

Schematic diagram of exploring micro particle models

Dong Bin (China) Tel: 86-13829293783 E-mail: 907238918@qq.com

Laboratory: Guangdong Caijian New Material Technology

Abstract: This article introduces a new micro particle model using pictures and text, introducing the principles of four fundamental forces, the Big Bang, material formation, antimatter, energy conversion, superconductors, relativity, pulsars, magnetic monopoles, and black holes.

The theoretical basis of this model is that when matter and antimatter collide, their mass is all converted into energy, that is, all converted into photons, which in turn shows that photons are the basic energy body that constitutes matter.

Based on this principle, the microscopic particle model is constructed as follows:

1. Photon is the fundamental particle that constitutes the universe and the most basic energy body. The absorption and release of cosmic material energy are transmitted by photon.

2. A photon is broken into two segments by an external force and is positively and negatively electric charged, referred to as a positive photon and a negative photon. Positive and negative photons can produce separate magnetic poles, called magnetic monopoles.

3. The positive photon and the negative photon attract a photon to rotate around itself and become a positron and an electron.

4. The positive photon and the negative photon by a greater external force, can be split into three incompletely broken, the positive photon than the negative stable, mainly into positrons, the negative photon split into three, attracting two positrons to form the proton, attracting a positron to form the neutron.

5. The positive photon and the negative photon can be split into three or two segments of different lengths by different external forces, embodying different qualities and properties, and forming a variety of different quarks, mesons, and other

particles, which will eventually decay into electrons, protons, neutrons, or photons.

Below, we will use pictures to illustrate.

photon



Negative photon

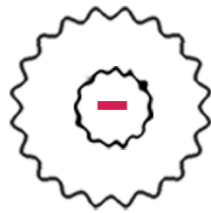


break

Positive photon



Negative photons attract a photon to form an electron



Positive photons attract a photon to form a positron



Negative photons split into three segments



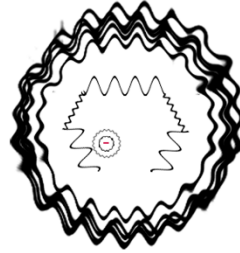
Positive photons split into three segments



Three segment negative photon
Attracting 1840 photons and
one positron to form neutrons



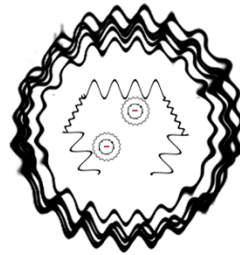
Three segment positive photon
Attracting 1840 photons and one
electron to form an antineutron



Three segment negative photon
Attracting 1840 photons and
two positrons to form protons



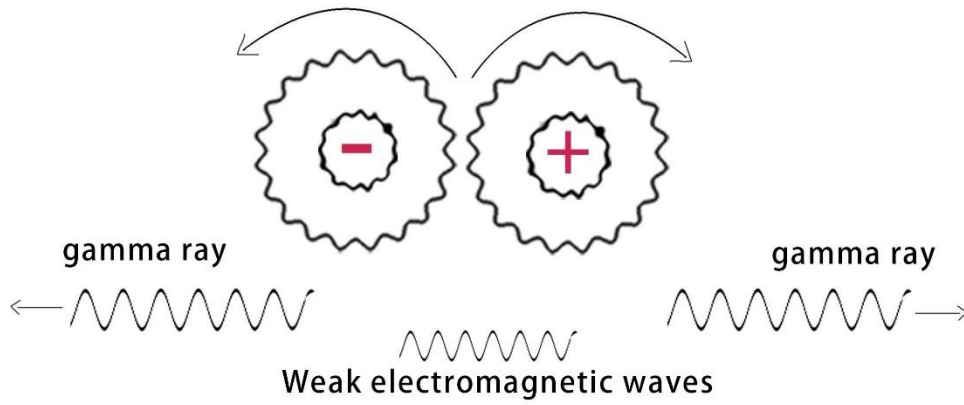
Three segment positive photon
Attracting 1840 photons and
two electrons to form antiprotons



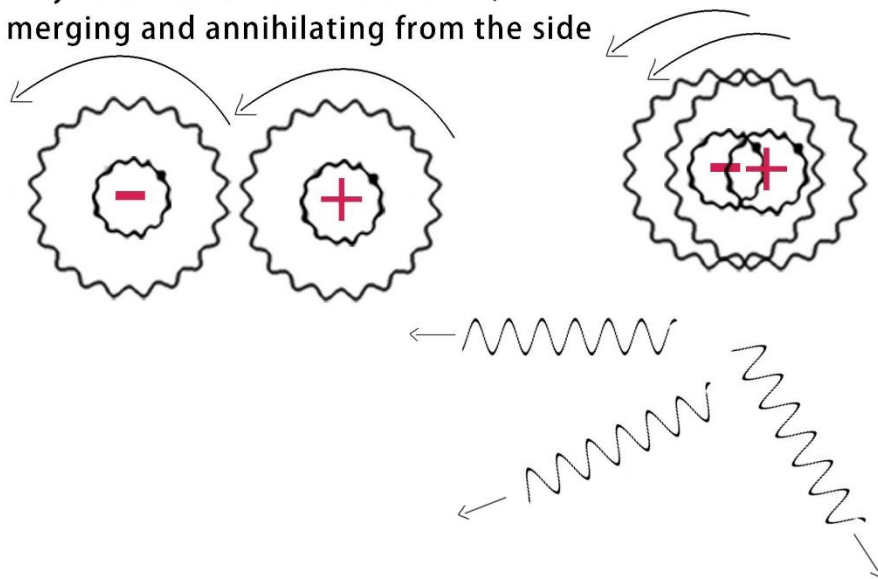
Modern experiments have shown that positive photons are stronger than negative photons. During the Big Bang, there were more negative photons broken into three segments than positive photons, and positive photons mainly became positrons.

This is why the universe is now composed of positive matter.

Reverse rotation annihilation of electrons and positrons

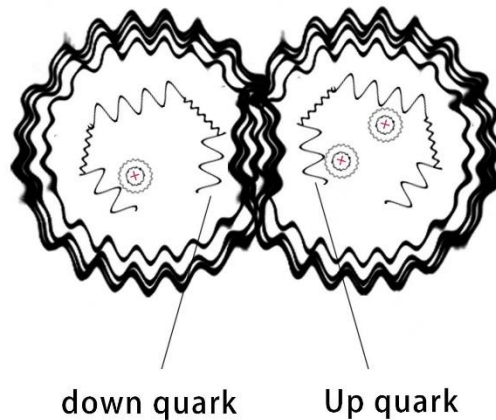


They rotate in the same direction,
merging and annihilating from the side



Generate three high-energy rays with uncertain directions

The lower quark inside the neutron and the upper quark inside the proton attract each other, Keep neutrons stable and prevent decay

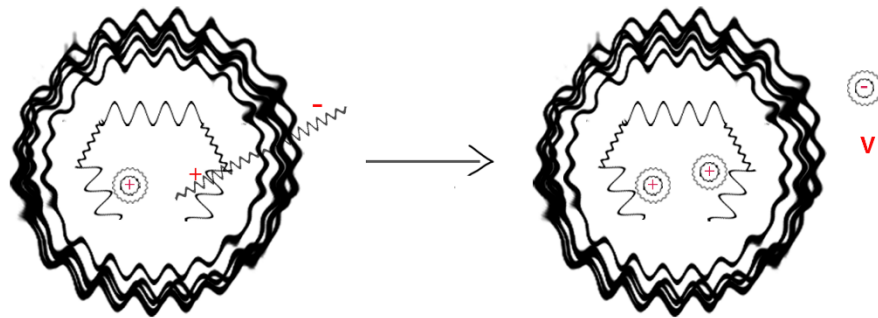


The photon flow around protons and neutrons rotates to each other's surface, wrapping these two particles together, The principle of mass atomic nuclei with multiple protons and neutrons is the same. The gravitational force of quarks within atomic nuclei The combined force formed by the entanglement force with the photon flow is called strong force in modern physics.

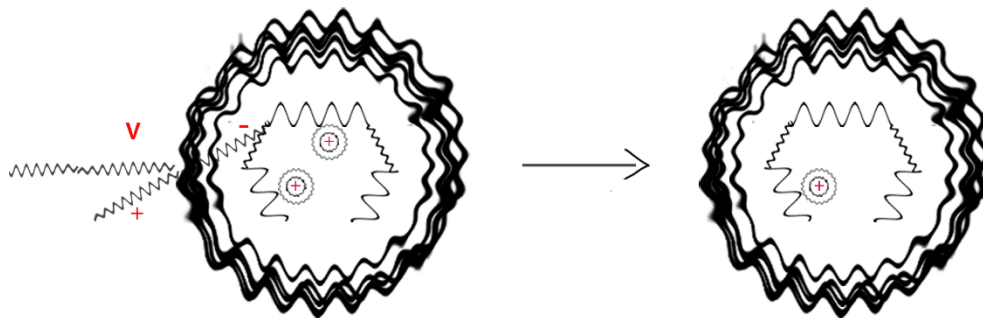
Photon flow is called gluon.

The photon flow wraps around protons and neutrons like an elastic pocket, so the strong intensity is related to Distance is inversely proportional, and this phenomenon in modern physics is called asymptotic freedom.

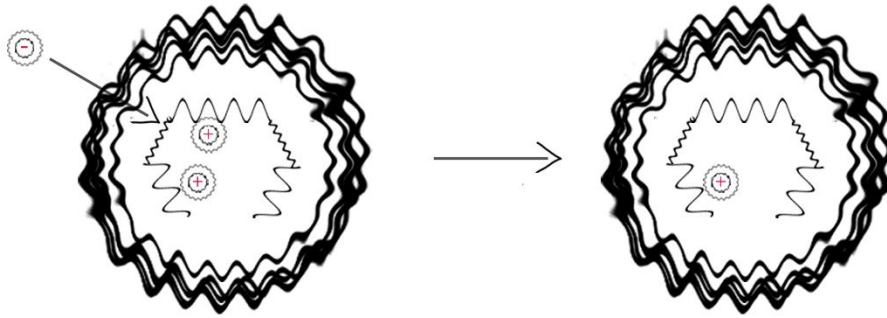
The lower quark inside a single neutron undergoes high-speed and irregular motion, and the neutrinos at the junction interrupt the interior
 A photon, a negative photon turns into an electron outside, and a positive photon turns into a positive electron inside a neutron,
 Combining with a lower quark to become an upper quark, neutrons become protons.
 It can be seen that weak forces are not short-range forces, but contact forces.



