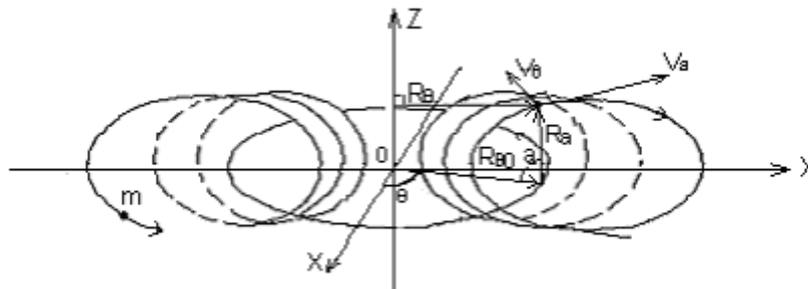


## Cold fusion reactors and new modern physics

Huang Zhenqiang Huang Yuxiang



$$(X^2 + Y^2 = R_{\theta 0}^2 \text{ Is round quation})$$

$$\left\{ \begin{array}{l} \vec{R}_\alpha \times m\vec{v}_\alpha = \frac{\hbar}{2\pi} \quad (\frac{\hbar}{2\pi} \text{ Is moment of momentum wave vector}) \quad (1.2-1) \\ \vec{R}_\theta \times m\vec{v}_\theta = \frac{\hbar}{2\pi} \quad (1.2-2) \\ \vec{R}_\theta = \vec{R}_{\theta 0} - \vec{R}_\alpha \cos \alpha \quad (1.2-3) \\ \alpha = N_\alpha \theta \quad (1.2-4) \\ \oint \vec{R}_\theta d\theta = \frac{N_\alpha \int_0^{2\pi} \vec{R}_\alpha d\alpha}{\vec{v}_\alpha} \quad (1.2-5) \end{array} \right.$$

### I. COLLEAGUES: HELLO!

The author of the "modern physics classical particle quantization orbital motion model general solution", referred to as the "new modern physics" a book. "The nuclear force constraint inertial guidance cold nuclear fusion collides" patent of invention referred to as the "cold nuclear fusion reactor" detailed technical data. Now provide to you, hope you help spread and the mainstream of modern physics of academic and fusion engineering academic communication. We work together to promote the cause of science and technology progress of mankind to contribute.

#### 1. the mainstream of modern physics theory system present situation

The mainstream of modern physics theory, are the quantum mechanics, cosmology and the theory of relativity composition. Born nearly years, although earlier had a certain degree of brilliant, but because the mainstream school way of thinking and the experimental observations improper interpretation, there is 19 aspects to explore strenuously to solve, and have to face the problem, (see new modern physics introduction).

A tax payers from long-term spend huge support out, as the core of all natural science basic theory of traditional theory, incredibly have so much contradictory nature of the problem, at least it is not the ultimate truth, is still at the exploratory stage of the hypothesis. This not only cause many alternative scholars question and to explore, even a clear mind, have a sense of social responsibility and conscience in mainstream scholars perked up, expect the new theory appeared. So the trend of The Times, the old school and there's no reason not to accept the new theory?

## 2. new modern physics theory system introduction

The author life admire Einstein, believe he stubbornly insist on orbit theory of quantum physics view is right. According to the author for physics intuitive understanding, thus to build a set of classical particle fluctuation, spin quantization along the vertical double elliptic orbit steady state motion model and equations, (see book cover particles along the orbital motion model and the equations). Will it and Newtonian mechanics and classical electrodynamics, rail change quantum mechanics and particle energy with the theory of relativity. After 14 years of hard work, repeated calculus verification, finally finish the new modern physics "book. Book points particle physics, nuclear physics, atomic physics, infinite eternal cosmology, space-time relativity question and unified field five parts, a total of 29 chapters, about 400000 words.

The new theories that can solve the universality of classical physics subject, and system accurately solve the mainstream of modern physics faces 19 aspects of all the problems. It is "the cold nuclear fusion reactor" invention patent core basic theory.

## 3. the reason of academic communication and expectations

1. The contribution of all the tax payers in natural science research, it is to discover the objective laws of nature, to the advancement of mankind civilization and progress of science, to create the first productivity service, and not for the maintenance of the school's subjective hypothesis of defense. The mainstream school insisted maintenance old modern physics theory system, the modern other natural scientific innovation research, especially for all mankind imminent nuclear fusion energy development research, what can have what kind of role? Don't also should not to tell?

2. This paper pointed out the main schools of modern physics theory system in 19 issues and research status, whether all the information given is true?

3. In ancient and modern, Chinese and foreign all modern physicists, including the entire Nobel Prize winner, what a potential on the above a certain aspect problem, even if it is a difficult problem in the a small subject, which gives the qualitative reasonable explanation?

4. What a lucky enough to like the author so, only according to a set of classical particle quantization vertical double elliptic orbit motion model, and Newtonian mechanics and classical electrodynamics and particle energy relativity union, can the 19 aspects of the problem are derived all accurate mathematical physics equation general solution?

5. Although this book shortcomings and mistakes, and inevitably, needs to be correct, however, will be Newtonian mechanics and classical electrodynamics and particle energy relativistic classical particle along the quantization vertical double ellipse model introduced modern physics, overall physical model design basis and related mathematical physics equation is derived calculus process and all the calculation results, with all the observation test data agree with the fact, at present the mainstream of modern physics circles the traditional school can find out the reason of rejection?

## 4. "The cold nuclear fusion reactor" to profile

The present invention item characteristic is: in normal temperature vacuum pipe and cavity, set space particular combination of electromagnetic field, according to the light nuclei intrinsic magnetic moment and the electric field, the first two series for fusion of nuclear constraint in the same lines (orbit) inside; Reuse nuclear inherent spin moment of momentum vector formed near the speed of light spin of super rotation gyro inertial guidance characteristics, to overcome the barrier to the strong coulomb repulsion role to realize the two series of nuclear automatic aiming guidance collide fusion of. Start two series of nuclear energy need voltage only 0.6-1.2 million volts, reaction cavity temperature 0-200°C. At the present manufacturing high voltage power transmission equipment technological level can be competent. According to the similarity of the nuclear force constraint inertial guidance system, the different velocity and energy of the ion beam mixing control, developed ion speed dc transformer, it is cold nuclear fusion reactor, issue of motivation and the nuclear power plant start-up fusion and power transfer system of the important equipment, so the merger to apply for a patent.

"The cold nuclear fusion reactor" Invention Patent, is expected to be in 3 ~ 5 years may test successfully. Once and for all mankind faces completely solve energy and environmental protection science and technology of the number one problem. And can be used as aircraft and spacecraft power. All mankind will be the cradle of civilization in the earth science times, every advance into the universe space age of science and civilization. Its economic benefits, social benefits and environmental value is unlimited.

