

A Revelatory Eschatology & Genesis: VII. Bosonic Temperature Unification & the Universe's Temperature Evolution

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Abstract

In this article, the author partly uses metaphors to explore bosonic temperature unification & the universe's temperature evolution in a revelatory eschatology and genesis.

Keywords: Revelation, eschatology, genesis, bosonic temperature, unification, evolution.

Möbius had broken into two and had transferred his one-sidedness to the Klein mirror and in a dimensional twinship between Klein's heness in the 12th dimension at the Instanton of Khaibit and Klein's sheness at the Instanton in Universe in the 10th dimension of the 11-dimensional two-sided manifold, Logos called the M-spacetime of the Mother as a Magic Mirror of the Mystery of Witten.

Klein's sheness so brought the UFOQR with its matter-antimatter definitions and acting under the auspices of the gauge ambassadors into the 10th dimension of the superstrings of Universe of the Mother as the Queendom of Baab from the 12th dimension of the Kingdom of the Father.

The matter templates YCM so could interact with their antimatter counterparts MCY in a new way, as the quantum relativity between them had changed from its 2-dimensional origin with no thickness to a 3-dimensional evolvment, due to the thickness of the Inflaton-Instanton interval in the birthing of space-time.

In particular $YCM(1)+MCY(-1) = (Y+M)C^2(M+Y)(0) = RCCR(0) = GMMG(0) = BYYB(0)$ in the mixing of the colour charges.

This created a new template; the Universal Intelligence called the Vortex-Potential-Energy or VPE as a Vacuum-Potential-Energy or a Zero-Point-Energy in the UFOQR.

This zero-spin or scalar VPE so had been defined as the Dark Energy or DE from Khaibit to continue the Inflaton of the hyper acceleration of the de Broglie wave-matter of the mass seed M_o .

Because the Inflaton had defined the Hubble event horizon as a Black Hole $M_H = R_H c^2 / 2G_o$, this gradient of Black Hole masses $M_o / M_H = \Omega_o$ defined a parameter $\Omega_o = 0.028$ as the difference

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between the Hubble Mother Black Hole and the mass seed M_o from the creation algorithm of the Mathimatia.

This Black Hole Mass parameter Ω_o so would specify M_o as the mass seed and as a form of mass energy Abba named as the 'Baryonic Matter Seed' and it was the baryonic matter that would interact with the EMR as photons without colour charge as a luminous form of matter. The Inflaton parameters of the de Broglie wave matter had been the hyper-acceleration $A_{dB} = R_H \cdot f_{ps}^2$ and the superluminal hyper-speed $V_{dB} = R_H \cdot f_{ps} = R_{HC} / \lambda_{ps}$, incorporating Abba's resonance self-state or eigen frequency f_{ps} into the birth of the cosmos.

The Dark Energy equation for the Inflaton was defined as a multiversal summation of the protoverse encompassed by the omniverse in the Mathimatia:

Dark Energy DE-Quintessence Λ_k Parameters:

A general dark energy equation for the kth universe ($k=0,1,2,3\dots$) in terms of the parametrized Milgröm acceleration $A(n)$; comoving recession speed $V(n)$ and scale factored curvature radius $R(n)$:

$$\Lambda_k(n) = G_o M_o / R_k(n)^2 - 2cH_o(\Pi n_k)^2 / \{n - \Sigma \Pi n_{k-1} + \Pi n_k\}^3 \text{ for negative Pressure } P_k = -\Lambda_k(n)c^2 / 4\pi G_o R_k$$

$$= \{G_o M_o (n - \Sigma \Pi n_{k-1} + \Pi n_k)^2 / \{(\Pi n_k)^2 \cdot R_H^2 (n - \Sigma \Pi n_{k-1})^2\} - 2cH_o(\Pi n_k)^2 / \{n - \Sigma \Pi n_{k-1} + \Pi n_k\}^3\} \Lambda_o$$

$$= G_o M_o (n+1)^2 / R_H^2(n)^2 - 2cH_o / (n+1)^3$$

$$\Lambda_1 = G_o M_o (n-1+n_1)^2 / n_1^2 R_H^2 (n-1)^2 - 2cH_o n_1^2 / (n-1+n_1)^3$$

$$\Lambda_2 = G_o M_o (n-1-n_1+n_1n_2)^2 / n_1n_2n_2 R_H^2 (n-1-n_1)^2 - 2cH_o n_1n_2n_2 / (n-1-n_1+n_1n_2)^3$$

.....

For the protoverse $k=0$ then, $\Lambda_o = G_o M_o (n+1)^2 / R_H^2(n)^2 - 2cH_o / (n+1)^3$ had been a boundary condition at the time instanton t_{ps} as the quantum of mass m_{ss} in $f_{ss} = m_{ss}c^2/h = 1/f_{ps} = t_{ps}$. All mass is quantized in $m = \Sigma m_{ss} = Nm_{ss}$ and $1/f_{ss}^2 = f_{ps}^2$ eigen states in 9×10^{60} permutations to $m f_{ss}^2 / m_{ss} = m E_{ss} / m_{ss} h f_{ps} = m \cdot m_{ss} c^2 / m_{ss} E_{ps} = m c^2 / m_{ps} c^2 = m / m_{ps}$.

Any mass m is so quantum gravitationally quantized in a mass eigen frequency f_{ss} in the time instanton as the inverse of the source frequency f_{ps} as a distribution of permutational self-states $f_{ps}^2 |_{mod} = 9 \times 10^{60}$.

The cycle time $n=H_o t$ for the nodal Hubble constant $H_o = c/R_H = dn/dt$ at the Instanton so had been $n_{ps} = H_o t_{ps} = c t_{ps} / R_H = c / R_H f_{ps} = c / V_{dB} = \lambda_{ps} / R_H = 6.26 \times 10^{-49}$ as a proportionality relating the minimum conditions of the Instanton to the maximum conditions of the Inflaton in the form of wavelength and velocity.

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$\Lambda_o(n_{ps}) = G_o M_o (n_{ps}+1)^2 / R_H^2 (n_{ps})^2 - 2cH_o / (n_{ps}+1)^3$ calculates as $\Lambda_o(n_{ps}) = \{G_o M_o / R_H^2\} \{R_H f_{ps} / c\}^2 = G_o M_o / \lambda_{ps}^2$ for this Lambda- or Dark Energy acceleration and proportional to the hyperacceleration of the Inflaton as $\Lambda_o(n_{ps}) / a_{dB} = \{G_o M_o / \lambda_{ps}^2\} / \{R_H f_{ps}^2\} = \{G_o M_o / \lambda_{ps}^2\} / \{2G_o M_H f_{ps}^2 / c^2\} = \{M_o / 2M_H\}$ as $c = f_{ps} \cdot \lambda_{ps}$ as the de Broglie group-wave velocity.

A group velocity for waves is upper limited by light speed 'c'; whilst a phase velocity for waves is lower limited by 'c' as a superluminal or tachyonic speed for matter waves in $v_{phase} = f\lambda = \{mc^2/h\} \{h/mv_{group}\} = \{c^2/v_{group}\} > c \forall v_{group} < c$.

