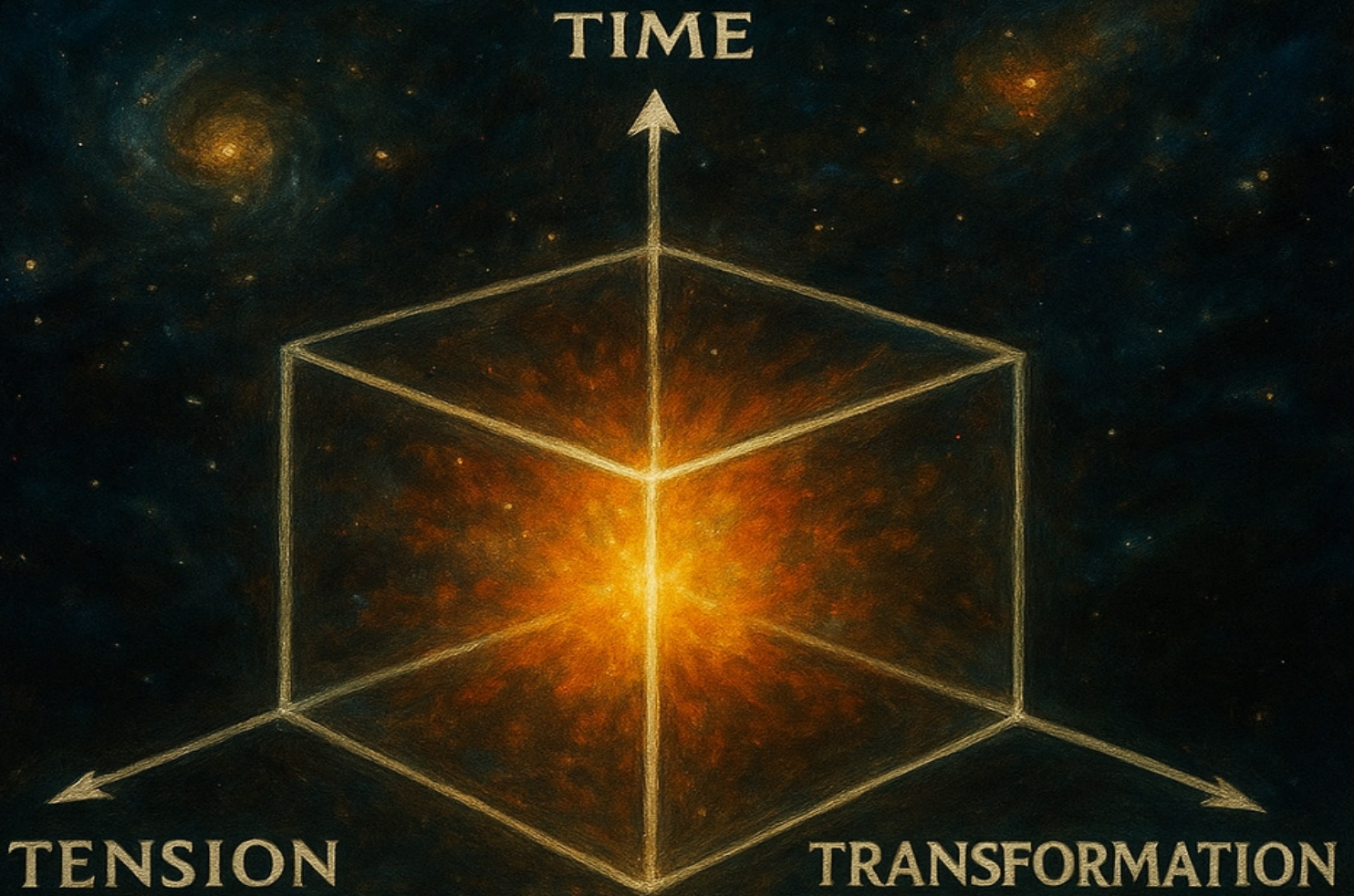


T-CUBE EXPERIMENT AND FLIPPING THEORY



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An Essay

In the expanding landscape of theoretical physics, where intuition and mathematics often collide to reveal deeper harmonies, the T-Cube Experiment emerges as one of the most illuminating conceptual bridges between Flipping Theory and the measurable universe. Although still hypothetical in conventional physics, within the Flipping Framework the T-Cube functions as an instrument of translation: a geometric, temporal, and energetic construct that makes visible the hidden flows that drive creation itself.