The research results at one's own expenses "cold fusion reactor and new modern physics published, they show that the mainstream of nuclear fusion reactor engineering circles and modern physics circles of subsequent research has no meaning. If will continue to adhere to the school's point of view, will be spent all his life and a large number of tax payer's hard-earned money still nothing. Such as dozens of years searching for quark, dark matter particles, graviton and Higgs boson are missing. Dozens of years all the nuclear fusion research, including the ITER international cooperation research progress is

slow, hope is frail. Continue will increase historic jokes, in the face of the tax payers and severity of later generation's question. Conversely, if you are able to intervene as soon as possible "cold fusion reactors and new modern physics," the audit and evaluation, based on the author's research continue to expand in the next epoch in science and technology to seize the peak. Please let your careful consideration.

详见链接: English <http://blog.tech110.net/?uid-3067-action-viewspace-itemid-67545>

中文—<http://blog.tech110.net/?uid-3067-action-viewspace-itemid-67547>

Introduction to New Modern Physics

#### Book summary

The mainstream of modern physics research status

Nearly 100 years to the birth of quantum physics, relativity and cosmic physics, has become the three pillars of Building propped modern physics. However, the international mainstream of modern physics research areas, there are still many aspects of the scientific community a hundred years to trying to explore not be resolved, they have to face the problem, such as:

1. Why decades in collision experiments in high-energy particle accelerators ejected freedom of all debris particles, all particles to split the decay of the whole process all transitional product particles, including the final stable protons, electrons, neutrinos, photons, not electrically neutral, is only charged particles with a unit?

2. What is the elementary particles basic composition unit? Why 36 of the so-called mixed fraction charge "quark" (including antiparticles) turned out to be all incarcerated? If it does exist, then the confinement of the reasons is it? Why infinitesimal point charges have been no energy "divergence"?

3. Why all the microscopic particles have wave-particle duality? So far, we still do not know the laws of their formation principles and specific sports! Why nuclear energy is  $E = mc^2$ ? What causes within the nucleus and the quality of all the particles missing?

4. Why the proton, neutron, electron, and hundreds of nuclei prime fixed rest mass, magnetic moment value and the corresponding electromagnetic field spatial distribution of range? How their energy, magnetic moment is formed? How accurate calculation?

5. Why protons, neutrons, there are strong, weak, electrical, magnetic interactions within all of the elementary particles and nuclei? What is the relationship between? How each interaction forming principle? How accurate calculation of strength?

6. Why natural radioactive series starting nuclear  ${}_{90}^{232}\text{Th}$ ,  ${}_{92}^{235}\text{U}$ ,  ${}_{92}^{238}\text{U}$ , and the total number of nucleons are close to 234? Why that has synthetic nuclear charge number 114 heavy nuclei is still very unstable? What causes

nuclides stable island prophecy fails? Why the end of nuclear stability is that  ${}_{82}^{206}\text{Pb}$ ,  ${}_{82}^{207}\text{Pb}$ ,  ${}_{82}^{208}\text{Pb}$ ? Why that nuclear in the face of high energy fast neutron was actually completely "transparent"? Inside them in the end was what kind of structure?

7. Why nuclei emit electrons  $\beta^\pm$  and rays  $\gamma$ ? They originally existed within the nucleus? Or later transformed form? How they are transformed? How to calculate their energy spectrum, intensity?

8. Why electrons in atomic surface will form a so-called "S, P, D, F type electron cloud"? Characteristics of each electron in the electron cloud movement, how the law? How accurate calculation of electronic excitation transition spectroscopy (especially surface multi-electron atom)? If the electron is indeed based on the probability of the state distribution, how to interpret the fixed orbital moment and emission and absorption spectra level?

9. How to analyze the energy calculation of heavy atoms lining K L layer many characteristics of the movement of electrons and X fluorescence-ray spectrum?

10. Why is there the 2.73K microwave blackbody background radiation in the universe? It is what? The photons are electrically neutral particles, why the characteristics of electromagnetic waves? Why is the speed of light  $c$  exactly 299792458m/s? What relationship exists between them? Why thermodynamics experiment to get ultra-low temperature of 0.0K is quite difficult?

11. Since the larger mass of the neutron star is bound to lead to gravitational collapse to form a black hole, the black hole shrinks gravitational collapse will inevitably lead to the gravitational potential energy tends to infinity, is the black hole mass is bound tends to infinity. This will inevitably lead to the gravitational field strength; gravitational sphere of "divergence" phenomenon tends to infinity. Why we found all galaxies within the central galactic nuclei have a great mass of the black hole, but have never seen the quality and strength of the gravitational field, the gravitational sphere "divergence" phenomenon?

12. Since we already know that all galaxies are large nebula contraction. Well, from the cosmic hot big bang full expansion diffusion to form thin large nebula to nebula to split the process of contraction as the galaxy density and gravitational force, should the changes? Why some form elliptical galaxies, some form spiral galaxy and

some formation of barred spiral-shaped galaxy? How the spiral arms of the galaxy formation and evolution? These galaxies in formation the process of evolution, is gradually shrinking? Or gradually spread?

13. Now mainstream astronomical community unanimously found that the age of the universe is 13.7 billion years old. The age of stellar age, ancient globular cluster surface stellar age, the age of the galactic nuclei of the central black hole, or the entire galaxy age how to contact? Accounted for more than 90% of the dark matter in the universe, dark energy in the end is what? They count as a principal member of the universe? How is more than 90% of dark matter, dark energy ages?

14. Universe really is expanding it? Universe really is formed by a hot big bang? If true, then the so-called mathematical singularity before the Big Bang is what? How it is formed? A second before the Big Bang excitation mechanism, what is it?

15. Is how the formation of ultra-high energy r-ray burst in the depths of the universe? The ultra-high-energy proton beam is formed? The so-called strength and size observed in recent years after the Big Bang creation of the universe and how it formed?

16. Why quasars have the unthinkable large energy radiation? Within it should have what kind of structure? Part quasars exceptional value red shift in the end is what causes it? All celestial spectral red shift , is Doppler red shifts?

17. How to solve the relativity twin paradox, clock problems between different time and space? Newton's absolute time and space and what relationship exists between Einstein's relative time and space? Light bending phenomenon, should understand the role of the gravitation field to track the movement of the photon bending it? Or the so-called space curved?

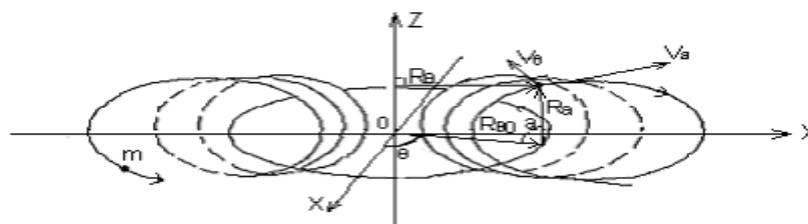
18. The gravitation is how it formed? The graviton, dark matter and dark energy in the end are what? Is what causes the solar neutrino missing? Internal neutrino was what structural features? How did they constitute all other elementary particles?

19. All the basic laws of physics in quantum physics, cosmology and physics and the theory of relativity between how unified? The role of the strong, weak, electrical, magnetic interactions of gravitational force between modern physics and classical physics is how unified? Modern physics and all the basic physical laws of classical physics, how unified? .....

