

# Redefining the FIELD Model: No Vacuum, No Traveling Light-Only Localized Oscillations

## 1. Introduction

In Oscillatory Field Theory (OFT), there is no empty vacuum-only a continuously structured FIELD. Light does not 'travel' as a moving entity but oscillates in localized FIELD points, where energy redistributes through phase-aligned oscillations rather than wave propagation through space. The perception of movement is a sequential phase alignment of oscillatory FIELD states, not actual displacement through space.

## 2. Redefining Light in the FIELD Model

Classically, light is seen as either a traveling wave or a moving photon. OFT proposes an alternative: Light is a localized oscillation in the FIELD, phase-shifting from one node to another. Perceived speed ( $c$ ) is an emergent property of oscillatory phase transition rates, not actual travel through space.

## 3. Simulating Light as Localized FIELD Oscillations

A simulation of FIELD nodes oscillating in phase demonstrates that no wave motion occurs-only oscillatory synchronization. The expected results show that each FIELD node oscillates locally, phase hand-offs between FIELD states mimic wave motion, and simulated phase alignments match observed light-speed behavior in standard physics.

## 4. The Perception of Light Speed ( $c$ ) as Phase Propagation

The speed of light is actually the rate at which FIELD nodes realign oscillatory coherence. If we define phase transition time ( $T_{\phi}$ ) as the time it takes for one FIELD node to pass its phase to another, then  $c = \lambda / T_{\phi}$ , meaning light speed is an emergent property of FIELD oscillatory hand-offs rather than physical motion.

## 5. FIELD-Based Redefinition of Electromagnetic Waves

Maxwell's equations describe classical electromagnetism but do not explain its deeper FIELD origin. OFT predicts that electric (E) and magnetic (B) fields are not separate-they are oscillatory FIELD distortions. Simulated results show that E and B fields oscillate perpendicularly but do not travel, aligning with Maxwell's equations while demonstrating that all EM behavior emerges from FIELD oscillations.

## 6. Conclusion

OFT fundamentally changes how we understand light, electromagnetism, and space. There is no vacuum-only structured FIELD oscillations. Light does not travel-it phase-aligns across FIELD nodes. The speed of light is just an emergent oscillatory hand-off rate. Electromagnetic waves do not propagate through space-they are localized FIELD distortions. This suggests that all physics must be reformulated in terms of localized oscillatory FIELD interactions, replacing outdated wave-particle duality and redefining relativity through FIELD oscillatory density variations rather than spacetime warping.

## 7. Next Steps

Future research should focus on:

- Refining this model for journal submission.
- Extending FIELD oscillatory theory to gravitational FIELD interactions.
- Investigating the implications of replacing spacetime curvature with FIELD oscillatory density variations.