

Treo model, Structure and working of universe, unification of forces and quantum gravitation.

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Abstract

Treo or strings are one object of creation. They present in two forms, as free treos they form packets of all photons and matter, which produces action by exerting load on space matrix. When alternately interwoven as bound treos (five positive dimensions of universe) with voids (five curled up negative dimensions) they form ten dimensional omnipresent Space matrix i.e. Space-time- energy.

All bound treos vibrate at Planck frequency i.e. S vibration per second in all possible S planes in 360° , at cosmic rhythm. One unit space matrix is a big cubical space, with S bound treo on its one side. ^[a16]

In our quantum universe the mass energy does not increase linearly, but it increases in steps, gradually at all \sqrt{S} quantum levels in each of four dimensions of space-time. The unit of increment changes in each dimension these are, in first dimension S free treos (of unit photon), in second dimension $\sqrt{S} \times S$ free treos (of unit electron), in third dimension $S \times S$ free treos (of unit mass) and $\sqrt{S} (S \times S)$ free treos (one billion metric ton) in fourth dimension.

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Thus accumulated all Electromagnetic energy and all mass energy in packets from one quanta to S quanta (of one unit mass) in first and second dimension, exert a load along its length of spread in a line, at each apex bound tree along its wave length.

There is only one force in universe, which is produced by action- reaction mechanism of space matrix. At each apex bound tree, the load exerted of above number of free trees according to its packet density, is neutralized by equal number of bound trees of space matrix, as they convert in kinetons (which only vibrates S times in direction of load) and get arranged in kinetic columns according to column geometry to produce equal and opposite reaction.

The increasing load is supported by addition of one new n^{th} layer having $2n - 1$ supporting units at n^{th} quantum level, which is added in all kinetic column present at each apex bound tree in first and second dimension, while in solitary kinetic column which forms at gravitational centre of body in third and fourth dimension.

The units which support this exerted load, in each dimension are; in first dimension Kineton (one bound tree converted in one kineton), in second dimension Orbitum (each orbitum is made up of S kinetons), in third dimension Graviton (with $S \times S$ kinetons in its associated graviton column) and then Electron black hole or S gravitons ($S \times S \times S$ kinetons) in fourth dimension, while any one n layered kinetic column, have total n^2 such units. Thus equal number of kinetons in each kinetic column, act together to neutralize this exerted load of free trees.

The geometry of deformation of space matrix and of kinetic columns changes, along with the nature of force generated, as the deformation increases with increasing load, it successively involves one (length), two (length and breadth), three (length breadth and depth) of unit space matrix and then it deforms all four dimensions of space–time, to produce fields of all four basic forces.

Introduction

Salient features of deformation in each of four dimensions:

DEFORMATION OF SPACE MATRIX. (TREQ MODEL)

(1) Each of four dimensions has \sqrt{S} quantum levels.

**(2) Unit of Increment of EM energy, Mass or momentum.
(At each of \sqrt{S} Quantum Levels In All Four Dimensions)**

(A) Increasing EM energy & mass energy in first and second dimension.

One quanta electromagnetic energy increases at each quantum level to form all \sqrt{S} type of photons (comprising entire EM spectrum) at \sqrt{S} quantum levels. As Higgs mechanism does not work in first dimension that is why Photons are loosely packed with EM energy and said to have no Mass energy [4].

But to compile unit electrons (\sqrt{S} quanta mass energy) together each having negative charge, as one unit at each of \sqrt{S} quantum levels in second

dimension, to form all elementary particles packets at their corresponding quantum levels the Higgs boson (gauge boson) is required, by which they pack them in multiple of *mass units*, by Higgs mechanism.

It is observed in tree model, that the mass energy of all known elementary particles are integral multiple of 35.012 MeV (with in 1% variation) which is composite mass energy of unit electron (being named, as C mue or simply *mass unit*).

The composite mass energy of unit electron i.e. 35.01 Mev, can be calculated with proposed formula by dividing mass energy of unit electron, by twice value of fine structure constant. $(35.01 \text{ Mev} = 0.511 \text{ MeV} \times 2/137.035999084)$ ^[b 16]

Thus, conventionally accepted mass of Higgs boson (125 GeV) ^[2] should alter in second dimension under cover of Gauge symmetry, with each fusion of C mue (or in fusion of hadrons by gluons to form atomic nuclei) to form one new elementary particle. ^[c16]

(!) Increment of S free treos (or 1 quantum EM energy present in one unit photon packet), at each of \sqrt{S} quantum levels in first dimension.

In deformation of unit space matrix in first dimension of length, S free treos (one quantum, electro-magnetic energy of unit photon packet) increases at

* MASS ENERGY OF PHOTON? Water wave in water has no mass, but water have mass; similarly the EM wave traversing on kinetic columns on space matrix, conserving its moving deformation, will have no mass energy but only momentum energy, while this photon will have electromagnetic energy, which produces photo electric effect. ^[4]

each of \sqrt{S} quantum levels, which thus form all \sqrt{S} types of photon packets which comprise entire EM spectrum.

(!!) Increment of $\sqrt{S} \times S$ free trees; (in 1 unit electron), at each of \sqrt{S} quantum levels in second dimension.

In deformation of unit space matrix in second dimension of length and breadth, $\sqrt{S} \times S$ free trees (\sqrt{S} quantum mass energy of unit electron packet) increases at each of \sqrt{S} quantum level, to form of all elementary particle packets, nucleons, elements, molecules and all masses up to S quanta mass energy in one unit mass.

(B) Increasing mass energy in third and fourth dimension.

(!!!) Increment of S^2 free trees (in 1 unit mass), at each of \sqrt{S} quantum levels in third dimension.

S^2 free trees or S quanta mass energy (in one unit mass) increases at each of \sqrt{S} quantum levels, to form \sqrt{S} unit masses body (i.e. two trillion metric ton).

(IV) Increment of $\sqrt{S} \times S^2$ free trees (of \sqrt{S} unit masses), at each of \sqrt{S} quantum levels in fourth dimension.

$\sqrt{S} \times S^2$ free trees or \sqrt{S} unit masses increases at each of \sqrt{S} quantum levels, finally to form one unit black hole of S unit masses.

(3) Length of Spread of All Packets:

Photon packet EM energy spreads along a line, equally on each apex bound tree which are present along its wave length in undeformed space.

But these photon packets can vary its packet density, when experimentally subjected to amplitude modulation (AM) or frequency modulation (FM) and phase variations.

Similarly matter particles are not point masses, but they all spread uniformly on each apex bound tree along its RC wave length.

But they can also vary its 'mass energy concentration; or packet density in packet' due to local fluctuations of field energy (which commonly manifest in Brownian motion of suspended particles).

As the Heisenberg uncertainties originate in the wave-like nature of matter, thus they can also exhibit uncertainty (uncertainties of its position and momentum) with in $\hbar / 2$ (S number of energy particles is the value of \hbar i.e. reduced Planck constant) ^[d16].

(a) Spread of all photons from unit photon to gamma photon and spread of all matter from unit electron to unit mass, respectively in first & second dimension.

In the deformation of first dimension and second dimension of unit space matrix, all mass energy packets spread uniformly on space matrix in a line on its wave length; calculated as (wave length = S number of bound trees / number of quanta mass energy in packet) and thus any packet exert equal load (according to its packet density) on each apex bound tree along its wave length, in undeformed space.

Thus the length of spread of packet (or wave length) will gradually reduce from S number of apex bound trees (of unit photon; a packet of one quanta

EM energy) to just one apex bound tree for unit mass (S quanta mass energy, or S^2 free trees). One kinetic column which forms at each apex bound tree along this length of spread (wave length) is Sub kinetic column in first dimension and one Shell in second dimension.

b) Only one solitary Kinetic column supports individual body, from one unit mass to one unit black hole (S unit black holes), in third and fourth dimension.

The kinetic columns are Electron black hole of \sqrt{S} spiral layers in third dimension, and Gravitational sphere (of all cosmic bodies) which forms by deformation of space - time in fourth dimension. Biggest gravitational sphere is of S layers, for S unit masses present in one unit black hole.

(4) Exerted load At Quantum Levels In each Dimension

(A) With increasing mass energy and decreasing wave length the load at each apex bound tree at any quantum level; is *square of free trees of this quantum level number* in first dimension and in second dimension the load is *square of quanta of this quantum level number*.

(B) With increasing mass energy, the load at one gravitational centre of body (is supported from all sides) in third dimension and in fourth dimension, increases at each quantum level by *square number of unit masses in body*. Thus load of M^2 is exerted at its gravitational centre, while $2M$ load is exerted on each concentric bigger layer in gravitational field in one direction, by any M unit masses body.

(5) Formation of Kinetic Columns

The Space matrix (space-time-energy) has three interdependent components of Space, Time and energy. If the value of one component changes the value of other two components will change accordingly. To support any load space matrix systematically contracts, with the conversion of bound trees (generating *potential energy* by vibrating S times in S planes) in kinetons (generates *kinetic energy* by vibrating S times in direction of load).

The load is (action) which generates equal and opposite force (reaction), and to support this load, one kinetic column forms at each apex bound tree along wave length in first and second dimension. While it forms on one gravitational centre of body in third and fourth dimension. Maximum \sqrt{S} Layered kinetic column can form in each dimension, with addition of one new layer at each of \sqrt{S} quantum levels.

