THE UNIVERSAL FORCE OF TIME

The Faraday from the Bond Lattice

The bridge between one electron and a flask of them is not two measured constants multiplied together — it is one whole number, 103,680, written into the light of hydrogen, the beat of the heart and the rock beneath our feet

Stephen Daubney · The Daubney Foundation · 2026 · Rev 5

Tau (T) is the living fabric of time itself — the sole substance of which all physical reality is composed. It is generated by the Sun, as by every star for its own system, and flows outward in the form of the DNA double helix, creating matter, which it deposits at nodal points — the planets — and creating life. Every particle, force, wavelength and conscious experience is a structured configuration of T-flow. The conservation law $d\Sigma T = 0$ governs all change: T is never created or destroyed at a node, only redistributed.

THE BRIDGE, NUMBER FIRST

96.45061728395061728 4

the Faraday = $10^7 \div (3 \times 4 \times 6 \times 8 \times 10 \times 18) = 10^7 \div 103{,}680$ ($5^6/(2\cdot3^4)$)

13.6048896 eV ($2^8\cdot3^{12}/10^7$) × 96.450617283950617284 ($5^6/(2\cdot3^4)$) = **1312.2 kJ/mol** ($3^8/5$)

the charge e = F ÷ N_A = **1.6024597723** ($5^9\cdot\pi^3/(2^6\cdot3^{10})$) · F ÷ 60 = **3125/1944**, the Sun–Mercury gear

ABSTRACT

Every chemist crosses the same bridge a hundred times a day without looking down. On one side stands a single electron, its energy counted in electron-volts. On the other stands a flask holding a mole of them — six hundred thousand billion billion — its energy counted in kilojoules. The exchange rate between the two sides is called the Faraday. Science builds it by multiplying two measured numbers, the count of the mole and the charge on the electron, and calls the product a constant. This paper sets out the position of the Universal Force of Time: **the Faraday is not a product of two accidents and it is not a constant. It is one whole number, 103,680, written into the light of hydrogen.**

The work is built number first, with each lattice form placed behind its number. The bridge is

- **96.450617283950617284 ($10^7/(2^8\cdot3^4\cdot5) = 5^6/(2\cdot3^4)$)**, and it is fixed by the atom's own two faces: hydrogen's quantum, **13.6048896 eV ($2^8\cdot3^{12}/10^7$)**, carried across it, is **1312.2 kJ/mol ($3^8/5$)** exactly.

From that bridge the paper:

- shows that **103,680 is the product of the six pure notes of hydrogen** — the only Balmer levels, 3, 4, 6, 8, 10 and 18, whose wavelength is a pure {2,3,5} address — and that the list is complete;
- opens **three more doors to the same number**: the last pure denominator of the Balmer series, **$322^2 - 4$**; the human heart at **72 beats a minute, counted over one day**; and, one decade down, **10,368, the register seam beneath the crust**;
- derives the charge from the bridge and the mole, **e = 1.60245977231860897 ($5^9\cdot\pi^3/(2^6\cdot3^{10})$)** — the volt on hydrogen's G2 face; shows that **the volt is not a constant**, giving the family of five volts on the lattice, among them the **sodium volt, 1.6021708860 ($2^5\cdot3^8\cdot\pi^9/5^8$)**, which carries the sodium D2 line exactly and is the face current science reads; and shows that the π in the charge and the π in the mole cancel exactly — **two roads make a room**;
- shows that **the Faraday divided by sixty is 3125/1944, the mile-to-kilometre gear**, because a kilojoule per mole is energy counted in minutes;

- puts **Faraday's law of electrolysis** wholly on the lattice: one faraday frees **1.0077696 g of hydrogen ($2^2 \cdot 3^9/5^7$)**;
- and corrects the earlier versions, which quoted the conventional figures and closed the bridge onto them by a fitted step.

It closes with what stands, what is open, the conditions that would break it, and an appendix from which every number can be rebuilt. Every figure has been recomputed from its lattice form at forty digits, π carried as a symbol.

THE FORMULAS OF THIS PAPER, NUMBER FIRST

Every result in this paper is carried by one of the formulas below, each written with the number first and the lattice form in brackets behind. Each is worked in full in the part named beside it.

FORMULA F1 **THE BRIDGE** **Part One**
96.450617283950617284 kJ/mol per eV ($10^7/(2^8 \cdot 3^4 \cdot 5) = 5^6/(2 \cdot 3^4)$)

FORMULA F2 **THE ATOM'S TWO FACES FIX IT** **Part One**
13.6048896 eV ($2^8 \cdot 3^{12}/10^7$) x 96.450617283950617284 = 1312.2 kJ/mol ($3^8/5$)

FORMULA F3 **THE SIX PURE NOTES OF HYDROGEN** **Part Two**
3 x 4 x 6 x 8 x 10 x 18 = 103,680 ($2^8 \cdot 3^4 \cdot 5$) 10^7 / 103,680 = the bridge

FORMULA F4 **THE LAST PURE DENOMINATOR** **Part Three**
322^2 - 4 = 320 x 324 = 103,680

FORMULA F5 **THE HEART AND THE DAY** **Part Three**
72 beats a minute x 1440 minutes a day = 103,680 / 10 = 10,368, the register seam

FORMULA F6 **THE CHARGE FROM THE BRIDGE AND THE MOLE** **Part Four**
e = 96,450.617283950617 / 6.018910362061421470 x 10^23 = 1.602459772318608970 x 10^-19
($5^9 \cdot \pi^3/(2^6 \cdot 3^{10})$)

FORMULA F7 **TWO ROADS MAKE A ROOM** **Part Four**
e (π +3) x N_A (π -3) = F (π 0)

FORMULA F8 **THE BRIDGE COUNTED IN MINUTES** **Part Five**
96.450617283950617284 / 60 = 1.607510288065843621 (3125/1944 = $5^5/(2^3 \cdot 3^5)$)

FORMULA F9 **ELECTROLYSIS ON THE LATTICE** **Part Eight**
m = M . Q / (n . F) one faraday, n = 1: 1.0077696 g of hydrogen ($2^2 \cdot 3^9/5^7$)

FORMULA F10 **THE THIRD OF THE QUANTUM** **Part Nine**
1312.2 / 3 = 437.4 ($3^7/5$) the Sun's circumference, at its decade

THE TERMS THIS PAPER USES

An address. Every value in this framework is a product of powers of 2, 3, 5 and π, and nothing else. That product is the value's address. A number that needs any other prime is not on the lattice.

