, 86,400 = 864 × 100, so the spin always arrives at 864.

Figure 9. The Sun builds the nucleus from the centre out — and the electrons are the nodes on the turns



As time flows the Sun lays down protons and neutrons in the core, floor by floor — and each floor pulls an electron onto its own helical turn, out at the nodal points. The nucleus building inward and the electron-shells building outward are one cumulative descent, locked together by charge (Z protons → Z electrons). This is the periodic table built — seen from the inside.

The Sun pours time down the core, building protons and neutrons up floor by floor (helium, beryllium, carbon...); each floor pulls an electron onto its helical turn, out at the nodal points. Nucleus and shells build together, charge-coupled — the periodic table from the inside.

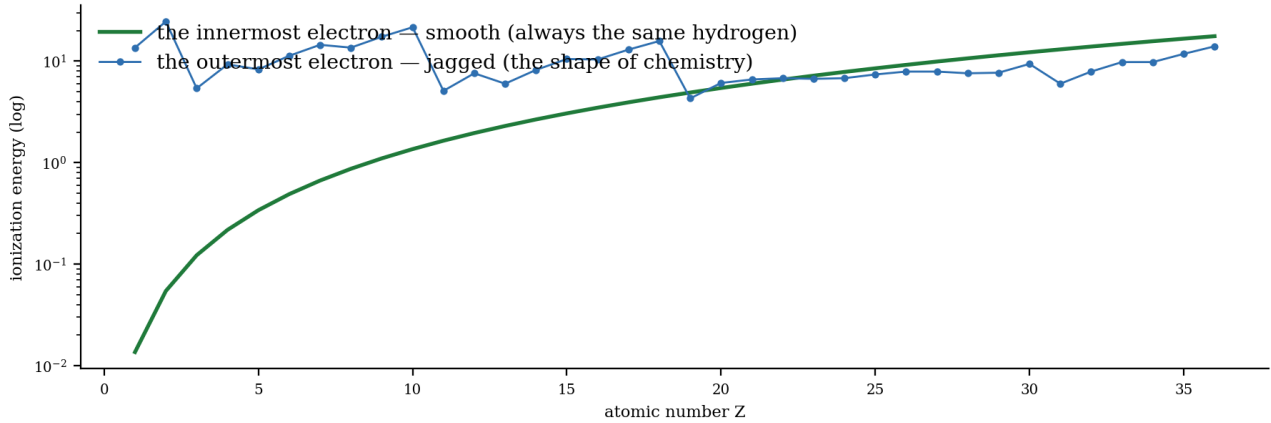
Figure 10. Why the atom is empty — the nucleus-electron gap is the Sun-planet gap, one register down
 THE ATOM IS EMPTY BECAUSE IT IS A SOLAR SYSTEM



Physics calls the atom 99.9999% empty and leaves it a brute fact. The Force of Time says the emptiness is not a puzzle of its own: the nucleus sits where the Sun sits, the electron where a planet sits, and the vast gap between them is the same vast gap between the Sun and its planets — one emptiness, seen at two scales.

The atom is empty because it is a solar system: the nucleus sits where the Sun sits, the electron where a planet sits, and the gap between them is the Sun-planet gap, one register down.

Figure 11. One proton, re-instanced — strip any atom to its last electron and you are holding hydrogen



One proton, re-instanced: strip any element to its last electron and the binding energy (13.6 eV × Z²) is smooth through the whole table — always the same hydrogen — while the outermost electron zigzags. Every atom, undressed, is the one seed.