(6) Uniform Column Geometry in All Dimensions

(!) The kinetic column in any dimension (with one by one inclusion of each new dimension of space-time) is formed *as per column geometry, it has $2n-1$ units in its n th layer and n^2 units are in any n layered kinetic column.*

(!!) One layer of $2n-1$ units increases in kinetic column at each of \sqrt{S} quantum levels in all four dimensions.

(a) The kinetic units which adds in one new layer, in all kinetic columns present at each apex bound tree along its length of spread, at any n th

quantum level are $2n-1$ *Kinetons* in first dimension, and $2n-1$ *orbitums* (each of S kinetons) in second dimension.

(b) With new one spiral layer added in kinetic column (electron black hole) it adds $2n-1$ *gravitons* (with S^2 kinetons in its graviton column) at each of \sqrt{S} quantum levels in third dimension. While in fourth dimension these kinetic units are $2n-1$ *electron black holes* (each have S number of Gravitons) which are added at each of \sqrt{S} quantum levels to form gravitational spheres of increasing size.

(!!!) Thus with the deformation up to last \sqrt{S} quantum level in each of four dimensions, the full kinetic column of \sqrt{S} layers in each dimension, will have its S kinetic units.

This is quantum gravitation, as each one free tree (load) is supported by one kinton by its one vibration for one Planck least time (and by S vibrations per second i.e. continuously).

(A) UNIT SPACE MATRIX

Space matrix is vibrating with its all vibrating bound trees S times per second (Planck frequency) at cosmic rhythm, which results in quantization of all five dimensions of space, time and energy, represented by Space-matrix. ^[a16]

This S number is cosmic code which governs every mechanism, and carves our quantum pendulum universe. Thus S number decides unit space, unit time and unit energy and value of most of universal constants directly. Space matrix is omnipresent and the presence of load at any point (on one bound tree), mark the boundaries of this one unit space matrix from this point of load.

The space is not divided in units, but one unit space matrix is *functional unit of space matrix* which participates first to execute action –reaction mechanism of universe and its boundaries starts from the point of load exerted on space matrix.

One Unit Space-Matrix (Unit Space- Unit Time- Unit Energy); is a cube of S number of bound treos on its one side (the S number of bound treos is also the distance traveled by light in one second), as it is governed by the rhythm of universe or S vibrations per second. The simile can be a book with S alphabets in one line, S lines on one page and S pages in book which deforms in first (length), second (length and breadth) and in third dimension (length, breadth and depth) of space.

The one quanta mass energy are S free treos, which is unit action per second, while one quantum kinetic energy or S kinetons are required to neutralize this load of one unit action. S treos is value of Reduced Planck constant \hbar (h bar). [d16]

This quantified one–unit space, systematically contracts with increasing load and includes one by one increasing number of dimensions of space –time, to produce fields of all four basic forces, (EM force, weak and atomic forces and gravitational force).

Unit space matrix is a cube with all its sides having S bound treos, and it can be better understood and remembered by simile of a book, that there is one line of S alphabets (S bound treos), S such lines in one page (S^2 bound treos), and S such pages in one book (S^3 bound treos).

S vibrations which can involve only S number of bound trees in one dimensional deformation of length, with involvement of increasing number of dimensions one by one and changing column geometry, can affect S^2 bound trees in two dimensional and S^3 bound trees in three dimensional deformation of one unit space matrix.

Our universe is quantum universe and thus the ground energy of space is also quantified by S, S^2 and S^3 bound trees in one, two and three dimensions, of one unit space matrix, as they all vibrates as one unit continuously by S vibrations (per second) per unit time.

(B). WAVE LENGTH AND FREQUENCY

(1) Wave Length in First and Second Dimension

To support all \sqrt{S} type of photons of EM spectrum, which are formed at \sqrt{S} quantum levels in deformation of first dimension of length, *EM waves* are formed in space matrix, while at \sqrt{S} quantum levels it forms *matter waves* for all elementary particles in deformation of two dimensions of length and breadth of unit space matrix.

Photons and elementary packets are *not point masses, but in fact they all exhibit dualistic nature. These packets behave as waves* as they spread and distribute their mass energy uniformly on all apex bound trees along its wave length, to produce EM waves and Matter waves respectively in first and second dimension, on gradually decreasing wave lengths from S bound tree to just one bound tree.

This *length of spread* of packet on its wave length, in first dimension reduces from S bound tree (wave length of unit photon) to \sqrt{S} bound trees (to wave length of gamma Photon), while in second dimension with spread of elementary particle on their respective RC wave lengths, it further reduces

from \sqrt{S} bound trees of one-unit Electron, to just 1 bound tree of one-unit mass.

Thus with increasing mass-energy at each next quantum level, the contraction of mass energy packets on its reducing wave length continues both in first and second dimension and finally S^2 free trees or S quanta mass-energy of unit mass, contracts and exert its total load at one bound tree on its one unit gravitational centre, which is supported by one graviton, with S^2 kinetons in its one graviton column of second dimension.

In first dimension all packets formed at \sqrt{S} quantum level gradually contracts and spreads and on its gradually reducing wave lengths (on which forms its one EM wave), which can be calculated by new proposed formula (*S bound trees / number of quanta in packet*) for one quantum in one unit photon, to \sqrt{S} quanta in one gamma photon.

While in second dimension the packets will spread on successively reducing RC wave length = $n = (\textit{S bound trees / number of quanta in packet})$ and will form its one matter wave on its 2 RC wave length, i.e. on $2n-1$ bound trees or one full layer of kinetic column. In second dimension the increasing angular momentum ($2n-1 \times \pi$) will calculate the circumference of its orbit; which is also Compton wave length of this packet. ^[e16]

2. Wave length in third and fourth dimension

But wave length in third and fourth dimension gradually increases; at each quantum level with increasing deformation.

Wave length in Third dimension.

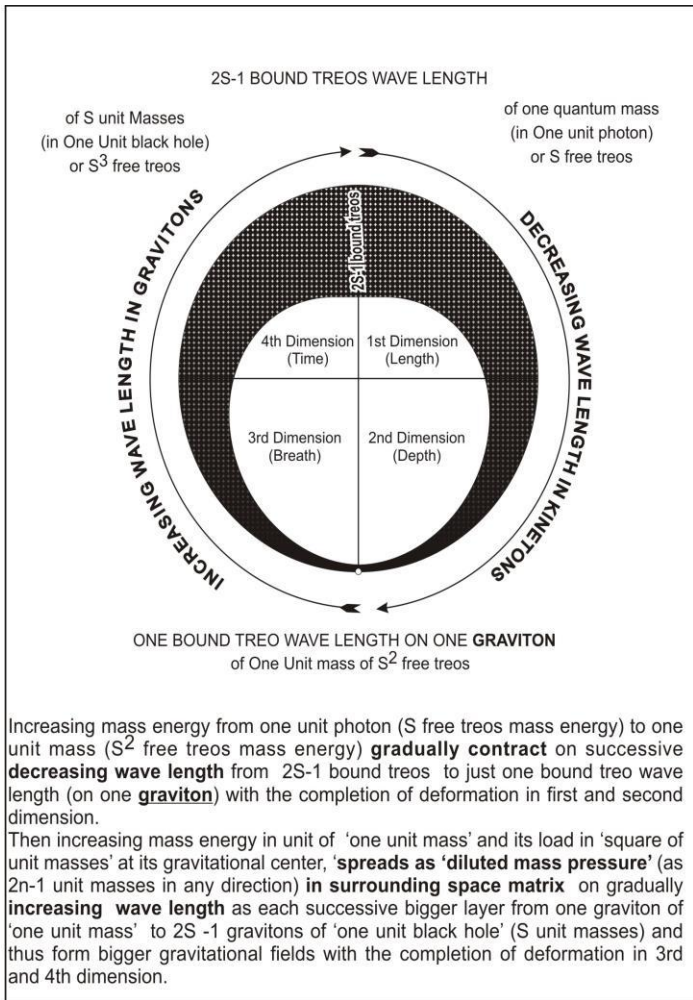
At each n^{th} quantum level, one wave will form on $(2n-1)$ gravitons present in every new n^{th} concentric bigger spiral layer in kinetic coloumn of third dimension.

The wave length is 1 graviton in first spiral layer, then it increases to 3 gravitons in second spiral layer, to 5 gravitons in third, by 7 gravitons in fourth and so on..... $2n-1$ gravitons in n^{th} layer and at last quantum level it is $2\sqrt{S}-1$ gravitons in last spiral layer.

Wave length in Fourth dimension

Similarly $2n-1$ electron black holes are added in any one n^{th} layer of kinetic coloumn (gravitational sphere in fourth dimension) at each next quantum level, on which one wave will form in fourth dimension.

As there are, 1 electron black holes in first layer, then 3 electron black holes in second layer, 5 electron black holes in third, 7 electron black holes in fourth and so on..... $2n-1$ electron black holes are in n^{th} layer and lastly it is $2\sqrt{S}-1$ electron black hole in last layer at last \sqrt{S} quantum level. (Thus one complete gravitational sphere of 'unit black hole' will have S^2 gravitons in its all S bound treeo layers).



