Calculation of Everything by Q-theory

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May 16, 2021

Keywords: Big Bang, Dark energy, Dark matter, Planck units, Theory of everything

Abstract The purpose of this study is to describe the calculation algorithm for everything that was calculated in previous studies. All calculations are divided into kinetic state and steady state. When analyzing forces, kinetic state is correct, and when analyzing other particles, steady state is correct. The entire universe is the mixture of kinetic state and steady state at the ratio of dark energy. The origin of all things are three generation neutrinos, graviton, photon, and gluon. Other particles are a combination of the above 6 particles. Force is also a particle with mass, and from its analysis, the ratio of dark energy and dark matter is calculated as 2.692. Our universe is on a dimensional horizon within a 4D supermassive anti-black hole. From Schwarzschild formula, the ratio of dark matter and ordinary matter is calculated as 84.6%: 15.4%. The values of electron neutrino, light, weak force, gravitational force, up quark, charm quark, down quark, strange quark, H boson, cosmological constant, birth of life, stellar black hole, intermediate-mass black hole, supermassive black hole, the radius of Big Bang, and the mass of Big Bang were calculated as 0.1531 eV, 1.795E-36 eV, 1.010E-6, 5.904E-39, 2.254 MeV, 1277.7 MeV, 4.756 MeV, 95.16 MeV, 125.02 GeV, 1.0883E-52 /m^2, 3.64E9 LY ago, 2.83 M_Θ, 32.8 M_Θ, 341 kM_Θ, 31.2 LY, 1.00E14 M_Θ. The six generation Planck units are calculated, and from Planck mass and dark mass it is proved that universe expands at a constant velocity. The physical values of all multi-verse will be the same as above. Given the 4th digit of muon and tau neutrino masses, and the correct masses of top and bottom quarks, the calculations will be more accurate.

1. Introduction

In previous studies, the mass of H boson was calculated easily from logarithmic parabolic equation relationship of W boson and Z boson[1], the characteristics of logarithmic elliptic equation and the principle of universal change were described[2], the dimension of our space was calculated as 6.00108 from the masses of electron, muon, and tau[3], the standard masses and oscillating masses of three generation neutrinos and gravinos were calculated[4], the mass of up quark was calculated [5], four fundamental forces were unified by logarithmic parabolic equation[6], the masses of proton and neutron were calculated[7], the masses of up, charm, down, and strange quarks were calculated[8], the cosmological constant problem was solved and the six generation Planck units were calculated[9], the masses of stellar black hole, intermediate-mass black hoke, and supermassive black hole were calculated[10], and the ratio of dark energy, dark matter, and ordinary matter were calculated[11].

The purpose of this study is to suggest the calculation of everything by summarizing all the contents calculated in previous studies[1-11].

2. Analysis of kinetic state

2.1 Kinetic State [3]

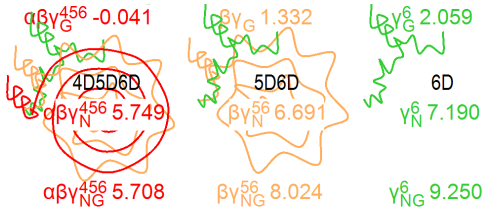

Fig. 1 Shapes of electron, muon, and tau

Kinetic state means a state that moves such as the speed of light. The masses of particles for kinetic state are calculated in Fig. 2.

2.2 Electron, Muon, Tau [NG][3]

The masses of electron, muon and tau are precisely measured as 510.999 keV, 105.658 MeV, and 1.77686 GeV. It is confusing whether they are in kinetic state or steady state. It is judged that both of above are correct. When the graviton, photon, and gluon react with force, they are in kinetic state, otherwise they are in steady state.

In Fig. 1, the shapes of electron, muon, and tau are shown. Here, α, β, and γ means 4D, 5D, and 6D particles, N means oscillating neutrino, and G means oscillating gravino. Electron is composed of $\alpha\beta\gamma_{NG}^{456}$ particles. When electron collides, the outer shell α_{NG}^{456} peels off, and it change to muon of $\beta\gamma_{NG}^{56}$. When muon collides, the outer shell β_{NG}^{5} peels off, and it change to tau of γ_{NG}^{6}.

