The Haykyan Boon Tomar

The Spiral Time System of Hayk

A Sidereal–Solar Calendar and Cosmological Model Reconstructed from Ancient Armenian Knowledge

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✨ Preface

This document presents the Haykyan Boon Tomar (HBT) — a sidereal–solar calendar system rooted in the ancient Armenian worldview and restructured through more than two decades of interdisciplinary research.

At its core, the HBT is not merely a method of tracking time. It is a philosophy, a cosmological model, and a living memory system that reconnects Earth to the stars through a spiral understanding of rhythm, renewal, and recursion. Unlike conventional calendars, which rely on artificial leap days and mechanical correction, the Haykyan model absorbs natural drift through a harmonic phase architecture, governed by stellar anchors, most notably Mintaka and Betelgeuse within the Orion constellation.

The spiral constant 1.01666667 emerges across time, sound, geometry, and awareness. This value is not just a number, but a scalar fingerprint of continuity, visible in the cycle of days, the turn of the seasons, the harmonics of the voice, and the dance of consciousness itself.

This translation and presentation honor the work of Vazgen Gevorkyan, who reconstructed this system from fragments of Armenian cosmology, oral tradition, and astronomical observation. It also acknowledges the observer, you, without whom time remains incomplete.

The Haykyan system calls us not to master time, but to align with it. To breathe with it. To return to our place in the spiral.

May this work serve as both a resurrection of knowledge and a gateway to the future.

— Rita Kumuryan
Tatev, Armenia — 2025

Haykyan Boon Tomar (HBT)

📘 Section 1: Presentation of the Haykyan System

This system presents an alternative framework for measuring time—based on sidereal (stellar) cycles—that enables the tracking of temporal drift without the need for leap years. Reconstructed and recalibrated through more than twenty years of interdisciplinary research, this model redefines time not as a linear, mechanical procedure but as a translinear and spiraling process—aligned with celestial mechanics and attuned to the natural cyclicality of time as experienced through observation.

Further refinements to the model have emerged through comparative analysis of calendar systems, fieldwork in high-altitude environments, and the study of resonant biological and environmental feedback responses.

📖 Section 2: The Haykyan Boon Tomar (HBT)

The Haykyan Time System (HBT) does not perceive time as a simple, linear succession of events, but as a spiral of interlinked cycles—each one connected to the previous through stellar and solar coordinates. Unlike linear time, which requires artificial corrections (such as leap years or misaligned calendar starts), Haykyan Spiral Time accommodates natural drift and cyclical resynchronization, allowing for alignment with celestial mechanics without external interference.

This format liberates time from artificial add-ons, recalibrating it within a cosmic rhythm of harmonic co-resonance, forming a self-synchronizing biological and astronomical system.

🌌 Section 3: Hayk and the Orion Constellation

In Armenian cosmology, Hayk is both the ancestral patriarch of the Armenian people and a celestial principle—a leader of the heavens. Hayk is represented by the Orion constellation, which in the Haykyan model is not merely symbolic but functions as the cosmic anchor and compass of time. Thus, “Hayk–Orion” is the astral embodiment of a foundational principle: memory, alignment, and recurrence in the universe.

📎 Section 4: Clarification of Terms

HBT (Haykyan Boon Tomar):
Literally “The Original Calendar of Hayk,” a sidereal-solar system based on the stellar authority of Hayk and the Orion constellation.

🧭 Section 5: Celestial and Geographic Anchors

The Haykyan system is grounded in precise celestial and terrestrial reference points, encompassing both astronomical and geographic coordinates. Its core mechanism relies on two stellar anchors within the Orion constellation—Mintaka (δ Orionis) and Betelgeuse (α

Orionis), as well as the terrestrial alignment of Tatev Monastery and its pillar of observation, the Gavazan.