The 19 aspects of the problem, basically outlines the main challenges facing the international mainstream of modern physics community and the current research. One out by taxpayers spent heavily dependent, as the core foundation of natural science theory doctrine, but still there are so many contradictory nature of the problem, at least that it was still in the exploratory stage hypothesis. Thus not only lead to a large number of non-mainstream scholars questioned and re-discover, even sober sense of social responsibility and conscience mainstream scholars are waiting to look forward to the advent of new doctrine. So the trend of the times, the scientific community there is any reason to continue to adhere to the "one-man" does not allow the new doctrine?

The new research progress of modern physics

The author of his life admired Einstein, convinced that he stubbornly adhere to the orbital theory of quantum physics is. According to the author of an intuitive understanding of the physics, thereby establishing a set of classical particle fluctuations, spin along the vertical double elliptical orbit movement model equations (see the cover of the particles along the orbital motion of the models and equations). Newtonian mechanics, classical electrodynamics, the Track of quantum mechanics and particle energy relativistic combination that can solve the issues of the universality of classical physics, but also the system to accurately solve all above the mainstream of modern physics faces 19 problems. After 14 years of hard work, repeated algorithmic verification, and finally completed modern physics classical particle the quantum orbital motion model general solution monographs, referred to as "the new modern physics. Manuscript sub-particle physics, nuclear physics, atomic physics, the infinite eternal cosmology and the time and space relativistic questioned five parts and 29 chapters, about 0.4 million words. Points are as follows:



$$(X^2 + Y^2 = R_{\theta 0}^2 \text{ Is round question})$$

Figure 1.1 still elementary particle fluctuations, spin vertical double oval track movement diagram

1. Has established the macro still elementary particles orbital motion model, as shown in Figure 1.1, equations (1.2). Only the introduction of two quantum numbers  $N_a$   $N_\theta$  ( $N_a$  fluctuations orbital quantum number used in particle physics and nuclear physics;  $N_\theta$  spin orbital quantum number, only used atomic physics), elementary particle fluctuations deduced The spin quantum steady state vertical double elliptical orbit motion model, see equation (1.3). Fluctuations, spin, when the macro still elementary particles accelerated by foreign energy, it is converted into a combination of orbital precession cylindrical helix, as shown in Figure 1.2.

$$\left\{ \begin{aligned} \vec{R}_\alpha \times m\vec{v}_\alpha &= \frac{\hbar}{2\pi} \left( \frac{\hbar}{2\pi} \text{Is moment of momentum wave vector} \right) \quad (1.2-1) \end{aligned} \right.$$

$$\left\{ \begin{aligned} \vec{R}_\theta \times m\vec{v}_\theta &= \frac{\hbar}{2\pi} \quad (1.2-2) \end{aligned} \right.$$

$$\left\{ \begin{aligned} \vec{R}_\theta &= \vec{R}_{\theta 0} - \vec{R}_\alpha \cos\alpha \quad (1.2-3) \end{aligned} \right.$$

$$\left\{ \begin{aligned} \alpha &= N_\alpha \theta \quad (1.2-4) \end{aligned} \right.$$

$$\left\{ \begin{aligned} \oint \vec{R}_\theta d\theta &= \frac{N_\alpha \int_0^{2\pi} \vec{R}_\alpha d\alpha}{\vec{v}_\theta} \quad (1.2-5) \end{aligned} \right.$$

$$\left\{ \begin{aligned} \vec{R}_\alpha &= \frac{\vec{R}_{\theta 0} E_{\alpha\theta}}{1 + E_{\alpha\theta} \cos\alpha} \quad (1.3-1) \end{aligned} \right.$$

$$\left\{ \begin{aligned} \vec{R}_\theta &= \frac{\vec{R}_{\theta 0}}{1 + E_{\alpha\theta} \cos\alpha} \quad (E_{\alpha\theta} = \frac{\vec{v}_\theta}{\vec{v}_\alpha} = \frac{1}{\sqrt{N_\alpha}}) \quad (1.3-2) \end{aligned} \right.$$

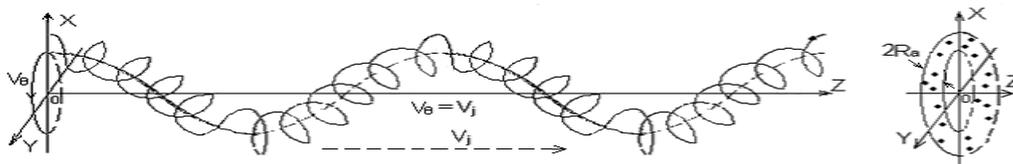
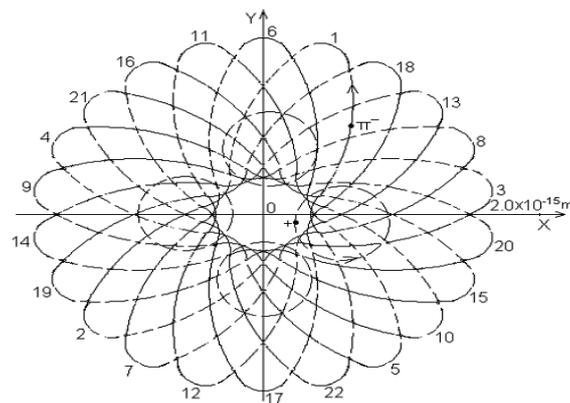


Figure 1.2 elementary particles along fluctuations, the spin precession of the orbital motion characteristics of the formation of wave-particle duality diagram

2. The crash test data based on decades of high-energy particle accelerator, the model system to validate the calculation, that form the most basic unit of all elementary particles with a unit of electricity charged particles. Load of electric particles composed of electric dipole; electrically neutral particles by n electric dipole, different particle n is a natural number; charged particles only bring to charged particles.

Classical Newtonian mechanics, electrodynamics, energy theory of relativity (Einstein's theory of relativity in the high-speed movement of particles of energy, charged particles electric, magnetic field strength and movement speed relation) introduced into the model, export the fine-structure constant; prove elementary particle energy fluctuations in the direction of motion of charged electromagnetic field energy particle aggregates formed nearly the speed of light c sports; internal, weak, electrical, magnetic interactions are electromagnetic field interactions; deduced particle separatist, the average life expectancy in the decay process with the electromagnetic field radiation  $W_{e||i}$ , relationship, see (4.13); projections of the internal structure of protons, neutrons instance is shown in Figure 6.5, table 6.2.

$$W_{e||i} \bar{T} = \frac{h}{8} \left( 1 + \frac{2.16}{N_{ai}} + \frac{3.35}{N_{ai}^2} \right) \quad (4.13)$$



Fluctuations of the Figure 6.5 neutrons internal two electrically charged elementary particles spin motion track In XOY plane projection diagram

Points 1 to 2, can solve the aspects puzzle of the above 1 to 5.

