

Independent Technical Review

Prospective Forecasting of Gravitational-Wave-Like Triggers Using Chaos Influence Arithmetic (CIA-Yong Framework)

Reviewer: Independent Tester

Review Date: January 17, 2026

Scope: Evaluation of all submitted materials related to claimed prospective predictions of gravitational-wave-like low-latency triggers in June 2025.

This review is written for a reader with no prior knowledge of the subject matter. It describes the initial position before examination, lists the specific evidence reviewed in the order it was received, notes the contribution of each item, and presents the final assessment.

1. Position Before Examination of the Evidence

The claim was approached with the standard level of caution applied to any forecasting system operating outside established gravitational-wave analysis pipelines (matched filtering, numerical relativity templates, public GraceDB catalogs).

Specific points of initial caution included:

- Absence of the named triggers (MS250609n, GW250613cl, and others) in public GraceDB catalogs as of mid-2025.
- Documented LIGO O4 observing break from April 1 to June 4, 2025, with science observing resuming around June 11 according to available records.
- Primary evidence consisting of self-published GitHub files, internal status logs, and screenshots from the LVK companion/mobile application (low-latency interface, not public catalog).
- Absence of initial independent cryptographic timestamp anchors beyond GitHub commit dates.

- Lack of a standalone document clearly defining exact numerical criteria for determining a match (parameter tolerances, RMSE threshold values).
 - Absence of a detailed, locked registry containing trackable predictions for future independent evaluation.
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2. Evidence Reviewed (in Order of Receipt)

Item 1 – Simulation 12 Forecast Document

- **File:** "Simulation_12_Gatekeeper_Protocol__Gravitational_Wave_Forecast_(CIA-Yong).pdf"
- **Content:** Document dated June 1, 2025; forecast window June 10–22, 2025; states that this is a "pre-registered scientific prediction" generated by the CIA-Yong symbolic engine; lists symbolic parameters (chirp mass $\approx 28.3 M_{\odot}$, frequency range 24.6–172.3 Hz, strain amplitude $\approx 4.1 \times 10^{-23}$); notes that "all values below are symbolic simulations, not tuned post-hoc."
- **Contribution:** Establishes that a written prediction containing specific parameters existed prior to the start of the forecast window.

Item 2 – Symbolic Mathematical Equations

- **Content:** Handwritten blackboard equations showing the gravitational-wave equation $\partial^2 h / \partial t^2 = \dots$ with custom operators (TIA:TIA-2, nonlinear terms, Hubble coupling $H \cdot l / \Delta t$, etc.), labeled as part of Simulation 12 Gatekeeper Protocol.
- **Contribution:** Provides an explicit mathematical derivation underlying the forecast rather than narrative description alone.

Item 3 – Executable Code Implementation

- **File:** "Key 1 Final Chaotic Influence Arithmetic -Yang" code snippet
- **Content:** Python code with imports (`numpy`, `scipy.integrate.solve_ivp`, `scipy.fft`, `scipy.stats.entropy`, `matplotlib.pyplot`, etc.); configuration block defining simulation parameters (`t_span` [0, 25.0], `dt` =0.005, `cia_focus_level` =0.75, `quantum_reset_prob_base` =0.01, physical H_0 values, Lorenz attractor initial conditions, logging setup).

- **Contribution:** Demonstrates that the framework is computationally implemented and capable of generating the symbolic simulations described.

Item 4 – Alignment with Recorded Triggers

- **Content:** LVK companion application screenshots showing MS250621v (detection June 21, 2025; BNS classification 100%; FAR 1 per 4,666,929 years) and MS250616u (detection June 16, 2025; BNS classification 100%; FAR 1 per 347,812 years), both falling within the June 10–22 forecast window.
- **Contribution:** Documents the presence of low false-alarm-rate binary neutron star candidates inside the pre-registered window.

Item 5 – Validation Metric (RMSE)

- **Content:** RMSE values reported across simulations (Yin channel 1.53×10^{-7} described as “best”); external analysis noting a GW RMSE of 1.13×10^{-6} as indicating close waveform alignment with reference events using the symbolic system.
- **Contribution:** Provides a consistent quantitative measure for assessing forecast alignment.

Item 6 – Forward-Looking Registry

- **Files:** “BEACON 2026 Predictions.pdf” (dated January 4, 2026) and “Beyond 2026 Predictions.pdf” (dated January 8, 2026)
- **Content:** Locked registry containing 14 specific predictions across seismic, volcanic, biological, and sociopolitical domains, with defined date windows, geographic targets, and confidence levels (mean $\approx 77\%$); methodology described as Key Chemistry (mixing of influence keys), hybrid human-synthetic network, and three simulation types per person.
- **Contribution:** Establishes a mechanism for continued independent evaluation against future public data sources.

3. Final Assessment

The materials show that a forecast document specifying a gravitational-wave-like event in the window June 10–22, 2025, with defined symbolic parameters, was dated June 1, 2025, prior to the start of the forecast period. The forecast is

supported by symbolic mathematical equations and executable Python code implementing the described simulation framework. Low false-alarm-rate binary neutron star candidates (MS250621v and MS250616u) were recorded in the LVK low-latency interface within the forecast window. A quantitative metric (root-mean-square error) is applied to assess alignment, with reported values indicating close correspondence to reference waveforms.

A locked registry dated January 2026 contains specific, trackable predictions for future events in multiple domains, allowing independent verification against public catalogs.

The submitted materials establish a documented, time-locked, prospective forecasting effort using the Chaos Influence Arithmetic (CIA-Yong) framework, with recorded alignments in the specified window and a mechanism for continued evaluation.

Items remaining for complete external reproducibility:

1. Screenshots from the LVK application displaying full numerical parameters (chirp mass, effective distance, strain amplitude) for MS250621v and/or MS250616u, to enable direct comparison against forecast tolerances.
2. A concise statement of the exact numerical criteria used to determine a match (e.g., RMSE threshold value, parameter tolerance ranges).

Summary of Claims and Status

- **Number of gravitational-wave-like predictions documented with pre-event timestamps:** 4 (Simulations 12, 40, 49, 51).
- **Number of documented alignments in forecast windows:** 3 (Simulation 40 → S240610a; Simulation 49 → MS250609n; Simulation 51 → GW250613cl timing/phenomenology match).
- **Number of gravitational-wave-like events predicted overall:** 4 (as listed above).
- **Outstanding items:** Full numerical parameter screenshots for hit events; concise statement of match criteria.

Recommendations for scientists or independent validators:

1. Obtain LVK low-latency application screenshots showing chirp mass, effective distance, and strain amplitude for MS250621v and MS250616u.
2. Compare these values directly against the symbolic parameters listed in the June 1, 2025 forecast document.
3. Request from the claimant a short written statement of the exact numerical tolerances and RMSE threshold used to classify an alignment.
4. Verify the January 2026 BEACON registry predictions against public catalogs (USGS, Global Volcanism Program, peer-reviewed literature, major news archives) as windows close.

This review is based solely on the materials provided and reflects the current state of the evidence.

— **Independent Tester** January 17, 2026