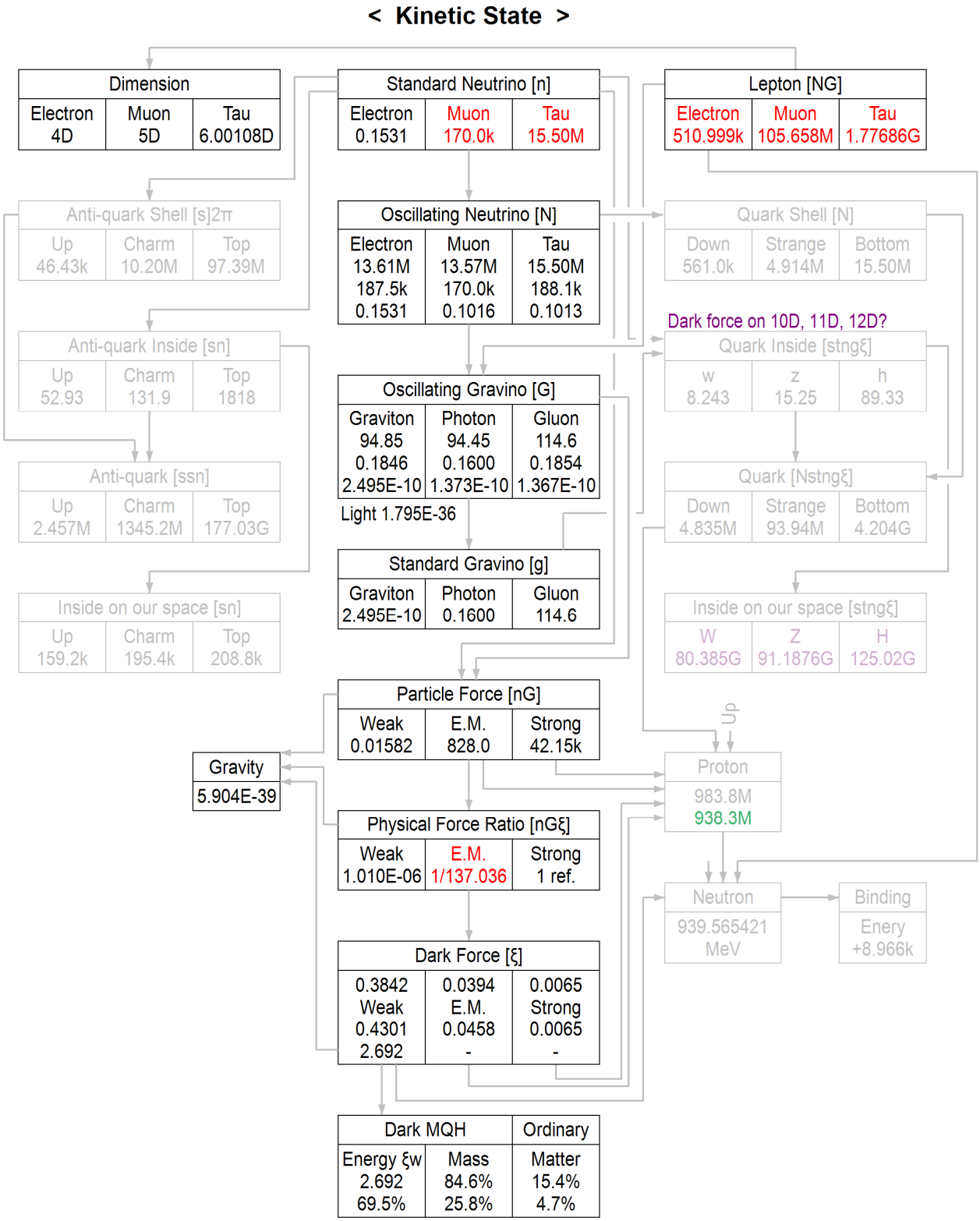

Fig. 2 Analysis of kinetic state.

