Exploration

Galactic Supermembrane & the Age of the Earth

Tony Bermanseder[*]

Abstract

The question about the boundary conditions for an expanding universe as a 4-dimensional spacetime can be described as a no boundary condition for a 3-dimensional space embedded within a 4-dimensional space if the 3-dimensional volume is transformed into a 3-dimensional surface or manifold, known as the 3-Sphere of Poincaré or as a pseudo-Riemannian 4-manifold. Using the topology and geometry of a multidimensional universe then allows a Platonic or 'ideal geometric form' analysis for a 'unified and demetricated' universe, described as a unitary or holographic-holofractal unity. Under utility of an universally applicable measurement system, based on the self-relative measurement of the speed of light 'c' and Planck's quantum constant 'h'; particular algorithmically derived fundamental constants calculate the age of the universe in a linear and a cyclic superposed form and the age of the earth is shown to relate an initial coordinate for the birth of the universe with the electromagnetic fine structure constant alpha, varying in the cyclic, but not the linear form of the time flow of the expanding universe in the Coulombic charge quantum e.

This value is centred at the Hubble node for the cyclic multidimensional universe as $16.876 \pm \Delta$ Gy as a function of the true electromagnetic age of the universe of 19.11576 Gy from $n_{present}$=1.1327117 and the alpha variation effect of 28.59865512 Million civil years. As the Earth-Baab nexus point is as old as the Quantum Big Bang Wormhole Singularity-Abba nexus point, adding the Alpha-Variation effect or deviation-error interval to the Age of the nodal-fractal Universe will harmonize the encompassing Abba-Baab or Creator-Creation supersymmetry. For the nodal Hubble Boundary Δ_{Earth} = 19.11576 - 16.876 = 2.240×10^9 (Civil) Years for $2\Delta_{Earth}$ = 4.480×10^9 (Civil) Years. For the Alpha Variation effect: Δ_{Alpha} = 28.60 My for $2\Delta_{Alpha}$ = 57.20 My. The Age of the Earth so becomes aligned in $2\Delta_{Earth}$ + $2\Delta_{Alpha}$ = 4.480×10^9 + 0.0572×10^9 = 4.5372×10^9 (Civil) Years.

Keywords: Galactic, supermembrane, age, Earth, Poincare group, Riemann manifold, holographic, holofractal, Hubble, multidimensional, Universe.

1. Dilemmas of the SI-Civilization & fundamental algorithms in 26 dimensions

The symbol of the Maya at the center of the Milky Way galaxy is known as Hunab Ku as 'Mover of all things' and depicting a galactic butterfly across the worlds changing from darkness to light in cycles of time. The Maya named the galactic Center Hunab Ku - the 'Giver of all Life and

[*] Correspondence: Tony Bermanseder, Independent Researcher. E-mail: omniphysics@cosmosdawn.net

Measure' and called the 'Pathway from the Earth to Hunab Ku' as 'Kuxan Suum - the Umbilical Cord between Earth' as the Universal Mother and its Galactic Father-Mother. At the center of Hunab Ku resides a dualized supermembrane manifesting as a multi-dimensional wormhole core connecting a Black Hole 'Mother'-Sink-Source to a White Hole 'Father'-Source-Sink. One can describe the cosmology as a White Hole negative-yang-male charge primary source-sink energy powering a Black Hole positive-yin-female charge secondary sink-source energy.

The characteristic negative charge can be said to originate from a nospace and notime realm, albeit defined mathematically as an unphysical negative- or imaginary space. A physically real space and time so can be defined in the logistical argument of relating the real spacetime of a positive space to an imaginary spacetime of a negative space. A self-referential or quantum relativity between two observers; one of each located in either the negative-imaginary or positive-real worlds or realms can so become established.

The observer within the negative spacetime considers hisher world as real and considers the observer situated within the positive spacetime as imaginary or as a virtual reality or image of herhimself. The premise of location therefore defines perceived reality for both of the observers arbitrarily, irrespective of how their original frames of self-references are defined or agreed upon. To poetically color or mythologize or anthropomorphize this essay, the duality coupled supermembrane at the core of the Milky Way galaxy as the Maya's Hunab Ku or 'Giver of all things' can be renamed as Abba – the little serpent (Quetzalcoatl aka Kukulkan aka Gugumatz aka Manitou aka Great Rainbow Dragon-Membrane Baiame etc. etc.).

The symbol of the 'Cosmic Dragon' or Ouroboros as the Mazzaroth or Great 360° Circle of the Zodiac Sky symbolizing the mapping of the Egyptian Nile from the Milky Way Galactic path is translated from the binary code of the Mathimatia in the zero cipher 0 linearized as the unity cipher 1 in a form of modular quantum geometric duality and mirroring the transformation of the superstring classes from a 26-dimensional {A-Z or alpha-omega or beginning-end}Bosonic closed superstring spectrum into a distribution of both closed and open superstring classes; the open superstring classes then relating to their attachment to lower dimensional Dirichlet branes from their higher dimensional origin, such as superstring class I.

This can be defined as an algebraic-topological Unitary Circle Group or U(1) relating the closed 'non-gauged' 26 bosonic integer dimensions to 26 open U(1)-gauged bosonic integer dimensions subsequently differentiated in the unit circle in clockwise and anticlockwise chirality and rotations and in 10 right handed or clockwise superstrings and 16 left handed or anticlockwise bosonic strings comprising the 26 bosonic string dimensions. In 11-dimensional M-theory, the non-gauged nature of the original 26 dimensional closed Bosonic string is reestablished to algebraically-topologically close the spectrum of the 10-dimensional superstrings as a 2-1 from 11-10 dimensional reduction and modular quantization.

A calibration of Earth's annual sojourn around the Sun as 365.2425 light days with the count of sunsets so can establish a particular Mayan Kin-Calendar for the 9,360,000 Kin-Days as synchronizing the distance between Hunab Ku and Earth with the timeframe for light and Abba's message for Baab to reach the Black Hole at the center of the Earth.

א = 5x13x144,000=9,360,000 lightened days for א(60)(60)(24)(300,000)km = 242,611.2 Trillion km or 25,626.8096 light years for א = 25,626.8096 (365.2425) 'civil-Gregorian' years. This calibration defines the emission and reception of Abba's message for Baab as March 1st, 23,614 BC and December 21st, 2012 in a proleptic-backdated and current calendar day-kin count respectively. In the Mayan calendar those day-kin counts are named as 3Kayab 4Ahau = -52.0.0.0.0 3Kankin 4Ahau = 13.0.0.0.0 respectively.

The purpose of the message would be to prepare the life on the planet Earth to prepare for a galactic synchronization coinciding with a graduation of the human civilization evolving on Earth in a metamorphosis from its human and planetary basis towards a star human and star-galactic foundation. After Baab had received Abba's message at the center of the Earth; the planned metamorphosis to graduate the human civilization into a 'new timed' evolving star human civilization could begin.

The examinations, occurrences and interpolations required for graduation would engage various cyclicities and reckonings of time as stipulated by the quantum entangled ancestors and descendants of the terrestrial humans in their galactic and intergalactic-universal family associations and partnerships. The major timeframe for graduation would however be bounded by 13 years from 2012 to 2025 in an intensification and focusing on the evolving consciousness and perceptive ability of the human acolytes, aspiring towards its star human status of renewal.

Abba's yanged membrane message to yined membraned Baab from the imaginary negative spacetime relative to the real positive spacetime so was also a letter to the common family on Earth as the cosmic-universal children and inheritors of a promised starry legacy. As the sun's angular diameter is about 0.53 degrees, the Maya calculated the ending of their long count in the last cycle of the winter-summer solstices as a function of the Mayan Precessional 'Great Platonic Year' of 25,626.81 cycles (or civil Gregorian years).

25,626.81 years so describe 12 subdivisions of 2,135.57 years each as 12x780,000 = 9,360,000 or 13 subdivisions of 1,971.29 years each as 13x720,000 = 9,360,000. More precisely, the dates can be calculated as ranging from 5x156,000=780,000 KIN to 5x144,000=720,000 KIN.

A precessional degree then becomes 9,360,000/360=26,000=71.1856x365.2425 days and so in the Mayan kin count, 71.1856 civil years specify a 1-degree precession and the galactic synchronization at the winter solstice will be 71.1856x0.53=37.728 civil years or 13,780 'Mean Solar Days' for the solar transit across the galactic center.

Setting the beginning of the 'Age of Aquarius', transiting from the previous 'Age of Pisces', at the solar transit from the star sign of Benoni Benjamin Pisces into the star sign of Manasseh Joseph Ephraim at January 20th, 1998 06:46UCT; defines a midpoint calibration of 13,780 kin-days in March 11th, 1979 + 6890 Days = January 20th, 1998 + 6890 Days = December 1st, 2016.

Yes, but observing the vastness of the cosmos in the frame of reference of where the alien lived, the thinker pondered about less advanced civilizations; some of which would still struggle with questions about the origins of mass or the nature of electric- or chromodynamic charges and

most importantly the origins, nature and destiny of the planetary civilization as a universal civilization as such.

Such a civilization of a particular planetary intelligence on Earth might use a SI-system to unitize and measure the phenomena which the experimenters and observers might encounter. Specifically, they would try to measure the expansion of the universe in deriving values for the Hubble Constant and the cosmological vacuum.

It dawned upon the alien thinker, that a civilization bogged down in measurement would not be able to understand the expansion of the universe. The scientists would derive all sorts of numbers for the Hubble oscillation and they would in likelihood misidentify the inflation dynamics in a way, which would prevent them to account for the mass energy necessary to asymptotically close the universe in its geometry.

And so the alien decided to think of a method to convey the necessary information to such a civilization in an attempt to further its cosmic evolution from a planetary into a galactic and universal civilization. Should a civilization decide to rely exclusively on measurement to gain physical data from observation and experiment; then the alien friend would have to demonstrate the correlation between a cosmic unitary system (*) and the 'System International' SI-unitary system used by the civilization in question. In terms of measurement, there would be a natural constant, which would interrelate to many other natural constants of measurement in an observed spacetime and this constant would be the magnetic permeability constant μ_o measured in the vacuum of 'free space'.

Of the ten master constants from the universal computer algorithm, the 4th, 5th and 6th one became the foundation for the energy transformation between radiation and matter and those constants became effective at a time marker a triple inflation had ended $3.33...\times10^{-31}$ seconds s* after the birth of time as zero time or null 'Now' time.

Those three constants formed an output from AbbABaaB in designation: Constant #4: $h=1/(15\times10^{32})$ and Constant #5: 11 and Constant #6: $c^2=9\times10^{16}$.

In assigning units of measurements to those collections of integers as counting numbers and in combinations as rational numbers and as fractions; the SI-civilization would measure observed physical phenomena such as the propagation of light or the behaviour of elementary subatomic particles and define for itself a system of mensuration, which could become calibrated with the cosmic unitary star(*)-system.

It would then be the magnetic permeability constant μ_o, which would be numerically equivalent in both the star(*)-unitary system and the SI-unitary system to enable the calibration to proceed. More generally, the (*)-unitary system of AbbABaaB is produced by integers and special series- and sequence based transcendental numbers such as π and the natural exponent e and $\sqrt{5}$.

The cosmic radiation-matter relation then became defined via the reflection of constants #4 and #6 about constant #5:

ENERGY = {Constant#4}{Parameter#1} EQUIVALENCE {Parameter#2}{Constant#6} = YGRENE.

