

## **MINERS\_UNIFIED\_AXIOMS\_v2**

# MINER'S UNIFIED AXIOMS (RLE v2)

## Axiom 0 (Dimensionless Base)

All terms are dimensionless and referenced to  $\theta$ ; no wall-second dependence.

## Axiom I (Temporal Invariance)

RLE\_θ and collapse parity are invariant to sampling rate changes after θ-normalization.

## Axiom II (Orthogonality of Substrate)

Local variations along  $\Xi_i$  minimally perturb  $\Phi_{\text{substrate}}$  under steady load:

$\partial\Phi/\partial\Xi_i \approx 0$  for steady spans; channels remain weakly coupled.

## Axiom III (Boundedness)

$\Phi_{\text{substrate}} \in [0, 1+]$  with narrow headroom above 1 in high-SNR regimes;  $\Xi_H, \Xi_C \in [0, 1]$ ;  $\Xi_E \in [0, 2]$ .

## Axiom IV (Substrate Consistency)

For stable systems,  $\text{mean}(\Phi_{\text{substrate}}) \approx 1 \pm \varepsilon$  (desktop  $\varepsilon \approx 0.03$ ).

## Axiom V (Collapse Independence)

Collapse detection is strictly tied to canonical RLE\_θ; substrate/envelope do not alter the detector.

## Implementation Notes

- EMA clamps, spectral/τ\_eff fallback, Δθ windowing rules
- Diagnostics computed append-only; envelope optional, diagnostic-only