Project CODE-GEO: Proof of Work & Digital Integrity

Shane Hartley
darian.frey@yahoo.com

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Overview

To ensure the immutability of the predictions contained within Project CODE-GEO—specifically the **2.816 ms echo** and the **355.11 Hz resonance**—this release has been cryptographically locked. This protocol prevents post-hoc adjustments to the theoretical framework following future LVK data releases.

1. Universal Identifiers

- **Zenodo DOI:** 10.5281/zenodo.18828511
- **Version:** 3.1.0 (Feb 2026 Calibration)
- **Repository:** github.com/Darian-Frey/CODE-GEO

2. Cryptographic Fingerprints (SHA-256)

The following hashes represent the "frozen" state of the theory at the time of archival. These can be verified by running the `sha256sum` command against the downloaded files.

Document / Script	SHA-256 Integrity Hash	Purpose
`PRD_Submission_V3.pdf`	`eda3b3fd...9b84`	Formal Theoretical Foundation
`Verification_V3.pdf`	`3a0011b1...0974`	Empirical Data & Spectral Table
`SUMMARY.pdf`	`72c7620e...1b3a`	Briefing for LSC Academic Audit
`echo_simulator.py`	`db3e9cb6...ab4f`	2.816 ms Delay Verification
`horizon_mod.py`	`26bb01ff...94c3`	Geometric Shell Stability Check

3. Replication Protocol

Independent researchers are invited to run the verification engine to reproduce the results directly from the Hilbert-Complexity Action derivation:

```
git clone https://github.com/Darian-Frey/CODE-GEO.git
cd CODE-GEO/simulations
python3 echo_simulator.py --mass 62.7
```

This document serves as a permanent record of the V3.1 theoretical lock.