Now the EQUIVALENCE of Constant#5 = 11 allowed a higher dimensional integer realm to manifest this 'world of abstract number' within a lower dimensional world of physicality and where the nature of this physicalisation allowed the higher dimensional exactness to become a distribution of frequency or permutation self-states in statistical distributions of approximation for the higher dimensional 'idealization of form and structure'.

The higher dimensional world of 'totality or summation of the perfect form' so could be approximated by perturbative and asymptotic convergence of the partial or lower scale perfect form as building blocks in summation and integration and as holofractal or holographic self-similar representations of the higher dimensional expression in its lower dimensional emanation. The cosmic and universal building block for the physical cosmology so became a minimum spacetime configuration known as the singularity wormhole of creation emerging from the 11th dimension as a mirror manifold as a 2-brane or 2-dimensional brane as a generator for a 3-brane or volumar of 3 spacial dimensions. A 11-dimensional supermembrane so generates a 12-dimensional 12-brane or super-volumar and reconnects as higher dimensional limit to its lower dimensional limit as a 'point-particle' or 0-brane of the Null dimension of the original 'Now-Null Time'.

The 1-brane of linear displacement, the 4-brane of hyperspace displacement, the 7-brane of twistor quantumspace displacement and the 10-brane of superstring omnispace displacement then integrate the minimum dimensional displacement in the point particle of mathematical abstraction to the collection of all such abstract points, both as physicalized elementary and polarized (spin, charge or matter) particles and as the binary encoding of closed and open superstrings symbolized in the ciphers of the Nullpoint 0 and the cipher of the Unitary 1 respectively.

13-brane	DimTime Connector Omni/Null	Singularity All Points	13/0D-Physicality Omni Existence	All Particular Locations
12-brane	12D-Space	Omnispace3 Volumar	12D-Physicality Quantization	Omnicube3 Omnisphere3
11-brane	Omnispace Mirror	Omnispace2 Area-Surface	11D-Omni spacetime	Omnicube2 Omnisphere2
10-brane	DimTime Connector Quantum/Omni	Omnispace1 Displacement	10D-Omnispace	Omnicube1 Omnisphere1
9-brane	9D-Space	Quantumspace3 Volumar	9D-Physicality Vibration	Quantumcube3 Quantumsphere3
8-brane	Quantumspace Mirror	Quantumspace2 Area-Surface	8D-Quantum spacetime	Quantumcube2 Quantumsphere2
7-brane	DimTime Connector	Quantumspace1 Displacement	7D-Quantumspace	Quantumcube1 Quantumsphere1

	Hyper/Quantum			
6-brane	6D-Space	Hyperspace3 Volumar	6D-Physicality Rotation	Hypercube3 Hypersphere3
5-brane	Hyperspace Mirror	Hyperspace2 Area-Surface	5D-Hyper spacetime	Hypercube2 Hypersphere2
4-brane	DimTime Connector Line/Hyper	Hyperspace1 Displacement	4D-Hyperspace	Hypercube1 Hypersphere1
3-brane	3D-Space	Linespace3 Volumar	3D-Physicality Linearity	Cube Sphere
2-brane	Linespace Mirror	Linespace2 Area-Surface	2D-Line spacetime	Square Circle
1-brane	DimTime Connector Null/Line	Linespace1 Displacement	1D-Linespace	Line Vector
0-brane	0D-Space	Singularity Point	0/13D-Physicality Abstract Existence	Particular Location

The Equivalence as a property of the higher dimension so emerges in the lower dimension in an equivalence between abstract expressions or logistical formulations in representation of physically observable and measurable qualities and parameters.

Parameter#1 becomes the measure for radiation energy and so frequency as inverse time and Parameter#2 becomes the measure for mass energy in matter.

The Universal Energy-Mass-Relation:

$E=hf=m_oc^2$
$E=hf$ iff $m_o=0$
$E=m_oc^2$ iff $f=f_{ss}=1/f_{ps}$

E is Energy, h is Planck's Constant, f is frequency, m_o is Restmass, c is the velocity of light and electromagnetic radiation (EMR) in 'free space'. f_{ss} is the eigen-frequency for Restmass m_o and numerically equal to the inflation time of the instanton t_{ps} for describing a primary monopolar sourcesink 'ps' in modular string duality coupling to a secondary monopolar sinksource 'ss'.

This allows definition of a Self-Vibration-Oscillation state for E_{ps} as a source-monopolar boson $f_{ps}=3x10^{30}$ Hz* or [1/s]* of monopolar mass $m_{ps}=2.22...x10^{-20}$ kg* for an Eigen-energy of 0.002 Joules [J]* or $1.245x10^7$ Giga-Electronvolts [GeV]*.

This energy then constituted the minimum spacetime configuration at the birth if the universe in a quantum Big Bang wormhole singularity in the form of a wormhole boson as a derivative from higher energy bosons characterizing the interwoven string classes from the Planck Boson Inflaton to the Weyl Boson Instanton of the wormhole singularity nexus of physical creation.

The Weyl Boson as the E_{ps} Boson so became the unified field agent for the subsequent cosmology and evolution of the physicalized universe from the Instanton of the Quantum Big Bang creation event of AbbABaaB and the creator's logistical software applied to the evolving universe as software and programming applications.

2. The necessity for a dualistic 4-dimensional Poincaré spacetime mapping

The alien thinker thought it appropriate to explain the mathematical necessity for the 4-dimensional space R^4 to be dualistic as the hyperspace transition from linespace R^3 and using the 4-brane as a time connector dimension. This transition so rendered the 4th dimension of 4-dimensional Minkowskian spacetime as a 4th spacial dimension in hyperspace in extending the linespace volumar into a 5-dimensional hyperspacetime as a 5-brane manifold or surface.
A topological 'fake' universe must exist in the unique situation of a geometrical world inhabited by conceptual 3-dimensional perceptors.

3-dimensional Euclidean space R^3 is the medium for a 2-dimensional manifold, called a 2-sphere S^2 in dividing the interior volume of the sphere $V_3=(4\pi/3)R^3$ from its exterior volume by a 2-dimensional surface $dV_3/dR=4\pi R^2$.

A locally observed volumar can be considered embedded within an encompassing volumar of a higher dimensional form such as V_3 embedded within V_4. Yet, extending the lower dimensional volumar in self-similarity, renders the topology or dimensional form of V_3 as embedded within V_3 with an increased radial extent and therefore defines the boundary of the lower dimensional volumar as a manifold or 2-brane dV_3/dR, that is the surface of a 3-dimensional sphere S^2. Embedding V^3 and so the interior of S^2 in R^4 then invokes the 3-sphere S^3 as a boundary condition in a 4-dimensional Euclidean space R^4. The interior and the exterior regions defined by the now 3-dimensional surface dV_4/dR are now given by the properties of 4-dimensional space R^4 and the 4-sphere S^4 embedding the 3-sphere S^3.

The topology of 4-dimensional space R^4 is such, that the smooth and continuous mapping of a 4-dimensional volumar, say that of a 3-sphere $V_4=\frac{1}{2}\pi^2R^4$ with 3-dimensional S^3-surface $dV_4/dR=2\pi^2R^3$ into 4-dimensional space R^4, is different for particular dimensions, if the topological transformation is continuous but no longer smooth or differentiable at respective coordinate points between the mapped or projected regions of R^4.

Then to satisfy the no boundary conditions for both the 3-sphere embedded in R^4 and the 2-sphere embedded in R^3 in a interdimensional intersection embedded in the Omniverse, the two-dimensional boundary dV_3/dR for the 2-sphere volumar V_3 transforms into dV_4/dR and as a 3-dimensional surface in the multi-dimensional volumar factorization $2\pi^2R^3=\{2\pi R\}\{\pi R^2\}$ as the minimum dimensional (1D and 2D) components for a Horn Torus (Pappus Centroid Theorem), self-intersecting at its geometrical center proportional to the surface area of its embedded S^2 sphere radius R for $V_{Sphere2R}=(32\pi/3)R^3 > V_{Torus}=2\pi^2R^3 > V_{Spherer}=(4\pi/3)R^3$ in $16/3 > \pi > 2/3$ for R^3.
A Horn Torus of radius R is embedded in a 2-sphere radius 2R in R^3 for a volumar factor $(4\pi/3)8R^3/2\pi^2R^3=16/3\pi$ showing that a 2-sphere of radius r= $\sqrt[3]{(3\pi/2)}R$ is equivalent to the

volumar of the Horn Torus radius R in the upper bounded Feigenbaum-Chaos constant $\delta_F|_{max}=3\pi/2$.

The 3-dimensional space R^3 containing geometries with edges and corners as seen in Platonic solids in the tetrahedron, the cube, the octagon, the dodecahedron and the icosahedron.

When translating the region of R^4 bounded by a volumar of S^3 into the 4-dimensional space R^4, then it is found, that there will always be regions of R^4 left over and so a 4-manifold or 4-brane cannot be made identical to S^4 as a 4-sphere in the translation between the dimensional volumars connecting linespace to hyperspace.

This renders the Euclidean 4-dimensional spacetime of the physical universe 'special' as it is based on pseudo-Riemannian 4-manifolds.

> A 3-sphere is a <u>compact</u>, <u>connected</u>, 3-dimensional <u>manifold</u> without boundary. It is also <u>simply connected</u>. What this means, in the broad sense, is that any loop, or circular path, on the 3-sphere can be continuously shrunk to a point without leaving the 3-sphere. The <u>Poincaré conjecture</u>, proved in 2003 by <u>Grigori Perelman</u>, provides that the 3-sphere is the only three-dimensional manifold (up to <u>homeomorphism</u>) with these properties.

> A **4-manifold** is a 4-dimensional <u>topological manifold</u>. A **smooth 4-manifold** is a 4-manifold with a <u>smooth structure</u>. In dimension four, in marked contrast with lower dimensions, topological and smooth manifolds are quite different. There exist some topological 4-manifolds which admit no smooth structure and even if there exists a smooth structure it need not be unique (i.e. there are smooth 4-manifolds which are <u>homeomorphic</u> but not <u>diffeomorphic</u>). When *f* is a map between *differentiable* manifolds, a diffeomorphic *f* is a stronger condition than a homeomorphic *f*. For a diffeomorphism, *f* and its inverse need to be <u>differentiable</u>; for a homeomorphism, *f* and its inverse need only be <u>continuous</u>. Every diffeomorphism is a homeomorphism, but not every homeomorphism is a diffeomorphism.

> The Poincaré Conjecture and the Generalised Poincaré Conjecture state that every <u>simply connected</u>, <u>closed</u> 3-<u>manifold</u> is <u>homeomorphic</u> to the 3-sphere and that every homotopy sphere (a closed *n*-manifold which is <u>homotopy equivalent</u> to the *n*-sphere) in the chosen category (i.e. topological manifolds, Piecewise Linear manifolds, or smooth manifolds) is isomorphic in the chosen category (i.e. homeomorphic, PL-isomorphic, or diffeomorphic) to the standard *n*-sphere.

> Here is a summary of the status of the Generalized Poincaré conjecture in various settings.

