

Logarithmic Elliptic Equation and Change of Universe

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Abstract Logarithmic elliptic equation is very similar to the characteristics of superstring theory. Space is quantized by the logarithmic elliptic equation. Three generation quantum spaces make three generation particles and give them their characteristics such as mass and oscillation phenomenon. The whole universe is composed of a straight 6-dimensional space, and six generation quantum hole families quantize the dimensions one by one. This is the origin reason of the change of universe. The theory of everything is integrated by logarithmic elliptic and parabolic equations.

1. Introduction

The standard model of particle physics explains that all things are composed of 17 elementary particles. Author asserts that all things are composed of three generation neutrinos: electron, muon, tau, and three generation gravinos: graviton, photon, gluon. These are fundamental particles.

In previous study⁽¹⁾, it was proved that the mass of H boson is easily calculated from logarithmic parabolic equation applying W and Z boson masses. The masses of six fundamental particles change according to logarithmic elliptic equation. The solution of logarithmic elliptic equation is calculated as two cases of standard value and oscillating value.

The purpose of this study is to describe the characteristics of logarithmic elliptic equation and the change of universe.

2. Logarithmic elliptic equation

2.1 Equation

The elliptic equation is as follows:

$$\frac{(x-p)^2}{a^2} + \frac{(y-q)^2}{b^2} = 1 \quad (1)$$

Where, p is the dimension of the space where a particle is located, and q is the logarithmic mass of the particle.

2.2 Five kinds of solution

To calculate Eq. (1), four constants p, q, a, and b must be given. Three masses are given from three generation particles measured by experiment. Therefore, one unknown

