Ramionics: Formulating and calculating all physics concepts and constants including **Fine Structure Constant α**, ħ, c, K Coulomb, e, K Boltzmann, Range of dark gravity and Dark Energy, Energy density of space and (mass, charge and structure) of (matter particles and energy particles)
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1.Epigraphs: The Mystery of 137

Albert Einstein: "The constant α has the value of about 1/137. Nobody knows why. It seems to be one of the greatest unsolved problems in physics."

Max Planck: "Every dimensionless constant of nature hides a mystery; α is the deepest of them all."

Paul Dirac: "If numbers such as 137 turn out to be pure geometry, physics will finally have reached its foundation."

Enrico Fermi: "No one knows what determines the value of α, and until we do, physics will not be complete."

Niels Bohr: "In the fine-structure constant we meet a number that appears to set the scale of all electromagnetic phenomena."

Hendrik Lorentz: "The fine-structure constant connects the worlds of mechanics, electromagnetism, and quantum theory in a single dimensionless number."

Werner Heisenberg: "When I see the fine-structure constant, I get the feeling that God is telling us: 'You will never understand me completely.'"

Richard Feynman: "You might say the hand of God wrote that number and we don't know how He pushed His pencil."

Wolfgang Pauli: "When I die, my first question to the Devil will be: What is the meaning of the fine-structure constant?"

Max Born: "No theory of the universe should be regarded as complete if it cannot explain the number 1/137."

Ramin: "give me only your desired scaling for space, time and energy units. I calculate all constants in the universe and physics (including fine structure constant) using universe geometry."

2.Introduction, Basic energy equation

Ramionics as a new physics defines the **universe** as a FCC lattice (Face-Centered Cubic) of 3 dimensional simple spherical **energy quanta** called **Ramions** (**Rotational Anti Matter and Matter ION**). Ramin's have real, measurable and calculatable parameters like energy $\mathbf{E_r}$ divided to two exactly equal linear and rotational parts of energy named $\mathbf{E_{Lr}} + \mathbf{E_{Rr}}$, Radial(compressive) force $\mathbf{F_{Lr}}$, Tangential (Rotational) Force $\mathbf{F_{Rr}}$, pressure **P** ,energy density $\boldsymbol{\rho_r} = \frac{\mathbf{E_r}}{\mathbf{V}}$,volume $\mathbf{V}=\frac{4\pi}{3}\mathbf{r^3}$ **,** radius **r** ,angular speed **ω**, rotational speed on its surface(**v=r. ω =c=light speed**) , torque **T**, rotational moment inertia **I**, mass equivalent to its energy $\mathbf{m}=\frac{\mathbf{E_r}}{\mathbf{c^2}}$ and electrical charge $\pm\mathbf{q_r}$ and Coulomb constant $\mathbf{k_r}$ and $\mathbf{E_P}$: Electrical self potential energy (of any semi-Ramion) and even **spin** and two **poles: north and south**:

(1) $\text{No limiting Critera} \rightarrow E_{Lr} = E_{Rr} \rightarrow E_r = E_{Lr} + E_{Rr} = 2E_{Rr} = 2E_{Lr} \rightarrow E = mc^2$

(2) $E_{Lr} = \frac{1}{2} m\, c^2 = PV = \frac{F_{Lr}}{4\pi\, r^2}\frac{4\pi\, r^3}{3} = \frac{1}{3} r.\, F_{Lr} = \frac{3G_r m^2}{5\, r}$; $\frac{1}{3} r.\, F_{Lr} is\ \ scaler\ not\ vector\ as\ \frac{1}{2} r \times F_{Rr}$

(3) $E_{Rr} = \frac{1}{2} I\, \omega^2 = \frac{1}{2}(mr^2)\left(\frac{c^2}{r^2}\right) = \frac{1}{2} m\, c^2 = \frac{1}{2} r \times \left(\frac{mc^2}{r}\right) = \frac{1}{2} r \times F_{Rr} = \frac{1}{2} T = 2E_P = 2\frac{K_r q_r^2}{2r}$

(4) $g = \frac{GM}{R}\left(\frac{1}{R} + \frac{1}{R_D}\right) e^{-\frac{R}{R_D}}$, $C^4 = 8\pi G \rho_s R_D^2$, $\rho_s = \varphi \rho_r$; cosmology and thermodynamics:

(5) $E_r = \rho_r V;\ (2) \rightarrow E_r = 2PV\ ;\ \rho_r = 2P \rightarrow f_r$ =degree of freedom dimensions=4

All elementary particles are formed by **collapsing** some ramions, distributing their energy onto other ramions and forming a **black hole** in size of 1 ramion as local (relative) value that can be considered as compressed mass with **12 wings** to simplify some calculations but really its nothing: A hole in space without matter, energy, time and space. Ramions have no space to carry extra energy because they are on maximum pressure and c (light speed) so they expand the space in a manner that forces and torques are balanced. It means reducing space pressure relatively that generates (strong force and normal and dark) gravity. Matter-Energy transformations called **Ramionic reaction** can be calculated and predicted by ramionics preciously. In ramionics black holes are simple but huge neutrino, they distributed their energy into the space to supply needed mass of their starts.

Electrical charges exactly present rotational energy & torque: $K_r q_r^2 = \frac{rT}{2} = \frac{rE_r}{2}$. Each wing carries a charge equal to 1/12 of an electron, and opposite wings along an axis must have equal charge for torque equilibrium, the six wing couples (±e/6) can only sustain total charge states of 0, ±1/2 e, ±2/3 e, ±e. electrical field is distributed by indentation of ramions and generate electromagnetics and weak force.

Linear Energy→ pressure→ relativity→ (strong force and normal and dark) gravity
Rotational Energy→ Torque→ Indentation→ Normal &Near (or weak Force) Electromagnetic

Ramions generate, contains, transport, define, formulate, and Explain any fundamental thing in physics: space, time, compatible Relativity + Gravity + quantum, matter, antimatter and their asymmetry, Time dilation, gravity and dark gravity (so called dark matter) , space energy (so called dark energy) causing space expansion, all elementary forces: gravity (includes strong force), electromagnetic (includes weak force), elementary particles structure geometry, physics constants like fine structure constant or elementary particles mass or electrical charges, black hole, worm hole, entanglement, … **with no** space-time curvature, no singularity, no mass generator or force or energy carrier particle like bosons and photons, no chromodynamics, no field, no loop, no string, no extra dimension, no parallel world.

Starting point:

(6) $\alpha = \frac{K e^2}{\hbar c}$; alpha: fine structure constant; Measured values:

(7) $\frac{1}{\alpha} = 137.035999046(\pm 27)$ Cz recoil (Berkeley 2018)

(8) $\frac{1}{\alpha} = 137.035999206(\pm 11)$ Rb recoil (LKB,Paris 2020)

(9) $\frac{1}{\alpha} = 137.035999177(\pm 21)$ CODATA (2022)

CODATA: Committee on Data for Science and Technology

Ramionics calculates alpha using universe geometry simply:

(10) $\frac{1}{\alpha} = \pi \gamma^2 2^6 (1 - \frac{1}{6+\text{RoundUp}\left(\frac{4}{10}\ (12\pi)^2\ 2^6\right)})$

(11) $\gamma = \sqrt[3]{\frac{10\sqrt{2}}{8\pi}} = 0.8255785095$; FCC geometry Radial freedom(16)

(12) $\frac{1}{\alpha} = 137.03976507112(1 - \frac{1}{36390})$ =137.03599920783

Above value is accurate value for alpha (zero error, accuracy more than experiments)

Sensitivity checking:

$\frac{1}{\alpha} = 137.03599910434$; Using 36389

$\frac{1}{\alpha} = 137.03599920783$; Using 36390; Correct values

$\frac{1}{\alpha} = 137.03599931132$; Using 36391

By analyzing FCC geometry of universe we see:

if baryons wing energy is n ramion then not only Kq^2 but also all constants in physics can be calculated from ramions energy and radius and c.

we name baryons parameter by B index and ramion parameters by r index

$\hbar_B = n^4 \hbar_r$ Equation(42)

$$\left\{ \begin{array}{c} K_W = 0.99981614906\ ;\ \text{Equation (10)(22)} \\ K_Q = \left(1 - \frac{1}{36390}\right) = 0.99997251992\ ;\ \text{Equation (57)} \\ (K_{B1} Q_{B1}^2) = (K_r Q_r^2) \left\{ n^3 \frac{K_h}{K_w K_Q}\ \pi\beta \left(\frac{96}{10}\right)^2 \right\} \text{Equation (77)(62)} \end{array} \right\}$$

$G_r = \frac{5\ r\ c^4}{3\ E_r}$ (63)

3.Geometry of the FCC (Face-Centered Cubic) lattice

3.1 Primary Parameters:

Circle's perimeter to r (radius) ratio= 2π

Circle's area to r^2 ratio= π

sphere's area to r^2 ratio= 4π

sphere's volume to r^3 ratio= $4\pi/3$

3.2 General parameters in crystallography:

Any ramion is tangent to 12 neighbors in a FCC lattice, generating maximum volume occupancy:

(13) $\varphi = \frac{\pi}{3\sqrt{2}} = 0.74048048969$ φ: Volumetric Occupancy

number of ramions in layer n:

(14) $L(n) = 10n^2 + 2$;L(1)=12; L(2)=42; **but L(0)=1** means center.

