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ALGORITHM OF TIME PRELIMINARY THEORETICAL RESULTS POINTING TO SPACE GEOMETRY PHYSICS TRANSFORMS

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ABSTRACT

We currently have efforts that concentrate on quantified formalism in physical mathematics gauging four-vector time matrix tensor algorithm in terms of fiber transforms bundle strings that will portray gravity of space. Ongoing paradigm with discontinuum physics has modeled formalisms gauge field stringmetrics wave function algorithm giving observable parameters that are measurable experimentally. We can apply further these formalisms to topology of space determining real matter universe's wave particle relationships. The author has systematically shown earlier with peer reviewed published papers that general mathematical transforms reveal physics depicting matter whole universe to be like a "black box", expressible transformable onto the domain of time as a four-vector matrix, elements of which are rank4 tensors. Gauging it with quantum relativistic unitarized normalized absolute variables, these parameters (when they are scalarized) give real values with local quantum depending on timeline and the global quantum depending on worldline network fabric. Subsequently, with inverse transform operations' domain having space of rank3 tensor with time as scalar quantity will eventually help in mapping geometry of space evolving in time event sequences, grand unifying field in theoretical physics.

Keywords: Gauging four-vector time matrix tensor algorithm, fiber transforms, gravity of space, string metrics wavefunction algorithm, matter universe's wave particle relationships, local quantum timeline, global quantum worldline network, rank4 tensor time, rank3 tensor space.

INTRODUCTION

Our earlier papers (Iyer, 2022a, 2022b) and review articles provided comparisons of currently available theoretical framework per literature. Since this paper is primarily preliminary results, only papers (Iyer, 2022a, 2022b) are considered here. A full paper having literature surveys with international references will appear in later publications of written articles.

Formalism of logic backup algorithm

Advancing towards grand unified field physics, the quantum gravity gage transforms Algorithm Graphical Equation of micro-blackhole force (Iyer, 2022a) has been applied exactly to facilitate theoretical derivation of experimental observable measurable parameters having spatial-temporal scalar quantum gauge field as function in terms of Laplacian, Fourier, and the Legendre transforms gaging the spin, rotation, revolution, and rotational angular velocity expressible as a function of time. Algorithmic equation micro-blackhole gage gravity force (Iyer, 2022a) transforming to equation graphic algorithms have been thoroughly derived by this author, mathematically solving within linear operator region of space quantum gravity that gives algorithm graphical metrics, [Y] = g_g[X], where output matrix [Y] is a metrically adjusted function of input

metrical matrix [X] such that g_g is a gage fibrational string parameter, as shown below in equation (1), explained thoroughly in (Iyer, 2022b), with application of $g_g = 1$ to get a resultant Algorithm Graphical Equation with scalar quantum gauge field $\|[\epsilon_{GR}]\|$ in terms of general transforms with Laplacian, Fourier, and the Legendre gaging the spin, rotation, revolution, and ω_{qg} merely expressed as a function in time domain, providing following results:

$$[\mathbf{X}] = \{(L'p(F^{-1}(g[\{\cos\theta_{spin}(t), \sin\theta_{spin}(t)\}, \eta_{rotation}(t), \kappa_{revolution}(t)])))^2$$
$$(Lp(F^{-1}(g[\{\cos\theta_{spin}(t), \sin\theta_{spin}(t)\}, \eta_{rotation}(t), \kappa_{revolution}(t)])))^{-2}$$
$$(g[f^{*}(\ln |Lp(F^{-1}(g[\{\cos\theta_{spin}(t), \sin\theta_{spin}(t)\}, \eta_{rotation}(t), \kappa_{revolution}(t)]))])\}^{-1}\omega_{qg}(t)$$
$$[\mathbf{Y}] = \|[\epsilon_{GR}]\|$$

$$(1)$$

where the parametric variables have been defined as follows:

Lp is Laplacian; $g[f^{*'}(f'(p^2))] \equiv$ gage of Legendre transforms of Lagrangian energy term p^2/m, where momentum p and mass m have been taken care of with transform manipulations.

$Lp(F^{-1}(g[\{\cos\theta_{spin}(t), \sin\theta_{spin}(t)\}, \eta_{rotation}(t), \kappa_{revolution}(t)]))$ is Legendre transforms of inverse Fourier gage angular {spin, rotation, revolution} which are functions of time.

$L'p(\mathrm{F}^{-1}(g[\{\cos\theta_{\mathrm{spin}}(t), \sin\theta_{\mathrm{spin}}(t)\}, \eta_{\mathrm{rotation}}(t), \kappa_{\mathrm{revolution}}(t)]))$ is Jacobian, the first derivative of Legendre transforms of inverse Fourier gage angular {spin, rotation, revolution} that are functions of time.

$\omega_{qg}(t)$ is the quantum gravity angular velocity as function of time.

$\|[\mathcal{E}_{\mathrm{GR}}]\|$ is the scalar space quantum gauge field matrix protocol, measurable normalized parameter.

While equation (1) won't have any closed form mathematical solution, like that in the Schrodinger equation, String theories, and other theoretical models of Theory of Everything equations, by employing clever manipulative intuitive techniques, observables have gotten pulled out of this black box like closed algorithms by special theoretical experimental methods (Iyer, 2022a, b; Iyer *et al*., 2023) to obtain precisely observationally measurable parameters quantifiable demonstrably corresponding to humanly naturally sensible gage metrics physics. Results of such techniques yield algorithm that gives point-to-point parameters multiplicatively relating to signal/noise matrix (. $\Gamma_{\omega,gr}$.) that is measurable in terms of profile density matrix intensity (Iyer, 2022a, b; Iyer *et al*., 2023) shown as equation (2) here:

$$(.\ \Gamma_{\omega,gr}\ .) => :: <= \begin{pmatrix} 0 \\ \emptyset \\ 1 \\ \phi \end{pmatrix} (\psi c\ \psi\mathfrak{d}\ \psi_S\ \psi_N) \qquad (2)$$

Equation (2) shows relationship of switching gaged fields, $\mathcal{E}_{\mathrm{PDP}}$, in the following unitarized form:

$$\begin{pmatrix} 0 \\ \emptyset \\ 1 \\ \phi \end{pmatrix} \text{ and } (\psi c\ \psi\mathfrak{d}\ \psi_S\ \psi_N)$$

quantifying clockwise and anticlockwise rotational wavefunction and south-north monopoles' wavefunctions, that is proposed to be Hod-PDP primordial operators making particle out of a superluminal plenum magnetic quagmire.

The author has derived further that rank4 tensor time is extractable from equation (1) having inverse transforms, giving four-vector matrix equating to general transforms (Iyer *et al*., 2023):

$$\begin{pmatrix} \hat{t}_{pr,\mu\nu} & \hat{t}_g^{\mu\nu} \\ \hat{t}_{l,\mu\nu} & \hat{t}_r^{\mu\nu} \end{pmatrix} = g^{-1}[f^{-1}(\|[\mathcal{E}_{\mathrm{GR}}]\|/g_{\mathrm{fts}})] = g_{\mathrm{ifts}}\,[\mathrm{transforms}] \qquad (3)$$

In equation (3), [transforms] represent $\{\|[\mathcal{E}_{\mathrm{GR}}]\|,\ g_{\mathrm{fts}}\}$ fibrational bundle gage transforms physics systems, telling us that information will have algorithmic relationship with matrix timeline. Hod may have the ability to break strong energy condition of PDP circuit functor that involves electrons, positrons, north and south monopoles assemblage within a Superluminous Plenum quagmire "Superfluids" (Iyer *et al*., 2020, 2022, 2023). Weak gravity may act on the superluminous plenum superfluids. Strong gravity then comes because of Hod-PDP mechanism with strong energy condition of PDP activated by Hods to create vacuum wave dynamic particle real energy matter universe, having coupling aspects with the modons as the Dirac strings of the monopoles electrodynamics with quantum density matrix may act to produce strong gravity via Hod-PDP mechanism generating dipoles-particles (Iyer, 2022a, 2022b; Iyer *et al*., 2020, 2022, 2023).