3. By the model of Figure 1.1, the "dismantling" of protons, neutrons within nuclei into high-, low-energy meson. A certain number, fluctuating quantum number, the same energy, low energy meson composed of a pair of particles spiral ring, the composition of the particles spiral ring track the nucleus internal structure of Figure 7.2, as shown in Figure 11.4 determine the nuclear force is the nuclear field force and the track at the point of tangency with the ampere force between the magnetic field to track current element. Each high and low energy particles spiral ring and lateral orbital nuclear force at the point of tangency accurate calculation of the examples of results are shown in Table 11.3.

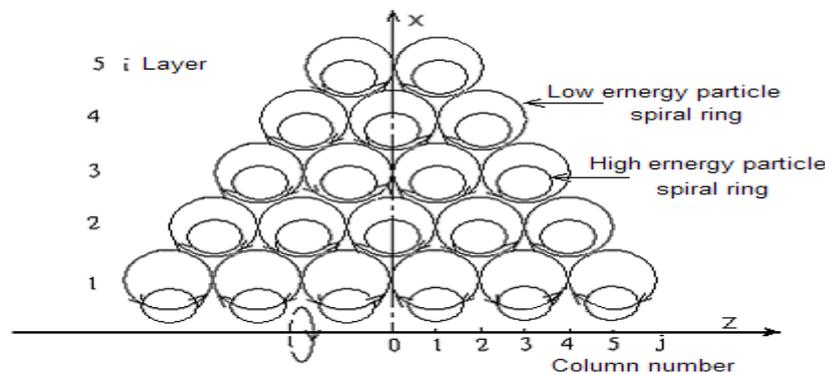


Figure 7.2 B nuclei internal low energy particles spiral ring combination schematic cross sectional view

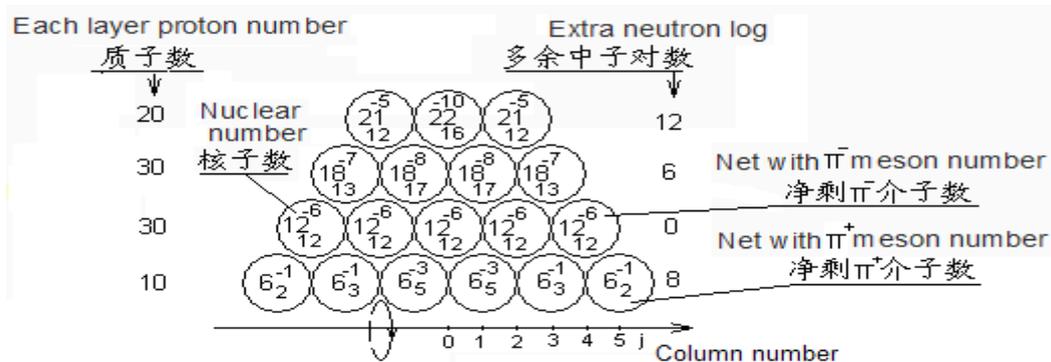


Figure 11.4  $^{232}_{90}\text{Th}$  nucleus kernel sub- net surplus  $\pi^\pm$  meson assigned to schematic diagram

Note: Figure 11.4, the figures of the middle of the ring is the total number of nucleons in the particles spiral ring, the superscript negative value is left  $\pi^-$  meson number of low-energy particles spiral ring net subscript value is high-energy particles spiral ring net the left  $\pi^+$  meson number. Nuclear power, magnetic energy, the total energy calculated on the left.

Va	10	4	10	8	20	14	18	42	40	28	52										
10	Vb	6	Vc	-2	Ve	12	Vf	-6	Vg	4	Vh	24	24	Vi	-2	Vj	-12	Vk	24	Vl	34
86	74	58	84	70	86	110	100														
Vm	Vn	Vo	Vp	Vq	Vr	Vs	Vt														
-12	-16	26	-14	16	24	-10	-10														

$$W_e = 1.817530386 \times 10^{-27} \text{ Kg}, \dots W_b = 1.437800649 \times 10^{-29} \text{ Kg}$$

$$\sum_{90}^{232} Th W_1 = 3.85240599 \times 10^{-25} \text{ Kg}$$

The neutron internal structure parameter simulation results exemplar 6.2

Analog value	N <sub>a2</sub> =2	N <sub>a2</sub> =12/5	N <sub>a2</sub> =22/9	N <sub>a2</sub> = 5/2	N <sub>a2</sub> =3
Parameters and use number of the formula	$m_{\pi 2} \times 10^{-28} \text{ Kg}$				
	6.632975	6.247308	6.215628	6.178265	5.924168
$\beta_2$ (4.9)	0.9990883	0.99901523	0.99900886	0.9990013	0.9989473
$m_1 \times 10^{-28} \text{ Kg}$ (6.1)	10.116311	10.501978	10.533658	10.571021	10.825118
$R_{020} \times 10^{-15} \text{ m}$ (1.6)	0.530816	0.666891	0.680851	0.698022	0.840622
$R_{02(0)} \times 10^{-15} \text{ m}$ (6.2-1)	0.310945	0.405282	0.415254	0.427590	0.532933
$R_{02(\pi)} \times 10^{-15} \text{ m}$ (6.2-2)	1.812317	1.881201	1.889164	1.899149	1.988934
$R_{a1} \times 10^{-15} \text{ m}$ (1.2-1)	0.348172	0.335386	0.334377	0.333195	0.325374
$U_n \times 10^{-26} \text{ J/T}$ (6.12)	-0.966114	-0.9661144	-0.9661136	-0.966114	-0.9661143

Note:  $m_1$  to the core particle mass,  $\beta_2$  coefficient for  $\pi^-$  meson fluctuations in the direction of movement of the speed of light c,  $U_n$  neutron magnetic moment.

By the model to expand export within the nucleus the  $\beta^\pm$  electronics ray,  $\gamma$  ray  $\pi^\pm$  meson split decay, each high and low energy particles spiral ring orbit between meson position adjustments, causing the entire nucleus the excess electromagnetic field energy release due. Classical electrodynamics, energy relativistic energy equations, each level of the different nuclei beam electron ray  $\beta^\pm$ ,  $\gamma$  ray energy, adjusts the position computing for accurate simulation.

The points can solve the problem of the foregoing the 5 to 7.

4. The Figure 1.1, Figure 1.2 model extended to atomic physics, by the combined effects of the nucleus of the repulsive force of the electric field between the attractiveness of the electric field of the electron and electronic export the surface various electronics around the nuclear spin, additional rotational ellipsoid track surface motions "s, p, d, f" electron cloud of the overall model, as shown in Figure 18.2, Figure 18.6. Based on the experimental determination of an atomic energy level variation, you can export the electronic orbital motion equations. To combined with the electric field energy equations, accurate simulation of the atoms of each of the various electronic orbital parameters and energy levels.