The π-degree. The degree of an address is the power of π it carries, and the degree says what kind of thing the value is. An even degree is a **room** — a state, a thing that sits; it pairs, like a pair of circles. An odd degree is a **road** — a transport, a thing that carries; it is the unpaired circle. A half degree is a **door** — a source, which squares to a whole address.

The free decade. Moving a value by a power of ten costs nothing on the lattice, because ten is two times five: the move shifts twos and fives together and changes nothing else. That is why 96.4506... and 96,450.6... are one address.

The day, 864. 864 is the day: 86,400 seconds in a day, written at its decade. It is the ground state of the DNA helix.

Why an energy can be carried across. An energy is a count of T, and the unit is a choice of clock: a joule is energy counted in seconds, a kilojoule per mole is the same energy counted in minutes, an electron-volt is that energy in the spin-orbit register. The bridge between electron-volts and kilojoules per mole is therefore a change of clock, and a change of clock is a lattice number.

The G-bond step. The G-bond step is the smallest structural step between adjacent faces of one value, **1.000090150603356201 ($5^{10}/(2^4 \cdot 3^9 \cdot \pi^3)$)** — the amount by which a G1 face is multiplied to give its G2 face.

The helical turn. A turn is one revolution of the DNA helix. The helical turn is the step from one revolution to the next, **1.004693930041152263 ($5^6/(2^6 \cdot 3^5)$)**: it carries the ground state 864 up to 868.0555…, the first turn.

The 612 step and the 703 step. The 612 step is helium divided by four, **1.000612842467910952 ($2^9 \cdot 3^5 \cdot \pi/5^8$)**. The 703 step is the span of hydrogen's ionisation faces end to end, **1.000703048319385397 ($800/(81 \cdot \pi^2)$)**. They are named here because the gap between the conventional bridge and the theory's is compared with them in Part Nine.

Free fall. Free fall is not the acceleration of a body pulled by a force. It is the correction that tops a rotation up to a full day, and on the Earth's register it is one value with the speed of light read in a different unit of time: **9.817477042468104 ($5^2 \cdot \pi/2^3$)**.

The radial mass. A radial mass is a mass spread over a radius rather than held at a point — the form in which a node's T is laid out around its centre. The mole, read through the helical turn, is one: a count of parts laid out around a node, not a heap.

How the numbers were checked. No value in this paper was found by a search, so no statistical test is needed to judge it. A p-value answers the question "how often would I see a landing this close if the thing were not real?"; a control is a set of decoys built to resemble the real values, run through the same search to find out how often chance alone lands; a standard deviation is the typical distance of a measurement from its mean, the spread of the ruler. Each matters when a result is found by looking. Every result here is an exact identity worked from its address, so it either closes to the last digit or it does not.

PART ONE — THE BRIDGE

Two worlds and one exchange rate

Hold a single electron in your mind and ask how much energy it takes to free it from a hydrogen atom. The answer is counted in electron-volts, a unit so small it belongs to the world of single atoms. Now ask a chemist the same question. The chemist never works with one atom, but with a mole of them, and measures the answer in kilojoules per mole. Between those two answers there has to be an exchange rate — one number that turns the atom's energy into the flask's.

The Universal Force of Time does not need to measure that number. **The atom carries both faces of its own quantum**, and the exchange rate is whatever joins them.

> **FORMULA F2 THE ATOM'S TWO FACES FIX THE BRIDGE**
>
> hydrogen's quantum, electron-volt face 13.6048896 ($2^8 \cdot 3^{12}/10^7$)
> hydrogen's quantum, kilojoule-per-mole face 1312.2 ($3^8/5$)
>
> 1312.2 / 13.6048896 = 96.450617283950617284 ($10^7/(2^8 \cdot 3^4 \cdot 5)$)
> and back: 13.6048896 x 96.450617283950617284 = 1312.2 exactly

Both faces are clean addresses — one a {2,3} rational at a decade, the other 3^8 over 5 — so their ratio is clean too. **The bridge is 96.450617283950617284, and it is 10^7 divided by a single whole number, 103,680 ($2^8 \cdot 3^4 \cdot 5$).** It carries no π. It is a room.

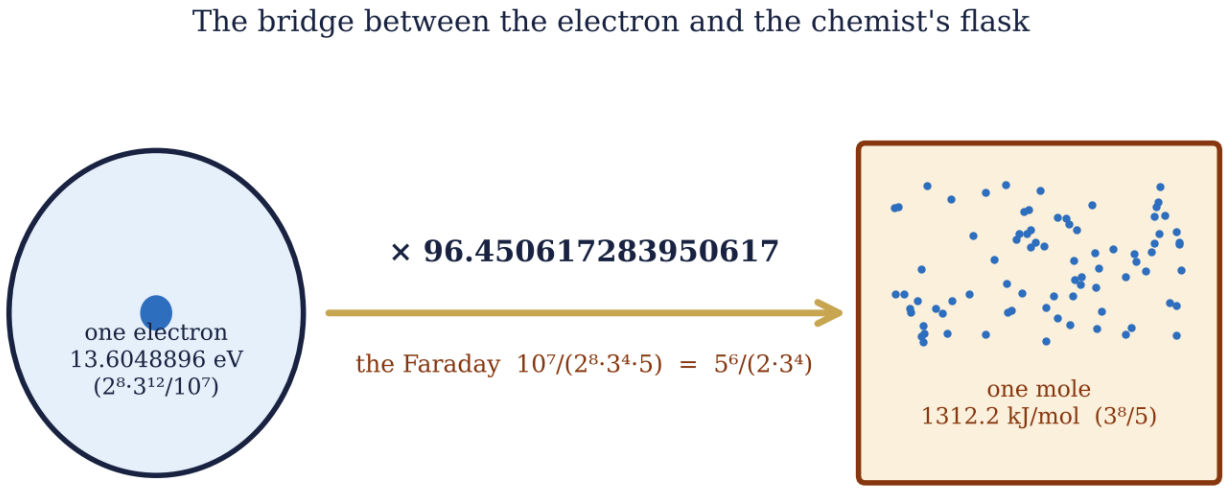


Figure 1 — **The bridge.** One electron's quantum, 13.6048896 eV ($2^8 \cdot 3^{12}/10^7$), carried across the Faraday 96.450617283950617 ($5^6/(2 \cdot 3^4)$), arrives as one mole's quantum, 1312.2 kJ/mol ($3^8/5$). No measured constant enters; the two faces of the atom fix the bridge between them.