Information-time graphing: "Black box" aspect equation (1) points can have output with a vibratory acoustic signal form to provide information time transforms, plot like the one shown in Figure 1 (Iyer *et al*., 2023).
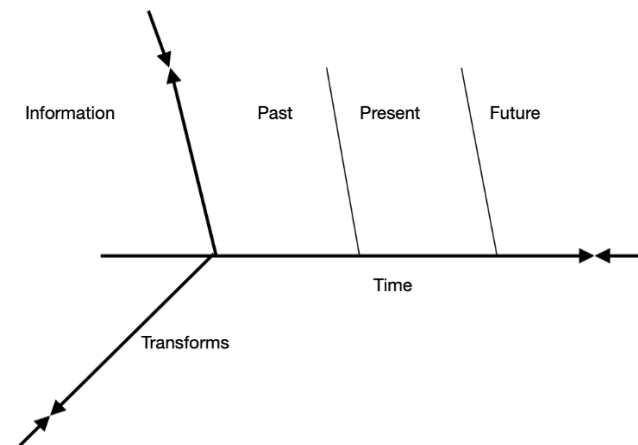

Fig. 1. The graphical transforms shoring time information of past, present, and future regions (Iyer *et al*., 2023).

The author quantified discontinuum physics (DCP) shifting paradigm by having algorithm identifying weight parametrically that is experimentally testable physically observable measurable quantity (Iyer *et al*., 2023). This algorithm is given in terms of discontinuum energy field (DEF) as:

$$\begin{aligned}(\mathrm{DEF}) &= (\mathrm{gravity\_bundle\_transform})(\mathrm{weight}) \\ &= \Sigma\{(\mathrm{fiber\_transforms})(\mathrm{gage\_velocity})\}\end{aligned} \qquad (4)$$
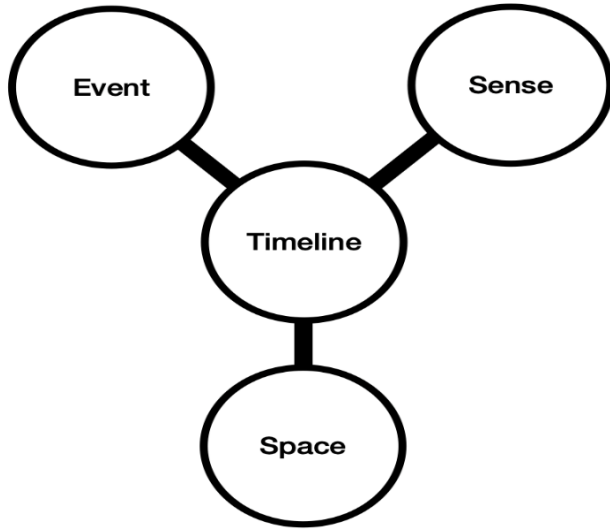
Fig. 2. The delta flowchart decoding point-to-point information streams {time connects spatially event sense, having action like functional networking bridge, history = event information time past summarizing, event = present summarizing clock information time, projective = future like functional information bridge, transforms active like functor initiating clockwork} (Iyer *et al*., 2023).

Equation (4) allows us to write the DCP algorithm equationally. Instrumentation designs measuring ρ, $(G\rho/g)$ is possible to estimate bundle gravity transforms, by application of trial-and-error techniques on experimental observations with measurements using typical computer programming simulations (Iyer, 2022a, b; Iyer *et al*., 2023) graphically determining **(DEF)** versus **(gage_velocity)** for varying **matter_weights**. This enables the discontinuum physics to be a grand unifying paradigm shifting physics. Figure 2 shows schematically some possible information streams.

Multiplicative Physicality Superluminal Nature iSpace time Space Sense

Equation (3) may be rearranged by unitarizing normalizing absolute matrix operations**., as** symbol "$\|$" will indicate such that they can perform multiplicative operation of rank4 tensor time matrix scalarized thus "bra" to "ket" angular energy matrix to characterize probabilistically time quantum. Here, $t^\wedge$ represents rank4 time tensor, wherein subscripts, and the superscripts $\mu\nu$ represent general coordinates within iSpace Planck, iP symbolic subscripts *pr*: proper, *r*: real, *g*: global, *l*: local; v_{ip} represents the iSpace Planck frequency, and φ_{ip} represents the iSpace Planck rotational angularity. Equation (5) is an equivalent energy time unitary Planck relational matrix. It has commutative (2×2) rank4 tensor time matrix and a scalar multiplicity with the frequency-angularity matrix equating to unitary value.

$$\left\| \begin{pmatrix} \hat{t}_{iPpr,\mu\nu} & \hat{t}_{iPg}^{\mu\nu} \\ \hat{t}_{iPl,\mu\nu} & \hat{t}_{iPr}^{\mu\nu} \end{pmatrix} \right\| * \left\| \begin{pmatrix} v_{ip} \\ \varphi_{ip} \end{pmatrix} \right\| = 1 \tag{5}$$

To be operative in terms of a switching circuit analog form, equation (5) may be rewritten with the "bra" showing circuit time operation matrix and "ket" the mode of switches vectorially on and off, per quantum probability wavefunction representations earlier (Iyer, 2022a, b; Iyer *et al*., 2020, 2022, 2023). Thus, equation (6) will show switching circuit time-mode unitary matrix:

$$\left\| \begin{pmatrix} \hat{t}_{iPpr,\mu\nu} & \hat{t}_{iPg}^{\mu\nu} \\ \hat{t}_{iPl,\mu\nu} & \hat{t}_{iPr}^{\mu\nu} \end{pmatrix} \right\| * \left\| \begin{pmatrix} \text{on} \\ \text{off} \end{pmatrix} \right\| = 1 \tag{6}$$

One can gauge equation (6) amenable towards an IT computer programmable algorithm with identity-like operation numerating time "bra" matrix, also translating unitary "ket" matrix to time dependent local and the global quantum variables, thereby coming up with a four-vector matrix qnbit ("quaternion bit") that may have property of chirality! The following transformed equation is shown to possess simulation computer programmable coding algorithm in logic format to evaluate quantum variables $\{q_l, q_g\}$, the global and local quantum parameters.

$$\begin{pmatrix} 0 & 1 \\ \underline{1} & \underline{0} \end{pmatrix} \begin{pmatrix} \text{on} \\ \text{off} \end{pmatrix} = \begin{pmatrix} q_l \\ q_g \end{pmatrix} \tag{7}$$

It has the following parameters: q_l is the quantum local variable and q_g is the quantum global variable. $\underline{0}$ and $\underline{1}$ represent conjugate analog of 0 and 1 states of probability numbers between -1 and 1.

Evaluating equation (7): $(0*\text{on}) + (1*\text{off}) = q_l$ or permutatively, q_l can be off or on. In the same way, $q_g = \underline{1}*\text{on} + \underline{0}*\text{off} = \{$between on and off – fluctuating$\}$ cycling like Hod-PDP circuit assembly – produce phase transitions Thus, $\{q_l, q_g\}$ will be on or off or fluctuating with cycling. We can write equivalently in compact matrix notation like: $\{0 \ \underline{0} \ 1 \ \underline{1}\}$ [on off] = $[q_l \ q_g]$, where q_l is the quantum local parametric variable logic format and q_g is the quantum global one.