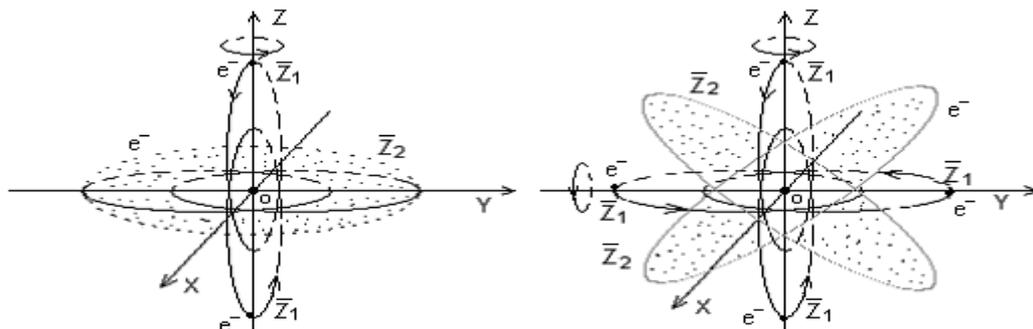


Figure 18.2 atomic surface 3 electron      Figure 18.6 atomic surface 5 "s+p-type electron cloud" to form "s+p-type electron cloud" to form

a schematic diagram

a schematic diagram

The combined energy theory of relativity, the points can solve the aforementioned 8 to 9 aspect problems.

5. Figure 4.2 elementary particle wave-particle duality model confirm photons, neutrinos are composed only by a pair of electric dipole motion orbits are cylindrical helix, as shown in Figure 2.4. The difference between the two is the electric dipole around fluctuations  $N_\gamma$   $N_\nu$  the precession orbit rotation frequency photons  $N_\gamma=1$  the neutrinos  $343323 \geq N_\nu \geq 5991$ . Thermodynamic energy relativistic introduce the model of Figure 2.4, export 2.73K blackbody microwave background radiation field in space of the universe is the neutrino venue neutrino average energy  $\overline{W}_\nu$  :

$$\overline{W}_\nu = 1.5KT = 5.653794510 \times 10^{-23} J = 6.290694778 \times 10^{-40} Kg \quad (5.1)$$

Bohr Tsz Man (wherein K is a constant)

<sup>232</sup><sub>90</sub>Th Nucleus kernel force balance validate the calculation results table (Figure 11.4, unit: Newton) Table 11.3

J \ N <sub>a</sub>	1	2	3	4	5	Nuclear magnetic force accumulated
58 F <sub>e0</sub>		t.769.3464576				65.54948748
F <sub>b0</sub>		-742.46066				
34 F <sub>e0</sub>	n.935.7967665		p.1242.139919			38.66368988
F <sub>b0</sub>	-1222.642838		-1069.812483			
16 F <sub>e0</sub>		j.1177.523759		m.332.5403438		-133.663746
F <sub>b0</sub>		-943.7382432		-943.7382432		
F <sub>e0</sub>	b.474.7645659		d.360.3313781		i.-30.5202085	243.7486375
34/13 F <sub>b0</sub>	128.3900218		-42.79667394		-14.26555798	
ΔF <sub>0b</sub>	107.2499555		-153.2142222		-114.9106666	

Note: Table 11.3 F<sub>e0</sub> for every high, low energy particles spiral ring spin the axial nuclear field force, F<sub>b0</sub> for side-by-side low energy particles spiral ring orbit tangent point at the current element magnetic field Ampere force, ΔF<sub>0b</sub> side by side, the two pairs of particles spiral ring. The track overall current between the magnetic field force. n-bar position spiral ring on excess magnetic forces on the lower outside of space mosaic restricting, so I do not participate in the nuclear force balance accumulated.

High frequency electromagnetic field can be part of the neutrino in the neutrino field excitation photon, the photon energy loss to close neutrino background field energy into neutrinos. Exported by the laws of thermodynamics neutrino propagation longitudinal wave speed v<sub>j</sub> coincides with the speed of light c, thus proving that the electromagnetic waves such as sound waves as longitudinal waves, not transverse wave!

$$v_j = \sqrt{\frac{1.5RT}{u}} = 299792436 \text{ m/s } (c=299792458 \text{ m/s! } ) \quad (5.4)$$

(Wherein 1.5 is the adiabatic exponent of the gas molecules, R is the universal gas constant, u neutrino field atoms).

By the model and the calculation results based on the total energy conservation law, inferences 2.73K blackbody microwave background radiation in the universe, space must be the long-term energy consumption in from After all frequency spectrum trace absorption of the supplement in order to maintain balance; spectrum in which the long-distance spread because the energy has been trace loss will inevitably lead to the red shift. With Olbeth paradox simultaneous, overall as a unlimited eternal universe on key basis. Derived by the Hubble constant Ho, the spectral red shift  $\sum K_{zj}$  with propagation distance R relation (22.10):

$$R = \sum K_{ij} / H_0 \left( \begin{matrix} \text{It} \cdot \text{will} \cdot \text{be} \cdot \text{the} \cdot \text{field} \cdot \text{of} \cdot \text{astronomy} \\ \text{a} \cdot \text{rare} \cdot \text{precise} \cdot \text{range} \cdot \text{ruler} \end{matrix} \right) \quad (22.10)$$

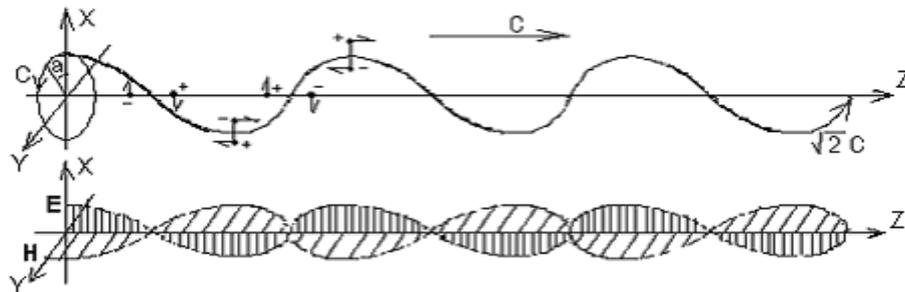


Figure 2.4 photons along fluctuations precession of the orbital motion of the medium wave-particle duality and electromagnetic waves forming principle schematic diagram