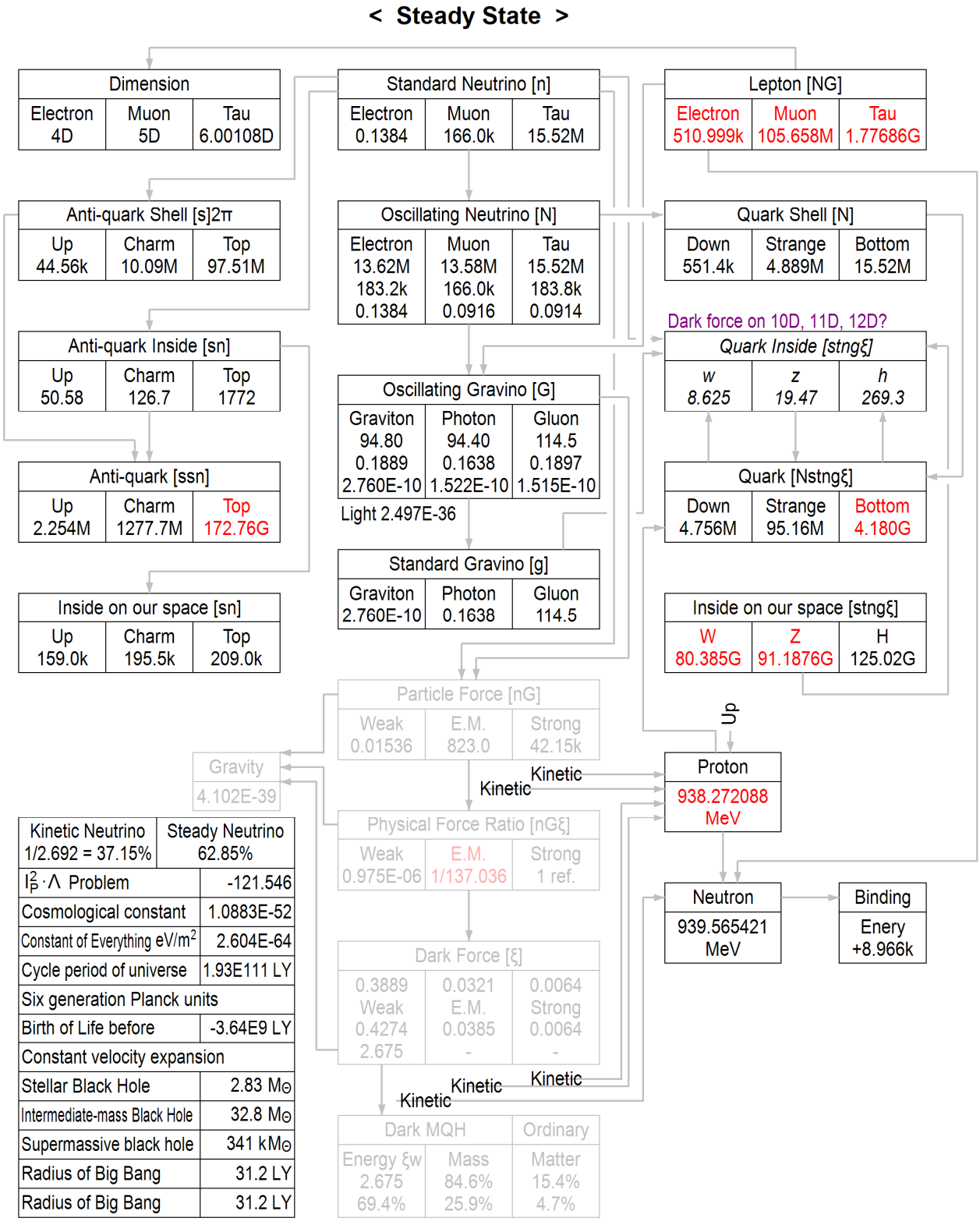

Fig. 3 Analysis of steady state.

2.3 Dimension[3]

Applying logarithmic elliptic equation and oscillation phenomenon to the masses of electron, muon, and tau, the dimension of quantum space is calculated as 6.00108D.

2.4 Standard Neutrino [n][4]

The minimum masses of muon and tau neutrinos are measured as β_n 170 keV and γ_n 15.5 MeV. If the fourth significant digit is given, more precise calculation can be performed. Applying the above values to logarithmic elliptic equation, the mass of electron neutrino is very easily calculated as α_n 0.1531 eV.

2.5 Oscillating Neutrino [N][4]

Particle itself does not have mass. The logarithmically compressive strength of quantum space imparts the mass to the particle[1]. Since there are three generation quantum spaces, the masses of particles are always formed as three generations. When the binding of particles is a single hard particle, the mass should be calculated logarithmically, and when the binding of particles is a single loose particle, the mass should be calculated arithmetically.

Neutrinos continuously move three generation quantum spaces by jumping. This is oscillation phenomenon, and due to this, the mass of neutrino changes very largely and quickly. The oscillating masses α_N, β_N, and γ_N of neutrinos are calculated by logarithmic elliptic equation of α_n, β_n, and γ_n.