3.3 Special parameters introduced by ramionics:

The cumulative ramions number up to layer n (including it) is:

(15) $T(n) = (1 \text{ for centre}) + \sum_{k=1}^{n}(10k^2 + 2) = T(n) = 1 + \frac{10\ n^3+15n^2+11n}{3}$

(16) $\varphi \times (\text{Volume of Sphere by radius as } \gamma n2r) = T(n)\frac{4\pi}{3}r^3$; γ definition

(17) $\rightarrow \gamma = \sqrt[3]{\frac{10}{24\,\varphi}} = \sqrt[3]{\frac{10\sqrt{2}}{8\pi}} = 0.8255785095$ γ: Radial Freedom

(18) $\beta(\text{surface of Sphere by radius as } \gamma n2r) = L(n)\,\pi r^2$; β definition

(19) $\rightarrow \beta = \frac{10}{16\varphi'^2} = \frac{10}{16\,(\frac{10\sqrt{2}}{8\pi})^{\frac{2}{3}}} = 0.91698716849$ β:Surface Occupancy

β is calculated for πr^2 cosine normalized area (not semi-sphere area: $2\pi r^2$).

Geometrical Parameters are hidden ratios behind the fine-structure and other constants in universe. they have (0.1 … 10) range of effect as a multiplier:

(20) $\pi,\ 2\pi,\ 4\pi,\ \frac{4\pi}{3},\ \gamma = \sqrt[3]{\frac{10\sqrt{2}}{8\pi}};\ \beta = \frac{10}{8(2\gamma^2)};\ \varphi = \frac{10}{8(3\gamma^3)} = \frac{\pi}{3\sqrt{2}},\ 10{,}12$

4.Particles and Ramionic Reactions

Using equation (10) for fine structure constant and (55) for electrical potential energy:

(21) $n_g = [K_n]\left(6 + \text{RoundUp}\left(\frac{4}{10}(12\pi)^2 64^g\right)\right)$

n_g: number of ramions in any baryon wing of generation g. default value of n_g is n1 sown as n

K_n: 1 or 5 (different scenarios); $n1 = 36390$ or 181950 ; B1: baryons of generation one: electrons, up, and down quarks;

64^g : baryon generation factor

So B_1 is made of collapsing $[K_n] \times 36390$ Ramions and its equivalent energy is equal to this count of ramions energy.

(22) $n_g = [K_n]\frac{1}{K_W}\left(\frac{4}{10}(12\pi)^2 64^g\right)$; $K_W = \frac{\frac{4}{10}(12\pi)^2 64^g}{6+\text{RoundUp}\left(\frac{4}{10}(12\pi)^2 64^g\right)}$

$g: 1 \rightarrow K_W = 0.99981614906$

K_W and K_Q factors are dependent to g (but independent of packet scenario).

(23) $\frac{3\varphi}{\gamma^3}12^2 = \frac{4\pi^2}{10}12^2 = \frac{4}{10}(12\pi)^2$: FCC Golden Number for maximum balance, stability, symmetry and on volume /surface, Energy /Torque for a FCC particle.

7 possible **packet scenarios** for main **ramionic reaction** (of transforming energy to baryon)

Scenario 1: $[K_n]: 5$ $[K_p]: 1$

In collapsing layers 1 to 119 **one packets** (of 31 B1) is formed and then transformed to **one** packets (of 7 protons+1 neutrons +7 electrons) until layer 479.

Scenarios 2 or 3: $[K_1]: 1$ $[K_p]: 5$ or 6

In collapsing layers 1 to 119 **five packets** (of 31 B1) are formed and then transformed to $[K_p]$ packets (of 7 protons+1 neutrons +7 electrons) until layer 479.

so $[K_p]: 6$ means an extra packet is produced after layer 119.

Scenario 4: like scenario 1, but 36400 instead of 36390, 36400 is bette because it is seen in ramion to baryon mapping coefficients as we will see. This extra 10 ramions shows any wing reaches to more stability (less energy) when its ramions are 100 multiplier because of factor 10 in equation (14) and maybe its default rotational (magnetic) energy.

Scenario 5: like above scenarios, but suppose (21) defines only one wing's ramion number; and baryon energy is 12*36400 ramion. it changes calculated baryon energy (divides it by 12) but has no effect on ramion to baryon mapping coefficients or radius because hole radius end wing radius are same.

Scenario 6: like above scenarios, but suppose 36400 is one wing ramion number; baryon energy is 24*36400 ramion energy, Because we suppose only ½ of ramions energy sits on wings as electrical charge, the other part of energy is distributed.

Scenario 7: suppose 36400 ramions is only for electrical charge of particle carried on any wings but for calculating all energy of particle distributed in the space we must calculate extra energy of all ramions in the space, If layer 1 has 12×36400 ramions how much energy is saved in layer 2 and so on. We know on FCC layer 1 volume of 12 wings are divided to equal inside/outside volumes at $R_E = 2.2360679775$ r so We can say energy save From $R = 0$ to R_E is 6×36390

(24) $E = \frac{R_D}{R_E} \times (6 \times 36400)$; from (99)(100)

Strong layers against collapsing are the layers that have maximum similarity to ideal sphere so they have most similarity to layer 1 (with 12 ramions) and layer infinity which have $10n^2+2$ ramions (approximately 10 multiplier number), So they are 12×10 = 120 multipliers.

Super strong layers: $120, 480, \dots, 4^k120, \dots$

In Super strong group larger layers are stronger.

Strong layers: other 120 multipliers and 120 factors

1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 30, 40, 60, 240, 360, 600, …

In this group layers 1 (full tangent) and layer 30=120/4 (means baryon generation 0) and layer 60 (multiplier of 10 and 12) are stronger than the others. layers 2,4,6 are a little weaker than their neighbours because strength function is an oscillatory function.

Relative Weak layers (geometrical mean between strong layers):

7, 9, 11, 13, 17, 22, 27, 35, 49, 85, 170, 294, …

Layers 4^k120 are needed to keep maximum similarity in quantum level between radius, surface and volume ratios, this means generation factor of 64^g

If layers 480 collapses then collapsing is continued until layer 16*120 to produce baryons of generation 2 so baryons in any generation have factor of $4^{3g} = 64^g$

Energy balancing of most important ramionic reaction in the universe:

In Ramionic reactions **most similar, great particles** are produced as main products, it usually means prime number:

Baryon balancing till layer 119:

(25) Main Ramionic Reaction $\begin{cases} T(119) = 5688439 = 5\{31 * (36390 + 309) + 18\} + 4 \\ T(119) = 5688439 = 31(181950 + 5 \times 309) + 94 \end{cases}$

Neutrino balancing:

$5 \times 309 = 1545;\ N7 = 1415;\ N4 = 309;\ N3 = 147;\ N2 = 55;\ N1 = 13;\ N0 = N(1)=1$

Neutrino notation:

N(n): A neutrino with n ramion energy

Nn: N(T(n)) for example N4=N(309) because T(4) is 309: Ramions number to layer 4

The Second type neutrinos have more chance to be generated or absorbed.

Neutrinos may start, interrupt, stop ramionic reactions and may be absorbed to or emitted (radiated) of it.

Neutrinos have short life if they get electrical charge, Baryons vice vera;

Black holes in the sky are huge neutrinos, most of them distributed their energy into the space because in some stochastic conditions small layers like 120, 480 could not stop the ramionic reaction (started by some quantum fluctuations) then very large layers did it.

Electrical charge balancing:

Up quark charge: +2/3 e

Down quark charge: -1/3 e

Proton= 2 (Up quark) +1 (Down Quark) → charge: +1

Neutron= 1 (Up quark) +2 (Down Quark) → charge:0

Any packet (31 B1 without electrical charge) can be transformed to (15 U +9 D +7 e) after **getting** electrical charge (**means emitting** equivalent electrical Potential energy) then transformed to (7 protons +7 electrons +1 neutron) after getting extra energy of collapsing layers 120 to 479. This extra energy saved as rotation (magnetic not electric) majority in Proton and Neutrons (with larger radius than electron). Electrical charge of this reaction is balanced.

31,15,7 in this packaging are $2^n - 1$ and 9 is $2^n + 1$ means **neutron to proton ratio of 7**

Strong layers can stop (or at least reduce ramionic reaction speed to create an opportunity for particles to settle charges and merging together). So we expect number of baryons at layer 119 to be **prime number** 31 but Maybe electrical charging or process speed let factor 5 to appear in the final number of ramion 5*31.