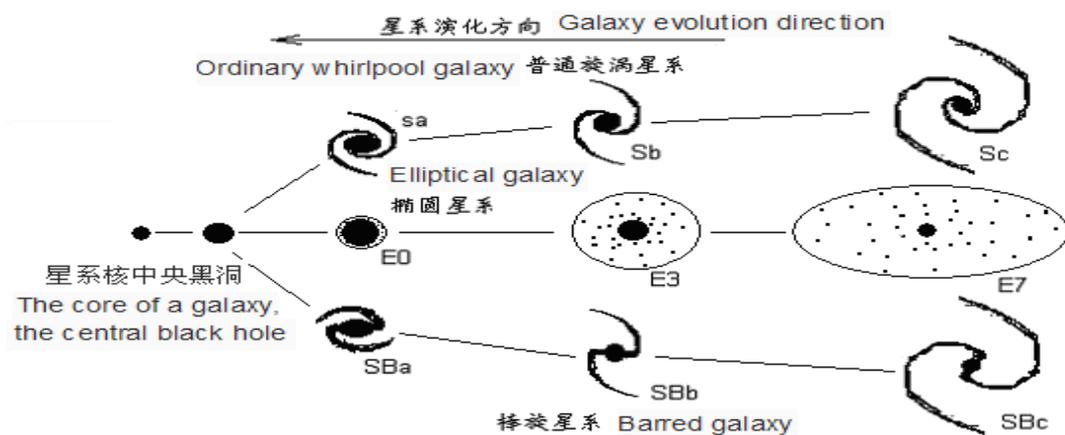


Figure 26.1 galaxy Hubble classification, evolution direction diagram

6. Inferences the Ming substances optical galaxy evolution is gradual contraction by the observed characteristics of different types of galaxy evolution, according to the law of gravity and the viral theorem, see Figure 26.1, and thus determine the stellar accounted for more than 90% of the dark matter in the universe have died globular clusters, galaxies, and even the wreckage of the entire group of galaxies. According to Figure 7.2, the nuclei of the internal structure of the model of Figure 11.4, the design inside the massive black hole were stable the neutron matter ring structure can be shown in Figure 24.5, thus avoiding the gravitational collapse led to the energy, the strength of the gravitational field, the gravitational sphere of influence trends form a "singularity" at infinity "divergence" problem. And thus achieve a balance in the black hole the internal gravitation and strong, weak, electrical, magnetic interaction between grand unified.

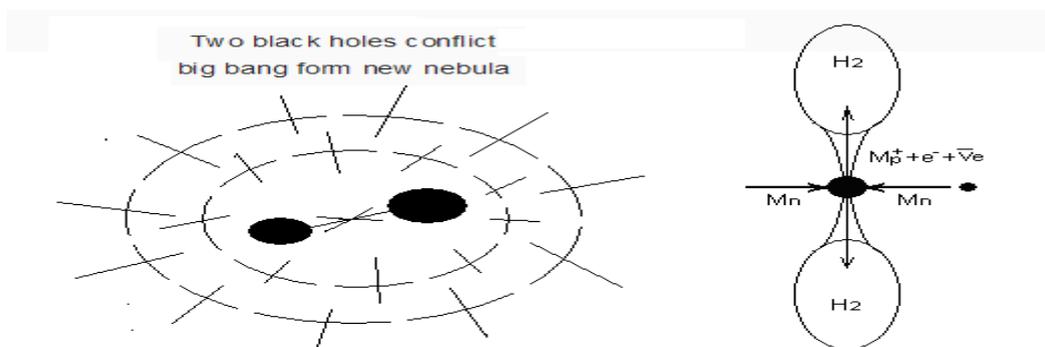


Figure 26.3 Two black holes conflict big bang form new nebula and Devour process polar axis radio nebula group forming principle diagram

7. When two black holes are near to each other in their respective field of gravitation winding movement due to

phagocytes neutron can turn to the polar jet formation newborn nebula, and the emergence of symmetrical compact source of radio lobes, as shown in Figure 26.3. When the two qualities close to the black hole collision, will undermine the stability of the ring structure of neutron matter will be thoroughly large explosion, can be completely converted to form a large group of freshmen nebula.

8. All globular clusters and galaxies we have observed, on the basis of the original material, the original role of universal gravitation field through the newborn nebulae along the track-by-phase adsorption newborn nebula to grow and develop. Therefore, the cosmological constant term in Einstein's equations, must maintain the dynamic gravitational equilibrium of galaxy clusters that dark matter overall average density is infinite and eternal universe model.

9. The extraordinary value of the energy of the quasar radiation and spectral the extraordinary value red shift, indeed the so the cosmic hot Big Bang Theory overwhelmed. Chapter 27 in the use of the black hole to suck the energy release of the accretion disk light pressure on the peripheral fullerene stellar black holes clouds bracketing principle the design the quasars internal structure model, spectrum extraordinary value red shift caused by gravitation places.

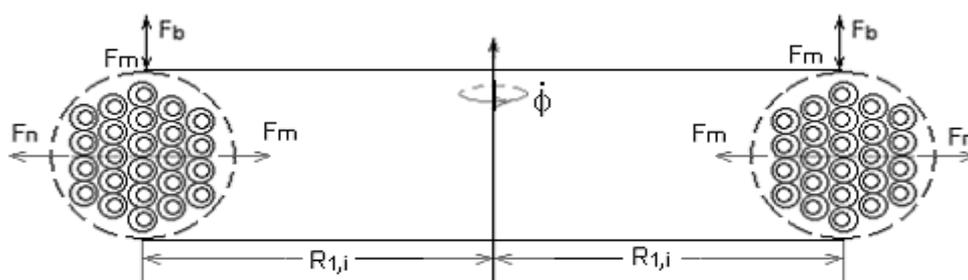


Figure 24.5 massive black hole internal neutron matter ring structure and gravitational  $F_m$ , the centrifugal force of the  $F_n$  nuclear force  $F_b$  balance diagram

Points 5 to 8, and can solve the aforementioned 10 to 16 regard problems.

10. By the wave-particle duality of the photon and the energy equation, Newtonian mechanics can also prove: photon as a particle grazed the surface of the sun from a distance, in the gravitation field effect, the precession of the orbit bending angle is  $1.75''$ !! Means to determine the relative space in the relativistic high-speed movement of the object relative the relative space in the moving direction of the neutrino; relative time is defined as electromagnetic waves in the direction of movement of the relative speed of light through the high-speed moving objects relative neutrino field required when spatial propagation relative time. The relative space and time is only on the fast moving objects have any meaning. Absolute spatial location coordinates to determine when the object began to accelerate from a standstill, the final deceleration to stationary; it corresponds to the relative space and time, is Newton's infinite, eternal cosmology and unified eternal time. By the spectral Doppler frequency shift effect, and further demonstrated the so-called relative spatial spectral frequency shift change the direction of the track along the precession wavelength; relative time is the speed of light through the spectral frequency shift change when the wavelength of the direction of the track along the precession required time. The argument inference: the gravitation field of light bending is the photon orbit precession bending, rather than the so-called space bending!

11. Based on the neutrino energy shock exists fact, demonstrated the principle of the neutrino form a quantum gravitational field. For solar neutrino disappearance deduced neutrino energy density. Further inference is dark matter, neutrino lucky enough to answer with a simple and intuitive physical model, including four graviton and dark matter problem.

Element 9 to 11, and can be systematically solve the aforementioned 17-19 aspects puzzle.

In summary, the manuscript by the classical Newtonian mechanics, electrodynamics, thermodynamics, energy relativistic astronomy and particle physics, nuclear physics, atomic physics eight interdisciplinary basic, has been completely conclusive evolution of the classical laws of physics too. The book established the orbital theory of quantum physics and the infinite eternal universe theory model proved weak interaction is electric, magnetic field interactions; demonstrated in the field of Macrocism the gravitation field dominated nebulae, galaxies and dark matter in the microscopic field loop transformation between the Ming, dark matter and states of matter by the electromagnetic field; final analysis, determine the relativistic relative space and time relationship with Newton's absolute space and time; the final settlement gravitation forming principle and the mystery of dark matter. System to solve the problem of the 19 aspects; raise the overall three disciplines to

accurately calculate the level of the orbital parameters; complete micro, macro, and the Macrocosm field between strong and weak, electricity, magnetic interactions and the role of gravity unified to achieve the grand unification of all the basic physical laws of classical physics and modern physics.