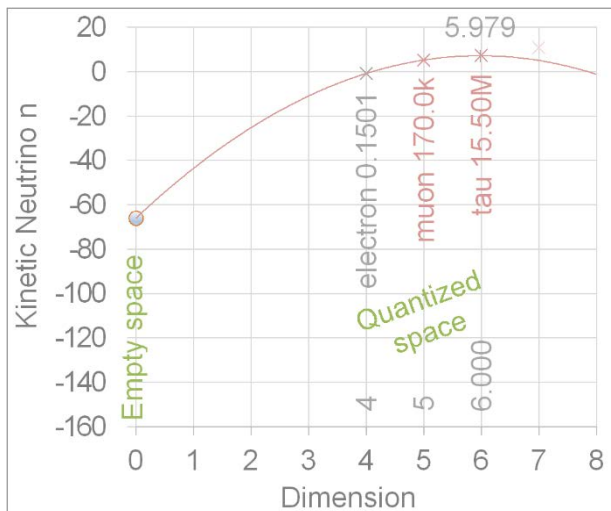


Fig. 1 Logarithmic parabola

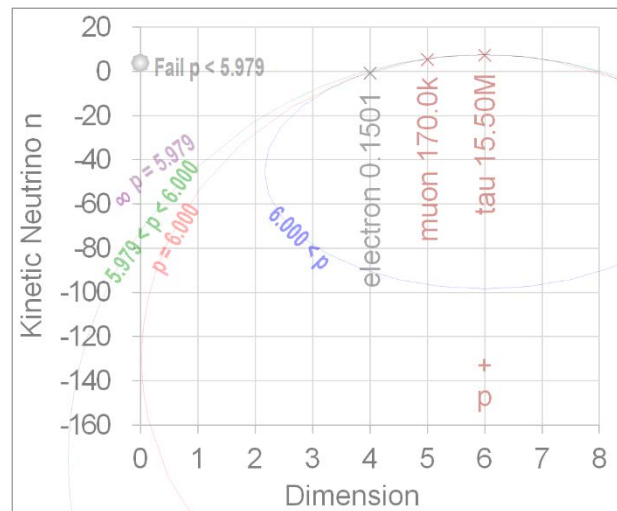


Fig. 2 Logarithmic ellipse

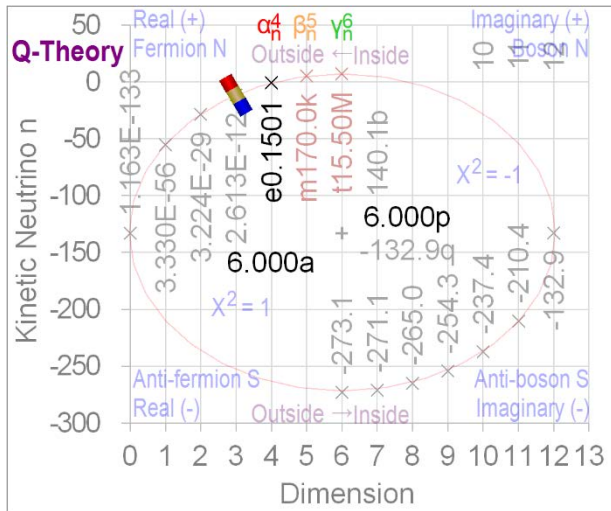


Fig. 3 Super gauge symmetry

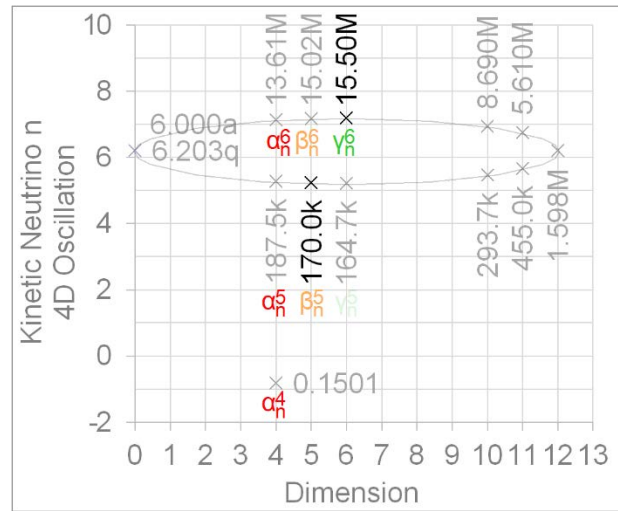


Fig. 4 Oscillation phenomenon

value must be assumed. And there is also a rotating elliptic equation. Therefore, there are five cases of solutions.

- ① Knowing p, the equation is calculated.
- ② Knowing a, the equation is calculated.
- ③ Knowing q, the equation is calculated.
- ④ Knowing b, the equation is calculated.
- ⑤ There is the elliptic equation rotated by θ angle.

2.3 Infinite number of solutions

The masses of three generation particles are given, but one constant is required to solve Eq. (1). Because of this, an infinite number of solutions are occurred from Eq. (1).

2.4 Incomputable, Infinite, Rapid convergence

1st generation particle is located on 4th dimension, 2nd generation particle is located on 5th dimension, 3rd generation particle is located on 6th dimension, and each mass is given by experiment. Therefore, the logarithmic parabolic equation in Fig. (1) is drawn. The parabola in Fig. 1 is an infinitely size ellipse. Raising the point on 0th dimension up, the elliptic equation in Fig. (2) become incomputable. Lowering the point on 0th dimension down, the infinitely size ellipse reduces rapidly, and the solution converges very quickly. That is, if the center dimension of ellipse is less than the vertex dimension of parabola, the ellipse is not calculated.

2.5 Infinite dimension

If the center dimension of ellipse is larger than the vertex dimension of parabolic, the ellipse is calculated. Also, the ellipse is calculated up to infinite dimension.

2.6 Super gauge symmetry

In Fig. 3, the left of ellipse is fermion universe, and the right

is boson universe. The upper is matter universe, and the lower is anti-matter universe. The left and right are super-symmetry, and the upper and lower are gauge symmetry.