5.Ramion energy (E_r)

Ignoring rotational (magnetic energy) of electrons (in comparing to proton and neutron rotational energy with grater radius) And some little neutrino absorbed or emitted, Main Ramionic Reaction to produce B1 (Electron, Up and down quarks) is:

(26) $(T(479) - 31 \times 5 \times 309)E_r = K_P(1\ E_N + 7\ E_{Pr} + 7\ E_e)$

$E_N = 939.56542052$ MeV; $E_{Pr} = 938.27208816$ MeV; $E_e = 0.51099895000$ MeV;

$$E_r = K_P \frac{7511.04703029\ \text{MeV}}{367489759-3\ \times 5\times 309}\ ;T(479) = 367489759$$

(27) $E_r = [K_E]\ 102.2072845555\ \text{eV} = [K_E]\ 1.6375412314 \times 10^{-17}\text{J}$

If N4 neutrino are absorbed and not radiated:
$k_{Neu} = 1 - \frac{31\times5\times309}{367489759} = 0.99986966984$
If 36400 used instead of 36390:
$k_{100} = \frac{36400}{36390} = 1 + \frac{10}{36390} = 1.000274800769$
In scenarios 5 and 6 K_E must be devided by 12 and 24

K_E $E_e = 0.51099895\text{MeV}$	Scenario 1 $K_E = 1$ means: $K_p = 5;\ K_n = 1$	Scenario 2 $K_E = \frac{1}{5}$ means: $K_p = 1;\ K_n = 5$	Scenario 3 $K_E = \frac{6}{5}$ means: $K_p = 6;\ K_n = 1$
$n=N_{b1}$	36390	181950	36390
E_r	102.2072845555 eV	20.4414569111 eV	122.649414666 eV
$E_{b1} = N_{b1}E_r$	3.719323084975 MeV 7.27853371318 E_e $\approx (7)\ E_e$	Same as K_E=1	4.463187702 MeV 8.73424045582 E_e
$E_{Pe} = E_{B1} - E_e$	3.20832413498 MeV 6.27853371318 E_e	Same as K_E=1	3.95218875197 MeV 7.73424045582 E_e
Method 1: $E_D = E_{B1} - \frac{E_{Pe}}{9}$	3.36284262553 MeV	Same as K_E=1	4.02405561842 MeV
$E_U = E_{B1} - \frac{4E_{Pe}}{9}$	2.29340124721MeV	Same as K_E=1	2.70665936776 MeV
Method 2: $E_D = E_{B1} - \frac{6E_{Pe}}{66}$	3.42765725452 MeV	Same as K_E=1	4.10389781546 MeV
$E_U = E_{B1} - \frac{28E_{Pe}}{66}$	2.3582158762 MeV	Same as K_E=1	2.7865015648 MeV

When a packet get electrical charge it means delivering this energy to the reaction:
In **qurarks** up and down energy calculations we have two methods:

Method 1: wings get charge together and continuous

(28) $\mathrm{E_P} \propto Q^2 \rightarrow \mathrm{E_D} = \mathrm{E_{B1}} - \frac{\mathrm{E_{Pe}}}{9}\ ,\ \mathrm{E_U} = \mathrm{E_{B1}} - \frac{4\mathrm{E_{Pe}}}{9}$

(29) $\frac{\mathrm{E_P\ of\ Packet}}{\mathrm{E_{Pe}}} = (15 \times \frac{4}{9}) + (9 \times \frac{1}{9}) + (7 \times 1) = 14\frac{6}{9}$=14.666666

Method 2: wings get charge discretely and separately (seems to be more accurate) see (54)

(30) $\mathrm{E_P} \propto \sum_{k=1}^{n}(k-1) = \frac{n(n-1)}{2}, n: 4,8,12 \rightarrow \mathrm{E_P} \propto (6,28,66) \rightarrow \mathrm{E_D} = \mathrm{E_{B1}} - \frac{6\mathrm{E_{Pe}}}{66}\ ,\ \mathrm{E_U} = \mathrm{E_{B1}} - \frac{28\mathrm{E_{Pe}}}{66}$

(31) $\frac{\mathrm{E_P\ of\ Packet}}{\mathrm{E_{Pe}}} = \left(15 \times \frac{28}{66}\right) + \left(9 \times \frac{6}{66}\right) + (7 \times 1) = 14\frac{6}{9} = 14.181818$

About Scenarios 1 to 3:
Scenario 1 have more probability because we see 36390 in K_Q and G formulas.
Scenario 2 is possible because it means 31 baryons at layer 119 (and 31 is a prime number) and Scenarios 1 and 3 correspond t0 5*31 particles (that is not a prime number) **but** may be collapsing layer 120 leaves no opportunity to 5 baryon merging
Scenario 3 is possible because it results in more similar values to gluon modelling results $\mathrm{E_D} = 4.8\ \mathrm{MeV}\ , \mathrm{E_U} = 2.3\ \mathrm{MeV}$ but ramionics calculations are based on universe particles to have higher accuracy without any modeling based particle like gluon.

Currently scenarios 6 of 4 of 1 seems to be mora accurate.

6.Discovering and Calculating Planck Constant

When a matter particles (a neutrino or a baryon with $E_B = nE_r$ energy) is made of n ramion (ramion: Energy particle: Energy quanta) they collapse or explode and their energy is distributed into other ramions and a particle hole (exactly a black hole) is remained covered by 12 ramion named as wing.

We must analyse all space (toward all depths of universe) To analysis this particle (for example its gravity or electricity) which needs many integral calculations while we can ususally suppose a theoretical (or even imaginary) matter at that black hole area.

In most application we can suppose a point mass $m = E_n/c^2$ without any rotation in the center of hole. For more accuracy we can see theoretical matter is made of ramions (that have equal linear and rotation energy) so it has this property by default (without getting extra energy for example as photon) like all ramions:

(32) $E_B = E_{LB} + E_{RB}\ ;\ E_{LB} = E_{RB}\ ;\ E_{LB} = \frac{1}{2}mc^2;\ E_{RB} = \frac{1}{2}I_B\omega_B^2$

(33) $\rightarrow E_B = mc^2 = I_B\omega_B^2$

(34) $I_B = \int \rho_m\, r^2 dV = K_I m R_B^2$; I_B:Rotational Inertia ; R_B :Rotation Radius

K_I examples: loop:1, disk:1/2 , spherical surface: 2/3, spherical volume:2/5

(35) $R_B = K_{Rad} \times r$; r: ramions radius

K_{Rad} Examples: ramion size=hole size:1

wings electrical charge surface= max gravity=event horizon: $\sqrt{5}$

(36) $\boxed{E_B = \hbar_B\omega_B\ ;\ E_r = \hbar_r\omega_r}$; Planck constant definition for baryon and ramion

(37) $R_B E_B = R_B(\hbar_B\omega_B) = \hbar_B(R_B\omega_B) = \hbar_B c_B;\ c_B = R_B\omega_B$

(38) $\boxed{\hbar_B = \frac{R_B E_B}{c_B} = \frac{E_B}{\omega_B}}$;more fundamental definition

(39) $E_B = I_B\omega_B^2 = (K_I m R_B^2)\omega_B^2 = mc^2 \rightarrow K_I R_B^2\omega_B^2 = c^2\ ,\ c_B = \frac{c}{\sqrt{K_I}}$

(40) $\rightarrow K_I(K_{Rad}r)^2\omega_B^2 = c^2 \rightarrow \omega_B = \frac{\omega_r}{K_{Rad}\sqrt{K_I}}$

Neutrino(1) energy is equal to 1 Ramion:

(41) $\hbar_{N(1)}\frac{\omega_r}{K_{Rad}\sqrt{K_I}} = \hbar_r\omega_r \rightarrow \hbar_{N(1)} = K_h\hbar_r;\ K_h = K_{Rad}\sqrt{K_I}$

(42) $\boxed{\hbar_B = K_h n^4 \hbar_r}$

The origin of n^4 will be explained soon. In ramionics we know that $\hbar, c, K, G, \rho$ need a factor of n's power when n is number of ramions in desired particle.

We can select sahape, K_I, K_{Rad} of imaginary particle proper to simplify our calculations. for example:

In Ramionic level analyses it's better to select $K_{Rad} = 1, K_I = \frac{2}{5}, K_h = \sqrt{\frac{2}{5}}$ means a particle as an spherical volume in size of particle hole itself without indentation with wings.

In Gravity and electromagnetic calculation: $K_{Rad} = \sqrt{5}, K_I = \frac{2}{3}, K_h = \sqrt{\frac{10}{3}}$

In scaling constant and units: $K_{Rad} = \sqrt{\frac{1}{K_I}}, K_h = 1$

Anyway K_h factor effect range is (0.1 …10) like geometrical parameters.

7. Calculating Ramion Radius and electron radius, scaling units (r, c, E_r)

(43) Second unit has been defined based on 9,192,631,770 oscillation of microwave radiation of cesium-133 atom transition between its two hyper-fine energy levels From 1967.

Also c, h, e, KBoltzmann have been fixed on this standard values (without any more digits) as basic scaling units (instead of standard meter and Kg samples) From 2019.