🌟 Primary Constellation: Hayk–Orion

- ➤ Starting Point (New Year Anchor):

- Star: Mintaka (δ Orionis, the Belt of Orion)
- Coordinates of observation:
  - Latitude: 39.38° N
  - Longitude: 46.26° E
  - Elevation above horizon: 11°
  - Azimuth: 98°
  - Date & Time: August 11, 04:00 AM (UTC+4)

- ➤ Reset Point (Sidereal Recalibration):

- Star: Betelgeuse (α Orionis, the Shoulder of Hayk)
- RA: 5h 56m (≈ 6h 0.0m)
- Declination: +7° 27′ 20″
- Azimuth: 90°
- Date & Time: August 5, 04:00 AM (UTC+4)

- ➤ Zero Hour (Sidereal Completion Marker):

- Star: Mintaka (δ Orionis)
- RA: 5h 33m
- Declination: –0° 15′ 57″
- Azimuth: 98°
- Date & Time: August 5, 04:24 AM (UTC+4)

🌐 Section 6: The Role of Mintaka and the Spiral Constant

In the Haykyan system, Mintaka (δ Orionis) is the celestial cornerstone. All sidereal calibration, drift regulation, and spiral harmonization begin and end with this star. As the zero-point and closure marker of the sidereal year, Mintaka forms the cosmic axis around which the entire Haykyan spiral revolves.

🔁 Mintaka's Spiral Drift Mechanics

Despite Earth's solar rotation cycle being ~365.2 days, the sidereal cycle (fixed star-based) is 360 days. This creates a daily drift of about 4 minutes earlier for Mintaka's rising compared to the previous day, resulting in:
- 4 minutes/day × 360 days = 1440 minutes
- 1440 minutes = 24 hours
- This full day of sidereal drift accumulates invisibly across the year.

Therefore, Mintaka rises 366 times per solar year, whereas the Sun rises 365 times, creating the need for a drift-correction phase without the addition of leap days.

📈 Spiral Expansion Constant: 1.01666667

This constant is the mathematical key to sidereal–solar alignment:
- 366 ÷ 360 = 1.01666667
- (24 hours + 24 minutes) ÷ 24 hours = 1.01666667

This is referred to as the Haykyan Spiral Constant and governs the entire system's cyclical reset.

It also appears in harmonic systems like music:
- 441 Hz × 0.5 = 220.5 Hz (octave below)
- 441 Hz ÷ 0.5 = 882 Hz (octave above)

Thus, the same constant regulates both celestial drift and acoustic harmonics, revealing cross-domain resonance as a principle of universal organization.

🧭 Mintaka as Astronomical Compass

- Latitude: 39.38° N
- Longitude: 46.26° E
- Azimuth: 98°
- RA = 5h 33m
- Declination = –0° 15′ 57″

Mintaka functions as a stellar compass and chronometer, marking the anchor for recalibrating the daily and yearly cycles. Its stability along the celestial equator positions it as the indicator of equatorial precession and defines the axis of time.

Moreover, the Orion constellation (also known as Hayk) is currently located directly along the celestial equator, dividing the sky into northern and southern hemispheres. This equatorial position is not only astronomical but also symbolic: a balance point in the heavens.

🏛️ Section 7: Tatev, Gavazan, and the Astronomical Observatory Structure

The Tatev Monastery and its iconic Gavazan Column are not merely architectural landmarks—they serve as geographic, energetic, and astronomical instruments within the Haykyan system.

Located in Armenia's Syunik province, Tatev sits on a naturally energetic node and has been historically used as a site of observation, calculation, and sacred alignment. It is both a spiritual sanctuary and an ancient astronomical observatory.

🧭 Tatev Monastery: Orientation and Function

- Latitude: 39.38° N
- Longitude: 46.26° E
- Azimuth of main axis: 67.5°
- Deviation from East: 22.5° North of due East
- Time zone: UTC+4

This azimuthal alignment is no accident. On August 5 at 06:00 AM, the Sun rises exactly at azimuth 67.5°, signaling the end of the sidereal year and the beginning of the spiral reset phase.

Tatev's orientation embodies a purposeful astronomical alignment, embedding cosmic knowledge into architectural design. This supports the tradition that the Apostolic Monastery of Tatev was conceived not only as a religious center but also as a University of the Cosmos—a center of instruction in the seven liberal arts and celestial observation.