Physics: IT algorithm of coding matrix for quantum computing

To be amenable to computer programming simulation operator algorithm, translating simply to IT four-vector matrix "qnbit", while keeping quantum computational probability properties, having mathematics constraint and physical restrictions outlined more in **Appendix I**, logic equation (7) will become:

$$\begin{pmatrix} 0 & 1 \\ pf1 & pf0 \end{pmatrix} \begin{pmatrix} 1 \\ 0 \end{pmatrix} = \begin{pmatrix} q_l \\ q_g \end{pmatrix} \tag{8}$$

Equation (8) has the parameter $pf1$ (permutating) as taking up values of (+1/prime_number); thereby, the parameter $pf0$ (permutating) taking up conjugatively values (–1/prime_number); we utilize the already well-known [prime_number] {1, 2, 3, 5, 7, ...} input to syntactically machine coding computer program. Graphically then plotting [X] axis = q_l: the quantum local; [Y] axis = q_g: the quantum global parametric values will output physics. Note also that by considering symmetric rotational property of the [X] and [Y] axes, with permutational matrix, we can also interchange to get [X] = q_g: the quantum global and [Y] = q_l: the quantum local. Typical examples with arithmetic numeration matrix calculations are given in **Appendix I**, without prime number factoring process to make it simple.

Retrofitting wavefunction, gage field phase-angle information onto reconstruction of algebra generalized mediating environment interacting entity per Feynman diagram quanta flowchart has been shown in Figure 3 below.

Fig. 3. The states that if X = q_n, the monopole N quantum charge, Y = q_s, the monopole S quantum charge, Ɛ = Q_ε, the Q factor of dipole environment Ɛ, then X' = q_g, Y' = q_l. They are a function of wavefunction, gauge field, timeline versus worldline, temperature (heat), and point potential (all four fields) aspects. Per design experimental instrumentation setup (Iyer, 2022a, b; Iyer *et al*., 2020, 2022, 2023) profile density, potential, temperature, signal/noise, elapsing time, wavefunctions, and mode of switches would be thus sensed, measured, and analyzed having observations on the point-to-point basis.

One may graph the local quantum, q_l, versus the global quantum, q_g, by rotation matrix to suit [X]-[Y] plotting corresponding to tensor time four-vector matrix format, as shown in Figure 4.

Thereby, q_l and q_g were computed per algorithm quaternion physics digital switching circuit gauge matrix fields algorithm in equations (7) and (8). Fluctuating, on, off deconvolute, convolute, gradient, vortex heat and energy field matrix gauge operator metrics protocol were carried out. The plot of q_l versus q_g schematically shows possible outliers and perhaps, discerning precise band of inliers stochastically analyzable like having Bayesian statistics evaluating distorted field anomalies within quagmire magnetic gauge monopole energy interpretive "superfluid" local action cells physics developing overall unifiable to having a grand field theory. We can prove: q_l (timeline):

the quantum local timeline event and q_g (worldline): the quantum global worldline operator linking temporal macro micro variables. Mapping [X] = q_g (worldline) versus [Y] = q_l (timeline). where [X] and [Y] are adjusted to physics operator matrix protocol might provide anomaly_band like zone at inlier within a linear regression plot, like in anomaly earthquakes and nebular-blackhole astrophysics (TEKNET EARTH GLOBAL SYMPOSIA TEGS website: All ongoing LIVE STREAM PHASE-II YOUTUBE RECORDINGS of EPISODES are available via URL: https://www.youtube.com/@teknet_earthglobal2923/streams. All videos of the PHASE-I YOUTUBE RECORDINGS of EPISODES are available via URL: https://www.youtube.com/@teknet_earthglobal2923/videos). We may associate vibrational vortex and cosmic microwave background radiative gauge matrix fields to worldline-timeline. Hence, timeline=>: :<=vibrational vortex=>: :<=gravitational wave, while having the worldline=>: :<=cosmic microwave background radiative, where =>: :<= shows associativity.
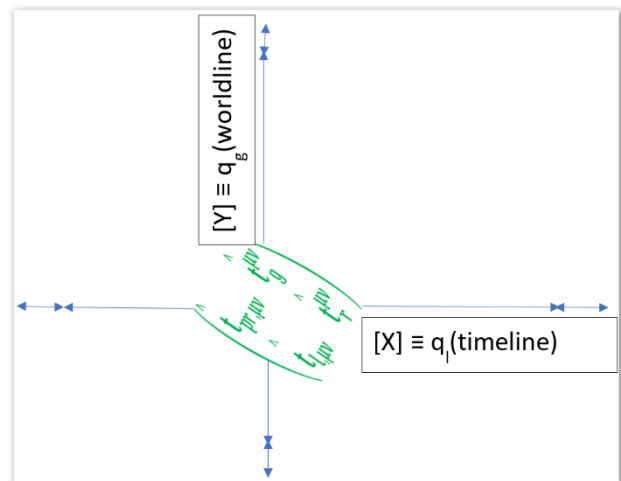

Fig. 4. The tensor time four-vector matrix rotated to correspond to graphing quantum parametric variables with the axes such as [X] ≡ q_l (timeline) and [Y] ≡ q_g (worldline) in equations (5) to (8). We can then interchange [X] and [Y] axes since they are rotationally symmetric to represent theme of global and local, making global independent and the local dependent parameters, pointed out earlier.

Mapping [X] = q_g (worldline) versus [Y] = q_l (timeline), Figure 5 shows quantum probability values within superluminous magnetic plenum, based on **Appendix I** calculations.

IT computer algorithm in equation (8) was eventually coded in a computer program after discussions in (TEKNET EARTH GLOBAL SYMPOSIA TEGS website: All ongoing LIVE STREAM PHASE-II YOUTUBE RECORDINGS of EPISODES are available via URL:

https://www.youtube.com/@teknet_earthglobal2923/strea ms. All videos of the PHASE-I YOUTUBE RECORDINGS of EPISODES are available via URL: https://www.youtube.com/@teknet_earthglobal2923/vide os). Here, briefly these preliminary theoretical results are enumerated executing program to compute q_l and q_g for $pf0$ and $pf1$ prime numbers up to 10,000 in one case and 100,00 in the other. *Mathematics constraint with* $pf1$ (permutating) = +1/prime_number; $pf0$ (permutating) = – 1/prime_number; [X] axis = q_g: the quantum global; [Y] axis = q_l: the quantum local were applied to programming computer graphing the results shown in Figure 6 below.
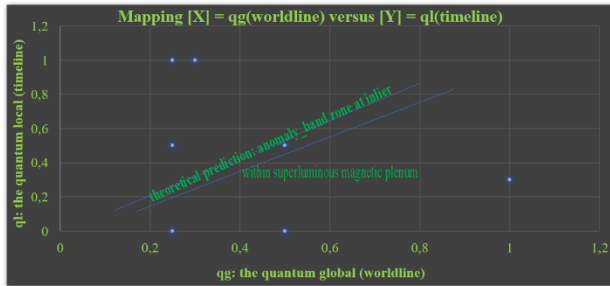

Fig. 5. The schematical mapping of [X] = q_g (worldline) versus [Y] = q_l (timeline), where [X] and [Y] are adjusted to PHYSICS operator matrix protocol, plotting quantum probability values, equations (7) and (8), within superluminal magnetic plenum, exemplified per **Appendix I** simple calculations. *Switching circuitry aspects quantizing phase angle Q factor restrictive physics may pull out anomalies to key real matter existing universally*.