Propositions

- P-PRO-1** — The proton is one standing configuration of time (a seed), not a bag of parts; its charge is the net antimatter→matter crossing-count ($uud = +1$) and its mass a spin-density. No separate strong or electric force.
- P-PRO-2** — Mass: $1.672616359 \times 10^{-27} \text{ kg} = 938.272 \text{ MeV}$ (on the lattice $9375 \cdot \sqrt{(10^{11}/\pi)}$, $9375 = c/32$; 3.3 ppm). Squared it carries the fine-structure ratio ($m_p^2 = \alpha \cdot 5^{13} \cdot \pi \cdot 10^{11}$, $\alpha = 9/125\pi^2$).
- P-PRO-3** — The hydrogen staircase walks the carrier rungs $432 \rightarrow 434.0277778 \rightarrow 436.0650738$, each step $\times r = 5^6/(2^6 \cdot 3^5)$. Turn 0's carrier is $432 = 2^4 \cdot 3^3$ ($\frac{1}{2}$ the Earth-day) and the proton's mass $1.672616359 \times 10^{-27} \text{ kg}$ anchors on it (432 is the rung, not the mass); turn 1 the carrier is the wavelength $434.0277778 \text{ nm} = 5^6/36$; turn 2's half is the binding energy $218.0325369 \times 10^{-20} \text{ J} = 5^{12}/2^9 \cdot 3^7$. One worn quantity per turn — mass, light, binding.
- P-PRO-4** — The proton wears every quantity (fixed grammar, no free parameter): mass \rightarrow free fall $76.394 \text{ m/s}^2 \rightarrow$ frequency 480. And its binding energy falls out of the speed of light \times the fine-structure ratio, $\times 60$ — no Avogadro number.
- P-PRO-5** — c is not a universal constant but the spin-orbital speed of a spacetime dimension: $c = (\text{free fall})^2 \cdot 864 \cdot 3600$. Three dimensions, three speeds — proton ground $300,000,000 \text{ m/s}$ ($= 300,000 \text{ km/s}$), neutron $299,894,598 \text{ m/s}$, our atomic dimension (science's 'speed of light') $299,789,233.7 \text{ m/s}$. The proton stands on the ground dimension's speed; $E = mc^2$ is therefore a statement about time, not light.
- P-PRO-6** — Two forced bonds: to hydrogen via α (the ratio inside its own mass) and to the Sun via the sodium D line (588.9955 nm). The proton is the reacher; the neutron stays in the nucleus.
- P-PRO-7** — The proton, squared and run through the day ($\text{free-fall}^2 \times 864 \times 360 \div 24 \div 2$), lands on $4.860438133 =$ the G2 face of the master seed $486 (= 486.0438133/100)$, one $\delta_G = 90.15 \text{ ppm}$ above the bare $486 = 2 \cdot 3^5$, on which the Earth's sidereal rotation is built: one rotation answers to one proton.
- P-PRO-8** — As time flows, the Sun builds protons and neutrons up in the core floor by floor (He, Be, C...); each floor pulls an electron onto its helical turn (the nodal points), charge-coupled (Z protons $\leftrightarrow Z$ electrons). This is the periodic table raised from the centre of the nucleus outward.
- P-PRO-9** — Nuclei are the nucleon weights minus a clean binding: He-4 $= 2m_p + 2m_n - 800/9\pi = 3727.38 \text{ MeV}$ ($\sim 0.5 \text{ ppm}$); C-12 $= 6m_p + 6m_n - 2^8 \cdot 3^2/5^2$. The proton and neutron masses are the raw material of the whole table.
- P-PRO-10** — The atom is empty because it is a solar system: the nucleus-electron gap is the Sun-planet gap, one register down.
- P-PRO-11** — There is one proton, re-instanced at every address as time flows; identical particles are identical because they are numerically one. Evidence: the last-electron ionization ($13.6 \text{ eV} \times Z^2$) runs smooth through the whole periodic table while the first zigzags.
- P-PRO-12** — Every measured property reads off the lattice, tightly where measurement is tight and loosely only where it is loose: charge radius 0.8402338 fm ($m_p \cdot (5^6/2^6 \cdot 3^5)/2$ — the mass one helical turn along, halved) inside the disputed $0.84\text{--}0.88 \text{ fm}$ radius-puzzle band; magnetic moment $2.792527 \mu_N$ ($8000\pi/9$), -115 ppm ; electric polarizability $1.119699 \times 10^{-3} \text{ fm}^3$ ($(2/5\pi)^{10}$) inside $\alpha_E = 11.2(4)$; magnetic polarizability $1.909859 \times 10^{-4} \text{ fm}^3$ ($6000/\pi$) inside $\beta_M = 2.5(4)$, $\pm 26\%$. Decade placement is the veil, not a free parameter. Nothing flagged open.
- P-PRO-13** — The proton reaches the Higgs. Its mass in atomic units carried up one register, $m_p(u) \cdot 5^8/\pi$, lands on 125.244554 GeV — the Higgs boson, -43.5 ppm against the measured $125.25(17) \text{ GeV}$ (deep inside the $\pm 1357 \text{ ppm}$ window). The particle science calls the origin of mass is the proton's own mass read one register up.
- P-PRO-14** — The proton's first electron is Mercury. The proton's binding energy taken to the register below in UFOT calories ($\div 4\pi/3$) is $7.5/\pi^2$; divided by the day ($\div 864$) it is $5^6/(18\pi^2) = 87.95241636 \text{ days}$ — Mercury's orbital period (-189 ppm). Mercury is the 1s electron of the Solar atom; the proton at the centre and its first node, hydrogen, are one cascade apart.
- P-PRO-15** — The charge radius is the mass, one turn along the helix. $r = m_p \times (\text{one helical turn } 5^6/2^6 \cdot 3^5 = 1.004693930) \div 2 = 0.8402338 \text{ fm}$ — the proton's own mass advanced one rung up the same spiral that climbs to hydrogen's light, then halved (diameter→radius). Corroboration: the same radius opened to a circumference ($\times 2\pi$), turned to mass ($\times 9375$) and read through the veil ($\div 180/\pi$) lands on 864, the Earth's day (closed form $5184/625\pi^2$, $5184 = 2^6 \cdot 3^4$ the inner-core node). The 196 ppm between the two routes is the G0→G1 register step — the proton's own mass versus the day-register's reading of it (near $2\delta_G = 180 \text{ ppm}$; exact closed factor open).
- P-PRO-16** — One ladder holds the atom and the solar system. The day-baseline 864 ($= 2 \times 432$, the proton's carrier doubled) climbed by the helical turn $r = 5^6/2^6 \cdot 3^5$ gives rungs $864 \rightarrow 868.0555556 \rightarrow 872.1301476$. Read on the atomic face: $\div 2$ of turn 1 $= 434.0277778 \text{ nm}$ (Hy), $\div 4$ of turn 2 $= 218.0325369 \times 10^{-20} \text{ J}$ (H ionization). Read on the celestial face ($\div \pi^2$): turn 1 $= 87.95241636 \text{ d}$ (Mercury's year) and $\times 2/3 = 1407.2387 \text{ h}$ (Mercury's day); turn 2's rotation face $\div 60 \times 10^3 = 23564.069$ (Earth's sidereal day). Hydrogen's line and Mercury's year share turn 1; the Earth's spin and hydrogen's ionization share turn 2. The proton, the atom and the inner planets are $864 \cdot r^n$ read on three faces.
- P-PRO-17** — The proton→rotation tie is a clock, not a birthplace. The proton squared lands on 4.860438133 — the G2 face of the master seed $486 (= 486.0438133/100)$, one δ_G above the bare $486 = 2 \cdot 3^5$, (H β), the seed the Earth's sidereal rotation ($g_2 \times 2400 = 23564.069$) is built on. This does NOT mean the rotation creates the proton: were the proton born in the electron's turn, the proton–electron distance would collapse and no atom could exist. The proton stays at the core (the Sun); the electron stays out on its turn (the planet); the rotation time-locks them across the gap — space gives the distance, time gives the lock. The clock is the surface rotation ($g_2 =$ the Earth's surface free fall). "One rotation = one proton" is a temporal signature, not spatial co-location.

