

NeuroEM Interfaces and Quantum Cognition

Dr. John Norseen, Dr. Serge Kernbach, and Dr. Michael Persinger – Theoretical and Experimental Links Between Electromagnetic Fields, Brain Modulation, and Microtubule Dynamics

■ Overview of Norseen's Hypothesis:

Dr. John Norseen proposed that electromagnetic (EM) fields could influence cognitive functions by directly interacting with the brain's microtubular structures. He suggested that these structures might act like sub-neural processors or quantum antennas, capable of responding to phase-structured EM waves.

■ Relation to Kernbach and Persinger:

- Kernbach used structured light (LEDs) and modulated EM fields to demonstrate information-like effects across space, possibly mediated by phase interactions.
- Persinger applied low-intensity magnetic fields to temporal lobes to induce altered mental states, suggesting phase-locked entrainment mechanisms.
- Norseen believed that such field structuring could tap into quantum-physical properties of neural substrates, especially microtubules.

■ Scientific Bridge:

- Microtubules possess dipolar protein structures that may support resonance with EM fields.
- Theoretical models (e.g., Orch-OR) suggest quantum coherence in microtubules.
- Vector potentials (Aharonov-Bohm effect) could shift phase coherence in biological domains.
- EM and RF fields might influence tunneling processes or quantum states within these microstructures.

■ Possible Influence Channels:

- Neural entrainment (brainwave modulation via frequency-locked input)
- Ephaptic coupling (non-synaptic electric field influence)
- Phase synchronization across distant biological systems (matching rhythms)
- Electromagnetic field coherence through low-entropy signal generation

■ Implications:

These findings suggest a convergent mechanism where modulated EM, light, and RF signals might influence biological function through coherent field dynamics. Norseen's vision extended to thought modeling, behavioral modulation, and neurosecurity frameworks, which align with the broader ideas of Kernbach and Persinger regarding subtle field effects in complex systems.