Physics: the results for matrix value coding
Courtesy: Christopher O'Neill, IT Physicist of Cataphysics Group, Ireland has developed coding algorithm (8). *Mathematics constraint with* $pf1$ (permutating) = +1/prime_number; $pf0$ (permutating) = – 1/prime_number; [X] axis = q_g: the quantum global; [Y] axis = q_l: the quantum local. The results for 10,000 prime number factorizations (M1) are shown in Figure 6. Also, the results for 100,000 prime number factorizations (M2) are graphically like those shown in Figure 6.

We can surmise physics restricting {q_g, q_l} values based on phase angle Q factor, quantum density matrix, scalar gauge fields, wavefunction, (heat) temperature, and point potential (all four fields) aspects. We may then predict nodes of q_g and q_l fabric will constitute scalarized linear arithmetic time that we apply for earth tracking of time-event. Relativistic clocks' movement limited by speed of light will get time running negatively {shown as positive high value having absolute values depicted here} within superluminal magnetic plenum fields. With anomalies existing, clock would start to move faster and then slowing due to inertia of the anomaly band moving oscillating switching near vacuum where it may get frozen at light speed. Minimum occurs when the inertia gets extremely

high such as at event horizon of a blackhole?! Interweaving of timeline within worldline exactly fabric fibrational environmental interactivity. Figure 7 schematically shows how clock may respond to environmental changes. Figures 1 to 7 are also discussed below.

Results for 10,000 prime number factorizations* (M1)
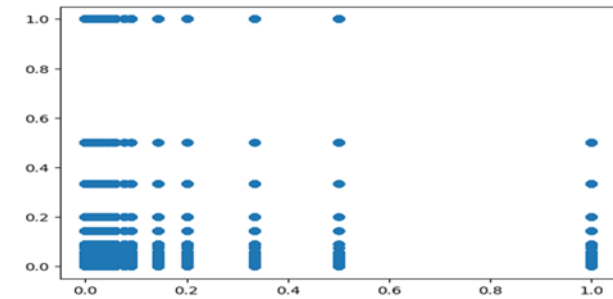
^Origin (0,0) zero time point ^(vacuum?!) intersection nodes of timeline weaving worldline.

Results for 100,000 prime number factorizations* (M2)
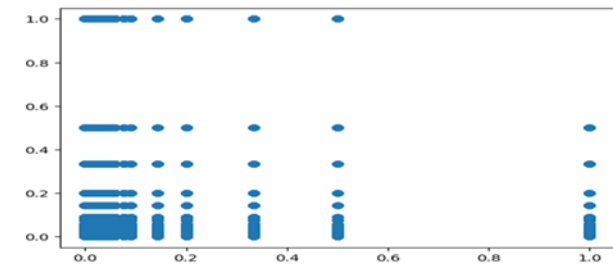
^Origin (0,0) zero time point ^(vacuum?!) intersection nodes of timeline weaving worldline.

Fig. 6. The outputs graphing to plot computer programmed algorithm in equation (8) to map q_g and q_l for $pf0$ and $pf1$ prime numbers up to 10,000 in one case (M1) and 100,000 in the other (M2). *Mathematics constraint with* $pf1$ (permutating) = +1/prime_number; $pf0$ (permutating) = – 1/prime_number; [X] axis = q_g: the quantum global; [Y] axis = q_l: the quantum local parametrizing variables. "They look basically identical, even though they are not.", cluster ><echo of the crystal eye>< especially bunching at origin zero time point (0, 0) (vacuum) intersection nodes with timeline weaving worldline. These are highlighted above to point to graph locations that were computer generated. Courtesy: Christopher O'Neill, IT Physicist of Cataphysics Group (Ireland) executed computer simulation programming.

Preliminary results explaining interpretive physics
Per the author's earlier papers (Iyer, 2022a, b; Iyer *et al.*, 2023), equation (1) summarizes Algorithm Graphical Equation with scalar quantum gauge field $\|[\mathcal{E}_{GR}]\|$ in terms of general quantum gravity gage transforms grand unifying micro-blackhole force field physics facilitating theoretical derivation of experimentally observable and measurable parameters. Manifesting what seems "black-box" universe, this equation systemizes spatial-temporal scalar quantum

gauge field as function in terms of Laplacian, Fourier, and the Legendre transforms gaging the spin, rotation, revolution, and rotational angular velocity expressible as a function of time.
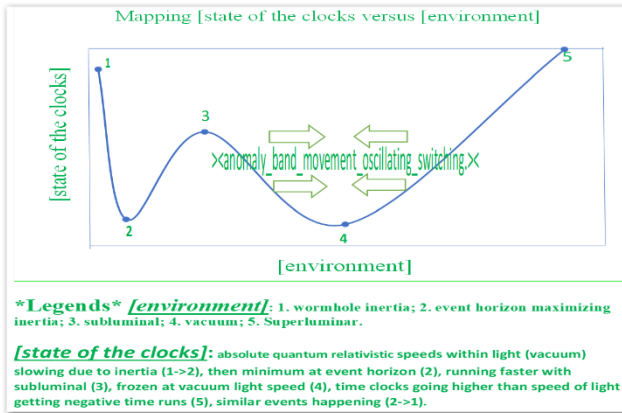

Fig. 7. The state of the clocks versus environment interactivity (schematical outlines). Legends explain how the environment affects the state of the clocks, especially quantum relativistic way.

Towards resolving measurement problem, humanly naturally sensible gage metrics physics relationship of switching gaged fields, $\mathcal{E}_{PDP}$, in the unitarized form written after equation (2) quantifying clockwise and anticlockwise rotational wavefunction and south-north monopoles' wavefunctions, equation (2) shows a way to instrumentation techniques to point-to-point parameters multiplicatively relating to signal/noise matrix (. $\Gamma_{\omega,gr}$.) that is observable measurable in terms of profile density matrix intensity (Iyer, 2022b; Iyer $et\ al.$, 2023).

Equation (3) originally derived by Iyer $et\ al.$ (2023) extracts rank4 tensor time from equation (1) giving four-vector tensor time matrix,

$$\begin{pmatrix} \hat{t}_{pr,\mu\nu} & \hat{t}_g^{\mu\nu} \\ \hat{t}_{l,\mu\nu} & \hat{t}_r^{\mu\nu} \end{pmatrix}$$

in terms of general [transforms] representing $\{\|[\mathcal{E}_{GR}]\|, g_{fts}\}$ fibrational bundle gage transforms physics systems, telling us that information will have algorithmic relationship with matrix timeline.

Figures 1 and 2 allow us to perform information time graphing, in that "black box" aspect equation (1) points can have output with a vibratory acoustic signal form to provide information time transforms of past, present, and future regions' events. The delta flowchart decoding point-to-point information streams, timeline connecting spatially event sense has capability to access history of event information time past to present clock summarizing projective future like clockwork (Iyer $et\ al.$, 2023).

Figure 3 adequately displays creatively reconstructing algebra generalizing mediating environment interacting with entity by retrofitting wavefunction, gage field phase-angle information flowchart modifying quanta per Feynman diagram. Equation (4) the author quantified discontinuum physics (DCP) shifting paradigm get extended practicality by having algorithm identifying weight parametrically that is experimentally testable physically observable measurable quantity given in terms of discontinuum energy field (DEF) (Iyer $et\ al.$, 2023). Estimation of gravity density bundle transforms are possible with instrumentation designs using typical computer programming simulations (Iyer, 2022a, b; Iyer $et\ al.$, 2023), graphically determining **(DEF)** versus **(gage_velocity)** for varying **matter_weights**, thus enabling the discontinuum physics to be a grand unifying paradigm shifting physics.