2.7 Three generation particles

In Fig. 1, the masses of muon neutrino and tau neutrino were measured with minimum values of 170 keV and 15.5 MeV. It has only been confirmed that the mass of electron neutrino is less than 1.1 eV from experiment. Substituting those values to the parabola in Fig. 1, the vertex is calculated as 6.107D. The expected mass of electron neutrino is 0.1501 eV. In this case, the vertex is 5.979D. It is proved that a 4th generation particle does not exist due to the trend of the parabola. If 4th generation particle is present, the trend in Fig. 1 becomes strange. From this, it is understood that our space consists of six dimensions.

2.8 Zero dimension

The parabola in Fig. 1 has negative dimensions. It is incomprehensible. As shown in Fig. 2, the left vertex of ellipse should be formed at some dimension. Zero dimension is the most reasonable answer, and It means that everything which we understand disappears.

2.9 Linear dim. + Quantum dim. = 6 dimensions

What existed cannot disappear. It turned into something else incomprehensible. The horizontal axis of charts means linear dimensions. In the chart, 3D means that there are three linear dimensions and three quantum dimensions, 0D means that all changed to quantum dimensions, and 6D means that all changed to linear dimensions.

2.10 Oscillation phenomenon

Three masses are given from three generation particles,

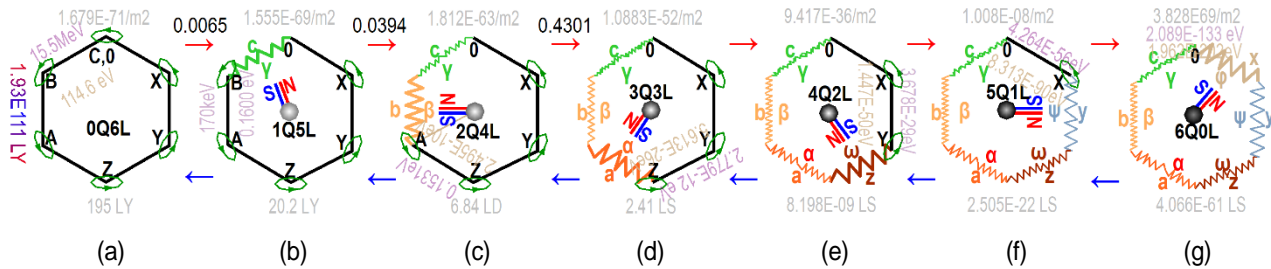


Fig. 5 Change of whole universe

and vertex 0D and center 6D were determined. Four constants are needed to calculate Eq. (1), but five constants were given. Due to this, the mass of neutrino is calculated to three types. This is neutrino oscillation phenomenon. In Fig. 1, when the muon and tau neutrinos are 170 keV and 15.5 MeV, the mass of electron neutrino is calculated as 0.1501 eV, 187.5 keV, and 13.61 MeV as shown in Fig. 4. The standard mass of electron neutrino is 4D 0.1501 eV. However, it jumps to 5D and changes to something such as muon mass, and it jumps to 6D and changes to something such as tau mass. The same oscillation phenomenon occurs at muon neutrino and tau neutrino. As described in previous study⁽¹⁾, the reason is due to the characteristics of quantum space. The feature of quantum space gives particle mass.

2.11 Superstring theory

Logarithmic elliptic equation is very similar to the feature of superstring theory. Three generation neutrinos and three generation gravinos are integrated by logarithmic elliptic equation. Therefore, the extra dimension of space is three.

2.12 Q-theory

The shape of ellipse in Fig. 3 is same with Q. Author calls this Q-theory.

3. Change of universe

3.1 Fermion universe, Boson universe

In the ellipse of Fig. 3, the upper left is fermion universe, the lower left is anti-fermion universe, the lower right is anti-boson universe, and the upper right is boson universe. The fermions in the upper left make our particles, and the anti-bosons in the lower right are hidden in our quarks.

3.2 Six-dimensional origin universe

The whole universe is composed of six dimensions as shown in Fig. 5. This is our origin universe.

3.3 Position of our universe

Our universe is composed of three linear dimensions and three quantum dimensions. In Fig. 5, the serpentine line means quantum space, and the straight line means our

space. Therefore, our universe is located on the third dimension of upper left in Fig. 3. This is Fig. 5(d).