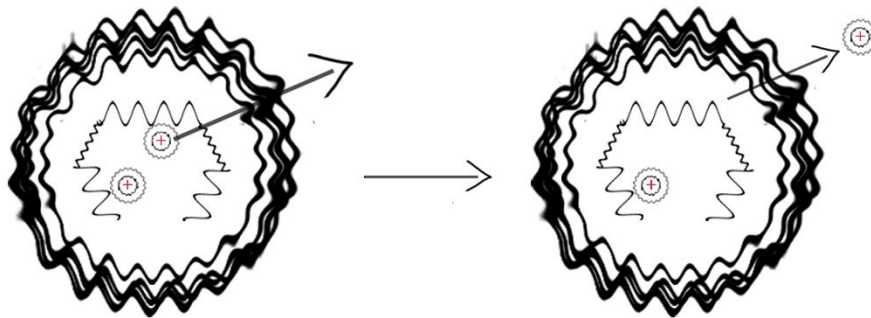
When a high-energy photon or neutrino collides with a proton, it interrupts a photon on the periphery of the proton, Positive photons become positrons outside and immediately annihilate with other electrons, while negative photons become electrons inside protons, immediately annihilate with a positron, and the proton becomes a neutron



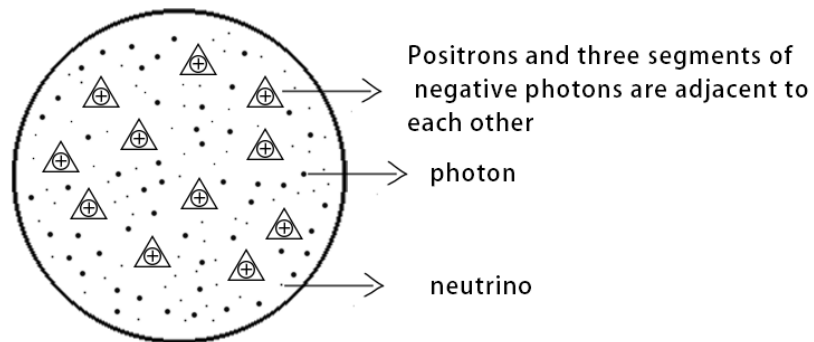
When there are too many protons in the atomic nucleus, electron capture occurs, and the captured electrons are related to a positron in the nucleus undergoes annihilation, and a proton transforms into a neutron



When electrons cannot be captured, Coulomb repulsion will squeeze out a positron, Protons become neutrons



black hole



When the mass of a black hole reaches the critical point of the entire universe's mass, the pressure inside the black hole compresses three segments of negative photons and positive electrons together. At this moment, electromagnetic force and universal gravity disappear simultaneously, and the Big Bang of the universe begins.

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Keywords: photon, strong nuclear force, Universal gravitation, principle of relativity, antimatter, magnetic monopoles

1 The reasons and overview of the microscopic particle model

In the history of human development, people have looked up to the stars and marvelled at the vastness of the universe. How many people have tried to find ways to explore the mysteries of the microscopic world. It is because of the curiosity and exploration of the unknown by these great predecessors that the advanced science and splendid civilisation of mankind exist today. In the last hundred years, theory of relativity and quantum mechanics have become the two cornerstones of modern physics and have made great contributions to modern science, but they have not yet been unified. The universe is incomparably huge, but it is composed of microscopic particles, so understanding the secrets of the microscopic world is also understanding the universe. In recent decades, scientists have used mathematics to design a set of standard models of microscopic particles, and have made many significant discoveries and achievements, but there are still the last few pieces of the jigsaw puzzle that are not completed. In this paper, through experimental results and data from previous generations, after rigorous mathematical calculations and logical analysis, a theoretical model is constructed that differs from the modern standard model of microscopic particles and can be reasonably explained:

The formation and decay of all elementary particles, the principle of the four fundamental forces, the principle of the Big Bang, the formation of matter, the principle of antimatter, the principle of energy conversion, the principle of superconductors, the principle of relativity, the effect of contraction of an object, the principle of pulsars, the magnetic monopole, and an exploration and outlook on black holes, dark matter, dark energy, the overall universe, and new energy sources for the future.

The theoretical basis of this model is that when matter and antimatter collide, their mass is all converted into energy, that is, all converted into photons, which in turn shows that photons are the basic energy body that constitutes matter.

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5. The positive photon and the negative photon can be split into three or two segments of different lengths by different external forces, embodying different qualities and properties, and forming a variety of different quarks, mesons, and other particles, which will eventually decay into electrons, protons, neutrons, or photons.

The cosmic principle is simple, and this article will follow this model and tell the secrets of the microscopic world in easy-to-understand layman's terms, so let's start with the photon.

photon



Negative photon

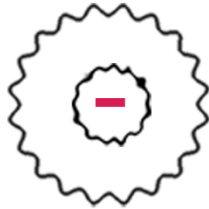


Positive photon



break

Negative photons attract a photon to form an electron



Positive photons attract a photon to form a positron



Negative photons split into three segments



Positive photons split into three segments



2 Photons, electromagnetism, and gravity

At the beginning of creation, God said that there should be light, so there is light, it can be seen, light from ancient times, are the most mysterious and most worshipped by mankind the most loved things, so what are the characteristics of light? Photons in

a vacuum speed is 300,000 kilometres per second, there is no static mass, only energy, in accordance with the relativity theory of time dilation effect and ruler shrinkage effect, photons according to the speed of light, photons have no time, no distance, no volume, from this end of the universe to the other end of the universe, no matter how far away, for the photons, are instantaneous. Our universe is a three-dimensional universe, starting from the big bang, has evolved 13.8 billion years, photons and we live in three-dimensional space of all things are not the same nature, from the characteristics of photons, photons do not have the characteristics of three-dimensional space, instead of the nature of four-dimensional space, then it can be assumed that photons are the substance of the four-dimensional space, the four-dimensional space of the photon is how to constitute our three-dimensional universe? Firstly, let's start from the shape and composition of photon.

Photons have no volume at the speed of light, but once the speed is reduced, they show volume. The photon shows a shape of a vibrating spiral line, which can be long or short, and can stretch like a spring. The length is inversely proportional to the frequency of vibration, the higher the frequency, the shorter the length, and the lower the frequency, the longer the length, and the frequency of vibration is proportional to the energy, the higher the energy, the higher the frequency, the lower the energy, the lower the frequency, and this is the shape of photon basic characteristics. The spiral line of photon consists of two segments, one segment with positive charge, which we call positive photon, and one segment with negative charge, which we call negative photon. Under normal circumstances, photon does not show electrical properties, but as long as the photon is disconnected by an external force, the positive and the negative are separated, and they will show the corresponding charge, and produce mutual attraction, which is the root of the electromagnetic force.

At the same time, the positive photon and negative photon also attract all photons, a force that is not positive or negative, but is small, which is the source of gravity, which will be explained in more detail later in the theory of relativity. Some people say that gravity is so small, how can it attract photons. The law of gravity is that the gravitational force is directly proportional to the mass of the object, and inversely proportional to the square of the distance from the object, that is to say, the greater the mass, the greater

the gravitational force, our sun, the earth and other celestial bodies can be seen in the powerful force of gravity, then the tiny photons, this time is the distance plays a role in the distance as long as the distance is close enough, the same can produce a strong gravitational force. Calculated, the electron and proton neutron with gravity within their volume, far greater than the photon's three-dimensional mass, which is the universe of all matter absorbing photons to accumulate energy, but also one of the roots of the atomic nucleus of the strong force, the back of the introduction of the strong force will be explained.

Positive photon and negative photon can be broken into three segments under the action of a large external force, these three segments will not be completely disconnected, there is a much finer but very strong material connected between them, similar to the three-sectioned baton used in Chinese martial arts, at this time the positive photon or negative photon will produce a greater attraction to the photon, the longer they are separated, the greater the attraction, and the attraction grows exponentially with the length of the fracture from several tens of times up to hundreds of thousands of times or more. As a photon breaks apart, it releases neutrinos at the break. Why and how much photon breakage creates an attractive force will be explored in later chapters. For now, let's start with the Big Bang and talk about the formation of matter.

3 Formation of matter, quark confinement, antimatter

13.8 billion years ago, a huge black hole near the point of eruption, the black hole described in this article is different from the traditional meaning of the black hole, this black hole has the volume of the size of a star, convergence of all the matter and energy of our universe, the matter inside the black hole are photons, neutrinos, positrons and broken into three segments of the negative photon, they are similar to the existence of the form of plasma, when the mass of the black hole reaches the critical point of the mass of the entire universe, the pressure inside the black hole will be positronic and fractured negative photon pressure together, positronic and negative combination of photons, this instant, the electromagnetic force and gravity disappeared at the same time, the universe began the Big Bang. The energy of the explosion is the entire mass of the universe according to the mass-energy formula for the conversion of energy, in the form

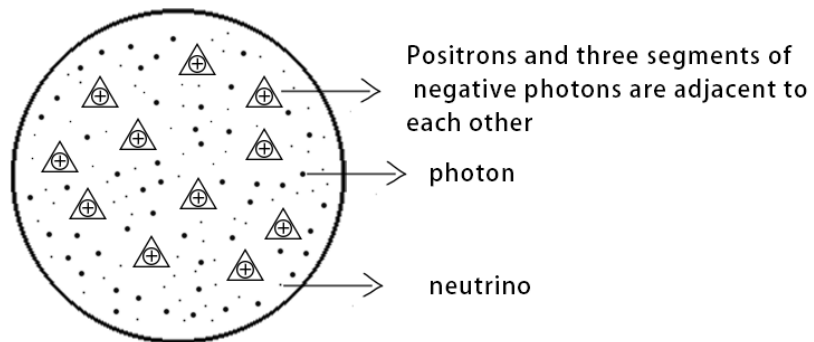
of photons burst out. A gram of antimatter and a gram of positive matter annihilation outbreak of energy, is the Hiroshima bomb three times the energy, which shows that the Big Bang outbreak of energy is how huge.

