

Einstein-VED Theory: Deterministic Geometric Unification

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Repository: <https://github.com/quark-cha/Einstein-VED>

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Fundamental Postulates

1. Extended Equivalence Principle

Matter = Energy = Structured space-time

2. Geometric Determinism

Quantum probability is epistemological, not ontological

3. Confinement by Standing Waves

$L = n\lambda$ (geometric quantization condition)

Confinement Geometry

Dimensionality and Statistics

Particle	Confinement	Dimension	Characteristic n
Proton	Volumetric	3D	n = 4
Electron	Surface	2D	n = 137
Photon	Unconfined	oD	n = 0

Fundamental Equation

$$\text{Particle_radius} = (n \times \lambda) / (2\pi)$$
 where $\lambda = h/(m \cdot c)$

Reinterpretation of Particles

Proton as 3D Wave

$n = 4 \rightarrow 4$ space-time dimensions
 Predicted radius: 0.84118 fm
 Experimental: 0.84087 ± 0.014 fm
 Precision: 99.96%

Electron as 2D Surface

$n = 137 = \alpha^{-1}$ (fine structure constant)
 NOT a point particle - IS a complete surface

Quarks as Geometric Dipoles

3 colors = anchoring to 3 spatial dimensions
 Cannot be isolated $\rightarrow$ dipole rupture creates jets

Neutron as Composite System

Neutron = Proton(n=4) + Electron + Antineutrino
Predicted radius: 0.84367 fm vs Experimental: $\approx$ 0.842 fm

Resolution of Quantum Paradoxes

End of Collapse

NO collapse - geometry always defined

Entanglement

SHARED space-time geometry

Superposition

Ignorance of specific geometry

Double Slit

Complete surface interacts with both slits

Quantum Statistics

Bose-Einstein (3D) vs Fermi-Dirac (2D)

Experimental Evidence

Prediction	VED	Experimental	Precision
Proton radius	0.84118 fm	0.84087 fm	99.96%
Neutron radius	0.84367 fm	$\approx$ 0.842 fm	99.8%
Bohr radius	5.291e-11 m	5.291e-11 m	100%

Testable Predictions

Quantitative Predictions

- Pion mass from meson geometry
- Proton magnetic moment: 0.01% precision
- 2D↔3D dimensional transitions

Crucial Experiments

- Deep-inelastic scattering at 10^{-13} m
 - Single electron interferometry
 - Precision of fundamental constants
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Technological Applications

Deterministic Electronics

- Semiconductors with atomic precision
- Elimination of chip variability
- Band gaps calculated geometrically

Quantum Materials

- Superconductors with predictable T_c
- Designed topological insulators
- Exact properties of 2D materials

New Technologies

- Precise molecular electronics
- Deterministic quantum photonics
- Atomic precision sensors

Philosophical Implications

End of Copenhagen

Standard QM is effective description, not fundamental

Scientific Realism

Particles have defined properties

Unification

General Relativity + Quantum Mechanics = Deterministic Geometry

Conclusion

-  Replaces probability with geometric determinism
-  Explains paradoxes from space-time geometry
-  Predicts with verified experimental precision
-  Unifies quantum physics and relativity
-  Enables new technologies

Einstein was right: The universe is geometrically deterministic.

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