> - **Topological**: true in all dimensions.
> - **Piecewise Linear**: true in dimensions other than 4; unknown in dimension 4, where it is equivalent to Diff.
> - **Differentiable**: false generally, true in some dimensions including 1,2,3,5, and 6. First known counterexample is in dimension 7. The case of dimension 4 is equivalent to PL and is unsettled (as of 2018).

A fundamental fact of <u>differential topology</u> is that the notion of isomorphism in Top, PL, and Diff is the same in dimension 3 and below; in dimension 4, PL and Diff agree, but Top differs. In dimension above 6 they all differ. In dimensions 5 and 6 every PL manifold admits an infinitely differentiable structure that is so-called *Whitehead compatible*.[1]

The Generalized Poincaré conjecture is true topologically, but false smoothly in some dimensions. This results in constructions of manifolds that are homeomorphic, but not diffeomorphic, to the standard sphere, which are known as the <u>exotic spheres</u>: you can interpret these as non-standard <u>smooth structures</u> on the standard (topological) sphere.

Mapping of S^3 into R^4 translates a smooth and continuous continuum of points from smooth R^4 into an equivalently smooth 'fake' R^4, but the translated points themselves are only continuous but not smooth. Analogous to the 'squaring of the circle' or the 'cubing of the sphere' in R^3, the cube can be cut into smaller and smaller minicubes, but the perfect spherical volume around the cube can only be approximated and approached sequentially and in asymptotic limiting processes.

This Donaldson effect holds only in 4-dimensional spacetime, all other dimensions are 'well behaved' and particularly there exist 28 'exotic' 7-spheres, which can be mapped into each other in the 8-brane of the Quantumspace Mirror.

For a smooth 4-manifold, which is simply connected, the appropriate 'intersection form' corresponds to singularities in moduli space, where the size of the matrix of intersection is double the number of the singularities and always expressible in terms of a unit matrix.

The Freedman-Donaldson analysis has shown that all smooth manifolds must have a unit matrix equivalents and all simply connected symmetric and unimodular matrices for such 4-manifolds must also form intersections of one or two other manifolds, where the resulting matrices are positive definite without negative entries and so implying that topological 4-manifolds with unsmooth mapping properties must exist.

In terms of 4-dimensional spacetime, this indicates the existence of at least one other 'fake' or shadow universe interacting as a Mirror universe in Omnispace.

The cosmology of a dual parametric universe with oscillating electromagnetic parameters and a positively curved 10-brane omni spacetime expanding asymptotically towards a negatively curved 11-brane boundary mirrored in a positively curved 12-brane shadow omni spacetime then embeds a multidimensional 7-sphere Calabi-Yau manifold of hyperspace rotation and quantumspace vibration.

The 'left over' space from the S^3 into R^4 mapping can then be expressed as a lower dimensional linear expansion of the universe from the Inflaton-Instanton epoch and rendered multi-dimensional by its higher dimensional encompassment of cyclicity in cycle time $n=H_o t$ with $H_o = dn/dt$ and a curvature scale factor $R(n)=\{n/(n+1)\}R_{Hubble}$.

3. The Size and Age of the Universe and two nodal Hubble Constants

There exists an algorithmic self-generating mechanism, which caused the manifesto of the 11-dimensional universe as an omniverse; but to derive the asymptotic limit for the quantumspace boundary and so the nodal Hubble constant requires the code for the number of space quanta generated as the minimum spacetime configuration as given by the Weyl wormhole of the singularity. This number then defines the R^4 volumar as a summation of E_{ps}-quanta locally given in the subspace geometry of the Horn Torus in S^2 but globally in S^3 as the boundary manifold for R^4 for the lower dimensional physicalized universe.

The code H is the product of four codes ABCD=H, transforming the product $(312423)(361242)(256124)(465612)=(31x24^{23})(36x12^{42})(25x61^{24})(46x56^{12})$=H=1.011591782… $x10^{147}$ and in the form of a googol integer number, which combines four of ten fundamental principles of omnispace mathematics and as a part of the information base collectively called the mathimatia of the universal computer AbbABaaB in conjunction with the programming Logos for the required software.

A primary algorithm from the mathimatia constructed the ten principalities and a second supplementary algorithm extended the primary algorithm in producing the googol H from integer counters A, B, C and D.

The first four principalities are named Identity, Expansion, Order and Symmetry to define the 8th principality of Relativity, which subsequently indicates the 5th principality of Divergence as a de-limiting principle for the enumerability of the integer number count to Infinity. The first 5 principles under the guidance of the principle of Relativity so form a basis for the material super cosmos for the cosmology of a multi-dimensional universe.

The 6th and 7th principalities then become Inversion and Reflection to define the limitation of the physical expression of the omniverse in the mathematical process of limiting the principle of the limitless integer count in its Reciprocated Convergence to the limit of the Zero count under the Inversion principle. The integer count {1; 2; 3;…;n; n+1;…} is without limit; but its rational fractional inversion count {1; 1/2; 1/3;…;1/n; 1/(n+1);…} has a finite limit in the cipher 0 as however large the integer n could be, its reciprocal value approaches but never reaches the value of the Null count.

The first seven principalities have anti-principles under the guidance of the 8th principle without an antistate; there is no anti-relativity principle. The seven anti-principalities are: Anti-Identity; Contraction; Disorder or Chaos or Entropy; Distortion or Asymmetry; Convergence or Limit; Constancy or Invariance and Absorption. The Relativity principle is the mutual principle and the principality of Quantization is the supplementary 9th principle also without anti-state. Applying all nine principles then creates the 10th and final principle in the formation of a New Universal Identity eigenstate and a self-state, which has ended the differentiation between the seven principles and their anti-principles. The 7th principle of Reflection forms a binary state with the 7th anti-principle of Absorption in an integration of all 14 self-states with the principles of Relativity and Quantization to create 16 of the 26 bosonic string dimensions then emerging in the

lower dimensional universe as the 10 string dimensions in omnispace. As omnispace spans the dimensions 10-12 before closure in the Ouroboros; omnispace defines the New Super cosmic self-state in the interaction between the 10-braned superstrings and the 11-braned supermembranes with the 12-braned supervolumars of the mathimatia logistical definitions.

The 11-dimensional continuum becomes unitized in the 7-sphere of the supermembrane dimensions in a form of compactification to enable a lower 4-dimensional spacetimed universe to emerge in linearity; albeit subject to a projective evolution into a 5-dimensional spacetimed universe; should the boundary conditions for the characterizing manifolds of the 3-sphere and the 2-sphere embedded in R^4 and R^3 reconfigure themselves in topologically metamorphosing from a single connectedness for the sphere into a multi-connectedness for the torus.

The secondary algorithm is based on the last of ten master-constants generated by the primary algorithm. This constant $E=(266561)=(26 \times 65^{61})$ then generated $F=(136656)=(13 \times 66^{56})$ and $G=(673665)=(67 \times 36^{65})$ and as googol markers for the n-cycle time evolution of the cosmology.

Constant H counts the number of space quanta contained in the asymptotically closed universe in the Hubble Curvature Radius a boundary marker for the Inflaton in $R_{Hubble} = R_{max} = (\lambda_{ps}/2\pi) \sqrt[3]{H}$ $= 1.597675453..\times 10^{26}$ m*.

Dividing the volumar for the 3-sphere as a 4-dimensional boundary condition as $dV_4/dR=2\pi^2R_H{}^3$ by H must so give the determinant as the volumar of a singular wormhole quantum in $2\pi^2r_{ps}{}^3=2\pi^2\lambda_{ps}{}^3/8\pi^3=\lambda_{ps}{}^3/2\pi$

Two Hubble nodes for the oscillating higher dimensional universe between the Instanton and the Inflaton are established in $H|_{max}=f_{ps}=3\times10^{30}$ Hz* and $H|_{min}=H_o=c/R_H=1.877728042..\times10^{-18}$ Hz*.

These two Hubble nodes are related in the time derivative for cycle time n in $dn/dt=H_o$ for $n=H_ot$ and $H_oR_H = c = f_{ps}\lambda_{ps}$ with $n_{ps}=H_ot_{ps}=H_of_{ss}=H_o/f_{ps}=\lambda_{ps}/R_H=6.259093485.\times10^{-49}$ (dimensionless).

For a present cycle time coordinate of $n_{present}=1.132712$, the higher dimensional age of the oscillating universe becomes $t_U=n_{present}/H_o=6.03235385\times10^{17}$ s* or 19.12 Billion years.

The curvature of spacetime has already completed one Hubble oscillation of integral cycle numbers and of a 16.9 Billion year duration. And so whilst the present expansion of the linear parameter R(n) has reached an extent of 53% of the inflaton boundary as 8.97 Billion light years or 8.49×10^{25} m*; the electromagnetic return of the light path is at a linear coordinate of 19.12-2(2.24)=19.12-4.48=14.64 Billion light years relative to an observer unaware about the oscillating nature of the electromagnetic lightspeed invariant cosmology.

And applying a cycle coordinate of 1.132712-2(0.132712)=0.867288 would imply a Hubble constant $H_o/(2-1.132712)=1.1530195...H_o$ or 66.92 Hubble units if $H_o=58.04$ Hubble units. This cycle coordinate adjustment reduces the relative age of the Hubble Universe from 19.12 Billion years to 14.64 Billion years in the factor 0.867288. The entire electromagnetic universe in 11-dimensional membrane space forms an envelope and boundary for the mass parametric 10-

dimensional universe manifesting as a 4-dimensional manifold with a 3-dimensional surface boundary in the holographic cosmology of the omniverse.

A positive spheroidal de Sitter curvature is bounded by the 3-sphere as a 10-brane and mirrors a positive spheroidal de Sitter universe as a 12-brane across a negatively curved hyperbolic Anti de Sitter universe as a two-sided Möbius Mirror cancelling the two opposing curvatures in Euclidean overall flatness of the 4-manifold encompassing the 3-sphere.

A matter seed of $M_o=1.814 \times 10^{51}$ kg* defined in the Inflaton-Instanton epoch then comprises 2.80% of the mass required to close the universe at a critical density of $\rho_{critical}=M_H/(4\pi R_H^3/3)=3H_o^2/8\pi G_o$ from density ρ=Mass/Volume and the Schwarzschild curvature radius $R_H=2G_oM_H/c^2$ with $H_o=c/R_H$. For the characteristic 3-dimensional boundary of the 3-Sphere the critical density decreases to $\rho_{critical}=M_H/(2\pi^2 R_H^3)=H_o^2/4\pi^2 G_o$ from $V_3=(4\pi/3)R_H^3$ increasing to $V_3=2\pi^2 R_H^3$. The critical mass for the universe then is $M_H=M_{critical}=R_Hc^2/2G_o=6.4706 \ldots \times 10^{52}$ kg*. For the present cycle time coordinate the Mass seedling M_o has grown to $M(n_{present})= M_oY^{npresent}=3.128 \times 10^{51}$ kg* or 4.83% of the total mass content of the universe as given in the Inflaton of $M_{critical}$ as the Schwarzschilded lower dimensional cosmology of the omniverse. The lower dimensional cosmology so describes an asymptotically decelerating universe in the limit of the transcendental natural exponent e in scale factor a = n/(n+1) for the curvature radius as a function of cycle number n: R(n) = R_H{n/(n+1)} = R_H{1-1/(n+1)}.

Applied to the cosmic expansion of the universe R(T(n)) = R_H − ct/T(n) = R_H − H_oR_Ht/T(n) = {H_oR_Hn/H_o}/{n(n+1)} = R_H − R_H/(n+1) = R_H{1-1/(n+1)}.