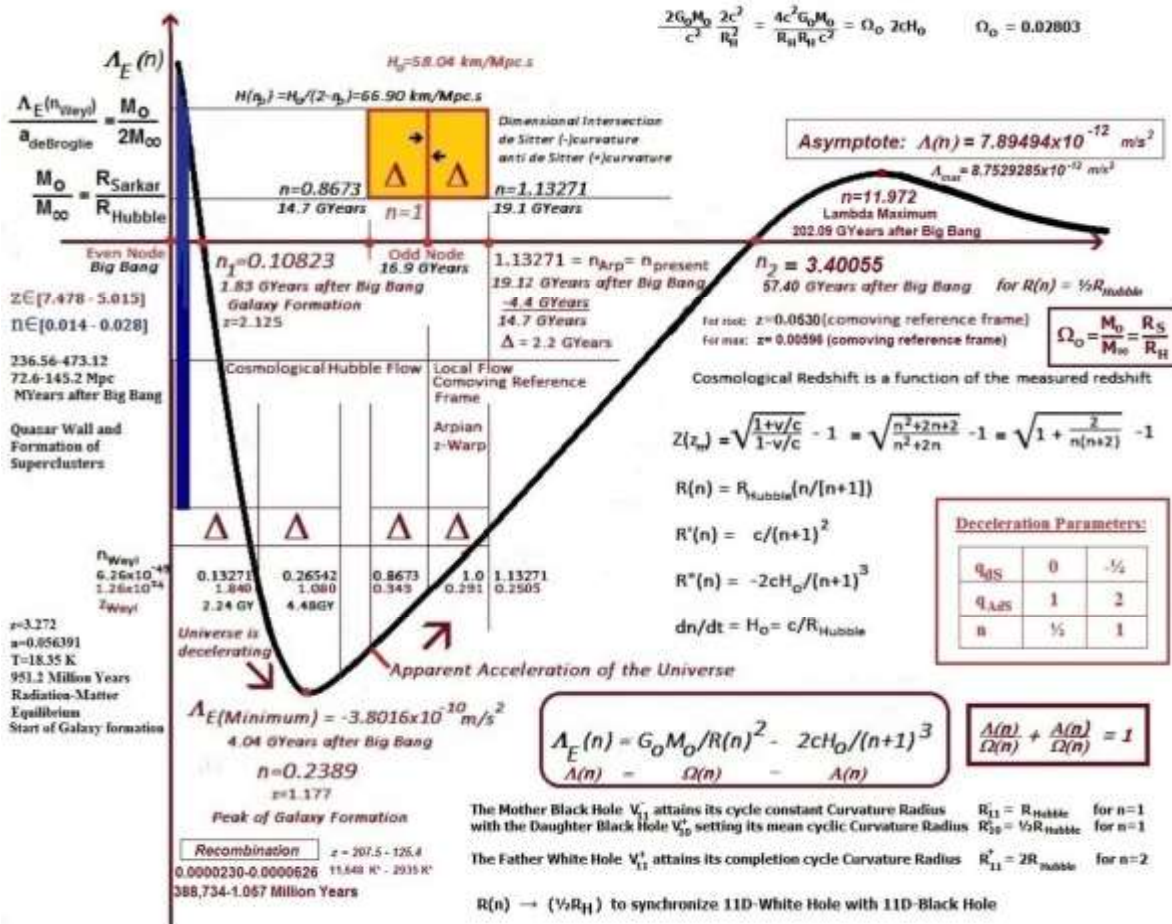
Evolution

At the instanton t_{ps} , a de Broglie Phase-Inflation defined $r_{max} = a_{dB} / f_{ps}$ and a corresponding Phase-Speed $v_{dB} = r_{max} \cdot f_{ps}$. Those de Broglie parameters constitute the boundary constants for the Guth-Linde inflation and the dynamical behaviour for all generated multiverses as subsets of the omniverse in superspacetime CMF.

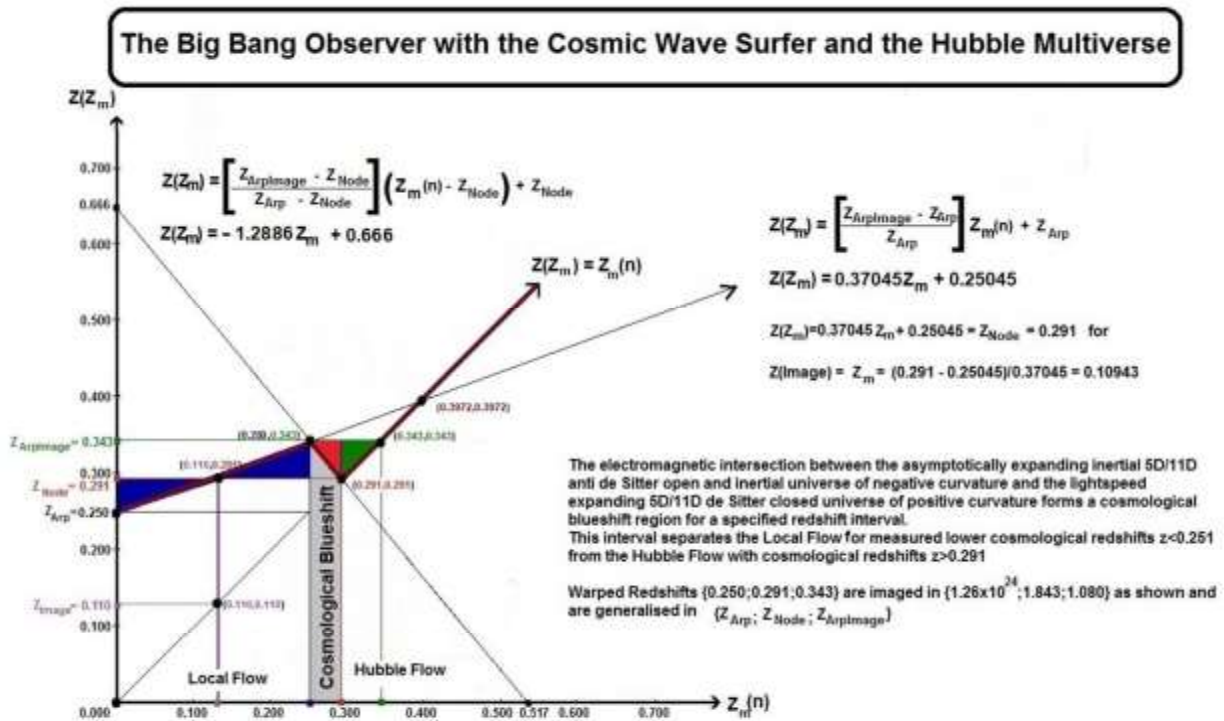
Initially, the de Broglie Acceleration of Inflation specified the overall architecture for the universe in the Sarkar Constant $A_S = A_E(n_{ps}) r_{max} / a_{dB} = G_O M_O / c^2$. The Sarkar Constant calculates as 72.4 Mpc. $2.23541620 \times 10^{14}$ m or as 236.12 Mlightyears as the bounding gravitational distance/scale parameter.

A Scalar Higgsian Temperature Field derives from the singularity and initialises the consequent evolution of the protocosmos in the manifestation of the bosonic superbranes as macroquantisations of multiverses in quantum relativistic definitions.

The Omega of critical density is specified in acceleration ratio $A_E(n_{ps}) / a_{dB}$, which is $G_O M_O / c^2 r_{max} = 0.01401506 = \frac{1}{2} M_O / M_{\infty} = \frac{1}{2} \Omega_O = q_O$ (Deceleration Parameter).



Evolution



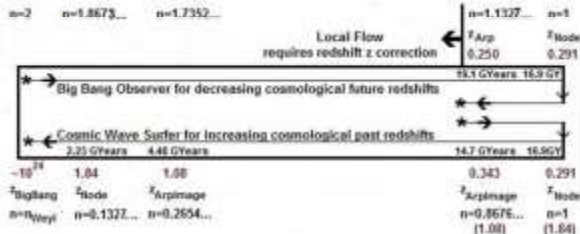
The intersection of the Local Flow cosmological redshift correction line for low redshifts z with the nodal redshift constant line determines a measured redshift $z(n)$ as $z(n) = z(image) - 0.109$ as a critical value for the Hubble Flow for high redshifts. For this value of z then particular unexpected cosmological phenomena, such as quasar redshift anomalies apparently coupling quasar sources with galactic hosts and aberrant spectra and light curves for gamma ray bursters and supernovae can be observed by Terrian stargazers unaware about the multivalued redshift regions and their mirroring properties as indicated.

$$H_0 = dn/dt = c/R_{Hubble} = n/t = n_{BB}/t_{BB} = n_{Weyl}/f_{Weyl} = \lambda_{Weyl}/\lambda_{Weyl}(R_{Hubble})$$

$$H_{0max} = f_{Weyl} = 3 \times 10^{30} \text{ Hz} \quad H(n_{present}) = H_0 (2 - n_{present}) = 66.9 \text{ km/Mpc} \quad H_{0min} = 58.04 \text{ km/Mpc} = 1.877 \times 10^{-10} \text{ Hz}$$

The Big Bang observer, say an Earth astronomer perceives and measures the receding event horizon of the Hubble node in witnessing higher future with increasing cosmological redshifts z from left to right.

The Big Bang observer remains stationary relative to the Cosmic Wave surfer and measures the latter in receding from her/his recession velocity or decreasing speed due to gravitational mass attraction



The Cosmic surfer rides the wavefront of the expanding universe in a comoving reference frame of the Arpan velocity defining the Arpan cosmological redshift. She/he so observes the cosmic evolution as a witness for the past in the increasing of the warping effect towards the Big Bang and where the 11D/5D closed de Sitter universe coincided with the 10D/5D open anti de Sitter universe. The increase of the redshifts then proceeds from the right to the left in mirroring the timearrow of the Big Bang observer.