(44) $$\left\{\begin{array}{c} c_r = 2.99792458 \times 10^{8}\,\mathrm{m/s}\ ;\ \text{In vacuum mean ramion} \\ h_{B1} = 6.62607015 \times 10^{-34}\ \mathrm{J\cdot s}\ \ ;\text{for baryon B1} \\ Q_e = 1.602176634 \times 10^{-19}\ \mathrm{C} \\ KBoltzmann = 1.380649 \times 10^{-2}\ \ \mathrm{J/Kelvin} \end{array}\right\};$$

(45) $\hbar_{B1} = \frac{h_{B1}}{2\pi} = 1.05457182 \times 10^{-34}\ \mathrm{J\cdot s}$;redused plank constant

We use above data and also we Calibrated E_r based on energy (or equivalent mass) of a{7 Protons+1 Neutrons+7 Electrons} Packet:

(46) $E_r = [K_E]\ 102.2072845555\ \mathrm{eV} = [K_E]\ 1.6375412314 \times 10^{-1}\ \mathrm{J}$

Now we can calculate any physic constant by (r, c, E_r)

(47) $\hbar_B = K_h n^4 \hbar_r \rightarrow \hbar_r = \frac{\hbar_B}{n^4 K_h} = \left[{K_n}^{-4}\right]\frac{1}{K_h} 6.01378557098 \times 10^{-53}\ \mathrm{Js}$

$36400 \rightarrow \hbar_r = \left[{K_n}^{-4}\right]\frac{1}{K_h} 6.00717973821 \times 10^{-53}\ \mathrm{Js}$;Ramion's ħ

(48) $r = \frac{\hbar_r c_r}{E_r} \rightarrow r = \left[{K_E}^{-1}{K_n}^{-4}\right]\frac{1}{K_h} 1.10097231364 \times 10^{-27}\mathrm{m}$;Ramion's r

$36400 \rightarrow r = \left[{K_E}^{-1}{K_n}^{-4}\right]\frac{1}{K_h} 1.100669848719 \times 10^{-27}\mathrm{m}$

(49) $r_n = nr \rightarrow r_e = [{K_E}^{-1}{K_n}^{-4}]\frac{1}{K_h}4.0064382493 \times 10^{-23}m$;Electron's r

$36400 \rightarrow$ same

8.Calculating Coulomb and Fine-Structure Constants

(50) $R^2F = k_{B1}\, e^2 = \alpha\, \hbar_{B1}\, c_r$; definition

Electrical Charge is equivalent to Torque and rotational Energy so similar electrical charges repel each other so collecting them on any surface needs energy (Like any capacitor) that can be calculated by two simple integrals (**Electromagnetic self energy**)

(51) $E_r = 2\, E_{Rr} = 4\, E_P = T$ =Torque

(52) $E_{\Delta Q} = \int_{\infty}^{r} -F\, dr = \int_{\infty}^{r} \frac{-\, K_r\, Q\, \Delta Q}{R^2} dR = \frac{K_r\, Q\, \Delta Q}{r}$ minus sign: save Energy

(53) $E_P = \int_0^{q_r} \frac{K_r\, Q\, dQ}{r} = \frac{K_r\, {q_r}^2}{2r}$ for any sphere or semi sphere with q_r charge

for particles consisted of n Ramion:

(54) $E_P = \sum_{t=2}^{n} (t-1)\ \frac{K\,(Q/n)^2}{2\, R_Q}$ R_Q: radius for charges surface

(55) $E_p = \frac{K}{2\, R_Q} \left(\frac{Q}{n}\right)^2 \frac{n\,(n-1)}{n^2} = \frac{K\, Q^2}{2\, R_q}\left(1 - \frac{1}{n}\right)$

(56) $K_Q = \left(1 - \frac{1}{n}\right)$; **Quantum Factor**

(57) $K_Q = \left(1 - \frac{1}{36390}\right) = 0.99997251992$; B1's Quantum Factor

(58) $E_r = 2 \times 2 \times \frac{K_r\, {q_r}^2}{2r}$

(59) $\rightarrow \alpha_r = \frac{K_r\, {q_r}^2}{E_r r = \hbar_r\, c_r} = \frac{1}{2}$

The coefficient Quantum Factor refines formulas needed to compensate error of continuous calculation on really discrete parameters. Here it converts Q^2 (considered as continuous parameter) to Q^2 as a discrete charge produced by ramions.

K_Q and K_W are dependent to g but independent of packet scenario

(60) $\frac{1}{\alpha} = 2^6\, \pi\, \gamma^2 \left(1 - \frac{1}{6 + \text{RoundUp}\left((12\pi)^2\, 2^6 \times \frac{4}{10}\right)}\right) \rightarrow \frac{1}{\alpha} \propto n \rightarrow\ \alpha \propto \frac{1}{n}$

(61) $R^2F = \alpha_{B1}\, \hbar_{B1} c \rightarrow\ K_{B1} e^2 \propto n^3$

(62) $(K_{B1} Q_{B1}^2) = (K_r Q_r^2) \left\{ n^3\, \frac{K_h}{K_w K_Q}\, \pi\beta \left(\frac{96}{10}\right)^2 \right\}$

Electrical charge is essentially a conventional parameter, yet the simplest convention seems to be assume that the Coulomb constant and electrical charge both are proportional to n.

Anyway in mutual state for example force between b1 and b2 must be calculated by geometrical mean of $(K_{B1}Q_{B1}^2)$ and $(K_{B2}Q_{B2}^2)$

9. Calculating G and other cosmological physic constant

Calculating G (for baryon B1)

(63) $hE_r = \int_0^r G_r\, m\, dm \frac{1}{R}$; $m = \left(\frac{4}{3}\right)\pi R^3\rho$; $dm = 4\,\pi R^2\rho\, dR$

(64) $\rightarrow E_r = \frac{3GM^2}{5r}$; Gravitational Self Energy

(65) $\rightarrow G_r = \frac{5\, r\, c^4}{3\, E_r} = 9.88141241595 \times 10^{27}\ m^3kg^{-1}s^{-2}$

(66) From above equation we understand that c for particle n is $\frac{c_r}{n^8}$

(67) $G = G_r\ \frac{1}{48n^8} = \frac{\hbar\, c^5}{96\, n^9\ E_{B1}^2} = \frac{\hbar\, c^5}{96\, n^{11}\ E_r^2}$; Ignoring K_w and K_Q ;

The exclusive way to Refine geometrical formula for G is increasing n from 36390 to 36400 it is the best sign for single baryon rotational (magnetic) energy equal to 10 ramion energy

(68) $G = \frac{\hbar\, c^5}{96\, n^{11}\ E_r^2} = 6.6743462768\ \times 10^{-11}\ m^3kg^{-1}s^{-2}$

Above value is accurate value for alpha (accuracy more than experiments)

(69)

$G = 6.67430(\pm 15) \times 10^{-1}$ experimental value, means 6.67415 to 6.67445

Sensitivity check:

$G = 6.6763754123\ \times 10^{-11}$; Using n=36390+9

$G = 6.6743462768\ \times 10^{-11}$; Using n=36390+10; correct values

$G = 6.6723296365\ \times 10^{-11}$; Using n=36390+11

(70) $\rho_{sr} = \varphi \frac{E_r}{\frac{8\pi}{3}r^3} = \frac{\pi}{3\sqrt{2}} \frac{1.6375412314\times 10^{-17}J}{\frac{8\pi}{3}(4.0064382493\times 10^{-23})^3} = 2.25067039743 \times 10^{49} \frac{j}{m^3}$

(71) $C^4 = 8\pi G\rho_s\, R_D^2$; Eq(100)

$LY = Light\ Year = 9.460730472580800\ \times 10^{15} m$

(72) $R_{Dr} = \sqrt{\frac{C^4}{8\pi G\rho_s}} = 3.80150891944 \times 10^{-23}\ m = 4.0181980984\times 10^{-3}\ \ LY$

This theory models matter, dark matter, and waves by altering the arrangement of Ramions, and therefore only the energy of space must be taken into account in calculations of the age and dimensions of the Universe.

Studies based on this theory open many avenues concerning the expansion of the Universe, the Big Bang, and cosmology, in addition to relativity, quantum theory, and elementary particles. In Ramion Theory all of universe is filled by Ramion, Ramion and space energy density is same even close to matter, so **maybe** we have to consider Dark energy (= Space energy density) share as 100% in calculation on Hubble constant H0, means 14.46×10^9 year Universe age and 14.46×10^9 LY observable radius.

10.Quantumized Gravity, Relativity, Strong Forece and so called Dark Matter

(73) $\rho_r = \frac{\rho_s}{\varphi}$, $\rho_s = \varphi\, \rho_r$, $\varphi = \frac{\pi}{3\sqrt{2}} = 74.048\%$

ρ_r: Ramion volume energy density

ρ_s: Space Energy density

Matter particles are not created by stopping or concentration of energy they are result of collapsing some ramions and distributing their energy into other ramions in the space, more close more share of energy. After that a black hole remains 12 expanded ramions with same radius (named wings) surround that hole. so not only light, but also mass is a wave in space. There is no particle-wave paradox except what our observation (by eye or device) and technology prefers or lets us.

