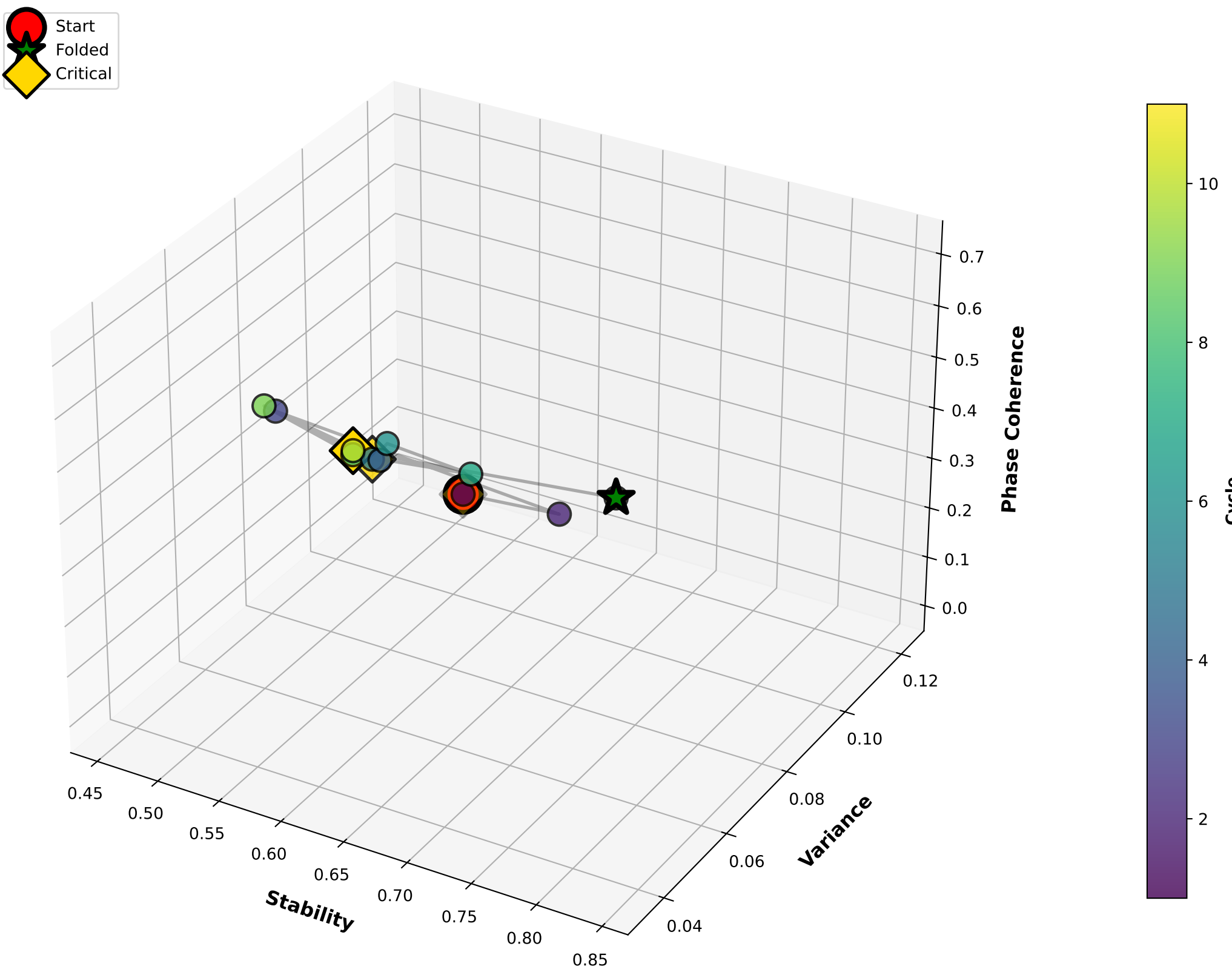
