

# Universal Force of Time — Discipline

## Index

*Complete Paper Index Organised by Scientific Discipline*

---

This index lists all papers in the Universal Force of Time series, organised by primary scientific discipline. Each paper derives its content from the single Tau-field axiom:  $\tau \equiv \text{matter} \equiv \text{DNA} \equiv \text{life}$ . Papers may appear under more than one discipline when their content spans multiple fields.

### Physics — Foundations and Constants

---

- FOT\_AcousticHarmony — Sound, frequency ratios, musical prime lattice
- FOT\_BalmerPlanetChain — Hydrogen Balmer series and planetary orbital periods
- FOT\_CascadeSeriesFrequency — Frequency cascades across all physical domains
- FOT\_DarkEnergy — Dark energy as Tau-field tension at cosmic register
- FOT\_DarkMatter — Dark matter as antimatter on 180° helical limb
- FOT\_Eclipse\_Deflection — 1919 eclipse deflection from Balmer  $n=4 \rightarrow 2$
- FOT\_Einstein\_EM2 —  $E=mc^2$  rewritten as the Tau-field identity  $E=mT$
- FOT\_Fine\_Structure — Fine structure constant  $1/\alpha = 125\pi^2/9$
- FOT\_Freefall — Free-fall chain deriving  $G1$  and  $G2$  from Earth-Sun distance
- FOT\_Fraunhofer — Solar absorption lines as Tau-field nodal positions
- FOT\_Gravity\_Time — Gravitational time dilation from Tau-register depth
- FOT\_Light\_Speed —  $c$  as the Tau-field propagation constant at  $D=0$
- FOT\_Moho — Earth Moho as  $G0/G1$  register boundary at  $20,000/\pi$  km
- FOT\_NuclearCascade\_Life — D-level cascade from nuclear physics to biology
- FOT\_OO\_Bond\_DNA\_Spectroscopy — O-O bond and DNA dimensions from prime lattice
- FOT\_PiFamily —  $\delta_{\text{orbital}}$ , structural ring, and  $\pi$ -family constants
- FOT\_Planck\_Scale — Planck length, time, mass from  $D=-114$  register
- FOT\_Quantum\_Bell — Bell inequality and Tau-field non-locality
- FOT\_TDIM\_Cascade — Temporal Dimensional Inversion Mapping cascade
- FOT\_Thermo\_Constants —  $R = 810/\pi^4$ ,  $k_B$ , and  $E=mT$  identity
- FOT\_UnifiedFormula —  $E(D,n) = G1 \times 2^D/n^2$  master equation

### Physics — Time and Relativity

---

- FOT\_Relativity — Special relativity from Tau-field Lorentz-equivalent
- FOT\_Temporal\_Traversal — Memory, present moment  $\Delta\tau = t_P/2$ , Strand-2 records
- FOT\_Temporal\_Year —  $G0, G1$ , Temporal Year = sidereal year
- FOT\_Time\_Equalization — Planetary synchronisation via Tau-register H-bond

### Physics — Quantum and Field Theory

---

- FOT\_Antimatter — Antimatter as 180° helical limb of Tau-standing-wave
- FOT\_CMB — Cosmic microwave background as Tau-field ground-state emission
- FOT\_Neutrinos — Neutrino mass from Tau-field tension (gravity adapted)

- FOT\_Teleportation — Void transit of Strand-2 address; ER=EPR
- FOT\_Void\_Transit — Inter-register gap physics and tunnelling

## Astronomy and Planetary Science

---

- FOT\_Balmer\_Planet\_Chain — Balmer lines map to planetary orbital periods
- FOT\_CosmicScale — Universe structure from  $D=+60$  Tau-register
- FOT\_Orbital\_Lattice — Planetary distances from  $\{2,3,5,\pi\}$  lattice
- FOT\_Planetary\_Speeds — Sun, Mercury, Venus, Earth speeds from prime lattice
- FOT\_Venus\_Antimatter\_Register — Venus retrograde,  $243=3^5$  d, pentagon resonance

## Chemistry and Molecular Science

---

- FOT\_Bond\_Angles — All molecular bond angles from D-level register geometry
- FOT\_Carbon\_Chemistry — Carbon as  $D=-4$  to  $D=-2$  bridge element
- FOT\_Medical\_Chemistry — Drug binding as Tau-node occupation
- FOT\_Organic\_Chemistry — Organic reaction mechanisms as register transitions
- FOT\_Water\_Bond\_Angle\_Extended —  $\text{HOH} = 2\arctan(5/3\pi) = 104.4495^\circ$
- FOT\_Water\_Properties — H-bond, anomalous  $H_{\text{vap}}$ , density maximum at  $4^\circ\text{C}$