The dynamic node moves the Hubble event horizon along the basic n interval $[0, n_{BB}, 1]$ to superpose the 11D Radius $R_{11}(n) = n R_{Hubble} = R_{Hubble} \Delta$ onto the oscillating multiverse bouncing between even nodes of the Big Bang observer $\{0, n_{BB}, 2, 4, 6, \dots\}$ and the odd nodes of the mirrored and imaged Cosmic wave surfer $\{1, 3, 5, 7, \dots\}$. The unitary interval so defines the curvature in $R_{11}(n) = R_{Hubble} \Delta$ asymptotically and as a function of the expansion parameter: $\left[\frac{R_{Hubble}(n)}{R_{Hubble}} - n[n+1] - 1 \right]$

Recessional Velocity: $v'/c = 1/(n+1)^2$ in $1+z = \sqrt{\frac{1+[v'/c]}{1-[v'/c]}} = \sqrt{1+2/[n(n+2)]}$ for $n = \sqrt{[c/v'] - 1} = \sqrt{1+2/[z(z+2)]} - 1$

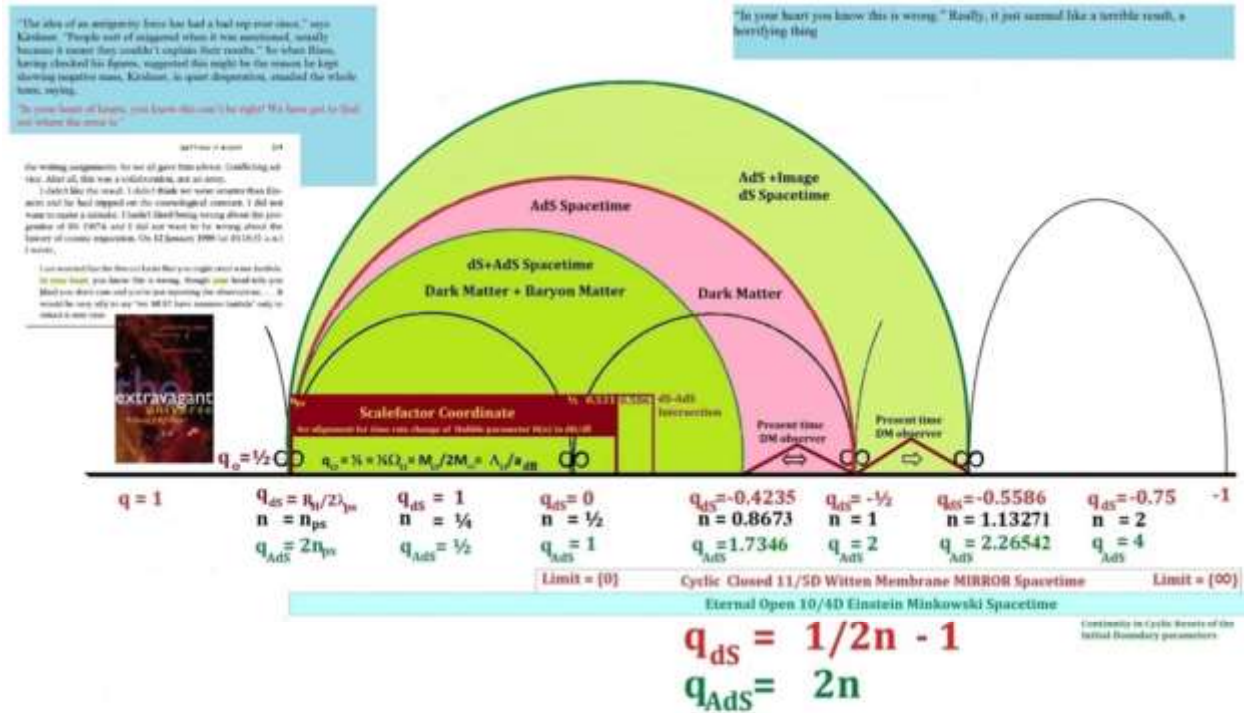
$v'/c = 1/(n_p + 1)^2 = 0.219855$ for $n_p = 0.25045$ for a present $z=0$ redshift image for $n_p = 1.132711 = 1 + 0.132711$ and $2 - 1.132711 = 0.867289$ (image)

Critical Redshifts:
 $Z_{Arp} = 0.00000$ for $n_p = 1.132711$ and imaged in the limiting $Z_{Arp} = 0.34323$ for the Local Flow LF
 $Z_{Node} = 0.04147$ for a LF- $n=3.96225$ for a redshift correction $Z_{Node} = 0.04147 - 0.37045(0.04147) + 0.25045 = 0.26581$ for a $n = 1.07864$ and $n_p = 1.07864 - 0.05407 = 912.5$ Million ly
 $Z_{Arp} = 0.10943$ for $n = 2.108730$ for a 'Local Flow' redshift correction $Z_{Arp} = 0.10943 - 0.37045(0.10943) + 0.25045 = 0.29099 = Z_{Node}$ at the node for a $n = 1 + n_p = 1.132711$; 2.24 Gly from n_p
 $Z_{ArpImage} = 0.1583$ with $v'/c = 0.1459$ and for a $n = 1.6180$ for a redshift correction $Z_{ArpImage} = 0.1583 - 0.37045(0.1583) + 0.25045 = 0.30909$ for a $n = 0.94993 = 1 - 0.05007$

The position of Blazar Q3C273 is so $1.132711 - 0.94993 = 0.18278$ from the n_p cycle coordinate at a displacement of $2.9202 \times 10^{25} m^3$ or 3.0846 Billion light years from n_p
 The nodal mirror of the Inflation defines a redshift displacement of 2.24 Billion years from the present observer for multiple redshift values for ylemic objects within the Local Flow.

$Z_{Node} = 0.25045 = 0.37045(0.25045) + 0.25045 = 0.34323 = Z_{Node}$ for a $n = 0.867289$ for $n_p = 0.867289 - 0.265422$ and a distance of 4.479 Billion light years from n_p imaging Z_{Node}
 $Z_{Node} = 0.29099$ for $n = 1.000000$ in Hubble Flow for $Z_{Node} = 0.29099$ for $n_p = 1.0000 = 0.132711$ and a distance of 2.240 Billion light years from n_p
 $Z_{Node} = 0.34323$ for $n = 0.867289$ in Hubble Flow for $Z_{Node} = 0.34323$ for $n_p = 0.867289 - 0.265422$ and a distance of 4.479 Billion light years from n_p
 $Z_{Node} = 1.07994$ for $n = 0.265422$ in Hubble Flow for $Z_{Node} = 1.07994$ for $n_p = 0.26544 = 0.86727$ and a distance of 14.636 Billion light years from n_p
 $Z_{Node} = 1.84012$ for $n = 0.132711$ in Hubble Flow for $Z_{Node} = 1.84012$ for $n_p = 0.13271 = 1.00000$ and a distance of 16.876 Billion light years from n_p

Evolution



$$q_{ds} \cdot q_{AdS} = 2n(1/2n - 1) = 1 - 2n$$

$$\frac{q_{ds} + q_{AdS}}{q_{ds} - q_{AdS}} = \frac{1 - 2n + 4n^2}{1 - 2n - 4n^2} = \frac{4\{n - 1/4(1+i\sqrt{3})\} \cdot \{n - 1/4(1-i\sqrt{3})\}}{-4\{n - 1/4(1-\sqrt{5})\} \cdot \{n - 1/4(1+\sqrt{5})\}}$$

Roots for $T(n)=-1$ in $n(n+1)-1=0$
 $n = -1/4(1+i\sqrt{3})$; $n = -1/4(1-i\sqrt{3})$
 Roots for $T(n)=1$ in $n(n+1)+1=0$
 $n = 1/4(\sqrt{5}-1) = 1/2X$; $n = -1/4(\sqrt{5}+1) = -1/2Y$

The cosmological observer is situated simultaneously in 10/4D Minkowski Flat dS spacetime, presently at the $n=0.8676$ cycle coordinate and in 11/5D Mirror closed AdS spacetime, presently at the $n=1.1327$ coordinate.

Observing the universe from AdS will necessarily result in measuring an accelerating universe, which is however in continuous deceleration in the gravitationally compressed dS spacetime for deceleration parameter $q_{ds}=2n$. Gravitation is made manifest in the dS spacetime by Graviton strings from AdS spacetime as Dirichlet branes at the 10D boundary of the expanding universe mirroring the 11D boundary of the nodally fixed Event Horizon characterised by $H_0 = c/R_H$

The Dark Matter region is defined in the contracting AdS lightpath, approaching the expanding dS spacetime, but includes any already occupied AdS spacetime. The Baryon seeded Universe will intersect the 'return' of the inflaton lighpath at $n=2-\sqrt{2}=0.586$ for (DM=22.09%; BM=5.55%; DE=72.36%).

The Dark Energy is defined in the overall critical deceleration and density parameters; the DE being defined in the pressure term from the Friedmann equations and changes sign from positive maximum at the inflaton-instanton to negative in the interval $L(n)>0$ for n in $[n_{ps}, 0.18023]$ and $L(n)> 3.4008$ with $L(n)<0$ for n in $(0.1803 - 3.4008)$ with absolute minimum at $n=0.2389$.

