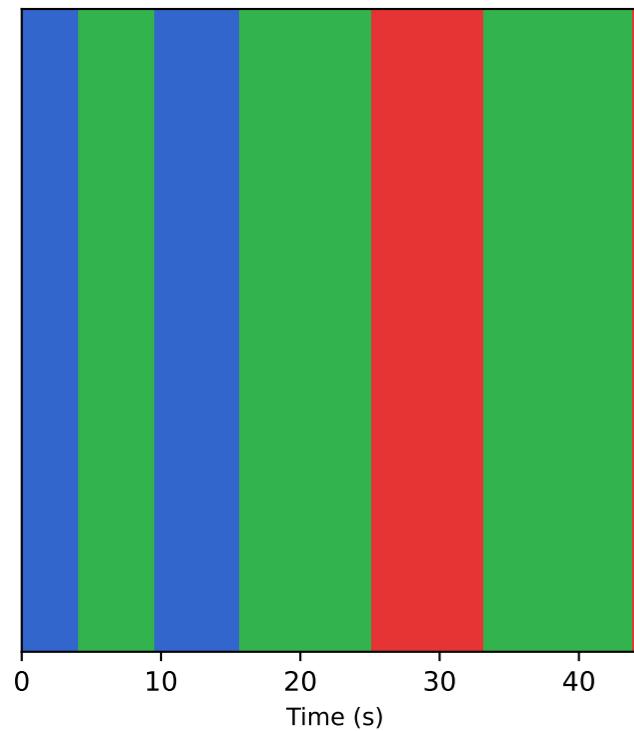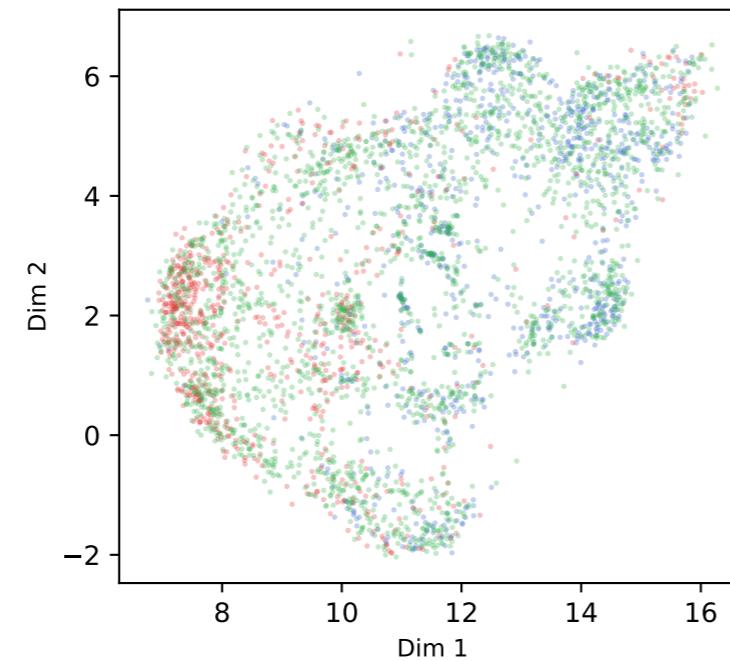**Simulation Validation: The Dynamical Microscope Recovers Known Structure**
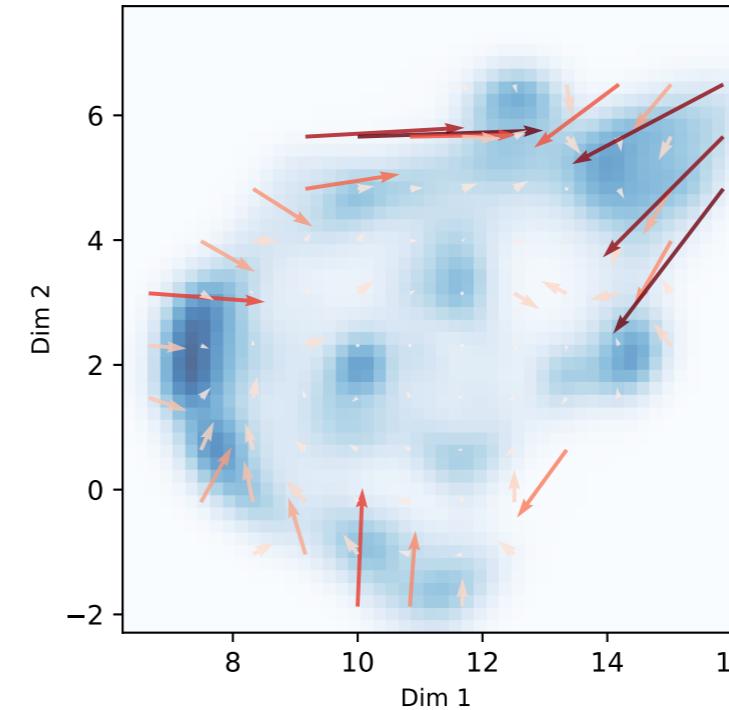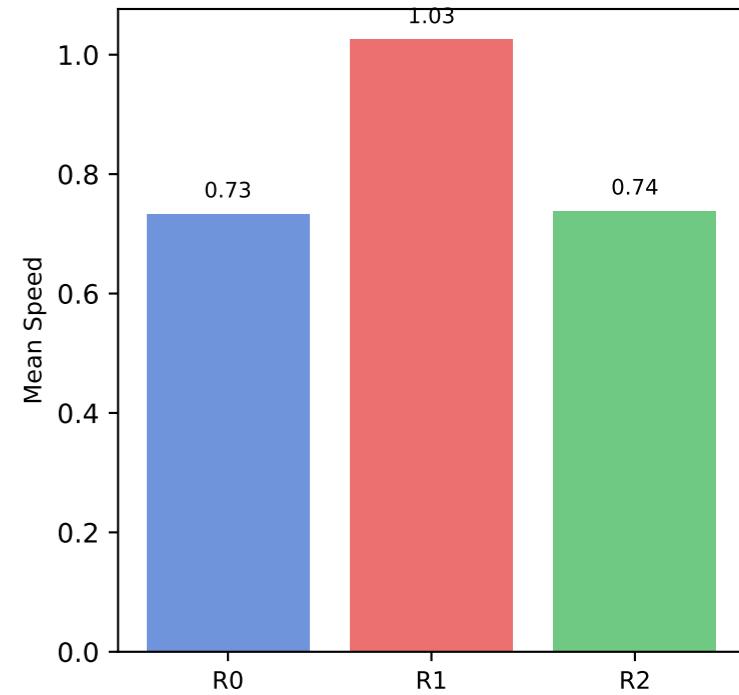
A) Ground-Truth Regime Sequence