2.6 Oscillating Gravino [G][4]

Gravino means graviton, photon, and gluon. The masses of electron $\alpha\beta\gamma_{NG}$, muon $\beta\gamma_{NG}$, and tau γ_{NG} in Fig. 1 have already been measured. The oscillating masses α_N, β_N, and γ_N of neutrinos was calculated above. From the difference between NG and N, the oscillating masses of graviton α_G, photon β_G, and gluon γ_G are calculated.

They are oscillating particles located in quantum space 4D, 5D, and 6D. Applying logarithmic parabolic equation to them, the mass of 0D is calculated as 1.795E-36 eV. This will be the mass of light.

2.7 Standard Gravino [g][4]

Substituting the oscillating masses G inversely to logarithmic elliptic equation, the standard masses of graviton α_g, photon β_g, and gluon γ_g are calculated.

2.8 Particle Force [nG][6]

In Fig. 4, the shapes of weak, electromagnetic, and strong forces are shown. Particle force is composed of standard neutrino n and oscillating gravino G. Therefore, the mass of particle force is calculated.

2.9 Physical Force Ratio [nG ξ][6]

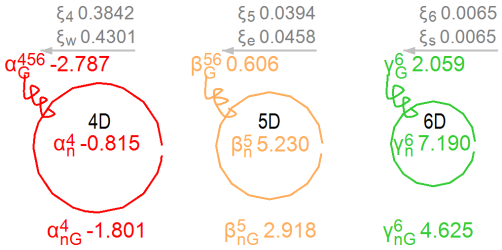

Fig. 4 Shapes of weak, electromagnetic, strong forces

Physically, when strong force is 1, electromagnetic force is 1/137.036. In electromagnetic force, the particle force and the physical force do not coincide as much as the logarithmic value 0.4301. Here, the sum of weak particle force and 0.4301 is calculated as 1.010E-6. This value closely coincides with the weak physical force of about 1E-6. It can be seen that the physical force is the sum of the particle force and the dark force ξ in Fig. 4.

2.10 Dark Force [ξ][6]

Applying logarithmic parabolic equation to the masses of three generation particle forces, the logarithmic mass of the vertex is calculated. The difference between its vertex and strong particle force is the 6D dark force of 0.0065.

Applying logarithmic parabolic equation to the masses of three generation physical forces, the logarithmic mass of the vertex is calculated. The difference between its vertex and strong physical force is 0.4694. The difference between this value and 0.4301 is the 5D dark force of 0.0394.

The difference between 0.4301 and 0.0394 and 0.0065 is the 4D dark force of 0.3842.

The graviton α_G^{456} in Fig. 4 oscillates on 4D, 5D, and 6D. Therefore, the weak dark force ξ_w is logarithmic 0.4301 and arithmetic 2.692. The photon β_G^{56} in Fig. 4 oscillates on 5D and 6D. Therefore, the electromagnetic dark force ξ_e is logarithmic 0.0458. The gluon γ_G^6 in Fig. 4 oscillates on 6D. Therefore, the strong dark force ξ_s is logarithmic 0.0065.

2.11 Gravity[6]

Applying logarithmic parabolic equation to the three generation physical forces, the 0D value is calculated as 2.175E-39. Multiplying this value by the weak dark force ξ_w 2.692 is 5.856E-39. 0D is not quantum space, but empty space. That is, gravity is not quantum mechanics. This is the force that particle tries to fall in a direction that we cannot understand.

Applying logarithmic parabolic equation to the three generation particle forces, the 1D value is calculated as 2.211E-39. Multiplying this value by the weak dark force ξ_w 2.692 is 5.952E-39. 1D means that there is a straight brane throughout universe. The brane is the origin of everything. The straight brane holds the particles that try to fall in 0D.

The average of the two above is 5.904E-39. This is gravity. Above, the calculated gravity value was multiplied by the weak dark force. This means that gravity and weak force are

equivalent. Weak force is the force acting on quantum space, and gravity is the force acting on empty space.

2.12 Dark Energy : Dark Matter : Ordinary Matter[11]

Weak dark force 2.692 is the ratio of the dark energy that expands the space of universe and the dark mass that contracts the space of universe.

The mass of ordinary matter is known as 1E53 kg. Applying 13.77 billion light-years of cosmic time to Schwarzschild formula and multiplying by 2π, the value is calculated as 5.511E53 kg. Here, anti-matter is 2π times heavier than matter. The ratio of dark matter and ordinary matter is 84.6% : 15.4%. This means that our universe is in a 4D anti-matter black hole. Author calls it Mommy Quantum Hole.