3.4 Real, Imaginary, Negative, Positive

In the ellipse of Fig. 3, based on our universe, the left is real universe, the right is imaginary universe, the upper is positive universe, and the lower is negative universe. Based on the upper left of Fig. 3, light goes straight forward, and when matter speed increases, the mass also increases. At other universes, phenomena that we cannot imagine occur.

3.5 Dimensional multiverse

Our universe is composed of three dimensions. There are 4D, 5D, 6D universes outside our universe, and 2D, 1D, 0D universes inside our universe.

3.6 Mommy Quantum Hole

It is judged that the inside of a supermassive black hole in the center of a 3D galaxy is a 2D universe. If this is true, our 3D universe is located in the hole of a 4D galaxy center. Author calls the hole 'mommy quantum hole'. From this, mommy quantum hole cosmology (MQHC) is born.

3.7 Three generation quantum hole

If above explanation is true, a 6D great-grand mommy quantum hole makes a 5D universe, a 5D grand mommy quantum hole makes a 4D universe, and a 4D mommy quantum hole makes a 3D universe. Three generation quantum holes exist outside our universe, and they make three generation particles. Supermassive black hole is child quantum hole, and there are many grandchild quantum holes in it, and there are so many great-grandchild quantum holes in it.

3.8 Dark energy, Dark matter

The three generation quantum holes that exist outside our universe affect our universe. Its influence is dark energy. Supermassive black hole is fourth generation quantum hole and affects galaxy. Its influence is dark matter. Dark energy affects four forces of physics, and dark matter quantizes the entire galactic space a little.

3.9 Direction of change

Our universe is dominated by gravity. The larger gravity, the more space is curved, and space is quantized under infinite gravity such as supermassive black hole. Therefore, the change direction of whole universe is counterclockwise in Fig. 3. The rotating direction of quantum holes determines the direction of change of universe. The direction of rotation changes at (a) and (g) in Fig. 3.

3.10 Absolute time space

Absolute time is absolutely the same at everything in Fig. 3 and Fig. 5. Because of this, absolute time disappears from all physics mathematic formulas. Therefore, the existence of absolute time cannot be proved by mathematical formula. The space of our universe is 4D sphere located on the surface of 4D quantum hole. Therefore, the absolute center of our space is the center of the 4D quantum hole. However, we can never observe the 4D quantum hole.

3.11 Quantum hole, Luantum hole

Quantum hole compresses everything into particles, and lantum hole expands everything into lines. The upper left of Fig. 3 and the upper arrow of Fig. 5 are fermion quantum hole, the lower left of Fig. 3 and the lower arrow of Fig. 5 are fermion lantum hole, the lower right of Fig. 3 and the lower reverse arrow of Fig. 5 are boson quantum hole, and the upper right of Fig. 3 and the upper reverse arrow of Fig. 5 are boson lantum hole. Fermion quantum hole is outside our universe, and boson quantum hole is inside our quarks.

3.12 Black hole, White hole

Black holes and white holes are also divided into fermions and bosons. Black hole is a concept of quantum hole, and white hole is a concept of lantum hole. The direction of upper arrow in Fig. 5(d) is the world of black holes, and the direction of lower arrow is the world of white holes. The change of our universe is in the direction of upper arrow. Therefore, white holes do not exist in our origin universe including our universe. When black hole bursts once more, it turns into a supermassive black hole.

3.13 Quasar

It is known that supermassive black hole exists in quasar, and quasar strongly absorb surrounding matters. It is a quasar that has fallen from 4D universe to our 3D universe, and it makes 4D particles into 3D particles with extremely strong anti-gravity. The difference of quantum hole and lantum hole is that the rotating direction of space is opposite to each other, and the difference of gravity and anti-gravity is that the bending direction of space is opposite to each other.