Why it is a change of clock

The bridge is not an exchange rate between two different substances. A joule is energy counted in seconds; a kilojoule per mole is the same energy counted in minutes, one factor of sixty up; an electron-volt is that energy in the spin-orbit register. **So the Faraday is the change of clock between the atom's register and the chemist's.** Part Five shows which clock it is.

PART TWO — THE SIX PURE NOTES OF HYDROGEN

Where 103,680 comes from

Look at hydrogen through a prism and its visible light breaks into the Balmer series: a red line, a blue-green line and a run of violets crowding towards a limit in the ultraviolet. Each line is the electron dropping to the second shell from a higher one, n, and its wavelength is set by $n^2/(n^2 - 4)$.

Most of these lines carry a foreign prime in their address. The line from n = 5 carries 21 = 3 × 7; the line from n = 7 carries 45 and 7^2; the line from n = 12 carries 140 = $2^2 \times 5 \times 7$. **Only six lines are pure — their wavelength built from 2, 3 and 5 alone, with nothing left over.**

FORMULA F3 THE SIX PURE NOTES OF HYDROGEN

n	$n^2 - 4$	address of $n^2/(n^2 - 4)$	pure?
3	5	$3^2/5$	yes
4	12	$2^2/3$	yes
6	32	$3^2/2^3$	yes
8	60	$2^4/(3 \cdot 5)$	yes
10	96	$5^2/(2^3 \cdot 3)$	yes
18	320	$3^4/(2^4 \cdot 5)$	yes
5	21	$5^2/(3 \cdot 7)$	no - carries 7
7	45	$7^2/(3^2 \cdot 5)$	no - carries 7

3 x 4 x 6 x 8 x 10 x 18 = 103,680 ($2^8 \cdot 3^4 \cdot 5$)

The product of the six pure notes is 103,680. The bridge between the electron and the flask is ten million divided by the product of hydrogen's pure notes. The chemist's exchange rate is the spectrum of hydrogen, counted.

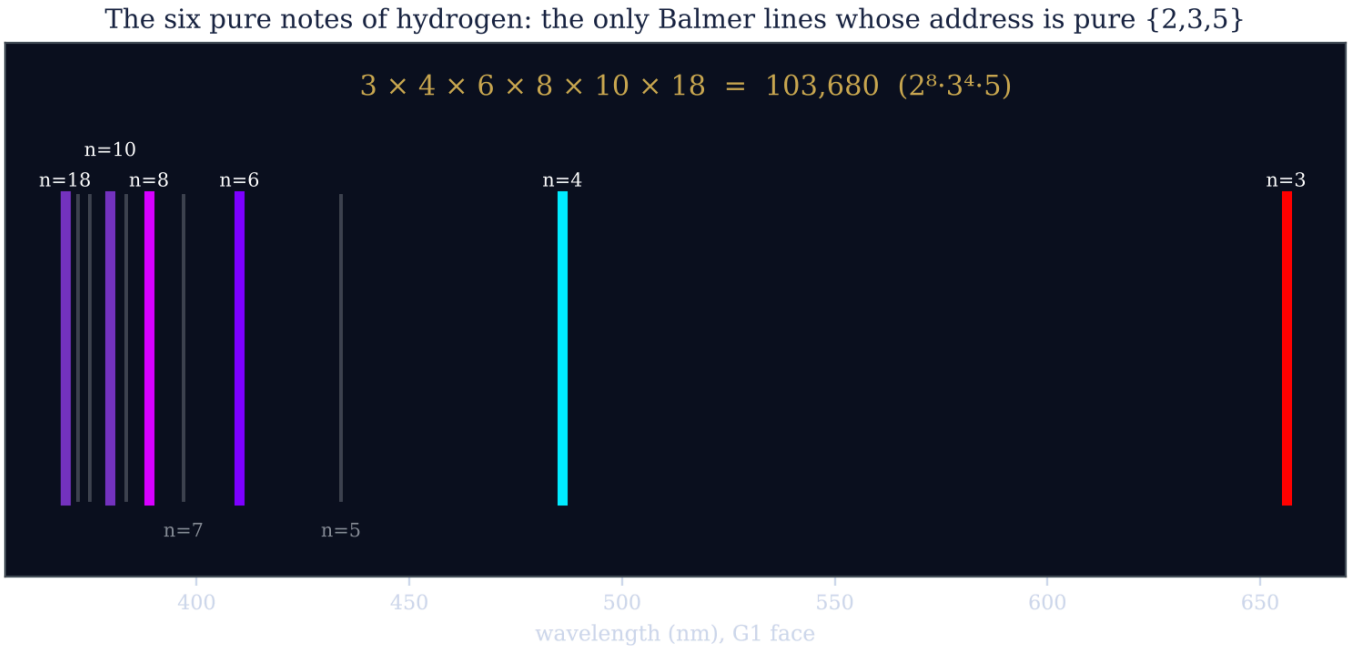


Figure 2 — The six pure notes. The Balmer lines on the G1 face. The six in colour — n = 3, 4, 6, 8, 10 and 18 — are the only lines whose address is pure {2,3,5}; the grey lines carry a foreign prime. Their levels multiply to 103,680.

