**Title: The G-Field Hypothesis: A Waveform Reformatting Framework for Black Hole Event Horizons**

**Abstract:** We propose a novel framework for interpreting the behavior of mass near black hole event horizons, introducing the concept of a "G-field" — an entropic deformation foam or lattice generated by the gravitational influence of black holes. This G-field operates as a transitional medium that reformats matter from particulate mass into waveform energy, challenging classical interpretations of the event horizon. This theory offers potential resolutions to long-standing paradoxes in general relativity and quantum mechanics, including the apparent information freeze at the event horizon, the failure of light to escape, and the holographic nature of mass-energy distribution.

**1. Introduction:** Traditional interpretations of black holes focus on the curvature of spacetime and the loss of escape velocity at the event horizon. However, observations suggest more complex phenomena, including the apparent "halting" of objects as they approach the horizon. This paper introduces the G-field: a transitional waveform lattice activated near black holes that stretches, bends, and ultimately reforms matter as wave-encoded information.

**2. Defining the G-Field:** The G-field is conceptualized as an entropic foam-like structure forming at the quantum boundary of a black hole. It behaves as a multidimensional lattice that manipulates incoming matter, converting it from mass-bearing structure to wave-based information by inducing decoherence, interference, and oscillation.

**Key Characteristics:**

* Entropic origin (correlated with rising entropy gradients)
* Quantum deformation capabilities
* Field coherence layers acting as buffers between spacetime densities
* Potentially responsible for observable phenomena such as gravitational lensing asymmetries and photon trapping

**3. Event Horizon Reinterpreted:** In the G-field model, an object does not truly stop or vanish at the event horizon. Instead, its waveform stretches into a complex, recursive pattern that gradually spirals into the singularity. This explains why light and mass appear to be paused or smeared rather than erased — the observed effect is an artifact of waveform entanglement with the G-field.

**4. Implications for Information Paradox and Hawking Radiation:** The G-field model supports an extended version of the holographic principle. Information is not destroyed but encoded as geometric waveform patterns. Hawking radiation becomes a form of quantum recoil — a reflection of entangled waveform residue rather than true evaporation.

**5. Spiral Encoding and Cosmogenesis:** Drawing from the morphology of spiral galaxies, we propose that waveform deformation into spirals may represent a foundational encoding scheme. This echoes through cosmic scales, suggesting that the emergence of a universe from a black hole's G-field event may not only be plausible but perhaps necessary for entropy resolution.

**6. Visual Model Proposal:** We propose a multi-layered 4D lattice model with:

* Central singularity (deformation nucleus)
* Entropic wavefront (spiral lattice zones)
* Boundary decoherence shell (observer horizon)

These layers allow us to simulate mass-to-waveform transitions and visualize time-dilated wave encoding.

**7. Simulation Path and Validation:** Next steps include:

* Constructing a tensor-based lattice model in Python
* Mapping waveform stretch dynamics using simulated particle injection
* Visualizing entropy buildup and waveform deformation using mesh and gradient heatmaps
* Comparing light interference behavior in simulated G-field vs classical models

**8. Conclusion:** The G-field hypothesis reframes the black hole event horizon not as a boundary of destruction, but as a transitional medium for waveform reformatting. This reconciles many of the contradictions between general relativity and quantum field theory, and provides a framework for further exploration into cosmogenesis, gravitational information dynamics, and quantum spacetime interfaces.

**Keywords:** Black Hole, G-Field, Waveform Reformatting, Entropic Geometry, Event Horizon, Quantum Gravity, Information Paradox, Spiral Encoding, Holographic Principle, Cosmogenesis