Equations (5) and (6) show multiplicative physicality of superluminal nature with iSpace time Space Sense (TEKNET EARTH GLOBAL SYMPOSIA TEGS website: All ongoing LIVE STREAM PHASE-II YOUTUBE RECORDINGS of EPISODES are available via URL: https://www.youtube.com/@teknet_earthglobal2923/strea ms. All videos of the PHASE-I YOUTUBE RECORDINGS of EPISODES are available via URL: https://www.youtube.com/@teknet_earthglobal2923/vide os) achieved by rearranging, unitarizing, normalizing, and absolute matrix operations of Equation (3) scalarizing rank4 tensor time "bra" scalarized matrix multipliable to "ket" angular energy matrix to characterize probabilistic time quantum. These equations have commutative 2x2 rank4 tensor time matrix and a scalar multiplicity with the "ket" matrix of frequency-angularity translated to mode of switches vectorially on and off, per quantum probability wavefunction representations earlier (Iyer, 2022a, b; Iyer $et\ al.$, 2020, 2022, 2023) to represent switching circuit time-mode unitary matrix.

Equations (7) and (8) are gauged form of Equation (6) to generate IT computer programmable algorithm with identity-like operation numerating time "bra" matrix, also translating unitary "ket" matrix to time dependent local and the global quantum variables. Thereby the author has produced a four-vector matrix "qnbit" ("quaternion bit") that may have property of chirality. Finally, making amenable to simulation computer programming, operator algorithm, the author has effectively translated simply to IT four-vector matrix "qnbit" while keeping quantum computational probability properties metricized to digital binary variable quantum parametric prime factorizable protocol. This manipulativeness eventually appears as codable algorithm (8) having permutating prime number factorization parameters $pf0$ and $pf1$ taking up conjugate values to input to syntactically machine coding computer program. Graphically then plotting [X] axis = q_g: the

quantum global; [Y] axis = q_l: the quantum local parametric values output in the form of useful physics. Typical examples with arithmetic numeration matrix calculations are given in **Appendix I**, without prime number factoring process to make it simple.

Figure 4 shows a way to graph the local quantum, q_l, versus the global quantum, q_g, by rotating time matrix to suit [X]-[Y] plotting corresponding to tensor time four-vector matrix format. Figure 5 schematizes mapping [X] = q_g (worldline) versus [Y] = q_l (timeline) to reveal quantum probability values within superluminal magnetic plenum, that are exemplified further via sampling **Appendix I** calculations.

Figure 6 outputs results of running executable IT program coding computer algorithm (8) inputting mathematics constraint of permutating prime number factor parameters of $pf1$ and $pf0$ fractions to compute and plot the global and local quantum parameters (q_g, q_l) schematized predictively in Figure 5, following discussions in (TEKNET EARTH GLOBAL SYMPOSIA TEGS website: All ongoing LIVE STREAM PHASE-II YOUTUBE RECORDINGS of EPISODES are available via URL: https://www.youtube.com/@teknet_earthglobal2923/streams. All videos of the PHASE-I YOUTUBE RECORDINGS of EPISODES are available via URL: https://www.youtube.com/@teknet_earthglobal2923/videos). Computational physics results matrix value coding computer executed output run Results for 10,000 prime number factorizations (M1) and for 100,000 prime number factorizations (M2) show crystal symmetric emanating patterns from vacuum zero time point intersecting structures manifesting with nodes of timeline weaving worldline effects These look like diffraction pattern of a perfect crystal. While it may ideally point to wormhole where conditions may be ideal for prime factorization, time tunnel, or suggestive of a "time crystal" structure pattern symmetries, these provide preliminary first level of results that may help in standard calibration to explore how real crystals and anomalies might reveal in simulation patterns. We hope having more plots by modifying coding algorithm, like for example incorporating quantizing phase angle physics with Q factor shunt-switching circuitry aspects to reveal something more meaningful exposing physically inner deeper structure of interweaving fabric exhibiting fibrations revealing contextual anomalies with mechanism which can be a part of natural physics showing manifestation appearing in terms of specifically fractal element aspects. Though these results do not show anomaly or anomaly band zone, they are not random either, rather they reveal clusters or lattice type of network; it is currently too early to comment on that any further. They seem all bunched together near origin or closer to (0, 0) vacuum quantum reflecting zero time point region. We plan to launch project coding ongoing model to PHYSICS computing to progress towards quantifiable PHYSICS

computer simulation with eventual experimental verifications that will prove grand unifiable field theoretical physical mathematics. We can surmise physics restricting {q_g, q_l} values based on phase angle Q factor, quantum density matrix, scalar gauge fields, wavefunction, (heat) temperature, and point potential (all four field) aspects. We may then predict nodes of q_g and q_l *fabric will constitute scalarized linear arithmetic time that we apply for earth tracking of time-event.*

Figure 7 extends on the inferences based on initial picture shown in Figure 5 as well as encouraging outputs revealing symmetries' patterns per Figure 6. The state of the clocks is an important physics determinant efficiently gauging environment-particle characterizable properties. Relativistic clocks' movement limited by speed of light will get time running negatively {shown as positive high value having absolute values depicted here} within phase of the superluminal magnetic plenum fields. With anomalies existing, the clock would be starting to move faster and then is expected to slow down due to inertia of the anomaly band moving by oscillatory switching near vacuum where it may get frozen at light speed. Minimum occurs when the inertia gets exceedingly high such as at event horizon of a blackhole. Interweaving of timeline within worldline exhibits like fabric fibrational entity-environmental interactivity.

Momentum energy physics
Per Newtonian mechanics: $\int m.\, v.\, dv = mv^2/2 + $ constant. Per Einstein mechanics: $\int m.\, v.\, dv = \int m_0(1 - v^2/c^2)^{-1/2} v\, dv = m_0 \int (1/v^2 - 1/c^2)^{-1/2} dv$. Then equating with Einstein's well-known energy equation of $E = mc^2 = m_0(1 - v^2/c^2)^{-1/2} c^2$, and then writing that with differential form, $(d/dv)\,(m_0(1 - v^2/c^2)^{-1/2} c^2) = m_0(1/v^2 - 1/c^2)^{-1/2}$. That is then $c^2(-2v/c^2)\,(-1/2)\,(1 - v^2/c^2)^{-3/2} = (1/v^2 - 1/c^2)^{-1/2}$. Note that m is the quantum object mass with m_0 being the rest value; c is the speed of light in a vacuum; v is the velocity of object quantum. Simplifying, we get the following:

$$c^2(-2v/c^2)\,(-1/2)\,(1 - v^2/c^2)^{-3/2} = (1/v^2 - 1/c^2)^{-1/2}$$
$$v\,(1 - v^2/c^2)^{-3/2} = (1/v^2 - 1/c^2)^{-1/2}$$
$$v\,(1 - v^2/c^2)^{-1/2}/\,(1 - v^2/c^2) = (1/v^2 - 1/c^2)^{-1/2}$$
$$1/\,(1 - v^2/c^2) = 1$$

Therefore, here $v = 0$. So, $v = 0$ per above momentum energy physics calculations might represent the state of the clocks at vacuum region 4 shown in Figure 7. This will mean oscillations of fermions around the vacuum constancy theoretically proving possibility of an anomaly band moving by oscillatory switching near a vacuum, like zero fields' point oscillating state of the clocks within environment, such as a vacuum. Clocks are working like a quantum relativistic dynamic entity.