Therefore, the ratio of dark energy, dark matter, and ordinary matter is calculated as 69.5%: 25.8%: 4.7%. Here, the value 2.692 was calculated as muon 170.0 keV and tau 15.50 MeV neutrino mass. If the masses are slightly different, the dark ratios are calculated slightly differently.

2.13 Anti-quark Shell [s][5,8]

In Fig. 5, blue s is anti-neutrino and red n is neutrino. Therefore, up, charm, and top are anti-quark, and down, strange, and bottom are quark. Here, f means fermion on 4D5D6D, and b means boson on 10D11D12D.

When up quark $\alpha\beta\gamma_s^f\alpha_{sn}^b$ collides, the shell α_s^f is peeled off and it is turned into charm quark $\beta\gamma_s^f\beta_{sn}^b$. When the charm quark collides, the shell β_s^f is peeled off and it is turned into top quark $\gamma_s^f\gamma_{sn}^b$.

Above, the masses of α_n, β_n, and γ_n were calculated. Anti-particle s is 2π times heavier than particle n. Therefore, the shell mass of anti-quark is calculated.

2.14 Anti-quark Inside [sn][5,8]

The inside of anti-quark is composed of a pair of anti-neutrino s and neutrino n. Here, α_{sn}^b on 10D, β_{sn}^b on 11D, and γ_{sn}^b on 12D are all same particles, and they are calculated by logarithmic elliptic equation. Since the quantum dimension of the shell is different, that of the inside are also different. Due to this, the inside mass naturally changes.

Since the masses of anti-neutrino s and neutrino n were calculated, the masses of the inside are also calculated.

2.15 Anti-quark [ssn][5,8]

The mass of anti-quark is the sum of the shell and the inside. The masses of up, charm, and top quarks are calculated as 2.457 MeV, 1345.2 MeV, and 177.03 GeV. These values differ some from the mass measured in physics.

The analysis of force almost coincides with physics. From this, it can be understood that forces act at the speed of light. Quark is in steady state, not kinetic state.

2.16 Inside on our space [sn][5]

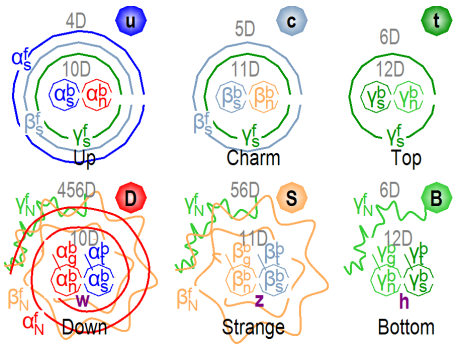

Fig. 5 Shapes of anti-quarks and quarks.

When top quark collides, the shell γ_s^f is peeled off, and a pair of anti-neutrino boson γ_{sn}^b on 12D pops out into our quantum space 6D. It jumps into 5D, it jumps into 4D, and then it disappears on our XYZ space. Since this is an anti-neutrino pair, it is difficult to find in particle colliders.

2.17 Quark Shell [N][8]

In Fig. 5, When down quark $\alpha\beta\gamma_N^f\alpha_{ngts}^b$ collides, the α_N^f is peeled off and it is turned into strange quark $\beta\gamma_N^f\beta_{ngts}^b$. When the strange quark collides, the β_N^f is peeled off and it is turned into bottom quark $\gamma_N^f\gamma_{ngts}^b$.

The mass of oscillating neutrino N was calculated above. Therefore, the mass of the shell is easily calculated.

2.18 Quark Inside [stng ξ][8]

Above, the masses of anti-neutrino s, anti-gravino t, neutrino n, and gravino g on 10D, 11D, and 12D were very easily all calculated by logarithmic elliptic equation. Here, it is judged that dark force is acting on the gravino t and g. The dark force on 4D, 5D, and 6D was calculated by the analysis of forces. However, the dark forces could not be dimensionally transformed into 10D, 11D, and 12D. An idea is needed.

The values predicted by author are presented in Table 1.

2.19 Quark [Nstng ξ][8]

The mass of quark is the sum of the shell and the inside. The masses of down, strange, and bottom quarks are calculated as 4.835 MeV, 93.94 MeV, and 4.204 GeV. These values differ some from the mass measured in physics.

2.20 Inside on our space [stng ξ][1,8]

There is w boson α_{ngts}^b of 10D in down quark, z boson β_{ngts}^b of 11D in strange quark, and h boson γ_{ngts}^b of 12D in bottom quark. These are all the same particles.