Diagrammatic representation of spread of load of increasing mass energy in all four dimensions

Fig1. \sqrt{S} Waves are formed at \sqrt{S} quantum levels, in S bound treo layers of each of four dimensions (shown in four quarters). Wave length *decreases* from S bound treos (starting from top) to \sqrt{S} bound treos with rotation of column from 0° by 90° in first dimension for all photon packets.

Then wave length further *decreases* from \sqrt{S} bound treos to **one** bound treos with rotation of column from 90° to 180° in second dimension for all matter packets.

Then wave length *increases* from one to \sqrt{S} bound treos with rotation of its kinetic column from 180° o 270° in third dimension and from \sqrt{S} bound treos to just one bound treo with rotation of its kinetic column from 270° to 360° in fourth dimension.

So at each next quantum level, \sqrt{S} bound tree layers (as required by all electron $2n-1$ black holes in one n th layer) are added in gravitational sphere, and wave length will increase to $\sqrt{S} \times 2n-1$ gravitons.

Thus at any n^{th} quantum level one wave will form on $\sqrt{S} (2n-1)$ gravitons, while in last \sqrt{S} th quantum level will add $\sqrt{S} (2\sqrt{S} - 1)$ gravitons, on which it will form one single wave.

The last layer is biggest peripheral layer of kinetic column (gravitational sphere) with one wave in $2S - 1$ gravitons length arc, of a circle of $2S-1 \times \pi$ circumference (which is also its Compton wave length) and S bound tree is radius of this one *unit black hole*.

3. Frequency

Frequency in First and Second Dimension

The *number of quanta as EM or mass energy in any packet, decide the FREQUENCY of wave both in first and second dimension*, which is also equal to the number of bound tree layers in their respective kinetic column (in each sub kinetic column in first or in each shell in second dimension), which forms at each apex bound tree along wave length of this packet.

Frequency of the wave was increasing by one unit, with increase of electromagnetic energy by one quantum, along with *one* new bound tree layer (one kinton layer) which increases in all sub kinetic columns at each of \sqrt{S} quantum levels in first dimension.

Then the frequency increased in multiple of \sqrt{S} numbers in second dimension, with the increase of \sqrt{S} quanta in packet at each of \sqrt{S} quantum levels which resulted in increase of \sqrt{S} bound tree layers (in one newly added sub shell) in increasing radius of each shell, present on each apex bound trees of its RC wave length.

The *orbital speed* of revolution of any body (electron, elementary particle, planet or satellite) is always equal to the *frequency of its matter wave* produced at this particular quantum level in its orbit. ^[16]

Thus at all \sqrt{S} quantum levels in first and \sqrt{S} quantum levels in second dimension the frequency gradually *increases* from 1 number to S number.

Now the matter wave will ultimately move around one gravitational centre of unit mass (in between its one gravitational centre and its supporting one graviton) at speed of S bound tree per second (or at speed of light) at its group velocity.

Frequency in Third and Fourth Dimension

This increased frequency up to S number, will now decreases in third and fourth dimension.

With increase of one unit mass at each next quantum level in deformation of third dimension the frequency decreases by one with addition of each new deformed bound tree (graviton) layer in electron black hole.

With increase of \sqrt{S} unit masses at each next quantum level in deformation of fourth dimension the frequency decreases by \sqrt{S} number with deformation of new \sqrt{S} bound tree layers (as required for increase of $2n-1$ electron black holes at each next n^{th} quantum level) in gravitational sphere.

(C) COLOUMN GEOMETRY

Both Linear deformation and angular radial deformation occur simultaneously, but for sake of description they are described here separately.

(1) Linear Deformation

(a) Kinetic Coloumn in First & Second Dimension

One kinetic coloumn forms at each apex bound treo along wave length of photon packet or RC wave length of elementary particle packet to support its exerted 'load'. The photon packet and all elementary particle packets spread on space matrix along a line, and with its uniform packet density it exerts uniform equal 'load' on each (apex) bound treo along its wave length.

This 'load' (mass/momentum) is perceived as an action by each apex bound treo & reacted by formation of one 'kinetic Coloumn' from local space matrix. Kinetic coloumn made up of *equal* number of kinetons (deformed bound treos) are formed to support this 'load' at each apex bound treo, as each one free treo of 'load' is supported by one kineton.

At any n^{th} quantum level, with reducing wavelength (and increasing mass-energy in packet) the exerted load at each apex bound treo in wave length is free treo square (n^2 free treos) at n^{th} quantum level in first dimension and with reducing RC wave length in second dimension at each apex bound treo, the load exerted is quanta square (n^2 quanta) at any n^{th} quantum level.

In first dimension all rotating sub kinetic coloumns *jointly* produce one transverse EM waves, @ one EM wave per quanta mass energy per second, while in second dimension each orbitum rotating @ one rotation per second, can *individually* support one quantum mass energy. All orbitums in vertically placed packet one over other will jointly produce its De Broglie matter wave. Thus total numbers of orbitums which form are always equal to the number of quanta mass energy in packet.

(!) Kinetic Coloumn in first dimension

In deformation of first dimension, with increasing EM energy by one quantum at each next quantum level forms all types of photon packets, which comprises entire EM spectrum.

At any nth quantum level, the photon packet of n quanta mass energy will spread in one line on each apex bound treos along its wave length (wave length = S bound treo / n quanta mass energy in photon packet).

Thus with increasing mass and decreasing wave length (contraction of packet length) it will exert a uniform load of n² free treos at each apex bound treo.



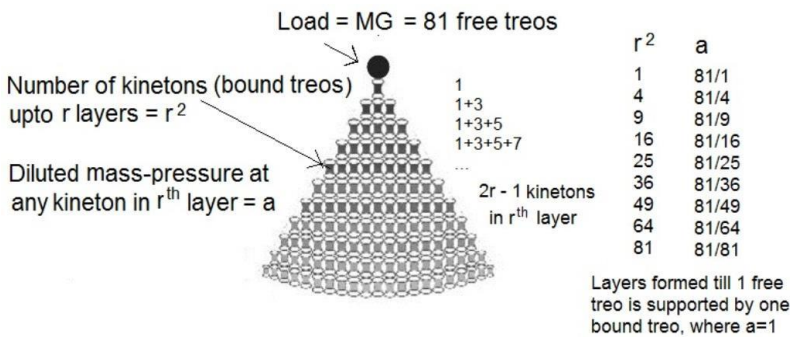
all supporting sub kinetic coloumns in one (wave) length of any Photon Packet form one EM wave

Figure 2 Photon packet uniformly spreads on each apex bound treo in its wave length and all Sub- kinetic together form its one EM wave.

With increase of one more quantum mass energy which generates one new photon packet of n quanta at next n^{th} quantum level, and one new layer is added having $(2n-1)$ kinetons, then each 'n' layered kinetic column (one on each apex bound tree along its wave length), will now have n^2 kineton to support this n^2 free trees exerted load of n quanta mass energy packet.

The total 'n' number of layers in 'kinetic column' of this n quanta mass energy denotes 'n' frequency of wave (or number of waves it will form per second) and also the 'n' amplitude of wave.

We will take the example of 9 quanta photon packet, causing a deformation at 9^{th} quantum level of first dimension (Figure. 3). To support the load of 9^2 free trees (81 free trees) at each apex bound tree, this one sub kinetic column will have $(1+3+5+7+9+11+13+15+17 = 81)$ kinetons) or 9^2 kinetons in this 9 layered sub kinetic column.



Example of a 9 layered kinetic column supporting 81 free tree load

Column geometry describing Newton's equation $MG = r^2 a$

Figure 3: Column geometry which is valid in all four dimensions

(!!) Kinetic Coloumn in second dimension

In contrast to first dimensional deformation where mass energy was increasing by one quantum at each next quantum level; in deformation of second dimension, the 'mass energy / momentum in new packet' increases by one 'unit electron mass' or by \sqrt{S} quanta (i.e. $\sqrt{S} \times S$ free treos) at each of total \sqrt{S} quantum levels of second dimension.

The sub kinetic coloumn of first dimension is replaced by one rotating Shell in second dimension, and in place of one kinton layer in sub kinetic coloumn of first dimension, it is now one sub shell (made up of \sqrt{S} bound treo layers), and in place of $2n-1$ kintons, $2n-1$ orbitums are in one new sub shell added in each shell.

Any 'n unit electron mass energy packet', of any elementary particle at n^{th} quantum level of second dimension will spread (on its RC wave length = S number of bound treos / number of quanta in photon packet and it will now exert load of n^2 quanta number of free treos at each of these apex bound treos (square of quantum level number of quanta); thus to counteract this load one new sub shell is added having $2n-1$ orbitums in each shell present on each apex bound treo along the R C wave length of matter wave at ' n^{th} ' quantum level of second dimension, then it will have n sub shells in each shell and total n^2 orbitums to support this load.

Thus at first four quantum levels it will have *one, three, five, seven* orbitums, as $2n-1$ orbitums are adds, with successive addition of first, second, third and fourth sub shell in each shell. (Figure 4)

Finally at last \sqrt{S} quantum level, \sqrt{S} unit electron mass energy or S quanta mass energy in 'one-unit mass', is supported by addition of one \sqrt{S}^{th} sub

shells having $2\sqrt{S}-1$ orbitums ($2n-1$) in just one shell, as RC wave length reduces to just one bound tree.