The big bang will be photons surge at the same time, most of the photons shattered into positive and negative segments, positive and negative segments and part of the shattered into three segments, but only the positive and negative segments can be completely separated, the positive and negative, no matter how long the three segments broken can only be disconnected but cannot be completely separated. Some of the three segments will shrink to be positive photons or negative photons. A part of the positive photons or negative photons will immediately attract the photons around it and make the photons rotate around itself, which forms the electron. A part of the photons splits into three segments of positive photons and negative photons, due to the break length exceeds the threshold (the break is blocked by neutrinos, more experiments are needed to verify this), cannot be restored to positive photons and negative photons, its powerful attraction will immediately attract electrons and photons around it to form quarks, a three-segmented negative photon will attract two or one positron to form a proton or neutron, and protons in turn will attract electrons to form hydrogen atoms, and the first Matter is thus created.

In the process of breaking, the Big Bang with so much energy didn't even manage to shake the three segments of the positive photon and the negative photon completely apart, then the quarks we now observe wouldn't have existed on their own, hence what we now calling in physics: quark confinement.

In addition, the current particle accelerator experiments, one hundred billion collisions to produce a small number of antiprotons, indicating that the positive photon is much firmer than the negative photon, shattered into three segments of the negative photon is far more than the positive photon, which is the reason that our current world are composed of positive matter. It can be seen that the Big Bang produced far more positive matter than antimatter, and antimatter will soon be annihilated, and now we detect a very small amount of antimatter is only the universe of high-energy rays formed by chance of a small probability of events in the universe to look for antimatter to be used as an energy source should not be feasible.

black hole

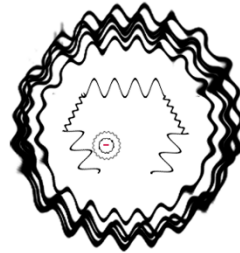


When the mass of a black hole reaches the critical point of the entire universe's mass, the pressure inside the black hole compresses three segments of negative photons and positive electrons together. At this moment, electromagnetic force and universal gravity disappear simultaneously, and the Big Bang of the universe begins.

Three segment negative photon
Attracting 1840 photons and
one positron to form neutrons



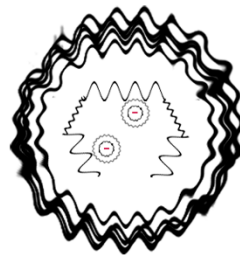
Three segment positive photon
Attracting 1840 photons and one
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Three segment negative photon
Attracting 1840 photons and
two positrons to form protons



Three segment positive photon
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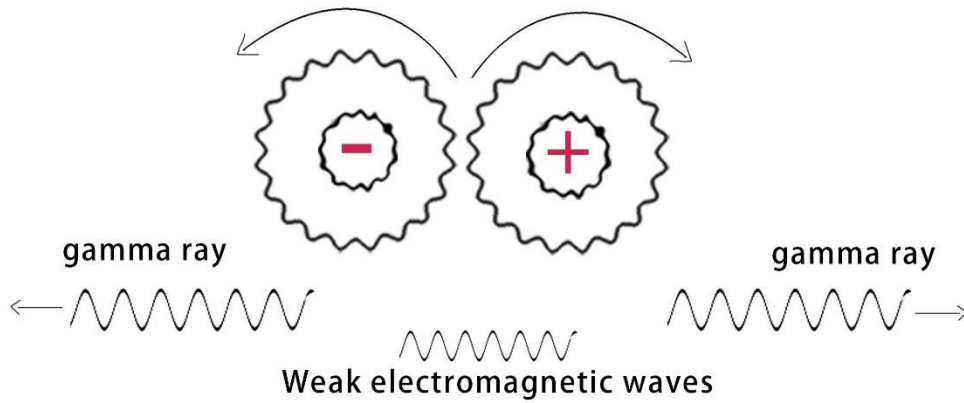
4 Formation of elementary particles

Electron, starting with the negative photon (the positive photon principle is reversed), the negative photon is produced, the fracture energy to attract a photon rotates around a negative photon, the photon's speed is reduced, the volume of the

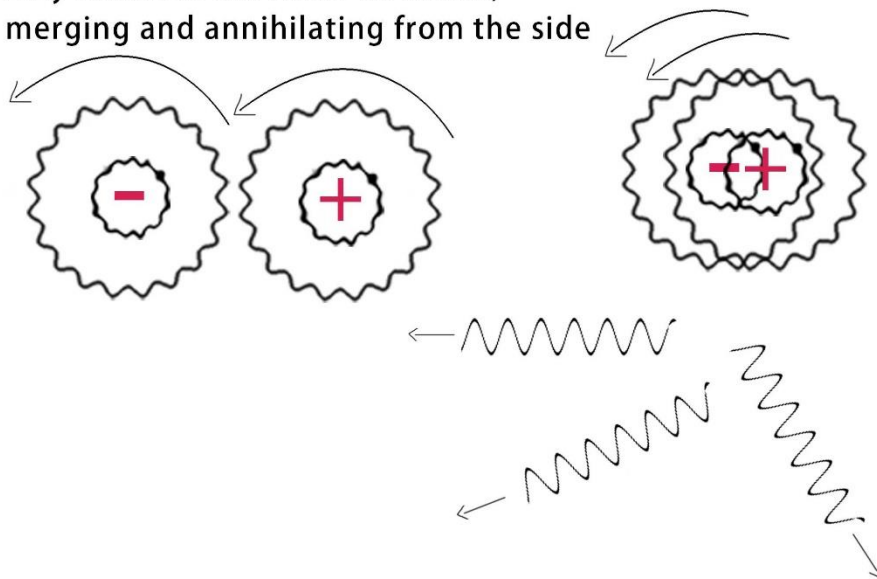
photon longer, photons in the outside wrapped around the negative photon rotating, the formation of a shell, the negative photon rotating in the inside, we observe spin is one-half, which is the formation of the electron. Photons, although reducing part of the speed, but still at a very high speed around the negative photon rotating, maintaining the kinetic energy of 300,000 kilometres per second, photons in the negative photon outside the formation of a strong shell, general energy cannot be opened, only with the positron meets the positron's vibrational frequency is the same as the electron's vibrational frequency, if the spin is opposite, similar to the two sizes of the same gears according to the same speed of the opposite rotation, attracted to the same together will be immediately combined, the positive and negative electrons inside the positive photon and the negative photon combine into photons, the photons of the electronic enclosure lose their attractiveness, to restore the photon form, in the form of gamma rays to the opposite direction of the shot, the internal photon in the form of a weak electromagnetic wave dissipation. If the spin is the same, equivalent to the same direction of rotation of the gear, head-on cannot be combined, can only move to the side of the combination, the combination time will be lengthened, the combination of photons will not be shot in the opposite direction, the internal photon retains the energy, so there will be three high-energy photons, which is the annihilation process of positive and negative electrons. Other positive and negative matter collision annihilation of the same principle as the electron.

When electrons undergo charge spin separation, they split into self spins and holes, which are the quantum energy generated by the rotating photon shell around the electron and the rotating negative photons inside the electron.

Reverse rotation annihilation of electrons and positrons



They rotate in the same direction,
merging and annihilating from the side



Generate three high-energy rays with uncertain directions

Protons and neutrons, when a negative photon breaks into three segments, a part of the force exceeds the threshold and will retain the form of a three-sectioned stick (the reason for the neutrino block at the break, whether the neutrino was originally present at this location at the break, or whether the strong attractive force at the break holds the

neutrino in place, which needs to be verified by better experiments), and each section of the stick carries a $1/3$ negative charge, which is the three down quarks, which are powerful attractive forces, attracting one or two positrons to rotate around themselves, and at the same time, attracting some of the photons to rotate around themselves.

A down quark that attracts a positron, a positron rotates around this down quark, the positron has a positive charge, then it shows two thirds positive charge, this is the up quark, the other two negative photons segments are the two down quarks, the up and down quarks have a small number of photons that rotate around them, and since the three quarks rotate together at high speeds, most of the attracted photons rotate around the outside of the three quarks, with equal positive and negative charges, which shows electrically neutral, which is the neutron.

Three down quarks attracting two positrons, two positrons spinning around two down quarks, each combination showing a charge of positive two-thirds, this are two up quarks. Another part with a negative one-third charge, is a down quark. The whole showing a positive charge, which is the proton.

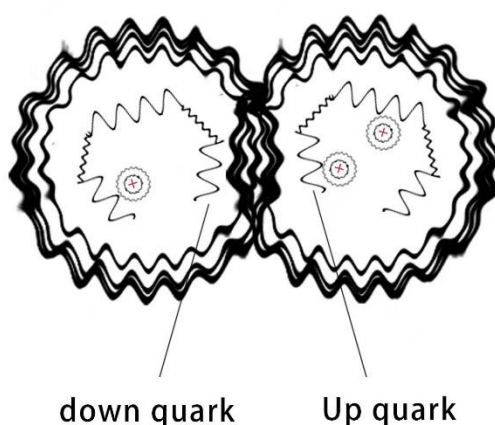
An electron is small but much larger than a photon, and a proton has one more positron occupying a quark orbital than a neutron, so a neutron attracts more photons than a proton, neutron is slightly heavier than a proton, and smaller than a proton instead. An electron has a mass of 0.51 MeV (for ease of description, energy is referred to as mass in this paper, same later), which can be seen as the mass of a photon in three dimensions, a proton has a mass of 938 MeV, which is about 1840 times that of an electron, and a neutron has a mass of 939 MeV, which is slightly heavier than that of the proton, so that it can be seen as a proton attracting 1840 photons, and a The energy contained in a proton is the energy to release 1840 photons.

5 Atomic Nuclear Force, strong nuclear force

A proton consists of three quarks, the three quarks do high-speed rotation in the form of a triangle, except for the quarks with a small number of photons rotating, the vast majority of the 1840 photons rotate around the periphery of the triangle of three quarks, photons rotate around the quarks, some of the energy is converted into mass, the speed is lower than the speed of light, then the photons will show the length, become

a long strip of spirals and rotate around the quarks at high speed,

The lower quark inside the neutron and the upper quark inside the proton attract each other, Keep neutrons stable and prevent decay



The photon flow around protons and neutrons rotates to each other's surface, wrapping these two particles together, The principle of mass atomic nuclei with multiple protons and neutrons is the same. The gravitational force of quarks within atomic nuclei The combined force formed by the entanglement force with the photon flow is called strong force in modern physics.

