

RCIRCUIT Simulation v0.1 — 1-Page Technical Summary

1. Objective

Minimal Δ signal-based phase propagation model verifying stability + local coherence.

2. Model Setup

- 20 PhaseNodes
- Δ threshold = 0.05
- Iterations = 50
- Noise decay = 0.9
- Propagation factor = 0.4
- Seed = 42

3. Method

- Initialize PhaseNodes in $[-1, 1]$
- Compute $\Delta = \text{phase}[i+1] - \text{phase}[i]$
- Filter Δ via noise threshold
- Propagate only meaningful Δ signal
- Track phase convergence

4. Key Results (v0.1)

- System stabilizes after ~40 iterations
- High Δ signal propagates then dissipates
- Low Δ signal suppressed (noise isolation works)
- No global synchronization required
- Convergence cluster width ~0.02 (stable)

5. Interpretation

- Δ signal is viable as compute primitive
- Phase operations avoid bandwidth explosion
- Local coherence emerges without global sync
- Simulation supports Phase Compute OS Layer-1 feasibility

6. Next Steps (v0.2)

- Coherence Map
- Resonance Score
- Δ Normalization
- Visualization prototype
- Stability metric chart

7. Contact

Chulhee Park · Phase Computing / RCIRCUIT · HROS

■ Email: jspchp638@gmail.com

■ GitHub: <https://github.com/jspchp63/HROS-RCIRCUIT-LAB>

■ Intro: <https://www.facebook.com/reel/814179151614352>