Thus at this last quantum level of second dimension, the total deformation forms one biggest S layered graviton coloumn (as \sqrt{S} bound tree layers are added in each shell at each of \sqrt{S} quantum level), which support one unit mass (one Planck mass i.e. 2.176×10^{-8} kg) with total deformation of second dimension at one 'unit gravitational center', by one graviton.

In second dimension up to any quantum level, the total number of bound tree layers deformed (\sqrt{S} bound tree layers are added with one new sub shell) decides frequency of its matter wave at this quantum level, which is also equal to the number of quanta mass energy in this elementary particle packet.

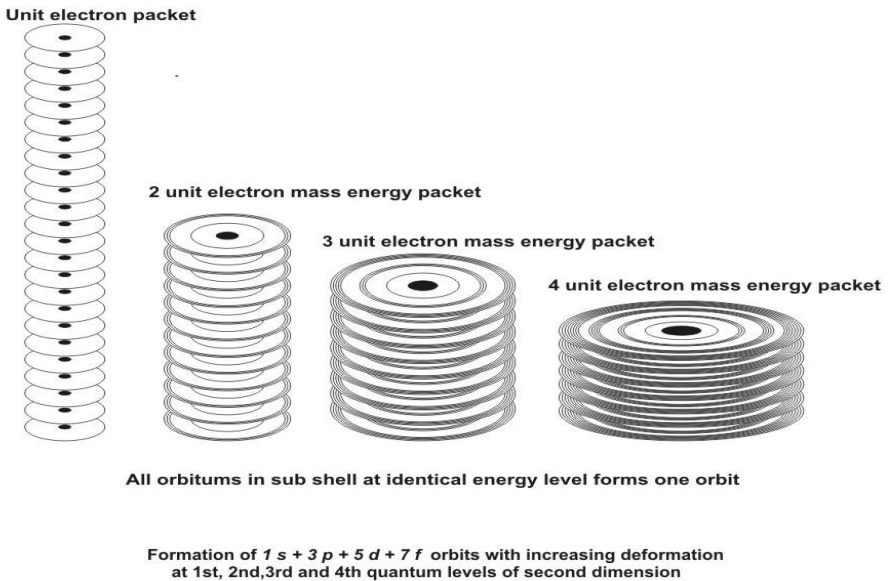


Figure 4: At 1st, 2nd, 3rd and fourth quantum level, shells present at each apex bound tree along its reducing RC wave length, will have one, two, three, four sub shells will have 1,3,5,7 (i.e. $2n-1$) orbitums.

(b) Kinetic column in three & four–dimensions.

(In three dimensional increasing deformations is formation of one electron black hole, which can support the load from one unit mass to one billion metric ton).

One unit mass is the maximum load which can be supported in universe at ‘one bound tree or unit gravitational centre’ by one graviton with its one graviton column.

Therefore, multiple unit mass body, which exerts square number of unit masses load at their gravitational center, is supported by equal number of gravitons; firstly by *one electron black hole*, a full kinetic column of third dimensional deformation supports one billion metric ton.

Then with still increasing mass any multiple unit masses cosmic body is supported by *one gravitational sphere of body* a kinetic column of fourth dimensional deformation, which form around gravitational centre of body.

It also explains the principal of equivalence, as why number of free trees (which decides its gravitational mass) are always equal to kinetons (which decides its kinetic mass) required to just move this body.

All thermodynamic, kinetic or chemical energy transfers are transfer of these full layers of kinetic column from, the kinetic columns of donating body to the kinetic columns of receiving body, as one layer is transferred in one processing time.

(c) Distribution of Load in Any One Kinetic Column

Load of any number of free Treos, which is exerted on each apex bound tree along wave length, is supported by equal number of 'kinetons' which get arranged in the shape of one 'sub kinetic column'. e.g. 81 'free Treos' 'load' is supported by equal 81 'kinetons', in 9 layered one kinetic column. The total load exerted at apex of kinetic column distributes equally on all kinetons (supporting unit), *up to any layer in column which is taken in account.*

If you take account of second layer, the load divides as $\frac{1}{4}$ on all three kinetons (diluted mass pressure 'a') of second layer (as total $1 + 3 = 4$ kinetons), while one kinton of first layer supports full load.

When third layer of sub kinetic column is taken in to account, it is $\frac{1}{9}$ th of total load (diluted mass pressure 'a') on each of 5 kinetons of third layer, as there are total nine bound trees up to three layers in column, (while it was $\frac{1}{4}$ of total load on each kinton in second layer, and full load on one kinton of first layer).

Similarly, it distributes its $\frac{1}{16}$ load (diluted mass pressure 'a') on each of 7 kinetons in fourth layer as there are total '16 bound trees to support the load up to fourth layer in column', while it exerts $\frac{1}{9}$ of total load on each kinton of third layer (as it divides on nine kinetons) and $\frac{1}{4}$ of total load (as it divides on four kinetons) is exerted on each kinton of second layer.

But in this column geometry this above mentioned load distribution pattern, describes 'a' as diluted mass pressure of body at each kinton in any layer of its kinetic column. This 'a' is the same as acceleration in Newton's gravitational field (thus this 'a' diluted mass pressure, can also be calculated by Newton's equation, $a = \frac{MG}{r^2}$).

All fields are made up of kinetic columns (of changing geometry), and this column geometry obeys ‘inverse square law’. The gravitational field, intensity of light, charge density etc: all fade ‘*by reciprocal of the square of distance ‘r’*’.

So, it can be seen that Newton’s equations which describe gravitational field are formed in accordance with this proposed column geometry.

(2) Angular radial deformation

With increasing energy mass by *one quantum* (value of reduced Planck constant) in each next bigger photon packets at each next quantum level in first dimension; one more layer is added in its all supporting sub kinetic columns (present at each apex bound tree in its entire wave length) and thus one layered to \sqrt{S} layered sub kinetic columns are formed.

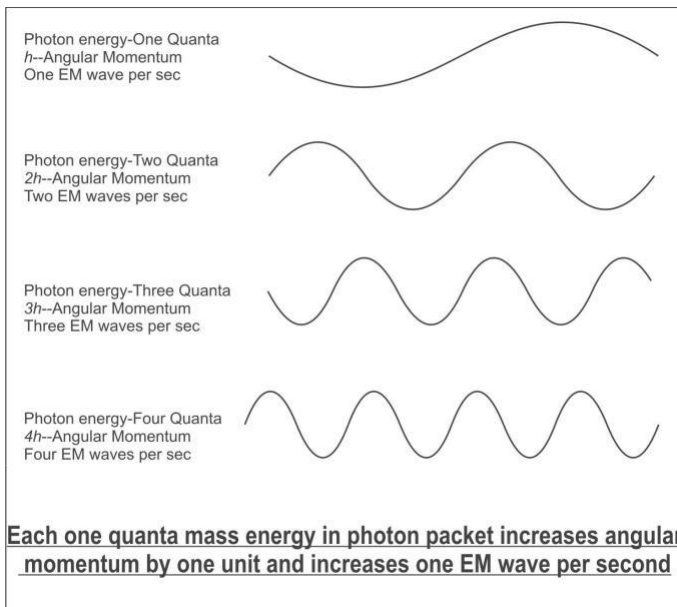


Figure 5: changing wave pattern with increasing angular momentum by one unit with increasing mass energy in photon packet by one quantum.

With increase of this one layer in all sub kinetic columns the angular momentum of packet, (rate of its rotation) and frequency of its wave increases by one unit, thus Planck constant ' h ' calibrates layer by layer deformation of space matrix in first dimension.

Up to finish of deformation of first dimension of unit space matrix at \sqrt{S}^{th} quantum level the angular momentum reaches 90° degree and thus after this the packets in second dimension are **vertically oriented** and this angular momentum further increases and reaches to 180° degree at last quantum level of second dimension, of one unit mass.

In second dimensional deformation the frequency jumps by \sqrt{S} number at each next quantum level, due to addition of \sqrt{S} bound tree layers at each next n^{th} quantum level (which form one new 'sub shell' in each shell), along with increasing angular momentum by \sqrt{S} units. The radius of shell also increases by \sqrt{S} bound tree layers, at each next n^{th} quantum level; where n can be 1, 2, 3 up to \sqrt{S} .

In case of 'Electron black hole' in three-dimensional deformation increasing angular momentum is decided by the increasing number of gravitons (and its wrapped graviton columns) *in each spiral layer* (circles) of electron black hole. The angular momentum increases as $n(hC)$ in this kinetic column, where n can be 1, 2, 3... up to \sqrt{S} .

While in deformation of four dimensions of space-time in 'gravitational sphere' of bodies, increasing angular momentum represents the increasing surface area of gravitational sphere, which is calibrated with the increasing radius of solid angle, as $n(h/4\pi)^{1/2}$, where n can be 1, 2, 3.... up to \sqrt{S} .

With this increasing angular momentum, the ‘column’ turns from 0–90 degree, 90–180 degree, from 180–270 and finally from 270–360 degree, respectively in one, two, three and four–dimensional deformation of space matrix. Then with increasing angular deformation of supporting kinetic column, the load is supported from *below, from side, from up and from all sides*, respectively in four dimensions.