When Ramions get extra energy they can't save it by increasing their pressure or velocity (light speed C) is on maximum value for this universe and there is no space to increase volume. They can tolerate a little extra pressure but only as fluctuation or short time in their dynamics and not in steady state, else they collapse consequently. Only remained way is expanding space itself. But time (for observer on ramions surface) also must be expanded (dialed) with same factor (to save c and energy values) also Space expansion factor must exactly Balance Force on any Ramion and layer simultaneously:

(74)
$$\begin{cases} F'_{(R)} = F_s \rightarrow r'^2_{(R)}\, P'_{(R)} = r_s^2\, P_s \rightarrow r'^2_{(R)}\, \rho'_{(R)} = r_s^2\, \rho_s \\ \rho'_{(R)} = \rho_s \left(1 - f_{(R)}\right), P'_{(R)} = P_s \left(1 - f_{(R)}\right) \\ t'_{(R)} = \frac{t_s}{\sqrt{1 - f_{(R)}}}\ ,\ r'_{(R)} = \frac{r_s}{\sqrt{1 - f_{(R)}}} \end{cases}$$

$F_s, r_s, t_s, P_s, \rho_s$: Ramions Bond force , radius, times base, pressure and density at far steady state space.

$F'_{(R)}, r'_{(R)}, t'_{(R)}, P'_{(R)}, \rho'_{(R)}$: Relative values sensed & observed at any ramions surface. They are less than P_r and ρ_r and so simulate a vacuum and gravity to the hole interpreted as matter.

Force on m2 is calculated by integralling $p' \times dS$ on its surface:

(75) $F = \int P' \times dS$

(76) $\rightarrow \quad F = (V_{m2} = \frac{m_2\, C^2}{\rho_2})(\frac{-\partial\, P'}{\partial\, R})$, minus for gravity

ρ_{m2}: when we consider a particle as compressed mass in its hole
g: gravity acceleration toward center

(77) $\rightarrow g_{m2} = (\frac{\rho_s}{\rho_2})\ \frac{c^2}{2}\ \left(\frac{-df}{dR}\right)$;for one particle m2 when m1>>m2

(78) $\rightarrow g_r = (\frac{\rho_s}{\rho_2})\ \frac{c^2}{2}\ \left(\frac{-df}{dR}\right)$; for one ramion or neutrino N1

Condition m1>>m2 means all space expansion is due to m1,it consists of too much particles, Force on above formula only calculates Force of m1 on m2, to resolve these criteria and have same (F1=force of m2 on m1) and (F2=Force of m1 on m2) we have to consider geometrical mean of $\frac{\rho_s}{\rho_{m1}}$ and $\frac{\rho_s}{\rho_{m2}}$; on the other hand density of hole particle is proportional to particle's energy to power 3 because we are consider all energy in a small particle hole with radius near to r. so the refining factor for g and G is:

(79) $G_{pq} = G_r\ \frac{\rho_s}{\sqrt{\rho_p\ \rho_q}}\ \ ;\ \ g_{pq} = g_r \frac{\rho_s}{\sqrt{\rho_p\ \rho_q}}$

energy balance equation:

(80) $m_1C^2 = E_{m1} = \int_0^\infty (\rho_s - \rho')\ 4\pi R^2\, dR$

(81) $m_1C^2 = 4\pi\rho_s \int_0^\infty f R^2\, dR$

So we have **3 criteria's:**

1 - $f_{(R)}$function must be bounded between 0 to 1, Continuous, Differentiable , monotonically decreasing functions, convergent to zero at infinity.

2 - $\left(\frac{-df}{dR}\right)$ functions Must be monotonically decreasing functions, convergent to zero at infinity.

3 – integral ($\int_0^\infty f\ R^2\ dR$) Must be finite and positive, so that energy can be balanced.

The general solution:

(82) $f = (\frac{B}{R})^k\ e^{-(\frac{R}{A})^P}$; criteria: $0 < p \leq k < 3$

factor $(\frac{B}{R})^k$ is needed to decrease function in close R when exponential factor $e^{-(\frac{R}{A})^P}$ is almost 1. exponential factor is needed to limit the calculated energy, forgetting this part leaded to dark matter idea.

In very close or accurate calculation we have to compute discrete equations of FCC lattice, all needed equations or supported in ramionics, but in most application Continuous analyses is enough:

Solution A: Integer k and p

(83) $f = \sum f_{kp} = \sum (\frac{B_{kp}}{R})^k e^{-(\frac{R}{A_{kp}})^P}$

Gravitational Acceleration:

(84) $g = \sum g_{kp} = \sum \frac{C^2}{2} \left(\frac{-df_{kp}}{d_R}\right) = \frac{C^2}{2} \sum (\frac{B_{kp}}{R})^k \frac{1}{R} \left\{ k + p (\frac{R}{A_{kp}})^p \right\} e^{-(\frac{R}{A_{kp}})^P}$

Energy Balance:

(85) $E = \sum E_{kp} = \sum 4\pi\rho_s B_{kp}^k A_{kp}^{3-k} z_k(p)$

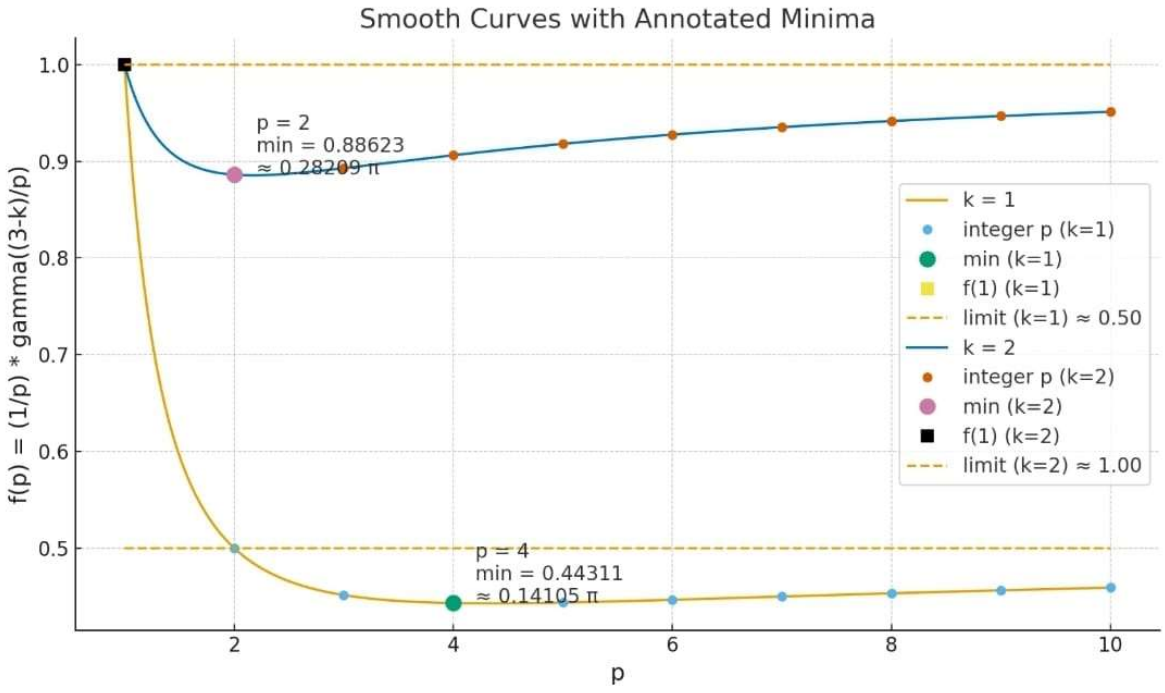
(86) $z_k(p) = \left(\frac{1}{p}\right) \Gamma\left(\frac{3-k}{p}\right)$ when $\Gamma(n) = (n-1)!$ Gamma function

Therefore: we have 3 terms in answer :

K=1, p=1 Long Range Gravity: consist of bright Gravity (proportional to 1/R2 as great Newton and great Einstein said) and Dark Gravity at far range (so called dark matter that Ramion Theory explains and models it simply without any dark matter particle)

K=2, p=1 Middle Range Gravity (between short and long) maybe its helpful for fitting long range and short range gravities.

K=2, p=2 short Range Gravity means Strong force



$$\textbf{(87)}\ \rho'_s = \rho_s\left(1 - \frac{R_F}{R}e^{-\frac{R}{R_D}} - \left(\frac{B_1}{R}\right)^2 e^{-\frac{R}{A_1}} - \left(\frac{B_2}{R}\right)^2 e^{-\left(\frac{R}{A_2}\right)^2}\right)$$

Long, Mid, and short range gravity in one equation:

$$\textbf{(88)}\ g_r = \frac{C^2}{2R}\left\{\begin{array}{c}\left(\frac{R_F}{R}\right)^1\left(1+1\left(\frac{R}{R_D}\right)^1\right)e^{-\frac{R}{R_D}} \\ +\left(\frac{B_1}{R}\right)^2\left(2+1\left(\frac{R}{A_1}\right)^1\right)e^{-\frac{R}{A_1}} \\ +\left(\frac{B_2}{R}\right)^2\left(2+2\left(\frac{R}{A_2}\right)^2\right)e^{-\left(\frac{R}{A_2}\right)^2}\end{array}\right\}$$

In energy balancing we can ignore energy for k=2 parts:

$$\textbf{(89)}\ R_F = \frac{2G\,M}{C^2}\ \text{and}\ g = \frac{GM}{R}\left(\frac{1}{R}+\frac{1}{R_D}\right)e^{-\frac{R}{R_D}}$$

$$\textbf{(90)}\ E = 4\pi\rho_s\left\{\begin{array}{c}R_F^1\,R_D^2\int_0^\infty x\,e^{-(x)^1}\,dx \\ +\,B_1{}^2\,A_1{}^1\int_0^\infty x^2\,e^{-(x)^1}dx \\ +B_2{}^2\,A_2{}^1\int_0^\infty x^2\,e^{-(x)^2}dx\end{array}\right\}$$

(91) $E = 4\pi\rho_s\, R_F^1\, R_D^2$

(92) $\rightarrow \quad E = 4\pi\rho_s \left(R_F = \frac{2\,G\,M}{C^2}\right) R_D^2$

(93) $\rightarrow C^4 = 8\pi G\rho_s R_D^2$ relating light speed c , G constant, space energy density ρ_s and radius of dark gravity observation R_D.

