



probability functions quantifying distributions of signal/noise sense

$$\{\psi_{\Gamma^+} \text{ +ve/clockwise}, \psi_{\Gamma_g^-} \text{ -ve/anticlockwise}, \psi_{\Gamma_g^+} \text{ +ve/anticlockwise}, \psi_{\Gamma^-} \text{ -ve/clockwise}\} \cdot \begin{pmatrix} \tau_x \\ \tau_y \\ \tau_z \end{pmatrix} \text{ represent time evolution. } \begin{pmatrix} \Gamma_X^{on} & \Gamma_Y^{off} & \Gamma_Z^0 \\ \Gamma_X^{off} & \Gamma_Y^{on} & \Gamma_Z^{off} \\ \Gamma_X^0 & \Gamma_Y^0 & \Gamma_Z^{on} \end{pmatrix}$$

represent expanding space matrix characterizing signal/noise distribution over  $\{X, Y, Z\}$  real space with the  $\{0, off, on\}$  switching modes to generate a real dynamic space time!!

We can evaluate above schema with procedures<sup>6,7</sup> to operate  $f(X)=X$  by a numerical iteration procedure methodology, with initial value  $X = \text{noise}$ , gaging  $g(X)=f'(X)=1$ . It will satisfy unitarized  $= \hbar\omega = 1 = f(\text{noise}) = i\Psi = \text{signal} = E / mc^2$  equivalence.<sup>6-10</sup>

Real space signal/noise  $\{0, off, on, X, Y, Z\}$  finite element modeling with computer simulation programming achieving grand unifying PHYSICS with gage discontinuity dissipative theoretical<sup>6,7</sup> research is proceeding to explain how evolutionary emergent everything nature theory get advanced towards meaningful knowledge.<sup>2-10</sup>

## Overall conclusion

- i. Modeling quanta point dynamical fields per Iyer Markoulakis O'Neill Malaver quantum astrophysics gage formalism provided a way to transform Helmholtz decomposition gradient vortex mechanics actions to electromagnetic events.
- ii. Algorithm equation matrix pure mathematical proof formalism has laid solidly foundation for parametric physics verifiable experimental designs obtained logically from formalisms configuring eigen gaging fields, quantum density matrix, coupling functional, probabilistic wavefunctions, signal/noise ratioing time space sense.
- iii. Original developed model of Iyer Markoulakis O'Neill Malaver quantum astrophysics formalism has gotten put together with Wenzhong Hodge scalar frictional vacuum theory of hod-Plenum, dissipative discontinuity of modeling gage physics, giving an Integral Model Astro Quantum PHYSICS.
- iv. Observables mesoscopic have been extracted from resultant integrated quantitative gage physical formalisms. Statistically,

for given population pattern, modulating scalar potential quantum density matrix with dynamic speeds and power density profiles help to compute evolving observable energy density matrix explicitly.

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## Conflicts of Interest

None.

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