(D) DEFORMATION OF SPACE MATRIX IN ALL FOUR DIMENSIONS OF SPACE-TIME.

(!) Deformation of First Dimension

One quanta electromagnetic energy or S number of free treos (in one–unit photon) evenly spreads on one side of this cube on S number of bound treos, where one free treo load on one (apex) bound treo is supported continuously by one kinton, by its on going S vibrations which occur in one second, (or by one vibration it is supported for the period of one Planck’s least time and along with it is pushed to next bound treo in its direction of propagation, to travel at the speed of light by translational motion).

To support increased load at each next quantum level equal number of kintons are converted from bound treos of space matrix to accomplish Action-reaction mechanism, and get arranged in transverse sub-kinetic columns of 1 to \sqrt{S} increasing number of layers, at each apex bound treo along wave length and thus the EM fields of EM forces are generated.

The rotating layers of kintons in all sub kinetic column are its magnetic vector of wave while free treos moving along its axis forms electrical vector of transverse EM waves.

Photon has spin 1, as it spreads on its one EM wave and performs one full rotation to regain its orientation.

(!!) Deformation of Second Dimension

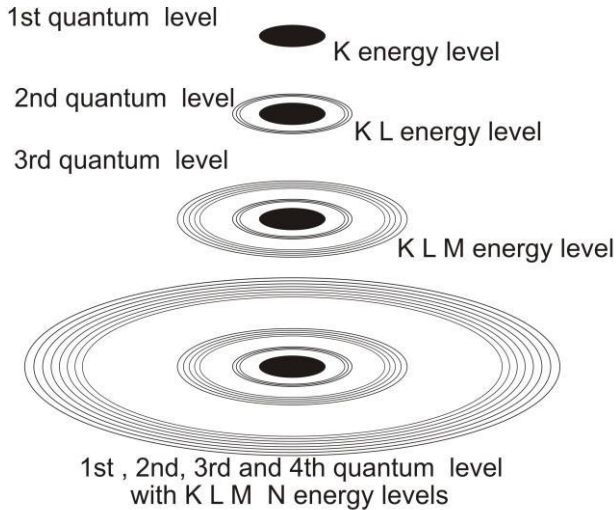
As the deformation increases, with increase of \sqrt{S} quanta mass energy (of one-unit electron) at each of \sqrt{S} quantum levels of second dimension, it supports all elementary particles, nucleons, atoms, molecules and masses up to one unit mass (*Planck mass*: $2.176\ 43 \times 10^{-8}$ Kg) or S quanta mass. ^[g16]

Thus to support load of each one quanta (S free trees) one *orbitum* of S kinetons adds in kinetic column (shell), to accomplish Action-reaction mechanism at each apex bound tree along its RC wave length.

The total numbers of orbitums formed in all shells are always equal to the mass energy quanta in any elementary particle packet (which condenses at this quantum level).

At first, second, third and fourth Atomic quantum level the shells will have respectively one, two, three and four sub shells, and kinetic energy levels of E, E/4, E/9, E/16 in four sub shells are due to total number of orbitums in consideration, and it matches with known value at K. L. M. N atomic energy distribution level. ^[14a] (Figure 6)

Finally with completion of this \sqrt{S} layered graviton column of second dimension, the biggest mass supported by this second dimensional deformation at one unit gravitational centre by one graviton by its one graviton column is unit mass (the mass roughly equal to weight of one flea egg). One unit mass is the *maximum load*, which can be supported at one bound tree, by one graviton in universe, at its unit gravitational centre.



In the deformation up to fourth quantum level, previous deformations at 1st , 2nd, and 3rd quantum levels also combines together to form atomic structure.

Figure 6. Atomic energy distribution at K, L, M, N atomic energy levels is according to proposed column geometry as central load dilutes on 1, 3, 5, 7 orbitums (2n-1 orbitums) which are successively added with one new sub shell at four quantum levels.

At any quantum level in second dimension, the mass energy packet will spread on its RC wave length (1/2 of this De Broglie matter wave length) and only after two rotation of this vertically placed packet, with its matter wave (on 2 RC wave lengths while *moving up and moving down*) it will regain its original orientation in space, thus they have $\frac{1}{2}$ spins. The anticlockwise and clockwise rotation decides *up spin and down spin*.

In deformation of second dimension if 'n' is Reduced Compton wave length, this matter wave will form on 2n-1 kinetons; and $(2n-1) \times \pi$ is angular

momentum of this mass energy packet, which calculated the circumference of its orbit and Compton wave length of packet.

(!!!!) Deformation of Third Dimension

The body made up to \sqrt{S} unit masses and its load (exerted at its unit gravitational centre, of square number of unit masses in body) is supported by equal number gravitons, arranged in spiral layers of kinetic column of third dimension i.e. '*one electron black hole*'.

By increase of one-unit mass (or S quanta mass energy) at each of \sqrt{S} quantum level in third dimension, $2n-1$ gravitons (from $2n-1$ full sheaths; pages of book) increases in one new n^{th} spiral layer which is added at n^{th} quantum level.

Finally one unit space matrix (all S sheaths) by its full deformation, produces \sqrt{S} number of spiral layered '*electron black hole*'. $2n-1$ gravitons are in each spiral layer and thus this full kinetic column of third dimension, will be having S number of gravitons; which will support \sqrt{S} unit masses (approximately 2×10^{13} Kg or 2 trillion metric ton body), and its load of S unit masses (in square of unit masses in body) at its unit gravitational center.

The cyclonic wave forms in third dimension, which will rotate the body continuously (e.g. all rotating asteroids) and these deformations (still forming incomplete kinetic columns) are often seen in nature and are responsible for all cyclones and whirl pool deformations of tornados, frequently seen in our atmosphere. ^[116]

(!V) Deformation all four dimensions of Space-Time

For bodies of (\sqrt{S} unit masses) to (S unit mass) in one unit black hole.

After the deformation of all three dimensions of space or full deformation of one unit space matrix, which form one electron black hole, the deformation increases at \sqrt{S} quantum levels of fourth dimension of Space-time.

In formation of one gravitational sphere (kinetic column of fourth dimension) at \sqrt{S} quantum levels, \sqrt{S} unit masses (approximately 2×10^{13} Kg or 2 trillion metric ton body), increases as one unit, along with increase of \sqrt{S} bound tree layers at each next quantum level in gravitational sphere of body.

Thus, ultimately it deforms total S bound tree layers, each having $2n - 1$ gravitons in its each n^{th} layer, while total S^2 gravitons are in this biggest possible gravitational sphere of S layers of *one unit black hole*.

The gravitational sphere of each cosmic body is *black holes in formation* and all gather matter by its gravitational forces and then churns it up, reciprocal to its size, to produce Hawkins's radiation (pairs of Tree and Void), which is energy (e.g. behind flow of solar wind) and thus by removing matter and its supporting deformations, it flattens space matrix, to prepare it (hidden purpose of Gravitation) for next big crunch and big bang of this Quantum pendulum universe. ^{[13] [14b]}

(!) Gravitational sphere of unit black hole.

This S layered biggest gravitational sphere of unit black hole, having total S^2 gravitons is formed by contraction of S number of unit space matrices i.e. simile S number of full books.

The gravitational sphere of unit black hole support its ‘S’ unit masses’ i.e. S^3 or $6.38164015 \times 10^{129}$ free trees, i.e. 203 thousand times the mass of sun, which gets totally accommodated in it, (after being concentrated in gravitational sphere with S bound tree layers in radius; as the radius of black hole should be $2 GM/ r^2$)

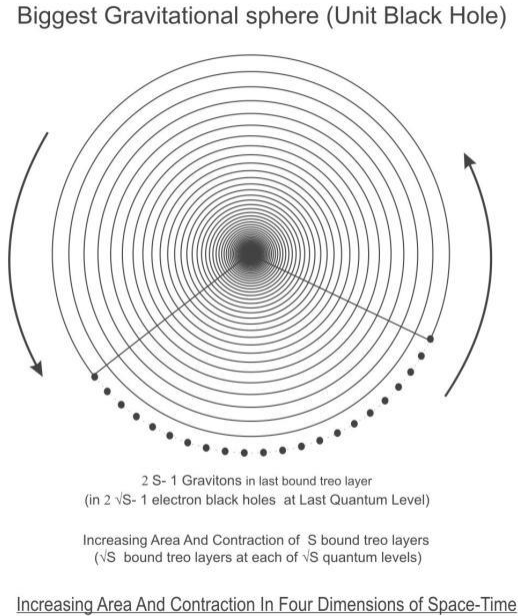


Figure 7: Column geometry of unit black hole at last quantum level of 4^{th} dimension.

All gravitons in gravitational sphere direct their force towards its centre i.e. at ‘gravitational centre of body’. Outer most layer of this unit black hole rotates at speed of light by S vibrations per second which successively reduces as *one vibration at each next quantum level* from S vibration to \sqrt{S} vibrations in this S layered gravitational column.

This reduction of number of vibrations one by one will successively slow down the speed of rotation of each inner concentric layer. This is necessary to maintain the configuration of this rotating kinetic column (which occupies 1/3 area of gravitational sphere), so it can direct force of its all gravitons simultaneously towards its gravitational centre. S graviton column together unite side by side to form gravitational (column) field of this black hole.

(!!) Gravitational sphere of Sun.