Fluctuations spin motion detection and detection of particles. the existing experimental detection level, the scientific community of the particle, nuclear, atomic energy, magnetic moments, electromagnetic energy radiation understand in more detail. Nuclei atoms and nuclei outer electron cloud "shape, size also have a certain understanding. However, the overall composition of the two and more than two hundreds proton, neutron and electron atomic systems, analysis calculated the specific orbital motion characteristics of each particle and many other relevant parameters, due to the complexity of the mutual influence of various parameters, and simply can not do; estimated that difficult to do in the future for a long time. Because of this, the reader's attention, the book is different from the conventional quantum mechanics research methods, the overall research program are as follows:

1. Start with the most simple of electrons, photons, neutrinos fluctuations, spin-orbit motion feature to start exporting all particles follow fluctuations, spin quantum steady state vertical double oval or circular helix orbital motion equations.
2. Reveal the internal structure of elementary particles, momentum, moment of momentum, energy forming principle; strong, weak, power, the magnetic interactions unity principles and related orbital parameters calculation method.
3. Combined with each other between two or more elementary particles vertical double elliptical motion orbit on the space, and the formation of a large number of elementary particles, protons, neutrons, nuclei and atoms of the orbital motion of the electrons in a combination of the overall model.
4. Each particle fluctuations, quantum between the spin-orbit motion cycle of multiples  $N_a N_0$  and many other parameters, the correlation, export particle momentum equations of each respective elliptical orbit, the moment of momentum, electric, magnetic field strength, the electromagnetic field energy and the original fluctuation energy, particle velocity, elliptical orbit eccentricity, radius parameters all quantum numbers  $N_a N_0$  related.
5. Finally, the  $N_a, N_0$  is a natural number, or a simple fraction to simulation. The final calculated particle energy, momentum, moment of momentum, magnetic moment, the radiation characteristics of electromagnetic energy, electricity, magnetic field strength of the spatial distribution of the particles and atomic nuclei within the strong, weak, electrical, magnetic interaction strength, the morphology of the particles, nuclei, atoms the size of the outer nuclear layer of "electron cloud" shape, size, all consistent with the experimentally determined value.

Thus proving that has the overall success of the model in the field of quantum physics.

The track on the success of the model theory of quantum physics, the basis of theoretical support for the study of the physics of the universe. Looking at the Modern Astrophysics development history, whether the medium of propagation of electromagnetic waves "Ethernet" really exist directly around the scientific community of the spectral red shift reason, Hubble's law and Lobbbers paradox explained. Only found 2.73K blackbody microwave background radiation in the universe, I demonstrated in Chapter 5, 21 to 22 2.73K blackbody microwave background radiation is caused by the neutrino, the neutrino is the propagation of electromagnetic waves "Ethernet field the electromagnetic waves are longitudinal wave spectral red shift, Lobbbers paradox and 2.73K blackbody background microwave radiation, the law of conservation of total energy photons trip overall argument for infinitely eternal cosmological key basis. The formation and evolution of stars, galaxies, the infinitely eternal cosmological model, trend, and determine the entire galaxy formation in the neonatal nebulae complemented the process of evolution is gradual contraction. Inferred that the uneven distribution of the universe, and accounted for more than 90% of the dark matter is the death of stars, galaxies, and even the wreckage of the entire group of galaxies. Be resolved according to the orbital theory of quantum physics point charge energy "divergence" of experience, the author designed a huge black hole of galactic nuclei Center internal the Global hollow structure of neutron matter, successfully overcome the gravitational collapse, the total energy of the gravitational field strength of the gravitational sphere of influence tends to infinity "divergence" difficult. The black hole by attracting outside dark matter collisions Big Bang, or turn to the polar injection process in the accretion disk, the successful completion of the dark matter into the prescribed substance nebula cycle process; successfully resolved quasars internal structure, energy radiation mechanisms and spectral extraordinary value of the red shift of the problem, so infinitely eternal cosmological model to be fully demonstrated. Further demon started that the relationship of Newton's absolute space and time and the Einstein relative space and time.

**Finally, in the interior of a black hole structure and force analysis, simulation, so as to realize the**

**neutrino field as medium, in microscopic and macroscopic and space in the field of view of strong, weak, electrical, magnetic and gravitational interaction effect between the unified field balance grand unified. The results indicated: classical physics and modern physics as overall comprehensive study has been to achieve unity and success.**

So, even though the book has more than one high-order equation, implicit function, irrational numbers, equations, a large number of the original function of integral equations can not be obtained directly. We can use a modern high-performance calculator; many equations compiled continuous calculation procedures, different  $N_a$   $N_0$  values into the simulation solving. As long as the reader has Newton's mechanics, electrodynamics, thermodynamics, energy relativistic quantum mechanics, astronomy and calculus basics, it like the physical model is simple and intuitive, logical and mathematical calculation to learn popular science books alone a high-performance calculator can whole book to read and review. Similarly, if the book was adapted into ordinary physics textbooks for high schools and institutions of higher education, it will be for the benefit of society and the entire human immeasurable merit.

The reader is advised to read the audit book before reading and thinking seriously Introduction and summary. It will help you overcome School prejudice, and make it easy for you to master the quantum model of the orbital motion of the classical particle of modern physics, the general solution of the basic physical conceptual model and practical knowledge of the system. To explored and promote the future of mankind a new era of science and civilization.

#### **Published cold nuclear fusion reactor and the meaning of the new modern physics**

This book reveals the universe, space, and all of the basic law of motion of celestial things and a variety of material elements from visible optical galaxy Ming substances, into the dark matter of the circular ring of black holes, the spray injection electricity from the polar axis of the black hole or the collision of black holes thorough the Big Bang, and the formation of the elements of the Ming substances nebula phase transition reincarnation evolution of the whole process of the objective laws of physics, for mankind modern and future of the many applications of science and technology engineering areas of innovation, the quantum to classical orbits expressed in mathematical physics equations, the precise analysis of the theoretical basis for the calculation of the relevant parameters of all particles, nuclei, atoms and molecules. Book chapters 15 to 20 atomic physics part, derived atomic surface electron orbital motion law model and the corresponding mathematical physics equations, if appropriate expand, will be able to directly and accurately analyze the chemical bond between the calculation of atomic and molecular relevant parameters. Thus eliminating the need to reverse estimates rely on a large number of the cumbersome experimental determination data, trouble chemically related parameters. The book theoretical system, in the research areas of biology, chemistry, nonsocial materials science, electronics and information science, aviation and astronautics and many applications of science and technology innovation to it as the core foundation of theoretical and analytical calculations based on have a multiplier effect.