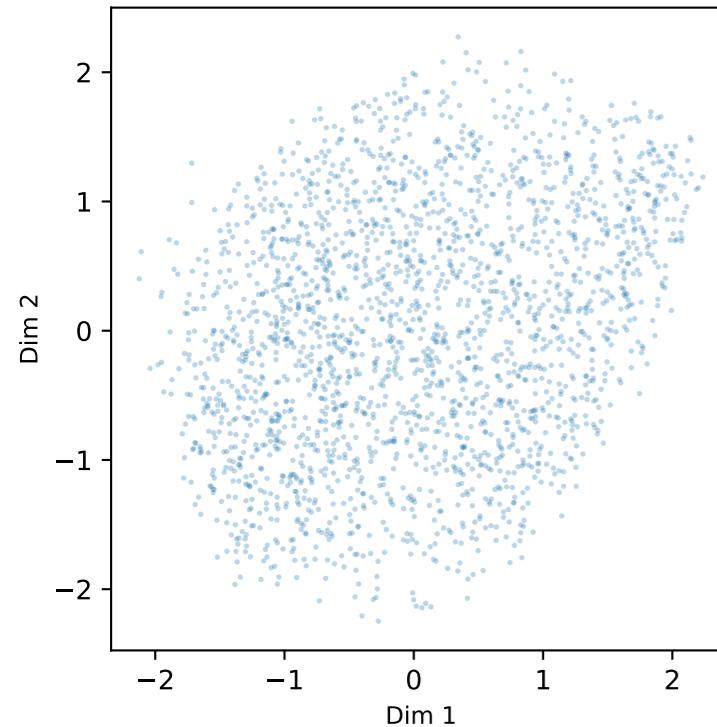B) Embedded Trajectories (colored by regime)
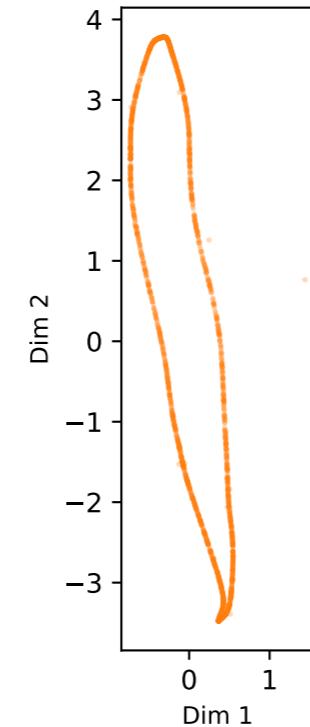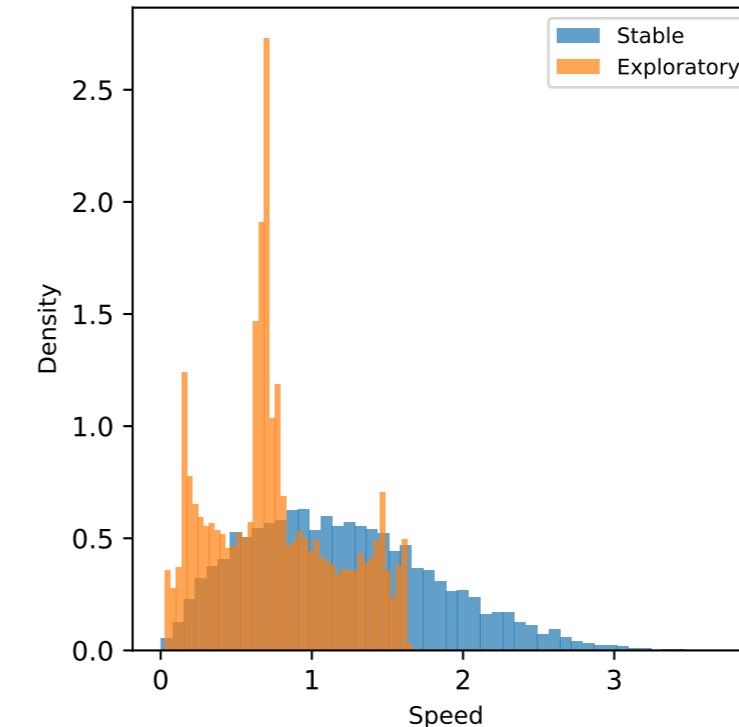
C) Density + Flow Field

D) Speed by Regime

E) Stable Attractor

F) Exploratory Attractor

G) Speed Distribution

H) State-Space Coverage