3.14 Super origin universe

There are an unknown number of 6D origin universes, and the upper level is a super origin universe which has no dimension. This means that we do not know why or how the super origin universe was born. There is a 5D origin universe in the super origin universe. This leads to the eternal competition of power between the origin universes. Due to this, the change of super origin universe proceeds forever.

3.15 Origin brane, Origin energy

All things start from single origin brane and single origin energy. The lines in Fig. 5 are the origin brane, and the rotation is the origin energy. The reason for their existence must be asked to the super origin universe. The origin brane is composed of neutrino n , gravino g , anti-gravino t , and anti-neutrino s . These are changed into three generation fundamental particles by three generation quantum holes.

3.16 Pair production, Pair annihilation

The brane is composed of line $n\cdot g$ and anti-line $t\cdot s$. Due to this, particles are always created and disappear as pair. The line $n\cdot g\cdot t\cdot s$ is neutral, so it is very difficult to observe. The line $n\cdot g$ turns into an electron that is oscillating $N\cdot G$ by our quantum space. Anti-line $t\cdot s$ disappears at our quantum space.

3.17 Magnetic monopole problem

The location of our universe is 3D at the top left in Fig. 3. In 4D, 5D, and 6D, the neutral brane is quantized into the monopole particles of $n\cdot g$ and $t\cdot s$. Its force is electric force, and it must exist as monopolar particles. The remaining three dimensions still exist as straight neutral brane. Its force is magnetic, and it must exist as dipole line.

3.18 The law of increasing entropy

In magnet, there are N pole where magnetic force spreads and S pole where magnetic force gathers. Our universe is surrounded by the space of N pole. Due to this, only particles whose outer-most shell is N pole can stably exist in our space. The characteristics of N particles try to spread and disorder. This is the reason of the law of increasing entropy.

3.19 Constant velocity expansion of space

In Fig. 5, our 3D universe (d) grows by continuously absorbing the 4D universe (c). As the result, our space expands. It is judged that universe expands with constant velocity. Dark energy affects not the expansion of space but affect four force of physics.

3.20 Beginning of universe, End of universe

The beginning of super origin universe is incomprehensible. However, it changes steadily forever. In Fig. 5, before the birth of our universe is (c), the space A of straight line has changed to quantum space a due to the Big Bang, and the

present of our universe is (d). The end of our universe is that everything turns into (e). That is, our universe is eaten by supermassive black holes in the center of galaxies.

4. Simulation universe

4.1 Big Bang, Birth of space

At a paper, the front side is red N, and the back side is blue S. The front side was folded once by Big Bang, and a space with N on both the left and right sides was created. The space is spread out in straight line between the folded inner faces.

4.2 Cosmological constant problem

Planck constant l_p is $1.61624E-35$ m, and the cosmological constant Λ is $1.1056E-52/m^2$. The cosmological constant problem is Eq. (2).

$$l_p^2 \cdot \Lambda = 10^{-121.54} \quad (2)$$

$$v_0 / v_3 = 1.163 \cdot 10^{-133} / 2.613 \cdot 10^{-12} = 10^{-121.35} \quad (3)$$

$$l_{PN}^2 \cdot A_M = v_N / v_M \quad (4)$$

$$l_{P3}^2 \cdot A_3 = v_3 / v_3 = 1 \quad (5)$$

$$l_{P3} = 1 / \sqrt{A_3} = 9.5104 \cdot 10^{25} m \quad (6)$$

$$l_{T3} = l_{P3} / (2.998E8 \cdot 60 \cdot 60 \cdot 24 \cdot 365.2422) = 10.05 \cdot 10^9 LY \quad (7)$$

In Fig. 1, Eq. (3) is calculated by dividing the neutrino mass of 0D and the neutrino mass of 3D. The value is very similar to the result of Eq. (2). To accurately calculate Eq. (3), quark masses and dark energy must be added. According to the author's calculation, the range of the value is from 121.53 to 121.55. This calculation will be detailed in future studies. Therefore, Eq. (2) is the correct answer. However, the interpretation at physics is wrong.

