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Cold nuclear fusion reactor and New modern physics

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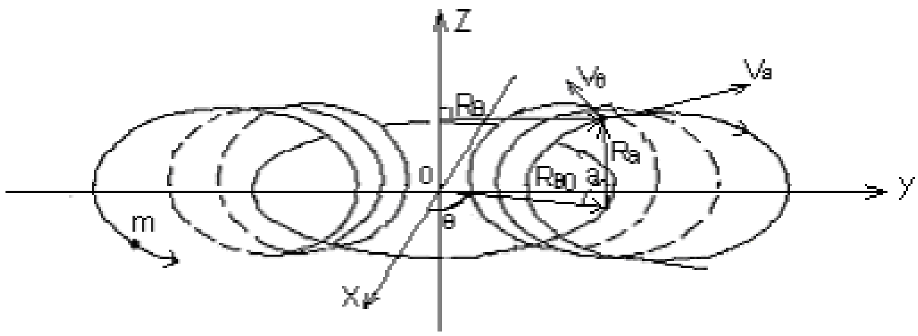
Modern physics classical particle quantization Orbital motion model general solution



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

$$\begin{cases} \vec{R}_\alpha \times m\vec{v}_\alpha = \dfrac{\vec{h}}{2\pi} \quad (\dfrac{\vec{h}}{2\pi} \text{ Is moment of momentum wave vector}) & (1.2-1) \\ \vec{R}_\theta \times m\vec{v}_\theta = \dfrac{\vec{h}}{2\pi} & (1.2-2) \\ \vec{R}_\theta = \vec{R}_{\theta 0} - \vec{R}_\alpha \cos\alpha & (1.2-3) \\ \alpha = N_\alpha \theta & (1.2-4) \\ \dfrac{\oint \vec{R}_\theta d\theta}{\vec{v}_\theta} = \dfrac{N_\alpha \int_0^{2\pi} \vec{R}_\alpha d\alpha}{\vec{v}_\alpha} & (1.2-5) \end{cases}$$

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作者个人简历 The author bio

作者黄振强，男，1954 年出生于中国福建省平潭县。1982 年由中国福州大学地质矿产勘查专业毕业，专职地质矿产勘查，高级工程师，至 2014 年 6 月退休。参加工作 30 多年来，一直利用业余时间，长年独立自费从事国际非主流方面的现代物理学基础理论研究。2005 年以后，继续进行《冷核聚变堆》和《连续自动齿轮变速箱》领域的专利创新发明。

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取得主要科研成果：

Made major achieVements in scientific research:

冷核聚变堆和新现代物理学综述

Cold Fusion Reactors and New Modern Physics ReView

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黄振强　冷核聚变堆　中国发明专利申请号：CN:200910129632.7

黄振强　连续自动齿轮变速箱　国际专利申请号：PCT/CN2012/000179

Huang Zhenqiang Cold fusion reactor Chinese invention patent application number: CN: 200910129632.7

Huang Zhenqinag Continuous automatic gearbox International Patent Application No.: PCT / CN2012 / 000179

黄振强，黄宇翔. 冷核聚变堆和新现代物理学,2013

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http://blog.tech110.net/?uid-3067-action-viewspace-itemid-67545

http://blog.tech110.net/?uid-3067-action-viewspace-itemid-67547

The relationship between neutrino and gravitational dark matter.

http://cscanada.net/index.php/pam/article/view/j.pam.1925252820130502.115/3700

http://cscanada.net/index.php/pam/article/view/3358

The 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 $^{232}_{90}Th$、$^{235}_{92}U$、$^{238}_{92}U$, 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 $^{206}_{82}Pb$、$^{207}_{82}Pb$、$^{208}_{82}Pb$？ 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 γ ? 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 unthinkably 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

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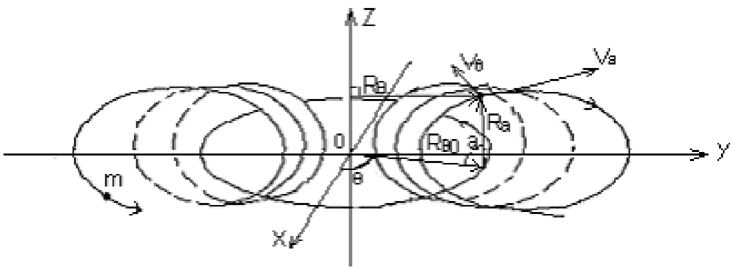
to look forward to the advent of new doctrine. So the trend of the times, the scientific community there is any reason to continue to adhere to the "one-man" does not allow the new doctrine?

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:



($X^2 + Y^2 = R_{\theta 0}^2$ 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_θ (N_a fluctuations orbital quantum number used in particle physics and nuclear physics; N_θ 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.

$$\begin{cases} \vec{R}_\alpha \times m\vec{v}_\alpha = \dfrac{\vec{h}}{2\pi} \quad (\dfrac{\vec{h}}{2\pi}\text{Is moment of momentum wave vector}) & (1.2-1) \\ \vec{R}_\theta \times m\vec{v}_\theta = \dfrac{\vec{h}}{2\pi} & (1.2-2) \\ \vec{R}_\theta = \vec{R}_{\theta 0} - \vec{R}_\alpha \cos\alpha & (1.2-3) \\ \alpha = N_\alpha \theta & (1.2-4) \\ \dfrac{\oint \vec{R}_\theta d\theta}{\vec{v}_\theta} = \dfrac{N_\alpha \int_0^{2\pi} \vec{R}_\alpha d\alpha}{\vec{v}_\alpha} & (1.2-5) \end{cases}$$

$$\begin{cases} \vec{R}_\alpha = \dfrac{\vec{R}_{\theta 0} E_{\alpha\theta}}{1 + E_{\alpha\theta}\cos\alpha} & (1.3-1) \\ \vec{R}_\theta = \dfrac{\vec{R}_{\theta 0}}{1 + E_{\alpha\theta}\cos\alpha} \qquad (E_{\alpha\theta} = \dfrac{\vec{v}_\theta}{\vec{v}_\alpha} = \dfrac{1}{\sqrt{N_\alpha}}) & (1.3-2) \end{cases}$$

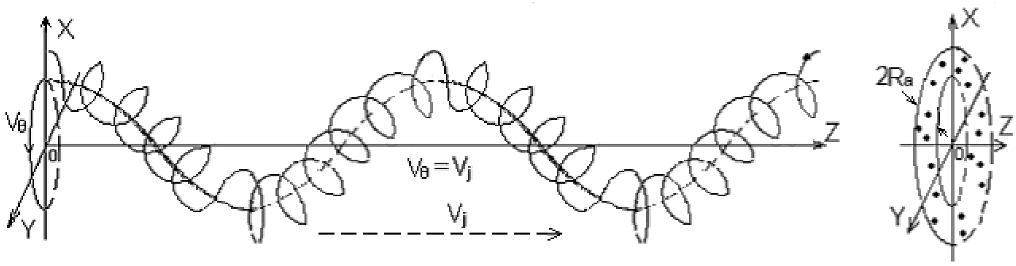
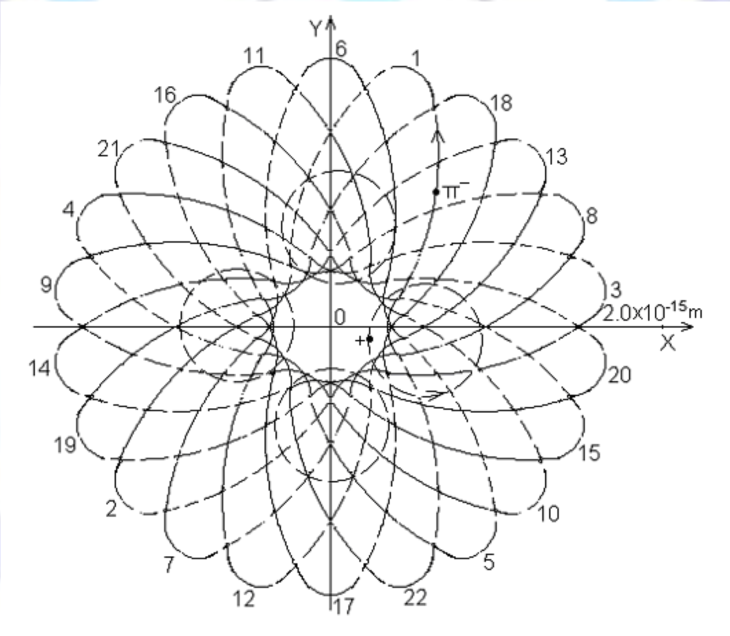


Figure 1.2 elementary particles along fluctuations, the spin precession of the orbital motion characteristics of the formation of wave-particle duality diagram



Fluctuations of the Figure 6.5 neutrons internal two electrically charged elementary

particles spin motion track In XOY plane projection diagram

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.

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

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.

By the model to expand export within the nucleus the $\beta^{\pm}$ electronics ray, γ 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 $\beta^{\pm}$, γ ray energy, adjusts the position computing for accurate simulation.

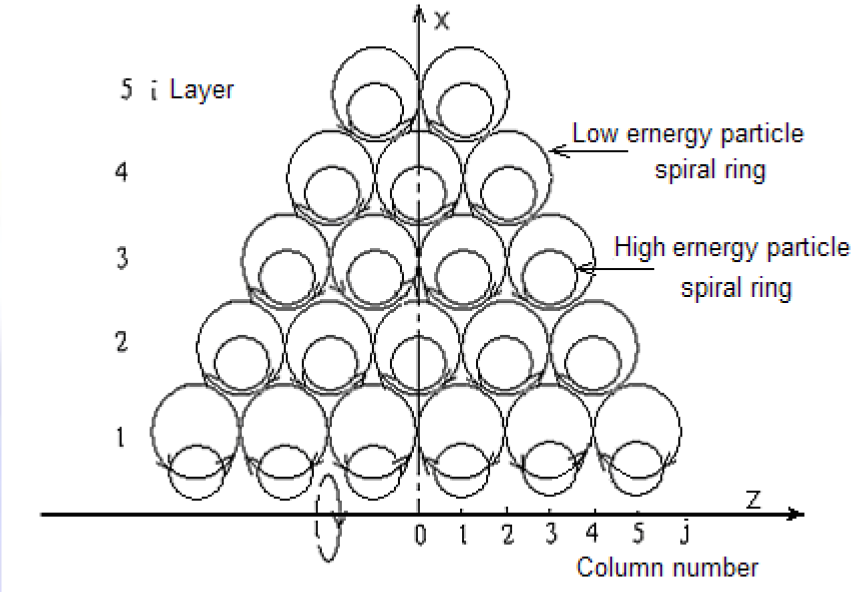


Figure 7.2 B nuclei internal low energy particles spiral ring combination schematic cross sectional view

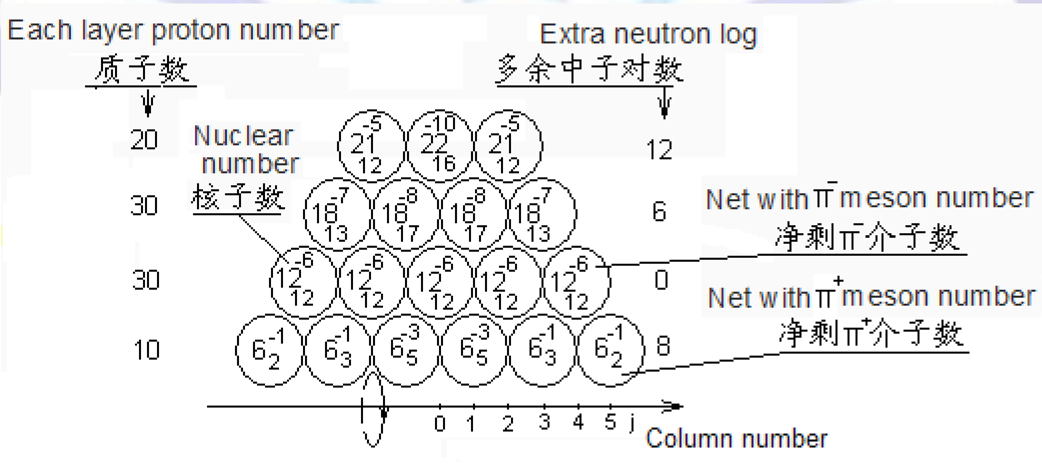


Figure 11.4 $^{232}_{90}Th$ nucleus kernel sub、net surplus $\pi^{\pm}$ meson assigned to schematic diagram

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 π⁻meson number of low-energy particles spiral ring net subscript value is high-energy particles spiral ring net the left π^+ meson number. Nuclear power, magnetic energy, the total energy calculated on the left.

$$Va^{}_{10}\quad Vb^{10}_{-6}\quad Vc^{4}_{6}\quad Vd^{10}_{-2}\quad Ve^{8}_{12}\quad Vf^{20}_{-6}\quad Vg^{14}_{4}\quad Vh^{18}_{24}\quad Vi^{42}_{-2}\quad Vj^{40}_{-12}\quad Vk^{28}_{24}\quad Vl^{52}_{34}$$

$$Vm^{86}_{-12}\quad Vn^{74}_{-16}\quad Vo^{58}_{26}\quad Vp^{84}_{-14}\quad Vq^{70}_{16}\quad Vr^{86}_{24}\quad Vs^{110}_{-10}\quad Vt^{100}_{-10}$$

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

$$\sum {}^{232}_{90}ThW_1 = 3.85240599\times 10^{-25}Kg$$

The neutron internal structure parameter simulation results exemplar 6.2

Analog value	N_{a2}=2	N_{a2}=12/5	N_{a2}=22/9	N_{a2}= 5/2	N_{a2}=3
Parameters and use number of the formula	$m_{\pi 2}\times 10^{-28}$ Kg				
	6.632975	6.247308	6.215628	6.178265	5.924168
β_2 (4.9)	0.9990883	0.99901523	0.99900886	0.9990013	0.9989473
$m_1\times 10^{-28}$ Kg (6.1)	10.116311	10.501978	10.533658	10.571021	10.825118
$R_{\theta 20}\times 10^{-15}$m (1.6)	0.530816	0.666891	0.680851	0.698022	0.840622
$R_{\theta 2(0)}\times 10^{-15}$m (6.2-1)	0.310945	0.405282	0.415254	0.427590	0.532933
$R_{\theta 2(\pi)}\times 10^{-15}$m (6.2-2)	1.812317	1.881201	1.889164	1.899149	1.988934
$R_{a1}\times 10^{-15}$m (1.2-1)	0.348172	0.335386	0.334377	0.333195	0.325374
$U_n\times 10^{-26}$J/ T (6.12)	-0.966114	-0.9661144	-0.9661136	-0.966114	-0.9661143

${}^{232}_{90}Th$ Nucleus kernel force balance validate the calculation results table

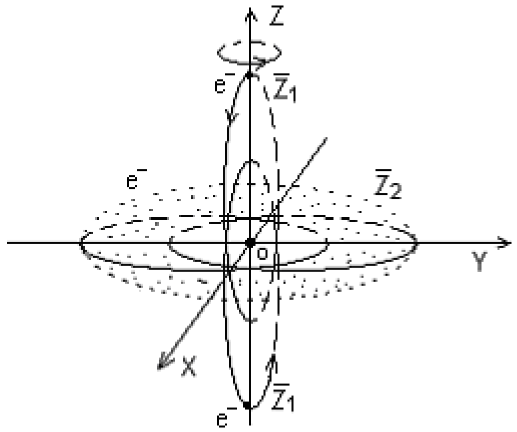
(Figure 11.4, unit: Newton) Table 11.3

N_a \ J	1	2	3	4	5	Nuclear magnetic force accumulated
58 $F_{e\theta}$ $F_{b\theta}$		t.769.3464576 -742.46066				65.54948748
34 $F_{e\theta}$ $F_{b\theta}$	n.935.7967665 -1222.642838		p.1242.139919 -1069.812483			38.66368988
16 $F_{e\theta}$ $F_{b\theta}$		j.1177.523759 -943.7382432	m.332.5403438 -943.7382432			-133.663746
34/13 $F_{e\theta}$ $F_{b\theta}$ $\Delta F_{\theta b}$	b.474.7645659 128.3900218 107.2499555		d.360.3313781 -42.79667394 -153.2142222	i.-30.5202085 -14.26555798 -114.9106666		243.7486375

Note: m_1 to the core particle mass, β_2 coefficient for π^- meson fluctuations in the direction of movement of the speed of light c, U_n neutron magnetic moment.

Note: Table 11.3 $F_{e\theta}$ for eVery high, low energy particles spiral ring spin the axial nuclear field force, $F_{b\theta}$ for side-by-side low energy particles spiral ring orbit tangent point at the current element magnetic field Ampere force, $\Delta F_{\theta b}$ 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.

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



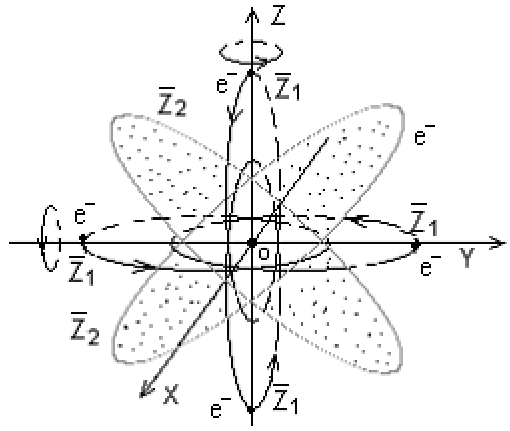


Figure 18.2 atomic surface 3 electron “s+p-type electron cloud” to a schematic diagram

Figure 18.6 atomic surface 5 “s+p-type electron cloud” to form a schematic diagram

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.

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_γ N_v the precession orbit rotation frequency photons $N_\gamma=1$ the neutrinos $343323 \geq Nv \geq 5991$. 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 $\overline{W}_v$:

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

Bohr Man (wherein K is a constant)

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 vj coincides with the speed of light c, thus proving that the electromagnetic waves such as sound waves as longitudinal waves, not transverse wave!

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

(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 $\sum K_{zi}$ with propagation distance R relation (22.10):

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

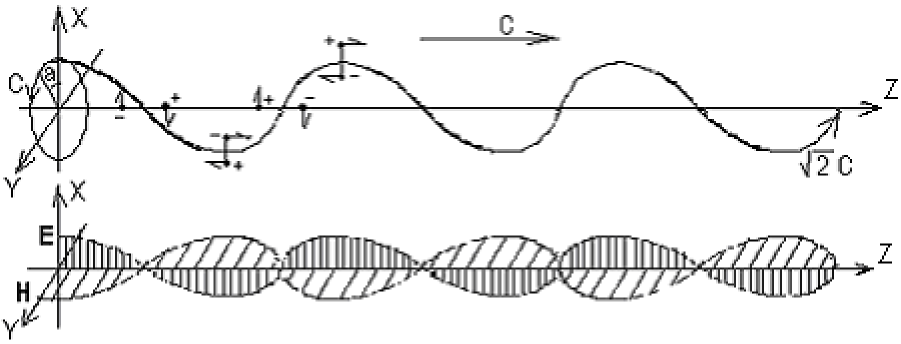


Figure 2.4 photons along fluctuations precession of the orbital motion of the medium wave-particle duality and electromagnetic waves forming principle schematic diagram

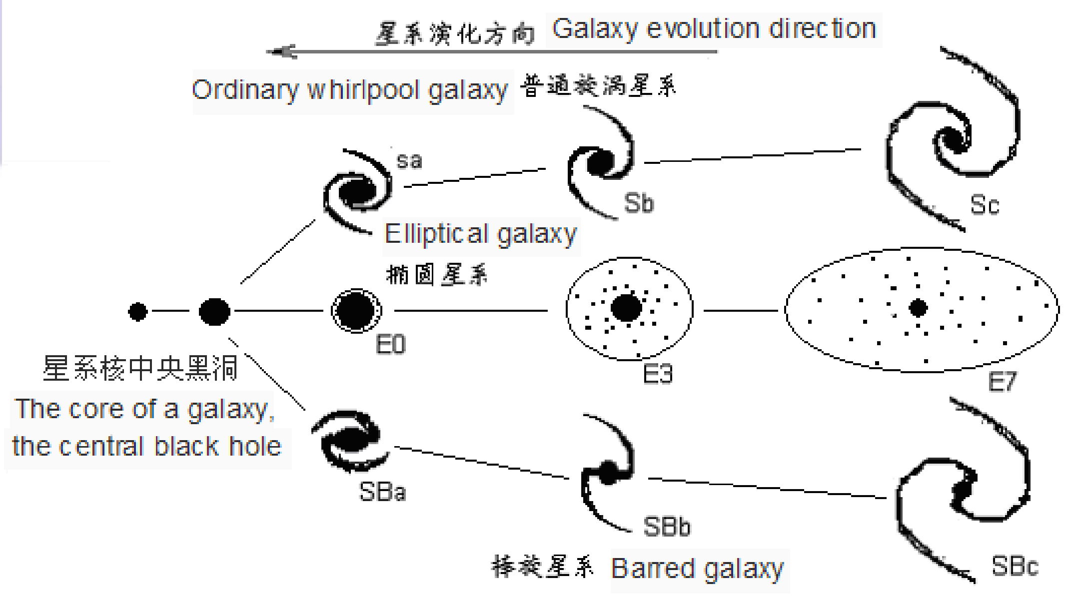


Figure 26.1 galaxy Hubble classification, eVolution direction diagram

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.

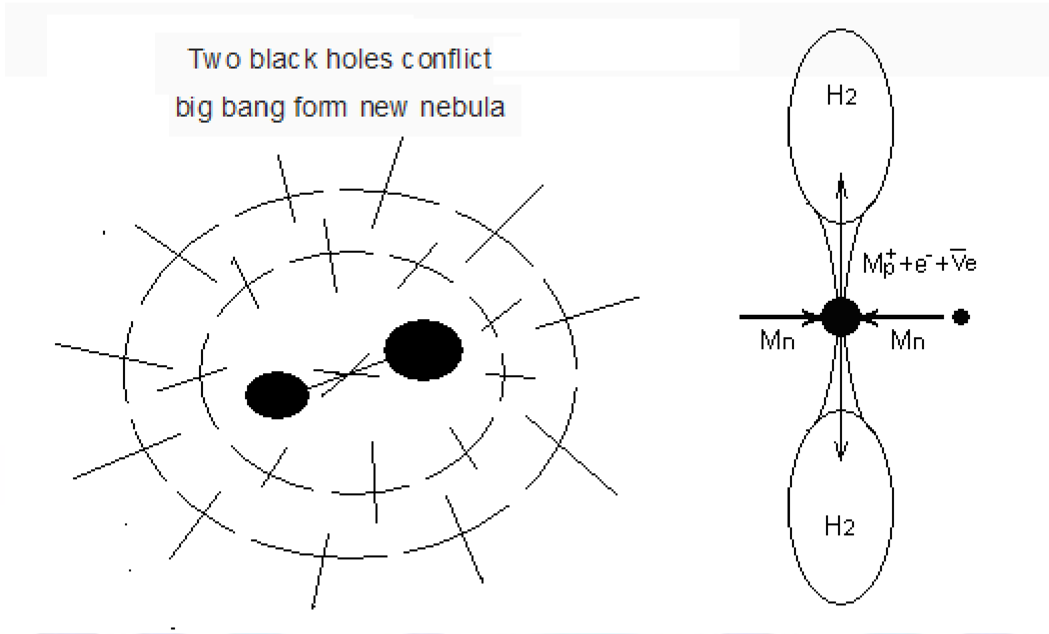


Figure 26.3 Two black holes conflict big bang form new nebula and

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.

