Photonic Modulation: From Molecular Light Structures to Atomic Genesis
Authored by Phil Pickard-Jones
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Section 1: Introduction

This white paper presents a unified framework that describes light not as a simple wave-particle duality, but as a structurally coherent molecular entity. Drawing from analogies in quantum mechanics, particle physics, biology, and cosmology, we introduce a layered photonic structure—organized into chromatic cores (spectrons), phase shells (phaseons). These structures are argued to precede matter, anchoring the formation of atoms and spacetime itself.

Gravitons, alongside IR (heat-carrying) and UV (ionizing) phaseons, provide **coherence**, making them the control phaseon in the triad. All three—IR, UV, and gravitons—are thus unified as phaseon field components, each with specialized influence over light-based systems.

This paper builds on other papers I've published, though heavily relies on known science, quantum physics, and theoretical/metaphysical knowledge as foundational information from which I've used linguistics and logic to connect the unknowns and provide probable and plausible solutions to the gaps left behind in all models. In essence, this paper fills in the gaps between atoms and light and addresses their genesis.

Section 2: Photeons — The Primary Family of Light-Mass Cores

The structural cores of photonic molecules are referred to as **Photeons**, a category of light-mass substructures composed of color-core particles and their coherence dynamics. In this model, Proteons (including Chromaton) and Newteons (Raydeon and Glaceon) are both subclasses of the broader Photeon family. This hierarchy mirrors atomic analogs while embedding photonic behavior into the structural identity. These atomic core analogs include:

Proteons — A subset of Photeons containing particles with coherent structural cores:

- **Chromaton** — A color-core particle composed of UUD sparks, analogous to a proton and it's quarks. It mirrors the simplicity and foundational role of Hydrogen—composed of a single proton and an electron. Green-centered, it balances structural emergence (Yellow/IR) with field collapse (Blue/UV).

Newteons — A complementary subset of Photeons named to reflect their neutron-like roles and honoring Newton. These particles serve structural and regulatory functions within photonic coherence.

- **Raydeon (Yellow)** — A stabilized radiative structure formed of UDD sparks (quark analogs). Supports radiative coherence and memory.
- **Glaceon (Blue)** — A UDD spark-composed structure that anchors collapse or contraction, functioning as a crystalline boundary stabilizer.

Together, Proteons and Newteons offer a foundational typology for how photonic matter organizes prior to atomic emergence. This model mirrors the elemental simplicity of early atomic structures—where a single proton (Chromaton) and neutron-like regulators (Newteons) set the stage for coherence, resonance, and eventual matter formation. These subsets of Photeons reveal how structured light may serve not only as a precursor to mass, but as its active constructor, embedded with logic, symmetry, and dimensional potential.

Section 3: Phaseons — The Electron Field Analogs

Phaseons function as the dynamic outer layer of photonic molecular structures, analogous to how electrons define the chemical behavior and boundary conditions of atoms. Unlike the more stable, core-centered Photeons, phaseons fluctuate in resonance, energy, and spatial alignment—enabling the modulation of coherence, temperature, and boundary interaction. This section defines the three primary types of phaseons: IR (Infrared), UV (Ultraviolet), and the Graviton (g), each with distinct spectral and structural roles. Together, they form a coherent triad that mediates how light behaves in spacetime, regulating the transitions between radiant energy and material structure.

- **IR (Infrared)** — Warm phaseon, linked to Raydeon structures and slow resonance. IR is recognized in three frequency bands: **IR-A, IR-B, IR-C**.
- **UV (Ultraviolet)** — Cold phaseon, linked to Glaceon and higher-energy resonance. UV also exhibits three levels: **UV-A, UV-B, UV-C**.
- **Graviton (g)** — The control phaseon with three charge states (+, −, 0). Gravitons define the shape, boundary, and coherence of phaseon shells, much like electrons define the behavior of atomic shells. Though still theoretical in mainstream physics, in this model, the graviton is treated as a field-regulating, coherence-enforcing particle.