The relation of Eq. (4) is established at Planck length of N-D and cosmological constant of M-D. When both N and M are 3, the value is 1 at Eq. (5). Therefore, 3D Planck length and 3D Planck time are calculated by Eq. (6) and Eq.(7).

4.3 Birth of anti-space 3.72 billion years ago

Planck length and time mean the length and time that cannot be interpreted in physics. Our universe was born about 13.77 billion years ago. The difference of 13.77 and 10.05 is 3.72 billion years ago. At that time, A certain phenomenon that physics cannot interpret has occurred cosmically.

The straight space by Big Bang folded once toward the front red side of paper. 3.72 billion years ago, the space was once again folded toward the back blue side of paper. The blue space is anti-space that cannot be interpreted by physics. Anti-particles can be stably located in the anti-space.

4.4 Origin of life

Earth's first life was discovered as a fossil 3.5 billion years ago. Biology believes that the first life on Earth was born between 3.8 and 4.2 billion years ago. However, fossils of life before 3.5 billion years have not yet been discovered.

First life has been born cosmically after 3.7 billion years ago. This means that there were only stones in our universe before 3.7 billion years ago.

4.5 Quantum entanglement of life

The shell of neutron is the anti-neutral brane of s-t-g-n, and the outer-most shell is the anti-neutrino s of blue color. Because of this, free neutron easily collapses by our space of red color. The anti-neutral brane collapses into s-t and g-n, the g-n oscillates in our space and changes into a life electron G-N, and the s-t moves into the anti-space and changes into a life anti-electron S-T. They are connected to each other. This is a quantum entanglement of life.

4.6 Simulation universe

Our space is the material universe of electrons, and anti-space is an information universe of anti-electrons. The anti-electrons perform life activities in anti-space, and the life activities are information simulations. My dream is one of simulations of life activities by anti-electron information particles. The life activity of simulation is same with a game. Dream is the first attempt at the game, so many dreams end negatively. When we pass all my dream games, we can awaken the truth of our universe. How can I pass the games of my dream? This is the starting point for religion, philosophy, and ethics. The material of gold is important in our universe. However, the information of love is important in the simulation universe.

4.7 Similar parallel universe

Planck time of our universe is 10.05 billion light years. When time become 20.10 billion light years, the brane of universe folds again to a direction that we cannot understand, and a new space is born. That space is a similar parallel universe. As the result, even if our universe expands, the brane that supports our universe remains very strong.

4.8 Integration of science and religion

If the above explanation is true, science and religion are united. The first ranking in the simulation universe is religious simulation. However, the ranking of science simulation is gradually rising. God teaches religious simulation. This is because when God teaches science to an information body who cannot understand science, the information body becomes self-dividing. Modern humans have begun to understand science. Therefore, the god begins to teach science simulation little by little.