This DE (quasi)pressure term for the present era (1-0.1498 for 85% DM as 4.85% BM and 27.48% DM and 67.67% DE) is positive and calculates as $6.69 \times 10^{-11} \text{ N/m}^2$, translating into a Lambda of $1.039 \times 10^{-36} \text{ s}^{-2}$ and $1.154 \times 10^{-53} \text{ m}^2$. This pressure term will become asymptotically negative for a universal age of about 57.4 Gy, and for the zero curvature evolution of the cosmos.

The 'naked singularity' can be defined as the ratio of the minimum to the maximum and calculates as the genetic 'NullTime' $n_{ps} = \lambda_{ps} / r_{max} = 6.259093485 \times 10^{-49}$ in dimensionless cycletime units (Tau-Time in General Relativity).

This NullTime precedes the Planck-Time $t_p = h/2\pi c^2 m_p = 6.9653035 \times 10^{-44}$ seconds (s*) by a factor of 111,283, should timeunits be assigned to n_{ps} .

The 'naked singularity' can then be redefined as the GENESIS-BOSON with a pre-Planck energy spectrum of $6.59 \times 10^{24} \text{ GeV}$, an effective 'size' of $3 \times 10^{-41} \text{ metres (m)}$ and a preBig Bang temperature of $7.67 \times 10^{37} \text{ Kelvin (K)}$.

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Timeinstantaneity ends the 'Bosonic Epoch' of the superbranes at $t_{ps} = 3.3301 \times 10^{-31}$ s and renders the Guth-Linde-Inflation as 'classically dynamic' in General Relativity. The negative curvature of 10D-C-Space is 'flattened' in the positive curvature of 11D-M-Space and an overall observed Euclidean flat cosmos is realised.

Hubble Parameter	$H(n) = \{c/[n+1]\} / \{R_H(n/[n+1])\} = H_0 / T(n) = H_0 / [n(n+1)]$
Timerate change Hubble Parameter in AdS without dS	$d(H(n)/dt)_{AdS} = (dH(n)/dn) \cdot (dn/dt) = -H_0^2/n^2$ by $H(n) = c/nR_H$ with $A(n) = 0$
Timerate change Hubble Parameter in AdS with dS	$d(H(n)/dt)_{AdS+dS} = -H_0^2 \cdot (2n+1)(n+1/2+1) / [n(n+1)]^2 = -4\pi G(\rho+P/c^2) = \rho_{n,im} + \rho_{A,im}$
Dark Energy Parameter with $\Lambda_{(E)instein} = 0$	$\Lambda(n)/R(n) = \Lambda_0/3 \cdot 4\pi GP/c^2 = \rho_{H_0} + \rho_{\Lambda} = G_0 M_0 / R(n)^3 \cdot 2H_0^2 / [n(n+1)]^2$

(1) $q(n) = -\ddot{a}/\dot{a}^2 = -\{-2cH_0R_H/[n+1]^3\} \cdot \{nR_H/[n+1]\} / \{c^2/[n+1]^2\} = 2n$ for AdS spacetime and dS spacetime for $H_0 = c/R_{(H)ubble/max}$

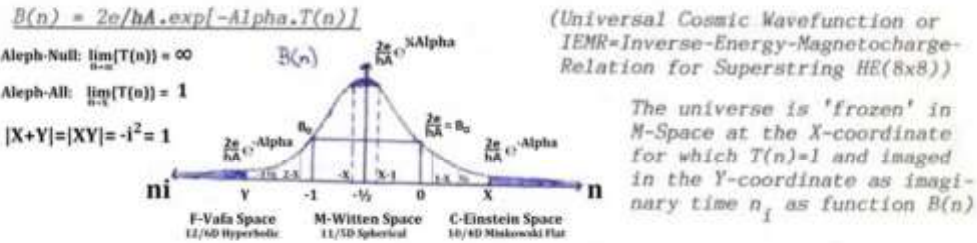
$r(n) = r_{max} (1 - 1/(n+1))$ (Parametric Scalefactor for Distance)

$t(n) = c/(n+1)^2$ (Parametrisation for Velocity)

$T(n) = -2cH_0/(n+1)^2 = a_0(n)$ [Milgrom] (Parametrisation for Acceleration)

$n = H_0 t$ with $c = f_{ps} \lambda_{ps} = H_0 r_{max}$ and $H_0 = dn/dt = constant = 1.879564359 \times 10^{-18}$ 1/s]

(2) with $T^2(n) = 1 = X(X+1) = -i^2 = -XY$ in the Feynman-Path-Integral as alternative quantum mechanical formulation for the equations of Schrödinger, Dirac and Klein-Gordon by: $T(n) = n(n+1) = |-n| + \dots + |-3| + |-2| + |-1| + 0 + 1 + 2 + 3 + \dots + n$



$T(n)=n(n+1)$ defines the summation of particle histories (Feynman) and $B(n)$ establishes the v/c ratio of Special Relativity as a Binomial Distribution about the roots of the $XY=i^2$ boundary condition in a complex Riemann Analysis of the Zeta Function about a 'Functional Riemann Bound' FRB= $-\frac{1}{2}$.

And so half of the Black Hole Mass parameter $\Omega_0 = M_0/M_H$ defines the Black Hole mass differential in the acceleration differential between the Dark Energy DE and the hyper- acceleration A_{dB} of the Inflaton as Deceleration parameter $q_0 = \frac{1}{2}\Omega_0 = G_0 M_0 H_0 / c^3 = G_0 M_0 / R_{HC}^2 = \Lambda_0 / A_{dB}$.

Applying this gradient to the Instanton then reduces the time instantaneity $t_{ps} = 1/f_{ps} = f_{ss}$ in $q_0 t_{ps} = n_{ps} \cdot \{G_0 M_0 / c^3\}$ to create a 'Higgs Potential False Vacuum' or HPFV within the Inflaton-Instanton epoch of the superstrings.

Evolution

The temperature evolution of the Instanton can be written as a function of the luminosity $L(n,T)$ with $R(n)=R_H(n/[n+1])$ as the radius of the luminating surface. Luminosity is specified as physical Power P or total energy E emitted over a time t .

For the total energy of Universe as $E_U = M_o c^2$ for a cycle time $n=H_o t$ or $t_{ps} = n_{ps}/H_o$ as initial boundary condition for $t = n/H_o$ then equates $H_o M_o c^2/n$ as proportional to $L(n,T) = (\text{Surface area of the energy emitter})(\text{BBR proportionality constant})(\text{temperature of emitting body to the fourth power})$ with proportionality constant $3/550$ obtained from the 33-tier Maria Code and the Principalities of the Mathimatia.

The second Eps-Expansion-Coefficient in the Expansion Principality now reduces this luminosity by a factor of $3/550 = 1/183.33\dots$ to indicate the Core-Bulge Ratio for Black Holes, termed a M-Sigma relation in the mapping of the Planck minimum energy Zero-Point Oscillator $E_p^o = \frac{1}{2}E_p = \frac{1}{2}hf_p = \frac{1}{2}m_p c^2 = \frac{1}{2}kT_p$ onto the Instanton parameters of the E_{ps} -Weyl wormhole.

$$3/550 = 1/\{11.2e^*/60\} = 60 E_{ps}/22 = \frac{1}{2}E_{ps} \cdot \{60/11\} \text{ for } \frac{1}{2}E_{ps} = \{11/60\} \{3/550\} = 33/33,000 = 1/2e^*.$$

The Luminosity function for Universe for a temperature $T(n=H_o t)$ is written as: **$L(n,T) = 6\pi^2 R(n)^2 \cdot \sigma \cdot T^4 = 3H_o M_o c^2 / 550n$**

$3H_o M_o c^2 / 550n_{ps} = L(n_{ps}, T(n_{ps})) = 6\pi^2 \lambda_{ps}^2 \cdot \sigma \cdot T_{nps}^4 = 2.6711043034 \times 10^{96}$ Watts* for $T(n_{ps}) = \sqrt[4]{\{M_o f_{ps}^3 / 1100\pi^2 \sigma\}}$ and where $\sigma = \text{Stefan's Constant} = 2\pi^5 k^4 / 15h^3 c^2$ in units of $[J/K^4 m^2 s^{-1}] = [kg/K^4 s^3]$ and as a product of the defined 'master constants' k, h, c^2, π and 'e' from the two self-generating algorithms of the Mathimatia.