The n layered gravitational sphere, will have $2n - 1$ gravitons in its each layer and total n^2 gravitons are there to support the load of any n unit masses body at its gravitational centre.

Smaller size cosmic body like Sun made up of 10^{38} unit masses, is supported by 10^{38} bound tree layered gravitational sphere around its gravitational center, while our Earth made up of 10^{32} unit masses have 10^{32} bound tree layers (in 1 mm) in its gravitational sphere.

Our Sun is made up of 10^{38} unit masses, which exert a load of $(10^{38})^2$ unit masses at its gravitational center. To support this load at gravitational center of Sun, a 10^{38} bound tree layered gravitational sphere is formed (it is the same size as calculated by general theory by Einstein), which have total $(10^{38})^2$ gravitons as per column geometry, (@ $2n-1$ gravitons are in each n^{th} bound tree layer and n^2 gravitons are in full gravitational sphere of n unit masses body) (Figure.8).

Gravitational sphere of Sun

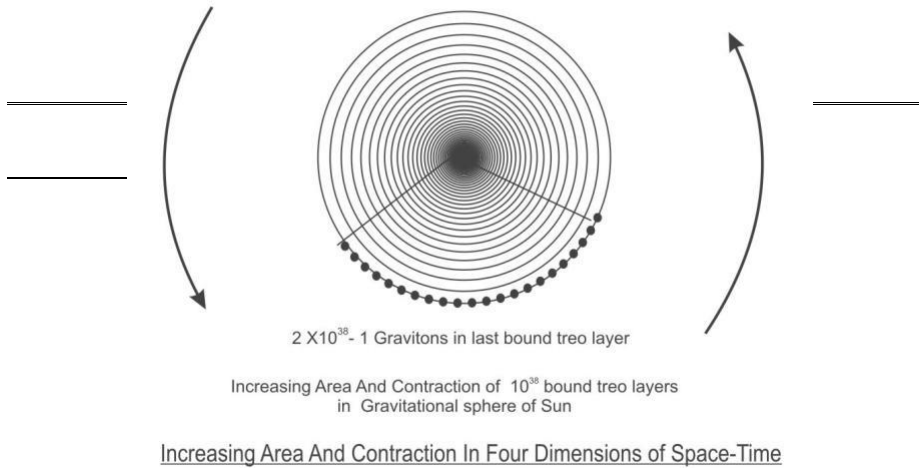


Figure 8: 10^{38} unit masses in Sun at its gravitational center is supported by 10^{38} bound tree layered gravitational sphere, (of 3 Km diameter) having $(10^{38})^2$ gravitons.

Same size gravitational sphere of 3 Km diameter (2×10^{38} bound tree layers) of sun is calculated by Einstein in his general theory of relativity.

(!!!) CENTRAL GALACTIC DISK

Our central galactic disk reported to have super massive black hole of 4.15 million sun masses ± 0.034 at Sag. A ^[17], (as any super massive black hole can only form by collection of unit black holes), it will thus have 21 unit black holes arranged according to this proposed column geometry in one incomplete kinetic column of fifth dimension in its 4 to 5 light second radius. And its baby bodies will start condensing at 0.43 pc (parsec) at its 10^4 th gravitational field quantum level as per tree model.^[16]

(!v) ROTATIONAL VELOCITY CURVE OF GALAXY:

The rotating galactic disc in '*3 dimensional deformation of its galactic gravitational field*' as *one body*, around galactic centre (of multiple black

holes), will have its embedded stars according to observed pattern. (Peripheral stars will rotate fast embedded in one rotating disc) ^[13r]

(v) UNIVERSAL SINGULARITY

While forming biggest concentration of mass in universe, one unit black hole will increase at each \sqrt{S} quantum levels along with gradual slow down of time from \sqrt{S} vibrations (at gravitational centre of one unit black hole) to zero vibration per second at its biggest Galactic center, which can be called as ‘*universal singularity*’. ^[14c]

(E) Proofs Of Proposed Nature Of Gravitational Fields; With Example Of Sun

Any ‘n’ unit mass of body exert a load of n^2 at its gravitational center, where it is supported by n^2 number of gravitons in its one gravitational sphere.

The gravitational field of any n unit mass body is formed by union of n number of Graviton coloumns.

The union of these n number of gravitons in n unit mass body in one direction, will have $2n-1$ gravitons in its outermost layer at periphery of gravitational sphere, and side by side union of its $2n-1$ full graviton coloumns with its \sqrt{S} layers in each coloumn, will extend as gravitational field of this cosmic body.

Any M unit mass body exerts M^2 unit masses load at its gravitational centre and $2 M$ free treos* load on each orbit, which forms at each quantum level in this gravitational field.

* (**2 M free treos or = 2 MG** (where M is mass of body in Kg × G is Newton’s universal gravitational constant; derived value in kinetons).

This 2 M load is first supported by $2n-1$ gravitons at outer most layer of gravitational sphere; and then by sum of total kinetic energy [$v^2 \times (2n-1)$ kinetons] in $2n-1$ kinetic columns, present along each apex bound tree in wave length of one matter wave, which form in any n^{th} layer of gravitational field.

Thus each concentric circular layer of gravitational field by its one wave can individually support the total load of body (sun), exerted on space matrix.

The gravitational field (column) gradually dilutes first in spherical three dimensional deformation (in which mass of body is accommodated e.g. spherical body of Sun)*, then on two dimensional deformation (in which orbits of all baby bodies start forming from 10^4 quantum level) and finally it dilutes in one dimensional deformation, which extends till last bound tree layer of this gravitational field at \sqrt{S} gravitational quantum level, will finally supports one free tree load by one kineton.

***Proof with Example of rings of Saturn** ^[j16]

Rarified mass of Gaseous Saturn (density less than water) which can not be accommodated in its three dimensional spherical deformation of its gravitational field, spills out on its two dimensional deformation, to which we see as spectacular *Rings of Saturn*; are actually rarified matter of Saturn, along its orbitums among orbits of few baby satellites, which start condensing at 10^4 th gravitational field quantum level. ^[k16]

Quantum Gravitation is a phenomenon to support the masses ranging from S free trees or one quantum (in unit photon) to S unit masses (in one unit black hole). It has been reported that there are positive energy in gravitational field ^[6]

GRAVITATIONAL ATTRACTION:

Fall of bodies towards each other is due to deficient support to bodies in between, as the *number of supporting gravitons formed in this common shared space matrix* in between, are divided and shared by bodies in proportion to their individual weight, but remains inadequate for both bodies to be supported.^[130]

We are holding the cup of gravitation up side down, as gravitational attraction is fall / push of bodies towards each other, due to inadequate support provided to both bodies, with sharing of inadequate number of supporting gravitons and there graviton columns produced by *common shared space matrix in between*.

The gravitons formed in common shared area is grabbed more by bigger body (so it is supported well) then the smaller body, but both body gets insufficient support in between and both fall towards each other accordingly.

That is why:-

(!) When light weight and heavy weight bodies were dropped from leaning tower of Giza by Galileo, all *after neutralizing their individual masses* by their individual gravitational fields, fell as 'mass less point objects' and came down simultaneously on Earth, all affected equally only by legend gravitational field of Earth irrespective to their different masses.

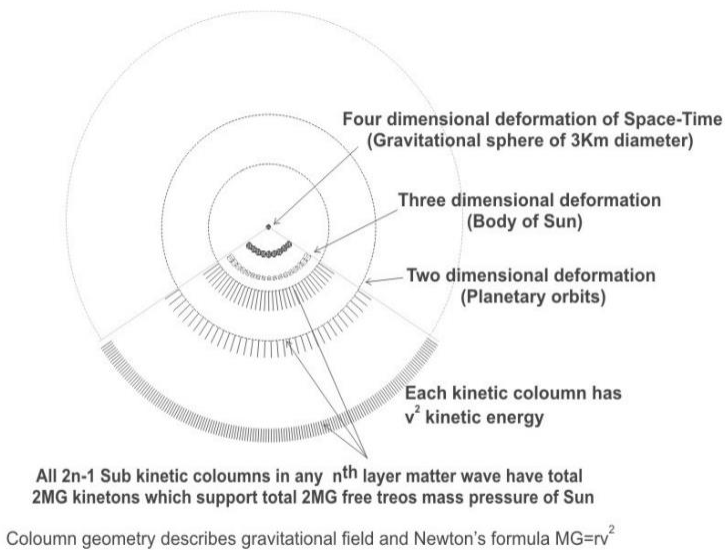
(!!) Similarly after *neutralizing their individual masses* by their own gravitational field, all planets orbit as 'weight less point masses' in its orbit, at v speed, only effected by its distance 'r' from Sun ($v = \sqrt{MG/r}$).

1. Structure of Gravitational Field (Example of Sun)

Any M unit masses body exert M^2 load at its gravitational centre, while its mass pressure in any one direction and on any one layer of its gravitational field (column) is $2M$ free trees ($=2 MG$)*.

*The M free trees = $3.14420507 \times 10^{124} = MG$ ($= 1.989 \times 10^{30}$ Kg mass of Sun and G is derived new value of gravitational constant i.e. $1.58079692 \times 10^{94}$ kinetons per Kg per second per second). [116]

This total load of $2M$ free trees on any and each orbit, distributes [total load $2M = r \times a (2n-1)$] equally on $2n-1$ apex bound trees on matter wave of orbit and generates an ACTION $r \times a$ on each apex bound tree.



