State:	$\sigma(t) = (\psi, \rho, \omega, \chi, \tau)^{\mathsf{T}} \in \mathbb{R}^5$
Potential:	$V(\sigma) = \frac{1}{2}\|\sigma\|^2 + \eta\, H(\sigma) - \lambda\, F(\sigma, \sigma^*)$
Entropy:	$H(\sigma) = -\sum_{i=1}^{5} p_i \ln p_i, \quad p_i = \frac{\lvert\sigma_i\rvert}{\sum_j \lvert\sigma_j\rvert}$
Coherence:	$F(\sigma, \sigma^*) = \sum_{i=1}^{5} \sigma_i \sigma_i^*$
Dynamics:	$\dot{\sigma} = -\nabla_\sigma V(\sigma) + R(\sigma, t) + \sum_i O_i(\sigma, t)$
Operators:	$\begin{cases} O_{\mathrm{DK}} = \mathcal{R}_{\psi\rho}(\frac{\pi}{2})\, \mathcal{R}_{\omega\chi}(\frac{\pi}{2}) \\ O_{\mathrm{SW}} = (1 + \beta(m_c - m))\, \mathbb{I}_5 \\ O_{\mathrm{PI}} = (1 - \kappa)\, \mathbb{I}_5 \\ O_{\mathrm{WT}} = (\mathbb{I}_5 + k\, \hat{e}_\tau \otimes \hat{e}_\tau) + k\, f(t) \hat{e}_\tau \end{cases}$
Resonance:	$m = \frac{F(\sigma, \sigma^*)}{\|\sigma\| \|\sigma^*\|}, \quad m \geq m_c \Rightarrow \ddot{\sigma} = -\nabla_\sigma V$
Energy:	$E(t) = \frac{1}{2}\|\dot{\sigma}\|^2 + V(\sigma), \quad \frac{dE}{dt} = -\|\nabla_\sigma V\|^2 + \dot{\sigma} \cdot R$
Stability:	$\mathbb{T}_{ij} = \frac{\partial^2 V}{\partial \sigma_i \partial \sigma_j}, \quad \lambda_i = \mathrm{eig}(\mathbb{T}),$ $0 < \lambda_i < 1 \Rightarrow \text{stable}, \ \det \mathbb{T} = 0 \Rightarrow \text{singularity}$
Projection (visual):	$\mathbf{x} = \mathbf{P}\sigma, \ \mathbf{P} = \frac{1}{\sqrt{5}} \begin{pmatrix} 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & 0 \\ 1 & 0 & -1 & 0 & 1 \end{pmatrix}$
Color Encoding:	$(H, S, V, \alpha) = \left(\frac{1}{2}(1 + \Phi_E),\, m,\, 1 - e^{-V},\, \lvert\Phi_E\rvert\right), \ \Phi_E = \frac{E_K - E_P}{E_K + E_P}$
Integration:	$\sigma_{t+1} = \sigma_t - \frac{dt}{2}[\nabla_\sigma V(\sigma_t) + \nabla_\sigma V(\sigma_t - dt \nabla_\sigma V)] + dt(R + \sum_i O_i)$
Summary:	$\begin{cases} \text{TIC: } \nabla_\sigma V = 0 \\ \text{Singularity: } \det \mathbb{T} = 0 \\ \text{Energy: } E = \frac{1}{2}\|\dot{\sigma}\|^2 + V \\ \text{Projection: } \mathbf{x} = \mathbf{P}\sigma \end{cases}$

$\eta = 0.05,\ \lambda = 0.9,\ \beta = 0.1,\ k = 0.15,\ dt = 0.05$ **All derivatives, transformations, and mappings are defined within this sheet.**