The Genesis Boson then became the parametric initialization of creation in the abstract labeling of the Mathimatia:

ENERGY=k.TEMPERATURE=h.FREQUENCY=h/TIME=MASS.c² 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; $h=1/[15 \times 10^{32}]$; $A=14 \times 15^{24}$; $k=1/[15 \times 16^{18}]$; 26×65^{61} } in reverse order and with arbitrary symbols as shown associated with those 'master constants'.

Particularly then: ENERGY = $hR_{max}/\lambda_{ps} = hR_H/\lambda_{ps}$ with MASS = $hR_{max}/\lambda_{ps} c^2 = 0.01183463299$ and TEMPERATURE = $hR_{max}/k\lambda_{ps} = 7.544808988\dots \times 10^{37}$ and FREQUENCY = $R_{max}/\lambda_{ps} = n_{ps} = 1.59767545\dots \times 10^{48}$ in the Mirror duality $f_{ps} = 1/f_{ss}$ for $f_{ps} \cdot f_{ss} = 1$ and time instantaneity $t_{ps} = f_{ss} = 1/f_{ps}$ as a Maximum/Minimum initial- and boundary condition.

Evolution

The MARIA CODE in the Riemann Analysis specifies the partitioning of the decimal monad around the primary Maria-Number and SE_{ps} -Constant "11" and specifies the Prime Number Algorithm: +1+11+10+11 as 33-tiered segments, which transform the mechanics of SE_{ps} into the 64-codex of the DNA/RNA code for its eventual quadrupling as the 256-codex incorporative of dormant intron/intein-codings. Details are in the references, but the MARIA-CODE is based on the distribution of the Maria-Numbers given by: $N_p + 99 = M_{p+12}$; $n = \frac{1}{2}((264k+1)^{\frac{1}{2}} - 1)$ via $n^2 + n - 66k = 0$ and the MARIA-INFINITY-MATRIX, semanticised as:

[28]	11LOVE65USE110LOVE164USE209LOVE263USE...(Archetype 2) 21USE66LOVE120USE165LOVE219USE264LOVE...(Archetype 3) 32USE77LOVE131USE176LOVE230USE275LOVE...(Archetype 5) 33LOVE87USE132LOVE186USE231LOVE285USE...(Archetype 6) 44LOVE98USE143LOVE197USE242LOVE296USE...(Archetype 8) 54USE99LOVE153USE198LOVE252USE297LOVE...(Archetype 9) 65USE110LOVE164USE209LOVE263USE308LOVE...(Archetype 2*)	Maria Numbers are those IntegerCounters, which contain all previously counted integers as mod33. 1+2+3+4+5+6+7+8+9+10+11=66 Since 66=2x33, 11 is N#1. (for k=2)
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Archetypes 2+3+5+6+8+9=33 and Archetypes 1+4+7+0=12 then define the imaginary time-dimensions as the Archetypes not in the Sequence for $E_{ps} = 1/e^*$ Coefficients used in the application of the seven fundamental principles to define the F-Space.

In particular, the first application of the Coefficient-Relation results in the specification of the Atomic Isotopes and the second application defines the Expansion/Contraction-Principle in the three-fold definition of RESTMASS=..and its transformation into its second (Black Body Transparency) and third (RMP's) as omniversal agency, i.e. Avogadro's Constant: $N_A = 6.022421431 \times 10^{23} \text{ mol}^{-1}$ as RESTMASS.

The 33-tier Maria Code from Principalities of the Mathimatia and Eps-Coefficients for Mass Transformation in the Genesis Boson

For the nth principality, the E_{ps} -Coefficient-Series and iterative counter k is:

[29]	$[7k-(7-n)] \cdot E_{ps}^{k-1} \cdot 10/33 = [7(k-1)+n] \cdot e^{1-k} \cdot 10/33$ Identity-Series(n=1;k=1,2,3): 10/33; 4/825; 1/55000;... Expansion-Series: (n=2;k=1,2,3): 20/33; 3/550; 2/103125;... Order-Series(n=3;k=1,2,3): 30/33; 1/165; 17/825000;... Symmetry-Series(n=4;k=1,2,3): 40/33; 1/150; 3/137500;... Infinity-Series:(n=5;k=1,2,3): 50/33; 2/275; 19/825000;... Inversion-Series(n=6;k=1,2,3): 60/33; 13/1650; 1/41250;... Reflection-Series(n=7;k=1,2,3): 70/33; 7/825; 7/275000;... Relativity-Series(n=8;k=1,2,3): 80/33; 1/110; 1/37500;... Quantisation-Series(n=9;k=1,2,3): 90/33; 8/825; 23/825000;... New Identity-Series(n=10;k=1,2,3): 100/33; 17/1650; 1/34375;...
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For k=1; the coefficients have the numerators: 10,20,30...and denominator 33.

For k=2; the coefficients have the numerators: 8,9,10...and denominator 1650.

For k=3; the coefficients have the numerators: 15,16,17...and denominator 825000.

The E_{ps} -Coefficient-Series can then be extended to reflect the 7-tiered principality.

Evolution

MASS becomes the 'Atomic-Mass-Unit' in 12D-F-Space in using one proto nucleon $m_c = \text{Alpha}^9 \cdot L_{\text{planck}}$ for every one of the 12 monopolar current loops in the Unified Field of Quantum Relativity UFoQR.

A first E_{ps} -Identity-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, subject to mass energy perturbation effects:

$$\text{MASS}(20/33)/12m_c = N_{\text{avogadro}} = 6.02242143 \times 10^{23} \text{ 1/mol}^*$$

The counter $N=n_{\text{ps}}=\lambda_{\text{ps}}/R_{\text{max}}$ in 'real' time relative to the Quantum Big Bang and emerging from the string epoch and relating to 'imaginary' time relative to this selfsame creation in the Cosmogony of the Genesis Boson in Khaibit and the Inflaton-Instanton of the Abba-Baab 11 dimensional super membrane.

This 'virtual' or unreal Quantum Relative Time then manifests as the Hubble-Frequency $H_o=c/R_H$ in proportionality to the Source Frequency of the E_{ps} -Gauge Photon $f_{\text{ps}}=c/\lambda_{\text{ps}}$ in the expression $H_o R_{\text{max}}=c=\lambda_{\text{ps}} \cdot f_{\text{ps}}$.

N then had been the Null time for the initialization of the super membrane modular duality in the De Broglie phase speed initialization, beginning with the oscillation or bounce of the PlanckLength conformably mapped onto time instantaneity as a Now-Cycle-Time $n_{\text{ps}}=H_o t_{\text{ps}}=H_o/t_{\text{ss}}$ and as the Time Instanton $t_{\text{ps}}=1/f_{\text{ps}}=f_{\text{ss}}$ and the Inflaton $R_{\text{max}}=R_{\text{Hubble}}=c/H_o$ with de Broglie Phase speed $V_{\text{debroglie}} = R_H \cdot f_{\text{ps}} = R_H \cdot c/\lambda_{\text{ps}} = c/n_{\text{ps}}$ as the 'Heartbeat of the Cosmic Mother Black Hole' frequency of the oscillating cosmos in the Cosmology of Abba.

The Hubble frequency $H(n)$, so oscillates between two Hubble nodes maximized as frequency as the source frequency f_{ps} at the Instanton and minimized in the Hubble frequency H_o at the Inflaton node of the Hubble event horizon as $H_o = n_{\text{ps}}/t_{\text{ps}} = \lambda_{\text{ps}} f_{\text{ps}}/R_H = c/R_H$.

The second E_{ps} -Expansion-Coefficient in the Expansion Principality now reduces this luminosity by a factor of $3/550 = 1/183.33...$ to indicate the Core-Bulge Ratio for Black Holes, termed a M-Sigma relation in the mapping of the Planck minimum energy Zero-Point Oscillator $E_p^0 = 1/2 E_p = 1/2 h f_p = 1/2 m_p c^2 = 1/2 k T_p$ onto the Instanton parameters of the E_{ps} -Weyl wormhole.

$$3/550 = 1/\{11/60 \times 2e\} = 60 E_{\text{ps}}/22 = 1/2 E_{\text{ps}} \cdot \{60/11\} \text{ for } 1/2 E_{\text{ps}} = \{11/60\} \{3/550\} = 33/33,000 = 1/2e^*$$

The third Expansion-Coefficient in the Expansion Principality is $2/103,125$ and indicates the frequency eigen states for sufficiently 'evolved space-aware' consciousness processors as VP_{EM_o}/m_c Abba energy collectors.

$(2/103,125) f_{\text{ps}} \cdot L_o = 9696969696 = f_i E_i^2$ 'self-states' for frequency-mass eigen-states and for an 'optical unification' of E_{ps} .Ess in the form of the Restmass-Photon acting as dark matter gauge ambassador particle on physical consciousness carrying YCM-matter conglomerations or bodies.