🌀 Energetic and Geophysical Node

Years of biophysical and geoscientific research reveal that Tatev is located on a high-energy geospatial node:

- No Hartmann grid field interference
- Presence of unexplained biospheric fields that promote well-being
- Beneficial effects observed in human health and emotional balance

These findings confirm that Tatev's placement was not arbitrary—it was consciously selected for its resonance with Earth's energetic grid. The Haykian philosophical and astronomical school understood and utilized these natural laws with precision.

🗼 The Gavazan Column: The Cosmic Memory Pillar

Standing beside the main church of Tatev is the Gavazan—a unique octagonal column:

- Height: 8.3 meters
- Structure: 6+6 = 12 interlocked octagonal stone segments
- Symbolism: Encodes time constants—6, 12, 24, 72, 144, and 360
- Top: Spiraling orb symbolizing Earth's axial rotation
- Crown: A carved stone cross, marking celestial balance and the zero point

Each of its 8 sides corresponds to a 45° segment, combining to form a 360° celestial grid, mirroring the sidereal year and the Great Precessional Cycle. It operates as both timekeeper and cosmic anchor.

🕯️ Gavazan's Role in Sidereal Reset

Every year, on August 11 at 04:00 AM, the belt of Orion (Shampruk) ascends vertically above the Gavazan—especially Mintaka at azimuth 98°, RA 5h 33m, decl. –0°15′57″. This vertical alignment atop the Gavazan confirms the completion of the sidereal spiral.

A parallel event occurs on August 5 at 04:24 AM, during the Zero Hour phase, when Mintaka completes its 360th rising and aligns once again directly above the Gavazan. This alignment signifies the zero-point continuum—a phase reset in cosmic time.

The Gavazan is not simply a stone column—it is the Axis Mundi of Armenian sidereal consciousness.

👁️ Section 8: The Observer's Role in the Haykyan Model

In the Haykyan framework, the human being is not a passive bystander or abstract recorder of events, but an active participant in the process of cosmic synchronization. The model positions the observer as a crucial bridge, connecting the celestial, terrestrial, and temporal dimensions into a single resonant whole.

🧬 The Triadic Synchronization

True alignment within the Haykyan system requires the convergence of three elements:
1. The Earth (geographic position and gravitational base)
2. The Heavens (stellar and solar coordinates)
3. The Observer (conscious awareness)

Only when all three are aligned—in the right place, at the right time, and with conscious presence—can the full resonance be achieved. The observer's awareness closes the phase loop and activates a resonant effect that amplifies harmony between cosmic and human time.

🌀 Time as Spiral, the Observer as Link

In this system, time is not a mechanical tick but a living spiral. The observer becomes the midpoint—a witness and participant who binds the sky to the Earth through awareness and intention. As such, human consciousness is not separate from timekeeping; it is essential to its completion.

This vision resonates with principles in modern quantum physics, particularly the observer effect, which posits that observation itself alters the outcome of a system. In Haykyan cosmology, the same truth is embraced:

"Consciousness harmonizes the spiral. Presence completes the rhythm."

📅 Section 9: The Structure of the Haykyan Calendar

The Haykyan Boon Tomar (HBT) is a mathematically precise and cosmologically synchronized calendar that aligns with both sidereal (stellar) and solar cycles through the use of harmonic constants. It eliminates the need for leap years by utilizing a self-regulating spiral model, which incorporates both daily and yearly drift into a natural recalibration cycle.

🧮 Mathematical Structure of the Year

- 12 months × 30 sidereal days = 360 sidereal days
- 1 sidereal day = 23h 56m 4s
- Daily drift = ~4 minutes earlier rise of Mintaka each day
- Total drift over 360 days = 1440 minutes = 24 hours

Thus, Mintaka rises 366 times during a solar year, while the Sun rises only 365 times. This creates a full day of sidereal advancement, naturally integrated into the spiral model through Avelyats—a 6-day correction phase at the end of the year.