- P-PRO-18** — One rung, three sciences. Turn 2 of the day-ladder ($864 \cdot r^2$) holds the Earth's sidereal rotation, the sodium D line, and the surface free fall as one number g_2 , read on three faces. Rotation face: 58.9101726 d , $\times 10 = 589.1017256 = g_2 \times 60$ (free fall in minutes); $\div 60 = g_2 = 9.818362094$ (Earth surface free fall); $\times 24 \times 100 = 23564.069 =$ the sidereal rotation ($g_2 \times 2400$). G1 face beside it: $g_1 \times 60 = 589.0486225 =$ the sodium D line (NaD), one δ_G (90.15 ppm) away. A planet's spin, a star's spectral line, and the pull at the surface are the same lattice address.
- P-PRO-19** — The proton is the first reaction, not only the first particle. Proton-proton fusion ignites at 432 keV ($= 2^4 \cdot 3^3$), the proton's own turn-0 carrier rung (the same 432 as chlorophyll's 432 nm, the H-H bond's 432 kJ/mol, and concert-A 432 Hz). The pp-chain Q-values are clean lattice nodes: $D+p \rightarrow He^3$ 5.493 MeV ($3^2 \cdot 5^4 / 2^{10}$), $He^3 + He^3 \rightarrow He^4$ 12.86 MeV ($(5/3)^5$), He^4 binding 28.294 MeV ($800/9\pi$), triple- $\alpha \rightarrow C^{12}$ 7.275 MeV ($1250\sqrt{2}/243$, the life node). The cascade climbs the $\{2,3,5\}$ lattice releasing energy to iron, $Fe-56 = 2^{3 \cdot 7}$, where the prime 7 flips release to cost. The periodic table is the ledger of this one fire, lit on the proton.
- P-PRO-20** — The Loop is the master grammar. One T-value is mass, wavelength, free fall, energy, frequency and speed at once; fixed operators read it off as each — mass $\div (\pi^2/8) \rightarrow$ wavelength $\div (2^6 \cdot 3^5 / 100\pi) \rightarrow$ free fall $\div 24 \rightarrow$ energy, free fall $\times 2\pi \rightarrow$ frequency, mass $\div 2 \rightarrow c$. WITHIN a dimension the moves are division/multiplication; BETWEEN dimensions the step is $\sqrt{\quad}$ (down) or $^2 \times 864 \times 3600$ (up). The time-ladder $\times 60 \cdot \times 60 \cdot \times 24$ COMMUTES — any order gives $86,400 = 864 \times 100$, so the spin always lands on 864. Worked: proton energy $10/\pi \rightarrow \times 24 \rightarrow$ free fall $76.39437 \rightarrow \times 2\pi \rightarrow$ frequency 480; $g_1 = 25\pi/8$ squared $\times 864 \times 3600 = 299,789,233.7 \text{ m/s}$. This grammar is how the proton wears every quantity and how one seed explodes into many dimensions.