Evolution

The temperature evolution at any cycle time $n=H_0t$ so is expressed as: $T(n) = \sqrt[4]{\{H_0^3 M_0 / 1100 \pi^2 \sigma\} \cdot \{(n+1)^2 / n^3\}}$

$R(n_{ps}) = n_{ps} R_H / (1+n_{ps}) = \lambda_{ps}$ in the limit of the Instanton with Volumar $V_3(R) = dV_4/dR = d(1/2 \pi^2 R^4)/dR = 2 \pi^2 R_H^3$ defining a surface area $dV_H/dR = 6 \pi^2 R_H^2$ from the 3-dimensional surface V_3 in the spacetime of Klein's 4-dimensional volume $V_4(R)$.

$L(n, T) = 3 H_0 M_0 \cdot c^2 / 550 n$ and for Temperature $T(n_{ps})$ ----- $T(n_{ps}) = 2.93515511 \times 10^{36}$ Kelvin*.

$T(n_{ps})$ so is the temperature of the Instanton as a function of the baryonic mass seed M_0 and therefore also the temperature of the Dark Energy in terms of the Lambda-Einstein acceleration in proportion to the deceleration parameter $q_0 = \Lambda_0 / A_{dB} = 1/2 \Omega_0 = M_0 / M_H$.

In the form and context of quantum gravity however, the temperature of the Instanton was

$T_{ps} = E_{ps} / k = h f_{ps} / k = m_{ps} c^2 / k$ for a quantum gravitational minimum Black Hole mass of $M_{hyper} = r_{ps} c^2 / 2 G_0$.

The BBR or Planck Black Body Radiator so began its expansion at light speed 'c' with hypermass $M_{hyper} = 6445.78$ kg* and about the weight of a pair of mature elephants as the minimum mass for a Schwarzschild Black Hole.

The rest of the mass seed M_0 so was distributed in the higher dimensional spacetime of Klein as a potential energy defined in the Vortex-Potential-Energy or VPE and in expectation of being 'triggered' as an 'energy of the vacuum' upon the 'filling' of the Klein space in 4 space dimensions by the Möbius 3-dimensional space expanding as the Instanton into the Inflaton.

Within the era of the super membranes, the physical parameters had been defined in the transformation of 5 string classes from the Planck boson to the Weyl boson and prior to the final transformation birthing the Instanton, the Genesis boson had defined the parameter of unphysicalised TEMPERATURE to allow a 'False Vacuum' to manifest the Higgs template in the UFOQR and to correlate the 'Bounce of the Planck length' to a 'Bounce of the Planck time' in the Inflaton-Instanton conformal transition and as the maximum HPFV.

Its minimum is then the deceleration parameter gradient $q_0 = \Lambda_0 / A_{dB}$ bounded in the Genesis boson for the parameter initialization.

$t_{Genesis} = n_{Genesis} / H_0 = 4.395 \times 10^{-33}$ s* for cycle time $n(t_{Genesis}) = \sqrt[3]{\{H_0^3 M_0 / 1100 \pi^2 \sigma\} \{n_{ps} k / h\}^4} = 8.252 \times 10^{-51}$ for $T(n_{Genesis}) = \sqrt[4]{\{H_0^3 M_0 / 1100 \pi^2 \sigma\} \cdot \{(n_{Genesis} + 1)^2 / n_{Genesis}^3\}} = 7.5448 \times 10^{37}$ K* in the Higgs false vacuum and $\{n_{ps} k / h\}_{mod}$.

Evolution

$t_{dBmin} = q_0 t_{ps} = n_{dBmin}/H_0 = n_{ps} \{ G_0 M_0 / c^3 \} = 4.672 \times 10^{-33} \text{ s}^*$ for cycle time $n(t_{dBmin}) = 8.772 \times 10^{-51}$ for $T(n_{dBmin}) = \sqrt[4]{\{ \{ H_0^3 M_0 / 1100 \pi^2 \sigma \} \cdot \{ (n_{dBmin} + 1)^2 / n_{dBmin}^3 \} \}} = 7.206 \times 10^{37} \text{ K}^*$ in the Higgs false vacuum from the DE gradient instanton bounce for deceleration parameter $q_0 = \Lambda_0 / A_{dB}$

$2t_{dBmin} = \Omega_0 t_{ps} = 2n_{dBmin}/H_0 = n_{ps} \{ 2G_0 M_0 / c^3 \} = 9.343 \times 10^{-33} \text{ s}^*$ for cycle time $n(t_{dBmin}) = 1.754 \times 10^{50}$ for $T(n_{dBmin}) = \sqrt[4]{\{ \{ H_0^3 M_0 / 1100 \pi^2 \sigma \} \cdot \{ (n_{dBmin} + 1)^2 / n_{dBmin}^3 \} \}} = 4.285 \times 10^{37} \text{ K}^*$ in the Higgs false vacuum from the DE gradient instanton bounce for $\Omega_0 = M_0 / M_H$

$t_{HPFV} = \{ T(n_{ps}) / \text{TEMPERATURE} \} t_{ps} = n_{HPFV} / H_0 = 1.297 \times 10^{-32} \text{ s}^*$ for cycle time $n(t_{HPFV}) = 2.435 \times 10^{-50}$ for $T(n_{HPFV}) = \sqrt[4]{\{ \{ H_0^3 M_0 / 1100 \pi^2 \sigma \} \cdot \{ (n_{HPFV} + 1)^2 / n_{HPFV}^3 \} \}} = 3.351 \times 10^{37} \text{ K}^*$ in the Higgs false vacuum $t_{dBmax} = [\sqrt{\alpha}] t_{ps} = n_{dBmax} / H_0 = 2.847 \times 10^{-32} \text{ s}^*$ for cycle time $n(t_{dBmax}) = 5.347 \times 10^{-50}$ for $T(n_{dBmax}) = \sqrt[4]{\{ \{ H_0^3 M_0 / 1100 \pi^2 \sigma \} \cdot \{ (n_{dBmax} + 1)^2 / n_{dBmax}^3 \} \}} = 1.857 \times 10^{37} \text{ K}^*$ in the Higgs false vacuum from the Planck-Stoney Inflaton time bounce

This manifests as a 'false vacuum' and as a temperature gradient, as a causation of the Big Bang Instanton on physical grounds.

The metaphysical ground is the symmetry breaking from the source parity violation described in the birth and necessity of the Graviton to resymmetrize the UFoQR and as a consequence of Abba's quest to find Baab as Universe without and within as Sophia Earth and the forms of Adam and Eve reborn from their archetypically energized nature as physicalized body forms manifesting the Life of Universe, Multiverse and Omniverse.

$$T(n)^4 = H_0 M_0 c^2 / (2\pi^2 \sigma R_H^2 [550n^3 / [n+1]^2]) \text{ for } T(n)^4 = \{ [n+1]^2 / n^3 \} H_0 M_0 c^2 / (2\pi^2 \sigma R_H^2 [550]) = 18.1995 \{ [n+1]^2 / n^3 \} (\text{K}^4/\text{V})^*$$

$$\text{TEMPERATURE} / T(n_{ps}) = 7.544808988... \times 10^{37} / 2.93515511 \times 10^{36} = 25.705 = 1/0.03890... \text{ } T(n_{ps}) = 2.935 \times 10^{36} \text{ K}^* \text{ of the singularity is } 0.0389 \text{ or } 3.89\% \text{ of the pre-singularity within the Inflaton.}$$

So the POTENTIAL Temperature manifests as 3.89% in the KINETIC Temperature' which doubles in the Virial Theorem to 7.78% as $2KE + PE = 0$:

Applying the actual VPE at the Instanton to this temperature gradient:

$$\rho_{VPE} / \rho_{EMR} = \{ 4\pi E_{ps} / \lambda_{ps}^3 \} / \{ 8\pi^5 E_{ps}^4 / 15h^3 c^3 \} = 15/2\pi^4 = 0.07599486... = 1/12.9878... \text{ indicating the proportionality } E_{VPE} / E_{EMR} = kT_{ps} / kT_{EMR} = 2T_{ps} / T_{potential} \text{ at the Instanton from the Inflaton as an original form of the virial theorem, stating the Kinetic Energy of the Instanton and the QBB Lambda to be twice the Potential Energy of the de Broglie wave matter Inflaton, then manifesting as the } M_0 / 2M_{Hubble} = \Gamma_{Hyper} / 2R_{Hubble} \text{ Schwarzschild mass cosmic evolution.}$$

This then extrapolates the Big Bang singularity backwards in Time to harmonize the equations and to establish the 'driving force of the vacuum' as the DE from Khaibit and in association with a potential scalar Higgs Temperature Field.

Evolution

All the further evolvement of the universe so becomes primarily a function of Temperature and not of mass.