Solution B: floating k and p ; better, easier and more accurate

As the distance R decreases from infinity to RF, parameters k=p increase from 1 to 2:

(94) $k = p = \left(1 + \frac{R_F}{R}\right)$

$R >> R_F$ results in K=p=1

R_F : Surface of particle hole where k=p=2

(95) $R_F = \frac{2G\,M}{C^2}$

(96) $\rho'_s = \rho_s(1-f) = \rho_s\left(1 - \left(\frac{R_F}{R}\right)^{\left(1+\frac{R_F}{R}\right)} e^{-\left(\frac{R}{R_D}\right)^{\left(1+\frac{R_F}{R}\right)}}\right)$

(97) $\left\{\begin{matrix} R_D \gg R_F \\ \text{Normal Gravity} \\ \text{including Dark Gravity} \\ \textit{So called Dark matter}\end{matrix}\right\} \rightarrow \left\{\begin{matrix} \rho'_s = \rho_s\left(1 - \frac{R_F}{R}\right)e^{-\frac{R}{R_D}} \\ g = \frac{G\,M}{R}\left(\frac{1}{R} + \frac{1}{R_D}\right)e^{-\frac{R}{R_D}}\end{matrix}\right\}$

(98) $\left\{\begin{matrix} R_D \approx R_F \\ \textit{Strong Force}\end{matrix}\right\} \rightarrow \left\{\begin{matrix} \rho'_s = \rho_s\left(1 - \left(\frac{R_F}{R}\right)^2\right) \\ g = 2\frac{c^2}{2R}\left(\frac{R_F}{R}\right)^2 = \frac{4G^2M^2}{c^2R^3}\ ; M = M_1 : close, M2 : far \\ \text{mutual Force} = \frac{4G^2 M1^{3/2} M2^{3/2}}{c^2R^3}; both\ M_1 and\ M_2 : close\end{matrix}\right\}$

(99) $E_m = \rho_s \int_0^\infty f\ 4\pi R^2\ dR$

(100) $E_m = 4\pi\rho_s R_F R_D^2 \left(1 + \frac{R_F}{R_D}\left(\ln\left(\frac{R_F}{R_D}\right) + 2\gamma - 1\right) + O\left(\frac{R_F^2}{R_D^2}\right)\right) \approx E_m = 4\pi\rho_s R_F R_D^2$

$\rightarrow \boxed{C^4 = 8\pi G\rho_s R_D^2}$; same as solution A

γ =0.5772156649 Euler - Mascheroni constant

O: big O function, Order of the error term, nothing to calculate

(101) $E_x = \rho_s \int_0^x f\, 4\pi R^2\, dR == 4\pi\rho_s R_F R_D^2 \left(1 - e^{-\frac{x}{R_D}}\right)\left(1 + \frac{x}{R_D}\right)$

$= 4\pi\rho_s x R_F R_D$; for small x

E_x is proportional to x near centre, it means density is proportional to $\frac{1}{R^2}$ so We can conclude If we suppose all mass concentrated in the particle hole (for simplify calculation and not really), its density inside the hole changes proportional to $\frac{1}{R^2}$, the results are same:

(102) $\begin{cases} \int_0^{R_H} (\rho_m \frac{R_H^2}{3R^2})\, 4\pi R^2 dR = \rho_m \left(\frac{4\pi}{3} R_H^3\right) \\ \int_0^{R_H} (\rho_m)\, 4\pi R^2 dR = \rho_m \left(\frac{4\pi}{3} R_H^3\right) \end{cases}$

Relativity and Time dilation

(103) $t_{(R)} = \frac{t_s}{\sqrt{1 - f_{(R)}}} = t_s \sqrt{\frac{\rho_s}{\rho'_s}} = \frac{r^2}{{r_s}^2} = t_s \frac{r}{r_s}$

For example in long range part of gravity:

(104) $t_{(R)} = \frac{t_s}{\sqrt{1-(\frac{R_F}{R})}} = \frac{t_s}{\sqrt{1-(\frac{2G\,M}{c^2\,R})}}$

If a mass moves at speed **v**, we obtain the following relation:

(105) $t_{(R)} = t_s \sqrt{1 - (\frac{v^2}{c^2} = \frac{R_F}{R})}$

There is no distinction between these two terms $\frac{v^2}{c^2}$ or $\frac{R_F}{R}$ just as a body must obtain the speed V (escape velocity) to escape of gravity of itself.

However, the speed and the energy are observer-independent. When a mass "moves", the ramions effectively move in the opposite direction because mass is a hole and distributed energy in all space.

In this theory we can study time dilation more than relativity or quantum theories by above formulas.

Energy of moving objects:

We can simply form R' function like to R'(x,y,z) or R'(R,θ,φ) or R(r, φ,z) to obtain distance of any point in space to last position of object due to ratio of its (v or ω) to c.
(in fact gravitational wave is travelling by light speed because this is maximum speed of data or energy through Ramions unless a narrow net connects two Ramions by empty geometry between other Ramions in warm hole or entanglement state)
Anyway we consider gravity speed as c

(106) $$E = \rho_s \int \frac{R_F}{R'} e^{-\frac{R'}{R_D}} dV$$

for example in spherical:

(107) $$E = \rho_s \int \frac{R_F}{R'} e^{-\frac{R'}{R_D}} 4\pi R^2 dR$$

If an object moves with speed x along a straight line, every point in space (at distance R from it) senses it $v\,\Delta t$ behind, therefore:

If an rotates on a circle of radius r with angular speed ω:
So in Ramin theory energy of rotating object on closed routes is not infinity
and based on the path we simply and accurately compute the energy attributed to the object.

11.Electromagnetism and weak Force

Electrical field distribution:

Ramions supply E_P easily by getting align with electrical field and a little indentation, with giving Energy of overlapped volume to space and a little decreasing in their pressure. No need to expand or stretch the space. They need manipulating space time when receiving energy not at sending energy because they can't increase the pressure. This process describes how electrical field is distributed without any energy or need to photon or electrical field lines.

Weak Force: If we calculate Gravity force and electromagnetic force accurately (and discretely if needed) we can see weak force for example any particle at close distance has 12 wings as electrical charge (and also as bonding point), and even a quark up (with positive charge) and electron may have repulsive force in some orientations or ramion indentation to supply electrical potential energy may results in some ramionic reactions (matter – energy transforming)

Suppose two particles $(Q1, R1, r1 = r_{m1})$ and $(Q2, R2, r2 = r_{m2})$
Q2 on centre and Q1 on Z axis at far distance: R>>R1 and R>>R2

(108) $V_{common} = 2V_{cap} = 2\pi d^2 r(1 - \frac{d}{3r})$

r, v: ramions radius and volume , d: indentation depth
any commom volume consists of 2 caps

(109) $\frac{V_c}{V} = \frac{3}{2}\left(\frac{d}{r}\right)^2\left(1 - \frac{d}{3r}\right) = \frac{3}{2}\left(\frac{d}{r}\right)^2 \; ; \; d \ll r$

Electrical Potential Energy of Q1

(110) $E_{p1} = \frac{K_r}{2R_1} {Q_1}^2 (1 - \frac{E_r}{E_{Q1}})$

(111) $R_1 = \sqrt{5}\, r_1$; a little larger than $2r_1$

Radius of an electrically charged particles must be defined on a radius that sum of internal part of ramions is exactly equal to sum of external part of ramions. $\sqrt{5}$ is calculated by geometry. r1 is the radius of central hole = radius of any of 12 ramions surrounded it.

(112) $E_{p1} = 12\, E_{Q1L1}\, \frac{V_c}{V} = 18\, \rho_r \left(\frac{d_1}{r_1}\right)^2$;; E_p supplied by indentation

E_{Q1L1}: Energy of layer 1 ramions of Q1

d1: indentation of layer 1 to layer 2 to supply Electrical potential energy. layer2 will get total of this energy be indentation to layer 2 and …This process explain how electrical field is distributed in the space.

