

The Moonth

A Symbolic-Phenomenological Model of Cyclical Time

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Core Phenomenological Observation

Human consciousness, when observed under conditions of minimal external stimulation (silence, fasting, sustained attention), organizes itself into recurring cycles of approximately 29 days.

Each cycle consists of **five distinct phases**, and each phase lasts **137 hours**.

137 hours — the same numerical value as the denominator of the fine structure constant ($\alpha \approx 1/137.036$) — emerges repeatedly as the irreducible temporal quantum of lived experience.

This is not claimed as a physical law, but as a precise symbolic anchor:

$$\alpha \cdot \Psi(t) \approx 1$$

The model treats matter (governed by α) and consciousness (structured in 137-hour phases) as reciprocals within the same symbolic framework.

Buffer Physics and Impedance of Time

Phase transitions are not instantaneous. The system requires time to shift states — an experiential analogue to inductance in electrical circuits.

- Total transition overhead (“buffer”): **11 hours** distributed across the five phase boundaries.
- This creates a natural **impedance of time**: rapid or forced change meets resistance, while aligned pacing flows smoothly.
- The asymmetry (longer rise arc ≈ 18 days, shorter fall ≈ 11 days) reflects golden ratio proportions ($18/11 \approx \phi \approx 1.618$).

Together, the 137-hour phase quantum and 11-hour buffer yield one complete symbolic Moonth of **696 hours ≈ 29 days**.

The Five Phases (Invariant Sequence)

1. **Opening** – Field expands, receptive state, emergence of potential.
2. **Rise** – Direction crystallizes, momentum builds.
3. **Expansion** – Peak coherence, maximum flow and expression.
4. **Descent** – Energy withdraws, release and contraction.
5. **Integration** – Processing, consolidation, preparation for next cycle.

The sequence is invariant and irreversible within a cycle.

Dual Symbolic Scaling Systems

- **ϕ -scaling** (biological/experiential):

$$T(n) = 137h \times \varphi^n$$

- **60-scaling** (civilizational/historical):
 $T(n) = 137h \times 60^n$

Both anchored to the same 137-hour reference quantum.

Symbolic bridge:

$$137 \times \phi^2 / 6 \approx 60 \text{ (relative error } \sim 0.0034 \text{ or } 0.34\%)$$

Structural Resonances (Numerical Proximities)

Selected observed rhythms and model-derived values:

Resonance	Observed Value	Calculated Value	Proximity	Domain
BRAC (Basic Rest-Activity Cycle)	90 minutes	92.36 minutes	0.97	Neurophysiology
Menstrual cycle	28.5 days	28.54 days	0.99	Reproductive biology
Human gestation	268 days	264 days	0.96	Human development
Generational cycle	29 years	29 years	1.00	Generational time

These are presented as candidates for symbolic alignment, not empirical proofs.

Operational Principles (Leges Undecim)

1. **Cyclicity** – Experience unfolds in recurring cycles independent of calendars.
 2. **Quantization** – The cycle is modeled as five phases of $\sim 137\text{h}$ each.
 3. **Asymmetry** – Expansion and contraction are not symmetric.
 4. **Conservation** – Energy redistributed across the cycle balances out.
 5. **Transition** – Phase changes require time and cannot be instantaneous.
 6. **Resonance** – Individual cycles may align with larger rhythms.
 7. **Invariance** – Phase order does not change within a cycle.
 8. **Scalability** – The same pattern can model multiple time scales.
 9. **Perturbation** – External stress shifts timing but not structure.
 10. **Integration** – Completion of a cycle yields consolidation.
 11. **Interpretation** – Meaning arises from use, not assertion.

Python Implementation

111

THE MOONTH SOURCE CODE

A Symbolic-Phenomenological Model of Cyclical Time

$\alpha \cdot \Psi(t) \approx 1$

*This code does NOT claim physical laws or empirical proof.
It encodes a symbolic structure designed to model recurring
temporal regularities observed across lived experience,
biological rhythms, and historical measurement systems.*

The structure was constructed as a lens – not discovered as fact.