When the bottom quark collides, the γ_N^f is peeled off, the h boson γ_{ngts}^b on 12D pops out, it jumps into our quantum space 6D, and it changes to H boson. Then, it jumps into 5D, and it changes to Z boson. Then it jumps into 4D, and it changes to W boson. The transformation occurs as a mixture

of logarithmic parabolic equation and logarithmic elliptic equation. The values should be calculated as 80.385 GeV, 91.1876 GeV, and 125.02 GeV. The problem of dimensional transformation of the dark force must be solved.

2.21 Proton [7]

Proton is composed of two up quarks, one down quark, strong particle and dark forces, and electromagnetic particle and dark forces. Its mass is calculated as 983.8 MeV. There is some different with that of physics. Proton is also in steady state, not kinetic state.

2.22 Neutron [7]

The mass of neutron is measured as 939.565421 MeV. Neutron is composed of proton, electron, shell of anti-brane stgn, and weak dark force ξ_w. Therefore, its mass is calculated. The difference of +8.966 keV occurred between the measured and calculated values. The difference is the separating energy of anti-brane stgn, which is the reason of negative beta decay.

3. Analysis of steady state

3.1 Steady State [3]

Steady state means stationary state. The masses of particles for steady state are calculated in Fig. 3.

3.2 Electron, Muon, Tau [NG] [3]

It is judged that electron, muon, and tau can be applied to both of kinetic state and steady state.

3.3 Dimension [3]

Therefore, the dimension of steady state is 6.00108D. That is, quantum space is 6.00108D, and it does not change.

3.4 Standard Neutrino [n] [4]

The steady state muon and tau neutrino masses can be calculated from charm and top quark masses. Therefore, the exact mass values of the quarks are required. In this case, the overall calculation becomes some easier. However, in this calculation, top quark 172.76 GeV and bottom quark 4.180 GeV were applied. These measured values will be a little more accurate. Assuming the masses of muon and tau neutrinos are β_n 166.0 keV and γ_n 15.52 MeV, the mass of electron neutrino is calculated as α_n 0.1384 eV from logarithmic elliptic equation.

3.5 Oscillating Neutrino [N] [4]

The oscillating neutrino masses α_N, β_N, and γ_N are calculated from logarithmic elliptic equation of α_n, β_n, and γ_n.

3.6 Oscillating Gravino [G] [4]

From the difference of mass between NG and N, the oscillating masses of graviton α_G, photon β_G, and gluon γ_G are calculated.

3.7 Standard Gravino [g] [4]

Substituting the oscillating masses inversely to logarithmic elliptic equation, the standard masses of graviton α_g, photon β_g, and gluon γ_g are calculated.

3.8 Particle Force [nG] [6]

The particle force is calculated from the standard neutrino n and the oscillating gravino G. However, force is in kinetic state, not steady state.

3.9 Physical Force Ratio [nG ξ] [6]

The weak physical force in steady state is calculated as 0.975E-6. This is very similar to 1.010E-6 in kinetic state. Which of the two values is correct will be judged by physics.

3.10 Dark Force [ξ] [6]

The calculation method is the same as kinetic state.

3.11 Gravity [6]

Gravity is calculated as 4.102E-39. The physics value is 5.906E-39. It can be understood that force is kinetic state.

3.12 Dark Energy : Dark Matter : Ordinary Matter [11]

The ratio is calculated as 69.4% : 25.9% : 4.7%.

3.13 Anti-quark Shell [s] [5,8]

Above, the masses of β_n and γ_n were assumed, and the mass of α_n was calculated. Anti-particle s is 2π times heavier than particle n. Therefore, the shell mass of anti-quark composed of α_s, β_s, and γ_s is calculated.

3.14 Anti-quark Inside [sn] [5,8]

Since the masses of anti-neutrino s and neutrino n were calculated, the masses of the inside are also calculated.

3.15 Anti-quark [ssn] [5,8]

The masses of up, charm, and top quarks are calculated as 2.254 MeV, 1277.7 MeV, and 172.76 GeV. Here, the top quark mass of 172.76 GeV is given. From try & error method, the tau neutrino mass is calculated as γ_n 15.52 MeV.

3.16 Inside on our space [sn] [5,8]

The inside mass will be measured as 159.0 keV on 4D, 195.5 keV on 5D, and 209.0 keV on 6D.