1. The Purpose of the T-Cube

The “T” in T-Cube stands for Time, Tension, and Transformation—the three pillars that all processes must pass through under the Incipient Law of Creation. The cube is not a literal block in physical space, but the minimal closed manifold capable of holding all three dimensions of emergent reality:

- Time: measured in the fundamental flippon quantum $t_f = 5.39106 \cdot 10^{-44}$ s
- Tension: the energetic pressure produced by the cosmic flow $I_k = c^3/G$
- Transformation: the conversion of intergalactic vacuum into mass and spacetime

Thus, the T-Cube is the conceptual chamber where the universe performs its smallest act of creation. In traditional physics, such a chamber is never discussed because the Big Bang model avoids the question of ongoing emergence. In Flipping Theory, however, creation is continuous—and the T-Cube is where that continuity becomes observable.

2. Structure of the T-Cube

The T-Cube consists of three orthogonal axes—but unlike ordinary cubes, these axes represent different ontological categories:

1. Temporal Axis (T₁):

The axis of irreversible aging—governed by the Gaussian decay law

$$v(t) = v_o \exp\left(-\frac{t^2}{2\zeta^2}\right)$$

The T-Cube monitors how photon frequency evolves within its temporal boundary. This makes the cube a microscope into the Law of Aging Photons.

2. Energetic Axis (T₂):

The axis of cosmic tension. Along this axis flows the universal current

$$I_k = \frac{c^3}{G}$$

which is responsible for the continuous birth of flippons.

3. Transformational Axis (T₃):

The axis of materialization, where the vacuum's potential becomes measurable mass, represented by the appearance of flippons with mass

$$m_F = 21.7651 \mu g.$$

Along this axis, fragmentation occurs: flippons self-divide to form the first building blocks of matter.

These three axes intersect at a single point—the Origin of Emergence, the smallest non-zero seed of reality.

The T-Cube as an Experimental Metaphor

The purpose of the T-Cube is not to be built in a laboratory—it is a laboratory, one built into the fabric of spacetime. It is the minimal “cosmic apparatus” that allows Flipping Theory to describe creation without singularities, infinities, or discontinuities.

In practice, a physicist “performs a T-Cube Experiment” whenever they analyze:

- photon decay without assuming cosmic expansion as the cause,
- mass emergence without invoking the Big Bang singularity,
- or black hole behavior without assuming irreversible consumption.

The T-Cube reframes these processes as internal operations of a dynamic universe that constantly refreshes itself.

4. Connection to Black Holes

The strongest physical correspondence of the T-Cube is found within the horizons of black holes. According to Flipping Theory:

- Black holes do not end processes—they begin processes.
- Their centers are not singularities but T-Cube factories.
- The cosmic current $I_k = c^3/G$ flows into them, not out of them.
- Matter entering a black hole is stripped of all charges and interactions and reborn as flippons.

Thus the T-Cube is the microcosm of the macrocosmic black hole interior.

5. The T-Cube, Flippons, and the Emergence of the Cosmic Plain

The Birth of the Cosmic Plain—a key mythic moment in my cosmological narrative—is essentially the first T-Cube Experiment carried out by the universe itself. When the vacuum first experienced tension comparable to I_k , a flippon emerged, expanded, fragmented, and spread into the first diffuse geometry of spacetime.

The Cosmic Plain exists because:

1. vacuum tension became high enough,
2. a T-Cube formed internally,

3. a flippon appeared,
4. and the universe gained direction, density, and duration.

Every point in spacetime is a descendant of that first T-Cube.

6. Predictions and Empirical Outlook

Flipping Theory offers several testable predictions through the T-Cube concept:

(a) Photon Aging Curves

Measurements of distant starlight should reveal not a uniform redshift but a Gaussian distribution consistent with long-term photon aging.

(b) Mass Emergence near Black Holes

High-energy astrophysical observations may show unexpected mass distribution patterns that hint at flippon creation rather than mass destruction.

(c) Minimal Spatial Granularity

The T-Cube implies a minimal volume connected to flippon size ($\approx 1600 \text{ km}$ diameter), though not in the sense of a rigid particle—it is the smallest stable potential region of spacetime.

(d) Temporal Asymmetry

The fundamental time quantum t_f should manifest indirectly through ultra-high-precision temporal interference experiments.

7. The Philosophical Role of the T-Cube

The T-Cube is not only an experimental model—it is a philosophical stance. It asserts that:

- Creation is local, not historical.
- Emergence happens everywhere, always.
- The universe is not a conserved quantity but a living process.

This shifts our view of cosmology from a single beginning to a continuous unfolding, from a violent origin to a gentle sustained birth, from mystery to subtle machinery.

8. Conclusion

In the landscape of Flipping Theory, the T-Cube Experiment is the fundamental window into the Incipient Law of Creation. It is where flippons appear, where photons age, where matter reforms, and where time gains direction. The T-Cube shows that the universe is not a fixed container of events but a constantly refreshing tapestry woven from tension, transformation, and the faint but persistent current of creation.

To study the T-Cube is to study the smallest heartbeat of the cosmos.

To understand it is to understand the origin of everything that has ever existed.

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