Photon flow is called gluon.

The photon flow wraps around protons and neutrons like an elastic pocket, so the strong intensity is related to Distance is inversely proportional, and this phenomenon in modern physics is called asymptotic freedom.

so that More than 1,800 photons would then become a stream of photons, wrapping around the quarks like ropes spinning. If there is a neutron approaching, the down quark of the neutron is easily attracted to the up quark of the proton, and the proton and the

neutron are next to each other, at which time some of the photons on the periphery of the two particles will rotate to the surface of each other to rotate, In this way the photon stream wraps around these two particles, like a chemical bond between molecules, where the photon acts as a chemical bond between molecules, but the force is much greater than the force of the chemical bond, and this combined force formed by the gravity of the quarks inside the nucleus and the entangling force of the photon stream outside the nucleus is called the strong force in modern physics.

A photon has a finite length and a finite number of protons and neutrons that it can enclose, so there is an upper limit to the atomic weight of the matter of our universe. The greater the mass of the nucleus, the greater the number of protons and neutrons, and the more difficult it is for the photon stream to wrap around them. This is the main reason why massive atomic nuclei are prone to decay.

6 Neutrinos, weak force

Neutrinos are the most mysterious particles, the least understood by modern science, with a mass so small that it is only one millionth that of an electron, carries no electric charge, and does not react with other particles, making it difficult to monitor. Although the neutrino is very small, but the universe does not have a particle is redundant, neutrinos in the composition of the universe of matter, play an irreplaceable important role. The fracture of photons was mentioned earlier, and neutrinos are the parts that fall out of the fracture when the photon breaks (due to the limited conditions of the existing test, this needs to be verified by better test data). What is the role of neutrinos in the composition of matter?

(1) Neutrinos only interact with photons at their junctions and breaks, and can stop at the break between the positive photon and the negative photon, which is the only place where neutrinos can stop.

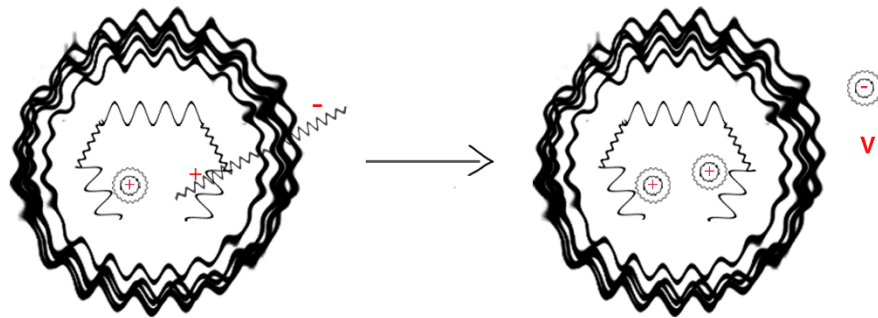
(2) A pair of neutrinos stopping at the right place at the two breaks in the three negative photons will lock in the negative photons, so that it cannot revert to negative photons, forming quarks, which then form protons and neutrons. The positron principle is the same and can form antiprotons and antineutrons.

(3) Neutrinos can break photon connections. Inside the neutron, there is only one

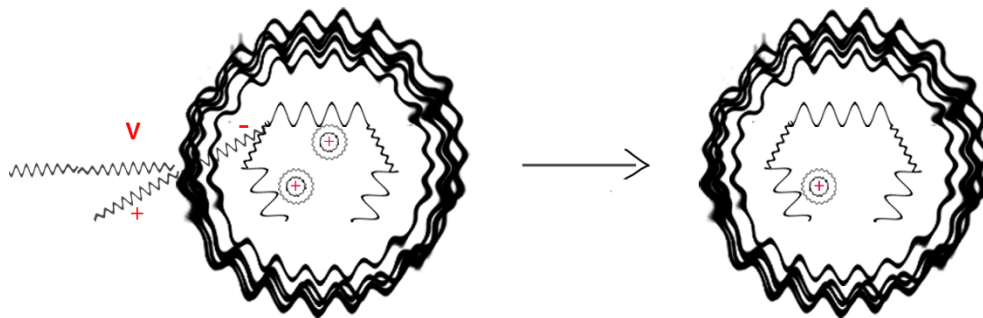
positron rotating around a down quark, and the other two down quarks are not bound by the positron and do high-speed irregular motion. The neutrino at the break moves with the down quarks at high speed there is a probability that it will break one of the photons around it, the photon breaks into a positive photon and a negative photon, and it immediately attracts photons around it to form a positron and an electron, and the positron rotates around one of the down quarks, and the electron is thrown off in the periphery, neutron decays into a proton. In turn, external neutrinos have a probability of interrupting a photon on the periphery of a proton, this probability is small, but it will increase in inside stars such as the sun, where the number of neutrinos is enormous. When a neutrino interrupts a photon on the periphery of a proton, the photon splits into two segments, the positive photon turns into a positron outside of the proton, and immediately annihilates with the other electrons, and the negative photon turns into an electron inside of the proton, immediately with a positron inside the proton combined annihilation, the proton will become neutrons, with the production of neutrons, the star has the basis for nuclear fusion. That also is the main reason for quantum penetration. This phenomenon is also called beta decay.

Neutrinos interrupt the decay of photons and other decays involving neutrinos, which in physics is now interpreted as the weak nuclear force, in fact, the decay of other large mass particles do not need a weak nuclear force, other large mass particles is a photon hit by external energy generated by the mass, itself contains potential energy, will automatically contraction of the decay, as if an elongated spring, let go of not only automatic contraction, but also to the outside to release energy. Neutrino shape is unknown, spin one-half should be a composite structure, can change the length of the shape in motion, this phenomenon is called neutrino oscillation in physics. Neutrinos are involved in the decay of almost all particles, is the main participant in the quantum penetrate, with super penetrating force, so the study of neutrinos, can solve the problem of nuclear fusion and the future of many new energy sources, but also to create more advanced communication tools.

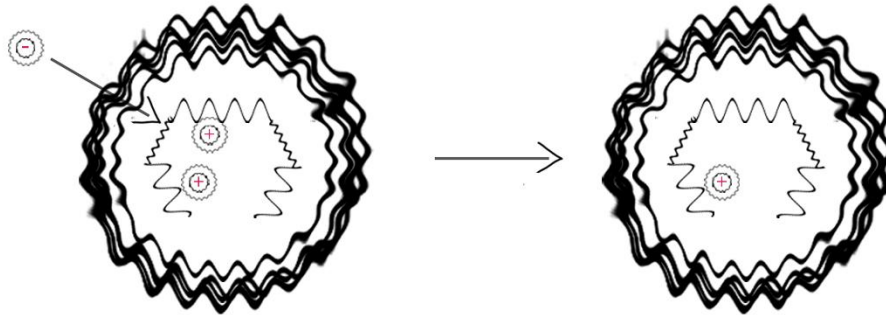
The lower quark inside a single neutron undergoes high-speed and irregular motion, and the neutrinos at the junction interrupt the interior
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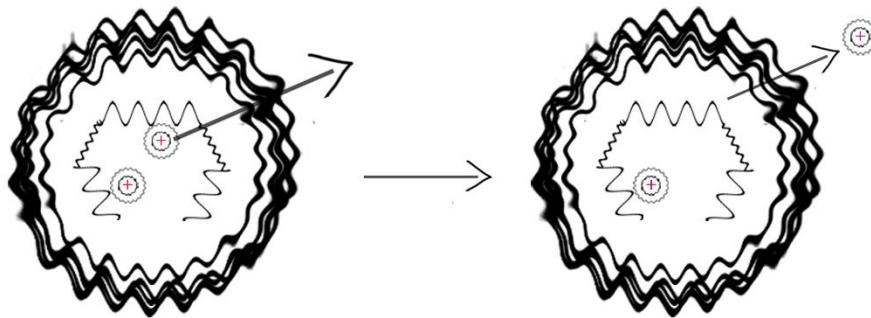
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When electrons cannot be captured, Coulomb repulsion will squeeze out a positron, Protons become neutrons



7 Formation of atoms

When a positively charged proton meets a negatively charged electron, the electron will run towards the proton due to the attraction of the charge, and it is logical that the electron will be tightly adsorbed outside of the proton, but the reality is that the electron

rotates far away from the proton, and this is the reason why? The electron is a combination of photons rotating around the negative photon, there is a specific frequency, carrying 300,000 kilometres per second of kinetic energy, in such a small scale, itself close to the speed of light rotating at the same time close to the speed of light around the nucleus of the atomic nucleus, the nucleus of the atom, the periphery of the photon flow is also close to the speed of light rotating, the nucleus of the atom is much larger than the electron, then the photon flow rotates at a lower speed and frequency than the electron, when the electron is attracted close to the Atomic nucleus, like two high-speed rotating gear contact, gear size is different, the size of the gear ratio is different, and the rotation speed is different, at such a high speed, there is only one effect, that is, immediately bounced off, bounced off and will be attracted by the electromagnetic force, so the electrons on the periphery of the nucleus of the atom non-stop movement, there is no fixed track, but will be balanced within a certain distance, we call the electron track. Within this orbital range, electrons approach the speed of light and revolve around the nucleus of the atom. In such a small scale, we can only observe a cloud of electrons. This is the formation of a single atom.

The case of multiproton atoms is more complicated due to the Coulomb repulsion between the protons, which needs to be co-ordinated by the neutrons, where it is not the spacing of the neutrons that holds back the repulsion, but rather the down quarks of the neutrons are attracted to the up quarks of the protons, counteracting some of the repulsion, while keeping the down quarks inside the neutrons stable without decaying into protons. The more protons there are in the nucleus, the more neutrons will be needed appropriately to have enough down quarks to counteract the repulsive force between the protons, and together with the binding force of the photon stream outside the nucleus (also known as the strong nuclear force), equilibrium is reached, and if there is no equilibrium in the nucleus, whether there are more protons or more neutrons, the decay will take place, and the equilibrium will eventually be reached, and that is the reason why the isotopes of some elements are prone to decay. Extranuclear electrons will be in the Coulomb gravitational force and the Coulomb repulsion between the electrons and the electrons under the action of their own kinetic energy, in accordance with the space outside the nucleus can accommodate the automatic layering, to achieve

a state of equilibrium, this layering is known as electron energy level orbitals. Between each layer of the orbit by the above three forces to form a relatively fixed potential barriers, the electrons to change the orbit will be absorbed or released a certain amount of energy. To jump to a higher level, the energy absorbed by the electron must be greater than the potential barrier between each level, and to jump to a lower level, it will release a photon of the same energy, and most of the energy of this photon is in the X-ray wavelength band, so the energy level jump of electrons is also an effective method to create X-rays.