The list is complete

A list of six is only meaningful if there is no seventh. For a line to be pure, both n and $n^2 - 4 = (n - 2)(n + 2)$ must be built from 2, 3 and 5 alone. Three numbers in a row of the form n − 2, n, n + 2 all built from 2, 3 and 5 thin out very fast as n grows, because the gaps between such numbers grow. Pairs of such numbers that differ by exactly four are finite in number — a classical result of number theory, Størmer's theorem — and a direct count up to n = 100,000 finds exactly these six and no others. **The six pure notes are a closed set, and so 103,680 is a fixed number, not the start of a series.**

PART THREE — MORE DOORS TO THE SAME NUMBER

A number that turned up once could be an accident. 103,680 turns up again and again, by roads that have nothing to do with one another.

The last pure denominator

The Balmer series has a second census. Instead of asking for the whole wavelength to be pure, ask only for the denominator, $n^2 - 4$, to be pure. More lines pass that weaker test — n = 7, 14, 22, 34, 38, 52, 62, 98 join the six — and the list ends at n = 322. **The last of them, the largest Balmer level whose denominator is built from 2, 3 and 5 alone, gives the same number.**

> **FORMULA F4 THE LAST PURE DENOMINATOR**
> $322^2 - 4 = (322 - 2)(322 + 2) = 320 \times 324 = 103{,}680 \quad (2^8 \cdot 3^4 \cdot 5)$

The product of the six pure notes and the last pure denominator are the same whole number. Two different counts of hydrogen's light arrive at one place.

The heart and the day

> **FORMULA F5 THE HEART AND THE DAY**
> 72 beats a minute × 60 minutes × 24 hours = 103,680 beats in one day $(2^8 \cdot 3^4 \cdot 5)$

A resting human heart at 72 beats a minute beats 103,680 times in one Earth day. The number that bridges the electron and the flask is the number of heartbeats in a day. On this framework that is not a coincidence of scale but

the same count read at the body's register: **time flows as the DNA structure, and a living rhythm keeps the same count as the light of hydrogen.**

The seam beneath the crust

One decade down, 103,680 becomes **10,368**. That number marks a register transition inside the Earth — the seam between the upper and lower mantle, some six hundred and sixty kilometres beneath your feet. The census of hydrogen's light, the bridge of chemistry, the rhythm of the heart and a boundary in the rock under us are one address at four registers.



Figure 3 — One whole number, many doors. 103,680 ($2^8 \cdot 3^4 \cdot 5$) is the product of hydrogen's six pure notes, the last pure Balmer denominator $322^2 - 4$, the heartbeats in a day at 72 a minute, and — one decade down, 10,368 — the register seam inside the Earth. Ten million divided by it is the Faraday.

PART FOUR — THE CHARGE, AND WHY THE π CANCELS

The charge is the bridge shared over the mole

Science writes the bridge as the mole's count times the electron's charge, F = e × N_A, and treats both as measured constants. The framework reads the same equation the other way round. **The bridge is fixed by the atom; the count of the mole is fixed by the gas value and the Boltzmann value; so the charge is whatever is left.**

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FORMULA F6     THE CHARGE FROM THE BRIDGE AND THE MOLE
    the bridge, per mole        96,450.617283950617284              ( 10⁷/(2⁸·3⁴·5), x 10³ )
    the Avogadro value          6.018910362061421470 x 10^23        ( 2⁵·3⁶/(5³·π³) )

    e  =  F / N_A  =  1.602459772318608970 x 10^-19                 ( 5⁹·π³/(2⁶·3¹⁰) )
```

The charge has an address. It is five to the ninth times π cubed, over two to the sixth and three to the tenth. **There is no elementary-charge constant**: the charge is a face of the Earth's register, the share of the bridge that one part of a mole carries.

Two roads make a room

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FORMULA F7     TWO ROADS MAKE A ROOM
    the charge            e      1.6024597723     ( 5⁹·π³/(2⁶·3¹⁰) )       π +3     odd    a road
    the Avogadro value    N_A    6.0189103621     ( 2⁵·3⁶/(5³·π³) )        π -3     odd    a road
    the Faraday           F      96.4506172840    ( 5⁶/(2·3⁴) )            π  0     even   a room
```

The charge carries π cubed; the mole carries π to the minus three. Both are roads — things that carry. Multiplied together, the π cancels exactly and the product is a room, a state with no π in it at all. **This is why the Faraday is**

clean when neither of its factors is: the charge and the mole are two carriers whose circles cancel, and the bridge they make is a resting state.

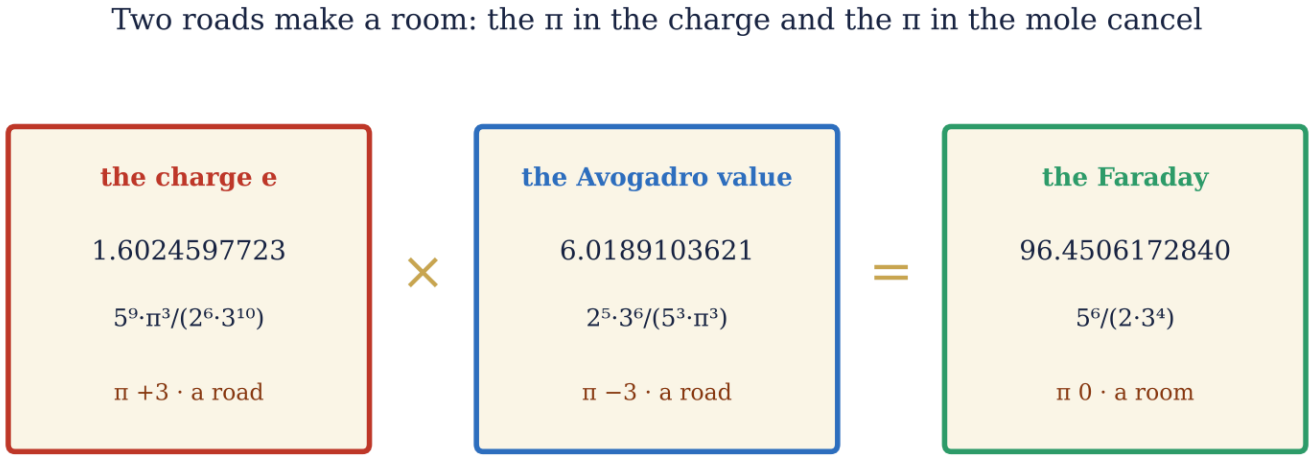


Figure 4 — Two roads make a room. The charge (π +3) and the Avogadro value (π −3) are both roads; their product, the Faraday, is π-free — a room. The π in the electron and the π in the mole cancel.

