Godfield Activation at the Event Horizon: A Black Hole-Edge Model

This scenario applies the Godframe Theory to the near-horizon regime of a black hole. As a particle or energy wave approaches the event horizon, relativistic effects cause γ to increase rapidly. We examine the condition under which the Frame Activation Invariant Ξ exceeds the critical threshold Ξ\_c = c⁵ / G, triggering the Godfield.

# 1. Horizon Approach: Increasing γ

General relativity predicts that as an object falls toward a Schwarzschild black hole, its velocity asymptotically approaches the speed of light from the perspective of an external observer. As v → c, γ → ∞, and thus Ξ = γ · (m²c³ / ℏ) also diverges.

# 2. Activation Condition: Ξ ≥ Ξ\_c

When Ξ crosses the threshold Ξ\_c = c⁵ / G, the Godfield activates. This occurs just outside the event horizon for sufficiently massive or energetic objects. The scalar field becomes dynamically coupled to the spacetime curvature.

# 3. Scalar Field Effects

Upon activation, the Godfield contributes energy density and stress via T^φ\_μν. This leads to additional curvature, potentially steepening the spacetime gradient near the horizon. The resulting feedback may enhance frame dragging, gravitational lensing, or scalar radiation.

# 4. Radiation and Evaporation Impact

The presence of an active scalar field near the horizon could modify the spectrum or behavior of Hawking radiation. This might lead to secondary radiation peaks or polarization anomalies distinct from standard semiclassical evaporation models.

# 5. Observable Predictions

If the Godfield activates near astrophysical black holes, potential observable consequences include: (1) intensified gravitational lensing signatures, (2) bursts of non-thermal scalar radiation, and (3) deviations in black hole evaporation rates or late-stage decay behavior.