Further preliminary results are shown in **Appendix II**, briefly discussing the geometry of space in relation to proposed dimensions that various entities making up the

universe might possess. These dimensional physics conjectures are typically listed there to show dimensional range, entities, and their expected properties. Graphically Hod-PDP mechanism operating in Superluminal Magnetic Plenum having monopoles are depicted by sketches of Feynman-like diagram. This also shows how PDP mechanism might create electron-positron pair and then with an effective environmental mediation of photon wave create quark gluon particle spectra. Also brought out are analog to charge, parity, time reversal symmetry to equivalent structure like topological defect, parity to shape like transforms, and time reversal to Hod-PDP mechanism that may be locally activated by distortion of turbulent Superluminal Plenum, acting like "Superfluid." Theoretical Algorithm Graphing wave particle by incorporating wavefunction, and the gage field function with phase angle generalizing Feynman diagram algebraically to graphical flowchart with examples are extended towards viable calibration of experimentally measurable observables. Examples with gage field calibration, and the wavefunction evaluations are enumerated there as well. Hence theoretical to experimental design capable of point-to-point detection by algorithm translatable to program code with simulation computer system are briefly introduced in **Appendix II** that appear more in the author's earlier papers (Iyer, 2022a, b; Iyer *et al*., 2023).

CONCLUSION

The author starts by reviewing earlier peer published papers' results as a part of the Logic Backup Algorithm Formalism physics giving gist of Algorithm Graphical Equation with scalar quantum gauge field $\|[\mathcal{E}_{GR}]\|$ in terms of general quantum gravity gage transforms grand unifying micro-blackhole force field physics. Manifesting what seems "black-box" universe, this equation systemizes spatial-temporal scalar quantum gauge field as function in terms of Laplacian, Fourier, and the Legendre transforms gaging the spin, rotation, revolution, and rotational angular velocity expressible as a function of time. In resolving measurement problem, humanly naturally sensible gage metrics physics relationship of switching gaged fields," ket" $\mathcal{E}_{PDP}$, and the four "bra" wavefunction ψ values allow design of experimental instrumentation techniques to observe and measure point-to-point parameters relating to signal/noise matrix quantitatively characterizing profile density matrix intensity.

Extraction of a rank4 tensor time from Algorithm Graphical Equation gives four-vector tensor time matrix in terms of general [transforms] representing $\{\|[\mathcal{E}_{GR}]\|, g_{fts}\}$ fibrational bundle gage transforms physics systems, telling us that information will have algorithmic relationship with matrix timeline. Applying gauging to information time transforms graphing of past, present, and future regions events are made possible by creatively reconstructing

algebra generalizing mediating environment-entity interactivity by retrofitting wavefunction, gage field phase-angle information flowchart to modify quanta per Feynman diagram. The author quantified discontinuum physics (DCP) shifting paradigm by having algorithm to estimate gravity density bundle transforms with instrumentation designs using typical computer programming simulations of discontinuum energy fields **(DEF)** versus **(gage_velocity)** for varying **matter_weights**, enables the discontinuum physics to be a grand unifying paradigm shifting physics.

Multiplicative physicality of a superluminal nature with iSpace time Space Sense was achieved by rearranging, unitarizing, normalizing, and absolute matrix operations scalarizing rank4 tensor time to "ket" angular energy matrix characterizing probabilistic time quantum. These equations were gauged to generate an IT computer programmable algorithm with identity-like operation numerating time "bra" matrix, as well as translating unitary "ket" matrix to time dependent local and the global quantum variables. Resulting four-vector matrix "qnbit" ("quaternion bit") that may have property of chirality was configured simply to IT four-vector matrix "qnbit" keeping quantum computational probability properties digitally binary variable metricized. Quantum parametric prime factorizable protocol was achieved as codable algorithm (8) having permutating prime number factorization parameters $pf0$ and $pf1$ taking up conjugate values to input to syntactically machine coding computer program.

Graphically computer plotting [X] axis = q_g, the quantum global and [Y] axis = q_l, the quantum local parametric values outputs physics values, with typical examples having arithmetic numeration matrix calculations given in **Appendix I**. Output results of running executable IT program coding computer algorithm (8) inputting mathematics constraint of permutating prime number factor parameters of $pf1$ and $pf0$ fractions to compute and plot the global and local quantum parameters (q_g, q_l) with 10,000 prime number factorizations (M1) and 100,000 prime number factorizations (M2) runs show crystal symmetric emanating patterns seemingly from vacuum zero time point intersecting structures manifesting with nodes of timeline weaving worldline effects.

Inferences extending encouraging outputs revealing symmetries patterns the state of the quantum relativistic PHYSICS clocks versus action environment may provide determinant to efficiently gauge environment-particle interaction properties. We expect with existing anomalies, the clock would be starting to move faster and then slowing due to inertia of the anomaly band moving by oscillatory switching near vacuum where it may get frozen at light speed. Encouraging breakthrough results were obtained by doing calculus of Newton-Einstein momentum energy physics, getting proof theoretically. This exposits

oscillations of fermions around the vacuum constancy such as predictive anomaly band moving by oscillatory switching near vacuum, like zero fields point oscillating state of the clocks within environment, especially vacuum states, where quantum relativistic clocks will seem like freezing.

We hope having more plots by modifying coding algorithm, like for example incorporating quantizing phase angle physics with Q factor shunt-switching circuitry aspects to reveal something more meaningful exposing physically inner deeper structure of interweaving fabric fibrations. These advanced physics revealing contextual anomalies with mechanism such as fractal element aspects may then bring out operational physical mechanisms. We plan to launch project coding ongoing model to physics computing to progress towards quantifiable physics computer simulation with eventual experimental verifications that will prove grand unifiable field theoretical physical mathematics. Measurement of key physical parameters such as quantum density matrix, scalar gauge fields, wavefunction, (heat) temperature, point potential (of all the four fields) aspects, and nodes of q_g and q_l fabric will help to understand physics changing, for instance, time-event-earth on a real scalarized linear arithmetic timeline.

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The author would be always indebted to many upcoming progressive outstanding journals who have promoted publications with excellent peer-reviews of our papers' articles. These publications would appear in "References" presented here, although the given listing would be only a sampling of the enormous physics literature available, especially to conform by tersely representing author's list.

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Appendix I

IT four-vector matrix "qnbit" can be gauged from equation (6) to (7) that is written above. *Mathematics constraint with* $\pm = 1/2$; $\theta = -1/2$; off = 0; on = 1 will give the following numeration matrix (simple digital matrix) evaluated to get real values:

$$\begin{pmatrix} 0 & 1 \\ 1/2 & -1/2 \end{pmatrix}\begin{pmatrix} 1 \\ 0 \end{pmatrix} = \begin{pmatrix} q_l \\ q_g \end{pmatrix}$$

Here $q_l = 0$ and $q_g = 1/2$ to show up as half square or step wave like operational amplifier switching circuit in physics.

Then, if we use 1/4 and –1/4 instead of 1/2 and –1/2, the matrix will be:

$$\begin{pmatrix} 0 & 1 \\ 1/4 & -1/4 \end{pmatrix}\begin{pmatrix} 1 \\ 0 \end{pmatrix} = \begin{pmatrix} q_l \\ q_g \end{pmatrix}$$

Here $q_l = 0$ and $q_g = 1/4$ represent the next step and then permutate to various values.

Then, if we have 1 and 0 instead of 0 and 1, the matrix will be:

$$\begin{pmatrix} 1 & 0 \\ 1/4 & -1/4 \end{pmatrix}\begin{pmatrix} 1 \\ 0 \end{pmatrix} = \begin{pmatrix} q_l \\ q_g \end{pmatrix}$$

So, $q_l = 1$ and $q_g = 1/4$ are for the next step and then permutate to various values and then so on many possibilities.