The next big phase transition is the attainment of the **BOSONIC UNIFICATION**, namely the 'singularity' temperature $T_{ps}=1.41 \times 10^{20}$ K with the Luminosity function. This occurs at a normal time of 1.9 nanoseconds into the cosmology.

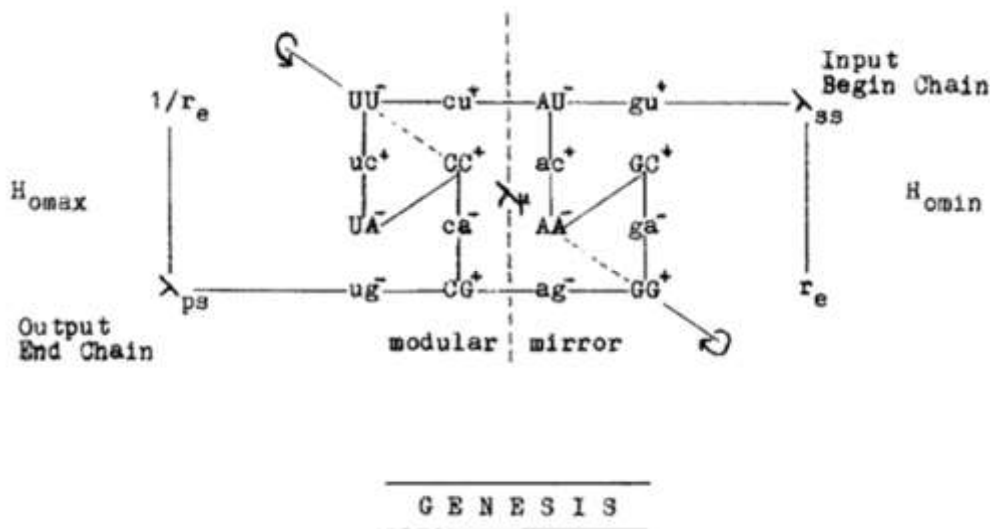
$T(n_{ps})$ reduces to $T_{ps} = 1.4167 \times 10^{20}$ K* for $L(n,T) = 6\pi^2 R(n)^2 \cdot \sigma \cdot T^4 = 3H_0 M_0 \cdot c^2 / 550n$ and $T_{ps} = E_{ps}/k$ for $n_{BU}^3 / (1+n_{BU})^2 = H_0^3 M_0 / (1100\pi^2 \sigma \cdot T_{ps}^4)$ and for $n_{BU} = \sqrt[3]{\{4.511 \times 10^{-80}\}} = 3.562 \times 10^{-27}$ for $t_{BU} = n_{BU}/H_0 = 1.90 \times 10^{-9}$ s* or 1.9 nanoseconds*.

It is then that the universe as a unity has this temperature and so allows **BOSONIC** differentiation between particles.

The individuated Bosons of the mass had been born then and not before, as the entire universe was a bosonic macro-quantized superstring or super-heated Bose-Einstein Condensate or SHBEC until the bosonic unification nexus was reached by the expansion of Universe from the lower dimensional Instanton of Möbius into the higher dimensional Inflaton of Klein.

The size of the universe at that time was that of being 1.14 meters across from $R(n_{BU}) = R_H \{n_{BU}/(1+n_{BU})\} = 0.57$ m*.

Next came the electroweak symmetry breaking at 1/140 seconds and at a temperature of so 1.7×10^{15} Kelvin*



Evolution

Evolution

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The squared E_1 -eigenstate implies a "doubling" of magnetocharged entities by the Action Law of $h^*=e^*e$ and the Cooper-Pairing of the e-chargequanta in Superconductivity and the Josephson-Constant J_0 in the $B(n)$.

We so define E_1 as $2m_0 c^2$, where $2m_0 = m_i + m_j$, which becomes "two bodies as one" or the average mass of a couple as m_0 . [$f_1 = 9696969696.N^2/E_1^2$].

The number N of Eigenstates f_1 is then defined by $2m_0 c^2/N$, where N can be said to constitute the number of unitcells for the combined "body".

Setting $N=L_0 f_{ps} = 5 \times 10^{14}$ as the transduction frequency from F-Space into C-Space, that is a wavelength of 6000 Angstroms (Orange Light), allows a partitioning of the "unitcells" into eight gluonic/colour-magnetocharged eigenstates of 62.5 Trillion per permutation and reflecting a quadrupolar magnetocharge distribution shared between a DUALITY-MONAD exhibiting Waveparticle-Particlewave duality in 12 dimensions and quantising AS the 13th dimension as a 26-D-Weyl-Tensor in the root-extension of 4-D-Spacetime. For $m_0 = 70kg^*$, a typical Alpha- $f_1 = 15,270$. Setting WAVEPARTICLE equal to MINDBODY and PARTICLEWAVE equal to BODYMIND and doubled in Superparity reflection in M-Space; defines a Valency-Sharing between the Magnetocharged components (Mind and Body) and linking to the nucleotidal basepairings as discussed in detail in the references.

The Superparity for positive (female) and negative (male) quadrupoles is:

$$\begin{bmatrix} \text{MindBody } (-,+), & \text{MindBody } (+,-) \\ \text{BodyMind } (-,+), & \text{BodyMind } (+,-) \end{bmatrix} = \begin{bmatrix} C^*G & G^*C \\ UA^* & AU^* \end{bmatrix} = \begin{bmatrix} YX & X^*X^* \\ X^*Y & XX' \end{bmatrix} = \begin{bmatrix} LC & L^*C^* \\ C^*L & CL' \end{bmatrix}$$

The nucleotidal bases are Cytosine-Guanine-Uracil-Adenine in C-Space and denoted as * in F-Space and link to one Y-Sex-Chromosome and a permutation of three X-Sex-Chromosomes defining a variety of sexual characteristics based on the generation of the 20 Amino Acids via the genetic code.

The magnetoinductive L-Factor (Male Magnetocharge) and the electrocapacitive C-Factor (Female Magnetocharge) can also be used to link the WaveParticle duality across the C-M-F-Space.

The $2m_0$'s so consist of two PARTICULAR WAVES in embodiment, sharing magnetocharges with two WAVED PARTICLES in disembodiment or ascension; thus defining Erwin Schrödinger's Cat Cleopatra BOTH ALIVE (as the JUDAIC LION) and DEAD (as the ROMAN EAGLE).

Once Cleopatra has found its genetic baseperfect match as defined by the extended 256-codex with the fifth baseletter of the Enimine- \downarrow (Uracil+Thywine) in the "KleinDragon-Twist" of Guanine with Cytosine and the "Serpent-Skew" of Uracil with Adenine in the twin-pentagonal redefinition of the Crick-Watson-Wilkins Double-Helix as the Curtis 12-D-F-Space formation; then the $XY=i^3$ quantum geometry can manifest the 13th dimensional SuperSpacetime in the Einstein-Minkowski Continuum as a Oneness of the sexual and magnetocharged Harmony of C-M-F-Space.

Evolution

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We use the Identity-Series for $n=1$ for 26 Bosonic Eigenstates/Dimensions (and coded in One-to-One correspondences, i.e. in the LOVEUSE symmetry 5445 in the Maria-Matrix) and the Helium-Distribution-Percentage of 1.271%.

[30] Isotopic-Percentage-Generator: $IPG = 1.271\% \cdot (7k-6) \cdot e^{2-k-j} \cdot 10^{[33(27-k)]}$

Abundance-Ratios for stable isotopes are then:

Hydrogen/Helium = (75%)/(23.729%) with remainder 1.271% and $k=1$ for Isotopes of Hydrogen; $k=2$ for Helium; $k=3$ for Lithium etc. until $k=26$ for Iron.

$k=1; j=1,2,3$ gives: 0.01481% ; $2.963 \times 10^{-5}\%$; $5.925 \times 10^{-8}\%$

$k=2; j=1,2,3$ gives: $2.465 \times 10^{-4}\%$; $4.930 \times 10^{-7}\%$; $9.860 \times 10^{-10}\%$

$k=3; j=1,2,3$ gives: $9.629 \times 10^{-7}\%$; $1.926 \times 10^{-9}\%$; $3.852 \times 10^{-12}\%$

The isotopic ratios are decreasing within a series of multiples of the E_{ps} -quantum and are weighted relative to natural abundances in nested perturbation of the elements.

At $k=3$, Lithium-6 occurs at say 7.4% and Lithium-7 at 92.6%; this mixes $j=1$ with $j=2$ in $7.125 \times 10^{-8}\%$ and $1.783 \times 10^{-9}\%$ respectively for a Lithium-Arithmetic-Mean of $3.652 \times 10^{-8}\%$ or a Lithium-Geometric-Mean of $1.127 \times 10^{-8}\%$.