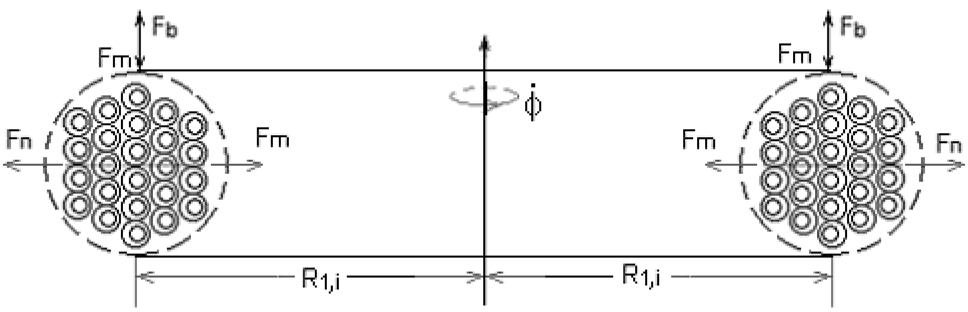


Figure 24.5 massive black hole internal neutron matter ring structure and gravitational F_m,

the centrifugal force of the F_n nuclear force F_b balance diagram

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.

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

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.

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 Macrocosm 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 IeVel 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 IeVel, 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_θ 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_θ related.

5. Finally, the N_a, N_θ 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 Lobbers 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, Lobbers 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_θ 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 λ 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 π± 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 → white dwarf → neutron star → black hole eVolution, large nebula from small irregular galaxies →into large galaxies→ barred spiral galaxy→ spiral galaxies → elliptical galaxies → galactic nuclei central nucleus of the ball → 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.

Book chapter 1 ~ 3 to prove the photon is composed of a pair of electric dipole, the quantized orbital fluctuations and precession direction speed is the speed of light c, speed is $\sqrt{2}c$, along the spiral orbit. Energy are $W_{rc} = m_r c^2 = hc/\lambda = h\nu$. By Newtonian mechanics, the kinetic energy of the photons is $W_{rc} = \frac{1}{2} m_r v_c^2 = m_r c^2$, as long as the $v_c = \sqrt{2}c$ is completely equivalent uniform with quantum mechanics and relativity. So, whether Newton's universal gravitation or the gravitational potential energy function of relativity, or relative photon high-speed Doppler effect relativity of space and time, as long as can make the photon energy big characterized by shorter wavelength, frequency blue shift, smaller is characterized by longer wavelength and frequency of redshift. Photonic frequencies and wavelengths of the product is equal to the speed of light： $\nu \cdot \lambda = c$.

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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1.1.1 Elementary particles essential characteristics

After nearly a century of experiments, the scientific community has confirmed that: the end product of all baryon decay electrons, neutrinos and photons in addition to proton; final product of all mesons and leptonic decay electrons, neutrinos and photons; neutrino accompaniedforward to the weak interaction of electrons and photons can be transformed into each other under certain conditions.

In the entire process of particle decay, its energy, momentum, angular momentum, charge, baryon number conservation, and the direction towards energy decreases spontaneous. Reaction unit charge is always the most basic human science experiment can achieVe the highest energy particle collisions, can be freely separated stable charged units. Find also much larger than the energy of the daughter mixed numbers charged "quark" is unwise as the idea of the most elementary particles in high-energy particle accelerator by particle collisions reaction. After decades of effort, and ultimately find some meager circumstantial eVidence, still can not be separated, and stable presence. The face of such an outcome, we should reconsider the definition of the elementary particles? Like substance composed of molecules, molecules are made of atoms, atoms, electronics, nuclear composition, the spontaneous separatist decay, the final stable energy minimum, widespread electronic, photons, neutrinos truly the most elementary particles.

The $U^{\pm}$ lepton In addition to protons, neutrons, electrons, photons, neutrinos, particles longest average life, but 2.197×10^{-6} seconds. They can only exist as an instant energy group. Therefore, as long as we clarify the internal structure of the electrons, photons, neutrinos, protons, neutrons, energy of origin, momentum, moment of momentum and nuclear forces forming principle, parameter calculation method and the relationship between particle physics is equivalent to solve the main problem.

1.1.2 Elementary particle fluctuations spin quantum steady-state orbital motion characteristics

Proposed by de Broglie early descendants confirmed microscopic particles exist volatility, its wavelength $\vec{\lambda}$, particle momentum $\vec{P}$ is Planck's constant h relationship:

$$\vec{\lambda} = \frac{h}{\vec{P}} \tag{1.1}$$

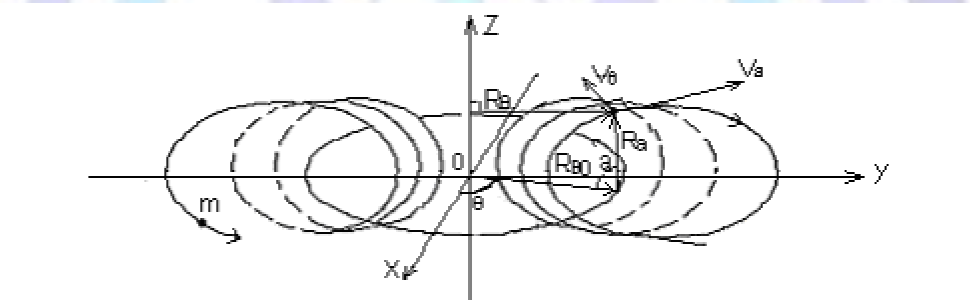
Modern physics experiments have confirmed: microscopic particles, elementary particles to existed fluctuations, spin two movements, and follow the momentum, moment of momentum and mean the law of conservation of energy. Just two movement's orbital quantum, Figure 1.1 and (1.1), we have:

$$\begin{cases} \vec{R}_\alpha \times m\vec{v}_\alpha = \dfrac{\vec{h}}{2\pi} \\ \vec{R}_\theta \times m\vec{v}_\theta = \dfrac{\vec{h}}{2\pi} \end{cases} \qquad \begin{cases} \vec{\lambda}_\alpha = \int_0^{2\pi} \vec{R}_\alpha d\alpha \\ \vec{\lambda}_\theta = \oint \vec{R}_\theta d\theta \end{cases} \qquad \begin{cases} \vec{P}_\alpha = m\vec{v}_\alpha \\ \vec{P}_\theta = m\vec{v}_\theta \end{cases}$$

The m represents the elementary particles along fluctuations; the $\vec{R}_\alpha$ quality of the moment in the movement $\vec{v}_\alpha$ of spin-orbit is variable. The $\vec{R}_\theta$、$\vec{v}_\theta$ said elementary particles to tend to the speed of light for the orbital radius vector of the wave motion; said and $\vec{v}_\alpha \perp \vec{R}_\alpha$、$\vec{v}_\theta \perp \vec{R}_\theta$、$\vec{v}_\alpha \perp \vec{v}_\theta$。$\vec{\lambda}_\alpha$ orbital radius vector of the spin motion energy relativistic velocities; Represents elementary particles along the wave direction of movement in the in each fluctuation movement cycle T_α, rail length; that $\vec{\lambda}_\theta$ each spin motion cycle T_θ in the length of the track along the spin direction of movement;, respectively, the $\vec{P}_\alpha$、$\vec{P}_\theta$ said elementary particles along fluctuations, spin the direction of movement of the moment of momentum. They are below standard "α, θ" distinction (following the same).

Note: book fluctuations, spin refers elementary particle along two vertical twin elliptical orbital motion of the two directions mutually perpendicular velocity component, the fluctuation of the elementary particles of the specified long-term human and academia spin different concepts.

Two orbital motions simultaneous three-dimensional Cartesian coordinate system, centered at the origin, still elementary particle fluctuations shown in the steady-state spin quantum orbital motion in Figure 1.1. Like a spring bent into a closed spiral rings, wire line on behalf of elementary particle fluctuations, spin the orbits. Fluctuations, the prerequisites for the establishment of the steady-state spin quantum orbital motion: orbital period of the spin motion must be fluctuations motion orbital period T_α N_α times T_θ! ($N_\alpha \geq 1$ is a natural number or a relatively simple Score). Thus, according to the wave equation and momentum moments conservation law still elementary particle internal orbital motion equations:



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

Figure 1.1 still elementary particle internal fluctuations, the steady-state spin quantum the vertical double oval track movement diagram

$$\begin{cases} \vec{R}_\alpha \times m\vec{v}_\alpha = \dfrac{\vec{h}}{2\pi} \quad (\dfrac{\vec{h}}{2\pi}\text{ Is moment of momentum wave vector}) & (1.2-1) \\ \vec{R}_\theta \times m\vec{v}_\theta = \dfrac{\vec{h}}{2\pi} & (1.2-2) \\ \vec{R}_\theta = \vec{R}_{\theta 0} - \vec{R}_\alpha \cos\alpha & (1.2-3) \\ \alpha = N_\alpha \theta & (1.2-4) \\ \dfrac{\oint \vec{R}_\theta d\theta}{\vec{v}_\theta} = \dfrac{N_\alpha \int_0^{2\pi} \vec{R}_\alpha d\alpha}{\vec{v}_\alpha} & (1.2-5) \end{cases}$$

1. 2 Orbit equations parameters characteristic answers

1.2.1 Orbit equations parameters characteristic answers

We first define the equations (1.2), the θ is a constant denoting the position fluctuations track projection plane, Z = 0 represents the projection plane of the spin-orbit. The （1.2-1）、(1.2-2) into the （1.2-3） type, which $\vec{v}_\theta / \vec{v}_\alpha = E_{\alpha\theta} \le 1$ is constant, so:

$$\begin{cases} \vec{R}_\alpha = \dfrac{\vec{R}_{\theta 0} E_{\alpha\theta}}{1+E_{\alpha\theta}\cos\alpha} & (1.3-1) \\ \vec{R}_\theta = \dfrac{\vec{R}_{\theta 0}}{1+E_{\alpha\theta}\cos\alpha} & (1.3-2) \end{cases}$$

Two movement orbits are elliptical orbit, and perpendicular to each other! (Hereinafter, for convenience, always omitted $\vec{R}_\alpha$、$\vec{R}_\theta$、$\vec{v}_\alpha$、$\vec{v}_\theta$、$\vec{h}$ vector "→" symbol). Let fluctuations, the direction of the spin motion track of the total length respectively L_α, L_θ, equations obtained by the (1.2-5), (1.3):

$$\begin{cases} L_\alpha = N_\alpha \displaystyle\int_0^{2\pi} \frac{R_{\theta 0} E_{\alpha\theta}}{1+E_{\alpha\theta}\cos\alpha} d\alpha & (1.4-1) \\ L_\theta = N_\alpha \displaystyle\int_0^{2\pi/N\alpha} \frac{R_{\theta 0}}{1+E_{\alpha\theta}\cos\alpha} d\theta & (1.4-2) \end{cases}$$

Substituting (1.4) equations (1.2-3), (1.2-5), we obtain:

$$E_{\alpha\theta} = \frac{1}{\sqrt{N_\alpha}} \qquad (1.5)$$

Equations (1.2), (1.3) compared with the elliptical orbit of the celestial planetary motion can be seen: the elementary particles along the fluctuations, spin quantum stationary state vertical twin elliptical orbital motion is, in fact, along the circumferential line $X^2 + Y^2 = R_{\theta 0}^2$ and Z the orbital movement of the shaft two rotary axis angular momentum conservation. The v_α speed v_θ constant R_α R_θ is a variable, so m the state of motion of the two tracks are the same, for the same variables. With the fluctuations in the radius of the orbit of the spin motion, the basic particles in which the coordinates of the position varies. Laboratory determination of the quality of elementary particles should be for each of the fluctuations, the average mass $\overline{m}$ of the the spin orbital motion cycle. (1.2-1), (1.3-1), (1.4-1), (1.5), we have:

$$\overline{m} = \int_0^{2\pi} \frac{mR_\alpha}{L_\alpha} d\alpha = \frac{h}{2\pi v_\alpha} \int_0^{2\pi} \frac{1}{L_\alpha} d\alpha = \frac{h\sqrt{N_\alpha - 1}}{2\pi v_\alpha R_{\theta 0}} \qquad (1.6)$$

1. 2. 2 The importance of the orbit equations

Because of the fluctuations, the spin quantum steady state vertical double elliptic orbit motion model of elementary particle fluctuations equation, derived in the classic basic laws of physics of elementary particles inherent wave-particle duality, Quantum momentum, angular momentum, and the average energy conservationout equations (1.2) - (1.6) are all still elementary particles, nuclei, atoms, eVen microscopic particles in the entire universe physics

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parameters to calculate the basic equation. Classical Newtonian mechanics, electrodynamics, thermodynamics, quantum fluctuations in the orbit of the movement mechanics and energy relativistic combine accurate simulation answer the Preface proposed quantum physics, cosmic physics and relativistic field problems. Because all the parameters calculated ultimately comes down to the method of classical physics, elementary particle quantum orbital motion model of elementary particles orbiting moment of momentum, charge number and average energy and momentum are completely conserved under conditions only with the orbital parameters m, $N_{\alpha i}$ related calculations. EVeryone else to specify a variety of quantum number, parity, isospin, strangeness ...... and laboratory observations of the parameters of the amendment, the abolition of all, in addition to the baryon number, charge number reserved!

Seen from the equations of Figure 1.1 and (1.3): When us still elementary particles the internal moving orbit calibration coordinate system, after the start time and the initial position, the coordinates of the elementary particle at any time t is located in orbit, energymomentum, moment of momentum parameter on all uniquely identified. Coordinates of elementary particles can be expressed as follows:

$$\begin{cases} \alpha = \dot{\alpha}\ t + \alpha_0 & (1.7-1) \\ X = (R_{\theta 0} - R_\alpha \cos\alpha)\cos\theta & (1.7-2) \\ Y = (R_{\theta 0} - R_\alpha \cos\alpha)\sin\theta & (1.7-3) \\ Z = R_\alpha \sin\alpha & (1.7-4) \end{cases}$$

HoweVer, measurement techniques available to the scientific community can not be precise, measured directly. Because the spray-type particles as a probe itself also exist fluctuations spin motion along the track. (2 to 4 will prove that they are also along the cylindrical helix orbital precession), as shown in Figure 1.2.

Elementary particles are much smaller than the radius of the fluctuations of its own entity, the spin-orbit radius R_α, R_θ fluctuations sports track intersection area, so the two can only very small probability of a random collision occurred. And the collision point of the particle energy, momentum, orbital radius and coordinates of the location are variables; this is academia long debate how to understand the microscopic particles of uncertainty phenomenon reason. HoweVer, the distribution state of the spin motion along tracks fluctuations from the electrically charged elementary particles, the performance out of the magnetic moments, the average mass, charge density, elementary particle fluctuations, the size of the spin motion orbit distribution range shown by the appearance of the elementary particles, particles inside and outside , within the nucleus, and the weak, electrical, magnetic interaction force strength, the laboratory can be directly measured and estimated data for the book's physical model validation and accurate simulation proved.

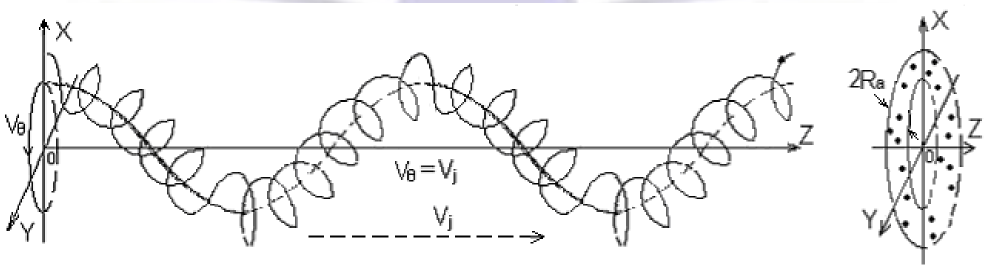

Figure 1.2 elementary particles along fluctuations, the spin precession of the orbital motion characteristics of the formation of wave-particle duality diagram

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2 Elementary particle internal structure, the energy of formation of the principles and parameters calculation

2.1 Elementary particle internal structure and energy origin

2.1.1 Elementary particle internal structure and the nature of charge Quantization

Scientific community are identified in all of the experiments from 1902 to 1990: all the free particles of free particles of the intermediate product, the spontaneous decay process of the energy radiation is electromagnetic energy; final product is the (proton) electrons, photons, neutrinos; allexperiments all particles decay process and all the transition, the final product of all baryons, mesons, leptons, charged nature can only be divided into three categories: a unit with a positive charge, with a unit negative charge, electrically neutral particles. When we will not consider the quality and the kinetic energy of the protons, neutrinos can be determined: all particle energy mc^2 are the electric and magnetic field energy, because the photons of electromagnetic energy radiation meson leptonic decay process and the final product, the electronic as electromagnetic energy ball "is beyond reproach. So, the book is the first of the elementary particles defined as follows: unit charge as one can no longer divided, basic, stable point particles, hereinafter referred to as "charged particles", in fact, the body radius tends to 0; All elementary particles, including all mesons, leptons and baryons core, when present them to electrically neutral, by n is positive, charged Particle electric dipole consisting of aggregates; when they are charged, additional charged particles; still elementary particle energy, the state of motion, and all parameters characterized by (1.2) orbit equations and (1.3) (1.5) (1.6) solutions; composed of baryons, the basic unit of the atoms (detailed proof, see the follow-up).

Photons have cyclical changes in the characteristics of electromagnetic waves; to form two photon pair of positive and negative electrons can collide annihilation; a photon can not be directly split into a pair of positive and negative electrons; neutrino production of charged mesons, leptons;$\pi^{\pm}$ mesoneVentually split decaying into two neutrino and an antineutrino and an electron. The characteristics, we can make the most direct inference: photons and neutrinos are composed by a pair of electric dipole, is the most simple of elementary particles. Because neutrino properties, it can be spread as eVenly as gas molecules in the vast space of the universe, the constitute a omnipresent neutrino background field. The 2.7K blackbody microwave background radiation in the universe formed only by the neutrino field (see Chapter 5 demonstration). Electronics is composed by a pair of electric dipole and a charged particle, when a pair of electron collisions Specter, in addition to generating two photons, should be associated with a low-energy neutrino. If it is a negative electron and a positively to charged particles collide, it happens to the formation of two photons. A photon collision near the nucleus, to the simultaneous excitation of two neutrinos or two pairs of electric dipole, split, combine into two (one pair) electronic. Similarly, the charged$\pi^{\pm}$ meson is composed by two pairs of electric dipole and a charged particle. Because the moment the law of conservation of momentum and momentum, launch an anti-neutrino and absorption neutrino a neutrino are equivalent. All other mesons, leptons, including baryon core, can be determined: the electrically neutral elementary particles are composed of n electric dipole assembly; the different particle n is a natural number, one more of the charged particles Charge charged particles. Under the internal structure of elementary particles, as long as enough analysis to calculated charged elementary particles, electrically neutral elementary particles, photons and neutrinos energy forming principle and related parameters.

2.1.2 Charged particle energy origin

By classical electrodynamics, shown as in Figure 2.1, charged particle energy relativistic speed Ava straight uniform motion, electrical, magnetic field strength is:

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$$\vec{E}_\alpha = \frac{e(1-\beta_\alpha^2)\vec{R}_\alpha}{4\pi\varepsilon_0 R_\alpha^3 (1-\beta_\alpha^2 \sin^2\alpha)^{1.5}} \qquad (\beta_\alpha = \frac{v_\alpha}{c}) \qquad (2.1)$$

$$\vec{B}_\alpha = \frac{\vec{v}_\alpha \times \vec{E}_\alpha}{c^2}$$ （the α is the angle between $\vec{v}_\alpha$ and $\vec{R}_\alpha$） （2.2）

When the circumferential fluctuation motion of the charged particles nearly the speed of light c, due to The fluctuations orbital radius R_a the entity radius much larger than the charged particles $R_{a\bullet}$, we can track the circumferential fluctuation motion simplified as the linear movement of each short circumferentially tangent. At this time, the electromagnetic waves "squeezed" only distributed within the plane of the vertical fluctuations movement $\vec{v}_\alpha$ direction to form a planar shock, as shown in Figure 2.1. Non-occurrence of electromagnetic energy radiation of charged particles stream packet rounded plane forward. By classical electrodynamics, the energy flux density distribution of glass Poynting vector $\vec{S}_\alpha$ is:

$$\vec{S}_\alpha = \vec{E}_\alpha \times \vec{H}_\alpha = \varepsilon_0 \left[\vec{v}_\alpha E_\alpha^2 - \vec{E}_\alpha\left(\vec{E}_\alpha \cdot \vec{v}_\alpha\right)\right] \qquad (2.3)$$

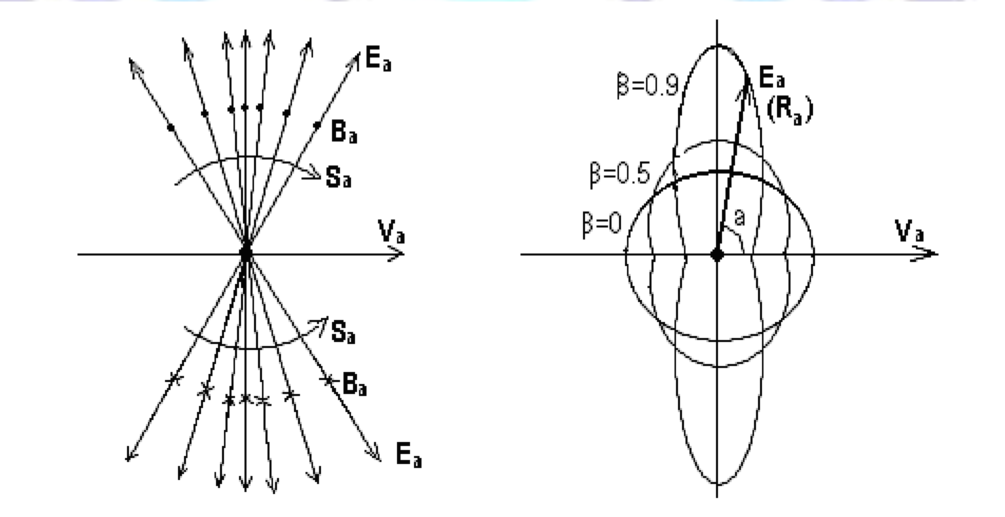

Figure 2.1 energy relativistic velocities v_a uniform linear motion of charged particles in electric and magnetic field strength characteristics Figure

By (2.3) that: $\vec{S} \cdot \vec{R}/R = 0$ (at the microscopic field, charge along the circumference to the speed of light c fluctuations movement does not occur cyclotron electromagnetic wave energy radiation, see the end of Chapter 5 supplemental argument).

Note: Because the orbit is elliptical orbit fluctuations, $\vec{v}_\alpha \to c$ and completely non-linear motion, energy flux density should take positive, so this is not simply take $\vec{S}_\alpha = \varepsilon_0 \vec{v}_\alpha E_\alpha^2$ value. But take the $\vec{S}_\alpha = \varepsilon_0 \left[\vec{v}_\alpha \vec{E}_\alpha^2 - \vec{E}_\alpha\left(\vec{E}_\alpha \cdot \vec{v}_\alpha\right)\right]$ value vector synthesis. The former when the equivalent electromagnetic field energy ball "volume should take $2\pi\bar{R}_\alpha^3$, $\beta_\alpha = 0.9981773259$ which is equivalent to the volume of the electromagnetic field" energy ball "should be taken as $\sqrt{2}\pi\bar{R}_\alpha^3$, $\beta_\alpha = 0.9987108301$. The systematic error is minimal.

