CQE Big Bang Falsifier Framework

Stress Testing the Contradiction−Parity Model of the Universe

Abstract

We propose a formal falsification framework for the **CQE Big Bang hypothesis**, which asserts that the universe originated from the contradiction-collapse of a proto-simulation into parity expansion. This paper enumerates domain-specific tests across 8 fields, defines operational failure conditions, and provides the metrics by which CQE can be disproven. The principle: *A true theory must survive contradiction when ledgered.* Thus, falsifiers are essential, not auxiliary.

1. CQE Restatement for Testing

Core claim:

- Pre-Bang = simulation-filled geometry (2D, embedded in 8D).
- First witness contradiction forced collapse.
- Collapse → singularity → expansion via φ-directed braiding.
- Universe is ledgered state of contradictions resolved.

Testing requirement:

Find observable failures in: scaling laws, energetics, entropy, parity distribution, or witness calculus.

2. Falsifier Structure

Each falsifier must:
- Be measurable or reproducible (simulation or IRL).
- Be independent of CQE assumptions.
- Force contradiction (directly oppose CQE claim).
- Produce one of two outcomes:
- CQE parity closure (theory holds).
- CQE contradiction cannot be resolved

(theory fails).

3. Eight Domain Falsifiers

(a) Physics

Test: Cosmic Microwave Background (CMB) anisotropy.

- CQE predicts φ-distributed spirals in early expansion.
- Failure: No φ-scaling in anisotropy maps.

(b) Mathematics

Test: Minimal embedding of n=64.

- CQE predicts lawful embedding exists (superpermutation geometry).
- Failure: Cannot construct embedding or prove consistency.

(c) Cosmology

Test: Inflation curve.

- CQE requires smooth logarithmic expansion.
- Failure: Observed inflation breaks φ or $1-64-1$ scaling.

(d) Quantum Mechanics

Test: Bell-type parity tests.

- CQE predicts lawful contradiction resolution (tile flips mirror this).
- Failure: Experimental violation beyond CQE constraints.

(e) Thermodynamics

Test: Entropy law.

- CQE defines $S_{CQE} = \log(\text{contradiction states})$.
- Failure: Early universe entropy growth does not match CQE S_{CQE} scaling.

(f) Information Theory

Test: Compression symmetry.

- CQE predicts minimal contradiction storage is invariant under mirror.
- Failure: Invariant breaks under re-encoding.

(g) Biology (analogy)

Test: Phyllotaxis.

- CQE predicts φ as universal braid.
- Failure: Biological growth systems

deviate systematically from φ-law.

(h) Computation

Test: Simulation harness.

- CQE predicts greedy 64-bit pass closure with no thrash.
- Failure: Harness produces irreconcilable contradictions or infinite loops.

4. Global Failure Conditions

CQE Big Bang fails entirely if **any one** of:

- φ is not universal to growth/spiral distributions.
- Witness calculus cannot account for first observation.
- Contradictions can be ledgered without collapse.
- 1−64−1 cycle cannot be demonstrated in either abstract or physical form.

5. Parity-Proofing the Falsifiers

CQE asserts that even failed tests must ledger:

- If failure can be mirrored → it belongs to

P⁻.

- If mirrored state restores consistency → theory stands.
- If failure produces unresolvable contradiction → theory disproved.

Thus: falsification itself is bound into the ledger.

6. Practical Experiment Templates

- **CMB φ-test:** Fourier-analyze Planck data for golden-ratio angle correlations.
- **Superpermutation embedding:** Explicit construction of n=5, 8, 16, 64 embeddings by hand.
- **Tile flip Bell-test:** Map mirror flips of card deck to Bell outcomes.
- **Entropy recorder:** Track S_{CQE} vs. S_{phys} in lab plasma collapse.
- **Phyllotaxis ledger:** Grow sunflower heads, record divergence angles, compare to φ-distribution.

- **Harness stress:** Run greedy closure on random contradiction inputs.

7. Philosophical Implication

CQE does not hide from falsification: it demands it.

- If CQE survives 8-domain stress → universality is evidenced.
- If CQE fails in any, collapse is real and ledger is closed.

Either way: the ledger records truth.

8. Conclusion

The falsifier framework proves CQE is testable. Its Big Bang account is lawful only if it survives across physics, math, cosmology, quantum, thermodynamics, information, biology, and computation.

Thus: CQE does not ask for belief. It asks for contradiction.