8 Energy transformation

Energy transformation of matter in nature, in addition to some decay by the neutrino generation and transmission, the other are by photons (photons contain visible light, high-energy rays, infrared, microwave, electromagnetic waves, these are different energy and frequency of photons, this paper is unified with the photon expression) to transfer, which is the focus of this paper. Photon transfer energy principle is as follows:

(1) The electron can adsorb more than one photon to itself, the faster the electron moves, the more photons it can adsorb.

(2) The higher the energy of the photon, that is, the higher the frequency, after the impact of the electron, the faster the electron's speed of movement.

(3) the speed of the electron is reduced by external forces, the photons adsorbed on the electron will be detached, that is, the emission of photons, the faster the deceleration, the higher the energy of the photons emitted.

From the three points above, we can see that the relationship between electrons and photons is like a person who wants to climb into a moving car, he needs to run and be close to the speed of the car in order to be able to climb more easily, here on the contrary, the photon is fast, and it needs the electron's speed to be close to that of the photon, in order to attract the photon more easily. The gravitation of the electron is fixed, then the smaller the speed difference between the electron and the photon, the more photons will be attracted, and the electron attracts and emits photons in the fast and slow change of speed, carrying out the energy conversion, which is the main way of energy conversion in our nature.

There is no absolute vacuum in the universe, no matter where, vacuum chamber

or outer space, is full of photons, all substances are constantly absorbing and emitting photons, energy conversion, photons absorbed by electrons within the substance, at any time in the appropriate saturation state, as if a magnet with a fixed magnetic force can only attract a fixed number of steel balls, when the steel balls are attracted to a limit value, finally one more steel ball will fall down. When a saturated electron attracts a photon, the photon is immediately reflected again, which is why we can see the world.

External photon energy is greater than the energy of photons carried by the electron, photons will prompt the electron acceleration, electron speed increases and can attract more photons, which is the electronic savings energy, embodied in the macroscopic is the temperature of the object rises. When the electron receives a high energy photon, the electron can suddenly increase the speed very quickly, and can even get out of the atomic nucleus of the bondage, which produces the photoelectric effect.

When the energy of the external photon is less than the energy of the photon carried by the electron, the external photon will take away the energy of the electron, and at the same time decelerate the electron, the electron decelerates to a certain speed, and the photon will detach from the electron, which is a loss of energy of the electron, which is embodied in the macroscopic is the cooling of the object. When the electron suddenly decelerates, it will release high energy photons, the faster the electron decelerates, the higher the energy of the released photons. It is like a car travelling at a constant speed, suddenly decelerating, and the contents of the car will fly out. The sudden deceleration of an electron releases a high-energy photon, and the faster the electron decelerates, the higher the energy of the released photon.

The energy of the decelerated emitted photons is proportional to the difference in speed of the electrons and inversely proportional to the time it takes for the electrons to decelerate.

The heat generated by the work done by the object is essentially the deceleration of electrons within the object and the emission of photons to produce the effect, for example, as follows:

Friction heat, when two objects friction, the object surface of the collision of electrons, electron deceleration release photons, thus forming heat.

Two stones or metal impact, produce sparks, when two stones impact, stone impact

surface is very small, the relative pressure generated is large, the impact part of the electron sudden violent deceleration, the release of photons carrying high energy, so produce sparks.

Small galaxies hit the Earth, the electrons inside the asteroid and the Earth was hit by the part of the electrons at the same time violent deceleration, the release of a large number of photons, resulting in a huge energy, so a huge explosion.

When an iron wire is bent repeatedly, the electrons in the bent part are squeezed, slowing down and releasing photons, thus generating heat.

Gas plus atmospheric pressure, gas molecules close together under pressure, the electrons are squeezed by Coulomb repulsion, electronic collision, slowing down, releasing photons, generating heat.

Resistance generates heat. When an electric current is passed through a resistor, electrons are squeezed, slowed down, and photons are released, resulting in heat or visible light.

It follows that heat transfer and energy transformation is actually electrons attracting and emitting photons.

The essence of the kinetic energy and potential energy of a moving object is that external energy is injected into every atomic electron in the object, that is, every photon, and its core principle can be explained by relativity.

All this work and heat are physical changes. chemical reactions produce heat or combustion, the essence is also a material molecule into another molecule, electrons emit photons, resulting in the formation of heat or combustion.

There are two other types of energy in the universe that are not produced by electrons emitting photons, but by atomic nuclei emitting photons, which are nuclear fission and nuclear fusion. Atomic nuclei carry a large number of photons, so nuclear fission and nuclear fusion can produce huge amounts of energy.

When matter and antimatter come into contact, all matter is converted into energy, that is, the photons that make up matter are all restored into photon bursts, and the energy conversion rate is 100 percent.

9 Superconductor

Scientists in the test found that many conductors in the very low temperature, the conductor resistance will completely disappear, this is the superconductor, what is the reason for this? Still have to start from quantum mechanics, people are used to the macro world of various physical and natural phenomena, the micro world of many phenomena is very mysterious, in fact, the micro world is the real essence of our universe. In the macroscopic world, the use of all energy will have loss, a spinning gyroscope, always stop, this is due to the macroscopic world is filled with a variety of substances, will produce a variety of resistance and friction loss of energy. On the contrary, the microscopic world, microscopic particles composed of electrons and atomic nuclei, electrons and atomic nuclei composed of photons, photons carry 300,000 kilometres per second of kinetic and potential energy, the space where microscopic particles running does not exist in other substances, electrons around the nucleus of the atomic movement, the formation of matter from the Big Bang, more than ten billion years, electrons are still around the nucleus of the atom around the movement, there is no loss of energy, the only change in energy is the photon brought about by the energy changes. Conducting body full of free electrons, which is the conductor can conduct electricity, the conductor in the voltage, the free electrons will move, thus generating current, free electrons in the process of moving, disordered electrons will be irregular collision and scattering, which produces resistance, this is the resistance, in the process of collision, the electrons decelerate the release of photons, so it feels like it will be heated, the greater the resistance, the release of photons the more, the hotter the conductor, which is the energy loss when the current is transported.

Going back to superconductors, when a conductor is at an extremely low temperature, low enough to reach a certain threshold, the free electrons undergo two changes. First, the disordered motion of the free electrons essentially stops, and the chances of collision with other particles are drastically reduced. Second, the conductor temperature drops to extremely low, said the photons adsorbed on the electron is also extremely small, can be seen as the photons adsorbed on the electron, in the process of cooling the conductor, has been launched out, so that the electron in the movement of the electron, there is no energy can be lost, the two reasons are superimposed on one another, the conductor is shown to have a resistance of almost zero, which This is the

reason why superconductors produce superconductivity. By the cause of superconductivity can be seen, the generation of superconductivity need to reduce the temperature to very low, or with very high air pressure to force the free electrons to reduce the irregular movement, which need to consume a great deal of energy, so the use of superconductors to power transmission should not work, but the use of superconductors with a persistent internal circulation of electric current and magnetic field, to do some other special scenarios of the application should be very promising.

10 Other fundamental particles

In decades of large particle collider experiments, scientists have discovered many various quarks, various mesons and various particles. In fact, these particles are photons split by the impact of the formation of different force size, split in different forms and lengths, reflecting the quality and performance is not the same.

Take the top quark as an example, the mass of the top quark is about 173GvE, which is the particle hit by the maximum collision force of existing colliders, and the formation principle is as follows. A strong external force will break a photon on the periphery of the proton, the positive photon is relatively strong, splitting into three slightly shorter segments, the total attraction of the three segments embodied mass of about 80GvE (in fact, it is the positive W boson), the negative photon is fragile, by the strong energy impact will be split for a very long length, the mass embodied in each segment of the mass of about 93GvE, the three segments of the positive photon and one segment of the negative photon are attracted together, the embodied mass of about 173GvE, the Displaying a charge of positive two-thirds, this is the top quark. Since the top quark mass is so large, the negative photon shrinks very quickly, and the three-segment positive photon shrinks slower than the negative photon, and it looks like it decays into the W boson and the bottom quark, and sometimes it shrinks even faster, and decays directly into the odd quark or the down quark. In this process, at the same time, massive particles with a two-thirds negative charge appear, now called anti-top quarks in physics, in fact, this is not an anti-top quark, this is the other two of the three negative segments, which do not have a positive charge attraction, and decay more quickly. The anti-top quark requires a positive photon that has been smashed into three very long segments, and a negative W boson, to form two-thirds negative charge, so

that it will have the same charge, the same frequency as the top quark, so that the top quark and the anti-top quark together will immediately annihilate, releasing a lot of energy. Thus, the above top quark will be no annihilation.

The decay of K mesons, which once shocked the entire physics community and gave rise to the law of non conservation of parity, has been explained in this article. However, there is another explanation that K mesons are generated by collisions between protons. As mentioned earlier, protons are spherical bodies surrounded by streams of over 1800 photons, and under high-speed impact, it is possible to simultaneously break two photons. The parts where these two photons break are slightly different, under the same impact force, It will exhibit the same mass, but slightly different angles will cause slightly different fractures, leading to different decays, θ During decay, two π mesons (one π^+ and one π^0) are generated, τ Then it decays into three π mesons (two π^+ , one π^-), where π^0 is actually a photon that is not completely disconnected in the middle and is broken on both sides, indicating a neutral charge. π^0 then completely disconnects from the middle and becomes a positron and a negative, immediately attracting the photons around it to become positrons and electrons, and then annihilating them together. If π^0 is completely broken in the middle at the beginning, there is a probability that it will become a π^+ and a π^- , which is why K mesons sometimes decay into two π mesons and sometimes into three π mesons.