The electromagnetic field of a charged particle energy for W_e, the the equivalent electromagnetic fields "energy ball" volume $\sqrt{2}\pi\overline{R}_\alpha^3$, the $\sqrt{2}$ coefficient enables electromagnetic field energy equation (2.4), transition from energy relativistic speed toward the stationary state. By the equation (2.3), due to $v_a \to c$ is a constant, so the direct electric field intensity $\vec{E}_\alpha$ take a = 0, π/2, the synthesis of two vectors:

$$W_e = \frac{\sqrt{2}\pi\overline{R}_\alpha^3 S_\alpha}{v_\alpha} = \frac{\sqrt{2}e^2}{16\pi\varepsilon_0\overline{R}_\alpha}\frac{\sqrt{1+(1-\beta_\alpha^2)^3}}{1-\beta_\alpha^2} \qquad (2.4)$$

When $\beta_a \to 0$, it should be equal to the average radius $\overline{R}_\alpha$ spherical shell uniform distribution of the electrostatic field energy charged particles along W_e:

$$W_e = \frac{e^2}{8\pi\varepsilon_0\overline{R}_\alpha} \qquad (2.5)$$

Make to (2.4) of charged particles electromagnetic field energy representative (1.2-1) type of elementary particles along the circumference of the wave motion of particle energy mc^2, too:

$$\frac{\beta_\alpha\sqrt{1+(1-\beta_\alpha^2)^3}}{1-\beta_\alpha^2} = 2\sqrt{2}\left(\frac{2h\varepsilon_0 c}{e^2}\right) \qquad (2.6)$$

Solution (2.6): βa =0.9987108301. It is charged elementary particles when a fluctuation in quantum N_a limit fluctuations in speed coefficient tends to infinity, see (2.16) where.

The fine structure constant (2.6), the right to export is the origin of elementary particle energy, the initial indications of the quantum steady state orbital motion, strong, and weak, electrical, magnetic interactions unity principle. Seen from (2.6): v_a single charged particles because the speed of the waves, the orbital radius R_a is a constant electromagnetic field energy mc^2 must be a constant, and is unable to meet the (1.2) the equations of elementary particles along fluctuations, spin-orbit movement conditions. Therefore, directly by probing all experiments to all the particles split decay process Corollary: charged elementary particles must be composed by n to the electric dipole and a charged particle aggregates.

2.2 Charged elementary particles energy forming Principle and parameters calculation

2.2.1 Charged particle energy forming principle

A electric dipole is, load electric particle spacing of L_r, the $K_r = L_r / 2\overline{R}_\alpha$. The fluctuation of electric dipole along the orbital motion while, also should be around the wobbled track rotation. On a charged elementary particles, the rotation speed and fluctuation of angular velocity of complete synchronization! In order toπ^+ meson as an example, when π^+ meson along the fluctuation orbits, if the start position a=0°, excess positive charged particle tracks just in fluctuation of polar axis R_α lateral, see Figure 2.2, (or spin orbit $R_{\theta 0}$ medial). Now, load electric particle fluctuations, rotation speed v_+, v_- and fluctuation velocity v_a relationship:

(Positive, load electric particle in fluctuating, spin orbit within the lateral distribution, readers can make a model of the rotating verification)

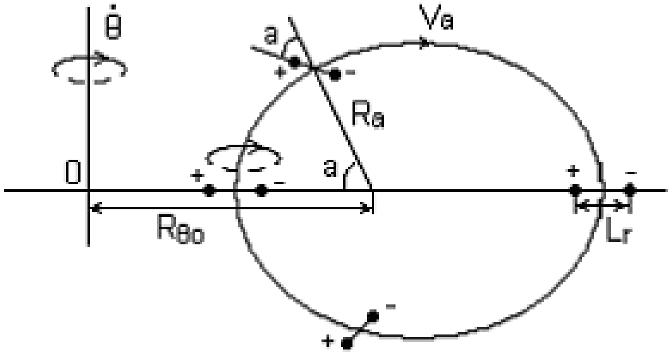

Fig 2.2 charged particle rotation speed fluctuation sketch map

$$\begin{cases} v_{+} = v_{\alpha}(1+K_{r}\cos\alpha) & (2.7-1) \\ v_{-} = v_{\alpha}(1-K_{r}\cos\alpha) & (2.7-2) \end{cases}$$

And at the beginning of the last century Planck founded the ideas of quantum mechanics. As long as we make the electric dipole within Lr as capable of telescopic change electromagnetic energy vibrator, the telescopic change cause the charged particles along the wave track motion tends to speed v_+, v_- periodic variation; lead to the synthesis of electromagnetic field intensity varies periodically, to determine the periodic changes of the energy, and (1.2-1) type of elementary particle in fluctuation, spin orbit periodic variations in the instantaneous energy equal to mc^2, a, R_a and N_a function. Thus, elementary particle in steady state within the orbit motion, will not appear in cyclotron, moving direction of electromagnetic wave radiation energy, momentum, and in line with the instant energy and average momentum, the law of conservation of energy. As long as we derive electromagnetic energy vibrator in the energy equation of N_a and a, K_r presents the continuous change of the relation, be equal to that book of charged particle internal structure, energy principle and calculation of related parameters of physical model.

By (1.3-1), (1.5), (1.6), elementary particles along the instant fluctuation fluctuation orbit orbit radius R_a and the average radius of $\overline{R}_{\alpha}$ respectively:

$$\begin{cases} R_{\alpha} = \dfrac{R_{\theta 0}}{\sqrt{N_{\alpha}} + \cos\alpha} & (2.8-1) \\ \overline{R}_{\alpha} = \dfrac{R_{\theta 0}}{\sqrt{N_{\alpha} - 1}} & (2.8-2) \end{cases}$$

Will (2.8) equations into (2.4), (2.5), (2.6) type, because β→1, so:

Because $\sqrt{1+(1-\beta_{\alpha}^{2})^{3}} \to 1$, therefore, each charged particles along the orbital motion of the instantaneous fluctuation of energy equation N_a, a, β_a relationship:

$$\frac{\beta_{\alpha}}{1-\beta_{\alpha}^{2}} = 2\sqrt{2}\left(\frac{2h\varepsilon_{0}c}{e^{2}}\right)\frac{\sqrt{N_{\alpha}} + \cos\alpha}{\sqrt{N_{\alpha} - 1}} \qquad (2.9)$$

2.2.2 Charged particle energy parameter calculation

A charged particle by a pair of n electric dipole and a positively charged particle composition, and positive, load electric particles each occupy a common wave, consisting of spin orbit, as biological gene as chain-like structure, (see Figure 3.3). Then the basic particle instantaneous electrical, magnetic field strength should be each charged particle instantaneous electrical, magnetic field intensity vector and. By (2.1), (2.4), (2.9) and (2.7) equation:

$$\beta_\alpha\left[\frac{n+1}{\sqrt{1-\beta_\alpha^2(1+K_r\cos\alpha)^2}}-\frac{n}{\sqrt{1-\beta_\alpha^2(1-K_r\cos\alpha)^2}}\right]^2$$

$$=2\sqrt{2}\left(\frac{2h\varepsilon_0 c}{e^2}\right)\frac{\sqrt{N_\alpha}+\cos\alpha}{\sqrt{N_\alpha-1}} \qquad (2.10)$$

So (2.10) type of α=π/2 or 3π/2, too:

$$\frac{\beta_\alpha}{1-\beta_\alpha^2}=2\sqrt{2}\left(\frac{2h\varepsilon_0 c}{e^2}\right)\frac{\sqrt{N_\alpha}}{\sqrt{N_\alpha-1}} \qquad (2.11)$$

The different charged particle internal K_r value trend Table 2.1

α°		0 °	30°	60°	80°	100°	120°	150 °	180°
N_a	n	$K_r \times 10^{-5}$							
2	1	17.4001	17.8604	19.2474	20.6731	22.4384	24.4076	27.1746	28.4420
	2	10.9000	11.1214	11.7909	12.4890	13.3802	14.4297	16.0509	16.8650
	3	7.88645	8.03130	8.47239	8.93784	9.54125	10.2662	11.4169	12.0079
2.5	1	17.4035	17.8223	19.0732	20.3417	21.8883	3.5797	25.8749	26.8757
	2	10.8507	11.0523	11.6572	12.2797	13.0601	13.9547	15.2669	15.8834
	3	7.83898	7.79120	8.37056	8.78613	9.31455	9.93101	10.8563	11.2994
3	1	17.0074	17.3858	18.5084	19.6353	20.9936	22.4581	24.4003	25.2240
	2	10.5667	10.7491	11.2928	11.8467	12.5320	13.3024	14.3947	14.8881
	3	7.62548	7.74529	8.10489	8.47507	8.93901	9.46894	10.2357	10.5879
31	1	7.17710	7.23191	7.38592	7.52881	7.68703	7.84192	8.02339	8.09200
	2	4.35031	4.37730	4.45357	4.52490	4.60465	4.68357	4.77725	4.81304
	3	3.11626	3.13432	3.18550	3.23358	3.28755	3.34121	3.40522	3.42977
151	1	3.39991	3.41199	3.44543	3.47580	3.50870	3.54020	3.57621	3.58958
	2	2.04910	2.05512	2.07182	2.08706	2.10364	2.11959	2.13792	2.14475
	3	1.46546	1.46951	1.48078	1.49107	1.50229	1.51311	1.52556	1.53021
500	1	1.89531	1.89905	1.90934	1.91860	1.92856	1.93802	1.94873	1.95269
	2	1.13995	1.14182	1.14698	1.15164	1.15666	1.16143	1.16686	1.16887
	3	0.81480	0.81606	0.81955	0.82270	0.82609	0.82933	0.83301	0.83437

On the show, for a certain value of N_a, v_a, β_a are constant, is a function of N_a, and the fluctuation of electric dipole motion track position independent. As long as we at different N_a values into (2.11) type for β_a value, n value together with different substitution (2.10) type, we can calculate the different charged particle internal K_r value change tendency, see table 2.1.

From Table 2.1 calculating results can be seen: K_r is a continuous gradient of the function, and the particle internal dipole numbers n inversely proportional, with fluctuations in quantum number N_a increases. Please note:

unpaired residual charged particles are distributed in spin orbital medial, and general electric, magnetic field intensity, were greater than the spin orbit of charged particles, illustrate the basic energy of mc^2 focused on spin orbital medial embodiment.

Further simulation calculation results show: the charged particle in the electric dipole rotation speed fluctuation of angular velocity and only fully synchronous, if it >1 natural number, then K_r values are not continuous positive solution. These characteristics of charged elementary particles, nuclei are behind the internal structure of the design, parameters calculation based on.

2.3 Electrically neutral elementary particle energy

Principle and parameter calculation

2.3.1 Electrically neutral elementary particle energy formation Principle

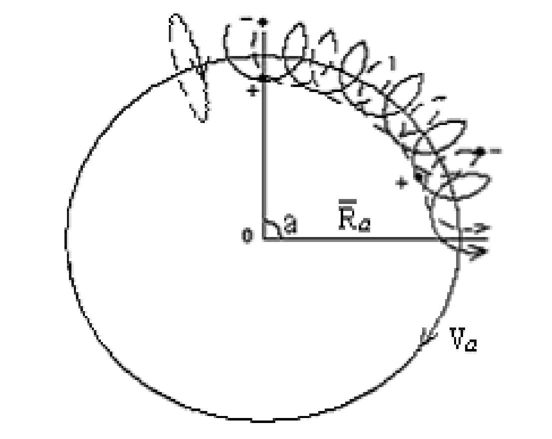

Fig 2.3 proton nuclear core electric dipole rotation diagram

In the next chapter, basic particle internal interaction analysis showed that: all the charged particles must travel at the speed of c motion can exist. The nature and eVen the entire universe, all charged particles along the fluctuation, spin orbit motion velocity vector and shall be $\sqrt{v_\theta^2 + v_\alpha^2} \geq c$, only such, within any charged particle along the fluctuation, spin two velocity vector superposition in a given direction, including rotation speed synthesis ability in the speed of light.

In addition to photons, neutrinos of all electrically neutral elementary particle, due to the internal structure is special, electric dipole center along the wave track wave motion velocity v_a, rotation caused all charged particle motion velocity of $N_rK_rv_a$ (N_r rotation frequency number), all two must be vector and in a direction is equal to the speed of light c, shown in figure 2.3. We have,

$$\sqrt{v_\alpha^2 + (N_r K_r v_\alpha)^2} = c \qquad (2.12)$$

By (2.12) type, too:

$$N_r = \frac{\sqrt{1-\beta_\alpha^2}}{K_r \beta_\alpha} \qquad (2.13)$$

From (2.1) to (2.6) compare the: electrically neutral elementary particle field energy is positive, on equal load electric particle electric, magnetic field intensity vector synthesis to achieVe. When we consider the K_r value is very small electric dipole can be large enough to form the electromagnetic field energy, the wave speed must be very close to the speed of light c. We take the v_a= $(1-10^{-9})$c, both in the scientific community are capable of accurately measuring the hands and the calculator to calculate the error range. By (2.3), when$\beta_a=1-10^{-9}$, can be simplified to:

$$\vec{S}_\alpha = \varepsilon_0 \vec{v}_\alpha E_\alpha^2 = \frac{e^2 \vec{v}_\alpha}{16\pi^2 \varepsilon_0 R_\alpha^4 (1-\beta_\alpha^2)} \tag{2.14}$$

As long as the electric dipole within each charged particle fluctuation velocity of v_+, v_- and (2.7) equations as a periodic variation, it can make the electrically neutral elementary particle electric dipole in the wave track fluctuations, rotation of synthesis electromagnetic field strength also shows periodic change, thereby forming the periodic variations of the energy mc^2, this periodic variations of the frequency must be charged particle and photon N_r times.

2.3.2 Electrically neutral elementary particle energy parameter Calculation

The actual simulation, K_r changes only with a values,by (2.13): K_rN_r= $\sqrt{1-\beta_\alpha^2}\Big/\beta_\alpha$ type, is constant, as can be seen from the table 2.2 electric dipole rotation frequency of N_r wave changes along the track. By (2.14), reference (2.9), (2.10) type inference process, electrically neutral elementary particle of β_a, N_a, K_r, a parameter relation can be expressed as:

$$n\beta_\alpha \left[\frac{1}{\sqrt{1-\beta_\alpha^2 (1+K_r \cos\alpha)^2}} - \frac{1}{\sqrt{1-\beta_\alpha^2 (1-K_r \cos\alpha)^2}} \right]^2 = 2\sqrt{2}\left(\frac{2h\varepsilon_0 c}{e^2}\right)\frac{\sqrt{N_\alpha}+\cos\alpha}{\sqrt{N_\alpha -1}} \tag{2.15}$$

A electric dipole numbers n=2, $\beta_a=1-10^{-9}$, N_a=3, the simulation results are shown in table 2.2.

Proton nuclear core is an electrically neutral elementary particle, fluctuations in quantum number $N_a\to\infty$, forming a circular orbit spin speed fluctuation, v_θ =0. From the atomic nucleus inner structure calculation, it is 6 on the electric dipole. n=6, $N_a \to\infty$, substitution (2.15), the simulation results are shown in table 2.2.

Similarly, the neutrino, as n=1, N_a=1, c precession rate is the speed of light. Fluctuation, precession track is cylindrical helical line. Considering the precession direction energy relativistic effects, by (2.15) type, too:

$$\beta_\alpha \left[\frac{1}{\sqrt{1-\beta_\alpha^2 (1+K_r \cos\alpha)^2}} - \frac{1}{\sqrt{1-\beta_\alpha^2 (1-K_r \cos\alpha)^2}} \right]^2 = \frac{2\sqrt{2}}{\sqrt{1-\beta_\alpha^2}}\left(\frac{2h\varepsilon_0 c}{e^2}\right) \tag{2.16}$$

The simulation results are shown in table 2.2. The neutrino in a=0～89˚ K_r values into (2.13) type, too: 343323≥ N_r ≥ 5991. Similarly, the proton core are: $2.9834 \times 10^8 \geq Nr \geq 5.2033 \times 10^6$.

From table 2.2 shows：that in addition to a=π /2、3π /2, K_r value is also a continuous gradient function a; in a=π/2, 3π/2, K_r value increases rapidly, but with $Kr=10^{-10\sim-13}$ orders of magnitude more, still microscopic little. From n on the electric dipole formed of electrically neutral particles, because of their: a=π/2 3π/2, through when there is a tiny distance, the variation of K_r value range is much smaller than the neutrino. If we consider the electric dipole rotation frequency number N_r, then eVery fluctuation cycle, the electric dipole of the telescopic oscillation frequency is N_r times. Of course, we can also make the proton nuclear core of electric dipole within 6 a values are equal, rotation angle N_{ra} interval of 60˚,

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6 pairs of dipole occupy 6 wave track perfectly synchronized motion, so that the variation of K_r value with minimum amplitude, but also the most special, the most stable structure. In addition, all photons neutrino electrically neutral elementary particle, this structure may be proton core can stabilize the only reason.

Electrically neutral elementary particle internal K_r value analog computation results table 2.2

α°	0°	30°	60°	80°	89°	100°	120°	150 °	180 °
Particle parameters	$K_r \times 10^{-13}$								
Electrically neutral particles n=2 N_a =3	6.14	6.92	11.13	29.55	280.78	26.78	8.25	4.04	3.19
Proton nuclear core n=6 N_a=∞	1.499	1.732	2.999	8.638	85.948	8.638	2.999	1.732	1.499
Neutrino n =1 N_a =1	1303	1504	2605	7501	74637.3	7501	2605	1504	1302

2.4 Photon of electromagnetic wave, energy principle and parameter calculation

Photon only by a pair of electrical dipole component, and neutrinos, fluctuation, precession track is cylindrical spiral line, see figure 2.4.

Orbit equation:

$$\begin{cases} X = R_\alpha \cos(\dot{\alpha}\ t + \alpha_0) & (2.17-1) \\ Y = R_\alpha \sin(\dot{\alpha}\ t + \alpha_0) & (2.17-2) \\ Z = R_\alpha (\dot{\alpha}\ t + \alpha_0) & (2.17-3) \end{cases}$$

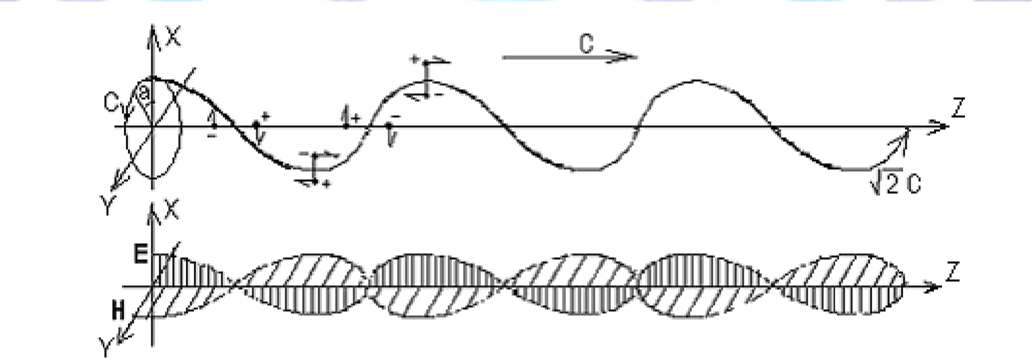

Fig 2.4 photon along the wave, cylindrical spiral orbit precession formed in the electromagnetic wave principle diagram

The photon is composed of neutrino by high frequency alternating electromagnetic field excited after the formation of the. When the photon energy is greater than the excitation of the neutrino background field average energy, electric is dipole polarization, positive, load fluctuation particles around the track rotation frequency N_r to 1.Rotation plane by excitation of the alternating electromagnetic field plane control, naturally formed in a direction perpendicular to the polarization and the electromagnetic wave oscillation. Now load electric particle fluctuations, rotation speed is composed of (2.7) equation to express. Reference (2.16) type, photonic Kr value in the calculation results, the same as in table 2.2. Kr values are equal. Photon fluctuation, precession motion along the electric dipole rotation formed by electromagnetic Potter syndrome is shown in figure 2.4.

From this chapter analysis shows: the neutrino and photon, is only one, only the energy difference. To distinguish the antineutrinos, the photon, can only be fluctuations in movement direction, the electric dipole rotation direction opposite to it, or photons in 0 for a,π,2π, office, load electric particle in fluctuation, precession of orbit.

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3 Elementary particles within the outer interaction strength

3.1 Charged particles within the outer interaction strength

3.1.1 With in the charged particles interaction strength calculation

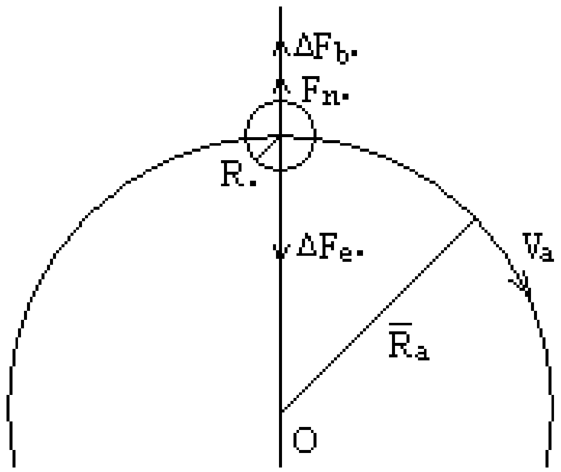

Figure 3.1 charged particles inside the interactions

Single charged particles are along the orbital motion of the fluctuations, not only to the formation of a strong centrifugal force of the $F_{n\bullet}$, but also form a stronger electric, magnetic force $\Delta F_{e\bullet}$ $\Delta F_{b\bullet}$. Charged Particles entity as a small sphere, diameter $2R_\bullet$, it should be smaller than the electric dipoles within the positive the load charged particles spacing $2K_r\overline{R}_\alpha$. The $K_{r\bullet} = R_\bullet / \overline{R}_\alpha$ is formed in the orbital motion of charged particles along fluctuations electricity, magnetic energy mc^2. When the orbital motion of charged particles along the volatility, the centrifugal force should be less than the fluctuation orbital motion of charged particles along the outside of the two hemispheres of their own electricity, magnetic force $\Delta F_{e\bullet}$ $\Delta F_{b\bullet}$ difference. Figure 3.1, we will average orbital radius of each charged particle along fluctuations $\overline{R}_\alpha$ radial divided into inner and outer side of the two hemispheres. "A" is omitted, the same below) by the equations of (2.7), $v_{\alpha 1} = \beta(1+K_{r\bullet})c$, $v_{\alpha 2} = \beta(1-K_{r\bullet})c$ (The β_α The subscript "α" omitted, the same below) Still exist tends to the speed of light is poor, resulting in each of the charged particles inside and outside are formed in the fluctuating movement power, the magnetic field force intensity differences. Newtonian mechanics and (1.2-1), (2.1), (2.2), (2.7), Figure 3.1 we have:

$$F_{n\bullet} = \frac{mv_\alpha^2}{\overline{R}_\alpha} = \frac{\beta hc}{2\pi R_\alpha^2} \tag{3.1}$$

$$\Delta F_{e\bullet} = \frac{(0.5e)^2}{4\pi\varepsilon_0 (K_{r\bullet}\overline{R}_\alpha)^2}\left[\frac{1}{\sqrt{1-\beta^2(1+K_{r\bullet})^2}} - \frac{1}{\sqrt{1-\beta^2(1-K_{r\bullet})^2}}\right] \tag{3.2}$$

$$\Delta F_{b\bullet} = \frac{(0.5e)^2\beta^2(1-K_{r\bullet}^2)}{4\pi\varepsilon_0 (K_{r\bullet}\overline{R}_\alpha)^2}\left[\frac{1}{\sqrt{1-\beta^2(1+K_{r\bullet})^2}} - \frac{1}{\sqrt{1-\beta^2(1-K_{r\bullet})^2}}\right] \tag{3.3}$$

Compare $\Delta F_{e\bullet}$ - ($\Delta F_{b\bullet}$ + $F_{n\bullet}$) values, simultaneous (3.1) to (3.3), we have:

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$$\frac{e^2}{4\pi\varepsilon_0\bar{R}_\alpha^2}\left\{\begin{array}{l}\frac{[1-\beta^2(1-K_{r\bullet}^2)]}{4K_{r\bullet}^2}\left[\frac{1}{\sqrt{1-\beta^2(1+K_{r\bullet})^2}}-\frac{1}{\sqrt{1-\beta^2(1-K_{r\bullet})^2}}\right]\\-\beta\left(\frac{2h\varepsilon_0 c}{e^2}\right)\end{array}\right\}=0 \quad (3.4)$$

Make to β=1-10⁹, $K_{r\bullet}$<1/β-1=10⁻⁹, by table 2.2: $K_{r\bullet}$<1.499×10⁻¹³. By the simulation we find that: (3.4) type: 1.499 x 10⁻¹³ > $K_{r\bullet}$ + 8.0 x 10⁻¹⁵, is the reasonable scope. $K_{r\bullet}$ = 8.0 x 10⁻¹⁵ is charged particles entity radius coefficient lower limit, and in (3.4), to: $\Delta F_{e\bullet}-(\Delta F_{b\bullet}+F_{n\bullet})=0$.Have their own electric and magnetic field strength of for: maintenance$\Delta F_{e\bullet}-\Delta F_{b\bullet}$>>0, $\Delta F_{e\bullet}-\Delta F_{b\bullet}$ processed maintenance train to fluctuations in the strength of the inside of the track, is the centrifugal force $F_{n\bullet}$ the multiple astronomy!