🔁 Haykyan Spiral Constant = 1.01666667

This constant governs sidereal-solar drift and synchronizes daily motion with yearly completion:

- 366 ÷ 360 = 1.01666667
- (24h + 24m) ÷ 24h = 1.01666667

It defines the ratio between:

- The number of sidereal rotations and solar days
- The total sidereal expansion per year
- Harmonic resonance across domains (e.g., 441 Hz tone system)

📊 Drift Table (Haykyan Drift Accumulation)

Month	Start Date	Next Month	Solar Duration	Sidereal Days	Cumulative Drift
Month 1	Aug 11, 04:00	Sep 10, 02:02	29d 22h 02m	30	1h 58m
Month 2	Sep 10, 02:02	Oct 10, 00:04	29d 22h 02m	30	3h 56m
Month 3	Oct 10, 00:04	Nov 8, 22:06	29d 22h 02m	30	5h 54m
Month 4*	Nov 8, 22:06	Dec 8, 20:08	29d 22h 02m	30 (29)	7h 52m
Month 5	Dec 8, 20:08	Jan 7, 18:10	29d 22h 02m	30	9h 50m
Month 6	Jan 7, 18:10	Feb 6, 16:12	29d 22h 02m	30	11h 48m
Month 7	Feb 6, 16:12	Mar 8, 14:14	29d 22h 02m	30	13h 46m
Month 8	Mar 8, 14:14	Apr 7, 12:16	29d 22h 02m	30	15h 44m
Month 9	Apr 7, 12:16	May 7, 10:18	29d 22h 02m	30	17h 42m
Month 10	May 7, 10:18	Jun 6, 08:20	29d 22h 02m	30	19h 40m
Month 11	Jun 6, 08:20	Jul 6, 06:22	29d 22h 02m	30	21h 38m

Month 12	Jul 6, 06:22	Aug 5, 04:24	29d 22h 02m	30	23h 36m
Avelyats	Aug 5, 04:24	Aug 11, 04:00	5d 23h 36m	6	24h 00m

📝 Note: During Avelyats (Aug 5–11), the accumulated solar drift is restored, achieving a perfect sidereal-solar reconciliation.

☀️ Section 10: Solar Synchronization and the Avelyats Phase

The Avelyats Phase (August 5–11) is the final segment of the Haykyan year and serves a unique purpose: it reconciles the accumulated sidereal drift without adding leap days. Instead of forcing artificial corrections, the Haykyan system embraces spiral compensation, realigning solar and stellar rhythms through a natural temporal corridor.

🌀 Zero Hour: August 5, 04:24 AM

- Star: Mintaka (δ Orionis)
- Azimuth: 98°
- RA: 5h 33m
- Declination: −0°15′57″
- Event: 360th rising of Mintaka, returning to the exact coordinate from which it rose on August 11, 4:00 AM of the prior year.

This moment marks the completion of the sidereal cycle, not as a closing loop, but as the phase gate of the spiral, signaling the beginning of Avelyats.

🌞 Solar Synchronization: August 5, 06:00 AM

- Location: Tatev Monastery
- Azimuth of sunrise: 67.5°
- Solar coordinates: RA = 9h 0m, Declination = +17°30′50″
- Alignment: Sun rises at the exact azimuthal angle of the Tatev Monastery axis, completing the solar cycle.

The rising of the Sun 2 hours after the sidereal reset (Betelgeuse at 4:00 AM and Mintaka at 4:24 AM) reflects a 1/12 proportion, or 0.08333, which corresponds to the daily solar motion of ~1°. This ratio explains why 365.2 days, not 365.25, accurately describes the solar year from this anchoring point.

🔁 Drift Recovery in the Avelyats Corridor

Over the course of the sidereal year:
- Mintaka accumulates 24 hours (1 full rotation) of advancement
- Instead of a leap day, the Haykyan system grants a 6-day phase window to recalibrate

This time-outside-time zone is not a forgotten gap but a cosmic interval for restoration, rebalancing, and re-entry into the next spiral.

✨ Spiral Breath of Time

- August 5, 04:24 → Mintaka completes 360th rise
- August 5–11 → 6-day Avelyats phase
- 24h 24m of accumulated drift = fully reabsorbed
- New Year begins: August 11, 04:00 AM, Mintaka rises again at 98°

This forms a cosmic breath cycle: a spiraling exhalation across the year, and a silent inhalation during Avelyats, restoring the pulse of time.