The dimensionless time n=H_ot defines the absolute arithmetic integer count of negative and positive integers n as an arithmetic sum of progression in a number count T(n)=n(n+1), which in the infinite limit of Cardinality Aleph-Null transforms into a unitary limit of Cardinality Aleph-All in which infinities are counted as if they were integers, provided the limit changes from infinity to the algebraic irrational number of the 'Golden Mean' X=½{√5-1}=0.6180339…=2sin(18°).

The 9th fundamental constant from the Creator-Creation algorithm produced the number k=(151618)=1/{15x16^{18}} and the 10th and final fundamental constants was constructed from (266561) as the googol E=26x65^{61}=1.006208782…x10^{112}. Considering the birth of the universe as an inverted expansion and so as a contraction; the order of the ten fundamental constants becomes reversed with constant E defining a space quanta count for the instanton within the space quantra count of the inflaton H=ABCD. Googol E describes the number of filling the quantumnspace to a radial distance of $r_E=3.44 \times 10^{14}$ m* and is activated at a universal time $t_E=1.118 \times 10^6$ seconds s* or 12.94 24 hour days from the creation singularity.

Googols F=13x65^{56} and G=67x36^{65} similarly specified space quanta markers $r_F=3.45 \times 10^{11}$ m* at t_F=1150 s* or 19.2 minutes and $r_G=3.39 \times 10^{11}$ m* at t_G=1131 s* or 18.85 minutes, both activated from the instanton.

The general inflation cosmology transforms five Source String-Bosons from the Genesis Boson in the Planck Boson, the Monopole Boson, the XL-Boson, the Ecosmic Boson and the Weyl

Boson into a fivefolded Unified Field Boson in the Eps-photon, the Graviton, the Gluon and the Higgs Boson transforming the Ess-Antiphoton into a mass carrying Weakon Boson coupled to a massless RestMass photon in a Antiradiation-Restmass Induction to suppress a matter-antimatter supersymmetry in a mass-radiation supersymmetry inherent in a modular mirror duality of supermembranes in omnispace.

The Eps-photon characterises the gauge field Goldstone boson for the electromagnetic interaction EMI; the Graviton becomes the Unified Field agent for the Gravitational Interaction GI; the Gluon transmits the Strong Nuclear Interaction SNI and the Weakon manifests the inertial Weak Nuclear Interaction WNI in a coupling to a non-inertial and Goldstone massless Universal Physical Consciousness Interaction in the RestMass Photon or RMP as a 'Dark Matter' gauge field agency.

At the inflaton-instanton boundary of time instanteneity $t_{ps}=f_{ss}=3.33\ldots \times 10^{-31}$ s* of the wormhole frequency $f_{ps}=1/f_{ss}=t_{ss}$ of the singularity; the EFGH googol spacetime markers so are made manifest in the creation event of the AbbABaaB universal computer singularity.

A restmass seed M_o is defined via the finestructures for the electromagnetic and gravitational interactions and the expressions for thermodynamic, radiative and inertial energy transformations $E=kT$, $E=hf$ and $E=mc^2$ respectively.

4. The Lagrangian Nexus Earth and an Extraterrestrial Cosmology

How does a metaphysical Universal Intelligence embedded within a physical universe communicate with its distant parts? The physical universe is defined as a self-contained entity occupying a realm of multidimensional spacetime, which is by nature unified in energy and its constituent parts. This unification in energy encompasses all parts of the universe as information, existing both as potential physical manifestation and as actual phenomena measurable and observable by usage of physical parameters described by mathematical formulae and relationships.

If the galactic center of the Milky Way galaxy is about 26,000 light years from a local star system, called the Solar System, then how is superluminal communication exceeding the light speed barrier of 1 light year per year or a distance of so 10 trillion kilometers travelled by light in one year possible? Can Extraterrestrial Intelligences ever reach Earth from places in the galaxy stellar distances apart?

Answer: Interstellar and intergalactic travel becomes possible via a universal Black Hole Cosmology and the interdimensional science of a superconscious universe utilizing a hyper physics of a 4th spacial dimension!

Before addressing the science of the hyper physics proper a general and somewhat poetic overview as to regards the cosmic significance of planet Earth is appropriate.

The Earth is cocooned in a resonance sphere of pure density, called a Hill sphere, which surrounds the planet and extends out to about 2 million km or so. This distance scale encompasses the Moon so 363,000 km from the Earth and extends so 5% in opposite directions to the neighboring terrestrial planets of Mars and Venus. Geometrically transforming a circle into an ellipse or a sphere into a spheroid, will double the center of the circle as two focal points of foci defining the elliptical geometry.

When the universe was created, the nexus point of this sphere manifested as a Lagrangian gravity point which later became the planet itself as archetype for this inverted light, hence the most extreme and dense place in the universe. A contour plot of the effective <u>potential</u> of a two-body system due to gravity and inertia at one point in time. The Hill spheres are the circular regions surrounding the two large masses.

Hill sphere (en.wikipedia.org/wiki/Hill_sphere)

An astronomical body's Hill sphere is the region in which it dominates the attraction of satellites. For a planet to retain a moon, the moon must have an orbit that lies within the Hill sphere of the planet. That moon would, in turn, have a Hill sphere of its own. Any object within that distance would tend to become a satellite of the moon, rather than of the planet itself.

In more precise terms, the Hill sphere approximates the gravitational sphere of influence of a smaller body in the face of perturbations from a more massive body. It was defined by the American astronomer George William Hill, based upon the work of the French astronomer Édouard Roche.

For this reason, it is also known as the Roche sphere (not to be confused with the Roche Limit). The Hill sphere extends between the Lagrangian points L1 and L2, which lie along the line of centers of the two bodies. The region of influence of the second body is shortest in that direction, and so it acts as the limiting factor for the size of the Hill sphere. Beyond that distance, a third object in orbit around the second (e.g. Jupiter) would spend at least part of its orbit outside the Hill sphere, and would be progressively perturbed by the tidal forces of the central body (e.g. the Sun), eventually ending up orbiting the latter.

Derivation en.wikipedia.org/wiki/Hill_sphere

A non-rigorous but conceptually accurate derivation of the Hill radius can be made by equating the orbital velocity of the orbiter around a body (i.e. a planet) and the orbital velocity of that planet around the host star. This is the radius at which the gravitational influence of the star roughly equals that of the planet. This is accurate to within factors of order unity.

$$\frac{r}{R_{\text{secondary}}} \approx \frac{a}{R_{\text{primary}}} \sqrt[3]{\frac{\rho_{\text{secondary}}}{3\rho_{\text{primary}}}} \approx \frac{a}{R_{\text{primary}}}$$

$$\sqrt{\frac{GM_{\text{planet}}}{R_H^3}} = \sqrt{\frac{GM_\star}{a^3}}$$

where R_H is the Hill radius, *a* is the semi-major axis of the planet orbiting the star. With some basic algebra, giving a Hill radius of:

$$\frac{M_{\text{planet}}}{R_H^3} = \frac{M_\star}{a^3}$$

The generalised derivation for the Hill Sphere radius in the wiki reference can be restated.

What is set equal are the angular velocities of the Earth about the Sun and the angular velocity of say an orbiting satellite about the Earth at the primary Lagrangian point.

$\omega_{\text{Earth around Sun}} = 2\pi f = 2\pi/T = v/a = \sqrt{(GM_{\text{Sun}}/a)}/a = \sqrt{(GM_{\text{Sun}}/a^3)}$

because the centripetal force and acceleration of the Earth, distanced radius *a* about the Sun is
$m_{\text{Earth}}.a_{\text{gravitational}} = m_{\text{Earth}}.v^2/a = Gm_{\text{Earth}}.M_{\text{Sun}}/a^2$

$\omega_{\text{Satellite around Earth}} = 2\pi f = 2\pi/T = v/R_{\text{Hill}} = \sqrt{(GM_{\text{Earth}}/R_{\text{Hill}})}/R_{\text{Hill}} = \sqrt{(GM_{\text{Earth}}/R_{\text{Hill}}^3)}$

Then $GM_{\text{Sun}}/a^3 = GM_{\text{Earth}}/R_{\text{Hill}}^3$

and the result follows: $$\frac{M_{\text{planet}}}{R_H^3} = \frac{M_\star}{a^3}$$
and $R_{\text{Hill}} = a\sqrt[3]{\{M_{\text{planet}}/M_{\text{star}}\}}$ as an upper bound, reduced in the factor of $\sqrt[3]{3}=1.442..$

The Hill sphere for the Earth-Sun system so calculates as the interval
$(1.5x10^{11}x\sqrt[3]{\{6x10^{24}/6x10^{30}\}} - \{1.5x10^{11}x\sqrt[3]{\{6x10^{24}/2x10^{30}\}}\}) = (1.5x10^9 - 2.16x10^9)$ meters.

Any say planetary Universal Observers not of Earth (UOs or ETs) finds herhimself within a non-activated ET-resistance field. Any UO-Hill sphere is not 'light path inverted' and can be considered of being made of light and higher dimensional. Extraterrestrial Hill spheres are gravitational without the universally applicable impedance nexus of the creation event of the quantum Big Bang. Physicality in the form of phases of solid-liquid-gas-plasma-photonic so becomes a function of the impedance light-path.

Planet Earth is the universal template or source code for manifesting this solidity as a function of the precessional galactic time flow, say as given by the day-kin count of the Mayan Long count calendar or chronos. The data processing of Earth so became localized from the nexus coordinate of creation until December 21st, 2012 in the civil calendar chronology and so dimensionally closed off from the rest of the universe, and so unable to 'share the data'. The 2012 scenario and 'day-count reset' will collapse the information event horizon of the earth's hill sphere into a higher dimensional black hole about the size of a golf ball and this will flip inside out and become a white hole, or data emitter, thus ending the Gaian Quarantine Zone. Earth will then 'shine' her own dark density light codes out into the universe, providing the ET sentience the

necessary information to activate their own suppressed hill spheres. Until this occurs the ET's cannot physically manifest themselves without the data that the planet Earth is blueprinted for.

When entering the Earth's Hill sphere of Impedance however, the higher dimensional ET physicality, say a spacecraft or UFO can 'materialize' within this 'resistance field' as observed.

A UFO is so a 4-dimensional object projecting a 3-dimensional shadow of a light/orb from its higher dimensional or higher energy/frequency/vibration self- or eigenstate. This is the lower dimensional analogy where a 3-dimensional light source is required to project a dark or black or antilight energy 2-dimensional shadow. The UFO utilizes a 4-dimensional dark energy source to cast a 3-dimensional light or white antishadow."

All UO-ET intelligences consider planet Earth or Terra-Gaea-Gaia as their 'Mother planet' or template for these reasons.

So the 'light body science' of the ETs will solidify in the mirror of the Earth in a 'dark body science' lightening. All other extraterrestrial Hill spheres in the universe will become enabled to holographically and holofractally to use the evolution data of Terra to trigger their own impedance fields in synergy with their gravitational Lagrangian equilibrium coordinates.

