

SEAM, OBSERVATION, AND CERTIFICATE DISCIPLINE

A true local result may still certify too little. Separate physical effect from causal legibility, then close the global boundary.

Claim ID:

Reviewer:

Date/version:

Claim type/scope:

1. ATOMIC CLAIM AND TYPED CHAIN

Atomic claim	One sentence; scale, location, date, canonical evidence label
Physical edge	Source, quantity, law, coupling, sink, dissipation
Control edge	Sensor/controller, target, timing, cost, failure mode
Observation edge	Instrument, geometry, path, preprocessing, noise, missingness
Archive edge	Deposition, alteration, exposure, recovery, recognition
Certificate edge	Exact bounded conclusion, assumptions, detectable failures

2. DUAL RENT

Seam and comparator	Γ ; reference seam/protocol Γ_0
Observer/classifier	Organism, instrument, archive, analyst, algorithm, proof system
Dynamical rent	What future changes under $do(\Gamma)$? Which outcome distance?
Epistemic rent	Which generators become more/less distinguishable? Gain sign?
Gain-reversal test	Intervention or new protocol expected to reverse masking
Boundary amplifier	Operation that could magnify the diagnostic distinction

3. FIVE FOG COORDINATES AND EQUIFINALITY

Reference fog	Relative to which material, mode, population, baseline?
Resolution fog	Which scales, frequencies, classes, uncertainties are averaged out?
Generator fog	Which ordinary and extraordinary histories fit the datum?
Chronology fog	Is causal order resolved at the mechanism's timescale?
Boundary fog	Which costs, reservoirs, denominators, escape paths are excluded?
Process equifinality	Different histories reaching the same physical state
Observation equifinality	Different states becoming the same measured record

4. LOCAL-TO-GLOBAL CERTIFICATE STACK

Local certificate	Differential, assay, mode, morphology, congruence, bounded fit
Fiber certificate	Complete preimages, alternatives, causal chain, residue graph
Closure/infinity	Properness, system closure, omitted reservoirs, asymptotic paths
Arithmetic	Good/bad primes, valuations, extensions, lifting, identifiers
Formal/replay	Proof object, exact identity, deterministic test, hashes, scope
Independent challenge	Channel not physically/institutionally downstream of first

5. RESIDUE, DECISION, FAILURE MEMORY

Residue field	Location, medium, intensity, covariance, survival/detection probability
Prospective test	Highest-information observation specified before search
Demotion condition	Result that materially lowers confidence
Failure record	Prediction ID, test, result, revision, assumptions added

Evidence: ☐ Established ☐ Strong inference ☐ Plausible ☐ Open ☐ Constrained ☐ Unsupported

Dual rent paid? ☐ dynamic ☐ epistemic ☐ both ☐ neither Global closure adequate? ☐ yes ☐ no Protocol preregistered? ☐ yes ☐ no

Decision / next action:

Guardrails. One-channel bias does not erase an independent multi-channel residue veto. A finite computation is not an unrestricted proof. A shared abstraction is not a shared hidden mechanism.