The graviton’s unique triplet structure makes it analogous not only to an **electron field regulator**, but also to the **Higgs boson**—the so-called "God particle." However, where the Higgs is theorized to bestow mass via a field interaction, the graviton in this model **bestows coherence and structure via field interaction**. It functions like a DNA strand embedded within the lattice of spacetime, carrying the inherent potential to direct and stabilize every other photonic-phaseon interaction.

Thus, all three phaseons—IR, UV, and g—form an "orchestra" of light-mass modulation. Each phaseon exhibits a triplet nature: IR and UV through their spectral subdivisions (A/B/C), and the graviton through its charge versatility (+/−/0). This suggests that the graviton, as the coherence

vector, may act as the **spectrum-forming root of all light**, in the same way DNA encodes the complete blueprint of biological complexity.

Together, Photeons and Phaseons constitute the foundational photonic molecule. They are stabilized by graviton-based charge coherence.

Section 4: Internal Substructure — Sparks and Boundary Particles

While the Photeon and Phaseon models define the external structure and functional roles of photonic matter, their behavior is ultimately governed by a deeper internal logic—encoded in the subparticles that construct them. These smallest units, such as Sparks, Luxons, Spirons, and Perions, represent the foundational architecture of coherence, identity, and boundary. They operate beneath the visible field, yet are essential to how light stabilizes, expresses, or collapses. Understanding these components reveals the deeper mechanical grammar of light itself. Within the Proteon cores lie nested subparticles:

- **Sparks** — These are the smallest light-mass particles, analogous to quarks. They come in variants: **Upsparks** and **Downsparks**, and in color forms Y (yellow), B (blue), and G (green). Their arrangements define core particle identity:
    - Chromaton = **UUD** (Upspark-Upspark-Downspark)
    - Raydeon/Glaceon = **UDD** (Upspark-Downspark-Downspark)
- **Luxons** — These are visibility controllers, analagous to gluons, and regulate whether a spark or field component is expressed in the visible spectrum.
- **Spirons** — Analogous to muons, these regulate rotational spin and coherence states. They can cause temporary field reinforcement or localized decoherence.
- **Perions** — These are quasi-gravitons that define spatial boundaries between light-mass objects, functioning like the luon or Pauli exclusion buffer. They ensure that phaseons do not collapse into one another, and provide a terminus to outermost phaseon field shells.

These internal substructures show that even at the smallest theoretical scale, photonic architecture obeys a nested logic—where each component supports the emergence and modulation of higher-order behaviors. From sparks that define core identity, to boundary-setting Perions, these elements help maintain coherence across light-matter transitions and prevent field collapse. As such, they form the unseen infrastructure of light's formative potential.

Section 5: Lifecycle Particles — Decay and Terminal Phases

These particles emerge during or after photonic field collapse, violent events, or decoherence. Each particle listed below is either a theorized or observed phenomenon in modern physics. This model does not rename them (except Tau to Nexon) because they already represent the terminal behavior of light-derived systems. Their inclusion here is to provide a photonic-genesis-based account for how these particles originate—not merely from atomic decay, but from light coherence collapse itself.

- **Axions** — Spent or decayed gravitons, possibly linked to dark matter.
- **Tachyons** — Terminal phase of IR fields, associated with redshift and decoherence.
- **Neutrinos** — Terminal phase of UV fields, near-ghost particles with residual field imprint.
- **Nexons** — Tau lepton analog, providing short-lived spark reconfigurations, formed in quantum collapse or impact events.

New insight suggests:

- The creation of a positron during early photonic fusion (from Gg + Gg to form a Deuterium analog) represents an immaculate particle birth, not present in the original Hydrogen-Gg analog starting point.
- This positron annihilates with an electron, creating a neutrino (UV) emission—a fleeting trace of the UV field.
- Fusion with another Gg forms a Helium-like analog, possibly releasing a Nexon or causing gamma radiation as a Tau-like burst. If a neutron is ejected and cannot survive, it may terminate violently, supporting the theory of UV to IR conversion via energetic rebound and slowing.
- The expulsion of UV (via burst or collapse) is often accompanied by the rebirth of IR. Gamma radiation as a UV precursor becomes a logical intermediate.
- In nature, blue (UV) is less visually dominant than green, supporting the idea that blue serves functional field roles rather than aesthetic ones.