That thank God for many years frequently on the author's special care given to the author "the cold nuclear force constraints inertial guidance nuclear direct hit fusion reactor and ion speed dc transformer" subject (the subject has applied for national defense patent). Present invention patents referred to as "cold fusion reactor" core basic theory from book 1 to 14 of Chapter particles and nuclei internal strong, weak, and the principle of the unity of the interaction of the electric and magnetic. Wherein: set the specific combination of the electromagnetic field of the space in the room temperature within the vacuum duct, linear from 0.6 to 1 million volts electrostatic particle accelerator according to the intrinsic magnetic moment and the internal electric field of the light nuclei, the first jet out of the bunches to be fusion of light nuclei constraints with a segment of the "pipeline"; recycling light nuclei intrinsic spin moment of momentum vector formed near the speed of light spin characteristics of super-strong rotation gyro inertial guidance, to overcome the bias of the Coulomb strong barrier repulsion, active guidance aimed at directly hit fusion. The biggest advantage of this device is lightweight structure, the process is simple, easy to manufacture, reliable and stable operation. Existing manufacturing large generators, high-voltage transmission grid system equipment's ability to be competent, and you can use as an aircraft or spacecraft engine power.

**Fusion of through this atomic nucleus of, access to safe, clean and environmentally friendly, inexhaustible, huge nuclear energy! Completely eliminate the carbon dioxide emissions of the greenhouse gas! So that once and for all, completely solve the energy and environmental problems of our country still face to all mankind! Will human from the current earth science in the age of cradle of civilization, and promote the future space science in the age of the universe civilization!**

All the basic theory of natural science research, services are to advance the science of mankind civilization. Practice is the sole criterion for testing truth. I believe that in the next three to five years, if the author is able to complete the support of the relevant departments of the state and people of insight in their

"nuclear force constraints the cold nuclear inertial guidance direct collision of the fusion reactor and ion speed dc transformer" This experiment the research topics of modern physics community at home and abroad quantum model of the orbital motion of the classical particle of modern physics is the general solution of the set of physical models and theoretical system should eventually will understand and accept.

#### Mathematics physics model is simple and clear grand unified field

In the "New modern physics," the first chapter of 1 to 14 particle physics section, we demonstrated that neutrinos and photons are only by a pair of charged particles consisting of an electric dipole. Wave dipole spin precession speed is the speed of light. Photon electric dipole rotation within the spin precession frequency and volatility are equal within the neutrino electric dipole rotation frequency of the spin precession frequency fluctuations thousands to several million times, volatility and spin precession frequency are equal. Photon and neutrino energy  $W$  and the relationship between the wavelength  $\lambda$  are:  $W = mc^2 = hc/\lambda$ . There is no rest mass  $m_0$  and energy  $W_0$ .  $\pi^\pm$  meson is determined by two pairs of electric dipole and a charged particle composition.  $u^\pm$  meson  $e^\pm$  electrons are by a pair of electric dipole and a charged particles. Proton is a six pairs of electric dipole consisting of core and  $\pi^\pm$  mesons composed. Neutrons than protons is just one more charged particles. 4 protons and electrons aggregated into helium atoms must be released two neutrinos. Therefore, the combustion process in the stellar fusion, protons, and electrons must release a large number of neutrinos can be transformed into a helium nucleus, neutrons, complete fusion, while the release of neutrinos and gravitational field of neutrino absorption completely transformed into a photon radiated. This is the missing solar neutrinos and photons incident causes a vacuum.

In the first 7 to 14 nuclear physics section, we demonstrated the neutrons, protons split into high and low energy  $\pi^\pm$  meson particles were composed of helical ring, the same levels of high and low spin quantum number can ring then a certain particle spirals combination of the different nuclear law model. And further demonstrates the strong interaction within the nucleus, the weak interaction is electromagnetic interaction, to achieve the strength of the electromagnetic interaction of the big four kinds of unity and strength accurate calculation. Nuclear decay process, more than a neutrino participation.

In chapters 15 to 20 atomic physics section, we demonstrate and accurate calculation of the atomic surface electronic transitions between energy levels or excitation, electron spin orbitals belonging to different energy levels between the neutrino form of so-called virtual photons participation and mutual transformation photon transition or excitation process. Similarly, the general chemical reactions, but also the surface atomic and molecular orbital electrons spin transitions between the different energy levels or excitation build chemical bonds, with the participation of the neutrino electromagnetic waves or infrared photon transitions into each other, or excitation.

In the first 21 to 26 chapters infinite eternal cosmology section, we demonstrated that Hubble's law is incomplete spectral Doppler redshift but mainly neutrino electromagnetic field in the medium prolonged exercise when their energy gradually loss process. But also are on the media in neutrino and gravitational field of the microwave radiation energy losses a compensation balancing process. Figure 26.1, Figure 26.3, and demonstrates the nebula in the gravitational field is contracted from the star  $\rightarrow$  white dwarf  $\rightarrow$  neutron star  $\rightarrow$  black hole evolution, large nebula from small irregular galaxies  $\rightarrow$  into large galaxies  $\rightarrow$  barred spiral galaxy  $\rightarrow$  spiral galaxies  $\rightarrow$  elliptical galaxies  $\rightarrow$  galactic nuclei central nucleus of the ball  $\rightarrow$  large black hole evolution. From the nebula to the evolution of the black hole is a black hole of neutrinos from the periphery to the center of the nebula concentration and an increase in gravitational potential energy field process. In the gravitational field, the quality differences between the larger black hole formed because gravitational field phagocytosis radio breaking nebula, black hole or two quality equivalent gravitational field due to the role of the collision led to the formation of the Big Bang re nebula. From black holes to the evolution of the nebula that neutrinos from the center to the periphery of the black hole and the gravitational field of diffusion potential energy release process. Is infinite eternal cosmological gravitational field of action in the main the cycles.

In the first 27 to 29 chapters temporal relativity questioning and grand unified field part, we demonstrate Newton's absolute space-time theory of relativity denial of Einstein's space-time. With Chapter 29, "[The Relationship Between Neutrino and Gravitational Dark Matter](#)"[2] paper presented to confirm the particles inside the nucleus interactions are weak electromagnetic interactions, neutrinos propagate electromagnetic field is both a medium for disseminating gravitational field medium. Propagation speed is the speed of light. Infinite eternal universe all the particles, atoms, molecules, nebulae, meteorites and a variety of large and small objects are electromagnetic and gravitational field under the combined effects of evolution. Achieve a micro and macro and entire infinite eternal universe grand unified field that electromagnetic fields and gravitational fields.

**The research results at one's own expenses "cold fusion reactor and new modern physics published, they show that the mainstream of nuclear fusion reactor engineering circles and modern physics circles of subsequent research has no meaning. If will continue to adhere to the school's point of view, will be spent all his life and tax payers a lot after the hard-earned money nothing. Such as dozens of years searching for quark, dark matter particles, graviton and Higgs boson are missing. Dozens of years**

all the nuclear fusion research, including the ITER international cooperation research progress is slow, hope is frail. Continue will increase historic jokes, in the face of the tax payers and severity of later generations' question, please let your careful consideration.

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