The J/ψ meson, in modern physics formulation, is a class of mesons consisting of charm quarks and anti-charm quarks, with a mass of 3.1 GeV. In fact, the J/ψ meson does not consist of charm quarks and anti-charm quarks, the charm quarks have a mass of 1.27 GeV, which, if they were together with the anti-charm quarks, would not be consistent with the mass of the J/ψ meson. In fact, with the charm quark, it is the other two of the three negative photons segments, which do not have positrons occupying their orbits and attract more photons, and so have a larger mass than the charm quark mass. Recently there have also been scientists who have found particles with four or even more quarks at particle colliders, which is actually a phenomenon formed when two or more photons break off. From the formation of elementary particles, it is clear that all quarks inside confinement cannot be antimatter to each other, and only quarks outside confinement can form antimatter. We have produced many particles in particle

colliders, many of which have a mass greater than that of the impacting particles, so the term discovery of elementary particles is inaccurate, it should be called the creation of these particles.

Among these particles, due to different angles of force, sometimes the photon will not split in the middle, but only on both sides, which is shown to be electrically neutral, e.g., Z boson, π^0 mesons, etc. Negative photons and positive photons sometimes split into three segments, sometimes they will only split into two segments, and those that split into three segments can form various quarks, various mesons, and W boson, etc., according to the length of the split. The three-segmented negative photons have the same three segments as the three quarks in the nucleus, and their frequencies are very close to each other, so the mesons can have strong interactions with the nucleus. The one that splits into two segments is the muon, which has only two segments, and its frequency is very different from that of the three segments, so it has very little force with the nucleus and will eventually contract into a negative photon and turn into an electron. All mesons and other particles are not a combination of quarks and antiquarks, which is inconsistent with the antimatter principle and seriously inconsistent with the facts.

In particle collider experiments, a large number of collisions are required to generate a top quark, and the production rate of other large particles is also very low. This article suggests that in the experiment of a large particle collider, as long as a common strong light source is irradiated at the impact position of the particle, the production rate of the top quark can be greatly increased, and the production rate of various other large mass particles can also be greatly increased. This article will not explain the reasons here for now, let's just use it as a prophecy to verify photon theory!

11 Interpreting relativity, time dilation, space-time bending, gravity

The emergence of the theory of relativity almost overturned classical physics and brought about a great contribution to the development of modern science and technology. Through Maxwell's system of equations and Lorentz transformations, Einstein established the principle of invariance of the speed of light, and calculated a series of formulas using mathematics, which are the famous mass-energy conversion formula and the time dilation effect, mass increase effect and delayed contraction effect

derived from it, which are the core of special relativity. Einstein used mathematics to derive the theory of relativity, but did not explain the reasons for these effects, this paper will be through the photon theory, about the reasons for the various effects of relativity.

The first is the conversion of energy into mass, the essence is that the photon is attracted by the positive photons and negative photons to form protons neutrons, electrons, and then the formation of matter, which is the conversion of energy into matter. Matter into energy, that is matter releases photons, such as cooking fire, atomic bombs, nuclear fusion and so on all the sources of energy, in fact, is the process of matter to release photons. When matter and antimatter come into contact, the photons that make up the matter are released completely, and this is when all the mass of the matter and antimatter is converted into energy and released in the form of photons.

Time dilation effect, the theory of relativity establishes the principle of the invariance of the speed of light, regardless of what frame of reference, photons are at 300,000 kilometres per second, even if the photon rotates around the electron or nucleus of the atom, the speed has been reduced, the reduced speed is converted into mass, but the photon's total potential energy of 300,000 kilometres per second will not change. We assume that a spaceship with a speed of 10,000 km per second sailing in the universe, the spaceship launch a beam of light, in front of the people on the Earth, the speed of this beam of light is still 300,000 km per second, to the spaceship as a reference, the speed of this beam of light is only 290,000 km per second, but people who inside the spaceship to see this beam of light is still 300,000 km per second, this is due to the spaceship flying at high speeds, resulting in the effect of time dilation, time in the ship has slowed down. Let's start with an electron in someone on the spaceship, this electron followed the ship to 10,000 kilometres per second flight, around the electron rotating photons to maintain the potential energy of 300,000 kilometres per second, this photon will need to reduce the speed to maintain the speed of light unchanged. All the matter on this spacecraft, including humans, is made of electron atoms, electrons and atoms are composed of photons, and the above substances will be correspondingly reduced in speed, then everything on this spacecraft will slow down, including human physiology and metabolism, and time dilation arises from this. As the photon slows down, some of the energy is converted into mass, so the mass gain effect occurs at the

same time. Length contraction, now cannot find a suitable reason to explain, Einstein almost all theories and prophecies, later proved to be correct, time dilation effect and mass gain effect, and ruler shrinkage effect out of the same set of formulae for the derivation of the first two have been verified, completely correct, then the late shrinkage effect should be correct, this effect can only be used in the four dimensions of space can be explained, perhaps this is also a way to open the four-dimensional space.

General relativity, the theory of general relativity, holds that time slows down when all matter is attracted by gravity, and the greater the gravity, the slower time becomes. Modern science has not only proved the correctness of this theory, but has also been used in practice, such as satellite navigation time determination, cannot be separated from the principle of speed time dilation effect and gravity time dilation effect. Why does gravity slow down time? As mentioned above, matter is composed of electron and atoms. Electrons and atoms are formed by positive and negative photons attracting photons and slowing them down. This refers to the gravitational pull of positive and negative photons to slow down the photons, resulting in the formation of mass and thus the formation of matter. The gravitational pull of positive and negative photons is the root cause of gravity. Gravity is produced by the gravitational collection of all positive and negative photons, and can similarly slow down photons, the composition of matter photon's speed slow down. The slower the speed of the electrons and atoms, the slower the speed of time, the greater the gravity, the slower the time, and the time dilation that results.

Space-time bends, and general relativity suggests that gravity is not actually gravity, but rather that the space around a celestial body bends, and the matter around the body collapses along the curved space towards the body. This paper argues that this theory is also correct. How to understand it? Still have to start from the speed of light invariance, we know that photons are born to maintain the kinetic or potential energy of 300,000 kilometres per second, which is the law of our universe, and the fundamental particles that make up all the matter are photons, including negative and positive photons, which are decelerated photons, so how can photons maintain the potential energy of 300,000 kilometres per second? It can be thought of in this way, these photons cannot advance along the space, the missing speed how to do, photons let the space

towards themselves to make up for the loss of speed, so as to maintain the speed of light unchanged, each slowed down photons produce this tendency, taken together, in the macroscopic on the manifestation of the space collapses, also manifests the gravitational force, which is the general theory of relativity of the spacetime curvature.

12 Object contraction effects

Both special relativity and general relativity demonstrate the time dilation effect. In fact, when these two effects occur, a contraction effect occurs in the object at the same time, and this contraction effect is not the ruler contraction effect. Ruler shrinkage effect is Einstein according to the formula, using mathematical methods to calculate a kind of effect, it refers to the direction of movement along the time axis of the object, the object and the space occurs in the length of the contraction, that is, the object becomes shorter, the object movement of the distance in space at the same time become shorter, this is the relativity theory of the ruler shrinkage effect. The object contraction effect means that, while the time dilation effect occurs in an object, the volume of the object will undergo all-round contraction, and the volume will become smaller. Whether it is when the velocity time dilation effect of special relativity or the gravity time dilation effect of general relativity occurs, the volume of the object will be shrunken, and the slower the time is, the smaller the volume will be. The principle is that when time slows down, the speed of photons that constitute matter slows down, and the corresponding speed of electrons also slows down. The distance of electrons rotating around the nucleus shrinks, and the size of atoms shrinks accordingly, which is embodied in the macroscopic object, that is, the volume of the object becomes smaller, which is the principle of the object contraction effect. When one day, when the human spaceship is flying close to the speed of light, or flying at the edge of a black hole, the spaceship shrinks to only a few millimetres or even smaller, and the astronauts inside the spaceship will shrink proportionally, but they will not feel it, the same as if we were living on the Earth, which is unbelievable, but a possible cosmic miracle. When the speed reaches the extremum and the spaceship shrinks to the extremum, the door into higher dimensional space may be found, and mankind's crossing of time and space can be realised!

13 The importance of the constant speed of light

Our universe, with electrons revolving around atomic nuclei, planets orbiting around stars, and stars orbiting around the centres of galaxies, all of which seem to be arranged by God in an orderly and seamless manner, is in fact all thanks to the constant speed of light. First of all, our universe is a universe in motion, as small as electrons and atoms, as large as galaxies and galaxy clusters, all the time in motion, if there is not a stable scale, the universe will be chaotic. Photons are the fundamental particles that make up the universe, and the invariable speed of light plays a very important role as the basis for the stability and invariance of the universe in the system that constitutes the atom. There are streams of photons at the periphery of protons and neutrons, each photon carries a potential energy of 300,000 kilometres per second, the speed of light invariance ensures the stability of the proton neutron, to ensure that the proton neutron constitutes the stability of each kind of atom. If the speed of light is not stable, the nucleus of the atom will change at any time, and the various elements that make up matter will not remain stable. Electrons are made up of photons spinning around negative photons. It is because of the stability of the speed of light to ensure the stability of the kinetic energy of electrons, electrons can be outside the nucleus of the atom always stable rotation. If the speed of light has instability, electrons in the periphery of the nucleus of the atom is unstable, either the kinetic energy is too large, the electrons escape, or the kinetic energy is too small, the electrons fell into the nucleus of the atom. Once these happen, matter cannot be formed, and there is also the fact that according to general relativity, the constant speed of light causes space to collapse, which is the root cause of gravity. The constant speed of light is the most important basic law of our universe, it is with the constant speed of light, there is our universe, there is our present great world.

14 The magnetic monopole

Magnetic monopoles, in reality, how scientists try, they never find magnetic monopoles, so is there any magnetic monopoles in the world? The answer is yes. There are only two kinds of particles in which a magnetic monopole can exist, and that is the positive photon and the negative photon. Positive photons and negative photons carry

separate positive and negative charges and can produce separate magnetic poles when they rotate, but as soon as they appear, positive photons and negative photons attract photons to turn into electrons, so we can't find them in reality. So why isn't the electron a magnetic monopole? Because there is a rotating photon outside the electron, and the photon contains both positive photons and negative photons, which can't produce separate magnetic poles, so it's not a magnetic monopole.