## Biology and Life Sciences

---

- FOT\_Antimatter\_Helix — Antimatter on Strand 2 of DNA double helix
- FOT\_DNA\_Life — DNA as the biological embodiment of the Tau double helix
- FOT\_NuclearCascade\_Life — Nuclear-to-life cascade via D-level transitions
- FOT\_Universal\_Life\_Requirement — Water, carbon, energy gradient,  $\text{Mg}^{2+}$

## Earth Science and Geophysics

---

- FOT\_Moho — Moho as  $G0/G1$  register boundary; seismic  $V_p=2^3$ ,  $V_s=3^2/2$
- FOT\_Earth\_Rotation — Earth rotation period from Tau-field  $D=0$  register

## Medicine and Health

---

- FOT\_Medical\_Chemistry — Drug design from Tau-node geometry
- FOT\_Medical\_Framework — Organ registers, cancer, HIV, autism, gestation
- FOT\_Organ\_Systems — Each organ at its Tau D-level register

## Mathematics and Number Theory

---

- FOT\_CascadeSeriesFrequency — Cascade law as  $\{2,3,5,\pi\}$  prime-lattice series
- FOT\_TDIM\_Cascade — TDIM as area-preserving involution across D-levels
- FOT\_UnifiedFormula —  $E(D,n)$  as the master equation of all UFOT

## Psychology, Philosophy, and Consciousness

---

- FOT\_Consciousness — Consciousness as D=0 Tau-register coherence
- FOT\_Meaning — Meaning as Strand-2 address recognition across registers
- FOT\_Social\_Alignment — Social groups as Tau-node clusters
- FOT\_Telepathy — T-node synchronisation; 40 Hz inter-brain coherence
- FOT\_Temporal\_Traversal — Memory as Strand-2 re-access
- FOT\_Zone\_of\_Enlightenment — ZoE ladder: hypnagogic to enlightenment

## Cosmology and Metaphysics

---

- FOT\_Antimatter — No matter/antimatter asymmetry — helical partner
- FOT\_CosmosAlive — The universe as a living Tau-field organism
- FOT\_DarkEnergy — Tau-tension at cosmic D+60 register
- FOT\_Meaning — Physical meaning encoded in the prime lattice
- FOT\_Teleportation — ER=EPR void channel; black hole information

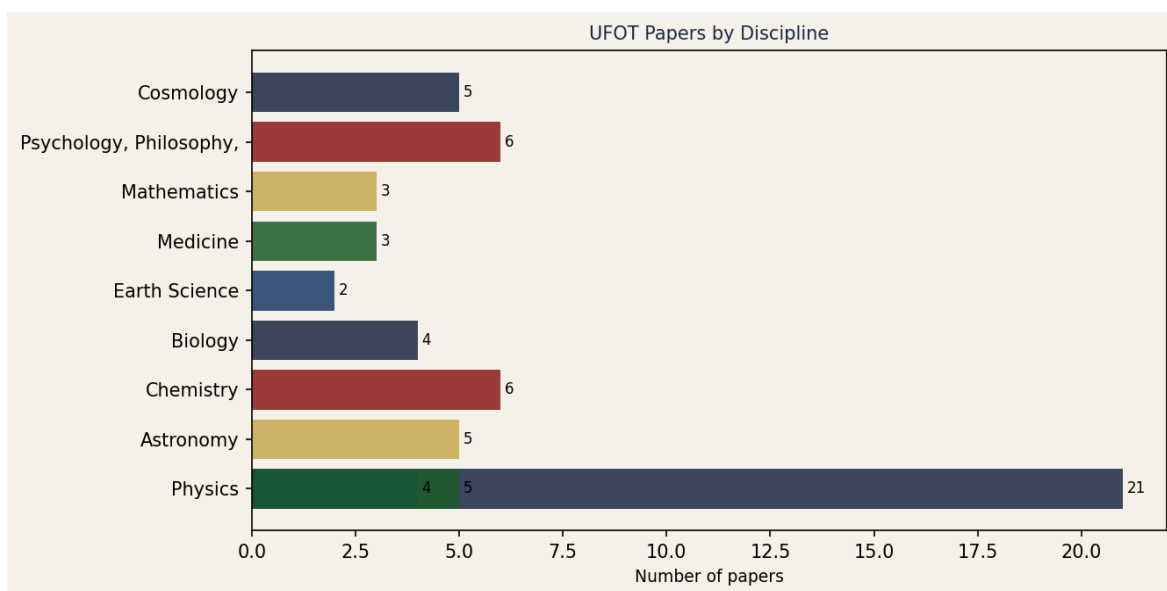


Figure 1. Distribution of UFOT papers across scientific disciplines. Physics carries the largest share; all disciplines are unified by the single Tau-field axiom.