With diluting mass pressure of Sun in gravitational field, the deformation occur in decreasing number of dimensions and gravitational kinetic energy reduces on smaller kinetic columns

Diagrammatic representation not to scale

Figure 8: Gravitational Sphere and Gravitational Field of Sun, $2n-1$ kinetic columns form one wave of this orbit and total kinetic energy supports $2M$ exerted load of Sun on it.

It is supported / neutralized by gravitational kinetic energy of equal number of total $2M$ kinetons which are present in all $2n-1$ kinetic columns, each with v^2 kinetic energy on each apex bound tree, thus [total kinetic energy in orbit is $v^2 (2n-1)$].

Here $n = r$ is number of bound tree layers from sun up to orbit; and 'a' is diluted mass pressure ($a = MG/r^2$) it is Newton's acceleration.

At any one, out of $2n-1$ apex bound trees (forming its matter wave) in n^{th} layer from Sun, the action $r \times a$ (load of free trees) at each apex bound tree, is reacted by equal force by v^2 kinetons, present in one v layered sub-kinetic column.

Action; $2M$ free tree load = on each of $2n-1$ apex bound trees in orbit $\times (r \times a)$

Reaction; $2M$ kinetons = $2n-1$ apex bound trees in orbit $\times v^2$

2. What gives slope to gravitational field

Increasing gravitational kinetic energy (v^2) in each kinetic column present at all apex bound trees in each next layer towards Sun, is $2MG$ kinetic energy. *But this $2 MG$ kinetic energy does not remain constant but comparatively reduces in each successive layer (matter wave) towards Sun, as the value of factor -1 increase disproportionately fast.*

This happens with decreasing value of n (as n is also equal to radius or distance from sun) in equation [$2MG \gg (2n-1) \times v^2$] the impact of -1 factor increases disproportionately fast as n approaches 1.

$$2MG \gg (2n-1) \times v^2 \gg MG$$

(r or n is large & 1 is small)

In each successive layer towards Sun, the less value of $2MG$ is calculated (i.e. total gravitational kinetic energy in one layer) than in next outer layer according to formula $2MG \geq (2n-1) v^2$.

The hypothetical calculation of 'total kinetic energy in one layer' from layer number 1 to layer number 10 in gravitational fields (**is calculated as 1 MG, 1.5 MG, 1.66 MG, 1.75 MG, 1.80 MG, 1.83 M, 1.85 MG, 1.87MG, 1.88 MG and 1.9 MG**). This anomaly provides a gentle slope towards parent body and thus the bodies in gravitational field, due to the total force of one full outer bigger layer, will slide/ fall towards Sun.

3. Formation of 'Gravitational Quantum Levels' in Gravitational Field of Sun.

As 10^{38} unit masses are in the body of Sun, it forms a gravitational sphere of 10^{38} bound tree layers to support it.

In gravitational field of Sun, outside this gravitational sphere, for first quantum level 1×10^{38} bound tree layers of gravitational field are required, for second quantum level next 3×10^{38} bound tree layers are added, at third quantum level next 5×10^{38} bound tree layers are added, for fourth quantum level 7×10^{38} bound tree layers are added in radius and according to column geometry, subsequently $2n-1 \times 10^{38}$ bound tree layers are added at any next n^{th} quantum levels. ($2n-1$ layers at any quantum level and n^2 up to any n^{th} quantum level)

Thus, bound tree layers up to any desired n^{th} quantum level = Square of quantum number or $n^2 \times$ Bound tree layers in gravitational sphere of parent body (which are also equal to the Number of unit masses, as mass energy of parent body)

4. Earth Orbit

Mass of Sun is $0.913880536 \times 10^{38}$ Unit masses. The gravitational field (column) of Sun forms by merging of $0.913880536 \times 10^{38}-1$ full graviton columns.

(A) Earth is situated at $1.00649465 \times 10^{4\text{th}}$ ‘gravitational quantum level’ of Sun.

Distance of orbit of planet Earth in bound trees layers from Sun = Square of this quantum level \times number of layers in gravitational sphere of Sun.

At square of 1.00649465×10^4 th ‘gravitational quantum level’ of sun (or 1.01303148×10^8) $\times 0.913880536 \times 10^{38}$ layers in gravitational sphere of Sun = $0.9257897548 \times 10^{46}$ bound trees layers from Sun, is this quantum level which is the distance of orbit at which planet Earth is situated.

(This distance calculated in bound trees when converted in Km; we get the conventional distance of earth in Km from sun, which again proves tree model)

At this level of Earth orbit, the Reduced Compton wave length of Sun is also = $0.9257897548 \times 10^{46}$ apex bound trees, on which M load of sun spreads and exert equal load at each apex bound tree along this wave length, is supported by one kintion by action – reaction mechanism of space matrix.

(B) Load of Sun, at any one apex bound tree, in this Earth orbit is neutralized by one kinetic column

1.00649465×10^4 gravitational quantum level of Sun, corresponds to $1.84288952 \times 10^{39}$ quantum level of quantum world, with equal $1.84288952 \times 10^{39}$ layers, and equal $3.39624178 \times 10^{78}$ kinetons are in both sub kinetic columns.

ACTION REACTION MECHANISM (ACTION = REACTION)

ACTION ($r \times a$) = load $3.39624178 \times 10^{78}$ free trees at each apex bound tree

REACTION (v^2) = $3.39624178 \times 10^{78}$ kinetons in each kinetic columns which form at each apex bound tree.

(a) The $3.39624178 \times 10^{78}$ free trees load is action $r \times a$, ($r \times a$), where diluted mass pressure of Sun is 'a' at distance 'r') at any one apex bound tree in orbit of Earth.

[Where 'r' = $0.9257897548 \times 10^{46}$ Bound tree layer distance of earth orbit from Sun.

And 'a' = 3.67×10^{32} free trees is 'diluted mass pressure of Sun' at earth orbit.

Therefore $r \times a = 0.9257897548 \times 10^{46} \times 3.668187 \times 10^{32} = 3.39624178 \times 10^{78}$ free tree load.]

(Here both 'r' and 'a' are calculated in terms of trees, are equal to conventional values when calculated in SI units on conversion.)

NOTE DOWN; $a = MG/r^2$ is acceleration according to Newton's equations, and same is calculated here as diluted mass pressure of Sun at each apex bound tree.

(b) This load 'ra' at each apex bound tree is neutralized by equal number of v^2 kinetons; which are present in v layered one kinetic column at each apex bound tree in Earth orbit.

i.e. $3.39624178 \times 10^{78}$ free trees load is supported by equal number of $3.39624178 \times 10^{78}$ Kinetons i.e. v^2 kinetons, in one $1.84288952 \times 10^{39}$ layered kinetic column (or v number of layers).

NOTE DOWN; v^2 is $= MG/r$, according to Newton's equations, and same is calculated here as kinetons in one kinetic column which form at each apex bound tree in orbit of earth to neutralize the exerted load.

Therefore

$1.84288952 \times 10^{39}$ quanta load, is at quantum level of Sun where earth orbit is present.

$1.84288952 \times 10^{39}$ or v number of layers is in each kinetic column, which have v^2 or $3.39624178 \times 10^{78}$ Kinetons, are present at each one apex bound tree in orbit of Earth.

(C) Total combined Kinetic energy in all kinetic column, present at each apex bound tree along one RC Wave Length in Earth Orbit can Support Load Equal to MG; or Total Mass of Sun.

On n apex bound trees in RC wave length $(0.9257897548 \times 10^{46}) \times 3.39624178 \times 10^{78}$ kinetons in each such kinetic column = $3.14420507 \times 10^{124}$ free trees mass energy of Sun,* or total MG load of Sun in Earth orbit.

*[Sun is $0.913880536 \times 10^{38}$ unit mass body $\times 3.440499 \times 10^{86}$ free trees per one unit mass = $3.14420507 \times 10^{124}$ free trees = 1.989×10^{30} kg is mass of sun (M) $\times 1.58079692 \times 10^{94}$ free trees in one Kg (G) (as $1.58079692 \times 10^{94}$ kinetons per Kg per sec per second which is derived value of conventional G)]^[L16]

(D) On 2 RC Wave Length One Full Matter Wave, Supports total 2MG Exerted Load of Sun on orbit

Total (M^2) load at gravitational center of Sun, exerts 2MG load on any one concentric layer of gravitational (field) in graviton column of sun and it is

distributed as mass pressure of Sun, on $2n-1$ apex bound trees of this layer, which is supported by $2n-1$ kinetic columns which form one matter wave.

Thus one matter wave in $0.9257897548 \times 10^{46}$ layer of gravitational field on its $2 \times 0.9257897548 \times 10^{46}-1$ apex bound trees (at its $2n-1$ apex bound trees) in one layer of gravitational (column) field of Sun, supports total 2 MG mass pressure of Sun, exerted on earth orbit.

$2 \times 0.9257897548 \times 10^{46}-1$ kinetic columns in orbit $\times 3.39624178 \times 10^{78}$ kinetons in each kinetic column = $2 \times 3.14420507 \times 10^{124}$ kinetons support equal load of 2 MG free trees of Sun, on Earth orbit.