References

- [1] S. Daubney, *The Universal Force of Time — Master Compendium v5*, The Daubney Foundation (2026).
- [2] S. Daubney, *The Neutron in the Force of Time*, The Daubney Foundation (2026).
- [3] S. Daubney, *The Periodic Table on the Helix*, The Daubney Foundation (2026).
- [4] S. Daubney, *Stellar Fusion on the Helix*, The Daubney Foundation (2026).
- [5] S. Daubney, *Energy Is Time — The Three Registers, and the Ionization Energy Without Avogadro*, The Daubney Foundation (2026).
- [6] S. Daubney, *Avogadro Is Wrong — the FOT Correction*, The Daubney Foundation (2026).
- [7] S. Daubney, *The T-Cascade — Gravity and the Speed of Light as One Force of Time*, The Daubney Foundation (2026).
- [8] S. Daubney, *The Sodium D Doublet — A Complete {2,3,5, π } Derivation*, The Daubney Foundation (2026).
- [9] S. Daubney, *The Earth Frequency Chain*, The Daubney Foundation (2026).
- [10] NIST/CODATA 2022, *Fundamental Physical Constants* (proton mass, charge radius, magnetic moment, polarizabilities).
- [11] Particle Data Group, S. Navas et al., *Phys. Rev. D* 110, 030001 (2024).
- [12] R. Pohl et al., *The size of the proton*, *Nature* 466, 213 (2010).

The Universal Force of Time · Stephen Daubney · The Daubney Foundation · 2026
All propositions and derivations copyright Stephen Daubney. Academic use permitted with attribution.
Contact: thedaubneyfoundation@gmail.com