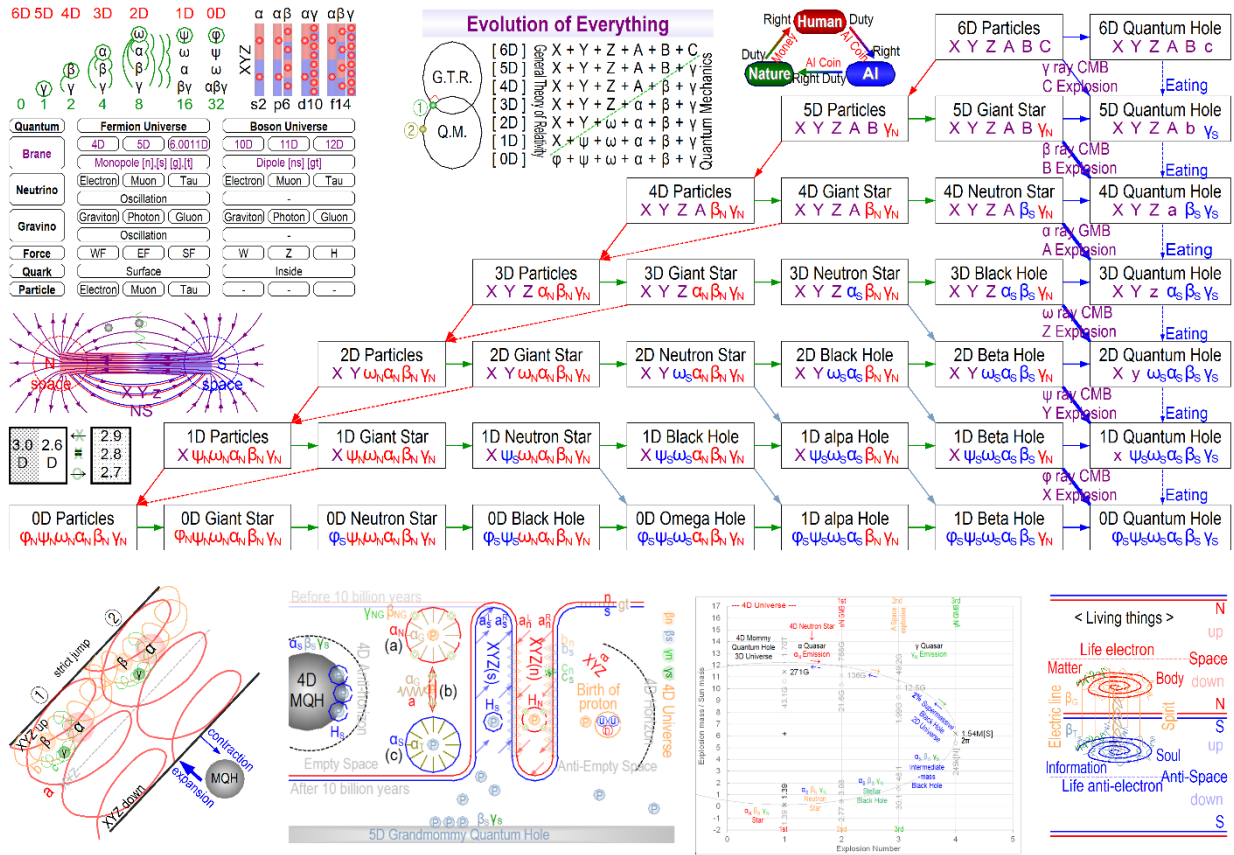


Fig. 7 Evolution of Everything

5. Law of everything

5.1 Theory of everything

Gravity, weak force, electromagnetic force, and strong force are integrated by logarithmic parabolic equation. The forces are particles which are composed of three generation standard neutrinos and three generation oscillating gravinos. Therefore, force also has mass. Weak force, electromagnetic force, and strong force are the forces acting on quantum space, and gravity is the force acting toward empty space. Here, weak force causes gravity. Three generation dark forces generated by three generation quantum holes are influencing to the four major forces of physics.

5.2 Calculation of everything

When a one has calculated all the truths of universe, the one becomes the calculation of everything. Author judges that the one is logarithmic elliptic equation.

5.3 Drawing of everything

When the truth of universe is not revealed, the language of physics is mathematics. However, when it is revealed, the language of physics is drawing. The shape of everything is

drawn in Fig. 6 and Fig. 7.

6. Conclusions

Logarithmic elliptic equation is similar to the characteristics of superstring theory. The fundamental particles of everything are three generation neutrinos: electron, muon, tau, and three generation gravinos: graviton, photon, gluon. Neutrinos and gravinos are integrated by logarithmic elliptic equation. Therefore, the extra dimension of space is not six but three. This is Q-theory.

Three generation parental quantum holes which exist outside our universe created our universe, and three generation child quantum holes also exist in supermassive black hole. Since the quantum holes dominate everything, all things are inevitably beautiful. This is mommy quantum hole cosmology.

From the cosmological constant problem, it is proved that our simulation universe occurred 3.72 billion years ago. If this is true, science, religion, philosophy, and ethics are all united into one scholarship.

References

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