These lifecycle particles offer key insight into how light structures degrade, evolve, and seed the building blocks of matter. Rather than being mere byproducts of atomic decay, particles like neutrinos and Nexons are reframed as terminal echoes or structural realignments following coherence collapse. In this view, photonic genesis and collapse are not opposites, but phases of the same continuum—where light expresses its most foundational properties as it transitions between form, boundary, and emission.

Section 6: The Primordial String — Gg as the Genesis of Light and Spacetime

Mainstream physics states that hydrogen formed during the Big Bang as the first element. However, this assumes the prior spontaneous emergence of quarks, gluons, and protons from a thermal plasma. Yet plasma itself does not inherently contain mass—it is a state of ionized energy. This raises a fundamental gap: where did these primordial mass-bearing particles originate? In this model, quarks and gluons are not random products of high-temperature plasma but are structured expressions of condensed light coherence. Photonic molecules such as Gg precede mass—not only structurally, but causally—giving rise to sparks and coherence boundaries that become the foundations of matter. Thus, light did not simply illuminate matter; it authored it.

This reframing opens the door to reconsider foundational structures like string theory—not as abstract quantum constructs, but as emergent forms of coherent light logic encoded from the outset.

If strings are real, then there must be a **first string**—a coherent seed of existence. We propose this string to be **Gg**: a photonic molecule composed of a green Chromaton (G) and its graviton-based shell (g), resembling hydrogen as the first, and primordial, element.

Key Functions of Gg:

- **Conductor:** Enables directional IR/UV propagation.
- **Connector:** Through its charge states, Gg links the Yellow (Raydeon/IR) and Blue (Glaceon/UV) poles.
- **Catalyst:** Initiates spacetime asymmetry, enabling expansion and boundary formation.

The trinary structure **Gg^{+} / Gg^{0} / Gg^{-}** represents a charge cycle that creates coherence, motion, and duality—all preconditions for structured time and space.

Green is chosen not arbitrarily, but due to its spectral position and balance. It bridges the thermal and radiative domains and enables emergence, coherence, and bifurcation.

In both conventional and proposed physics, light travels perpetually unless bound. Without a graviton-based boundary, there is no volume. Without volume, there is no mass. Thus, gravitons must precede matter—not only to stabilize light, but to allow it to become still enough to form anything at all. Light, by nature, seeks motion. Only when interrupted—contained or inverted by coherent fields—can it begin the process of structural emergence. The Gg pair, then, is not simply a particle; it is the first stabilizer of spacetime.

Section 7: Conclusion

This framework presents a comprehensive restructuring of how we understand the genesis of matter, coherence, and interaction—not as isolated events within a chaotic plasma, but as structured expressions of photonic logic and gravimetric architecture. The model begins with the graviton (g) as the precondition for volume and boundary, enabling light to stabilize and transition from a wave of infinite motion into a coherent molecular structure.

From this stabilized seed, the Chromaton-Graviton pair (Gg) emerges as the primordial string—encoding the ability to link hot and cold spectrums (IR/UV), stabilize spin and coherence (Spirons), regulate visibility and radiative activity (Luxons), and form boundaries (Perions). The result is a layered photonic molecule capable of becoming mass under pressure, impact, or inversion.

This model offers a photonic-first ontology that explains how atomic structures could arise in a universe where light was the only available substrate. Rather than relying solely on chance collisions or Higgs-field interactions, this approach posits a lattice of light logic—where gravitational coherence, spectrum division, and phaseon modulation all work in tandem to guide the formation of matter from within light itself.

This is not a rejection of modern physics—it is its continuation. By treating light as both a field and a form, this model restores agency and order to the origin of structure. Light does not just illuminate the universe; it constructed it, molecule by molecule, boundary by boundary.

Summary Logic Flow:
Graviton (g) → Gg (Photonic Seed) → Photon → Atoms → Higgs Field → Mass

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Appendix A: Terms Glossary

Atomic Analogs (for Reference):

- **Quarks** – The fundamental building blocks of protons and neutrons; exist in varieties such as 'up' and 'down', and are grouped in threes within atomic cores.