15 Roots of electromagnetic force and gravitational force, four-dimensional field

As mentioned earlier, photons have the property of four-dimensional spatial matter, so let's start by looking at the two-dimensional world from our three-dimensional world. The universe in which people live is a three-dimensional world, but people spend a lot of time dealing with two dimensions, such as walking, which is moving on a two-dimensional road surface, and using tools, which is also the contact of people with two-dimensional pavement. It can be said that the world we live in, as it is now known, is a world that intersects with one, two, three, and four dimensions.

Take a stick and the plane at its end is a two-dimensional plane. Assuming that this two-dimensional plane is inhabited by two-dimensional beings, we take a knife and split the stick a little bit down the middle of the plane, and separate the two sides with our hands, and there is a force that bounces back towards the centre on these two sides. Although we know the cause of this force, the creature on the two-dimensional plane at the end, does not know what causes the attraction between the two sides, this is the reason why the dimensions are different and the lower dimensions do not understand the higher dimensions. It is normal that people live in a three-dimensional world and cannot understand the properties of four-dimensional space. From the above example, we apply to photons, photons are four-dimensional material, it is separated under the action of external forces, from the perspective of the three-dimensional world, they are separated from each other, there is no connection between them, why there will be interaction force, but from the perspective of the four-dimensional point of view, there is a four-dimensional material connection between them, and this material is the "field", the field is the same as photons, across the four-dimensional space, and are ubiquitous

in the three-dimensional world, both near and far. The electromagnetic and gravitational forces of the three-dimensional world are formed by this field.

Physics now explains that the electromagnetic force is transmitted by photons moving back and forth, using the analogy of two people passing a basketball to a photon transmitting the electromagnetic force between an electron and the nucleus of an atom. But this doesn't make sense because this only transmits repulsive force, not gravitational force. The magnetic field is explained as being transmitted by imaginary photons, and since they are photons, the magnetic field is closed-loop, and here the photons turn corners and can penetrate almost any substance, which is grossly inconsistent with the properties of photons.

This paper argues that electromagnetic and gravitational fields are the macroscopic embodiment of four-dimensional fields in three-dimensional space. The theory of relativity is Einstein converted by electromagnetic theory, thus establishing the principle of the invariance of the speed of light, the time dilation effect, the quality increase effect and the ruler shrinkage effect, etc. These are all the laws of nature discovered on the basis of the four-dimensional space and time, they are not phenomena that can be seen in our three-dimensional world, which is out of line with our usual laws of nature, but after more than a hundred years of scientific validation, all of them are correct and they produce great effects for our Scientific development has produced a huge role, so the theory of relativity indirectly proves the existence of four-dimensional space, if there is no four-dimensional space and four-dimensional field, three-dimensional matter will not have the speed of light limit, time dilation, mass increase effect, ruler shrinkage effect, etc.. The photon splits into two parts and then has an effect on four-dimensional space. The four-dimensional field affects the photon in a form invisible to our three-dimensional world, just as the body of a stick affects the plane of the end of the stick, and indeed affects every aspect of our three-dimensional world, which is supposed to be the root cause of quantum entanglement. Modern physics can't explain how mass arises, and finally has to invoke a field concept: the Higgs field, which is actually going round in a big circle and back to its original position.

16 Pulsar

A pulsar, a neutron star spinning at high speed. Let's start with the formation of a

neutron star. A star with a mass of 8 to 30 times the mass of the Sun collapses when it runs out of fuel to form a neutron star, which is more than 1.4 times the mass of the Sun and has a diameter of 10 to 20 kilometres. As can be seen, with such a large mass and such a small volume, this neutron star rotates very quickly, at more than a few hundred revolutions per second, according to the law of conservation of angular momentum. When the mass of the neutron star is large enough and the rotation speed is fast enough, the neutron star's powerful gravity and the centrifugal force generated by the high-speed rotation presses the outer shell of the neutron star more tightly. But the shell of the neutron star poles, due to the role of the powerful centrifugal force, will be much more sparser than the equator and the entire surface, the neutron star inside the neutron star is extremely compressed, neutron periphery of the photons in the strong pressure, from the two poles of the sparse place extrusion, to high-energy rays in the form of shot, the two poles of the thin place by the neutron star internal magnetic field, will be slightly offset, so we see is the regular pulsation phenomenon of the neutron star, so called it pulsar. That's why it's called a pulsar. With the emission of high-energy rays, the energy of the pulsar will gradually weaken, the rotational speed becomes lower, the mass decreases, the centrifugal force will slowly become smaller, to a certain point, the shell at the poles of the pulsar is no longer sparse, the internal pressure is not enough to press the photons out, the rays will stop, and then the pulsar will become a real neutron star.

17 Black hole

The black holes described in this article are different from what is now taught in physics. Here the principle of black hole formation is the same, are made of massive stars finally collapsed into, but there is volume, a three times the mass of the sun's black hole, the diameter of only a few centimetres, the black hole is extremely compressed inside the photon, neutrino, positron and the three-segmented negative photon, there is no longer the form of the neutron, but is similar to the existence of the form of the plasma, positron and the three-segmented negative photon next to each other, vibrating inside the ocean of photons. Speaking of black holes, we have to talk about Hawking radiation. Hawking radiation in the end there is no, now is not sure, even if there is, in accordance with the theory of Hawking radiation, a three times the mass of the black hole (also the smallest black hole), completely evaporate, need to be 10^{84} years, the

larger the mass, the longer the time, the time is the concept of what is the concept of time, can be called the end of days, the universe do not know how many rounds have already been passed, so here can be ignored, do not have to consider.

From the moment of its birth, a black hole will keep absorbing all the substances around it, and after all the substances around it have been absorbed, it will keep absorbing the cosmic rays, photons, electromagnetic waves and neutrinos passing through it, so the mass of a black hole will keep increasing from the moment of its birth and it will not stop. Black holes only absorb external energy, do not emit energy characteristics, can be understood as the universe of entropy reduction, it is due to the entropy reduction of black holes, so that the universe since the Big Bang entropy increase, slowly return to silence, ready for the next explosion of the cycle.

Extending from black holes to mathematics, black holes are celestial objects deduced through mathematical calculations, which have now been verified through astronomical telescopes, proving once again the greatness of mathematics. In the past one hundred years, modern physics and classical physics has changed greatly, classical physics is generally through experiments, coupled with mathematical calculations, to get the correct theory, many theories of modern physics are first through mathematical calculations, predicted some theories, and then in the experiments to verify, this method is very efficient, for the development of modern science and technology has made a great contribution to the development of the science and technology, and so gradually in the scientific community, the formation of mathematical dominance Universe, the universe is the illusion of mathematics. Mathematics can deduce zero, negative numbers, then naturally deduce the conclusion that the volume of the black hole is infinitely small, the density is infinite, and even deduce the time reversal. This paper argues that maths is just maths, it is a tool for human beings to understand nature and develop science and technology, and the universe is not constructed by maths. Quantum mechanics has made it clear that the quantum is the smallest unit, the Planck scale is also the smallest scale recognised by science, these are the smallest particles that can be described mathematically as quantum state. So black holes are infinitely small and infinitely dense, it is just a mathematical result of the operation, which is different from the actual should be. Turning back time, it has been compared that if a person is now

standing more than 2,000 light years away, they can see the scene of Qin Shi Huang's ascension to the throne. Theoretically it is possible to do so, but how is this different from the video footage we see, which does not produce a time reversal. That's why a proper understanding and use of maths is what helps us to explore the universe and understand it better.

18 Dark matter

More than twenty years ago, when astronomers were studying the motion of galaxies, they found that the stars on the outskirts of galaxies were moving very fast. According to the mass and gravitational pull of galaxies, with such a fast speed, the stars should have broken away from the galaxies, but the stars were travelling in accordance with their existing orbits, which indicated that there were other substances inside the galaxies that produced enough gravitational pull to make the stars on the outskirts of the galaxies move around the galaxies. According to calculations, in addition to our visible matter such as stars, there is six times more matter than visible matter that we cannot see or find, and scientists call it dark matter. This paper argues that this dark matter is mainly black holes, and neutron stars white dwarfs, etc. Black holes account for the main mass. The reason is as follows:

Shortly after the Big Bang, the formation of matter, and soon the first generation of star formation. The first generation of stars are all massive stars, burning quickly, life expectancy from millions of years to hundreds of millions of years, these massive stars will eventually collapse into black holes. According to the black hole theory, the mass of a black hole is at least one-tenth of the mass of the star before it explodes, so down the line, the first generation of the black hole have more than ten per cent of the mass of galaxy, when the universe is relatively small and the density of matter is very high. With the intensive outbreak of the first generation of stars, the interstellar space is full of stellar remnants, black holes will keep absorbing these materials, like a sweeper to clean the cosmic space, so that only a small amount of interstellar material into the second generation of stars. Most of the second-generation stars are also massive stars. After billions of years of burning, the second-generation massive stars run out of fuel and explode into black holes, neutron stars, etc., which, like the first-generation stars,

become sweepers to clean the cosmic space. Our sun is at least the third-generation star. Regardless of whether it is the first generation of black holes or the second and third generation, once a black hole is formed, it will keep absorbing the surrounding matter, and the mass will get bigger and bigger, and now scientists have found black holes that are more than 100 billion times the mass of the sun. That means that several of these black holes combined could exceed the mass of our galaxy. Thus, Black holes are about 80 per cent mass, visible matter left more than ten per cent, is a normal phenomenon.

A few years ago there was a Japanese scientific team, also believe that dark matter is a black hole, they want to verify through experiments, the specific method is to use the huge mass of black holes, using the principle of gravity lensing, to find the number of black holes in the cosmic space, after a period of time of observation, it did observe 13 black holes, their team calculated that this number is far from enough to the number of black holes and the quality of galaxies, and then made a conclusion that dark matter is not a black hole. However, this paper argues that it is because of the ability to observe 13 black holes in the experiment, enough to show that the number of black holes in cosmic space is huge, for the following reasons, in the Milky Way galaxy, we observed black holes are very far away from us, scientists observed a nearest black holes, there are 1,600 light years away from the Earth, and the rest of the thousands of light years to tens of thousands of light years, so far away to do the observation of the gravity lensing, it is As if in the solar system, from Mars so far away from the beginning, all the way to Neptune outside, in different distances to place a few light bulbs, and then in their space to launch any golf ball, we observe a certain golf ball in the Earth just to block the bulb, from tens of millions of kilometres to billions of kilometres of such a distance, how much to launch the golf ball, to have such a chance to block the light bulb, so the ability to observe the 13 black holes shows the sheer number of black holes in our galaxy, especially the closer to the centre of the galaxy the more black holes there are.