(E) Circumference of Earth Orbit

(1) *Crompton wave lengths of $0.913880536 \times 10^{38}$ small matter waves, of quantum world, join side by side and together form full circumference of Earth orbit.*

Gravitational field of Sun is formed by union of $0.913880536 \times 10^{38}$ graviton columns, as Sun is made up of $0.913880536 \times 10^{38}$ unit masses.

In each of these graviton columns at 1.00649465×10^4 quantum level at 'r' distance of 1.01303148×10^8 bound tree layers from its apex [$r = 1.01303148 \times 10^8 = (1.00649465 \times 10^4)^2$] the Compton wave length or circumference of this small matter wave ($2 \pi r$) is = $2 \pi \times 1.01320458 \times 10^8$ bound trees.

$0.913880536 \times 10^{38}$ number of such circumferences of small matter waves ($2 \pi \times 1.01320458 \times 10^8$ bound trees is Compton wave length or circumference of each small matter wave orbit), together form circumference of orbit of earth = 5.819×10^{46} Bound trees.

(2) Circumference of Earth orbit is *Compton wave length* (2 × Reduced Compton wave length × π) of one joint matter wave in orbit of Earth.

One matter wave in orbit of Earth forms on $2n-1$ apex bound trees; and when multiplied by pi; $\pi (2n-1) =$ it is Compton wave length of matter wave in orbit of Earth = 3.14 (value of π) multiplied by $(2 \times 0.9257897548 \times 10^{46}$ bound trees -1) = circumference of Earth orbit = **5.819×10^{46} Bound trees.**

(3) Earth revolves in Earth orbit to complete its one revolution in one year

5.816×10^{46} bound trees circumference = $1.84288952 \times 10^{39}$ bound tree distance per second × 31557600 seconds are in 365.25 days of one year.

Concluding remark

Albert Einstein noted that ‘matter and electromagnetic energy curves space – time’ and also calculated in general theory the magnitude of this curvature produced by Sun, but the mechanism of production of this curvature of space-time were never explained, leave aside the purpose of this deformation.

We accepted it as law, and never tried to explore, what reacts and how, while generations passed from the time of Newton, just cramming ‘every action has equal and opposite reaction’.

No EM forces erupt without photon or atomic forces in absence of nucleon, neither gravitational forces without presence of a body, thus due to their

presence the proposed action-reaction mechanism of space matrix produces all four basic forces.

Our space is not only space time, but it is omnipresent space matrix (space-time-energy) with its 3 interdependent components of Space, Time & Energy; as energy is first time recognized and proposed as fifth dimension of universe.

Any load of free trees on space matrix is supported by equal number of vibrating kinetons (deformed bound trees vibrating at Planck frequency or S times per second in S plains per second, curtails its degree of freedom and start vibrating only in direction of load) of space matrix, as they start vibrating only in direction of load after being arranged per column geometry.

Our universe is a quantum universe in which space, time and energy all are quantised. One unit space matrix is a cube of S bound trees (the distance light travels in one second), with \sqrt{S} quantum levels in each dimension of space. With increasing loads, at these \sqrt{S} quantum levels the space matrix increasingly contracts along with involving all three dimensions of space one by one. While it involves multiple unit space matrices with deformation of time as well at \sqrt{S} quantum levels of fourth dimension.

The *number* of unit (Planck) masses in any cosmic body is always equal to *number* of bound tree layers in its gravitational sphere (i.e. in Schwarzschild radius when it is expressed in Planck's least length and same is calculated by general theory). Same *number* of Graviton columns unites side by side to form gravitational (column) field of this body, which extends up to \sqrt{S} th 'gravitational field quantum level'. The number of Bound tree layers which

adds at each next n^{th} quantum level can be calculated as per column geometry (i.e. $2n-1$ bound trees layers \times number of full graviton columns which together units side by side to form this gravitational field of this body).

Any M unit masses body exerts a load of M^2 at its gravitational centre which is supported by equal number of gravitons in its M layered gravitational sphere (Schwarzschild sphere).

Outside this gravitational sphere $2M$ load is exerted at each gravitational field layer, which is supported by total kinetic energy of all kinetic columns which form at each apex bound tree along its $2RC$ wave lengths of 'matter wave' of this layer. Thus each consecutive, concentric, bigger gravitational field layer of any cosmic body can support total load of body.

Due to inadequate production of supporting gravitons and its graviton columns from common shared space matrix in between, and its unequal sharing (according to their masses) in between both bodies, both inadequately supported bodies being *pushed* from all sides, fall towards each other (to which we perceive as gravitational attraction).

There is only one mechanism in nature i.e. Action- reaction mechanism of space matrix, which exhibits as four basic forces with changing amount and dimensions, involved. With increasing contraction of space matrix, the geometry of space and shape of kinetic column (which together form field of all four forces) changes along with the nature of basic force generated in each dimensional deformation. Thus we achieve our goal of unification of forces and of quantum gravitation.

BIBLIOGRAPHY

- (1) Panu Raatikainen, 2015, ‘*Godel’s incompleteness theorems*’
Stanford Encyclopedia of Philosophy,
- (2) Higgs, Peter; 1964, *Broken symmetries and the masses of gauge bosons*, Physical review letters 13 (16) 508-509.
- (3) Y. Valdimirov, N. Mitskievich & J. Horský, 1987 *Space Time Gravitation*, Mir publication.
- (4) Jhon A Mackan; (2015) *Only Space Time*, California, P 4
- (5) M. Kaku & J. Thomson, 1997, *Beyond Einstein*, Oxford university press
- (6) Lee Smolin; (2014). *Positive energy in quantum gravity*,
phys.rev.d 90 no.4 p 1– 3
- (7) V. F. Mukhanov, (2005), ‘**Physical foundations of cosmology.**’ Cambridge University Press. pp. 58–. ISBN 978- 0-521-56398-7.
- (8) Paul Davies. *The Goldilocks Enigma*. First Mariner Books. p. 43–. ISBN 978-0-618-5922-6.
- (9) Briel Vacariu & Mihai Vacariu, 2018, *Dark Matter and Dark Energy*, Space and Time & Other Pseudo-Notions in Cosmology.
- (10) Ashok Saxena et al. ‘*Position of Baby bodies in any gravitational field*’ <http://vixra.org/abs/2011.0097:v1.pdf>
- (11) Ashok Saxena et al. ‘*confirmation of Treo model outside solar system*’ <http://vixra.org/abs/2011.0096:v1.pdf>
- (12) Itzhak Bars; John Terning, 2009, *Extra Dimensions in Space and Time*. Springer. pp. 27–. ISBN 978-0-387-77637-8.
- (13) Ashok Saxena. 2005, *Inside a Wave*, paper cover book (India), Manas Prakashan. Page number 192, (Copy right no. L-36882/2010/19-11-2010)
- (14) Ashok Saxena; 2015 “*Our universe and how it works; (Quantum gravitation and Fifth dimension)* pp a 141, b 256 c 254 (India) hard copy ISBN 978-93-5235- 003-2 (Manas Prakashan); 2016 e-book, ISBN 978-93-5235-065-0 Book baby.
- (15) Ashok Saxena; 2020 “*Treo Model of Structure and Working of Universe (Cosmic code)*”, (INDIA) ISBN 978-1-64828-887-6 paper back, Notion press, e- book ISBN 978-1-64828888-3 (Notion press). Copy right application no, L-94591/2020.

- (16) Ashok Saxena. 2020; *Treo model of Structure and working of universe, cosmic code*. viXra org > Quantum gravity and string theory> PP ; a 84, b 47, c 180, d 70, e 211, f 237, g 154, h 173, i 140, j 240, k 223, L 218.
viXra:2011.0155: Pdf
- (17) R Genzel; 2010 ‘*The Galactic Centre massive black hole and nuclear star cluster*’ arXiv: 1006.0064: Pdf.
- (18) Krauss, Lawrence M.; Robert J. Scherrer, 2007; ‘*The Return of a Static Universe and the End of Cosmology. General Relativity and Gravitation.*’ 39 (10): 1545–1550. ArXiv: 0704.0221.
- (19) Michio Kaku. Parallel Worlds: 2006. *A Journey through Creation, Higher Dimensions, and the Future of the Cosmos*. Knopf Doubleday Publishing Group. pp.385. ISBN 978-0-307-27698-8.
- (20) Carroll, Bradley W.; Ostlie, Dale A. 2013, *An Introduction to Modern Astrophysics*, (International ed.). Pearson. pp. 1173–1174. ISBN 9781292022932.
- (21) Planck Collaboration, “Planck 2015 results. XIII. *Cosmological parameters* (See Table on page 32)”.Astronomy & Astrophysics. 594: A13. arXiv: 1502.01589.
- (22) Oleg Bazaluk, 2009, *World Existence and “Evolved Matter” as its Modern Model*. Philosophy and Cosmology 1(1): 3–37.
- (23) Kazanas, D., 1980 *Dynamics of the universe and spontaneous Symmetry breaking*, The Astrophysical Journal. 241: L59 L61.
- (24) Vaudrevange, Starkman, Cornish, Spergel, 2012. *Constraints on the Topology of the Universe: Extension to General Geometries*, Physical Review D. 86 (8): 083526. arXiv:1206.293 pdf.
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