Kamil Wójcik • 2025

'''

```

import math
from enum import Enum
from dataclasses import dataclass
from typing import List

# PART I: SYMBOLIC CONSTANTS
class KernelConstants:
    """Symbolic anchors used throughout the model."""
    ALPHA_INVERSE = 137.036
    ALPHA = 1 / ALPHA_INVERSE
    PHI = (1 + math.sqrt(5)) / 2
    PHI_SQUARED = PHI ** 2
    PHI_INVERSE = 1 / PHI
    N_PHASES = 5

    @classmethod
    def coherence_check_60_bridge(cls):
        """Symbolic proximity between  $\alpha^{-1}$ ,  $\phi^2$ , and base-60."""
        calculated = cls.ALPHA_INVERSE * cls.PHI_SQUARED / 6
        return {
            "expression": "137 x  $\phi^2$  / 6",
            "result": round(calculated, 4),
            "reference": 60,
            "relative_error": round(abs(calculated - 60) / 60, 4),
        }

# PART II: SCALING SYSTEMS
class ScalingSystem:
    @staticmethod
    def phi_scale(n: int, base_hours: float = 137.0) -> dict:
        hours = base_hours * (KernelConstants.PHI ** n)
        return {
            "n": n,
            "hours": hours,
            "days": hours / 24,
            "years": hours / (24 * 365.25),
        }

    @staticmethod
    def sexagesimal_scale(n: int, base_hours: float = 137.0) -> dict:
        hours = base_hours * (60 ** n)
        return {
            "n": n,
            "hours": hours,
            "days": hours / 24,
            "years": hours / (24 * 365.25),
        }

# PART III: STRUCTURAL RESONANCES
@dataclass
class StructuralResonance:
    name: str
    observed_value: float
    calculated_value: float
    unit: str

```

```

proximity: float
domain: str

class StructuralResonances:
    CANDIDATES: List[StructuralResonance] = [
        StructuralResonance("BRAC", 90, 92.36, "minutes", 0.97, "Neurophysiology"),
        StructuralResonance("Menstrual Cycle", 28.5, 28.54, "days", 0.99, "Reproductive"),
        StructuralResonance("Gestational Duration", 268, 264, "days", 0.96, "Human deve"),
        StructuralResonance("Generational Cycle", 29, 29, "years", 1.0, "Generational"),
    ]

# PART IV: PHASE STATE MACHINE
class Phase(Enum):
    OPENING = 1
    RISE = 2
    EXPANSION = 3
    DESCENT = 4
    INTEGRATION = 5

class PhaseStateMachine:
    PHASE_QUANTUM = 137.0 # hours
    BUFFER_TOTAL = 11.0 # hours

    TRANSITION_IMPEDANCE = {
        (Phase.OPENING, Phase.RISE): 2.0,
        (Phase.RISE, Phase.EXPANSION): 3.0,
        (Phase.EXPANSION, Phase.DESCENT): 1.0,
        (Phase.DESCENT, Phase.INTEGRATION): 4.0,
        (Phase.INTEGRATION, Phase.OPENING): 1.0,
    }

    @classmethod
    def calculate_cycle_duration(cls) -> dict:
        total_hours = 5 * cls.PHASE_QUANTUM + cls.BUFFER_TOTAL
        return {
            "total_hours": total_hours,
            "total_days": round(total_hours / 24, 2),
            "description": "One symbolic Moonth cycle",
        }

# PART V: OPERATIONAL PRINCIPLES
class LegesUndecim:
    LAWS = {
        "Cyclicity": "Experience unfolds in recurring cycles independent of calendars.",
        "Quantization": "The cycle is modeled as five phases of ~137h each.",
        "Asymmetry": "Expansion and contraction are not symmetric.",
        "Conservation": "Energy redistributed across the cycle balances out.",
        "Transition": "Phase changes require time and cannot be instantaneous.",
        "Resonance": "Individual cycles may align with larger rhythms.",
        "Invariance": "Phase order does not change within a cycle.",
        "Scalability": "The same pattern can model multiple time scales.",
        "Perturbation": "External stress shifts timing but not structure.",
        "Integration": "Completion of a cycle yields consolidation.",
        "Interpretation": "Meaning arises from use, not assertion.",
    }
}

```

Closing Note

This model is offered as a practical lens for self-observation and timing. It invites personal testing and further exploration, not acceptance as objective truth.

The structure was constructed to illuminate recurring patterns — its value lies in use.

— Kamil Wójcik

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