3.1.2 Charged particles lateral force each other parameters are Calculated

When we will be charged particles tends to zero as a radius small sphere of view, and the lateral force electric and magnetic field will be to infinite. Magnetic field force charged particles could be overcome their own electric field repelling force, preVent occurrence blowout phenomenon? Become the scientific community for many years searching for the mixed number charge of quark?

A charged particle bursts into n pieces of debris, the initial moment of each fragment itself electric and magnetic field strength respectively for: $\Delta F_{e\bullet/n}$、$\Delta F_{b\bullet/n}$， processed maintenance, processed, we also as long as the maximum of electric and magnetic field force direction, perpendicular to the $\vec{v}_\alpha$ speed position is enough, (the same below). By (3.2), (3.3), to:

$$\begin{cases}\Delta F_{\frac{e\bullet}{n}}=\dfrac{\frac{e}{n}\left[\frac{e(n-1)}{n}\right]}{4\pi\varepsilon_0(K_{r\bullet}\bar{R}_\alpha)^2}\left[\dfrac{1}{\sqrt{1-\beta^2(1+K_{r\bullet})^2}}-\dfrac{1}{\sqrt{1-\beta^2(1-K_{r\bullet})^2}}\right] & (3.5-1)\\ \Delta F_{\frac{b\bullet}{n}}=\dfrac{\frac{e}{n}\left[\frac{e(n-1)}{n}\right]\beta^2(1-K_{r\bullet}^2)}{4\pi\varepsilon_0(K_{r\bullet}\bar{R}_\alpha)^2}\left[\dfrac{1}{\sqrt{1-\beta^2(1+K_{r\bullet})^2}}-\dfrac{1}{\sqrt{1-\beta^2(1-K_{r\bullet})^2}}\right] & (3.5-2)\end{cases}$$

Obviously, only the beta β→1、$K_{r\bullet}$→0, both force to infinite, effect radius is only charged particles entity radius （$K_{r\bullet}\bar{R}_\alpha$）, and two kinds of force just equal size, direction, on the other hand, can be in equilibrium. Neutral and charged elementary particles, the wave speed coefficient beta for 1－10⁻⁹>β≥0.9987108301, that: $\Delta F_{e\bullet/n}/\Delta F_{b\bullet/n}\geq 1$

By analogy, charged particles will instantly blowout, completely disappear, but the fact is not the case. Reason from elementary particle internal structure, charged particles fluctuation, the spin velocity v_a、v_θ, theta, electric dipole $N_rK_rv_a$ rotating speed, etc. As long as we make: $\sqrt{v_\alpha^2+v_\theta^2+(N_rK_rv_\alpha)^2}\geq c$, one will be the direction of the speed just for c, can make $\Delta F_{e\bullet/n}/\Delta F_{b\bullet/n}=1$ processed maintenance train. Rotation, fluctuation, spin motion orbit of charged particles oneself electric and magnetic field strength can be charged particles firmly bound within their own orbit, equal and opposite direction, just to be in equilibrium, the force is charged particles themselves electric and magnetic fields

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form the strong force.

The rail to tend to the speed of light wave motion is micro particles inherent characteristics. Because $1.499\times10^{-13} > K_{r\cdot} \geq 8.0\times10^{-15}$, charged particles should be an infinitesimal point of geometry. Want to rely on particle collision directly hit a moving at the speed of geometric point, by (1.2 1) type, particle collision energy want to infinite, hit probability of will is an infinitesimal. So, charged particles will is the most basic component in the whole process of the eVolution and structure unit (see infinite and eternal cosmology). Within the scientific community in the cosmic rays and high-energy particle accelerators collision experiment, explore decades still cannot be called mixed number charge "quark" particles steadily separated alone, why is this.

Which classical electrodynamics theory in the point of energy "divergence" difficult to beed solved at the same time. Charged particles as a particle will not stationary in a certain space geometry point; It neVer to tend to the speed of light v_a v_θ theta and energy relativistic velocities along the fluctuation, the movement of the spin track; So, charged particles and electric dipole is composed of elementary particles energy, strength, fluctuation orbit radius beta R_a、β、K_r、$K_{r\cdot}$ parameters such as, only determined by the physical model and equations (1.2) this book; The energy mc^2 nature is limited. By R_a、R_θ、β、K_r theta, beta, Kr parameters such as relationships, fluctuation, the spin track movement characteristics, all the elementary particle and wave particle duality of atoms and molecules to form nature and all settled (see chapter 1, 5).

3.2 Electrically neutral elementary particle, the outer interaction strength

3.2.1 Electrically neutral elementary particle interaction strength within the computing

Is to set up a pair of electric dipole Charged Particle spacing of L_r, mutual electrical, magnetic force for $F_{e\pm}$, $F_{b\pm}$, by (2.1), (2.2), was:

$$\begin{cases} F_{e\pm} = \dfrac{e^2}{4\pi\varepsilon_0 L_r^2 \sqrt{1-\beta^2(1+K_r\cos\alpha)^2}} & (3.6-1) \\ F_{b\pm} = \dfrac{e^2(1-K_r^2\cos^2\alpha)\beta^2}{4\pi\varepsilon_0 L_r^2 \sqrt{1-\beta^2(1+K_r\cos\alpha)^2}} & (3.6-2) \end{cases}$$

Simultaneous get:

$$\frac{F_{e\pm}}{F_{b\pm}} = \frac{1}{(1-K_r^2\cos^2\alpha)\beta^2} \quad (3.7)$$

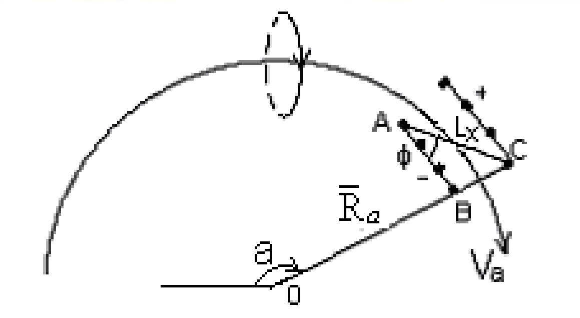

Figure 3.2 electrically neutral elementary particles within charged particles in an electric field force diagram

β→1、K_r→0 above formula established conditions, field gravitational slightly larger than the magnetic field repulsion, just plays to overcome the electric dipole rotation movement periodic energy exchange between the centrifugal force generated by the charged Particle role.

Electrically neutral elementary particle composed by the n pairs of the electric dipole between the electric and magnetic fields between each pair of electrical dipole or charged particles interaction force Figure 3.2 shows. By (2.1), (2.2), (3.6-1), (3.6-2), as long as we compare the electric force v_a direction interaction can. Positive load electric particle spacing disposed electric dipole spacing for the $2\Delta\overline{R}_\alpha$, the staggered L_x, the relationship with the other parameters:

$$\begin{cases} L_x = \sqrt{(2K_r\overline{R}_\alpha)^2 + \left[2(n-1)\Delta\overline{R}_\alpha\right]^2} & (3.8\text{-}1) \\ \sin\phi = \dfrac{2K_r\overline{R}_\alpha}{L_x} & (3.8-2) \\ \cos\phi = \dfrac{2(n-1)\Delta\overline{R}_\alpha}{L_x} & (3.8-3) \end{cases}$$

By (2.1), (3.6-1), located either on the electrostatic force between the charged particles of charged particles with homosexual F_{ex1}, as F_{ex2} heterosexual the electrostatic force between the charged particles, when we calculate the points A andthat B, C between the electric field interaction, we have:

$$\begin{cases} F_{ex1} = \dfrac{e^2\left[1-\beta^2(1+K_r\cos\alpha)^2\right]}{4\pi\varepsilon_0\left[2(n-1)\Delta\overline{R}_\alpha\right]^2} \quad (\sin\phi = 0) & (3.9-1) \\ F_{ex2} = \dfrac{-e^2\left[1-\beta^2(1+K_r\cos\alpha)^2\right]\cos\phi}{4\pi\varepsilon_0 L_x^2\left[1-\beta^2(1+K_r\cos\alpha)^2\sin^2\phi\right]^{1.5}} & (3.9-2) \end{cases}$$

Simultaneous get:

$$\frac{F_{ex2}}{F_{ex1}} = \frac{-\left[2(n-1)\Delta\overline{R}_\alpha\right]^3}{\left\{(2K_r\overline{R}_\alpha)^2 + \left[2(n-1)\Delta\overline{R}_\alpha\right]^2 - \beta^2(1+K_r\cos\alpha)^2(2K_r\overline{R}_\alpha)^2\right\}^{1.5}} \qquad (3.10)$$

Clearly, the equilibrium conditions of the two directions of the electric force is beta $\beta\to1$、$K_r\to0$.

If we (3.6-1) (3.9-1), two formulas were compared and set $L_x = 10\Delta\overline{R}_\alpha$, n = 2, then: $\dfrac{F_{e\pm}}{F_{ex1}} \approx \dfrac{(n-1)^2}{25\left(1-\beta^2\right)^{1.5}}$.

Because $\beta=1-10^{-9}$、n=2, substituting too: $F_{e\pm} / F_{ex1}=4.4721\times10^{11}$. By the preVious result: electricity, electric dipole magnetic field interaction force between the electric dipole 4.4721×10^{11} times! So, when the electric and magnetic fields within the electric dipole interaction force $F_{e\pm}$ $F_{b\pm}$ as a super force, the electric and magnetic field force between the electric dipole F_{ex1} F_{bx1} naturally become weak interaction force. This proves the strong and weak interactions are actually electrical, magnetic interactions.

3.2.2 Electrically neutral elementary particle surface interaction strength calculations

Provided an electrically neutral elementary particle has n pairs of electric dipole, electric dipoles along the radius of rotation of the vertical fluctuations in the direction of movement of the n $K_r\overline{R}_\alpha$ as elementary particles surface radius. For calculation purposes, we analyzed the calculation of fluctuations, the outside of the spin-orbit a=π at the electric dipole rotation orbit, the outer surface of the electric and magnetic field force size, you can understand the whole picture. Its surface force refers to the orbit of rotation of the electric dipoles within the elementary particles, the outer surface of the integrated power, the difference of magnetic force $\triangle F_e$,$\triangle F_b$. By (2.1), (2.2),$\triangle F_e$, $\triangle F_b$:

$$\begin{cases} \Delta F_e = \dfrac{(ne)^2}{4\pi\varepsilon_0(2K_r\overline{R}_\alpha)^2}\left[\dfrac{1}{\sqrt{1-\beta^2(1+K_r)^2}} - \dfrac{1}{\sqrt{1-\beta^2(1-K_r)^2}}\right] & (3.11-1) \\ \Delta F_b = \dfrac{(ne)^2\beta^2(1-K_r^2)}{4\pi\varepsilon_0(2K_r\overline{R}_\alpha)^2}\left[\dfrac{1}{\sqrt{1-\beta^2(1+K_r)^2}} - \dfrac{1}{\sqrt{1-\beta^2(1-K_r)^2}}\right] & (3.11-2) \end{cases}$$

Simultaneous equations (3.11) have:

$$\Delta F_e - \Delta F_b = \frac{(ne)^2}{4\pi\varepsilon_0(2K_r\overline{R}_\alpha)^2}\left[\frac{1-\beta^2+K_r^2\beta^2}{\sqrt{1-\beta^2(1+K_r)^2}} - \frac{1-\beta^2+K_r^2\beta^2}{\sqrt{1-\beta^2(1-K_r)^2}}\right] \quad (3.12)$$

The Table 2.2, of N_a=1、n=1、$\beta=1-10^{-9}$、$K_r=1302.6\times10^{-13}$ value (3.1) into (3.12), we have:

$$\Delta F_e - \Delta F_b + F_{n\alpha} = \frac{e^2}{4\pi\varepsilon_0\overline{R}_\alpha^2}\left[8.675331\times10^{13}n^2 + \beta\left(\frac{2h\varepsilon_0 c}{e^2}\right)\right] >> 0 \quad (3.13)$$

Which, together electric force outward from elementary particle fluctuations inside track, or magnetic forces inward, comprehensive electrical, magnetic force point fluctuations outside the orbit. The centrifugal force F_{na} electricity, magnetic force $\triangle F_e$, $\triangle F_b$ compared clearly insignificant. Similarly, if let a = 0, the integrated electricity, magnetic forces also point to the fluctuations outside the orbit, but point to the inside of the spin-orbit. Therefore, the entire elementary particle surface along fluctuations, spin-orbit motion, integrated electric and magnetic field force in the spin-orbit direction of changes. By (3.4), we know that the entire the elementary particle surface electric and magnetic field force is much smaller than the charged particles outside of electric and magnetic forces. The overall synthesis characteristics of electric and magnetic forces capable of elementary particles firmly constrained fluctuations, spin-orbit. The chapter concludes with a comparative demonstration will feature in Table 3.1.

3.3 Charged elementary particles outside the interaction strength

3.3.1 Charged elementary particle interaction strength within Computing

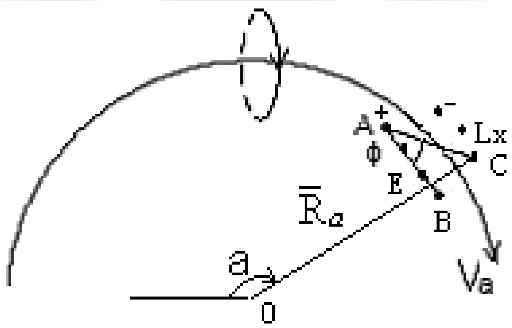

Figure 3.3 charged basic internal charged particles electric field force diagram

By figure 3.3 shows, set in the elementary particles by n of electric dipole and a positive charged particles. When we calculated at point A and point B, and C of the electric force between charged particles F_{ex1}, F_{ex2}, make AC = L_x, the

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interval between two of electric dipole in2 $\Delta\overline{R}_\alpha$, because:

Reference (3.6-1), (3.9) equations have to:

$$\begin{cases} EC = 2K_r\overline{R}_\alpha & (3.14-1) \\ AE = (2n-1)\Delta\overline{R}_\alpha & (3.14-2) \\ L_x = \sqrt{(2K_r\overline{R}_\alpha)^2 + \left[(2n-1)\Delta\overline{R}_\alpha\right]^2} & (3.14-3) \end{cases}$$

$$\begin{cases} F_{ex1} = \dfrac{e^2\left[1-\beta^2(1+K_r\cos\alpha)^2\right]}{4\pi\varepsilon_0\left[2n\Delta\overline{R}_\alpha\right]^2} \quad (\sin\phi = 0) & (3.15-1) \\ F_{ex2} = \dfrac{-e^2\left[1-\beta^2(1+K_r\cos\alpha)^2\right]\cos\phi}{4\pi\varepsilon_0 L_x^2\left[1-\beta^2(1+K_r\cos\alpha)^2\sin^2\phi\right]^{1.5}} & (3.15-2) \end{cases}$$

Will make F_{ex1}/F_{ex2}=-1, equations (3.14) into (3.15) equations were checking:

$$\Delta\overline{R}_\alpha = K_r\overline{R}_\alpha\sqrt{\frac{1-\beta^2(1+K_r\cos\alpha)^2}{\left[n^2(n-0.5)\right]^{2/3} - (n-0.5)^2}} \qquad (3.16)$$

Make N_a = 3, into (2.11), to: β = 0.9989472725. For n = 3, table 2.1 to: K_r = 10.5879 x 10^{-5}. Generation into (3.16), to: $\Delta\overline{R}_\alpha / K_r\overline{R}_\alpha = 0.0366927$. That stagger the interval between the electric dipole is far less than the inside of the electric dipole is, load power distance between particles.

By the same token, if make n = 1, look-up table 2.2: K_r = 25.224 x 10^{-5}, substituting (3.16), type: $\Delta\overline{R}_\alpha / K_r\overline{R}_\alpha = 0.082844$, explain with electric dipole number n decrease, interval increases.

3.3.2 Charged particle surface force strength calculation

Set in the elementary particles by n of electric dipole and a surplus of charged particles, because of the excess unpaired distribution of charged particles is always in the inside of the spin track, and $\Delta\overline{R}_\alpha << K_r\overline{R}_\alpha$, we can carry on the simplified calculation. In a=π, the inside of the n+1 charged particles on the lateral n a charged particle synthesis of electric field attractive processed ΔF_e maintenance, integrated magnetic repelling force processed ΔF_b, respectively:

$$\begin{cases} \Delta F_e = \dfrac{n(n+1)e^2}{4\pi\varepsilon_0(2K_r\overline{R}_\alpha)^2}\left[\dfrac{1}{\sqrt{1-\beta^2(1+K_r)^2}} - \dfrac{1}{\sqrt{1-\beta^2(1-K_r)^2}}\right] & (3.17-1) \\ \Delta F_b = \dfrac{n(n+1)e^2\beta^2(1-K_r^2)}{4\pi\varepsilon_0(2K_r\overline{R}_\alpha)^2}\left[\dfrac{1}{\sqrt{1-\beta^2(1+K_r)^2}} - \dfrac{1}{\sqrt{1-\beta^2(1-K_r)^2}}\right] & (3.17-2) \end{cases}$$

Movement of elementary particles along the track motion of centrifugal force F_{na} is:

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$$F_{n\alpha}=\frac{mv_\alpha^2}{\overline{R}_\alpha}=\frac{h\beta c(\sqrt{N_\alpha}+\cos\alpha)^2}{2\pi\overline{R}_\alpha^2(N_\alpha-1)} \tag{3.18}$$

The equations (3.17) and (3.18) - united stand:

$$\Delta F_e-\Delta F_b+F_{n\alpha}=$$
$$\frac{e^2}{4\pi\varepsilon_0\overline{R}_\alpha^2}\left\{\begin{array}{l}\frac{n(n+1)(1-\beta^2+K_r^2\beta^2)}{(2K_r)^2}\left[\frac{1}{\sqrt{1-\beta^2(1+K_r)^2}}-\frac{1}{\sqrt{1-\beta^2(1-K_r)^2}}\right]\\+\left(\frac{2h\varepsilon_0 c}{e^2}\right)\beta\frac{(\sqrt{N_\alpha}+\cos\alpha)^2}{N_\alpha-1}\end{array}\right\} \tag{3.19}$$

Make n = 2, N_a=3、β=0.9989472725、a=π, from table 2.1 to: K_r = 1.48881 x 10^{-4}, generation into (3.19), to:

$$\Delta F_e-\Delta F_b+F_{n\alpha}=\frac{e^2}{4\pi\varepsilon_0\overline{R}_\alpha^2}\left[\begin{array}{l}4.4389849\times10^5\\+0.2679492\beta\left(\frac{2h\varepsilon_0 c}{e^2}\right)\end{array}\right]>>0 \tag{3.20}$$

With equations (3.11), (3.12) and (3.13) - similar to charged elementary particles comprehensive electric and magnetic field strength in a=0、π is pointing in the direction of wave rail lateral, but strength is much smaller than neutral particles. Also change in the direction of the resultant force along the spin track, also is far less than that of (3.4) - calculation of charged particles inside and outside comprehensive electric and magnetic field strength. The whole electric and magnetic field force synthesis characteristics can also be charged elementary particles firmly constraints in the fluctuation, the spin track.

3.4 The basic particles in internal wave direction other position and spin direction Orbit inner side and outside of the interaction force strength calculation

3.4.1 Elementary particle internal interactions in the wave direction other position strength calculation

Set a neutral elementary particles composed of n to the electric dipole. According to (3.1), each pair of electric dipole along the wave produced by the orbital motions centrifugal force F_{na} is:

$$F_{n\alpha}=\frac{mv_\alpha^2}{n\overline{R}_\alpha}=\frac{h\beta c}{2\pi n\overline{R}_\alpha^2} \tag{3.21}$$

By table 2.2, $K_r < 10^{-8}$ and (3.4) results to: $1.4991\times10^{-13}\geq K_{r\bullet}\geq 8.0\times10^{-15}$, Because $K_r\cos a\to0$, $K_{r\bullet}\cos a\to0$. We can put each pair of electric dipole in positive and load fluctuation rate charged particles are v_a, has nothing to do with position in wave a. Each charged particles along the orbit radius fluctuation $\overline{R}_\alpha$ Aradial are divided into inner and outside two hemispheres, by (2.7) equations: $v_{\alpha1}=\beta(1+K_{r\bullet})c$, $v_{\alpha2}=\beta(1-K_{r\bullet})c$ is still poor speed, leading to each charged particles, and the lateral formed in the wave motion of electric and magnetic field force intensity difference. By (3.2) ~ (3.4) and (3.11) equations, n of electric dipole in 2n a charged particle inside and outside comprehensive electric and magnetic field force $\Delta F_{eb\bullet}$ processed for:

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$$\Delta F_{eb\bullet}=\frac{2n(0.5e)^2\left[1-\beta^2(1-K_{r\bullet}^2)\right]}{4\pi\varepsilon_0(K_{r\bullet}\overline{R}_\alpha)^2}\left[\frac{1}{\sqrt{1-\beta^2(1+K_{r\bullet})^2}}-\frac{1}{\sqrt{1-\beta^2(1-K_{r\bullet})^2}}\right] \quad (3.22)$$

Will (1.2 1) into (3.21), to β=1-10^{-9}, $\Delta F_{eb\bullet}-F_{na}>>0$, simultaneous (3.21) and (3.22), to:

$$\frac{e^2}{4\pi\varepsilon_0\overline{R}_\alpha^2}\left\{\frac{2n\left[1-\beta^2(1-K_{r\bullet}^2)\right]}{4K_{r\bullet}^2}\left[\begin{array}{c}\frac{1}{\sqrt{1-\beta^2(1+K_{r\bullet})^2}}\\ -\frac{1}{\sqrt{1-\beta^2(1-K_{r\bullet})^2}}\end{array}\right]-\beta\left(\frac{2h\varepsilon_0c}{ne^2}\right)\right\}>>0 \quad (3.23)$$

The conditions of (3.23) - is $1/\beta-1>K_{r\bullet}\geq 8.0\times10^{-15}$. Will $K_{r\bullet}=8.0\times10^{-15}$ generations into (3.23), for n=1, a: processed:$\Delta F_{eb\bullet}/F_{na}>>1$, the results are shown in table 3.1. These results show that neutral elementary particles within each charged particles comprehensive electric and magnetic field force direction along the R_a to fluctuations in the inside of the track, is a multiple centrifugal force in the direction of the wave astronomy.