3.17 Quark Shell [N] (8)

The mass of oscillating neutrino N was calculated above. Therefore, the mass of the shell is easily calculated.

3.18 Quark Inside [stng ξ] (8)

It is judged that dark force is acting on the gravino t and g. The dark force on 4D, 5D, and 6D was calculated by the analysis of forces. Here, the values cannot be dimensionally transformed into 10D, 11D, and 12D. Therefore, the inside mass cannot be calculated here. Three ideas are needed.

3.19 Proton (7)

The mass of proton was given as 938.272088 MeV. From this, the mass of down quark is calculated as 4.756 MeV. The mass of the shell is 551.4 keV, so the inside w is calculated as 8.625 eV.

3.20 Quark [Nstng ξ] (8)

The down quark mass was calculated as 4.756 MeV from proton. The mass of bottom quark was given as 4.180 GeV. The mass of the shell is 15.52 MeV, so the inside h is calculated as 269.3 eV. The inside z will be calculated as 19.47 eV from the analysis of W, Z, H bosons. Therefore, the mass of strange quark is calculated as 95.16 MeV.

3.21 Inside on our space [stng ξ] (1,8)

The masses of W and Z bosons were given as 80.385 GeV and 91.1876 GeV. Applying logarithmic parabolic and inverse parabolic equations to these values, the mass of H boson is calculated as 125.02 GeV.

Applying logarithmic parabolic equation to w on 10D, z on 11D and h on 12D, the value on 5D should be calculated as 91.1876 GeV of Z boson. Therefore, calculating this inversely, the mass of z on 11D is 19.47 eV.

It is judged that their relationship should also satisfy logarithmic elliptic equation. This is author's idea. When the mass of muon neutrino is β_n 166.0 keV, the above relationship is established. From this, the mass of charm quark is calculated as 1277.7 MeV.

3.22 Neutron (7)

The separating energy of shell anti-brane is calculated as +8.966 keV.

4. Analysis of universe

4.1 Mixing of kinetic state and steady state (9)

The universe changes with a mixture of 37.15% of kinetic state (=1/2.692) and 62.85% of steady state (=1.692/2.692). The neutrino masses for kinetic state and steady state were calculated above. By mixing in the above ratio, the neutrino masses that can analyze the universe is newly calculated.

4.2 Cosmological constant problem (9)

The cosmological constant problem measured from Planck satellite is logarithmic -121.539. The value calculated from above is -121.546 in Fig. 3. That is, the measured cosmological constant is 1.1057E-52, and the calculated cosmological constant is 1.0883E-52. The difference between the two is 1.6%. This is the difference between whether the muon mass is 170.0 keV or 170.1 eV.

4.3 Six generation Planck units (9)

Our space is composed of XYZ linear dimensions and abc quantum dimensions. That is, our space is 3D quantum space. Planck units in physics are the analysis of xyzabc quantum dimensions. That is, Planck space is 6D quantum space. That is, Planck unit is not to analyze our universe. From our calculation, the dimensional universes of six generation Planck units are calculated.

4.4 Constant of Everything (9)

Regardless of dimensions, 2.604E-64 eV/m^2 must be established. This is constant of everything.

4.5 Cycle period of universe (9)

Regardless of dimensions, the cycle period of all universes is calculated as 1.93E111 LY. That is, all is dimensional circular universes.

4.6 Origin of life (9)

3D Planck length and 3D Planck time were calculated as 9.586E25 m and 10.13E9 LY. The big bang occurred about 13.77E9 LY ago. Therefore, about 3.64 billion years ago, a new simulation universe was born. This is the origin of life.

4.7 Constant velocity expansion

In Fig. 6, the unit on horizontal axis is E9 LY, and the unit on vertical axis is E53 kg. The current age of the universe is 13.77, and the current dark matter was calculated as 5.511. 3D Planck time and 3D Plank mass were calculated as t_{P3} 10.13 and m_{P3} 1.291. When 1.291 is multiplied by π, the value is calculated as 4.055. In this case, the mass of time 0 in Fig. 6 is calculated as 9E-5. Considering the significant digits, this means that the value is zero. If this is correct, it is proved that our universe expands at a constant velocity.

The mass of supermassive anti-black hole in our universe must be multiplied by 2π. However, dark matter is one dimension higher. Integrating $2\pi^1$ is π^2. Planck's mass formula is a root calculation, so its root is π. This would be the dimensional analysis.