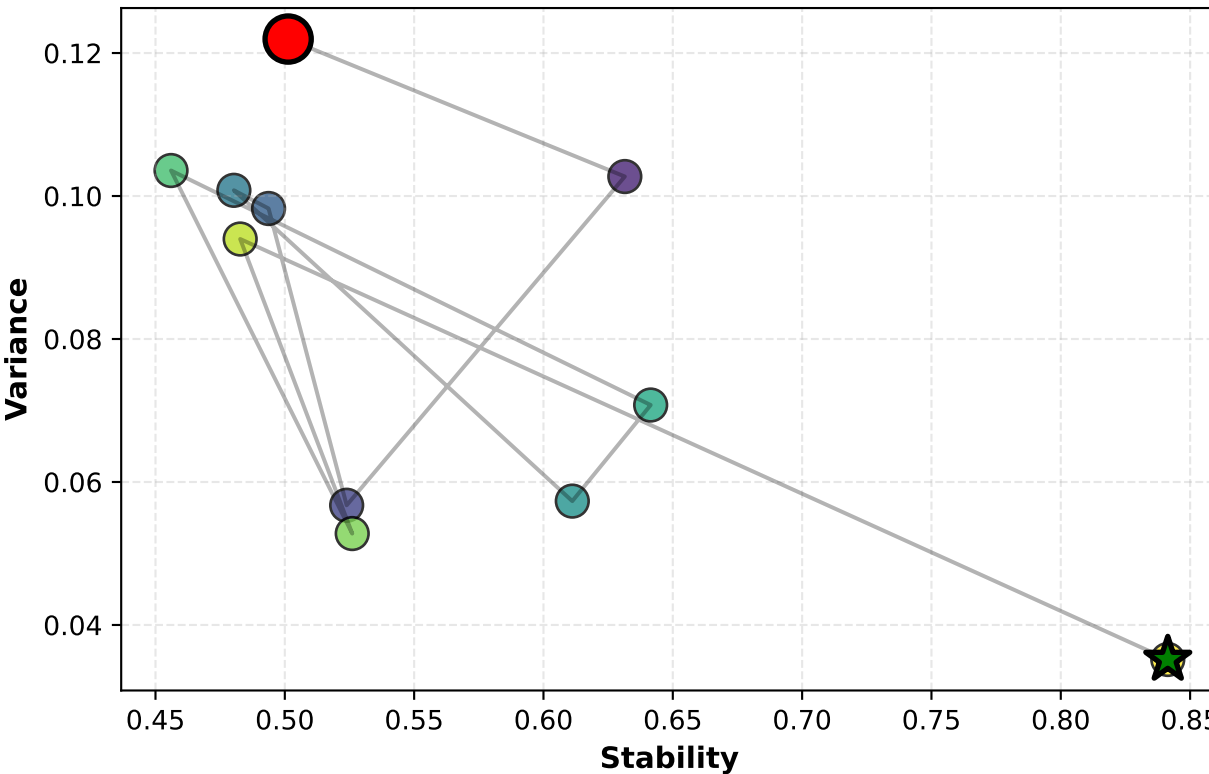