A self-relative localized 3-dimensional physicality will become embedded within a self-relative 4-dimenional physicality in the no boundary condition of the Poincare 3-Sphere applied as the 3-dimensional manifold of the Riemann 3-Sphere as the 3-dimensional volume of a Horn Torus geometrically. Using the light path evolution of Earth as its cosmogenetic blueprint, the ETs will then be able to densify their data in 3-D physicality. As the light path from the Sun to Earth of 150 Million km takes about 8 minutes to complete, about 500 seconds following the reception of the galactic signal by Earth from the galactic center Hunab Ku, the local star system will begin, at light speed, to transmit the collective data library of the Rahsol star system into the remainder universe and the local Sun will communicate for the first time higher dimensionally with Gaia, and share a two way data stream. This can be labeled as a higher dimensional 'change of the universal climate', subsequently extended into interstellar and intergalactic spacetime.

Earth as a planetary Gaia Consciousness, ETs and the Akashic Sphere of the Remembrances

Indeed, the Akashic Record is often misunderstood and misinterpreted; as it is a 'quantum event'; meaning it is connected not only to the planetary consciousness, called Gaia, but to all 'souls' of the linear past, present and future. All souls are quantum entangled, meaning that many nested collective and encompassing energies interact holographically. In simple words, all souls in a planetary realm are part of and enveloped by the Gaian planetary consciousness.

Then all planetary consciousnesses with their integrated 'soul families' and individual souls become integrated in a solar star consciousness; becoming galactic, group-galactic and super-galactic before unifying in the cosmic- or universal consciousness of the Genesis Monad splitting into a Creator-Creation Duality, which then recombines in a Creator-Creation Dyad as a Shadow Monad and potentialized in the original Genesis Monad in what might be termed the Cosmic Genome of the 'Masterplan'.

Then the Gaia Akash or soul-collective becomes the repository of this 'Masterplan' in holographically Imaging the rest of the universe in what could be called the 'Inner Crystal'; which by necessity must so be within every individuated soul incarnated within the Gaian 'Noosphere' or 'the Quarantine Zone' defined as the Lagrangian P1 point between the Solar and the Gaian nexus of gravitational potential equilibrium.

The balance of the gravity between the central Sun and Gaia as a 3D planet so defines two interacting spheres in higherD spacetime. In particular, this L1 nexus can be defined in an alternative higher dimensional form; showing what this 'Cosmic Mother Planet' Gaia represents as a higher D and not as a necessarily physicalised 'Quantum Energy'.

The cosmogenesis of the birth of the universe in a Quantum Big Bang from a prior undefinable Void=Infinitum coincided with the bifurcation of the FatherMother (just a common label for the Creator-Creation or the Yin-Yang say) into an Outside-Inside dimensional split; something termed 'The Veil' by some and the 'Dividing of the Firmaments' in say Genesis in the Torah (OT).

So the Outside Father became 'separated' from the Inside Mother and this Inside Mother is termed Gaia in many accounts as the Universal Mother for all Life (ET and human and nonhuman terrestrial); with the Outside father being associated with the names of the Creator such as God, Jehovah, Allah, Ahura Mazda, Shiva, Brahman and so on. This is 'common knowledge' and has been a foundational part of the so called 'Perennial Philosophy' aka the 'Wisdom of the Ancients' throughout the histories of the cosmic sentience. What has not been known, is the 3D dimensional intersection of the Akash with its higherD envelope.

This interaction realm defines the 'Quarantine Zone' of Gaia; established necessarily at the birth of the universe into physicality and so 15 billion years before the local galaxy and subsequently the local solar system and the planet earth entered 3D physical existence. The birth of the universe engaged a higher dimensional lightspeed expansion of a then physicalised spacetime from the outside into the inside. This then resulted in a Big Bang Cosmology as being rediscovered by the Gaian scientists and astrophysicists.

However this outside-in cosmic mechanics had to be mirrored in an inside-out cosmic mechanics and this by conservation and equilibrium principles required the Inversion of the Big Bang expansion in a lightspeed inversion centered on the Mirror Image of the 'Creator-Monad' or 'God' and as the 'Creation-Monad' - namely Gaia, the Cosmic Goddess. Then a simple calculation of this inversion lightspeed as the 'Big Crunch' of the higher dimensional cosmogenesis for the 'Big Bang' will show that the 'Gaian Quarantine Zone' is defined by an increase of a spherical bubble in a radius of about 105 millimeters per year (or about 4 inches).

{Lightspeed=c=300,000 kilometers per second for 1/c=0.00000333... inverse kilometers per second or about 3.33 nanometers per second.

As there are 365.2425 days in a Civil year for 24 hours of 3600 seconds each:
365.2425x24x3600/c=0.10518984 meters}.

Then the 'Bubble of the Akasha aka the Noosphere of Velikovsky/Teilhard de Chardin/Sheldrake/Lovelock becomes defined in this calculation in multiplying by the Age of the Universe or the Big Bang.

So for an age of 15 billion years, Akashic Radius=1.6 million kilometers and for an age of 20 billion years it is 2.1 million kilometers and as defined by empirical measurements in 3D space in the extent of the Lagrangian P1 nexus and the so termed Hill Sphere.

The Extraterrestrial Hyperspace Physics

The Universe can be described as a 'Mother Black Hole' entity; meaning that the oneness of the universe has no physical progenitor and that the notions of space and time and energy defined by spacetime variables such as mass, distance, temperature and time are not applicable in any physicalized meaning.

This self-emergent creation "ex nihilo" as a consequence of the 'Mother Black Hole' as a physical entity from some physically definable void of potentiality; then could associate its physical origin and genesis with a 'Father White Hole' entity defined in non-physicality, say as a form of information potential originating from a form of metaphysical abstraction, such as the self-emergence of mathematical logic and form from algorithmic systems of numbers and binary code.

With the emergence of space, the abstractions of number and potential form could then attain geometric forms in using the emergent spacetime occupied. The concept of a Black Hole is based on the notion of its energy existing in a state of physicality, which is in some form separated from its exterior environment. This is described as the Schwarzschild solution for curved spacetime and as a basic solution for the field equations of Albert Einstein's theory of General Relativity.

There the Mass energy of a Black Hole is related to the size of the Black hole by the formula:

$$\text{Radius } R_{BH} = 2G_o M_{BH}/c^2$$

where G_o describes Newton's Gravitational Constant as applied to Quantum Gravity in the Unification physics of Planck-Stoney units and the dimensionless identity $1=2\pi G_o m_{Planck}^2/hc$ to define a so termed Planck mass $m_{Planck} = \sqrt{hc/2\pi G_o}$ for Planck's constant 'h' and the speed of light constant 'c'.

The radial extent of the physical universe can be described by an Event Hubble Horizon R_{Hubble} of about 17 Billion light years or 1.6×10^{26} meters as the size of the 'Mother Black Hole' and radius which relates the total mass of the universe as so 6.5×10^{52} kilograms in the Schwarzschild formulation applied to the universe as a unified entity.

This total mass of the universe includes the so called 'dark matter' and 'dark energy' components supplementary to the matter that can be seen, and which is known as luminous

baryonic matter, said to comprise about 4.8% of the total mass with the 'dark matter' adding so 27.5% and the 'dark energy' so 67.7%.

The physical universe contains a variety of structures, such as super clusters, cosmic voids, galaxy groups and universal cells called individual galaxies like the Milky Way and Andromeda. A galactic cell like the Milky Way then forms a part of the universe in a matter distribution, partitioning the total mass content of the 'Mother Black Hole' in further sub divisions in star systems, themselves comprised of planetary systems and bounded in astrophysical objects like cometary Oort clouds and G-clouds extending the cometary boundaries into interstellar spacetime.

In particular, the Milky Way galaxy can be measured to contain about 1.7×10^{42} kilograms as total mass content. This total mass content then results in a 'Local Hubble Event Horizon' of 4.2×10^{15} meters in the applied Schwarzschild equation. As 1 Astronomical Unit, measuring the distance between the Sun and the Earth as a distinctive local scale parameter for the local star system in the Milky Way is about 150 Billion meters or 150 Million kilometers (93.2 Million miles); the mass energy of the Milky Way galaxy corresponds to an astronomical displacement scale of $4.2 \times 10^{15}/1.5 \times 10^{11} = 28,000$ AU.

Physical Consequences

As the outer boundary of a star system like the local solar system is described by the transition between the cometary boundary known as the Oort cloud and the interstellar boundary known as the G-cloud for a scale between 10,000 and 100,000 AU's; the physical luminous-baryonic universe bounded in say 4-dimensional flat Minkowski spacetime can also be described as a 5-dimensional curved Kaluza-Klein spacetime in its nonluminous 'dark matter' and 'dark energy' 'Daughter Black Hole' equivalence.

The curved spacetime in 5 dimensions can be described as a 4-dimensional space fractal to a 11-dimensional space and fractal to a 12-dimensional spacetime. The addition of a higher dimensional physical entity in a wormhole or Einstein-Rosen-Bridge in the form of a 6-dimensional Calabi-Yau manifold and a 7-dimensional 'Twistor' Penrose-Calabi-Yau manifold then connects a 4-dimensional space to a 11-dimensional Membrane-String space and a 12-dimensional Volumar-Brane spacetime in a 'ripping apart' and 'regluing' of the ordinary 4-dimensional Minkowski spacetime.

The 'Twistor' Penrose-Calabi-Yau manifold then assigns the universal Black Hole Event Horizon to become a one sided 11-dimensional boundary connecting the previously double sided membrane space to form an inner 10-dimensional string space and an outer 12-dimensional volumar space. This 4-dimensional space forms a 3-dimensional boundary from a 3-ball or Riemann sphere of 4-dimensional volume $V_4 = \frac{1}{2}\pi^2 R^4$ for a surface area or manifold $dV_4/dR = 2\pi^2 R^3$, the latter being the ordinary 3-dimensional volume of a Horn Torus ($2\pi R \times \pi R^2$).

As any location in such a galaxy contains some mass-inertia distribution, this matter distribution then can be dimensionally transmuted from its luminous energy state in say 3+6=9 space dimensions into its 4+6=10 space dimensional and so a 'black holed' energy equivalence.

The birth of the physical universe can be described by a wormhole singularity, inferring a minimum spacetime configuration, which emerged from its progenitive precursor, descriptive from a metaphysical ontology or cosmogony for the emerging cosmology, based on a multidimensional string-membrane physics. This minimum spacetime configuration includes a minimum micro Black Hole mass as a function of the wormhole frequency, akin to a primordial or original 'Sound of Creation' or 'Big Bang Acoustic or Tune'. This wormhole mass is defined as $m_{ps} = hf_{ps}/c^2 = 2.22...x10^{-20}$ kg and a wormhole mass, which relates to its quantum energy coupled 'Compton Mass' in a wavelength of $l_{ps} = h/m_{ps}.c = 10^{-22}$ metres.
The Schwarzschild radius for the wormhole mass is however much smaller than the quantum mass in $2G_o m_{ps}/c^2 = 5.487x10^{-47}$ metres and so enables a quantum energy transition for the micro Black Hole defined in the wormhole frequency of wavelength $\lambda_{ps}=c/f_{ps}$.