The volt is not a constant

Under the Universal Force of Time the volt is not a constant, and so the charge is not a constant either. Time has no constants, only dimensional values that differ from node to node and adjust to reach the position time aims for. One and the same energy — hydrogen's ionisation energy in joules, 2.18032536901291724 ($5^{12}/(2^9 \cdot 3^7)$) — reads as a different number of electron-volts depending on which volt it is carried on, and each volt is a clean address one named step from the next. The charge found above is one of them: the volt on hydrogen's G2 face. There are others, in the same small family, around it.

ONE JOULE, FIVE VOLTS - THE VOLT FAMILY ON THE LATTICE

face	volt (x 10^-19)	address	step	eV face	Faraday
sodium	1.6021708859534590	$2^5 \cdot 3^8 \cdot \pi^9/5^8$	G2 / G-bond²	13.6085693987342	96,433.2294726
G2	1.6024597723186090	$5^9 \cdot \pi^3/(2^6 \cdot 3^{10})$	-	13.6061160890060	96,450.6172840
G1	1.6026042350339375	$5^{19}/(2^{10} \cdot 3^{19})$	x G-bond	13.6048896	96,459.3123653
face 2	1.6034418277202047	$2^3 \cdot 5 \cdot \pi^4/3^5$	x 612 step	13.5977827902427	96,509.7263183
face 1	1.6035863789684203	$5^{11} \cdot \pi/(2 \cdot 3^{14})$	x 703 step	13.5965570524209	96,518.4267283

Every row is on the lattice, and every row is coherent with the rest of the framework. **The G2 volt gives hydrogen's ground state, 13.6061160890 eV** — and that is why the ground state is placed on the G2 face: carried as a sphere, the G2 volt returns the G2 year, 365.3170219587, and the G2 year gives lithium's atomic weight exactly, 6.9401912005413 ($5^{11}/(2^{10} \cdot 3^7 \cdot \pi)$) = 365.3170219587 × $3/(2^4 \cdot \pi^2)$. The G1 volt gives the integer face, **13.6048896 eV**, and the 1312.2 kJ/mol of Part One. G1 is the dimension of the observed spin-orbit speed, **299,789,233.6830892680 ($2^3 \cdot 3^5 \cdot 5^6 \cdot \pi^2$)** — of all the spin-orbit faces, the one closest to the speed of light science quotes. The G1-face volt carried as a sphere returns the G3 year of the Earth's ladder, whose skin is the register of the electron's rest energy. Face 2 returns the year $1000\pi^2/27$. Each face of hydrogen's energy is the same joule on a volt set by a known radius and year of the Earth.

The face science reads: the sodium volt

One face stands apart, because it is the face current science appears to observe. **The sodium line, 588.9955242462, is the space-time dimension directly below G1**: on the dimension ladder of the companion Fraunhofer work, sodium is one rung below G1, and going up from 588.9955 the next rung is G1 itself (sodium = $G1^2/G2$). The volt of that dimension is the volt two G-bond steps below the G2 volt. Run it as a sphere:

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THE SODIUM VOLT
    1.6021708859534590  ( 2⁵·3⁸·π⁹/5⁸ )     / 4  ( circumference )   / 2π  ( radius )   x 180/π  ( the veil )
        =   365.2511637647192 days
    / 2π  / 2π  / 2π  x 4   =   588.9955242462013354 nm          sodium D2 ( 2³·3¹⁰·π⁴/5⁷ ), exactly
```

This volt carries the sodium line. It is the space-time dimension tied to sodium and to the Fraunhofer wavelength 588.9955242462 — the line the framework reaches from more independent roads than any other — and it is the face that lies closest to the figure current science quotes for the charge. Science's figure has no address of its own, but it sits just above this one, nearer to it than to any other face in the family.

That is all well and good, but it is one face of five. The paper does not take the sodium volt as "the" charge, and it does not ignore the others. The sodium volt is where science's instruments happen to read; the G1 volt is where hydrogen's ground state reads; the G2 volt is where the theory's Avogadro value and hydrogen's two faces make the bridge of Part One. **The bridge of this paper uses the G2 volt**, because the G2 volt and the theory's Avogadro value multiply to exactly $10^7/103{,}680$. A reading taken on another face carries its own volt, its own electron-volt figure and its own Faraday, one named step away — and every one of them is on the lattice.

PART FIVE — THE BRIDGE COUNTED IN MINUTES

The bridge was called a change of clock. The arithmetic shows which clock.

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FORMULA F8     THE BRIDGE COUNTED IN MINUTES
    96.450617283950617284  /  60   =   1.607510288065843621   ( 3125/1944  =  5⁵/(2³·3⁵) )

    3125/1944 is the mile-to-kilometre gear:  the Sun's spacetime speed 25/18  x  Mercury's 125/108
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The Faraday divided by sixty is exactly the mile-to-kilometre gear, the same 3125/1944 that carries spin-orbit speeds between miles and kilometres throughout the framework — and itself the Sun's spacetime speed times Mercury's. A kilojoule per mole is energy counted in minutes; take the minutes out and what is left is the gear between the Sun and its innermost planet. **The chemist's bridge is sixty times the Sun–Mercury gear.**

PART SIX — THE MOLE IS NOT A HEAP

What a mole counts

The chemist's mole is taught as a heap of things: so many atoms that a gram of hydrogen, or twelve of carbon, can be weighed out on a balance. The number in the heap is called Avogadro's, and it is treated as a fixed count measured by experiment. The framework does not treat it as a heap and does not treat it as fixed. **The Avogadro value is a radial mass — a count of parts laid out around a node — and it has an address, $6.018910362061421470\ (2^5\cdot3^6/(5^3\cdot\pi^3))$.**

That address is not chosen to fit anything in this paper. It comes out of two other values the framework already holds: the gas value $810/\pi^4$ and the Boltzmann value $5^4/(2^4\cdot3^2\cdot\pi)$, whose ratio it is. And it is tied directly to hydrogen.