Similarly, the charged particle, because most of the energy is reflected on the remaining charged particles, so:

$$F_{n\alpha}=\frac{mv_\alpha^2}{\overline{R}_\alpha} \quad (3.24)$$

$$\Delta F_{eb\bullet}=\frac{(2n+1)(0.5e)^2\left[1-\beta^2(1-K_{r\bullet}^2)\right]}{4\pi\varepsilon_0(K_{r\bullet}\overline{R}_\alpha)^2}\left[\frac{1}{\sqrt{1-\beta^2(1+K_{r\bullet})^2}}-\frac{1}{\sqrt{1-\beta^2(1-K_{r\bullet})^2}}\right] \quad (3.25)$$

Simultaneous (3.24) and (3.25), to $\Delta F_{eb\bullet}-F_{na}>>0$, to:

$$\frac{e^2}{4\pi\varepsilon_0\overline{R}_\alpha^2}\left\{\frac{(2n+1)\left[1-\beta^2(1-K_{r\bullet}^2)\right]}{4K_{r\bullet}^2}\left[\begin{array}{c}\frac{1}{\sqrt{1-\beta^2(1+K_{r\bullet})^2}}\\ -\frac{1}{\sqrt{1-\beta^2(1-K_{r\bullet})^2}}\end{array}\right]-\beta\left(\frac{2h\varepsilon_0c}{e^2}\right)\right\}>>0 \quad (3.26)$$

Make β=0.9987108301、（$N_a=\infty$）、n=2、$K_{r\bullet}=8.0\times10^{-15}$, into(3.26), to:

$$\frac{e^2}{4\pi\varepsilon_0\overline{R}_\alpha^2}\left[3.078125\times10^{15}-\beta\left(\frac{2h\varepsilon_0c}{e^2}\right)\right]>>0 \quad (3.27)$$

Make β＝1-10^{-9}、n＝2、$K_{r\bullet}=8.0\times10^{-15}$, and into（3.26）to:

$$\frac{e^2}{4\pi\varepsilon_0\overline{R}_\alpha^2}\left[3.493835\times10^{18}-\beta\left(\frac{2h\varepsilon_0c}{e^2}\right)\right]>>0 \quad (3.28)$$

3.4.2 Elementary particle movement of internal and external spin track Motion the e and h field force strength calculation results

To charged particles inside and outside surface and the basic particle surface comprehensive electric and magnetic field, the results shown in table 3.1. To see that all the elementary particles, charged particles, only fluctuation, spin, rotation speed is $\vec{v} \geq c$ to stable; Elementary particles within each charged particles along the fluctuation, the movement of the spin track, inside and outside the two hemispheres of electric and magnetic field force $\Delta F_{eb\bullet}$ processed Feb ▪ always pointing in the direction of wave orbital medial, size is fundamental particles along the fluctuation track movement form centrifugal F_{na} astronomy multiples; And far outweigh its fluctuation track along the surface of the whole elementary particles movement form comprehensive electric and magnetic field strength of ΔF_{eb}, (because $K_r >> K_{r\bullet}$); The latter always pointing in the direction of wave rail lateral; So, the entire elementary particles can be firmly constraints in the fluctuation, the spin track.

Charged particles, the basic particle surface comprehensive electric and magnetic field

Force strength comparison table 3.1

Particle category	v_a	K_r $K_{r\bullet}$	$\Delta F_{eb(\bullet)}$ / F_{na}	Calculation formula
Charged particles	$(1-10^{-9})$ c	$K_{r\bullet} = 8.0\times10^{-15}$	5.0991×10^{15}	(3.4)
Electrically neutral elementary particles	$(1-10^{-9})$ c	$K_r=1.306\times10^{-10}$ $K_{r\bullet} = 8.0\times10^{-15}$	6.3307×10^{11} 1.0198×10^{16}	(3.13) (3.23)
Charged elementary particles n =2	0.998947273c 0.998710830c $(1-10^{-9})$ c	$K_r=1.4888\times10^{-4}$ $K_{r\bullet} = 8.0\times10^{-15}$ $K_{r\bullet} = 8.0\times10^{-15}$	1.20996×10^{4} 2.2504×10^{13} 2.5496×10^{16}	(3.20) (3.27) (3.28)

So, each charged particle far outweigh the elementary particles on the surface of the comprehensive electric and magnetic field strength can be unlimited to wave orbital medial shrinkage? The answer is: not! First, different elementary particles fluctuation orbit radius R_a lpha represent different energy, should be the elementary particles inside the inherent characteristics. Inward contraction means that energy increases self into infinite, violation of the law of conservation of energy. Secondly, all of the charged particles, the fluctuation, spin, rotation orbit, can stable existence is the precondition of its speed is $\vec{v} \geq c$. We cut the ball eVery charged particles entity into 2n, see figure 3.4.

By (2.1), (2.2), too: when speed is $\vec{v} = c$, integrated electric and magnetic field interactions only occurs in the vertical direction the speed, the lateral plane of two small pieces, each other between adjacent plane electricity, magnetic force is zero. So, by (3.4), each charged particles internal comprehensive electric and magnetic field force as $\Delta F_{eb\bullet}$, as follows:

$$\Delta F_{eb\bullet} = \frac{e^2\left[1-\beta^2(1-K_{r\bullet}^2)\right]}{4\pi\varepsilon_0 \overline{R}_\alpha^2 (4K_{r\bullet}^2 \times 4n)} \times \left[\frac{1}{\sqrt{1-\beta^2(1+K_{r\bullet})^2}} - \frac{1}{\sqrt{1-\beta^2(1-K_{r\bullet})^2}}\right] \tag{3.29}$$

Theoretically, slice the n value size there is no limit, but it can reflect the basic particle of the charged particles in the different combination structure, can normal environment, the orbit of wave motion position of deformation degree of stretch. It must adjust instantly, always meet in table 3.1 $\Delta F_{eb\bullet} \geq \Delta F_{eb}$, elementary particles can be properly, firmly constraints in the fluctuation, the spin track. Provide the self adjusting, the tensile deformation and from can state the conditions of the environment around other charged particles of the opposite sex, charged particles between electric field. This is for elementary particles, nuclei, atomic units must be positive and load all the micro particle charged particles, with positive and negative, the basic particle of symbiosis. (See chapter 7 nucleus structure model and the nuclear force forming principle).

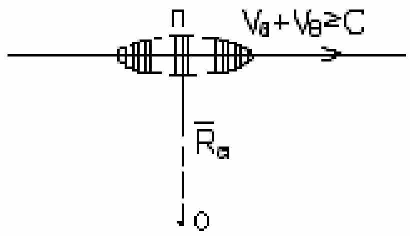

Figure 3.4 charged particles inside the subdivision schemes

Photons, neutrinos only consists of a pair of electric dipole, can no longer separation, and the same, rotate speed, track is cylindrical helical, and so is stable. Electronic more than only a charged particle, also can no longer separation, so also is stable. By (3.16), charged elementary particles along the fluctuation track movement direction, internal each distance between charged particles with the number of electric dipole n laid great decreases and the interval between big and small beside. The electric and magnetic field inside the natural cause interactions imbalance, split decays either. To $\pi^{\pm}$ can only be protons, within the nucleus. The reason for this is internal only 2 of electric dipole and charged particles. Each charged particles interval symmetrical on both sides are equal, just show the internal comprehensive electric and magnetic field force between the charged particles is just balance, and a corresponding stable around the external "state" of the environment, both protons, nuclei formed special structure within the nuclear force, see chapter 6 and nuclear physics. On the proton core, composed of 6 to the electric dipole, for 6 to electric dipole just in same fluctuations orbital plane synchronous movement, spacing stagger 60 DHS, charged particles positive and negative switch position, this special structure to make proton has a special stability characteristics of the core. In addition to the above five kinds of particles can be concluded that: all other elementary particles, because of the electromagnetic force between internal charged particles are equilibrium state, so is not stable.

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4 Elementary particle, strong and weak electricity,magnetic interaction unity

4.1 The uncertainty relation

4.1.1 Unity the principle of set upon the basis

Existing statistical theory of quantum mechanics theory of elementary particles and conditions within the nucleus, strong and weak electricity, and magnetic interaction is the characteristic length, whether to have produced neutrinos, role to distinguish the distance from the surface phenomenon. Has been proved in front of the book, the elementary particles energy origin is electromagnetic field energy.Internal super function and division decay is the weak interaction of charged particles and electric dipole along the fluctuation track movement of electric and magnetic field force acting between themselves and each other. So, we have eVery reason to further corollary: elementary particles inside the super function, along with the weak interaction of neutrino formation, interaction with electric and magnetic field is the same; Is the basic of particles with different energy fluctuation, spin quantization in the process of transition between the stationary orbit, n of electric dipole (charged particles and a surplus) collection divided, electricity, magnetic energy release of radiation process.

As long as we can from this book elementary particles quantization stationary vertical double elliptical orbit model, using classical electrodynamics and energy relativity principle, from an average of energy and momentum conservation, momentum, charge number, baryonic number are the basic laws of physics, according to the basic particles along the orbit of the distance, speed, time, the releVance of the derived four functions are the basic particles, split the decay product changes life, energy and the motion state equation, is strict prove the above argument.

4.1.2 The uncertainty relation

According to the basic particles moving along the orbit model, from all the elementary particles sprayed out of a particle accelerator, shall have volatility, spin, and went into the quantization of cylindrical helical compound movement track. Precession speed AAv_j and spin speed v_θ, mutually perpendicular direction, movement track as shown in figure 1.2 and figure 4.1.

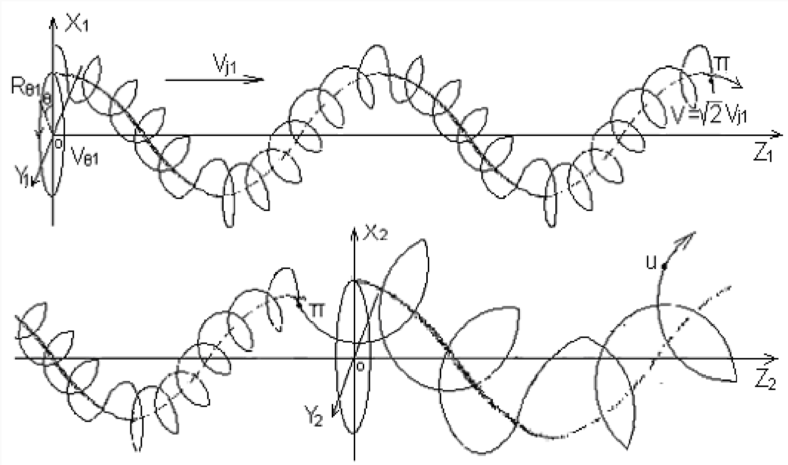

Figure 4.1 elementary particles along the fluctuation, spin, move into the compound orbit in split, decay principle diagram

Chart description: spray type basic particle track is not from the point source to the collision between a straight line, but a piano, the thickness of the cylinder to the diameter of the fluctuation track $2R_a$, see figure 1.2 and figure 4.2, which indicated that the micro particle wave particle duality nature. Hybrid orbital motion equations (1.2) and (2.17) equation should be extended to:

$$\begin{cases} R_\alpha = \dfrac{h}{2\pi m v_\alpha} & (4.1-1) \\ R_\theta = \dfrac{h}{2\pi m v_\theta} & (4.1-2) \\ R_\theta = R_{\theta 0} - R_\alpha \cos\alpha & (4.1-3) \\ \alpha = N_\alpha \theta & (4.1-4) \\ \int_0^{2\pi} R_\theta d\theta = \sqrt{N_\alpha}\int_0^{2\pi} R_\alpha d\alpha & (4.1-5) \\ v_j = v_\theta & (4.1-6) \\ Z = v_j t & (4.1-7) \end{cases}$$

Front has been proved: static fundamental particles speed fluctuation $v_a \to c$, along the fluctuation, the spin quantization stationary vertical double.

Moving in elliptical orbit, because of the fluctuation, the speed of the spin direction, and to follow the law of conservation of momentum and the average momentum, energy, will not happens electromagnetic energy radiation. So, only in the injection type fluctuations, spin, the motion of the complex motion in orbit, the chapter 3 of the analysis shows that the fluctuation, spin, precession direction, a=π/2，3π/2, electric dipole vibration coefficient K_r value is uncertain, elementary particle energy only in a=π/2，3π/2, to discontinuous changes, and appeared precession direction of electromagnetic energy radiation. (of course, also can produce ionization collisions in environmental media, such as energy loss). Such as electromagnetic wave radiation of energy loss, the fluctuations of elementary particle track N_a quantum number increasing, spin, precession direction speed v_θ、v_j decreases gradually, the basic particle energy will gradually reduced. When the N_a、v_θ and v_j after changes to a certain degree, the basic particle decay; Split the decay product number of the quantum fluctuations of N_a decrescent, v_θ、v_j, another the next leVel of electromagnetic radiation and energy loss and split the decay process; Until are internal structure, energy, motion to adapt to the environment.

In $\pi^\pm$, for example, by the energy principle of relativity, the injection hybrid orbital motion of the moving average quality $\overline{m}_\pi$ and static average quality $\overline{m}_{\pi 0}$ for the relationship between:

$$\overline{m}_\pi = \frac{\overline{m}_{\pi 0}}{\sqrt{1-\beta^2 / N_\alpha}} \qquad (4.2)$$

When it is in moving into electromagnetic waves or other forms of energy radiation loss occurs, the quantum fluctuations interest and interest of N_{ai} and N_{ai+1} track transition motion when the energy difference between $\Delta\overline{m}_{\pi i} c^2$ for:

$$\Delta m_{\pi i} c^2 = m_{\pi 0} c^2 \left(\frac{1}{\sqrt{1-\beta_i^2 / N_{\alpha i}}} - \frac{1}{\sqrt{1-\beta_{i+1}^2 / N_{\alpha i+1}}} \right) \qquad (4.3)$$

By classical electrodynamics principle, fundamental particles in the moving direction for speed v_j changes lead to electromagnetic field energy radiation power P_{ell} for:

$$P_{e\parallel} = \frac{e^2 \left|\dot{v}_j\right|^2}{6\pi\varepsilon_0 c^3 \left[1-\left(v_j/c\right)^2\right]^3} \qquad (4.4)$$

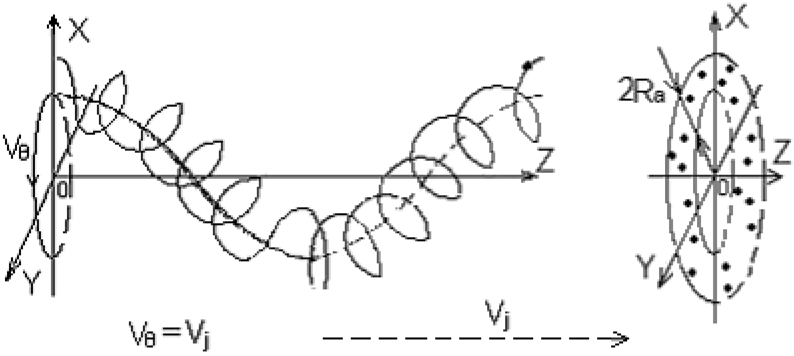

Figure 4.2 basic particle formation wave particle duality principle diagrams

Fundamental particles along the spin, the motion orbit of each cycle for the $T_{\theta i}$ by (1.4-2) type:

$$T_{\theta i} = \frac{L_{\theta i}}{v_{\theta i}} = \frac{2\pi R_{\theta i 0} N_{\alpha i}}{\beta_i c\sqrt{N_{\alpha i}-1}} = \frac{hN_{\alpha i}}{m_{\pi 0}(\beta_i c)^2}\sqrt{1-\frac{\beta_i^2}{N_{\alpha i}}} \qquad (4.5)$$

Its average acceleration $\dot{v}_j$ should be the average rate of change of the spin precession direction speed v_j cycle, too:

$$\dot{v}_j = \frac{c\left(\frac{\beta_i}{\sqrt{N_{\alpha i}}} - \frac{\beta_{i+1}}{\sqrt{N_{\alpha i+1}}}\right)}{\frac{1}{2}\left(T_{\theta i} + T_{\theta i+1}\right)} \qquad (4.6)$$

By (1.6), (4.2), we have:

$$R_{\theta 0i} = \frac{h\sqrt{N_{\alpha i}-1}}{2\pi m_{\pi 0}\beta_i c}\sqrt{1-\frac{\beta_i^2}{N_{\alpha i}}} \qquad (4.7)$$

Similarly, β_i value is calculated by the formula (2.11) can be simplified as:

$$\frac{\beta_i}{1-\beta_i^2} = 2\sqrt{2}\left(\frac{2h\varepsilon_0 c}{e^2}\right)\frac{\sqrt{N_{\alpha i}}}{\sqrt{N_{\alpha i}-1}} \qquad (4.8)$$

To $\frac{2h\varepsilon_0 c}{e^2} = \frac{1}{a_c}$, generation into (4.8), to:

$$\beta_i = \frac{\sqrt{32N_{\alpha i} + a_c^2(N_{\alpha i}-1)} - a_c\sqrt{N_{\alpha i}-1}}{4\sqrt{2N_{\alpha i}}} \qquad (4.9)$$

A fundamental particles each spin, electromagnetic wave radiation energy into dynamic cycle for $W_{e\|i}$, by (4.4) ~ (4.9), to:

$$W_{e\|i} = \frac{1}{2} P_{e\|i} (T_{\theta i} + T_{\theta i+1})$$

$$= \frac{e^2 c \overline{m}_{\pi 0} \left(\frac{\beta_i}{\sqrt{N_{\alpha i}}} - \frac{\beta_{i+1}}{\sqrt{N_{\alpha i+1}}} \right)^2}{1.5\pi\varepsilon_0 h \left[\left(1 - \frac{\beta_i^2}{N_{\alpha i}}\right)^3 + \left(1 - \frac{\beta_{i+1}^2}{N_{\alpha i+1}}\right)^3 \right] \left(\frac{N_{\alpha i}}{\beta_i^2} \sqrt{1 - \frac{\beta_i^2}{N_{\alpha i}}} + \frac{N_{\alpha i+1}}{\beta_{i+1}^2} \sqrt{1 - \frac{\beta_{i+1}^2}{N_{\alpha i+1}}} \right)} \quad (4.10)$$

A K_{ti} for time coefficient, make $K_{ti}=\Delta\overline{m}_{\pi i} c^2 / W_{e\|i}$. Because K_{ti} >> 1, jet type elementary particles should be N_{ai} and N_{ai+1} quantization stationary orbit passes between K_{ti} time step transition radiation, the energy of the oscillation will $\Delta\overline{m}_{\pi i} c^2$ all out, and then turn to the next leVel track; Or in N_{ai} and N_{ai+1} fluctuations between quantum number still exist K_{ti} the fluctuations of the transition of a mixed number quantum number; So, the life of the fundamental particles T should be:

$$T = \sum_{i=1}^{Nai} \frac{K_{ti}}{2} (T_{\theta i} + T_{\theta i+1}) \quad (4.11)$$

To (4.3) ~ (4.10) - integrated into (4.11), and the determination of the equation, too:

$$W_{e\|i} T = \frac{K_i h}{8} \quad (4.12)$$

The K_i value change with fluctuating interest quantum number N_{ai} calculation results shown in table 4.1.

The change of the calculation results show that K_i value only associated with N_{ai} value, actually has nothing to do with particle rest mass m_0 completely, that is to say: (4.12) - the basic particles of any quality calculation results are the same. This chapter main consideration particle into the moving direction of electromagnetic radiation energy, the particle collisions with medium, ionization, and other forms of energy loss is not consideration. Obviously, the latter's influence can be neglected. So, this chapter not only reVeals the uncertainty relation between forming principle, but also changes with fluctuations N_{ai} quantum number of accurate value.

By mathematical simulation results and comparison, we can use (4.13) - instead of table 4.1 the results:

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

The K_i value change with fluctuating interest quantum number N_{ai} the results table 4.1

N_{ai}	2	5	10	50
K_i	2.926064	1.536049	1.239385	1.044161
N_{ai}	100	500	1000	5000
K_i	1.021870	1.004341	1.002168	1.000433

To basic particles are electrically neutral, there are still changes periodically of the electric and magnetic field, and the same energy origin, follow energy relativity formula (4.2), so the same applies to the above analysis results, the difference only lies in β = 1-10^{-9} is constant.

4.2 Elementary particle life, split the decay product relates

To the law of conservation of energy, and momentum

4.2.1 Elementary particles split the decay product service life and the Law of conservation of energy, and momentum equation

Elementary particle energy originated from internal electric dipole magnetic energy oscillations. By (2.9) ~ (2.16) - the results indicated that electric dipole coefficient K_r value, mainly with the basic particle internal electric dipole log n; Electrically neutral basic particles and charged particles K_r value size difference is quite wide, and fluctuations quantum interest of N_{ai} and track the position of a also to have certain relations; In a=π/2、3π/2 position, all of the neutral or charged elementary particles, K_r values are uncertain value; At this time, the internal each charged particles between the electric and magnetic field force is perpendicular to the wave, the spin track radius; the resultant force tends to zero. So in elementary particles under the action of centrifugal force, the fluctuation track the movement of the position of the decay of split occurred only in a=π/2、3π/2. Only in this way, particles and matrix division within the plasma particles decay coefficient of all the electric dipole of K_r can get; And matrix and the plasma particles in a=π/2 location or near the moment when the sum of energy and momentum is still should follow the law of conservation of energy, momentum and energy gradually reduce spontaneous split the decay law of.

Movement of elementary particles along the orbital motion of the average quality of $\overline{m}_i$ and instant quality m_i relationship, by (1.2-1), (1.3-1), (1.5) and (2.8) equations have to:

$$m_i = \frac{\overline{m}_i\left(\sqrt{N_{\alpha i}} + \cos\alpha\right)}{\sqrt{N_{\alpha i} - 1}} \qquad (4.14)$$

Still in π$^+$→u$^+$+υ (neutrino) hormone called tau was decay process, for example, in the direction of the wave motion, by (4.2), (4.14), we have:

$$\begin{cases} \dfrac{\overline{m}_{\pi 0}\left(\sqrt{N_{\alpha\pi}} + \cos\alpha\right)}{\sqrt{\left(1-\beta_\pi^2/N_{\alpha\pi}\right)\left(N_{\alpha\pi}-1\right)}} = \dfrac{\overline{m}_{u0}\left(\sqrt{N_{\alpha u}} + \cos\alpha\right)}{\sqrt{\left(1-\beta_u^2/N_{\alpha u}\right)\left(N_{\alpha u}-1\right)}} + m_\nu & (4.15-1) \\ \dfrac{\overline{m}_{\pi 0}\left(\sqrt{N_{\alpha\pi}} + \cos\alpha\right)\beta_\pi c}{\sqrt{\left(1-\beta_\pi^2/N_{\alpha\pi}\right)\left(N_{\alpha\pi}-1\right)}} = \dfrac{\overline{m}_{u0}\left(\sqrt{N_{\alpha u}} + \cos\alpha\right)\beta_u c}{\sqrt{\left(1-\beta_u^2/N_{\alpha u}\right)\left(N_{\alpha u}-1\right)}} - m_\nu c & (4.15-2) \end{cases}$$

Because charged elementary particles wave speed $v_{\theta i}$ theta I decreases with increasing number of quantum fluctuations N_{ai}, so split decay, quality very small neutrino wave speed direction should be contrary to maternal particles, the jet recoil role to improve the quality of the plasma particles u$^+$ the sons of light wave velocity. Interactions by chapter 3 basic particle internal structure and analysis can be seen: elementary particles stability condition is various, load interaction of charged particles, electricity, magnetic repelling force, attraction vector and must be far outweigh the centrifugal force. Split decay in a=π/2、(3π/2), by the charged particle interactions between K_r、$\Delta\overline{R}_\alpha$ change caused by imbalance. By equations (4.15):

$$m_\nu = \frac{\overline{m}_{\pi 0}\left(\sqrt{N_{\alpha\pi}} + \cos\alpha\right)}{\sqrt{\left(1-\beta_\pi^2/N_{\alpha\pi}\right)\left(N_{\alpha\pi}-1\right)}}\left(\frac{\beta_u - \beta_\pi}{1+\beta_u}\right) \qquad (4.16)$$

4.2.2 Parameters of the simulation results

If parent π^+ mesons, plasma u^+ light and electrical dipole moment coefficient in hormone called neutrinos $m_υ$ tau were K_{ri} value, N_{ai}、$\Delta\overline{R}_{\alpha i}$、$\beta_i$ parameters change, is in the Angle of wave $Aa=90^o\sim91^o$ within the interval of the moment, by (4.14), (4.15-1), (4.16), the moment of matrix and plasma particles energy changes with fluctuations N_{ai} quantum number shown in table 4.2. From visible: when N_{au} = 4, π^+ split muon decay into u^+ light quantum number changes when fluctuation range of corresponding: $1242 \geq N_{a\pi} \geq 110$. The $N_{a\pi}$ value generation into (4.10), (4.13), to π^+ violation of life range for: $4.579289\times10^{-8} \geq T \geq 2.832698\times10^{-12}$ (seconds).

