

PARALLAX Exchange Clearinghouse

Computational Notebook and Software Package - Zenodo v0.1.0

Overview

This software package provides an executable computational notebook and reference module for PARALLAX Exchange Clearinghouse. The package turns the documentation into a runnable artifact: phi constants, heartbeat calculations, Kuramoto coherence gates, production-engine registry summaries, clearinghouse netting examples, and hash-based compute receipts.

Component	Included file	Purpose
Notebook	PARALLAX_Computational_Notebook.ipynb	Runnable computational documentation
Reference module	parallax_core.py	Phi, Kuramoto, netting, receipts
Citation	CITATION.cff	Citable software metadata
Zenodo	.zenodo.json	Upload metadata
Overview	PARALLAX_Software_Overview.pdf	Human-readable package summary

Executable demonstrations

Heartbeat formula computed in notebook: $\phi^4 * (1000 / 7.83 \text{ Hz}) = 875.364 \text{ ms}$. The notebook also runs a Kuramoto coherence gate for 24 engines, summarizes the production-engine registry, demonstrates multi-asset netting, and creates deterministic SHA-256 compute receipts.

Zenodo upload notes

Upload the ZIP package as software. After publication, update the DOI in the notebook, README, and CITATION.cff. The .zenodo.json file contains the software metadata and related GitHub repository link.

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