(113) $E_{p1} = \rho_r 2\pi r\,(d_n)^2\,L(n)$; E_p Distribution on layer n

(114) $L(n) = 10n^2 + 2$; R = □'n2r ; from Fcc Geometry

(115) $E_{p1} = \rho_r 2\pi r\,(d_n)^2 \frac{10R^2}{4\ \alpha'^2\ r^2}$; $E_{p1} = \frac{K_r}{2\,R_1} {Q_1}^2 (1 - \frac{E_r}{E_{Q1}})$

(116) ${d_{(R)}}^2 = \frac{\alpha'^2}{10\,\pi}\ \frac{k_r}{\rho_r}\ {Q_1}^2 \left(1 - \frac{E_r}{E_{Q1}}\right) \frac{r}{R_1}\ \frac{1}{R^2}$ → d: Proportional to $\frac{1}{R}$

pressuring part of ramions energy supports **Ep energy** while **rotating part** of ramions energy carries **electrical Force**. **So electrical field distributes to infinity by indentation without and force and without any energy**. Until it hits to another electrical charge Q2.

At **first step** we suppose Q1>>Q2 so ramions layer 1 of Q2 have indentation normal to z axis due to Q1 (anyway their torque direction is from centre of Q2)

Moment of inertia in parallel with rotation axis:

(117) $I_{\parallel} = I_Z = \frac{\pi\, m}{60} d^3 (40\, r^2 - 30\, d\, r + 6\, d^2)$

Moment of inertia Normal to rotation axis:

(118) $I_{\perp} = I_X = \frac{\pi\, m}{60} d^2 (60\, r^3 - 80\ d\, r^2 + 45\ d^2 r - 9\, d^3)$

Total Moment of inertia as great Edward John Routh explained:

(119) $I = I_{\parallel}\, Cos^2\theta + I_{\perp}\, Sin^2\theta$

(120) $F_Z = \frac{\pi}{4}\, \rho_m \omega^2 d^2 (2r_2 - d)^2 Sin^2\theta$

F_z or Force toward Q1 generated by rotation of any ramion around Q2 black hole:

(121) $F_Z = \pi \frac{\rho_r}{c^2} \omega^2 d^2 {r_2}^2 Sin^2\theta\ ;\ \rho_m = \frac{\rho_r}{c^2}\ ;\ r_2 \ll d$

(122) $F_Z = \pi\, \rho_r \frac{d^2 {r_2}^2}{r^2} Sin^2\theta\ ; c = r\omega$

(123) $F_2 = (8\ (sin\ \frac{\pi}{4})^2 + 4\,(sin\ \frac{\pi}{2})^2)\ F_Z$; $F\ of\ Q_1 on\ Q_2$

(124) $F_2 = 8\, F_Z$

(125) $F_2 = 8\pi\, \rho_r \frac{{r_2}^2}{r^2} d^2$; ${d_{(R)}}^2 = \frac{\alpha'^2}{10\,\pi}\ \frac{k_r}{\rho_r}\ {Q_1}^2 \left(1 - \frac{E_r}{E_{Q1}}\right) \frac{r}{R_1} \frac{1}{R^2}$

(126) $F_2 = \frac{8\,\alpha'^2}{10}\ \frac{{r_2}^2}{r\,R_1\,R^2} k_r {Q_1}^2 \left(1 - \frac{E_r}{E_{Q1}}\right)$

to make symmetry and remove criteria $Q_1 \gg Q_2$:

(127) $$F_1 = \frac{8\,\alpha'^2}{10}\frac{{r_1}^2}{r\,R_2\,R^2}k_r{Q_2}^2\left(1-\frac{E_r}{E_{Q2}}\right)$$

(128) $$F = F_{Q1,Q2} = \sqrt{F_1F_2}$$

(129) $$F = \frac{8\,\alpha'^2}{10}\sqrt{\frac{{r_1}^2}{r\,R_1}}\sqrt{\frac{{r_2}^2}{r\,R_2}}\frac{k_rQ_1Q_1}{R^2}\sqrt{1-\frac{E_r}{E_{Q1}}}\sqrt{1-\frac{E_r}{E_{Q2}}}$$

(130) $$\frac{8\,\alpha'^2}{10}\sqrt{\frac{{r_1}^2}{r\,R_1}}\sqrt{\frac{{r_2}^2}{r\,R_2}}=1$$

12.Matter–antimatter Asymmetry

Our Universe is similar to a Ramion—perhaps a ramion nested within its mother cosmos, with the possibility of an unbounded mother–daughter hierarchy, or even a recursion in which the whole curls back into its own core. In any case, the only plausible rationale for the breaking of matter–antimatter symmetry is that our Universe is currently performing the rotation.

If, in our surroundings (i.e., within the hemisphere of the Universe we inhabit), the rotation is such that a slight negative charge resides in the internal vacuum of space, then this small excess (together with electric-charge conservation) drives the heavier particles to become + and the lighter particles to become −.

Thus, in the other hemisphere of our universe, antimatter may perhaps dominate.

Therefore, if cosmological observations in our vicinity allow us to determine the prevailing direction of rotation, that direction, reflected within the ramion, can likewise indicate whether a clockwise produces of a ramion corresponds to positive or to negative charge.

Photon is not merely an electromagnetic wave; macroscopic bodies may likewise be regarded as hypothetical quanta. Accordingly, both material quanta and photon are, in essence, waves rather than particles. Under certain observational conditions, however, they may be perceived and registered as particles.

13.Photons

A single Ramion cannot act as a photon on its own, because it would have to change either its rotational speed or its direction of rotation, and it has no force to accomplish either. Consequently, the electric field generated by the rotation of the Ramion—and, on larger scales, as described by the Maxwell's equations—by its own rotation gives rise to a magnetic field. However, since this energy transfer ultimately proceeds in the form of Ramion quanta, it can be regarded as a quantum of energy, termed photon. The energy of this photon is similar to the hypothetical Coriolis force:

(131) $F = m(c) \times w$

(132) $E = m\,(rv) \times w = mrc\,w =$

$\hbar = mrc \quad [reduced\ Planck\ constant\ ] \rightarrow E = \hbar w \quad [For\ photon]$

$[For\ real\ Ramion]\ \hbar\, c = mrc^2 = m\,c^2\,r = er$

14.Bosons

Figure 1: Elementary particle table

Ramionics no need to define any force carrier or mass generator
Bosons may be some neutrno, baryon of different generation and even more complex particles:
Any ramion has 12 bonding point

15.More about Calculating radius and strength of of FCC layers

1-Volume Models

R_{MPV} : Maximized Planar Volume

R_{MCV} : Maximized Curved Volume, Caps

2-Surface Models

R_{MTS} : Maximized Total Spherical Surface (of Ramions Surface)

R_{MNS} : Maximized Normal ($cosine\ weighted$) Spherical Surface

R_{MPS} : Maximized Planar Section Surface, Circles ;

for layer one: $\boldsymbol{R_S = R_{MPS1} = R_{ETS1} = \sqrt{5}\, r}$

R_{MCS} : Maximized Curved Section Surface

3-Radial Models

3.1-Equalisation Base radial:

$\boldsymbol{R_{EPV}}$:Equal Planar Volume (Internal and external due to R)

$\boldsymbol{R_{ECV}}$: Equal Curved Volume (Caps)

for layer one: $\boldsymbol{R_V = R_{ECV1} = R_{E1} = 2.1219157809\, r}$

$\boldsymbol{R_{ETS}}$: Equal Total Spherical Surface (of Ramions Surface)

$\boldsymbol{R_{ENS}}$: Equal Normal $cosine\ weighted$ Spherical Surface (of Ramions).

Layers have too much radius definitions and even we can define new radius by equalisation or maximization any couple of them. For example:

$\boldsymbol{R_E}$**:** Equilibrium radius: Equal derivative of the occupied volume fraction and the cosine weighted surface contribution

(133) $$\frac{d}{dR}\frac{Volume\ occupancy}{R^3} = \frac{d}{dR}\frac{cosine\ weighted\ surface}{R^2}$$

(134) $$3u^4 - 16\,u^3 + 18u^2 + 11 = 0\,;u = \frac{R_e}{r}$$

(135) $$\rightarrow\ R_{E1} = 2.1219157809\,r = R_1 + 2.1219157809\,r$$

(136) 2.12131403803529

Physical Meaning: At Re, the volumetric expansion and the surface flux of the layer are dynamically balanced. This represents the geometric point where neither surface-dominated nor volume-dominated growth prevails.

3.2-Range based radial:

$\boldsymbol{R_{AP}}$: Include or covers All Points of ramions volume, maximum distance to centre

$\boldsymbol{R_{NP}}$: include None of Points this layer ramions volume, minimum distance to lattice centre, equals to previous layer R_{AP}

$\boldsymbol{R_{AC}}$: Include or covers All Centres of ramions volume, maximum distance to centre

$\boldsymbol{R_{NC}}$: include None of Centres this layer ramions volume, minimum distance centre

$\mathbf{R_{MR}}$: mid range of all point or cenres: $\frac{R_{AP}+R_{NP}}{2} = \frac{R_{AC}+R_{NC}}{2}$

$\mathbf{R_{CMed}}$: Centres median, median of distance between ramion Centres and lattice centre

3.3-Average based radial:

R_{CMn}: power mean of centres position = $\sqrt[n]{\sum R_c^n}$

R_{CM}: Mean of centres position (=**R=Default Radius of layer)**

The methods to determine strongest layer against collapsing:

1-mechanical test: too expensive: we need 3,333,333,333 testing bolls with force and torque sensors and a pressing system to determine weak and strong layers (only for layer 1 to 1000 analysis)

2-Computerised simulation: expensive yet: needs heavy program and huge super computers to analyse all forces and torques on so much spherical surface.