- **Gluons** – The force-carrying particles that bind quarks together through the strong nuclear force; often described as the 'glue' in atomic nuclei.

- **Muons** – Heavier cousins of the electron with a short lifespan, playing a role in certain particle decay processes.

- **Neutrinos** – Extremely light, neutral particles produced in radioactive decay and fusion; rarely interact with matter. Also theorized to be end-of-lifecycle UV particles (specifically UVC)

- **Tachyons** – Hypothesized faster-than-light particles associated with the terminal phase of IR fields. In this model, they represent the end-of-life resonance collapse of infrared coherence, embodying redshift, time displacement, or signal dissipation phenomena in spacetime.

- **Antineutrinos** – The antimatter counterpart to neutrinos, also produced in particle decay, such as during beta decay.

- **Photeons:** Core light-mass particles and the sub-units of FS light.

- **Proteons:** Proton-class photeons (Chromaton), consisting of a color core and it's electron-like fields, the phaseon.

- **Phaseons:** IR, UV, g with 3 subtypes each, mimicking electron fields in atomic science.

- **Chromaton:** Proton analog consisting of three quark equivalents known as sparks (UUD)

- **Newteons:** Neutron analogs, also consisting of three sparks or quark analogs (Raydeon/Glaceon = UDD)

- **Sparks:** Quark analogs, and make up the proton/proteon and neutron/newteon cores.

- **Luxons:** Visibility modulators and gluon equivalents that bind sparks together and form a complete proton or neutron

- **Spirons:** Spin/coherence regulators and muon equivalents - heavier electron-like particles

- **Perions:** Spatial boundary enforcers and quasi-gravitons that theoretically provide mass to other solidified particles (observed sup-atomic particles)

- **Lifecycle Particles:** Axions and Nexons — Axions are theorized by modern science and proposed here as behaving opposite to gravitons and Perions, possibly linked to dark matter and gravitational inversion. Nexons are modeled as short-lived, high-energy Tau analogs that appear during photonic collapse or restructuring, acting as transitional catalysts in light-derived particle lifecycles.

Appendix B: Materials Science and Experimental Validation

Based on the proposed LL–CC (pronounced 'Elsie' = Light Logic–Coherence Crystal) model, materials science plays a pivotal role in validating the photonic molecule structure and field behavior. These doping and coating techniques aim to isolate, slow, or redirect spectral phaseons (IR, UV) within structured crystal systems. Experimental validation may be most successfully achieved through generation of **quantum plasma (QP)** and from **hydrogen- and lithium-doped synthetic diamonds**, followed by its containment within a structured, field-regulated chamber. This would allow observation of light-phase separation, graviton-mimicking coherence, and resonance behavior under LL–CC protocols.

Photonic Field Separation via Crystal-Based Proof-of-Concept:

1. **Y/IR Filtering Using Doped Quartz:**
    - Hydrogen and lithium doped quartz isolates yellow and IR bands.
    - Blue/UV are refracted or filtered out.

2. **IR Modulation Using Ruby (Cr**:Al****_$_2O_3$):********
    - Ruby absorbs yellow while transmitting IR.
    - With graphene or ITO coatings, the IR may be slowed and re-emitted as visible red—supporting the theory that red = slowed IR.

3. **B/UV Slowing Using Sapphire or Amethyst:**
    - Sapphire (Al_2O_3) is naturally attuned to UV and can be doped and coated similarly.
    - Amethyst (SiO_2 w/ Fe^{3+}) may serve as a UV attenuation medium, though its efficacy in IR or visible conversion is less clear.

4. **Diamond-Based FS Crystal for LL-CC Entry Phase:**
    - Full-spectrum light can be pulsed into a synthetic diamond layer to form programmable light-phase strands, serving as the base LL-CC (Light Logic–Crystal Coherence) chip entry.

IR and UV are the only ‘colors’ known to emit radiation, supporting their field identity as true **electron analogs** rather than mere “colors.”

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