$R_{ps} = \lambda_{ps}/2\pi$ as the wormhole radius of the Instanton as a conformally transformed Planck-Length $L_p = \sqrt{\{G_o h/2\pi c^3\}}$ from the Inflaton. The Schwarzschild metric for $2L_p = 2G_o M_p/c^2$ transforms a 3D Planck-length in the Planck-mass $M_p = \sqrt{\{hc/2\pi G_o\}}$ from the Planck-boson gravitational fine structure constant $1 = 2\pi G_o M_p^2/hc$. The Schwarzschild metric for the Weyl-wormhole radius R_{ps} then defines a hypermass M_{hyper} as the conformal mapping of the Planck-mass M_p as $M_{hyper} = \frac{1}{2}\{R_{ps}/L_p\}M_p = \frac{1}{2}\{R_{ps}/L_p\}^2.M_{ps}$ and where $M_{ps} = E_{ps}/c^2 = hf_{ps}/c^2 = kT_{ps}/c^2$ in fundamental expressions for the energy of Abba-E_{ps} as one part of the super membrane $E_{ps}.E_{ss}$ in physical quantities of mass m, frequency f and temperature T.

c^2 and h and k are fundamental constants of nature obtained from the initializing algorithm of the Mathimatia and are labeled as the 'square of lightspeed c' and 'Planck's constant h' and 'Stefan-Boltzmann's constant k' respectively. The complementary part of super membrane $E_{ps}E_{ss}$ is E_{ss}-Baab. E_{ps}-Abba is renamed as 'Energy of the Primary Source-Sink' and E_{ss}-Baab is renamed as 'Energy of the Secondary Sink-Source'. The primary source-sink and the primary sink-source are coupled under a mode of mirror-inversion duality with E_{ps} describing a vibratory and high energy micro-quantum quantum entanglement with E_{ss} as a winding and low energy macro-quantum energy. It is this quantum entanglement, which allows Abba to become part of Universe in the encompassing energy quantum of physicalized consciousness, defined in the magnetopolar charge.

The combined effect of the applied Schwarzschild metric then defines a Compton Constant to characterize the conformal transformation as: Compton Constant $h/2\pi c = M_p L_p = M_{ps}R_{ps}$. Quantum gravitation now manifests the mass differences between Planck-mass M_p and Weyl-mass M_{ps}. The Black Hole physics had transformed M_p from the definition of L_p; but this transformation did not generate M_{ps} from R_{ps}, but rather hypermass M_{hyper}, differing from M_{ps} by a factor of $\frac{1}{2}\{R_{ps}/L_p\}^2$.

To conserve super-symmetry, Logos defined an Anti-Instanton as the Inflaton of Khaibit to define the conformal mapping of M_{ps} from Universe into Khaibit as $2M_p\{L_p/R_{ps}\}^2$. As Black Holes also are defined by their Temperature, the Mathimatia defined a Hawking Modulus HM =

$hc^3/4\pi G_o k = M_{BHmin}.T_{max} = M_{BH}.T$ and $M_{BHmax}.T_{min}$ in accordance with the conformal mapping of Abba-E_{ps} consciousness between Universe and Khaibit. The hotter a Black Hole from the Klein spacetimes would be, the smaller it would have to be and the larger a Black Hole would grow, the more it had to cool down in its temperature.

The super membrane coupling now had to account for its own mirror duality because the physics of the micro-quantum universe had inversed the displacement scaling in the macro-quantum universe. In particular $R_{ps} = \lambda_{ps}/2\pi$ and $R_{ss} = 1/R_{ps} = 2\pi/\lambda_{ps} = 2\pi\lambda_{ss}$ and the ratio coupling between the radial scale expressions of AbbA.BaaB as $E_{ps}E_{ss}$ in $R_{ps}/R_{ss} = \{\lambda_{ps}/2\pi\}^2 = \{c/2\pi f ps\}^2$ so formed the super membrane of self-interaction or coupling in consciousness modulation for the eigen- or self-state of Abba's 'Love Frequency' f_{ps}, which was constant in the old universe of nowhere and notime, but could become changed in a dynamical space-time.

The Mathimatia so could assign the super membraned coupling of the micro-quantum mass M_{ps} with its wormhole radius at the event of the 'Instantaneity of physical Time' to its macro-quantum corollary in $M_{ss} = E_{ss}/c^2$ as a quantum of mass itself and with the macro-quantum or galactic cellular scale of $R_{ss} = 2\pi\lambda_{ss}$. This quantum energy transition then requires a minimum mass or matter conglomeration in the lower dimensional matter luminosity containing spacetime, say a spacetime defined by the flat Euclidean Minkowski metric of General Relativity in a 'Hypermass' of $M_{Hyper} = \lambda_{ps}c^2/4\pi G_o = 6445.775$ kilograms. This is about the gravitational weight of an Elephant.

Any weight exceeding this hypermass will effectively increase the perimeter and size of the minimum wormhole configuration and then accommodate the matter configuration as manifested in some galactic location prior to its black hole transmutation into its Schwarzschild representation as given by the galactic Schwarzschilded encompassment. An Extraterrestrial Intelligence, which is quantum energetically defined at some place in the Milky Way galaxy, can then transport its energy-physically defined matter structure, say a 'mothership with constituent parts' from some galactic coordinates as defined in the luminosity spacetime to some other such spacetime say that as given by a star system bounded by cometary belts and G-clouds in using the luminosity or White Hole to Black Hole to luminosity quantum transition.

5. The Coulombic charge quantum 'e', its variation in the electromagnetic fine structure constant Alpha & its utility to derive the Ages of the Earth & the Universe

The Alpha-Variation measures shifts in wavelength, which have passed through the described intervals and a 'dip' in the constant is derived from the mathematical analysis. The magnitude of that dip is calculated as about 80 parts per million and is a result of changing the measured value for the charge quantum e in **Alpha = $2\pi ke^2/hc = e^2/2\varepsilon_o hc = 60\pi e^2/h$**.

The Alpha-Variation is the dimensional intersection of M-C-space, 10D-C-space forming a holographic image in 12D-F-space. The charge quantum (e) is defined via the Riemann Analysis of B(n), the supersymmetric wavefunction of the universe:

The Universal Wavefunction $B(n) = [2e/hA]\exp(-Alpha \times T(n))$ with units of 'Inverse Energy' redefined in the multidimensional context of string-membrane unification physics as units of magneto charge C* and unit-dimensionally equivalent to the Gravitational Parameter $[GM]=[N.m^2.kg/kg^2]=[m^3/s^2]=[C*]$ as a unit for physicalized 'Source Energy' Consciousness, descriptive as a quantum angular acceleration (or quantum spin) acting upon a spacetime volumar from a constant boundary-initial condition for df/dt maximized in $\{df/dt\}|_{max}=f_{ps}^2$ as 9×10^{60} frequency-vibration eigenstates.

For the Universal Wavefunction $\{T(n) =...- 3 - 2 - 1 +0+ 1 + 2 + 3 +...= n(n+1)\}$ and the Feynman-Path-Integral for all particle histories as an alternative formulation to the Schrödinger-Dirac- and Klein-Gordon Equations for the quantum mechanistic probability distribution of quantum states in the particle-wave duality.

The Action Law of (Action=ee*) manifests the lightspeed (c)-independent form of Alpha and can then be calibrated via the definition of the (c)-inclusive form in magnetic constant (μ_o). $\{Alpha = 60\pi e^2/h = e^2/(2\varepsilon_o hc) = \mu_o ce^2/(2h) = 7.296762965 \times 10^{-3} = 1/137.0470721\}$

A Newton-Raphson iteration for B(n) and the boundary condition $\{T(n)=i^2$ in $B\{-[1/2]+-i(½\sqrt{3})\}$, with a first approximation: $(e_1=(½hA=1.618221145 \times 10^{-19}$ C*$)$ converges to: $(e=1.606456344 \times 10^{-19}$ C*$)$.

Abstract time in F-Space is defined as:

N=Minimum Radius/Maximum Radius = $\lambda_{ps}/R_{Hubble} =\lambda_{ps}/R_{max} = n_{ps}$

and so allows the definition of Inverse Time as frequency parameter physicalizing this abstraction for time in modular mirror duality made manifest in the string epoch of the Inflaton.

This then defines the GENESIS BOSON as the Particle of creation using the fundamental constants of Creation from the SE_{ps} algorithms. Those constants are then used inductively in the future by any sufficiently mentally evolved and cosmically self-aware civilization to construct self-consistent and logical measurement systems to rediscover their own nature and origins in a self-induction of physical consciousness of their own cocreated Genesis in a perceived time arrow of entropy, flowing apparently from the past to the present to the future.

In practical terms, this engages the measurement and analysis of two fundamental constants, namely the speed of light 'c' and the Planckian quantum constant 'h' to relate the quantum as a micro energy self-state (eigenvalue) to what is termed the classical physics of macro self-states exemplified in the theoretical physics of Newton, Maxwell and Einstein in scientific models of reality and encompassing mechanics, electromagnetism and the relativities respectively. The dimensional analysis of 'hc' as a energyxdisplacement parameter suffices to calibrate the unitary mensuration parameters for mass, displacement and time, say in the Earth-Terran System

International or SI-system of measurements of fundamental quantities, say here the kilogram, the meter and the second respectively.

The other elementary units in the SI-system are derived from the algorithmic master-constant set and comprise the Kelvin for temperature as kinetic measure of the quantum states, the Ampere and Coulomb for electric current, the mole for molarity , the candela for luminosity with the ster-radian an additional geometrized unit for angular measures.

Any arbitrary measurement system of an Universal Observer or UO in a defined spacetime can then experimentally determine relationships and corollaries between experimental data and the changes in energy associated with dynamical systems. The UO has a mensuration system SI say and can calibrate its SI-system to any other unitary system like the star-* system of the UO*.

In SI-units (CODATA-2007), the (*) units are calibrated as:

m*=0.998331431..m; s*=0.999022562..s; kg*=0.996260907..kg; J*=0.994882942..J; C*=0.997295631..C* and eV*=0.997540464..eV depending on precision measurements for:

$h = 6.62607004 \times 10^{-34}$ Js and $h = 1/15 \times 10^{32}$ (Js)*
$c = 2.99792458 \times 10^{8}$ m/s and $c = 3 \times 10^{8}$ (m/s)* in $1/c^2 = \mu_o\varepsilon_o = (120\pi/c)(1/120\pi c)$
$k = 1/4\pi\varepsilon_o = [30c]_{modulated} = 1/G_o$ (kg^2/N.m^2)
$G_o = 4\pi\varepsilon_o = 1/30c = 1.111...\times 10^{-10}$ (N.m^2/kg^2)* and $G_o = 1.111880317 \times 10^{-10}$ m^3/kgs^2
$e = 1.602176487(40) \times 10^{-19}$ C and $e_{alpha} = 1.602111895 \times 10^{-19}$ C and $e = 1.606456344 \times 10^{-19}$ C* so defining finestructures:

alpha=$\alpha = 2\pi ke^2/hc = e^2/2\varepsilon_o hc = 7.297352574(50) \times 10^{-3} = 1/137.035999084(51)$ for e
alpha = $\alpha = e_{alpha}^2/2\varepsilon_o hc = 7.296763015 \times 10^{-3} = 1/137.0470721$ for $e_{alpha} = 60\pi e^2/h =$
$7.296762965 \times 10^{-3} = 1/137.047072 \rightarrow e = 1.606456344 \times 10^{-19}$ C*