3D Phase Space Analysis: Stability-Variance-Coherence Trajectory
Quantitative Evidence for Phase-Locked Convergence

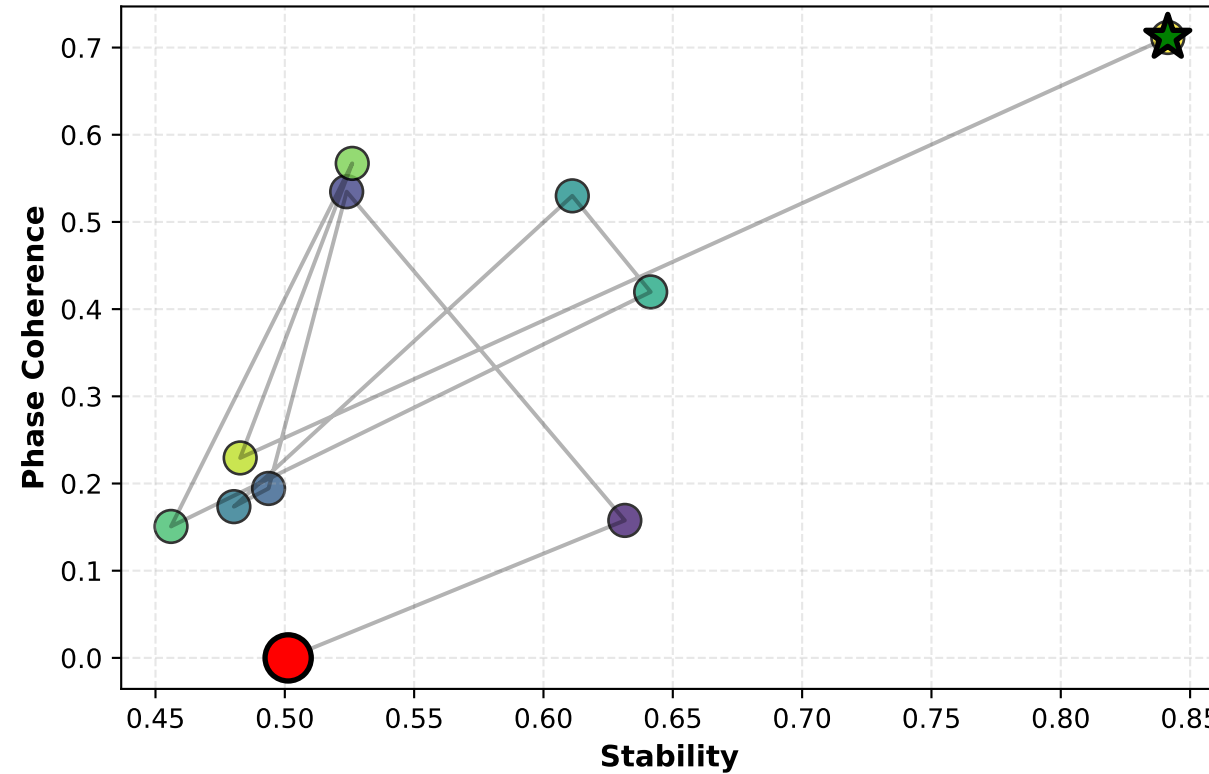
(A) 3D Phase Space Trajectory
Stability-Variance-Coherence