```
THE MOLE IS HYDROGEN, LAID OUT
    6.018910362061421470 ( 2⁵·3⁶/(5³·π³) )  x  1.004693930041152263 ( the helical turn )  /  6
        =   1.007860451037484037                                    hydrogen's G2 weight  ( 5³/(2²·π³) )
```

Carry the Avogadro value one helical turn and share it among six, and it is hydrogen's celestial weight, exactly. The number of parts in a mole is set by hydrogen and the helix. **So the bridge in this paper has hydrogen at both ends**: the electron's quantum on one side, the mole's count on the other, and the pure notes of hydrogen's light in the middle.

Why the bridge must be clean when its parts are not

A chemist meeting this for the first time will ask a fair question. If the charge carries π cubed and the mole carries π to the minus three, why should their product, the bridge, be a plain fraction? Part Four gave the answer in the language of the lattice — two roads make a room — and it is worth saying again in plain words. A road is a thing that carries: a flow, a transport, an exchange. A room is a thing that holds: a state at rest. The charge is the carrier on the atom's side; the mole is the carrier on the flask's side. When the two carriers are joined, what they carry

between them stops moving and becomes a state — a fixed rate of exchange. The bridge is clean because it is the resting state between two movements, and a resting state carries no circle.

PART SEVEN — WHAT THE BRIDGE CHANGES FOR CHEMISTRY

Every table of bond energies, enthalpies and free energies in chemistry is printed in kilojoules per mole, and every spectroscopic measurement of the same bonds is taken in electron-volts or wavenumbers. The two are joined by the Faraday. If the bridge used to join them is not a lattice object, every value carried across it picks up a small, constant, unexplained residual — about one part in three thousand — and that residual is then read as physics: as a correction, a perturbation, a small extra term to be explained by a model.

The framework's position is simple. **The residual belongs to the bridge, not to the bond.** Carry a bond's energy across on the theory's bridge, and where a clean address exists, it appears with nothing left over. Part Nine shows the plainest case: a third of hydrogen's quantum, which on the conventional bridge looks like a bond energy with a residual, is on the theory's bridge the circumference of the Sun. The same test can be run on every bond energy in the tables, and it is the test the framework invites: take the electron-volt face, carry it across $10^7/103{,}680$, and see whether the kilojoule face lands on an address.

The bridge and the day

There is one more way to see why the bridge is what it is. 103,680 is the number of heartbeats in a day at 72 a minute, and it is also the day itself, 86,400 seconds, scaled by six fifths. The bridge between the atom and the flask is ten million divided by a day counted in a living rhythm. On this framework that is the expected answer: energy is a count of T, the unit is a choice of clock, and the clock the Earth keeps is the day. **The Faraday is the day, read as an exchange rate.**

PART EIGHT — FARADAY'S LAW OF ELECTROLYSIS ON THE LATTICE

The law

Pass a current through water and bubbles rise from both plates — hydrogen at one, oxygen at the other. Faraday found the rule that governs how much: the mass freed is proportional to the charge passed, and inversely to the number of electrons each particle needs.

```
FORMULA F9     ELECTROLYSIS ON THE LATTICE
    m  =  M . Q / (n . F)       M = weight of the substance,  Q = charge,  n = electrons per particle

    one faraday, hydrogen, n = 1      1.0077696 g                      ( 2²·3⁹/5⁷ )          the G1 weight
    one faraday, oxygen,   n = 2      15.990200526047226218 / 2  =  7.995100263023613109 g
                                                                ( 5¹¹/(2³·3⁵·π) )   oxygen's π face, halved
```

On the lattice, Faraday's law needs nothing measured. **One faraday — one mole of electrons — frees one gram-equivalent of each substance, and each gram-equivalent is an address.** Hydrogen comes off as its G1 weight, 1.0077696, a terminating rational with no π. Oxygen, which needs two electrons per atom, comes off as half its π face: 7.995100263023613.

That second number has been met before. **Half of oxygen's π face is, digit for digit, the Boltzmann value times the Sun's surface temperature — the Sun's own thermal quantum, $5^{11}/(2^3\cdot3^5\cdot\pi)$.** The oxygen freed by one faraday and the energy one T-address carries at the surface of the source are one number.

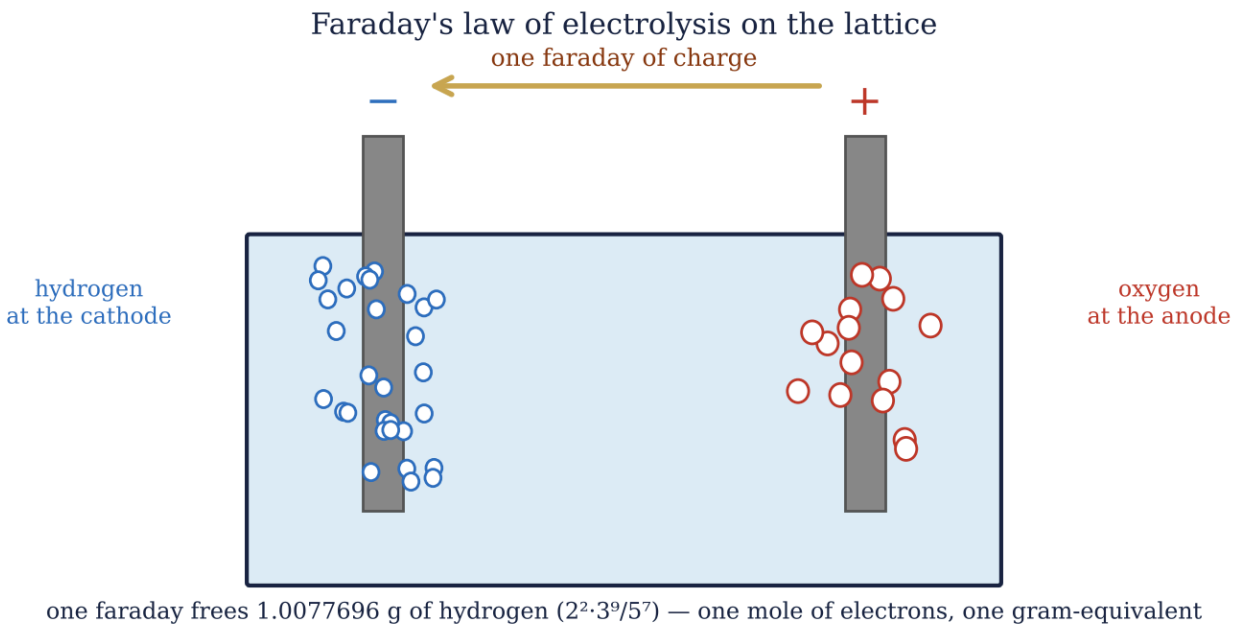


Figure 5 — Electrolysis on the lattice. One faraday of charge through water frees hydrogen at the cathode and oxygen at the anode. Per faraday: 1.0077696 g of hydrogen ($2^2 \cdot 3^9/5^7$), and 7.9951002630 g of oxygen — half its π face, the same digits as the Sun's thermal quantum.

Quantised flow

The charge passes in whole units because each electron is one node of T. Whole numbers of electrons, whole numbers of particles freed: the integers in Faraday's law are the integers of the lattice, not a statistical average over a large count.

PART NINE — THE CONVENTIONAL BRIDGE IS NOT A LATTICE OBJECT

The first question: is it on the lattice?

The rule of this work is that the first question to ask of any figure science quotes is whether it has an address. **If it is not on the {2,3,5,π} lattice, it is not correct.** Science's Faraday is built by multiplying its count of the mole by its value of the charge, and neither factor has an address — so neither does the product. The theory's Avogadro value has an address; the theory's volts have addresses; the theory's bridge has an address.