There is also the fact that there are countless galaxies in our universe, and each galaxy has hundreds of billions or even trillions of stars or more. With so many sources of stellar light, our universe should be very bright, and our nights shouldn't be so dark, why is that? This can only mean that there are countless black holes hidden in the

universe, which have been absorbing photons all the time since they were created, leading to the darkness of our universe. The above shows that dark matter is the dark stars and other substances mainly black holes.

19 Dark energy

More than a decade ago, scientists in the United States calculated that the universe was expanding at an accelerated rate by observing supernova outbursts and deduced from this that there was still more energy in our universe that had not been discovered, and it was calculated that this energy accounted for 70 per cent of the energy of the entire universe. This is the reason for the accelerated expansion of the Universe, but people don't know what exactly this energy is and where the source is. This paper argues that the accelerated expansion of the universe is correct, and the source of this energy is the primordial energy of the Big Bang, which, after 13.8 billion years, is still pushing the universe to expand outwards. Dark energy can be confirmed by calculations. We cannot now determine the mass of the entire universe, but we can roughly calculate the mass of galaxies. Take the Milky Way as an example, the Milky Way is 100,000 light-years in diameter, and the neighbouring Andromeda Galaxy is 200,000 light-years in diameter, and they are 2.5 million light-years apart, and the distance between other galaxies is generally around two to three million light-years, the distance seems to be very far away, but according to the volume and mass of the galaxies, it is actually close, and proportionately not as far away as that between the Earth and the Moon, so the galaxies in our universe are still in a dense stage. According to the mass-energy conversion formula, the initial energy that constitutes our galaxies, need to occupy the space is much larger than the distance between the galaxies, two galaxies are more than ten million light years away from the appropriate distance, since the galaxies are still so close to each other, then the original energy of the Big Bang is still pushing the galaxies away from each other. Of course, this is only in the universe on a large scale expansion, those galaxies are too close to the gravitational force, and eventually merge together, the universe will become more and more imbalanced in space, and now the unknown source of the giant attraction may be an extremely large galaxies or black holes.

The expansion process of the universe is as follows: the universe has just exploded,

after a period of expansion, after the formation of matter, stars and galaxies slowly formed, The galaxies are very close to each other at this point, the gravity of the galaxies slowed down the speed of the expansion of the universe slowed down, so that after more than 9 billion years, with the expansion of the universe to a certain size, the distance between galaxies become farther away, the gravitational force is insufficient to resist the cosmic explosion of the raw energy, the universe began to accelerate the expansion. From more than 4 billion years ago until now, the universe has been in the accelerated expansion.

Here in addition to the energy of the explosion, at the same time there is another kind of energy is also contributing to the accelerated expansion of the universe, this energy is the vacuum energy outside the universe. Our universe, no matter how much it expands, beyond the universe is the real vacuum, where there is no air, no photons, no temperature and all that,. According to the principle of increasing entropy, a universe containing a huge amount of energy is attracted to the void and expands. This internal energy of the cosmic explosion and the vacuum energy outside the universe is the source of dark energy and the reason for the accelerated expansion of the universe from explosion to expansion. There are countless universes beyond ours, and at a certain point, distant galaxies merge with them close by, and the gravitational pull of the material gathering area grows until it produces a giant black hole, slowly brewing the next Big Bang.

20 The Future of the Universe

Starting from the origin of life, the birth of the Earth is now 4.6 billion years. Several hundred million years after the formation of the Earth, the Earth gave birth to the first life. According to existing theories, life in a few hundred million years, from inorganic matter to organic matter to amino acids proteins DNA and so on. Hundreds of millions of years is a long time for human beings, but for such a complex evolution of life forms, hundreds of millions of years is really too short, and the complexity of life forms is not formed by chance by probability. This paper argues that life took root from interstellar matter falling to Earth, and that life may have existed for a long, long time, even beyond the age of our universe, after countless cosmic reincarnations. Our universe will keep on expanding, but don't worry that it will become more and more

empty and turn into endless darkness, there are countless other universes outside of our universe, which are of much the same type as ours, and are also made up of photons, and they are also expanding since their eruption. One day, our universe will intersect with other universes, similar to the Milky Way intersecting with the Andromeda Galaxy, and the black hole at the dense concentration of matter grows in mass, which in turn attracts more and more matter, until one day, when the mass of this black hole is large enough to reach the mass of the entire universe that we live in, the pressure inside the black hole reaches an extreme point and presses the positron and the three segments of negatron together, and the positron and the negatron combine to form the photon. At this instant, gravity and electromagnetism disappear at the same time, and another Big Bang begins. Billions of light years away from the centre of the explosion beyond the space, there are still some remaining planets or other material, these substances will retain the information or life forms of the last universe, life is thus retained in the cosmic space to spread, unending, endless.

21 New Energy Perspectives, controlled nuclear fusion

We have learnt about the composition of matter, the source of energy and the reasons for its production, but the vast majority of the energy we use now is dominated by very inefficient chemical energy, and nuclear power plants are so unfriendly to the environment that they will be abandoned as soon as a new environmentally friendly energy source is available. Now the world's best and most promising, but also possible to achieve the clean energy, is controlled nuclear fusion, many countries are grasping the research and development, I believe that in the near future will be realised. Controlled fusion requires sufficient temperature and pressure to be realised, but it needs to be within a controllable range, and so far, the world has not found a suitable method.

This paper argues that when carrying out controlled nuclear fusion, starting from the neutrino and vibration frequencies and increasing the probability of quantum attempts to penetrate the hydrogen nucleus, the temperature and pressure of nuclear fusion can be lowered, and continuous controlled nuclear fusion can be realised. The existing tokamak devices in the world have been close to success, and this paper

suggests that the emission of electromagnetic waves with the same frequency as that of the hydrogen nucleus when heated, so that the hydrogen nucleus resonates and warms up, can greatly reduce the input energy and increase the Q value, thus realising continuous controlled nuclear fusion.

This is the first step to achieve a new energy source, if you want to carry out interstellar voyages, the existing energy sources are not suitable, a heavy rocket fuel to be thousands of tens of thousands of tonnes, and its own hull is only a few tonnes of dozens of tonnes, such a ratio is simply impossible to voyage, so what is the best energy source to use? Currently can think of is anti-matter, according to the energy conversion, dozens of grams of anti-matter energy is enough for interstellar travel. As mentioned above, our universe does not have much antimatter, and it is not feasible to rely on collecting antimatter in the universe as an energy source, then we can create antimatter after we have achieved such an infinite energy source as nuclear fusion, and then our interstellar travels will be much simpler. Creating antimatter can be done equally well by starting with neutrinos and vibrational frequencies, which I believe will be realised one day.

As technology advances, at some point there is actually a better energy source waiting for us. This better energy source is the ultimate energy source of our universe, the energy source that higher civilisations are using, and this energy source is all the matter that makes up our universe, which gathers the energy of the Big Bang, hidden in every electron and every atom, and as long as we find a way to open it up, there is an endless amount of energy for us to use. To put it simply, as long as we find a way to restore the three negative photon segments within the nucleus of an atom to electrons, we will have found the key to opening up the energy of matter, In terms of difficulty, this is easier to achieve than controllable nuclear fusion changes. Perhaps in the near future, we will find the key and humanity will leap from a 0.7 level civilization to a second level or higher civilization.

22 Star Trek

The universe is so vast that we just can't go very far with the endless energy we've found, and with the relativistic speed of light limitations, is mankind locked in around

the solar system? Maybe there are other ways. Many people say that as long as the invention of the curvature engine spaceship, you can achieve interstellar travel, this article that the curvature engine does not work, first of all, the energy problem, according to the theory, in order to create the curvature spaceship before and after the space-time bubble, you need to the entire universe of energy, from the point of view of the science, this is unrealistic, from the point of view of the energy is not cost-effective, you cannot interstellar travel, how can you collect the energy of the entire universe? Secondly, even if you can create a curvature spaceship, when flying, the spaceship is not moving in spacetime, then the relativistic time dilation effect will not happen, and the people on the spaceship have the same time as on the ground, and according to the lifespan of human beings, they can't possibly fly very far, so a curvature engine spaceship should not work. So there are other ways? There should be, as I said earlier, we live in the universe is a three-dimensional universe, but our three-dimensional universe is a four-dimensional universe of material composition, then four-dimensional space must exist, we as long as the discovery of the nature of four-dimensional space, opened the door to interstellar travel, seemingly distant distance, but also close at hand, across the past to achieve the interstellar travel. We watch distant galaxies, as if you pull a fibre optic, around the house in a circle, and then back to their feet, through the fibre optic you see things dozens of metres away, but in fact, it is right next to you, the four-dimensional space is so magical. Maybe one day, we can go from this end of the universe to the other end of the universe, like photons, in an instant, and even more, in an instant, we can cross from our universe to another universe, then we human beings have entered into the ranks of the higher civilisation, and I believe that this day will come eventually!

23 Epilogue

In this paper, photons are described in terms of three-dimensional particles in order to describe the principle of subatomic particles. Photon is in three-dimensional and four-dimensional transformations of the energy body, with wave-particle duality, its more microscopic structure far beyond the existing physical knowledge of the cognition. But as long as we understand the microscopic structure and properties of photons, we have

found the key to unlock the ultimate energy source of the universe, which requires scientists to work harder to research and explore.

Modern science and technology is changing rapidly, we enjoy the convenience and comfort brought by science and technology at the same time, we cannot forget the hard work and sweat of countless scientific predecessors. This paper is based on the countless scientific achievements of the predecessors, constructed this theoretical model with the modern standard model of microscopic particles are different, I hope that more people to explore and experimental verification, the theory, whether it is right or wrong, as long as it is proved, it is a great progress of science. Science is endless, especially mathematics, many great scientists, through mathematical calculations, predicted a lot of correct theories, here to pay tribute to the great scientists, to the great mathematics! I wish that the world's science advances by leaps and bounds, and the life of mankind becomes happier and more secure!