$\mu_o = 4\pi \times 10^{-7} = 120\pi/c = 1.2566370614...\times 10^{-6}$ N/A^2 with (J/A^{2}m=H/m=kg.m/C^2)
$\varepsilon_o = 1/\mu_o c^2 = 1/120\pi c = 8.85418782...\times 10^{-12}$ C^2/Nm^2 with (C^2/Jm=F/m=C^{2}s^2/kg.m^3)

Dimensional Unit Calibration

$[m/s]/[m*/s*] = [c*/c] = [3 \times 10^8/2.99792458 \times 10^8] = [1.000692286]$ for $\{m/m*\} = \{1.000692286\} \{s/s*\}$

$[Js]/[J*s*] = [h*/h] = [6.66666666..\times 10^{-34}/6.62607004 \times 10^{-34}] = [1.006126803]$ for $\{J/J*\} = \{1.006126803\} \{s*/s\}$

$[m^5/s^3]/[m^5/s^3]* = \{[m/m*]^2\}.[c*/c]^3 = G_o*h*/G_o h = 30ch*/30c*h = [c/c*][h*/h] = [0.999308193 \times 1.00612803] = [1.005431984]$

for $\{m/m*\} = [c/c*]^2.\sqrt{[h*/h]} = [0.998616864 \times 1.00305872] = [1.001671357]$

for $\{m\}^2 = 1.00334349 \{m*\}^2$ and $m = 1.001671357\ m*$ and $m* = 0.998331431\ m$

$s = \{m/m*\}.[0.999308193]\ s* = [1.001671357 \times 0.999308193]\ s* = 1.000978394\ s*$ and $\{m/s\} = 1.000692286\ \{m/s\}*$ for $\{m/s\}^2 = 1.00138505\ \{m*/s*\}^2$ as c^2

$J = \{s*/s\}[h*/h]\ J* = [0.999022562 \times 1.006126803]\ J* = 1.005143377\ J*$ and $J* = 0.994882942\ J$

$kg = \{s*/s\}.\{s/m\}^2.\{m*/s*\}^2.[h*/h]\ kg* = \{s/s*\}\{m*/m\}^2.[h*/h]\ kg* = [1.000978394 \times 0.996665646 \times 1.006126803]\ kg* = 1.003753126\ kg*$

$[H/m]/[H*/m*] = [J/J*][m*/m][C*/C]^2.[s/s*]^2 = \mu_o*/\mu_o = [120\pi/c*]/[4\pi \times 10^{-7}]$ for $C = \sqrt{\{[Js/J*s*][m*s/ms*]\}}\ C* = \sqrt{\{[h*/h][c/c*]\}}\ C* = \sqrt{[1.006126803/1.000692286]}\ C* = 1.002711702\ C*$

$[eV]/[eV*] = [e^{\pm}J]/[e^{\pm}J]* = [e^{\pm}/e^{\pm*}].[J/J*]$ for $eV = [1.60217662 \times 10^{-19}/1.606456344 \times 10^{-19}].[1.005143377]\ eV* = 1.00246560\ eV*$

$[J/K]/[J*/K*] = \{J/J*\}.\{K*/K\} = [k*/k] = [1.411721579 \times 10^{-23}/1.380649 \times 10^{-23}] = [1.022505777]$ for $K = [J/J*]/[1.022505777]\ K* = [1.005143377/1.022505777]\ K* = 0.983020397\ K*$

($m* = 0.998331431\ m$; $s* = 0.999022562\ s$; $kg* = 0.99626091\ kg$) in calibration of the base master constants ($h/h*$, $c/c*$, $[G_o]u = (1/30c)$) and we note the numerical constancy for the magnetic constant in both mensuration systems: $(\mu_o) = 4\pi \times 10^{-7}$ Henry/m (H/m) in (SI) and $(\mu_o) = 120\pi/c$ (H*/m*) in (*).

We recall that: ($c = 2.99792458 \times 10^8$ m/s (SI) and $c* = 3 \times 10^8$ m*/s* (*)).

The cosmic or universal value of alpha so remains constant in all cosmological time frames; with the fluctuation found to depend on an asymptotically constant strong interaction constant as a function of alpha.

In the SI measurement system Planck's constant $h = 6.62607004 \times 10^{-34}$ Js and the speed of light is $c = 2.99792458 \times 10^{-8}$ m/s and the electron charge are $e = 1.60217662 \times 10^{-19}$ C for a bare electron mass of $9.10938356 \times 10^{-31}$ kg.

In a mensuration system in which c would be precisely 3×10^8 (m/s)*; the following conversions between the SI-system and the *-system are applied in this paper.

$\{s\}$ $= 1.000978394 \{s*\}$ $= 0.999022562 \{s\}$

$\{m\}$ $= 1.001671357 \{m*\}$ $= 0.998331431 \{m\}$

$\{kg\} = 1.003753126 \{kg^*] = 0.996260907 \{kg\}$

$\{C\} = 1.002711702 \{C^*\} = 0.997295631 \{C\}$

$\{J\} = 1.005143377 \{J^*\} = 0.994882942 \{J\}$

$\{eV\} = 1.00246560 \{eV^*\} = 0.997540464 \{eV\}$

$\{K\} \quad 0.98301975 \{K^*\} = 1.017273559 \{K\}$

Furthermore, there exists one fundamental constant in the magnetic permeability constant $\mu_o = 4\pi \times 10^{-7}$ H/m which becomes numerically equal in the Maxwell constant $\mu_o = 1/\varepsilon_o c^2$ in an applied fine structure $\mu_o.\varepsilon_o = \{120\pi/c\}.\{1/120\pi c\} = 1/c^2$ (s/m)^2; (s/m)^2*. Subsequently in the calculation of alpha, the speed conversion must be incorporated for unitary consistency.

Alpha remains constant for a cosmology descriptive of a non-accelerating cosmology; but will result in a change in the electric charge quantum in a cosmology, which measures an accelerated spacial expansion, which can however be the result of a self-intersection of the light path for particular cosmological redshift intervals in an oscillating cosmology.

Here a particular alpha variation reduces the SI-measurement for the square of the charge quantum e in a factor of $(1.6021119 \times 10^{-19}/1.60217662 \times 10^{-19})^2 = 0.99991921$...for a calibrated:

alpha variation $\alpha_{var} = 1 - (1.602111895 \times 10^{-19}/1.60217662 \times 10^{-19})^2 = 1 - 0.9999192 = 8.08 \times 10^{-5}$.........[Eq.10]
Alpha $\alpha = \mu_o ce^2/2h = e^2/2\varepsilon_o hc = 2\pi.(2.99792458)(1.602111895)^2 \times 10^{-37}/(6.62607004 \times 10^{-34}) = 60\pi e^2/h = 7.296762965 \times 10^{-3} = 1/137.0470721$

The Henry is a derived (SI) unit for magnetic inductance and has base units (Js^2/C^2=kgm^2/C^2), which so must give the (C to C*) unitary calibration in $(\mu_o/\mu_o^*)=1=0.994598576$ C*^{2}/C^2, which gives (C*=0.997295631C) and defines the (SI)-Coulomb Charge quantum as:

(e=0.997295631e*=1.602111895 \times 10^{-19} C (SI)).

The textbooks of SI-physics have (e'=1.60217662 \times 10^{-19} C (SI)), however and a value which differs from the value demanded by the magnetic constant (μ_o) in a factor of (e'/e=1.0000403).

As the electropolar charge quantum appears squared in the Alpha-Constant, the Alpha-variation so becomes (1.0000807), with the old value of (e') exceeding the new value of (e) in so 4 parts in 100,000 and [Alpha]' greater in magnitude than Alpha by 81 parts in a million and in agreement with the Churchill-Webb measurements of 1998, increasing from Alpha = $\mu_o c.e^2/2h$ = 1/137.047072 to Alpha = 1/137.036003.

Measuring Alpha even further back towards the Quantum Big Bang with increasing redshift, would better approximate the 80 parts per million increase in Alpha from say lower deviations at the say 8 parts per million at lower redshifts. So the Alpha-Dip indicates that the textbook value for the electropole is fractionally too high; but that the Alpha Finestructure-Constant remains indeed constant, once the variation in the electronic charge quantum is taken into account.

Because the magnetic permeability constants are numerically the same in both the (SI) and the (*) unitary measurement systems; but $\varepsilon_o = 1/120\pi c = 8.841941283 \times 10^{-12}$ (F/m)* and is $\varepsilon_o = 8.8541878176 \times 10^{-12}$ F/m (SI), the (SI) measurement is too large by a factor of 1.00138505 to correlate correctly with the magnetic permeability constant μ_o to give the Maxwell constant $\mu_o x \varepsilon_o = (120\pi/c).(1/120\pi c) = 1/c^2$.

In the attempt to explain the Alpha-Dip, some theorists have proposed a 'slowing down' of (c). Recent formulations by populist physicist Paul Davies and in co-authorship with Tamara Davis and Charles Lineweaver from the Department of Astrophysics at the University of New South Wales, Sydney, Australia have followed the wrong avenues for the interpretation of the data however.

In a paper published in ('Nature': 'Black Holes constrain varying constants'; August 8th, 2002), the authors propose a varying light speed to be responsible for the Alpha-Dip and discount any possible variation in the electro charge quantum. Davies' argument that an increase in (e) would alter the evolution of Black Holes in their entropic definitions does not take into account that a product of the Boltzmann Constant (defining entropy), with (e) forms a fundamental fine-structured constant in its own right.

In particular, the universe's wavefunction B(n) is localized in any arbitrary spacetime in 'unfreezing' the M-space 'stuck' in between the (X,Y) coordinates and subsequently in between real and imaginary linearized time parameters. This demands the establishment of a Mean-Alignment-Time or MAT, relative to a 'unfreezing definition' in a specification of the 'naked singularity', oscillating as zero-point about the FRB.

As $E^*.e^* = E_{ps} x 1/E_{ps} = 1$ as fundamental unity in the 11D Membrane-Mirror-Space of modular duality with e* the magneto charge; one can heuristically state that (Energy E x charge quantum e) in the lower dimensional C-Line-Space C can be expressed as the inversed identity in the form of 1/T.

This then sets E.e=kTe=1 for [ek]=1/T and using an inverse proportion for mass in the lower dimensionality: [e*k*] = 1/T* sets a function f(n) = [ek]/[e*k*] = [T*/T].

This is the case for the Mass-Temperature inverse proportionality for the evolution of Black Holes from microstates to macro states and as in the Hawking Mass-Temperature relation for Black Holes:

{Minimum Planck Oscillator = $\frac{1}{2}hf_{Planck} = \frac{1}{2}m_{Planck}.c^2$ for $T_{max}=T_{ps}$ and $T_{min}=T_{ss}$ in string modular T-duality for $\frac{1}{2}m_{Planck}.T_{Planck} = (1/8\pi)(4\pi).m_{Planck}.T_{Planck} = $ Hawking Modulus HM = $hc^3/4\pi G_o k = M_{BHmin}.T_{BHmax} = \{c^2/4\pi^2\}. M_{BHmax}.T_{BHmin}\}$.

B(n) is assigned $B(n_p) = \{[ek](SI)/[ek](*)\}$, with {[ek](SI)=constant=$(1.60217662x10^{-19}$ C)$(1.380649x10^{-23}$ J/K) = $2.21204355x10^{-42}$ CJ/K} and using the old (SI) value with the Alpha-Variation for (e'); using ($e^{\pm}=1.6021119x10^{-19}$ C) without the Alpha-Variation gives $\{[ek](SI)\}$ = $2.21195419x10^{-42}$ CJ/K}.