Similarly, a range and $N_{a\pi}$、T, the relationship between see table 4.3.

therefore, the life of the fundamental particles directly with particles in internal fluctuation track Angle parameter $a=90^o\sim91^o$ interval change of division of speed, although this chapter only to a few a Angle value interval type calculation comparison, readers can see the change trend of calculation and the experimental results perfectly.

The π^+ mesons in $a=90^o\sim91^o$ interval split decay instantly energy changes the results table 4.2

$N_{\alpha\pi}$	$(m_\pi - m_υ)\times10^{-28}$ Kg	$N_{\alpha\mu}$	$m_\mu\times10^{-28}$ Kg
2	4.971994843~910636872		
3	3.730167878~ 692582141	2	3.763675139~3.717228697
4 5 6 7 8	3.316109467~3.287172421 3.109056233~3.084790194 2.984816239~2.963549677 2.901986125~2.882843494 2.842820036 ~ 2.82527882		
9	2.798444514 ~ 2.78216465	3	2.823842472~2.795389007
10 11 .. 50 .. 100 ..	2.763929647~ 2.74867598 2.736317391~2.721918619 .. 2.538513845 ~ 2.53224843 .. 2.512896999~2.508511389 ..		
110 111 112 .. 200 .. 300 .. 500 .. 1000 ..	2.510593818~2.506416136 2.510386532~2.506228054 2.51018298 ~ 2.506043444 .. 2.500281559~2.497196033 .. 2.496104525~2.493589412 .. 2.492772936~2.490827339 .. 2.490280078~2.488905709 ..	4	2.510468711~2.488561851

1242	2.489794933~2.488561947		
1243 1244 .. 2000.. 3000 .. 5000 .. 10000 ... ∞	2.48979332 ~ 2.488560831 2.48979171 ~ 2.488559718 .. 2.489035519~2.488064178 .. 2.488620942~2.487827978 .. 2.48828938 ~ 2.487675235 .. 2.488040767~2.487606544 .. 2.487792203~2.487792203	5 6 .. . .. ∞	2.353761653~2.335390653 2.259730608 ~ 2.24363022 .. .. .. 1.883551778~1.883551778
		note	Values are hormone called m_υ were by $N_{\alpha\mu} = 4$ in the results of calculation, and $N_{\alpha\mu}$ =2、3、……Compared to the error is negligible

The $\pi^{\pm}$ muon a value range and $N_{a\pi}$,T the relationship between the calculation result table 4.3

a value range	$N_{a\pi}$ Constituting range	Particle life range (seconds)
90º~90.5º	$187 \geq N_{a\pi} \geq 110$	$2.360281\times10^{-12} \geq T \geq 2.83270\times10^{-12}$
90º~90.75º	$307 \geq N_{a\pi} \geq 110$	$1.712236\times10^{-10} \geq T \geq 2.83270\times10^{-12}$
90º~90.95º	$734 \geq N_{a\pi} \geq 110$	$5.587989\times10^{-9} \geq T \geq 2.83270\times10^{-12}$
90º~90.99º	$1083 \geq N_{a\pi} \geq 110$	$2.647643\times10^{-8} \geq T \geq 2.83270\times10^{-12}$

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5 Microwave field characteristics of the transmission

Principle and parameter calculation

5.1 Microwave field characteristics and parameters are calculated

5.1.1 Microwave field characteristics

In the scientific community existing on the stability of the particle detection technology and knowledge IeVel, combined with this theoretical model, can be determined for stable particle in the universe detection task has been finished. So, eVenly distributed in space, the long-term stability of 2.73 K bold background of microwave radiation is caused by what? In protons, electrons and photons (electromagnetic waves), and choose between neutrinos, can only be electromagnetic waves.

Front has been proved that electromagnetic waves and photons are similar, when electromagnetic wave energy big light when it is photons, only consists of a pair of electric dipole, the fluctuation, the velocity is the speed of light c, orbit for cylindrical helical. When the electromagnetic wave energy small light when it becomes neutrino campaign to medium electromagnetic field shock wave. Because neutrinos are electrically neutral appearance elementary particles, low quality, and other particles, and atomic and molecular interaction is very weak, so have the special characteristics of penetration and diffusion. IneVitable in a similar gas molecular motion state eVenly spread in the vast space, the physical characteristics can be reference to analysis and calculation of gas molecules kinematics law of thermodynamics.

5.1. 2 Microwave field parameters are calculated

By molecular dynamics and the universe space 2.73 K in bold background microwave radiation characteristics of a microwave average energy for $\overline{W_\nu}$:

$$\overline{W_\nu} = 1.5KT \qquad \text{(K is the Boltzmann constant)} \qquad (5.1)$$

Will the AAT = 2.73 value generation into (5.1), to: $\overline{W_\nu}$ =5.65379451×10^{-23}J, By the energy theory of relativity to: $\overline{W_\nu} = \overline{m_\nu} c^2$, $\overline{m_\nu}$ =6.290694778×10^{-40}Kg, root mean square velocity is:

$$\bar{v} = \sqrt{\frac{3KT}{\overline{m_\nu}}} = \sqrt{2}c \qquad (5.\ 2)$$

Will to $\overline{m_\nu}$, T = 2.73 value generation into (5.2), to: $\bar{v} = \sqrt{2}c$, (directly (5.1), $\overline{W_\nu} = \overline{m_\nu} c^2$ generation into (5.2), the result is the same, and the temperature T.) That microwave fluctuations, rotate speed and photon exactly the same, all is the speed of light. Because of fluctuation, the velocity is constant c, so for microwave, the speed of gas molecules in different temperature distribution curve should be changed to microwave energy distribution curve. Thus, microwave and photon neutrinos are only one, only energy size difference.

Comparing the calculation results can be seen, the earth, the sun gravitational potential energy of hydrogen are far outweigh the kinetic energy, gravitational density distribution in $N_1 > N_2$, can preVent hydrogen molecules spread into space. To the gravitational potential energy is far less than the kinetic energy of the microwave. Is the sun that belongs to medium quality of stars in the universe, the microwave gravitational potential energy only kinetic energy of the 2.105 x 10^{-6} times!!!! Have no influence gravity density distribution changes with height. Moreover, at the speed of light wave and move into the neutrino has extremely strong penetration performance. Any substance composed of atoms, molecules container or planets, stars, in the presence of the neutrino is "transparent". So, unless the supermassive stars or black holes on the edge of the strong gravity field can't stop neutrino internal eVenly spread in the whole universe space and stars, forming the omnipresent neutrino field and space eVenly distributed in the 2.73 K bold microwave background radiation field.

Hydrogen molecules, microwave kinetic energy, gravitational potential energy and diffusion

Characteristics calculation results table 5.1

category	Kinetic energy （J）	Gravitational potential energy（J）	Gravity density distribution
Using the formula	$\overline{W}_d$ =1.5 KT	$\overline{W}_g$ =GM$_1$ $\overline{m}_2$ / R	$N_i = N_o e^{-mgH\,i/kT}$
microwave The earth The sun	5.65379451×10^{-23}	$3.944365837\times10^{-32}$ $1.189891687\times10^{-28}$	H_1=1m, H_2=50000m $N_1=N_o$, $N_2=N_o$ $N_1=N_o$, $N_2=N_o$
hydrogen The earth The sun	6.1715413×10^{-21} 1.29913015×10^{-19}	2.09866509×10^{-19} 6.33101556×10^{-16}	$N_1=N_o$, $N_2=0.671N_o$ $N_1=N_o$, $N_2=0.591N_o$
Note	Microwave temperature take 2.73 K, and the earth's surface hydrogen take 298 K, the surface of 6273 K. Assume that hydrogen without decomposition, ionization, temperature is constant.		

We by the surface of the earth, the sun for microwave, hydrogen molecular kinetic energy, and gravitational potential energy compared with gravity density change, analyze the characteristics of the microwave diffusion, the results shown in table 5.1.

5.2 Electromagnetic wave propagation theory and parameter calculation

We know from the fluctuation of the laws of physics: any energy wave must have a media of communication, early have not yet found that neutrinos, think is a transverse wave; electromagnetic wave is only transmitted in solid medium. Michelson use optical methods and measure to earth absolute movement of historical conditions, the scientific community media of propagation of electromagnetic waves will temporarily leave out also can understand.

Now, the book has proved the photon and neutrinos are composed of a pair of electric dipole, all at the speed of the wave, the cylindrical helical orbit; Photons in the electric dipole rotation angular velocity and angular velocity fluctuation is same, can show in the fluctuation, the motion characteristics of electromagnetic wave, see figure 2.4; Neutrino because of electric dipole in rotation angular velocity is the photon, hormone called N_u were $343323 \geq N_u \geq 5991$, hormone called N_u were (see chapter 2); The electromagnetic wave frequency is the same times, hormone called energy photon N_u were to show the variation characteristics of transient electromagnetic field in the scientific community is still not aware of; The omnipresent, uniform distribution of magnetic dipole of neutrino and early people think "etheric field" how similar!

By molecular dynamics and gas elastic medium wave propagation theory, the gas molecules adiabatic index r for:

$$r = C_p / C_v = 1 + 2/i \qquad (5.3)$$

(C_p type is the gas constant pressure heat capacity, C_v constant heat capacity, i for molecular translational and rotational degrees of freedom). Neutrinos, into the dynamic track can be regarded as piano, translational degree of freedom for 2, the rotation of the electric dipole of freedom is 2, generation of (5.3) in type, too: r = 1.5. According to the section of neutrino uniform diffusion distribution characteristics, can use ideal gas of the propagation of logitudinal wave velocity formula:

$$v_i = \sqrt{\frac{rRT}{u}} = c \qquad (5.4)$$

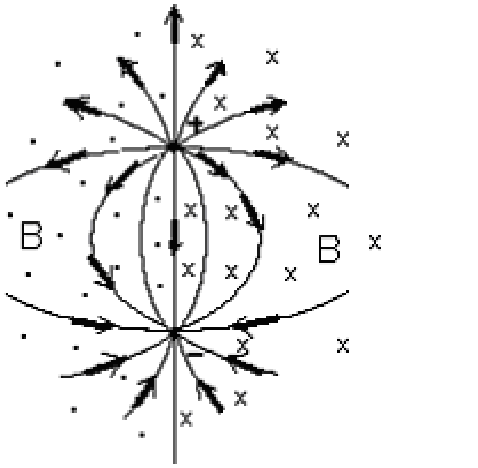

Figure 5.1 electromagnetic oscillation source formation of power line and the polarization of the neutrino electric dipole moment directional arrangement plan "→"on behalf of the electric dipole moment

Will r=1.5, R for the universal gas constant, T=2.73K, u=$\overline{m}_v$, $\overline{m}_v = \overline{W}_v / c^2$, N_A=3.746712×10^{-16}Kg/mol, and in (5.4), to: v_j=2.99792436×10^8m/s, it is the speed of light c! And has nothing to do with the temperature of the blackbody microwave radiation! Experiments have determination; maxwell's equations of electromagnetic field also have been proved theoretically, the electromagnetic wave is transmitted at the speed of light. But how can is a transverse wave, electromagnetic wave in gas state distribution of neutrino field spread? And neutrino field propagation speed of longitudinal wave and happens to be the speed of light, it can't be coincidence?

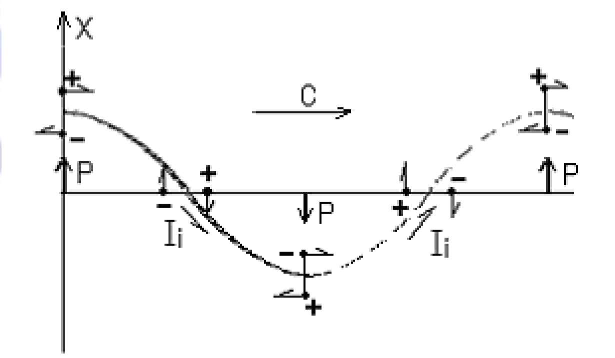

Figure 5.2 is polarized directional arrangement of neutrino internal displacement current Ii formation schematic diagram "→"on behalf of the electric dipole moment

Detailed analysis of the mechanism of electromagnetic wave propagation in the neutrino field, it is not hard to find, it with solid material principle of transverse shear deformation of the spread in different. When an electromagnetic vibration source, we can simplify it for magnetic dipole oscillation, in neutrino field generated by the electric and magnetic fields as shown in figure 5.1, in high frequency low magnetic field, the electric dipole part of the neutrino will be

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formed orientation polarization photons, namely a hormone called N_u were gamma $N_\gamma=1$. Be directional polarization of photons in the original direction of rail current shown in figure 5.2. Obviously, this is the polarization within the photonic form of electric dipole moment directional arrangement should be completely with electromagnetic vibration source of power lines coincide, see figure 5.1, but just the opposite directions.

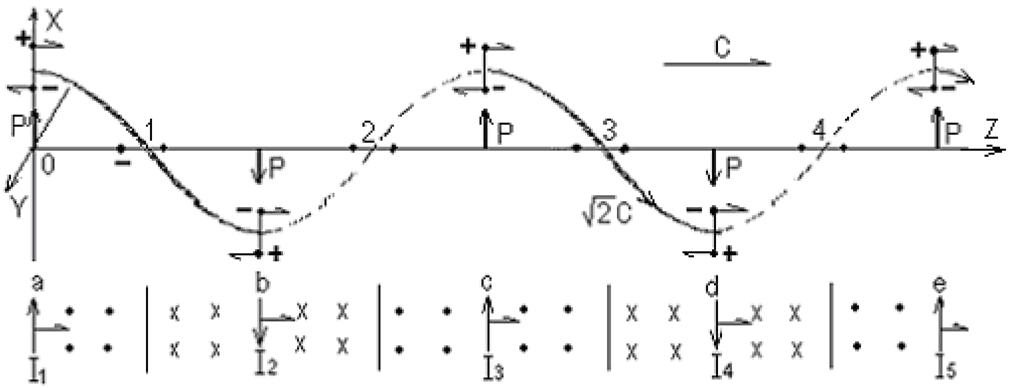

Figure 5.3 is the polarization direction of the photons in the exciting field of you moving force analysis of the current

By polarization direction of the photon along the original track movement direction displacement current generated, the exciting field forming principle is shown in figure 5.3. Since the displacement current in the exciting field under the action of the Lorentz magnetic force just pointing in the direction of photon precession.

As in the Z axis 0-1 the photon wave, into orbit, the displacement current I_1 produce a section of the magnetic field; When photons run to 1-2 rail section, the I_2 displacement current in section b magnetic force under the action of the precession v_j direction advance; I_3 displacement current then generate c section of the magnetic field; ...... Similar recurrence is forming the photon, movement, the transmission of electromagnetic wave.

To sum up, part of the neutrinos were polarized orientation to keep the original orbit fluctuation, the formation of the precession movement, photons, the electric dipole moment of the directional arrangement of McNamara power lines and displacement current in the equations, the displacement current itself and induction magnetic field. So, electric and magnetic field perpendicular oscillations are caused by the electromagnetic induction electromagnetic inherent apparent physical characteristics, partly by the polarization direction of neutrino photons to keep the original of the speed of light c and movement direction longitudinal also with the speed of light c precession is microscopic nature of electromagnetic wave propagation in the form of waves.

Photon wave particle duality of also can see from this chapter and in figure 2.4 the essence: when electromagnetic vibration source frequency f_1 less than $\overline{m}_\nu c^2$/h=8.532644262×10^{10}/s, electromagnetic energy is less than the average energy neutrino field of single neutrino $\overline{m}_\nu c^2$, it only has to polarization neutrino field medium all the neutrino, in neutrino field in the form of electromagnetic wave propagation in the medium; When frequency $f_2> f_1$, is enough to completely polarization single neutrinos, making it the fluctuation, and went into orbit of cylindrical spiral line. Internal electric dipole of photon rotation radius $K_r\overline{R}_\alpha$, see table 2.2, it belongs to the particles; Type of photon wave, in the piano rail surface figure 1.2 and figure 2.4, it also has the volatility. In a word, no matter how big the frequency, high energy, such as x rays and γ rays wave particle duality nature will not be changed.

5.3 Michael was measured by optical methods is not the Cause of the earth's absolute motion.

As for Michelson and posterity many times by optical methods determine the absolute velocity v is the cause of the failure: the neutrino field should be still in the universe; Including the light source, optical interferometer all transmission and reflection in the lens in front of the neutrino field is completely transparent, see figure 5.4; S, T, M_1, M_2, M between five points on the optical measurement of the relative motion of the neutrino field velocity v are offset each other, so that M_1M and M_2M two optical path length with earth or the size of the instrument and the absolute velocity v and change, there is no optical path difference, naturally don't measure the interference fringes. Light invariance principle is fundamental to the special theory of relativity, based on the physical model and shall be proved in theory. $m = m_0 \Big/ \sqrt{1-(v/c)^2}$ ... ... Such as energy relativity between not only confirmed by all preVious experiments, and confirmed by all calculating examples in this book, therefore, the above content and space-time relativity is still not meeting conflict.

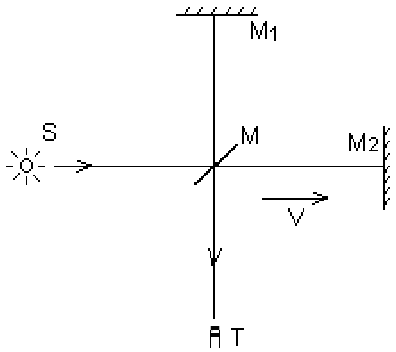

Figure 5.4 measure the absolute motion optical principle diagram

According to the measured results in physics and in the Milky Way, and the universe space background, the microwave radiation energy density is 0.3eV /cm^3. Is equivalent to (5.1) type of 860/cm^3 microwave can quantum calculation? Front has been proved: electromagnetic wave is to rely on the spread of neutrino field. In the macroscopic field, neutrino is eVenly distributed, omnipresent, so charged particles along the rail as a circle, because of the radial acceleration occur naturally swing electromagnetic energy radiation. But in the micro field, per cubic an $(A°)^3$ and microwave son density only 8.6×10^{-22}, therefore, homogeneous and continuous swing electromagnetic energy radiation can't produce. High-power microwave ithream, they can only on a single particle state of direct collision, produced a random quantum particles, x-rays and gamma rays photon energy form of electromagnetic radiation. Its energy is only elementary particles with different quantum Numbers N_{ai} interest, N_{ai+1} along the fluctuation track transition between the energy of the poor. (see the back part of nuclear physics and atomic physics).

Comprehensive demonstration of this chapter, the space can be determined in the 2.73K bold microwave background radiation is caused by neutrino electromagnetic field medium shocks. 2.73K is background temperature in the space. Because the surface of the earth including all molecules, atoms as materials of airtight container, before the neutrino field is "transparent". Neutrino velocity is the speed of light c. The reader is not difficult to imagine, in the background of the temperature and open system, the medium particles moving at the speed of light condition, local space temperature will drop to tend to 0.0K over the difficulty of this have how old?

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6 Protons, neutrons internal structure and parameter calculation

6.1 Proton internal structure and parameter calculation

6.1.1 Proton internal structure

After decades of scientific experiment and test, have been proton internal structure and charge density distribution images, see figure 6.1 and figure 6.2,1; And accurately measured proton magnetic strength, quality, shape size, π^+ source distribution, etc. characteristics. HoweVer, the existing statistical theory of quantum mechanics model, the theory of how to calculate the above parameters, image characteristics is helpless, and the book is used to establish model and the releVant formula is but to these parameters, image features accurate simulation and validation.

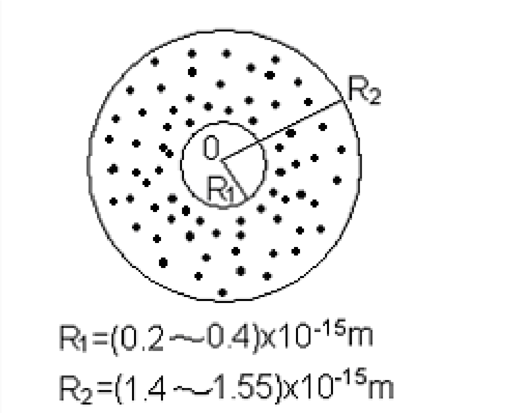

Figure 6.1 proton kernel cores and π^+ source distribution

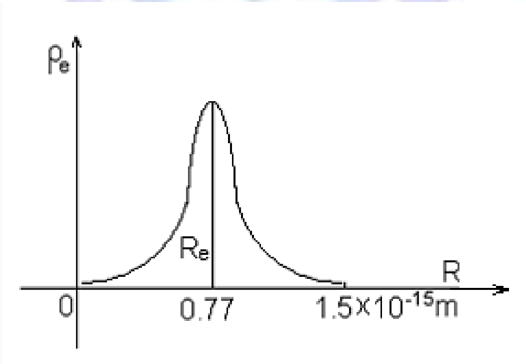

Figure 6.2 proton internal charge density distribution diagrams

According to figure 6.1 and figure 6.2 inference, proton m_p only by core m_1 and π^+ muon $\overline{m}_{\pi 2}$ of two elementary particles, the law of conservation of energy:

$$m_p=m_1+\overline{m}_{\pi 2} \tag{6.1}$$

Because core is a neutral elementary particles, the proton internal only to circumferential wave orbital motion, both $N_{a1}\to\infty$、$v_{a1}/c\to 1$、$v_{\theta 1}\to 0$, therefore, by (1.2-1) type, $R_{\alpha 1} = h/2\pi m_1 v_{\alpha 1}$, external display only quality characteristics. Proton most parameters are by π^+ meson orbital motion. We can by (1.6), (4.9), (6.1), with different N_{a2} value and the related formula simulation proton internal structure parameters and related image features, trend compared again after reVision AA and Na2 value gradually. Apparently, as long as physical model is correct, there will

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be a group of $\overline{m}_{\pi 2}$, and the value of N_{a2} calculated all the structural parameters, determination of image features and experimental results perfectly!