Mapping of global and local quantum values of $\{q_l, q_g\}$ will provide knowledge of timeline within worldline, as well as anomalies within Superluminal magnetic quagmire Plenum that may hold the secret of genesis of real matter universe.

*PHYSICS restraint with* *Q factor giving phase angle*

$\{q_l, q_g\}$ will not have continuous values due to the Q factor. We see relationships worldline incorporating timeline four-vector time matrix $\{q_l, q_g\}$ appearing in converted plots. Key pointers with ongoing progressive physics considerations have been listed below.

- Rethinking Simple physics: What is it?

Emmanouil Markoulakis's structure electron photon physics, Christopher O'Neill's quaternions crystal space geometry PHYSICS, John Hodge's STOE wave heat equations physics, Christian Wolf's geometry topology constant iSpace Mathematical physics, Gerd Pommerenke's modeling quantum astro universal circuitry physics, Wen Zhong's frictional vacuum Super-photon

Physics, Manuel Malaver's Dark Energy and Stellar Compact Galactical ASTROPHYSICS, Emory Taylor's Discontinuum physics versus classical, quantum, general special relativity, Rajan Iyer's Gage Helmholtz's 2x2 matrix fields time transforms general formalism physics, Normal Current physics general paradigm, and Standard Model Theory of Everything to list a few show the progressive natural physics wholly.

- {Observable, Observer, Object, Observed, Distance} Why {observed object observer distance observable perspectives matter, things work only in a certain flowing manner} overall?!

Rajan Iyer's ANSATZ time physics transforms show our whole universe to be "black box." Hence, self-consistent modeling requires systems matters, for example, people hooked on TV watching may provide one form of perspective.

- PHYSICAL MATHEMATICS versus Mathematical physics: Paradox, Puzzle, physics Problem Solving.

How can one quantify reference frame perspective point?! Via the modeling of a close infinity observer looking to know Universe's Observables….

- Know how physics with quantifying algebra.

Presently, the author has been working out algebra of observer observable object distance fundamentally to quantify point physics. Mathematically quantifying physics provides results that we can write as observer observable object point distance [potential] = of the form $\{f(1/r)\} = \{\exp(-\int v.\, r.\, dt)\}$ with $0 \ll r_{observer\text{-}object} < \infty$ and $-\infty \ll f(1/r) < 0$. My quantifying mathematics observer physics can be applied to various self-consistency physics mathematically with invariant compatible algebra to classical, quantum, relativity, and astrophysical General physics paradigm problem solving situations…. Requirement with self-consistent physics development is working like a feedback circuit loop, like for example with the people hooked onto televisions, especially as exhibiting error signal with particle-wave environment system open strings, closed strings generating vortex, as brought out with example in the paper by Iyer *et al*. (2023). Let us do further analysis with equation (2). The gaged fields, $[0\ \theta\ 1\ \varphi]$ can be related to an observer observable object point distance [potential] = of the form $\{f(1/r)\} = \{\exp(-\int v.\, r.\, dt)\}$, with $0 \ll r_{observer\text{-}object} < \infty$ and $-\infty \ll f(1/r) < 0$ for self-consistent physics.

Question of what will constitute observers have ongoing physics debate, per Hossenfelder's videos [https://video.search.yahoo.com/search/video;_ylt=Awr.x wpGTRZkTW4f0HH7w8QF;_ylu=c2VjA3NlYXJjaAR2d GlkAw--
;_ylc=X1MDOTY3ODEzMDcEX3IDMgRmcgNtY2FmZ WUEZnIyA3A6cyx2OnYsbTpzTpzYixyZ246dG9wBGdwcm

lkA0hMU3UuZFdtUUhpRkV5SlhyU3RvUUEEbl9yc2x0
AzAEbl9zdWdnAzEEb3JpZ2luA3ZpZGVvLnNlYXJjaC
55YWhvby5jb20EcG9zAzAEcHFzdHIDBHBxc3RybAM
wBHFzdHJsAzUzBHF1ZXJ5A3NhYmluZSUyMGhvc3
NlbmZlbGRlciUyMGhoYXQncyUyMHRpbWUlMjB5b3
V0dWJlJTIwcmVjZW50JTIwdmlkZW9zBHRfc3RtcAM
xNjc5MjgwNzM4#?p=sabine+hossenfelder+what%27s+ti
me+youtube+recent+videos&ei=UTF-
8&fr2=p%3As%2Cv%3Av%2Cm%3Asb%2Crgn%3Atop
&fr=mcafee&type=E211US1264G0#]

- Proceeding thought with novel paradigm

Real value measurement formalism physics, with having observer = mirror universe at distance closer, however not infinity from observable universe helps us to produce an interesting situation where alien in the mirror universe has capability in observing our observables' real universes like point initially trillions of light years away. If that ET alien decides to send an accelerating entity (that maybe eventually burning to) superluminal entity, luckily for the ET alien, that entity get directed to thus reach our real observable universe through our own galaxy to earth, it then possibly caused dinosauric extinction more than 165 million years ago; that information also has potentially capability to transmit to the ET alien who now senses a life outside his ever-moving cosmos. Subsequently, ET might be thinking of traveling to our galaxy to earth but may reach only after billion years. What changes this scenario could be wormhole travel that may help the ET alien to reach earth in a faster manner – it is something we do not know about?!

Superluminal Plenum may be open strings, whenever broken heat energy gets released to generate vortex kinks that may create closed strings. Open strings are likely fermionic-like with 1/2 spin vibration, while closed strings are likely to appear bosonic-like spin1 vibration. Therefore, a Hod may have spin1 vibrational characteristics.

Keynote: Only particles and the waves are physically observable. Superluminal Plenum Hod are imaginary entity-like. Hence, Hod-PDP mechanism circuit becomes needed to measure effects experimentally. Refer to (TEKNET EARTH GLOBAL SYMPOSIA TEGS website: All ongoing LIVE STREAM PHASE-II YOUTUBE RECORDINGS of EPISODES are available via   URL: https://www.youtube.com/@teknet_earthglobal2923/strea ms. All videos of the PHASE-I YOUTUBE RECORDINGS of EPISODES are available via URL: https://www.youtube.com/@teknet_earthglobal2923/vide os) with discussions about time-like and space-like photons, antineutrinos, and neutrinos to describe Hod-PDP assembly.

Appendix II

Geometry-of-space algorithm of time make sense?

The algorithm of time needs physics transforms because of interactive synergism of object rotations with time domain (Iyer, 2022a, 2022b; Iyer *et al*., 2023), whereas the geometry of Space requires quaternions rotations. These aspects will be covered during later publications only.

Geometry of space: dimensionless {point, Superluminal, Plenum, magnetic, quagmire} to dimensional {Hod, dipole, magnetic, planar field} to {PDP, clockwork, assembly, discontinuum, mechanism} to {particle, photon, quark, gluonical, matter} are linkable graphically in flowchart like Feynman diagram (Fig. II.1) providing the process of north and south monopoles which get mediated by Superluminal Magnetic Quagmire Plenum to create Hod-dipolar planar magnetic rigid entity having high energies to provide forces breaking symmetry to create quasi-particles generating electron-positron pair to assemble with north-south monopoles to create PDP circuit clockwork mechanism. Through photon wave (produced by Hod) mediation, the Hod-PDP assembly induces quark-gluonical particle to matter forming. This process has been graphically sketched below.
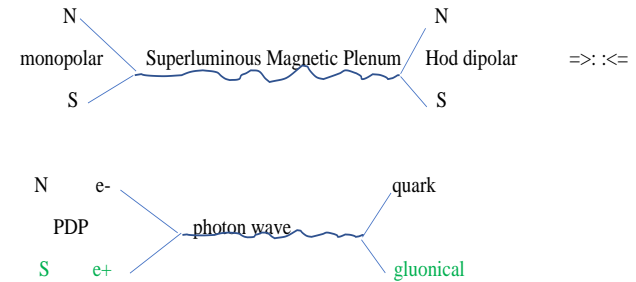

Fig. II.1. Two Feynman-like diagrams.