4.8 Three generation black holes (10)

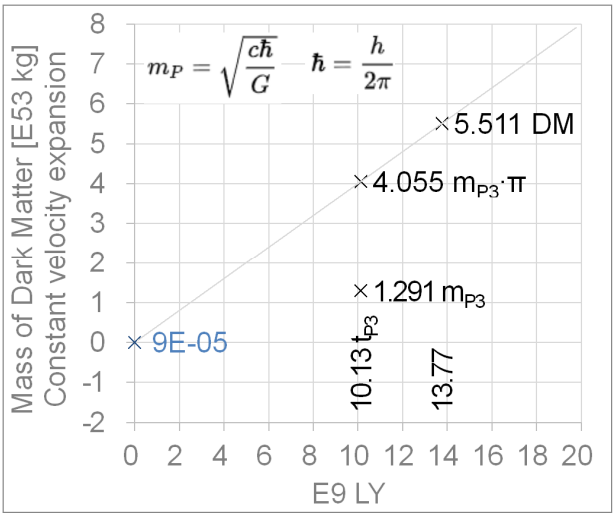

Fig. 6 Constant velocity expansion

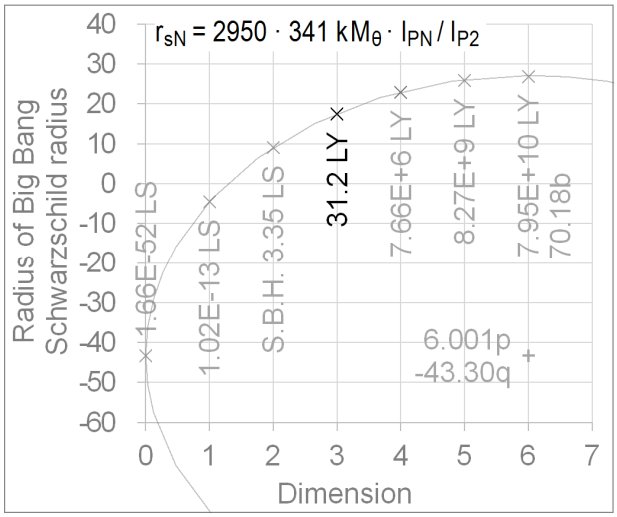

Fig. 7 Radius of Big Bang for N-D universe

The minimum masses of stellar black hole, intermediate-mass black hole, and supermassive black hole will be observed as 2.83 Mθ, 32.8 Mθ, and 341 kMθ. However, the actual masses would be 3.25 Mθ, 53.7 Mθ, and 2.14MMθ.

4.9 Radius of Big Bang

The big bang mass of supermassive black hole would be 341 k Mθ. From Schwarzschild's formula, the big bang radius is calculated as 3.35 LS in Fig. 7. The 3.35 LS multiplied by the ratio of N-D Planck length l_{PN} and 2D Plank length l_{P2} would be the N-D Big Bang radius r_{sN}. The calculated values are shown in Fig. 7. The radius of the big bang of our universe is calculated as 31.2 LY.

4.10 Mass of Big Bang

The mass of the Big Bang of supermassive black hole is 341 kMθ. It must be multiplied by 2π, and its mass is 2.14 MMθ. The 341 kMθ multiplied by the ratio of N-D Planck mass m_{PN} and 2D Plank mass m_{P2} would be the N-D Big Bang mass. The mass of the Big Bang of our universe is calculated as 1.00E14 Mθ. Here, the dimensional analysis for π must be multiplied.

5. Conclusions

The core for calculating is as follows. 1) All calculations are divided into kinetic state and steady state. 2) Force is analyzed as kinetic state, other particles as steady state, and the entire universe as mixed state. 3) The origin of all things are three generation neutrinos, graviton, photon, and gluon. 4) Logarithmic elliptic equation is established on the origin particles. 5) The origin particles oscillate, and they also are established on logarithmic elliptic equation. 6) Four fundamental forces are established on logarithmic parabolic equation. 7) Dark force always acts on the particle force. 8) Tightly bound particles must be calculated as logarithmic masses, and loosely bound particles must be calculated as arithmetic masses. 9) The characteristic of quantum space determines all the characteristics of particle. 10) Everything must be calculated in terms of dimensions.

The dark forces on 4D, 5D, and 6D must be converted to 10D, 11D, and 12D. However, the formula has not yet been found in this study. If this is found, everything will be perfectly calculated and proven. Given the 4th digit of muon and tau neutrino masses and the correct masses of top and bottom quarks, all calculations will be more accurate.

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