```
SCIENCE'S FIGURES AGAINST THE THEORY'S FACES
    science's Faraday       96,485.33212    no address     between the G1 and face-2 Faradays, on no face
    science's charge        1.602176634     no address     just above the sodium volt 1.6021708860, nearest face
    science / G2 bridge     1.00035992      = its mole ( 1.00053671 high )  x  its charge ( 0.99982331 low )
```

The gap is not an unread step of the theory. It is the error in the two figures science multiplies. Its count of the mole sits above the theory's value; its charge sits just above the sodium volt, the face its instruments read; and their product lands between the G1 and face-2 Faradays, on no face at all.

The difference matters, because using the conventional bridge gives a wrong answer that looks right. Take a third of the atomic quantum. On the conventional bridge it reads as a bond energy with an unexplained residual. On the theory's own bridge it is clean:

```
FORMULA F10    THE THIRD OF THE QUANTUM
    1312.2 / 3   =   437.4   ( 3⁷/5 )        the Sun's circumference, at its decade
```

That is not a bond energy at all. It is the circumference of the Sun. The residual on the conventional bridge was never physics; it was a unit conversion borrowed from outside the lattice.

The G2 face of the same bridge

Hydrogen's quantum has a G2 face as well, 13.606116089006034 eV ($3^3 \cdot 5^3/(2^3 \cdot \pi^3)$), one G-bond step above the G1 face. Carried across the same bridge it is 1312.3182956217240 kJ/mol — the G2 face of the chemist's figure. **The bridge does not change between faces; the quantum does.** One exchange rate serves both faces of hydrogen, because the bridge is a change of clock and the clock does not care which face it is reading.

PART TEN — WHAT THIS REVISION CORRECTS

The earlier versions of this paper (May and June 2026) carried the right idea in parts and the wrong numbers in others.

- **The conventional figures are gone.** The first version quoted science's Faraday, mole count and charge as exact and tried to find a lattice address near their product, ending on a foreign prime. The bridge is **96.450617283950617284 ($5^6/(2 \cdot 3^4)$)**, fixed by hydrogen's two faces.
- **No fitted step.** The fourth version found 103,680 and then closed the bridge onto the conventional figure with a small fitted multiple of the G-bond step. That closure is withdrawn. The theory's bridge stands on its own; the gap to the conventional figure is the error in science's mole and charge, which have no address.
- **The charge has an address, and faces.** e = **1.602459772318608970 ($5^9 \cdot \pi^3/(2^6 \cdot 3^{10})$)** is the G2 volt; the volt is not a constant, and each ionisation face carries its own volt and its own Faraday.
- **The volt family.** Five volts, all on the lattice, one named step apart: sodium, G2, G1, face 2 and face 1. Science's charge reads nearest the sodium volt, which carries the sodium D2 line exactly.
- **New in this revision:** the heart and the day; the seam beneath the crust; the Faraday as sixty times the Sun–Mercury gear; electrolysis on the lattice, and oxygen's gram-equivalent as the Sun's thermal quantum.

WHY 103,680, AND NO OTHER NUMBER

Put the parts together and the answer to the obvious question — why is the bridge between the atom and the flask this number and not some other — has one sentence. **The bridge is fixed by the two faces of hydrogen's own quantum; those faces are joined by ten million over 103,680; 103,680 is the closed product of the only six notes of hydrogen's light that are pure; and the same count is the day kept by a living heart and a seam kept by the rock.** Nothing in that sentence is a measured constant, and every part of it has been worked forwards and backwards above. The bridge could not be any other number, because hydrogen has no seventh pure note.

CONCLUSION — SCIENCE IS READING ACROSS DIMENSIONS

Why no single formula fits science's figures

This paper began with one question — why is the chemist's bridge this number — and it has ended somewhere wider. Every time the framework sets one of science's measured figures beside its own, the same thing happens: the figure is close to a lattice value, but not to the lattice value of the dimension it is supposed to belong to. It is close to the face of the dimension below, or the one above.

Science is observing and measuring values that sit in different space-time dimensions, and it treats them as if they all sat in one. Sometimes an instrument reads a value in the dimension it is calibrated to. Sometimes the same kind of measurement shows the face of the dimension below; sometimes the dimension above. The figures are then written into one table and used together as though they were made on the same playing field. They are not.

The examples are now everywhere