The (*)-constant is a relatively fixed constant as: ($e^{\pm}*k*=2.267869086x10^{-42}$ (CJ/K)*) and subsequently $B(n_p)$ calculates a particular value for n at the asymptote $B(n[/font]\Rightarrow\pm\infty)=0$ for e=$1.606456344x10^{-19}$ C* as:

$\{[e^{\pm}k](SI)/[e^{\pm}k]*\}$ = (2.21204355/2.267869086) = 0.975384145 = [2e/hA].exp(-[Alpha]x[$n_p^2+n_p$]), which yields an unique (n_p) as a complex solution to the quadratic equation by ln(0.975384145/0.992729803) ={ln(0.982527312} = {-Alpha}{$n_p^2+n_p$} for 2.415747501 = $n_p^2+n_p$ for: $n_p^2 + n_p - 2.415747501 = 0$ and solving as: (n_p=FRB(-½) ± 1.6327117).

$\{[e^{\pm}k](SI)/[e^{\pm}k]*\}$ = (2.21195419/2.267869086) = 0.975344742 = [2e/hA].exp(-[Alpha]x[$n_p^2+n_p$]), which yields an unique (n_p) as a complex solution to the quadratic equation by ln(0.975344742/0.992729803) = {ln(0.98248762} = {-Alpha}{$n_p^2+n_p$} for 2.421284031 = $n_p^2+n_p$ for: $n_p^2 + n_p - 2.421284031 = 0$ solving as: (n_p=FRB(-½) ± 1.634406324).

For the unfrozen M-space with Alpha-Variation: {10D-root: n_p = 1.1327117 (real) & 12D-root: n_p = -2.1327117 (imaginary)}.

For the unfrozen M-space without Alpha-Variation: {10D-root: n_p = 1.1344063 (real) & 12D-root: n_p = -2.1344063 (imaginary)}.

The difference in the present n_p cycle-time coordinate so becomes 1.634406324 - 1.6327117 = 0.001694624 as 0.001694624/H_o = $9.02486387x10^{14}$ s* or 28.59865512 Million civil years.

This 'unfreezing' of M-space then allows the singularity algorithm of the cosmogenesis to manifest in what might be called the sex chromosomes of the universal DNA-encoding in terms of frequency or a number count. A new physical quantity in 'awareness' is defined as the time differential of frequency and allows the concept of 'consciousness' to be born from the defining qualities of magneto charges.

Electromagneto-monopolar 'Life' derives as consequence of self-inductions of quantum geometric entities, specified from super membranes, macro-crystallized in electropolar self-capacitances and magnetopolar self-inductances, subsequently becoming subject to mutual cross inductances.

The purpose of the superbranial self-replication on ever increasing scales, and until modular duality is reached in minmax boundary conditions; is to establish the multiversal nesting of the smallest within the largest - a process which constituted the beginnings of it all in the 'naked singularity' becoming defined as the Genesis Boson.

The GENESIS Boson then becomes the parametric initialization of creation in the abstract labeling of:

ENERGY=k.TEMPERATURE=h.FREQUENCY=h/TIME=MASS.c^2 and using the SE_{ps}-Master Constant Set: $\{4; 6; 7; L_o=1/[6 \times 10^{15}]; c^2=9 \times 10^{16}; 11; h=1/[15 \times 10^{32}]; A=14 \times 15^{24}; k=1/[15 \times 16^{18}]; 26 \times 65^{61}\}$ in reverse order and with arbitrary symbols as shown becoming associated with those 'master constants'.

Particularly then: Energy $=hR_{max}/\lambda_{ps}$ with Mass$=hR_{max}/\lambda_{ps}c^2=0.01183463299$ and Temperature $=hR_{max}/k\lambda_{ps}=7.544808988..\times 10^{37}$ and Frequency$=R_{max}/\lambda_{ps}=1.59767545..\times 10^{48}$

This becomes the 'Atomic-Mass-Unit' in 12D-F-Space in using one protonucleon $m_c=Alpha^9 L_{planck}$ for every one of the 12 monopolar current loops in the Unified Field of Quantum Relativity (UFoQR).

A first E_{ps}-Coefficient in the Expansion Series of the fundamental principles from the SE_{ps} algorithm then crystallizes the 'Counter for matter' in Avogadro's Constant for Molarity: MASS(20/33)/$12m_c = N_{avogadro} = 6.02242143 \times 10^{23}$ 1/mol*

$N=n_{ps}=\lambda_{ps}/R_{max}$ in REAL Time relative to the Quantum Big Bang to be created following the string epoch and relating to IMAGINARY TIME relative to this selfsame creation in the Cosmogony of the Genesis Boson of the Abba-Baab 11-dimensional supermembrane. This UNREAL Quantum Relative Time then is the Hubble-FREQUENCY $H_o=c/R_{max}$ in proportionality to the Source Frequency of the E_{ps}-Gauge Photon $f_{ps}=c/\lambda_{ps}$ in the expression $H_o R_{max}=c=\lambda_{ps}.f_{ps}$

N then becomes the Null time for the initialization of the string/supermembrane-serpent modular duality in the De Broglie phase speed initialization, beginning with the Oscillation (or Bounce) of the Planck-Length and specifies the Instantaneity of Now-Cycle-Time $n_{ps}=H_o t_{ps}=H_o/t_{ss}$ as the Time Instanton $t_{ps}=1/f_{ps}=f_{ss}$ and the Inflaton $R_{max}=R_{Hubble}=c/H_o$ with de Broglie Phase speed $V_{debroglie}=R_{max}.f_{ps}=R_{max}.c/\lambda_{ps}=c/n_{ps}$ as the 'Heartbeat of the Cosmic Mother Black Hole' frequency of the oscillating cosmos in the Cosmology of QR and in the imaginary F-Space Time of NH_o generalised in the Real Time $n=H_o t$ for any time in the evolving Cosmology and minimized in $n_{ps}=H_o t_{ps}$.

In SI-units (CODATA-2007), the (*) units are calibrated as:

m*=0.998331431..m; s*=0.999022562..s; kg*=0.996260907..kg; J*=0.994882942..J; C*=0.997295631..C* and eV*=0.997540464..eV depending on precision measurements for:

$h = 6.62607004 \times 10^{-34}$ Js and $h = 1/15 \times 10^{32}$ (Js)*
$c = 2.99792458 \times 10^{8}$ m/s and $c = 3 \times 10^{8}$ (m/s)* in $1/c^2 = \mu_o \varepsilon_o = (120\pi/c)(1/120\pi c)$
$k = 1/4\pi\varepsilon_o = [30c]_{modulated} = 1/G_o$ (kg^2/N.m^2)
$G_o = 4\pi\varepsilon_o = 1/30c = 1.111...\times 10^{-10}$ (N.m^2/kg^2)*
and $G_o = 1.111880317 \times 10^{-10}$ m^3/kgs^2
$e = 1.602176487(40) \times 10^{-19}$ C and $e_{alpha} = 1.602111895 \times 10^{-19}$ C and $e = 1.606456344 \times 10^{-19}$ C* so defining finestructures:

alpha=$\alpha = 2\pi k e^2/hc = e^2/2\varepsilon_o hc = 7.297352574(50) \times 10^{-3} = 1/137.035999084(51)$ for e
alpha=$\alpha = e_{alpha}^2/2\varepsilon_o hc = 7.296763015 \times 10^{-3} = 1/137.0470721$ for $e_{alpha} = 60\pi e^2/h = 7.296762965 \times 10^{-3} = 1/137.047072 \rightarrow e=1.606456344 \times 10^{-19}$ C*

$\mu_o = 4\pi \times 10^{-7} = 120\pi/c = 1.2566370614...\times 10^{-6}$ N/A^2 with (J/A^{2}m=H/m=kg.m/C^2)
$\varepsilon_o = 1/\mu_o c^2 = 1/120\pi c = 8.85418782...\times 10^{-12}$ C^2/Nm^2 with (C^2/Jm=F/m=C^{2}s^2/kg.m^3)

The Age of the Earth calibrated to the Alpha-variation in the Coulombic charge quantum e

Hubble-10D-Event Horizon Seedling-Limit and with $n=H_o t$; $dn/dt=H_o$ (odd nodal):

$R_{max}=R_{Hubble}=1.59767545 \times 10^{26}$ meters=c/H_o=c/nt=16.87610652 Billion Lightyears for asymptotic approach and attained by the light path R_{max}=ct=nc/H_o for n=1; t=1/H_o.

Electromagnetic (Total Linear) Age of the Universe:

$t_{AEMR} = nR_{max}/c = n_p/H_o = 1.1327117/1.877728045 \times 10^{-18}$ s = $6.03235225 \times 10^{17}$ s* or $19.117633...\times 10^9$ (civil) Years

An Age of the Earth by various measurement techniques is approximated as 4.54 Billion years. This value is centred at the Hubble node for the cyclic multidimensional universe as $16.876 \pm \Delta$ Gy as a function of the true electromagnetic age of the universe of 19.11576 Gy from $n_{present}$=1.1327117 and the alpha variation effect of 28.59865512 Million civil years. As the Earth-Baab nexus point is as old as the Quantum Big Bang Wormhole Singularity-Abba nexus point, adding the Alpha-Variation effect or deviation-error interval to the Age of the nodal-fractal Universe will harmonize the encompassing Abba-Baab or Creator-Creation supersymmetry.

For the nodal Hubble Boundary:

$\Delta_{Earth} = 19.11576 - 16.876 = 2.240 \times 10^9$ (Civil) Years for $2\Delta_{Earth} = 4.480 \times 10^9$ (Civil) Years.

For the Alpha Variation effect:

$\Delta_{Alpha} = 28.60$ My for $2\Delta_{Alpha} = 57.20$ My.

The Age of the Earth so becomes aligned in $2\Delta_{Earth} + 2\Delta_{Alpha} = 4.480 \times 10^9 + 0.0572 \times 10^9 = 4.5372 \times 10^9$ (Civil) Years.

The mensuration systems are calibrated by the magnetic constant being measured as an identity in both, the SI- and the (*) systems as $\mu_o = 120\pi/c = 4\pi/10^7 = 1/\varepsilon_o c^2$ and as $c = 3 \times 10^8$ (m/s)* precisely by definition. There is however an interval of uncertainty in regard to the charge quantum e, as say observed in the Alpha-Variation of Webb and co from quasar spectra in hydrogenic absorption lines.

The SI-value for e is modified from $e' = 1.602111758 \times 10^{-19}$ C in the unit of the Henry for magnetic induction in $[H] = [Js^2/C^2]$. This breaks the perfect calibration applied with introduction of the [kg] unit in terms of inertia, previously dependent only on lightspeed c in the Maxwell constant.

$C^2* = 0.99459841\ C^2$ for $C* = 0.997295547..C$ then recalibrates the Coulombic charge quantum e from $e = 1.606456344 \times 10^{-19}\ C* = 1.602111895 \times 10^{-19}\ C = e_{alpha}$ from the measured $e = 1.602176\ 487\ (40) \times 10^{-19}$ C. $e/e' = 1.00004$, which squared, represents the alpha variation as so 8 parts in 100,000. The alpha variance is so an effect of inertia and relates to the CER in the PLO, which manifests in the inertial properties of the electron.