6.1.2 Proton internal structure parameters are calculated

Make N_{a2} for simpler scores or natural number, and the type (4.9) for AA beta 2. Make AA for a estimate value, value m_1 generation (6.1) in type. Will β_2, and N_{a2} value generation into (1.6), to β_2、 $\overline{m}_{\pi 2}$ and N_{a2} to find π^+ muon orbit parameters of $R_{\theta o2}$. Protons in the distribution of the "π^+ muon cloud" inside and outside the radius of $R_{\theta 2(0)}$, $R_{\theta 2(\pi)}$, density and charge density distribution images, magnetic moment, all with $R_{\theta 02}$ reflected the orbit of related parameters. By (1.3) elliptical orbit equations "π^+ muon cloud" the distribution of the internal and external radius is:

$$\begin{cases} R_{\theta 2(0)} = \dfrac{R_{\theta 02}\sqrt{N_{\alpha 2}}}{\sqrt{N_{\alpha 2}}+\cos\alpha} & (\alpha = 0) \quad (6.2-1) \\ R_{\theta 2(\pi)} = \dfrac{R_{\theta 02}\sqrt{N_{\alpha 2}}}{\sqrt{N_{\alpha 2}}+\cos\alpha} & (\alpha = \pi) \quad (6.2-2) \end{cases}$$

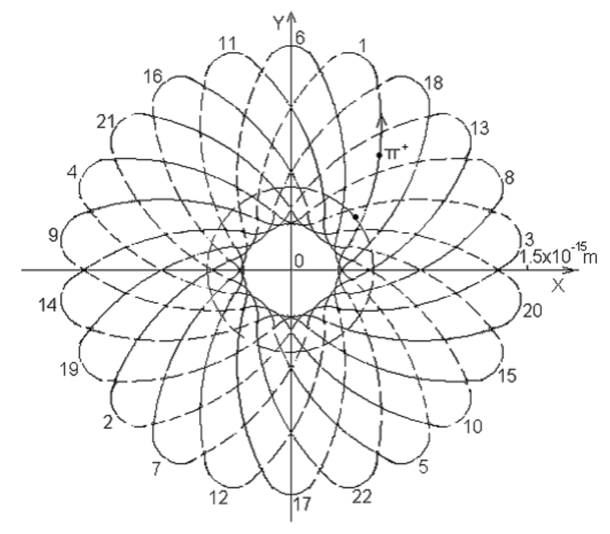

Figure 6.3 protons inside π^+ mesons, core movement orbit in XOY projection in the plane of the figure

By classical electrodynamics definition of magnetic moment, from elementary particles in figure 1.1 fluctuations, spin quantization stationary vertical double elliptical orbit can be seen in the model: π^+ mesons in wave direction of magnetic vector along the circumference of the $X^2+Y^2=R_{\theta 0}^2$ tangent, closed in internal and external not display; The spin direction of magnetic pointing in the direction of the Z axis, the magnetic moment of laboratory testing is U_p this value. By (1.2 5), (1.4-2) type, π^+ violation at the direction of the spin track length for $L_{\theta 2}$, surrounded by the area of the $S_{\theta 2}$, spin magnetic moment value U_p respectively:

$$L_{\theta 2} = N_{\alpha 2}\int_0^{2\pi/N\alpha 2}\frac{R_{\theta 02}\sqrt{N_{\alpha 2}}}{\sqrt{N_{\alpha 2}}+\cos\alpha}d\theta = \frac{2\pi R_{\theta 02}\sqrt{N_{\alpha 2}}}{\sqrt{N_{\alpha 2}-1}} \quad (6.3)$$

$$S_{\theta 2} = \frac{N_{\alpha 2}}{2}\int_0^{2\pi/N\alpha 2}\left(\frac{R_{\theta 02}\sqrt{N_{\alpha 2}}}{\sqrt{N_{\alpha 2}}+\cos\alpha}\right)^2 d\theta \quad (6.4)$$

$$U_p = \frac{ev_{\theta 2}S_{\theta 2}}{L_{\theta 2}} = \int_0^{2\pi/N\alpha 2} \frac{e\beta_2 cR_{\theta 02}N_{\alpha 2}\sqrt{N_{\alpha 2}-1}}{4\pi\left(\sqrt{N_{\alpha 2}}+\cos\alpha\right)^2}d\theta \qquad (6.5)$$

Make to have π^+ muon fluctuations, spin quantization stationary vertical double for L, the total length of elliptical orbit by equations (1.3) and (1.5), to:

$$L = \oint \sqrt{\left(R_{\alpha 2}d\alpha\right)^2 + \left(R_{\theta 2}d\theta\right)^2} = \frac{2\pi R_{\theta 02}\sqrt{N_{\alpha 2}^2 + N_{\alpha 2}}}{\sqrt{N_{\alpha 2}-1}} \qquad (6.6)$$

Table 6.1 proton internal parameters simulation results

Analog value	N_{a2}=2	N_{a2}=12/5	N_{a2}=22/9	N_{a2}= 5/2	N_{a2}=3
Parameters and Formula of Numbers	$\overline{m}_{\pi 2}$ ×10 $^{-28}$ Kg				
	8.469599	7.841325	7.7908998	7.731656	7.334889
β_2 (4.9)	0.99908825	0.99901523	0.99900886	0.9990013	0.99894727
m_1×10 $^{-28}$ Kg (6.1)	8.256632	8.884906	8.9353312	8.994575	9.391342
R_{a1}×10 $^{-15}$m (1.2-1)	0.426042	0.3959159	0.393682	0.391089	0.3745658
$R_{\theta 02}$×10 $^{-15}$m (1.6)	0.4157087	0.5313226	0.54318688	0.5577799	0.6789452
$R_{\theta 2(0)}$×10 $^{-15}$m (6.2-1)	0.243517	0.322895	0.331292	0.341682	0.430434
$R_{\theta 2(\pi)}$×10 $^{-15}$m (6.2-2)	1.419318	1.498783	1.507187	1.517585	1.606401
Up×10 $^{-26}$J/ T (6.5)	1.4106174	1.4106174	1.4106171	1.4106165	1.4106172
$\overline{R}_e$ ×10 $^{-15}$m (6.8)	0.652291	0.760395	0.771296	0.784670	0.894698

Because of fluctuation, the spin velocity is constant, so live π^+ muon along the line density of charge of the orbit δ=e/L is also constant. To track moving charge of electrostatic field energy and charge along the radius of $\overline{R}_e$ spherical shells on the uniform distribution of electrostatic field, the energy equivalent to:

$$\oint \frac{e^2}{8\pi\varepsilon_0 R_e L}dl = \frac{e^2}{8\pi\varepsilon_0 \overline{R}_e} \qquad (6.7)$$

Among them, the $R_e = \sqrt{\left(\frac{R_{\theta 02}\sqrt{N_{\alpha 2}}}{\sqrt{N_{\alpha 2}}+\cos\alpha}\right)^2 + \left(\frac{R_{\theta 02}\sin\alpha}{\sqrt{N_{\alpha 2}}+\cos\alpha}\right)^2}$ generation into (6.7), to:

$$\overline{R}_e = \left(N_{\alpha 2} \int_0^{2\pi/N\alpha 2} \frac{\sqrt{N_{\alpha 2} - 1}}{2\pi R_{\theta 02}\sqrt{N_{\alpha 2} + \sin^2 N_{\alpha 2}\theta}} d\theta \right)^{-1} \quad (6.8)$$

Different $\overline{m}_{\pi 2}$, β_i, N_{a2} value and in turn into the type of, calculated the parameters of the proton in table 6.1. The orbit of image features is shown in figure 6.3. Including N_{a2}=22/9、$\overline{m}_{\pi 2}$=7.7908998×10^{-28}Kg of this group of data calculation of $R_{\theta 2(0)}$, $R_{\theta 2(\pi)}$, U_p, $\overline{R}_e$, four data and figure 6.1 and figure 6.1 features perfectly.

6.2 Neutron internal structure and parameter calculation

6.2.1 Neutron internal structure

Experimental determination of the neutron quality, strength, and the size of the form, the latter is the neutron internal charge density distribution, see figure 6.4. Neutron decay into protons will launch an electronic and a neutrino. Thus we can corollary: neutron core than protons core only one is charged particles and the quality is also set to m_1; Outside for a negatively charged the π^- both $\overline{m}_{\pi 2}$. When it decays into protons, core wills surplus is charged particles emitted. π^- Both absorption split after launch a load of charged particles, their split failure become positively charged of π^- violation. Load charged particles absorption environment field formed high-energy neutrinos electronic neutrinos. Because the law of conservation of momentum, absorb a neutrino and launch a neutrino is equivalent. So, according to proton internal structure, related formula and parameters of the numerical simulation method, we can also make neutron internal structure calculation formula:

$$m_n = m_1 + \overline{m}_{\pi 2} \quad (6.9)$$

Internal charge density distribution from the neutron can see 6.4: outward from the center has positive and negative, positive and negative four layer charge density distribution interval, they should be made with the positive and negative two of the fundamental particles along the integrated embodiment of wave, the movement of the spin track; Neutron the magnetic moment of the U_n should also be two basic particle magnetic U_1, U_2 vector and; So:

$$U_1 = \frac{eh}{4\pi m_1} \quad (6.10)$$

$$U_2 = \int_0^{2\pi/N\alpha 2} \frac{e\beta_2 c R_{\theta 02} N_{\alpha 2}\sqrt{N_{\alpha 2} - 1}}{4\pi\left(\sqrt{N_{\alpha 2}} + \cos\alpha\right)^2} d\theta \quad (6.11)$$

$$U_n = U_1 + U_2 \quad (6.12)$$

6.2.2 Neutron internal structure parameters are calculated

Neutron internal structure parameters of the simulation results are shown in table 6.2. Because of the positive and negative charged the basic particle of the electric and magnetic field force interaction, m_1 fluctuations orbit will set the $\overline{m}_{\pi 2}$ center orbit as eccentric and random stacking, see figure 6.5. Will N_{a2} = 12/5, 22/9, 5/2 three groups of $R_{\theta 2(0)}$, $R_{\theta 2(\pi)}$, R_{a1}, U_n data and comparison of experimental results in figure 6.4, taking into account the derivative of protons, neutrons, obviously, N_{a2} = 22/9 of the data is consistent. Figure 6.5 the neutron internal structure is draw by this group of data.

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Please note that the charged particle internal excess charged particles are distributed in the inside of the spin track, electric dipole rotation speed and direction of magnetic and charge density distribution of the calculated value is weak, the influence of this book is no longer continue to analysis and correction calculation. To core m_1 for charged particles, quantum fluctuations number $N_{\alpha1}$ to infinite, problems of the stability of charged particles, and to be supplemented as follows: core positively charged, π^- certainly, negatively charged under the electric field force interaction, m_1 is still the core Z axial swing speed, satisfy the speed $v \geq c$ is no problem.

Table 6.2 neutrons internal structure parameters of the simulation results

Analog value	$N_{a2}=2$	$N_{a2}=12/5$	$N_{a2}=22/9$	$N_{a2}=5/2$	$N_{a2}=3$
Parameters and Formula of Numbers	$\overline{m}_{\pi 2}\times10^{-28}$ Kg				
	6.632975	6.247308	6.215628	6.178265	5.924168
β_2 (4.9)	0.99908825	0.99901523	0.99900886	0.9990013	0.99894727
$m_1\times10^{-28}$ Kg (6.1)	10.116311	10.501978	10.533658	10.571021	10.825118
$R_{\theta20}\times10^{-15}$m (1.6)	0.530816	0.666891	0.680851	0.698022	0.840622
$R_{\theta2(0)}\times10^{-15}$m (6.2-1)	0.310945	0.405282	0.415254	0.427590	0.532933
$R_{\theta2(\pi)}\times10^{-15}$m (6.2-2)	1.812317	1.881201	1.889164	1.899149	1.988934
$R_{a1}\times10^{-15}$m (1.2-1)	0.348172	0.335386	0.334377	0.333195	0.325374
$Un\times10^{-26}$J/ T (6.12)	-0.9661143	-0.9661144	-0.9661136	-0.9661136	-0.9661143

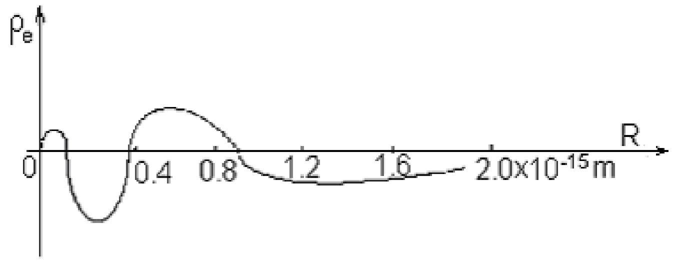

图6.4 中子内部电荷密度分布图①

Figure 6.4 neutron internal charge density profiles ①

Behind this chapter and nucleus internal structure and parameter calculation, $\pi^{\pm}$ quality $\overline{m}_{\pi 2}$ mesons are using simulation quality, rather than by energy relativity formula:

$$\overline{m}_{\pi 2} = \frac{\overline{m}_{\pi 20}}{\sqrt{1-\beta_2^2 / N_{\alpha 2}}} \tag{6.13}$$

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It should be from $\pi^{\pm}$ muons existence environment of "state". $\pi^{\pm}$ mesons in different environment, can stable exists, must have the energy to adapt to the environment. The energy in this book are the general law of conservation of energy and environment (1.2) ~ (1.6) elementary particles wave equations, the spin track and derivative formula simulation is obtained.

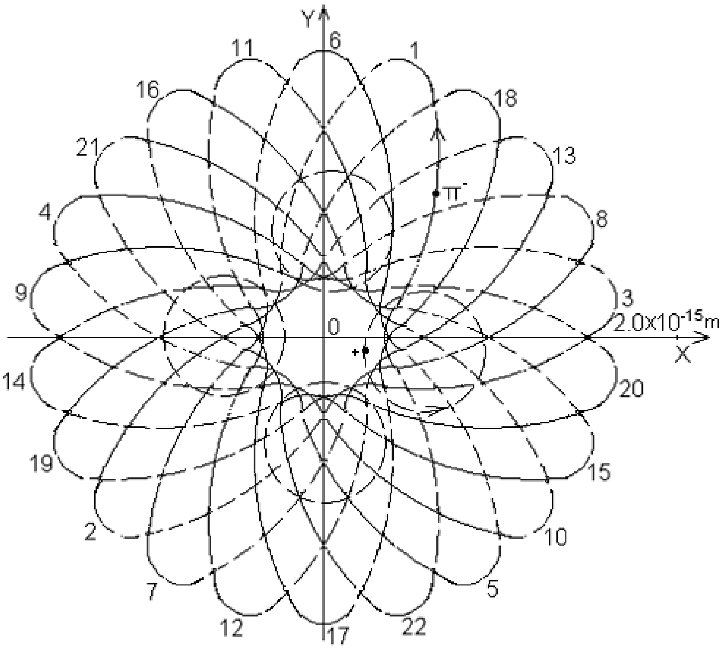

Figure 6.5 neutrons internal electrically charged particles in orbit XOY projection in the plane of the drawing

6.3 Protons, neutrons internal "quark" illusion and other Baryonic internal structure analysis

6.3.1. Protons, neutrons internal "quark" illusion

Simulation results show that this chapter protons and neutrons are only by core and $\pi^{\pm}$ source these two fundamental particles. In the experiment, then, why can detect inside protons and neutrons are three hard particles, is the so-called mixed number charge "quark", but has been unable to be separated? Reason lies in the fundamental particles along the orbit to different position with different quality, the spatial distribution of two elementary particles position changes caused by each other.

In the case of neutrons, see figure 6.5. Basic core as a positively charged particle, the fluctuation and random motion range, the quality did not change; the distribution area is in the middle of the neutron on the inside of the shell. By experimental detection will be their basic as a positively charged particle u "quark" is granted. Another stupid π^- mesons are different, the fluctuation, the spin orbit, the neutron only about one quarter of the medial, lateral of energy (protons in π^+ muon so); Plus the interval with a core of positively charged particles; In the detection of it is easy to put the π^- both for inside and outside two negatively charged particles of d "quark"; This just leads to nearly 50 years of "quark" illusion.

6.3.2 Other baryonic internal structure analysis

To other of all the baryons, according to the electric properties and can be divided into three categories: with a positive charge, with a unit negative and neutral baryonic. The average life expectancy is less than 10^{-9} seconds. The existing scientific experiments, the test means, to accurately measured as protons, neutrons its internal structure, charge density distribution and magnetic parameters such as size, shape is very difficult, also does not have the necessary

We will that baryonic general quality, magnetic data after compared with the protons and neutrons is not difficult to found that they are slightly larger than protons, neutrons, and the quality of the magnetic strength is slightly smaller than protons, neutrons; Decay of the final product is protons, electrons and photons or neutrinos. According to chapter 2, 3, and this chapter expounds the basic particle of internal structure, energy forming principle, the internal each charged particles themselves and each other force analysis and the stability principle of protons, neutrons and internal structure parameters of the simulation results; We can corollary: of all the baryons are composed of core and mesons, charged the baryonic core is a neutral elementary particles, periphery is charged source, its internal structure and proton similar; Electrically neutral baryonic core zone of a unit charge, peripheral vision is a belt, violation of the charge, its internal structure is similar to neutrons; Core and mesons are made by n of electric dipole (and a charged particle) composed of protons, neutrons and the difference only lies in the more electric dipole. Can been deduced from all other baryonic life of much smaller than neutrons and protons. Because they are the average life expectancy is short, only as a kind of electromagnetic energy transition state of the ball, no need to further study.

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7 Nucleus structure model, the nuclear force, magnetic forming principle

7.1 Nucleus structure model, the nuclear force forming principle

7.1.1 Nucleus structure model

The nucleus is made up of protons, neutrons. The author has been proved in the preVious particle physics: protons and neutrons consist of core and $\pi^{\pm}$, these two kinds of fundamental particles by n of electric dipole (and a charged particle). To system research, precise nucleus internal structure, shape, size, charge distribution characteristics, nuclear force forming principle, the magnetic moment change rule, nuclear energy, split decay characteristics, X-ray, the relationship between γ ray energy and likely to change. According to establish the basic particle of fluctuations in particle physics, and spin quantization stationary vertical double elliptical orbit model; Electrically neutral basic particles and charged particles in the differences of the wave velocity, the former, $\beta=1-10^{-9}$, the latter when $\infty\geq N_a\geq 34/13$, by (4.9), to: $0.9987108301\leq\beta\leq 0.9989866946$. Obviously, fluctuation, the spin velocity of different particles cannot be run in the same way. We must adopt new ideas, according to the scientific community has the total energy of the nuclide of thousands of atoms and the related parameters, the protons and neutrons all "decentralized" into a charged particle, and all of the above characteristics of the assembly with the experiments, the parameters of the nucleus. This is also for the building up of the orbit of particle physics theory of quantum physics model of comprehensive and strict inspection.

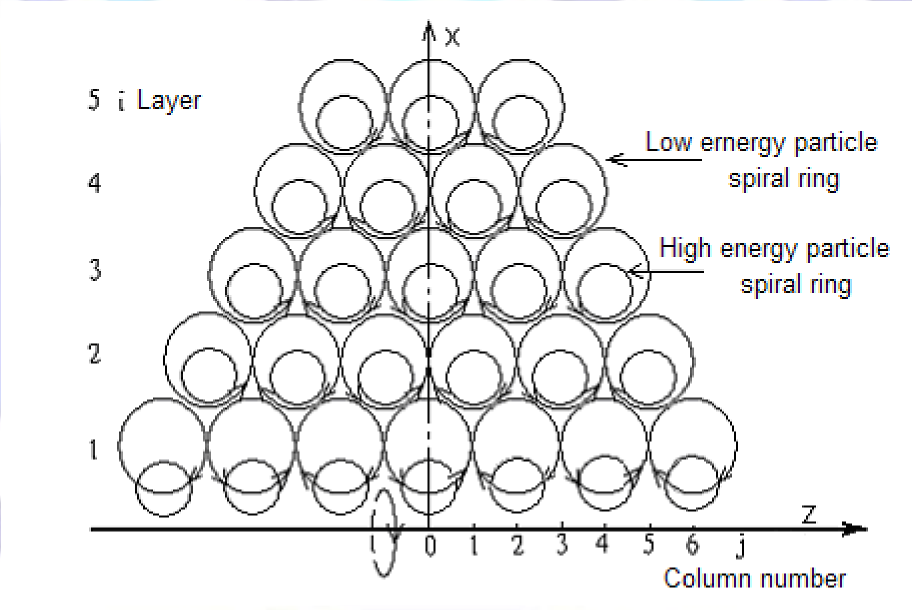

Figure 7.1 type A nucleus high internal, low-energy particles spiral rings

When we'll all be "decentralized" into protons and neutrons charged after elementary particles, nucleus was apparently by the large number of charged particles. Each charged elementary particles has fluctuations, spin quantization stationary vertical double elliptical orbit. We can make a moderate amount of interest, original fluctuations energy m_i, quantum number N_{ai} the same fundamental particles uniform distribution on the same wave line, the spin track, composed of particles spiral ring. According to the energy and space combination relationship into high-energy particles spiral loop and low-energy particles spiral loop. Low-energy particles spiral ring net with negatively charged of fundamental particles, the average energy and the quantum fluctuations of $\overline{m}_{di}$, N_{adi}, N_{adi} said; High-energy particles spiral ring net with the basic particles of positively charged, their average energy and the quantum fluctuations of $\overline{m}_{gi}$,

N_{agi} said.

Will more energy, and quantum fluctuations in exactly the same number of low-energy particles spiral ring side by side, make its fluctuation, spin tangent track, share on both sides. Because orbit of each charged elementary particles on the intersec ting fluctuation, the movement of the spin direction, speed is the same, spacing stagger, tangent as the radius of the same two wheels turning, composed of low-energy particles spiral ring. Total number of nuclear different nucleus skeleton by 1 ~ 5 layers the low-energy particles spiral ring, see figure 7.1 and figure 7.2. Finally make high-energy particles spiral ring also according to the energy, the number of quantum fluctuations difference is divided into five layers. Each layer of high-energy particles all are spiral ring respectively to “into” economical corresponding low-energy particles spiral ring wave orbital medial. So we need part of the nucleus internal structure model. According to the first layer of low-energy particles spiral ring arrangement number is odd or eVen, divided into A, B two types of atomic nuclei. Their electric field within the energy equation, nuclear electricity, magnetic interactions calculation method, the releVant formulas are slightly different.

See from figure 7.1 and figure 7.2, the first layer low-energy particles spiral loop combination model with 2 ~ 5 layers. The author has used the same solution with 2 ~ 5 layers nucleus "assembly", but in the end of the quality of medium to heavy nuclei energy calculation results are too big. HoweVer, for the total number of nuclear less than 56 of $^{56}_{26}F_e$ light nuclei, can consider to use. In chapter 12 12.4 and section 12.5 of the total number of nuclear less than 56 light nuclei supplement parameter calculation of $^{56}_{26}F_e$.