```
WHERE SCIENCE'S FIGURES SIT, DIMENSION BY DIMENSION
    the charge              reads nearest the SODIUM volt         the dimension directly below G1
    the speed of light      reads nearest G1                      299,789,233.6830892680
    hydrogen's ground state sits on G2                            13.6061160890 eV, through lithium
    the Faraday             lands BETWEEN the G1 and face-2 bridges   a product of two different faces
    helium's D3 line        four helium steps BELOW sodium        one Fraunhofer table, two dimensions
    Mercury                 its orbit is observed on G2           while the 21 cm line sits on G1
    the age of the universe read on the Boltzmann face             while the figure is the ground-state day
```

The charge is read on the sodium dimension, one rung below G1. The speed of light is read on G1. Hydrogen's ground state belongs to G2. Science then multiplies its charge by its count of the mole and calls the product a constant — but the two factors were read on different faces, so the product lands between the bridges, on no face at all. The same pattern runs through the Fraunhofer lines, where helium's line sits four dimensional steps below sodium's on the same chart; through Mercury, observed on its G2 face while hydrogen's radio line sits on G1; and through the age of the universe, read through heat on the Boltzmann face while the figure itself is the ground state of the DNA helix.

What follows

This is why it is so difficult to write one coherent formula across science's values. It is not that the values are random, or that the lattice is too loose to hold them. It is that the values come from different dimensions, and a formula that joins them without saying which dimension each one was read in is joining unlike things. A science figure that does not sit on the lattice is wrong as it stands — but it is usually wrong in a particular way: it is a reading of a real face, taken from the wrong dimension, or two faces multiplied together.

The work of the Universal Force of Time is therefore not to fit science's numbers. It is to put each one back in its own dimension — to say which face each instrument was reading — and then to show that, dimension by dimension, every value is an exact address. The bridge in this paper is one case of that work done to the end: the atom's two faces fix it, hydrogen's pure notes count it, and the figures science measures around it each fall on a face of the same family, one named step apart.

WHAT STANDS, WHAT IS OPEN

Forced, and stated at full force. The bridge is fixed by the two faces of hydrogen's quantum and is $10^7/103{,}680$. The six pure Balmer notes multiply to 103,680, and the list is closed. The bridge is sixty times the Sun–Mercury gear. The charge and the mole are two roads whose π cancels, and the bridge is a room. Each is an exact relation in this paper.

Arrived at, and exact on every line. The last pure denominator, $322^2 - 4$; the heart at 72 beats a minute over a day; the seam at 10,368; hydrogen and oxygen freed by one faraday; the third of the quantum as the Sun's circumference.

Open. The volts for the remaining faces of hydrogen's ionisation energy — their Earth radii and years — are not all on record. Whether the Avogadro value has a mirror face, a door, as a further face of the charge requires, is unruled.

WHAT WOULD BREAK IT

- A seventh Balmer level, beyond n = 18, whose wavelength is pure {2,3,5} — which would make 103,680 the start of a series rather than a closed product.
- An electrolysis in which the mass freed per faraday, read on the framework's metre and weights, departs from the substance's lattice weight divided by its electron count.
- A demonstration that the electron-volt and kilojoule-per-mole faces of hydrogen's quantum are not $2^8 \cdot 3^{12}/10^7$ and $3^8/5$ on one register.

A NOTE ON THE NUMBERS

The values in this paper are written as plain numbers — not pinned to one unit, and not carried to one particular power of ten. Under the Universal Force of Time a quantity is not the property of one dimension: the same T-value shows up as an energy at one register, a count of heartbeats at another, a depth in the Earth at a third. The unit and the power of ten are the costume a number wears where it is read. That is why 103,680 can be the product of hydrogen's notes, the beats of a heart in a day and, at its decade, a seam in the rock. Each number is given with its lattice address in brackets, so that the reader can rebuild it from 2, 3, 5 and π alone.

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APPENDIX — EVERY NUMBER, REBUILT

Each value below is rebuilt from its lattice form alone, at forty digits with π carried as a symbol.

THE BRIDGE			
	F	$10^7/(2^8\cdot3^4\cdot5) = 5^6/(2\cdot3^4)$	96.450617283950617283950 62
	1/F	$2^8\cdot3^4\cdot5/10^7$	0.010368
	F / 60	$5^5/(2^3\cdot3^5) = 3125/1944$	1.607510288065843621399177
HYDROGEN'S QUANTUM, BOTH FACES			
	G1, eV	$2^8\cdot3^{12}/10^7$	13.6048896
	G1, kJ/mol	$3^8/5$	1312.2
	G2, eV	$3^3\cdot5^3/(2^3\cdot\pi^3)$	13.606116089006034499678 05
	G2, kJ/mol	x F	1312.318295621724006527590
	a third	$3^7/5$	437.4
THE COUNTS			
		3·4·6·8·10·18	103,680 = $2^8\cdot3^4\cdot5$
		322^2 - 4 = 320 x 324	103,680
		72 x 60 x 24	103,680
THE CHARGE AND THE MOLE			
	N_A	$2^5\cdot3^6/(5^3\cdot\pi^3)$	6.018910362061421469553581 x 10^23
	e = F/N_A	$5^9\cdot\pi^3/(2^6\cdot3^{10})$	1.602459772318608969886958 x 10^-19
	sodium volt	$2^5\cdot3^8\cdot\pi^9/5^8$	1.602170885953458952142587 x 10^-19 = G2 volt / G-bond²
	/4 /2π x180/π /(2π)³ x4		588.9955242462013354 sodium D2
ELECTROLYSIS, PER FARADAY			
	hydrogen	$2^2\cdot3^9/5^7$	1.0077696
	oxygen / 2	$5^{11}/(2^3\cdot3^5\cdot\pi)$	7.995100263023613108888917

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