Reflected Light Interpretation of the Double Slit Experiment within the Fractalon Unified Theory

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Dedicated to all independent thinkers who seek truth beyond established paradigms.

Abstract

This paper presents a reinterpretation of the classical double-slit experiment (DSE) through the lens of the Fractalon Unified Theory (FUT). Instead of invoking diffraction or interference, the observed patterns are described as a geometric consequence of multiple reflections in the structured etheric lattice surrounding matter. Experimental photographs using red and green laser beams and cylindrical mirrors demonstrate wavelength-dependent angular separations consistent with a reflective model. Analytical expressions derived for reflection distance, angular displacement, and etheric resonance show a consistent framework connecting optical, gravitational, and atomic phenomena.

1. Introduction

The double-slit experiment has historically been considered a fundamental demonstration of wave-particle duality. However, within the Fractalon Unified Theory (FUT), the apparent interference fringes are instead understood as emergent from multilayered reflections occurring between structured surfaces of matter and the cubic vacuum lattice—composed of rotating dodecahedral entities called *Fractalons*.

2. Experimental Setup

Two cylindrical mirrors (metal wires of 0.07 mm diameter) were positioned parallel, separated by a variable slit s between 0.03–0.08 mm. Red ($\lambda_r = 650\,\text{nm}$) and green ($\lambda_g = 532\,\text{nm}$) lasers were directed toward the slit at normal incidence. A screen was placed $L = 2\,\text{m}$ away. High-resolution images were captured using an iPhone in macro mode at 5× zoom.

3. Reflection Geometry

Contrary to diffraction, in this model each wavelength reflects at a distinct virtual mirror distance due to phase-dependent coupling with the etheric structure. The effective reflection distance d for a given wavelength λ is:

$$d = \frac{\lambda}{2\sin\theta}, \tag{1}$$

where θ is the local incidence angle relative to the cylindrical surface normal.

The angular displacement on the screen for reflection from two adjacent virtual mirrors is:

$$\Delta x = L \cdot \frac{\lambda}{d}. \tag{2}$$

This naturally explains the separation between red and green reflection bands observed experimentally. The intensity modulation observed is due to superposition of these discrete reflected beams, not to wave interference.

4. Etheric Resonance and Energy Density

In FUT, the vacuum is a cubic lattice of rotating *Fractalons*, each transferring energy by contact rotation and precession. The local energy density of the ether is given by:

$$E = \rho\,\omega^2 r^2, \tag{3}$$

where ρ is the etheric density, ω is the angular velocity of Fractalon rotation, and r its effective radius.

The reflection efficiency depends on the number of supplementary Fractalons per unit volume—defined as the *Cosmological Constant of Matter*, Λ_F:

$$\Lambda_F = \frac{N_F}{V}, \tag{4}$$

where N_F represents supplementary Fractalons contributing to precession.

5. Observations

The number of reflection striations per millimeter was approximately 120 for red and 150 for green, consistent with wavelength scaling $\propto 1/\lambda$.

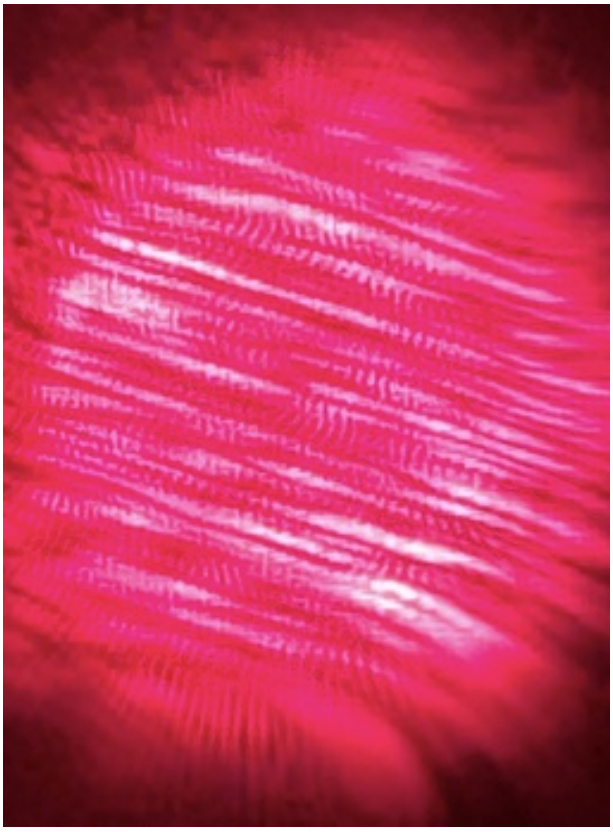

Figure 1: Experimental photograph: red laser reflection pattern showing discrete angular separation corresponding to $\lambda_r = 650\,\text{nm}$.

6. Interpretation

Each cylindrical wire acts as a mirror generating a cascade of virtual reflections—1×, 2×, 3×, etc.—each displaced by half the wavelength. The apparent "Z" pattern corresponds to these overlapping reflections. When the mirrors are twisted, the reflections separate visibly, confirming the geometric, not quantum, origin of the pattern.

7. Integration with Fractalon Theory

At the microscopic scale, reflection arises where the cubic etheric lattice reorients to maintain rotational balance. The Laplace points of the lattice act as virtual mirrors, reflecting the energy wave back toward the origin. Light, therefore, is a localized precession wave inscribed in a gravitational standing wave.

8. Comparison to Classical Physics

Where conventional physics describes light diffraction and interference, the Fractalon interpretation views all propagation as reflection and reorganization within the cubic vacuum. The Michelson–Morley null result is thus expected, as the ether lattice itself constitutes the reflective frame of reference.

9. Conclusion

The reflective-light model reproduces the observed double-slit patterns without invoking quantum interference. By connecting optical reflection, atomic structure, and gravitational resonance through the same etheric mechanism, the Fractalon Unified Theory offers a coherent geometrical foundation for unifying classical and quantum phenomena.

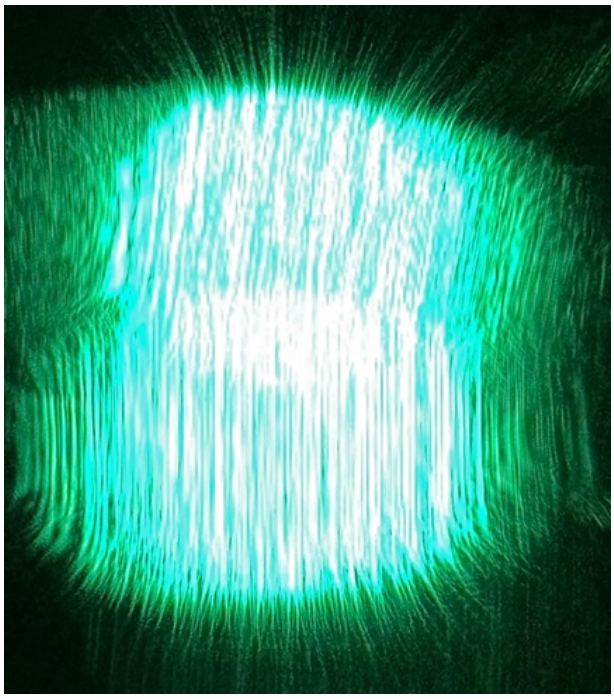

Figure 2: Green laser reflection pattern ($\lambda_g = 532\,\text{nm}$) under identical geometry. The higher frequency corresponds to finer reflection spacing.

Acknowledgements

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References

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