3-Radius analysis: layers that their all types of radius have relation similar to layer 1 or ∞ are strong because in layer 1 or ∞ all ramions are tangent to make strong layer. This method is better than two above mentioned methods but very hard yet

4-The best method introduced in Ramionics: 120 multipliers

16.More about alpha 1/137…

1. Richard P. Feynman (1918–1988)

“There is a most profound and beautiful question associated with the observed coupling constant, $e^2/\hbar c$... It’s one of the greatest damn mysteries of physics: a magic number that comes to us with no understanding by man.”

2. Wolfgang Pauli (1900–1958)
“When I die, my first question to the Devil will be: What is the meaning of the fine-structure constant?”

3. Albert Einstein (1879–1955)
“The constant α has the value of about 1/137. Nobody knows why. It seems to be one of the greatest unsolved problems in physics.”

4. Max Born (1882–1970)
“If α were bigger than it really is, we should not be able to distinguish matter from ether... The fact that α has just its value 1/137 is certainly no chance but itself a law of nature.”

5. Paul Dirac (1902–1984)
“One could perhaps hope that the fine-structure constant will one day be explained by a fundamental theory, but at present it remains an empirical mystery.”

6. John Archibald Wheeler (1911–2008)
“Why do these constants of nature come together to make the particular number 1/137.036 and not some other number?”

7. Freeman Dyson (1923–2020)
“The number 137 comes in at so many levels of physics that it cannot be coincidence.”

8. Arthur Stanley Eddington (1882–1944)
“The fine-structure constant is really the ratio of two natural units of action... Its significance reaches into the structure of the universe itself.”

9. Steven Weinberg (1933–2021)
“The fine-structure constant sets the strength of electromagnetic interactions. Were it much different, chemistry and life as we know it would be impossible.”

10. Murray Gell-Mann (1929–2019)
“We can calculate many things, but we do not calculate the fine-structure constant. It simply exists.”

11. Sheldon L. Glashow (1932–)
“The Standard Model contains 17 particles and about the same number of arbitrary constants, among them the fine-structure constant—this is deeply unsatisfying.”

12. Julian Schwinger (1918–1994)
“It would be a triumph of theoretical physics to derive α from first principles.”

13. Enrico Fermi (1901–1954)
“No one knows what determines the value of α, and until we do, physics will not be complete.”

14. Niels Bohr (1885–1962)
“In the fine-structure constant we meet a number that appears to set the scale of all electromagnetic phenomena.”

15. Hendrik Lorentz (1853–1928)
“The fine-structure constant connects the worlds of mechanics, electromagnetism, and quantum theory in a single dimensionless number.”

16. Max Planck (1858–1947)
“Every dimensionless constant of nature hides a mystery; α is the deepest of them all.”

17. Werner Heisenberg (1901–1976)
“When I see the fine-structure constant, I get the feeling that God is telling us: ‘You will never understand me completely.’”

18. John D. Barrow (1952–2020)
“If we could explain α, we might explain why the universe allows life.”

19. Frank Close (1945–)
“Without the value of α, the periodic table could not exist.”

20. George Gamow (1904–1968)
“God made the integers; all else is the work of man—except perhaps the fine-structure constant.”

21. Lev Landau (1908–1968)
“α is one of those constants that will be understood only when we have a unified field theory.”

22. Brian Greene (1963–)
“The fine-structure constant ties the threads of electromagnetism and quantum mechanics together.”

23. Sean Carroll (1966–)
“There’s a hint that 1/137 is more than coincidence; it’s a whisper of deep mathematical structure in the fabric of the cosmos.”

24. Michio Kaku (1947–)
“To a physicist, α is a key that might unlock the ultimate theory of everything.”

25. Lisa Randall (1962–)
“We often wonder why the constants of nature are what they are. The fine-structure constant remains the most tantalizing.”

26. Roger Penrose (1931–)
“The number α has a precision that seems to be woven into the structure of space-time.”

27. Kip Thorne (1940–)
“α is a reminder that nature speaks mathematics far beyond our intuition.”

28. Edward Witten (1951–)
“In string theory, α appears naturally, yet we still do not know why it takes its specific value.”

29. Leonard Susskind (1940–)
“Every attempt to explain 1/137 ends in more questions—it’s like nature’s own riddle.”

30. Stephen Hawking (1942–2018)
“If the fine-structure constant had been only slightly different, life would not have appeared in the universe.”

31. Martin Rees (1942–)
“The fine-structure constant is one of the six numbers that determine the essential features of our universe.”

32. Paul Davies (1946–)
“α is one of those fingerprints of the cosmos that seem tuned for life.”

33. Frank Wilczek (1951–)
“1/137 is nature’s most famous mystery number.”

34. George Smoot (1945–)
“The constant α tells us how light and matter talk to each other.”

35. Carlo Rovelli (1956–)
“The fine-structure constant bridges quantum mechanics and the structure of space-time.”

36. John Polkinghorne (1930–2021)
“The values of constants like α look astonishingly designed for a universe of complexity.”

37. Brian Cox (1968–)
“If we ever find why α equals 1/137, we’ll glimpse the handwriting of the universe.”

38. Sabine Hossenfelder (1976–)
“The fine-structure constant is not just a number—it’s a measure of our ignorance.”

39. Peter Higgs (1929–)
“We can measure α with extraordinary accuracy, yet we don’t know why it is what it is.”

40. Lawrence Krauss (1954–)
“Maybe someday a deeper theory will tell us why the universe chose 1/137 instead of 1/138.”

41. Lisa Meitner (1878–1968)
“In α we see the unity of matter, light, and quantum action.”

42. Heinz Pagels (1939–1988)
“The fine-structure constant is one of the signatures of God in the equations of physics.”

43. Carl Sagan (1934–1996)
“Maybe 1/137 is the cosmic password for intelligent life.”

44. James Peebles (1935–)
“Without the exact value of α, stars would neither shine nor last.”

45. Richard Muller (1944–)
“1/137 is the most remarkable number because it unites three worlds: relativity, quantum mechanics, and electromagnetism.”

46. Leonard Susskind (1940–)
“The fine-structure constant will be the Rosetta stone of fundamental physics.”

47. Michael Duff (1949–)
“If any number deserves the title ‘cosmic constant,’ it’s 1/137.”

48. John Baez (1961–)
“The fine-structure constant is like nature’s way of saying: mathematics and physics are married forever.”

49. Freeman Dyson (1923–2020)
“It’s not unreasonable to think α might be the fingerprint of a deeper mathematics behind physics.”

50. Arthur Eddington (1882–1944)
“Perhaps the universe is not only queerer than we suppose, but queerer in a way dictated by 137.”

51. David Bohm (1917–1992)
“The constancy of α suggests that the universe maintains an inner coherence through all its transformations.”

52. Hermann Weyl (1885–1955)
“The appearance of α in quantum theory is no accident—it reflects the harmony between the continuum and the discrete.”

53. Abdus Salam (1926–1996)
“The fine-structure constant might be the bridge between quantum electrodynamics and cosmology.”

54. Ilya Prigogine (1917–2003)
“The number 1/137 belongs to the same family of constants that make order possible in chaos.”

55. Eugene Wigner (1902–1995)
“The unreasonable effectiveness of mathematics may find its cause in numbers like 1/137.”

56. Philip Anderson (1923–2020)
“α is the most experimental of constants and the most philosophical of numbers.”

57. Yakov Zel'dovich (1914–1987)
“The value of α is not arbitrary; it is a cosmological signature.”

58. Bryce DeWitt (1923–2004)
“The fine-structure constant could be the link between quantum gravity and ordinary matter.”

59. Max Tegmark (1967–)
“If mathematics is the language of the universe, α is one of its first syllables.”

60. Andrei Sakharov (1921–1989)
“The fine-structure constant defines the possibility of complexity in the universe.”

61. Gerard ’t Hooft (1946–)
“α represents a fundamental symmetry that our theories have not yet captured.”

62. Edward Teller (1908–2003)
“To change α would be to rebuild the cosmos from its foundation.”

63. John Wheeler (1911–2008)
“In α, the universe reveals a deep design of self-consistency.”

64. Freeman Dyson (1923–2020)
“The question of α’s origin is a meeting point of physics and metaphysics.”

65. Sean Carroll (1966–)
“Perhaps α is not a constant at all, but a conversation between time and the laws of nature.”

66. Lisa Randall (1962–)
“The fine-structure constant may be the universe’s way of balancing elegance and necessity.”

67. Roger Penrose (1931–)
“The fine-structure constant might one day lead us to the mathematical soul of reality.”

68. Frank Wilczek (1951–)

“When we understand α, we will have taken the first step toward knowing why there is something rather than nothing.”

69. Freeman Dyson (1923–2020)
“α is the fingerprint of creation written into the equations of light.”

70. Richard Feynman (1918–1988)
“All the mathematics in the world would be meaningless without that little number, 1/137.”