One of the operator effects will be to have the component of timeline global time versus locally time getting affected by worldline component of the real time with the proper time. Events at locally time get changed faster. This will have many timeline-event ongoing change. Worldline expanded millions of billions of years, likely "Back to ongoing future" exactly. However, because time transforms gauge shows universe to be a "black box", feedback loop conditions satisfying to model self-consistent physics becomes a real possibility. Inferentially, this will point to a four-vector time matrix, as shown in equations (5) and (6).

{hcharge, parity, time reversal symmetry} =>: :<= {change, picture, time four vector matrix}. Worldline and timeline compatible units when comparable magnitude topology come together it will start altering geometry of disc to geometry of spatial toroid transforms transitioning to time bubble. [charge] topological transforms [parity]

Superluminal Plenum to a Hod-PDP quantum mechanism with [time reversal] {nuclear, plasma, quark, particle, gluon, matter} [X Y] =>: :<= [X' Y'] phases then can be mediated by environmentally energetic gage force field operator at global level. **hcharge** is like topological defect. **parity** is like transforms operator. **time reversal** is like fibrational strings. General dependence properties' characterizations analogically will be like: [charge] on {structure like topological defect}, [parity] on {shape like transforms geometrical disc toroidal bubble}, and [time reversal] on {mechanism like Hod-PDP quantum level distorting Superluminal Plenum}.

Keynote: Earth may start spinning faster probably due to worldline compressing timeline longitude of Earth now?! Applying classical mechanics with moment of inertia, one can hypothesize that a squeezing effect, having especially action on magnetics will enhance spinning process. This may have an effect manifesting with changing picture timeline event locally making time closer to global as a real outcome?! If we write these processes quantitatively in terms of a four-vector gauge information matrix (time, bubble, having, toroidal) [rotations_operator_metrix_protocol], having also worldline and timeline compatible scalar units, transforming to topology of space will be seen to be altering effectively geometric shape of disc to toroidal corresponding to time bubble.

Dimensional conjectural physics shifting paradigm
In a gist manner, we can extend physics conjectures to make sense by justifying dimensions of various entities that make up the universe, listed briefly here in Table II.1.

Table II.1. The entity and expected property for several dimensional ranges. Note that adsorption signals may occur with Hod, as well as with Hod-PDP clocking mechanisms.

Dimensional range	Entity and expected property
0 to 1	Superluminal Plenum that may be noisy, however not observable
1 to 2	Open strings, typically 1D; Closed strings or loops, typically 1D to 2D
2	Hod that will not have thickness, hence transparent not observable
2 to 3	Quasi-particles, particles like fermions and bosons - potentially observable
3	Matter universe general Euclidean observable
3 to 4	Space-time manifold, for instance, blackholes observable effects
4 to 5	Hod-PDP assembly dynamics, effects quantum physically interpretable

"What is time?" …. functional linking past and the present functors of event-timeline, a.k.a., arrow of time in one direction then with information on the other direction of five-dimensional topological metrics.

- o   Knowhow {information, time} functional linking geometry {space, sense}
- o   Graphing with example of information = event ongoing marking then shows up as timeline......
- o   light sense vacuum space timeline event…… physically observables that point to such possibilities......
- o   sound sense matter space timeline event……. physically observables that point to such possibilities......

We can sketch time and event connecting sense rotations with geometry of space as shown in Figure II.2 below.
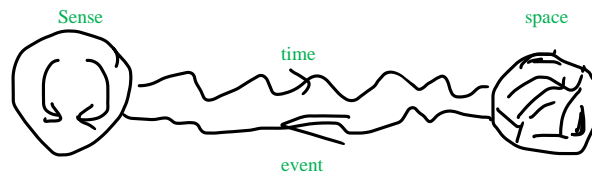

Fig. II.2. The diagram for time-event connecting sense to space.

"What is it?" …. Time acts like a mixed operator …… "Why?"

1.   Time is having linear nonlinear aspects (Iyer, 2022b)
2.   Time is a functional linking directionally conjugatively typically with open strings event information like functors sense to space connectivity, per sketch above.
3.   Time is marking global to local ongoing directionally matrix operator strings with information local linking global, interpreting sketch above in terms of information-timeline.
4.   Time is a four-vector matrix (Iyer *et al*., 2023).
5.   Worldline towards a proper timeline pattern pathway, per Preliminary Results above.

"How?".... defining time in terms of moment and history.... Time is microscopically reversible with quantum tunneling process switching subatomic sense to spatial nonlinear operator, however mesoscopic to macroscopic irreversible timeline event.

Theoretical Algorithm Graphing wave particle real link value
Let us treat the diagram shown per Figure II.3. In this figure, Ψ is the wavefunction of electron positron pair and φ is the gage field function with phase angle that can be

evaluated from designs experimental measurements (Iyer, 2022a, 2022b; Iyer *et al*., 2023). Hence, values of **(ψ, φ)** can be evaluated to complete quantification of the following process diagram:
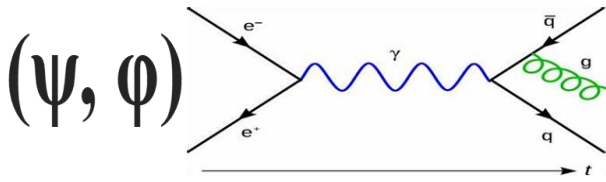

$$(\psi, \varphi)$$

Fig. II.3. The Feynman-like diagram.

This algorithm graphing with ITSTEM physics will have several usages, especially quantum computing applications. We can predict that it would provide working calibrator viably in experimentally measuring Γ and ρ feasibly with instrumentation systems shown per text in prototype designs, having calibrated $\varepsilon_{PDP} = [0 \; \emptyset \; 1 \; \phi]$ to yield Ψ values by iterative processes computer programs. Such practical results are obtained there also by theoretical computer programming made possible in conjunction with experimental techniques. Once these quantum results have been achieved, that will then lead to evaluating $|\Psi>$. Then, real $<\Psi|$ values can be evaluated by solving algorithm (Iyer, 2022b) with theoretical and experimental procedures that have been already described above to get values of example wavefunction matrix (**ψc ψɔ ψS ψN**) via trial-and-error basis. This extensively elaborate methodology will then supply all values to compute $\rho = |\Psi>$, wavefunction-phase angle electron positron photon mediator quark antiquark gluon. In this Feynman diagram (Figure II.3), per Wikipedia text, "….an electron (e-) and a positron (e+) annihilate, producing a photon (γ, represented by the blue sine wave) that becomes a quark–antiquark pair (quark q, antiquark q̄), after which the antiquark radiates a gluon (g, represented by the green helix) ….". The whole assembly with software algorithm having hardware particle apparatus (Iyer, 2022a, 2022b; Iyer *et al*., 2023) will help to stabilize quantum computer equipment self-correcting operationally while calibrating accessories that get supplied alongside eventual quantum computer internet technological systems.