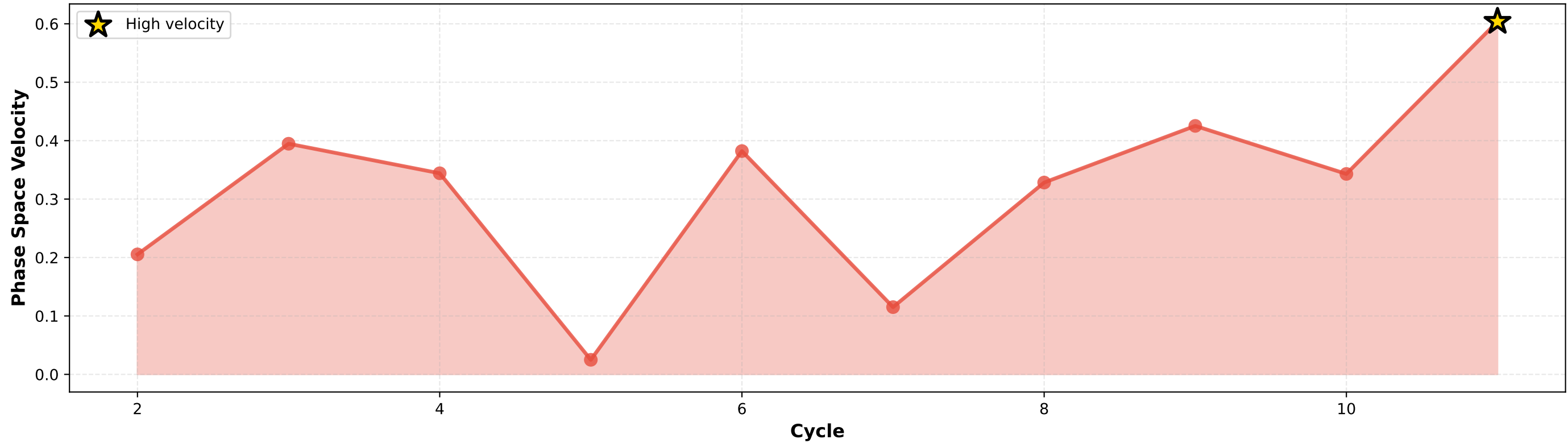
(B) S-V Projection



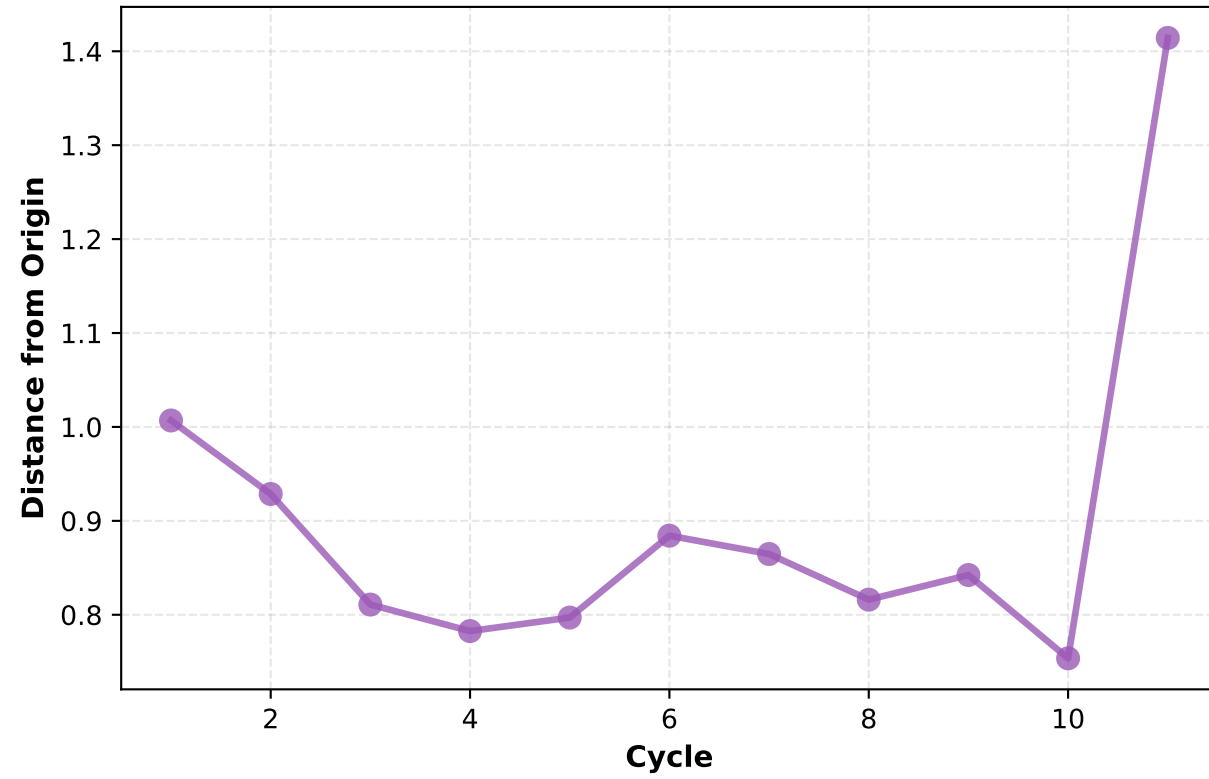
(C) S-P Projection



(D) Phase Space Velocity
Rate of Change in S-V-P Space



(E) Phase Space Distance



3D PHASE SPACE STATISTICS:

TRAJECTORY METRICS:
Total cycles: 11
Start point: S=0.501, V=0.122, P=0.000
End point: S=0.841, V=0.035, P=0.712

Δ Stability: 0.340 (67.8%)
 Δ Variance: -0.087 (71.2% reduction)
 Δ Phase coherence: 0.712

VELOCITY ANALYSIS:
Mean velocity: 0.3167 ± 0.1563
Max velocity: 0.6038 (cycle 11)
Total path length: 3.167
High velocity events: 1 (>0.4730)

TRAJECTORY SHAPE:
Mean curvature: 2.6656 rad
Max curvature: 4.9372 rad
Straightness: 0.251

CONVERGENCE METRICS:
Distance to target (final): 1.414
Convergence rate: -0.0370 per cycle
Monotonic improvement: 50.0% of cycles

CRITICAL TRANSITIONS:
Number of jumps ($\Delta S > 0.1$): 3
Cycles with jumps: [1, 5, 10]