Deuterium-Abundance is naturally bounded in 0.01481% and reduced in radioactive j -isotopes like Tritium in perturbative Beta-Minus-Decay.

Helium-3 is bounded in $2.465 \times 10^{-4}\%$ and subject to a 3:1 Hydrogen/Helium ratio for the remainder of 1.271%, i.e. the ratio 0.953/0.318, which adds to the primary elements.

Until BOSONIC UNIFICATION (BU) at 1.90×10^{-9} s* with $T_{BU} = T_{ps} = E_{ps}/k = 1.4167 \times 10^{20}$ K*; the superstring epoch defines the density in the multiverse as Boson-Gluon-Photon-Plasma. At the instanton, the temperature is $T_{nps} = 2.94 \times 10^{30}$ K* (from [19]); restmass seed M_{ps} so manifesting as $VPE^{2n} = TCN + MCY + RGB + BGR = R^3 G^3 B^3 + B^3 G^3 R^3 = B^3 Y Y = B^3 Y^2 Y^2$ -Pair-Production/Annihilation (J8-J10 in UFOQR) in forms of Matter/Antimatter, Photon/Gluon and Neutrino/Antineutrino.

The EMR-Radiation-Density is related to the Bosonic-Energy-Density via $E_{ps} - VPE = \phi_{VPE}$:

[31] $\phi_{EMR} = (8\pi^5 k^4 / 15h^3 c^3) T_{Boson}^4 = (n_{Boson} c^3 / 2\pi^2 1_{Boson}^3) \cdot 2 \int_0^\infty u^3 du / (e^u - 1) = [E/V]_{Boson} \cdot 2 \int_0^\infty (4) \cdot \int_0^\infty (4)$

Generally: $\phi_{VPE} = 4\pi E_{ps} / \lambda_{ps}^3$ in $\phi_{EMR} / \phi_{VPE} = 2 \int_0^\infty (4) \cdot \int_0^\infty (4) \cdot (kT/E_{ps})^4 = (2\pi^4 / 15) \cdot (kT/E_{ps})^4$

Planck-Density is then: $\rho_P = (4\pi/c) T_P^4 = E_P^4 / 15 \cdot 1_P^3$, with $\sigma = 2\pi^5 k^4 / 15h^3 c^3$ (W/m²K⁴)*,

BU-Density becomes: $\phi_{BU} = (4\pi/c) T_{ps}^4 = 8\pi^5 E_{ps}^4 / 15\lambda_{ps}^3 = \phi_{VPE} \cdot (2\pi^4 / 15)$ or 2.0×10^{81} (eV/ℓ)*
 3.264×10^{63} J/m³

The VPE-ratio between photons and baryons (based on n_c and K.XIR.K) is determined in the G-F-Interval as Eta-Inner= $G/E=1/1039802245$ and Eta-Outer= $F/E=1/986925478$ as spacequanta. The Black Body Energy for cycletime $n_p = h \omega_p$ is given in $T_{2,7} = hf_{2,7}/k$ and $f_{2,7} = 5.68 \times 10^{10}$ 1/s*.

The Number of photons per unitvolume is N_γ , with photon density varying in intensity $I(x, \mu)$ as 'e' from a central source and for Attenuation $II_0 = I/e$ for attenuation coefficient μ being inverse the lighthpath $x=1/\mu$ in modular string T-duality: $[N_\gamma \cdot e] = (4\pi/c) \cdot T_{2,7}^4 / E_{2,7}$, then generalised as 5.04 (eV/ℓ) or 8.10×10^{16} J/m³.

The microwave background at n_p so becomes about 418 Million γ/m^2 at 2.7 K* and $c/f_{2,7} = 5.20$ nm for $f_{2,7} = 5.77 \times 10^{10}$ Hz*
 $N_\gamma(n)/e = N_{Baryon} = M_\sigma/m_c = 1.83 \times 10^{78}$ for $n=1.22 \times 10^{-31}$ and $T=3.17 \times 10^{23}$ K*; $R=2.06 \times 10^{-5}$ m* and $\rho_{EMR} / \rho_{100} = 4c^2 X^n / 550(n+1) \cdot m_e^{-2} \cdot j^2$

Eta-Mean = $\eta = N_{Baryon} / N_\gamma = 1/2 (G/E + F/E) = 9.874845308 \times 10^{-10}$

Unification Eta-Mean = $\eta = 1/2 (G/E + F/E) / \sqrt{2} = 6.98257 \times 10^{-10}$

Evolution

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The present C-Space Density ρ_{10D} relates via $DIM(n_p)=7.56$ to the present M-Space Density ρ_{11D}

$$\begin{aligned}
 \rho_{11D} &= M_0 Y^{n_p} / (2\pi^2 R_H^3 (n_p) = 2.9096 \times 10^{-29} \text{ kg}^*/\text{m}^{*3} \text{ and 'dimmed' to} \\
 \rho_{10D} &= M_0 Y^{n_p} / (2\pi^2 R_H^3 (n_p / [n_p + 1])^3 = 2.1996 \times 10^{-28} \text{ kg}^*/\text{m}^{*3} \\
 \eta_{10D} &= (\rho_{10D} / m_c Y^{n_p}) / ((4\sigma/kc)(T_{np}^3/e) = (0.1285) / (4.378 \times 10^8) = 2.935 \times 10^{-10} \text{ attenuated from } N_B/N_\gamma = \epsilon \eta_{10D} = 7.98 \times 10^{-10} \\
 \eta_{11D} &= 3.88 \times 10^{-11} \text{ 'dimmed' from } \eta_{10D} \text{ and attenuated from } \epsilon \eta_{10D} = 1.06 \times 10^{-10}
 \end{aligned}$$

$\eta_{10D} \text{ mean} = 5.46 \times 10^{-10}$

$\eta_{11D} \text{ mean} = 7.24 \times 10^{-11}$

This mean value for Eta mirrors the dimensional intersection of the Riemannian hyperspheres in G/E and F/E of the IR-OR-HBirmi, and as compared with the F/G ratio for the baryonic elemental HBirmi-Distribution in the Identity-Series of the SE_{ps}-Code. From the G-F-HBirmi, the nucleosynthesised elements coalesce in the form of nucleons m_c in predominately doughnut-shaped alpha-particular macroquantum supermembranes or Calabi-Yau manifolds and reflected in subsequent planetesimal- and starformations in the generation of the ylemic epoch of neutron stars.

A general formula for the MAGIC NUMBERS of nucleonic arrangements in shells is given by the SE_{ps}-algorithm in the Unification-Polynomial of N-Space:

[33] $ax^3+bx^2+cx+d=0$ and the Feynman-Path-Integral $T(n)+2$ sets the mapping of SE_{ps} onto Super-SE_{ps} as the relative primeness of the Experience-Factors in SE_{ps} superparititive to SE_{ps}* in extension.

SE_{ps}* in F-Space differs by the Fermat-Identity *2* from SE_{ps} in C-Space to denote the Union between the binary and decimal systems in: $a^*+b^*+c^*=1 \rightarrow 2 \rightarrow 10$.

Subtracting polynomial $f(x)$ from $f(x+1)$ for the identity $n^3+n+2=0$ gives $3ax^3+(3a+2b)x^2+(a+b+c)x=0$ and specifying $a=1/3$ and $b=0$ and $c=5/3$.

$T_{\text{MagicNumbers}}(n) = n[n^3+5]/3$ for the primary and secondary series.

Primary Series: 0,2,6,14,28,50,82,126,184,...

Secondary Series: 0,2,(2),6,(8),14,(20),28,(42),50,(78),82,(stop command),126,...

As $50+82=132 \rightarrow 126$: the Magic Number for $n=7$; this Out-of-Order sets a natural limit on the nuclear stability in the generation of the periodic table of the atomic elements as consequence of fundamental principles in the specification of Lead at #82 and Bismuth-209 the last stable isotope at #83.

The secondary series reflects the Fibonacci mechanism of always adding successive terms as the Experience-Factors in the *Information-Gathering-Parameter*.

The 2-branes of Helium-4 or alpha-particles so become topological surface mappings from M-Space into the C-Space of 4-D with the added Calabi-Yaus of 6-D as the *collapsed* superstring dimensions of a Conifoldment-Transformation of 3-Toruses into a 3-Sphere (Poincare/Riemann); root-reduced as Möbian-KleinBottle-Dragon-Manifold in 2-D. The Quantum Geometry of minimally connected surface topologies is then defined via the SE_{ps}-Identity $XY=X+Y+1=i^2$ and the 3-D crystallisation of Platonic Solids in fivefold supersymmetry across the Omnispaces of the 10-11-12-13/4=1-D continuum.