

Miner's Unified Laws and Axioms of Recursive Physics

Miner's Unified Laws define a recursive physical framework bridging thermodynamics, motion, and adaptation. These laws describe how systems evolve through feedback, efficiency, and equilibrium rather than linear causality.

AXIOM I — Thermodynamic Recursion (Miner's Law of Efficiency)

"In quantum and classical systems alike, processing speed and stability are governed not by frequency but by the thermal rate of change between recursion and resolution."

Formal Equation — Recursive Load Efficiency (RLE):

$$\text{RLE} = (\eta \times \sigma) / [\alpha \times (1 + 1/\tau)]$$

Where:

- η (Utilization) = fraction of system activity (0.0–1.0)
- σ (Stability) = inverse of rolling deviation (1 / std)
- α (Load Factor) = power consumption / baseline power
- τ (Sustainability Time Constant) = thermal time to equilibrium

Interpretation:

Efficiency increases with utilization and stability, decreases under load, and stabilizes with thermal resolution. RLE serves as a universal measure of system efficiency — applicable to thermodynamic, computational, and biological systems.

AXIOM II — The Two Thermal Paths

"There exist two valid routes to increased recursive speed: through heat or through cold."

1. The Path of Heat (Q-Storage):

Heat accelerates deterministic logic, enabling faster read/write resolution.
Behavior: Hotter → Faster resolution, lower recursion.

2. The Path of Cold (Q-RAM):

Cold accelerates recursive collapse, enabling rapid logical cycling.
Behavior: Colder → Faster recursion, higher instability.

3. The Thermal Midpoint (Q-Cache):

The equilibrium of hot and cold defines the zone of maximum stability.
Recursive speed is not a clock — it is rhythm: a thermal oscillation balanced between heat and cold.

AXIOM III — Harmonic Containment (Recursive Physics)

"The universe operates through harmonic recursion, not absolutes.

All physical systems must obey recursive containment laws anchored through dimensional balance."

Mathematical Representation (Symbolic Form):

$$dS/dt \propto 1 / (1 + 1/\tau)$$