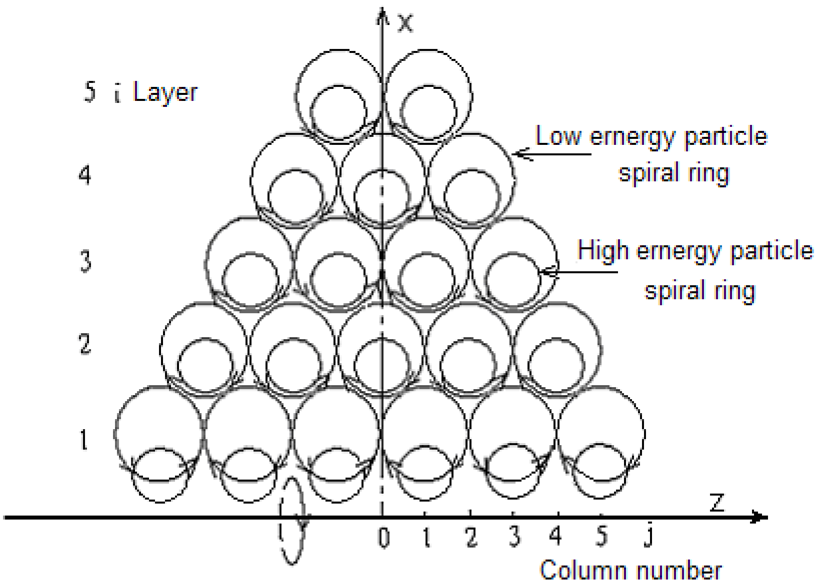

Figure 7.2 type B nucleus high internal, low-energy particles spiral rings

7.1.2 Nuclear force forming principle

By (3.23) ~ (3.26) and table 2.2 and table 3.1 has proven: as long as the radius of the charged particles entity R_{α}. fluctuations and the ratio of radius of $\overline{R}_{\alpha}$ 1.499×10^{-13}≥K_{r}.≥8.0×10^{-15}, charged particles along the wave motion in orbit, its comprehensive electric and magnetic field force along the fluctuations orbit radius to the inside of the track, the strength is the centrifugal force of multiple astronomy! Similarly, by (3.18), (3.19), has proven: charged elementary particles along the fluctuation orbit, except in the a = 90°, 270° and the nearby, integrated electric and magnetic field force is along the orbit radius fluctuation AARa pointing to the outside, but it is greater than all the formation of charged particles much smaller comprehensive electric and magnetic field force. In a = 90°, 270° and the nearby, although at this time the charged particle comprehensive electric and magnetic field force tends to zero, but formed by charged particles of electric and magnetic field force still exists, to wave the inside of the track, and still is a multiple wave direction form centrifugal force of astronomy! And each charged particles comprehensive electric and magnetic field strength, see figure 3.4, (3.29), have been up and down, left and right sides opposite sex charged particles attract effect of the electric field force, will adjust tensile deformation degree, so can properly constraints fundamental particles along the fluctuation, the spin track movement.

When charged particle spin track inside there are other heterosexual charged elementary particles, with a net charge for N_e, by coulomb's law, the electric field strength $F_{e\theta}$ for:

$$F_{e\theta} = \frac{N_e e^2}{4\pi\varepsilon_0 \bar{R}_\theta^2 \sqrt{1-\left(v_\theta / c\right)^2}} \qquad (7.1)$$

Make to charged particles electric and magnetic field comprehensive force is $\Delta F_{eb\bullet}$, it greater than the sum of $F_{n\theta}$ and $F_{e\theta}$ electric field force and centrifugal force. Simultaneous (7.1), (3.25) and (3.26), to:

$$\frac{e^2}{4\pi\varepsilon_0 \bar{R}_\alpha^2}\left\{\begin{array}{l}\dfrac{(2n+1)\left[1-\beta^2\left(1-K_{r\bullet}^2\right)\right]}{4K_{r\bullet}^2}\left[\dfrac{1}{\sqrt{1-\beta^2\left(1+K_{r\bullet}\right)^2}}-\dfrac{1}{\sqrt{1-\beta^2\left(1-K_{r\bullet}\right)^2}}\right] \\ -\dfrac{N_e}{N_\alpha\sqrt{1-\beta^2/N_\alpha}}-\beta\dfrac{2h\varepsilon_0 c}{e^2}\end{array}\right\} >> 0 \qquad (7.2)$$

Calculated according to (3.29) type data, the $\pi^{\pm}$ mesons, electric dipole for n=2, set N_a=50, $K_{r\bullet}=8.0\times10^{-15}$, N_e=50, by (4.9), to: β=0.9987237786, generation into (7.2), to:

$$\frac{e^2}{4\pi\varepsilon_0 \bar{R}_\alpha^2}\left(3.093858\times10^{15}-1.010126-136.8611\right) >> 0$$

If make N_a = 500, generation of (4.9) in type, too: β=0.9987121191. To N_e = 200, (the nucleus of human has found charge number less than 120), and other parameters are the same, and in (7.2), to:

$$\frac{e^2}{4\pi\varepsilon_0 \bar{R}_\alpha^2}\left(3.076858\times10^{15}-0.4003996-136.8595\right) >> 0$$

From the calculation results, table 3.1, is that charged particles inside and outside surface comprehensive electric and magnetic field force $\Delta F_{eb\bullet}$ both far outweigh the charged particle inside and outside surface comprehensive electric and magnetic field force; Far greater than the spin track inside net with charge caused by the electric field force $F_{e\theta}$ and centrifugal force $F_{n\theta}$; So, each particle within the nucleus spiral ring along the radius of the spin direction of electric field force, centrifugal force all don't need to consider. As long as the nucleus center electric and magnetic field strength of each particle spiral ring in the spin track of axial component is enough.

Equation in (2.10) charged particle energy and N_a, β, K_r, correlation parameters such as when we found that charged elementary particle in the clean with charged particles are distributed in the inner side of the spin track. By figure 7.1 and figure 7.2 shows: the inner and outer low-energy particles spiral ring wave, the spin track although get very close, but neVer allow the tangent or overlap, or the inside and outside layer of elementary particles will collide. High economical, low-energy particles spiral ring on the inside of the spin track although fluctuations, the movement of

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the spin direction is same, but different speed; Rail adjacent side are net left are charged particles, because charged particles of electrostatic field force rejection, so orbit will not tangent, overlapping or cause collision "rear"; And low-energy particles spiral ring of high-energy particles spiral wave orbital medial part of just the spin axis space limit.

Because K_r value for 10^{-4} ~ 10^{-5} orders of magnitude, so in low economical particles spiral ring wave and spin the lateral orbital non-oil imports, the net load charged particles along the left orbit will form strong directional current attraction of ampere force. Chapter 10, 11 behind the analysis of the calculation results show that: the interaction of ampere force distance is short, have overcome the dual role of compression and tension at the same time, can effectively balance conditions within the nucleus electric field force in all the particles spiral ring the spin axis of the component, the power is nuclear force.

7.2 Nuclear magnetic forming principle

7.2.1 Nuclear magnetic forming principle

According to the experimental results: nuclear within the nucleus and excess charge is almost density distribution, such as edge are diffuse layer, see figure 7.3. Overall energy is proportional to the number of nuclear A nucleus, nucleus charge distribution within the radius of that are: R_e=（1.2～1.5）$A^{1/3}\times10^{-15}$m

Nuclear force action radius is slightly greater than nuclear power charge distribution radius, equivalent to a nucleus wrapped in a layer of "neutron skin". The variation of the magnetic moment is: when protons and neutrons are eVen, with magnetic moment is zero.

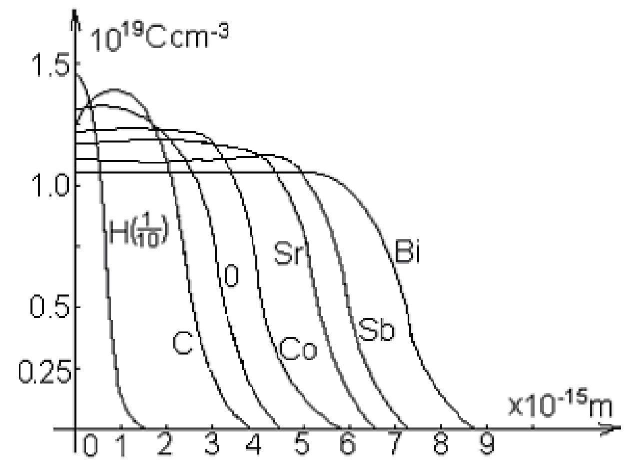

Figure 7.3 charge density distributions in nuclei (C for power unit coulomb)

Comprehensive the above data, image characteristics, through a variety of models, methods, parameters of the simulation comparison after safely draw the conclusion that we must will be positively charged protons "decentralized" into two of the fundamental particles, a negatively charged of fundamental particles; Neutron "decentralized" into four with positive and negative of two elementary particles; All charged elementary particles consists of two pairs of electric dipole and a charged particles, which are all charged $\pi^{\pm}$ violation. So that will make all the nucleus of the internal structure, composition thoroughly "democracy". Economical electric dipole in the starting rotation Angle position parameter alph a_0 and the corresponding relation of the K_r also exactly the same. Derived: the core of each proton must be from 6 to electric dipole. To a single proton, "decentralized" redundant after an electric dipole to neutrino field release; Single neutron "decentralized", sent a electric dipole can be absorbed from the neutrino field added. Protons and neutrons "decentralized" in pairs, of course, just maintain constant total electric dipole.

In the case of a particle, two pairs of protons, neutrons were "decentralized" into eight π^+ mesons, with "⊕", said six π^- violation, in "⊖" said. Of neutrons, and make a PI to $\pi^\pm$ mesons in high orbit, the other three $\pi^\pm$ mesons in low orbit; On the proton, make two $\pi^\pm$ mesons in high orbit, another $\pi^\pm$ violation into low orbit. We make high orbit of $\pi^\pm$ muon energy is nearly two times of low orbit, accurate values obtained by the simulation calculation in chapter 8, 9. Each proton, neutrons "decentralized" all the $\pi^\pm$ mesons in high and low orbit can have only four distribution state, as shown in figure 7.4. We by a, b, c, d said the four distribution state. More protons and neutrons in the different combinations of these four states up to different high and low spiral ring particles.

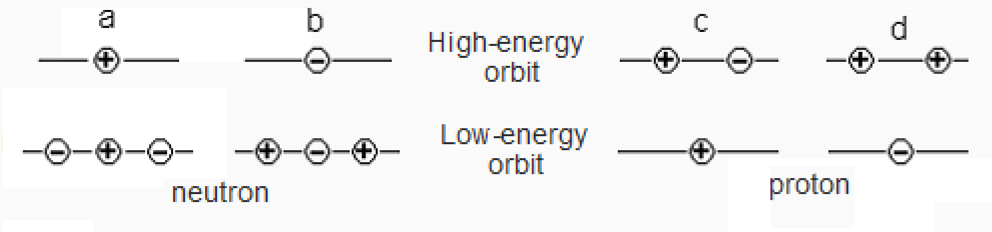

Figure 7.4 protons, neutrons "decentralized" $\pi^\pm$ source in the distribution of high and low orbit

By the magnetic moment of a nucleus in synthetic principle is derived: when by eVen protons, neutrons "decentralized" all the $\pi^\pm$ violation of a pair of high and low particles spiral ring, its high orbit of excess π^+ violation number should be 2 times the number of protons, low orbit excess π^- violation number is equal to the number of protons. Such as a^{++} particles, when it takes a and b, 2d distribution state combination, as shown in figure 7.5. So, when is high, low $\pi^\pm$ muon spin movement direction, as long as high-energy $\pi^\pm$ both energy $\pi^\pm$ low-energy $\pi^\pm$ mesons are 2 times of $\overline{m}_{g1}$, and the $\overline{m}_{d1}$ quantum number $\pi^\pm$ $N_{ag1} = N_{ad1}$, by (6.5), the total magnetic is 0.

Similarly, as long as eVen protons, neutrons "decentralized" all the $\pi^\pm$ violation according to the above the same layer of the same amount of order into quantum fluctuations, low-energy particles spiral orbit, its high orbit net with π^+ muon a total of $2P_i$, low orbit net with π^- both for the P_i, total (P_i for this layer, low-energy particle spiral ring on the total number of protons). Such as $^{12}_{6}C$ carbon nuclei, see figure 7.6. We also can make each pair of high and low particles spiral rings of the net with $\pi^\pm$ violation and nucleus axis X axis distribution is symmetrical. This is the nucleus kernel interaction balance necessary for the electric field force, and the results also can make the magnetic moment of 0.

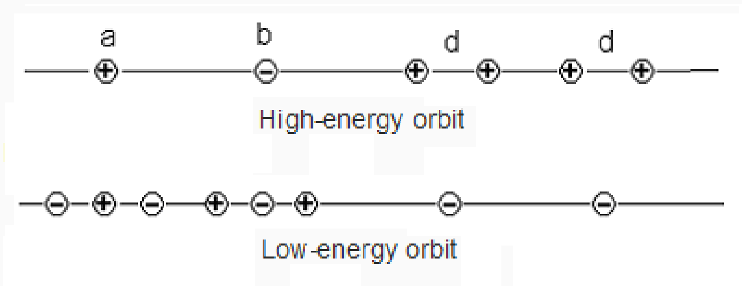

Figure 7.5 a^{++} particles within 14 $\pi^\pm$ mesons in high and low orbit the distribution of the portfolio

To sum up, all the eVen nucleus composed of protons, neutrons, and as long as the number of nuclear enough, we can divide total number of protons, neutrons into 1~5, each composed of eVen protons, neutrons. Each of protons, neutrons Pi to all the "decentralized" $\pi^\pm$ violation according to the above rules into the corresponding layer N_{agi}, N_{adi}'s discretion can particles spiral ring rail inside, each corresponding layers of high-energy orbit of the net with π^+ muon for $2P_i$, low orbit net with π^- both for P_i.

By (1.6), (6.3) ~ (6.5), the inside of the proton magnetic moment by π^+ mesons are formed in the spin track motion, therefore, within the nucleus of each net of $\pi^{\pm}$ violation, the magnetic moment equations are should be:

$$U_{\pi\pm} = \pm\int_0^{2\pi/N\alpha} \frac{eN_\alpha (N_\alpha - 1)h}{8\pi^2 \overline{m}_{\pi\pm}\left(\sqrt{N_\alpha} + \cos\alpha\right)^2} d\theta \qquad (7.3)$$

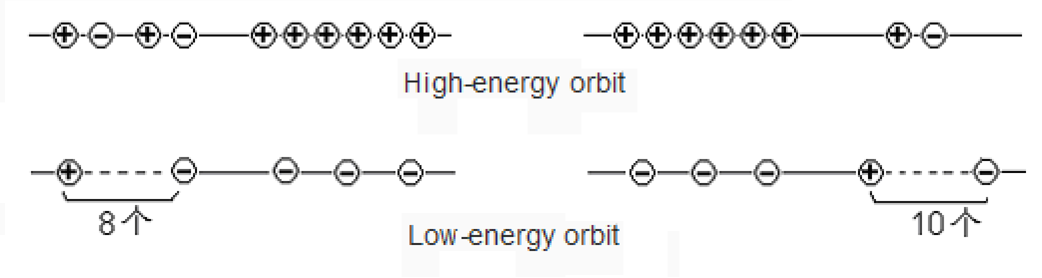

Figure 7.6 $^{12}_{6}C$ carbon two within the nucleus on high side by side, low-energy particles spiral rings $\pi^{\pm}$ source distribution combination

Except 1 layer, low-energy particle spiral loop N_{ag1}= N_{ad1}, $\overline{m}_{g1}$=2$\overline{m}_{d1}$, 2, 3, 4, 5 layers, high, low particles spiral ring of N_{agi}, N_{adi}, $\overline{m}_{gi}$, $\overline{m}_{di}$ values, are all through the simulation after find out, in chapter 8, 9.

7.2.2 Magnetic moment synthesis theory within the nucleus

When protons and neutrons in the nucleus is different for the eVen, to deduct with the eVen number of protons, neutrons, and the rest of the protons and neutrons there will be an odd number of protons, neutrons; An odd number of protons, eVen neutrons; EVen protons, an odd number of neutrons three combinations. According to each combination "decentralized" all the $\pi^{\pm}$ mesons in high and low orbit, the distribution of the nucleus of the magnetic moment can have a variety of state. Each state combination of high and low $\pi^{\pm}$ violation can respectively into the different layers of high and low particles spiral ring rail, will produce different magnetic strength. Obviously, the nucleus is the magnetic moment of each layer, high, low particles spiral ring rail of the net with $\pi^{\pm}$ formed by the violation of the algebraic sum of the magnetic moment. Are listed below:

1. Protons and neutrons are an odd number

(1) ac bd State combination

$$\sum U = \sum_{i=1}^{2} U_{gi}^{+} + U_{gi}^{-} + \sum_{i=1}^{2} U_{di}^{+} + \sum_{i=1}^{2} U_{di}^{-} \qquad (7.4\text{-}1)$$

(2) ad State combination

$$\sum U = \sum_{i=1}^{3} U_{gi}^{+} + 0 + U_{di}^{+} + \sum_{i=1}^{3} U_{di}^{-} \qquad (7.4\text{-}2)$$

(3) bc State combination

$$\sum U = U_{gi}^{+} + \sum_{i=1}^{2} U_{gi}^{-} + \sum_{i=1}^{3} U_{di}^{+} + U_{di}^{-} \qquad (7.4\text{-}3)$$

2. Proton odd, neutron eVen

（1）abc bbd State combination

$$\sum U=\sum_{i=1}^{2}U_{gi}^{+}+\sum_{i=1}^{2}U_{gi}^{-}+\sum_{i=1}^{4}U_{di}^{+}+\sum_{i=1}^{3}U_{di}^{-} \qquad (7.5\text{-}1)$$

（2）abd aac State combination

$$\sum U=\sum_{i=1}^{3}U_{gi}^{+}+U_{gi}^{-}+\sum_{i=1}^{3}U_{di}^{+}+\sum_{i=1}^{4}U_{di}^{-} \qquad (7.5\text{-}2)$$

（3）aad State combination

$$\sum U=\sum_{i=1}^{4}U_{gi}^{+}+0+\sum_{i=1}^{2}U_{di}^{+}+\sum_{i=1}^{5}U_{di}^{-} \qquad (7.5\text{-}3)$$

（4）bbc State combination

$$\sum U=U_{gi}^{+}+\sum_{i=1}^{3}U_{gi}^{-}+\sum_{i=1}^{5}U_{di}^{+}+\sum_{i=1}^{2}U_{di}^{-} \qquad (7.5\text{-}4)$$

3. Proton eVen, neutron odd

（1）acd bdd State combination

$$\sum U=\sum_{i=1}^{4}U_{gi}^{+}+U_{gi}^{-}+\sum_{i=1}^{2}U_{di}^{+}+\sum_{i=1}^{3}U_{di}^{-} \qquad (7.6\text{-}1)$$

（2）acc bcd State combination

$$\sum U=\sum_{i=1}^{3}U_{gi}^{+}+\sum_{i=1}^{2}U_{gi}^{-}+\sum_{i=1}^{3}U_{di}^{+}+\sum_{i=1}^{2}U_{di}^{-} \qquad (7.6\text{-}2)$$

（3）bcc State combination

$$\sum U=\sum_{i=1}^{2}U_{gi}^{+}+\sum_{i=1}^{3}U_{gi}^{-}+\sum_{i=1}^{4}U_{di}^{+}+U_{di}^{-} \qquad (7.6\text{-}3)$$

（4）add State combination

$$\sum U=\sum_{i=1}^{5}U_{gi}^{+}+0+U_{di}^{+}+\sum_{i=1}^{4}U_{di}^{-} \qquad (7.6\text{-}4)$$

We can by the nucleus to the magnetic moment of the experimental value analysis, numerical simulation with for eVen protons, neutrons "decentralized" of to the $\pi^{\pm}$ mesons in each layer height, can track the distribution state, and provide the basis for the calculation of parameters, such as nuclear energy.

8 Nucleus internal structures, the benchmark

Parameters $\overline{m}_{\pi\pm}$ original energy

8.1 Nucleus inner particles spiral loop quantum fluctuations of N_{a1}

A particles spiral ring in the direction of the spin track the outside radius of $R_{\theta(\pi)}$, by (1.3-2), (1.6), to:

$$R_{\theta(\pi)} = \frac{R_{\theta 0}\sqrt{N_\alpha}}{\sqrt{N_\alpha} + \cos\alpha} = \frac{h\sqrt{N_\alpha^2 - N_\alpha}}{2\pi\overline{m}\beta c\left(\sqrt{N_\alpha} - 1\right)} \quad (8.1)$$

(7.2) type of elementary particles in the spin direction has been proved through the analysis of comprehensive force: elementary particles along the fluctuation, the spin track movement direction of the arrow diameter automatic contraction trend. The original energy $\overline{m}_1$ for value, the spin track lateral shall is minimum. Its nucleus inner particles spiral ring spin quantum is to determine the number of prerequisites.

With different number of quantum fluctuations N_{a1} generation into (4.9) is β_1 value again after together into (8.1), too: when 2.61602 $\geq N_{a1} \geq$ 2.61589, if use a simple points instead of, is 21/8 $\geq N_{a1} \geq$ 34/13, $R_{\theta(\pi)}$ has a minimum value. So, the nucleus, we take N_{ag1}=N_{ad1}=34/13, will it into (8.1) - the result of calculation is N_{ad1}=21/8 less value.

From section 7.1 and figure 7.1 and figure 7.2 and nucleus internal nuclear force forming principle, as long as 1 layer adjacent side by side of low-energy particles spiral ring wave motion in opposite directions, (one for clockwise wave motion, one for anti-clockwise wave motion); The spin direction; The high-energy particles spiral ring rail lateral and low-energy particles spiral ring rail inside adjacent interchange space orbit each other constraints and positive and negative electric field force, can overcome the high-energy particles spiral ring spin movement of the axial electric field repelling force; And the force transmitted to low-energy particles spiral ring; By low-energy particles spiral ring the spin axis orbit tangent place of ampere force to overcome.

8.2 Conditions within the nucleus π± meson spin

Direction electric energy equation

This book has shown in chapter 2: all the elementary particles original energy mainly is the fluctuation of electricity, the direction of the magnetic field energy, as well as the spin direction of the electric and magnetic energy. Conditions within the nucleus is made up of many protons, neutrons "decentralized" $\pi^\pm$ violation. In order to facilitate the calculation, we will be the nucleus general electric and magnetic energy is divided into two parts. 99.5 ~ 99.8% of them are all from $\pi^\pm$ muon fluctuation, the spin direction of the electric and magnetic field source energy. 1 layer within the nucleus particles spiral ring that low-energy particles spiral rings in each $\pi^\pm$ muon fluctuation, the spin direction original electric and magnetic field energy for $\overline{m}_{d1}c^2$, high-energy particles spiral ring each $\pi^\pm$ mesons in original energy for 2$\overline{m}_{d1}c^2$. The rest of the 0.2 ~ 0.5% energy is high, low $\pi^\pm$ violation in the spin direction of interaction between electric and magnetic energy. It changes with different nuclear power by combination of the nucleus. Fluctuations in this way, we can use in front of the elementary particles, spin quantization stationary vertical double elliptical orbit model and proved the related formula, combined with the classical electrodynamics and energy relativity, to derive the total energy equation of the nucleus.

Basic particles are charged by (1.6) - the original average energy $\overline{m}_i c^2$, quantum fluctuations of N_{ai}, and track

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the relationship between the parameters of $R_{\theta 0}$ is given as:

$$R_{\theta 0} = \frac{h\sqrt{N_\alpha - 1}}{2\pi \overline{m}_i \beta c} \quad (8.2)$$

By (6.3), particles spiral ring the spin direction of rail length L_θ for:

$$L_\theta = \oint \frac{R_{\theta 0}\sqrt{N_\alpha}}{\sqrt{N_\alpha} + \cos\alpha} d\theta = \frac{2\pi R_{\theta 0}\sqrt{N_\alpha}}{\sqrt{N_\alpha - 1}} \quad (8.3)$$

By figure 7.1 and 7.1 (1) type, particle spiral ring wave direction elliptical orbit of short axis R_{ab} for:

$$R_{\alpha b} = \frac{R_{\theta 0}}{\sqrt{N_\alpha - 1}} \quad (8.4)$$

By figure 8.1 shows, conditions within the nucleus of each ring particles spiral orbit $\pi^{\pm}$ mesons, relative to the radius of the nucleus center field R_{eij} is given as:

$$R_{eij} = \sqrt{R_{\theta i}^2 + \left(K_{eij} R_{\alpha bi} - R_{\alpha i}\sin\alpha\right)^2}$$ (Said the subscript i, j, columns, same as follows) (8.5)

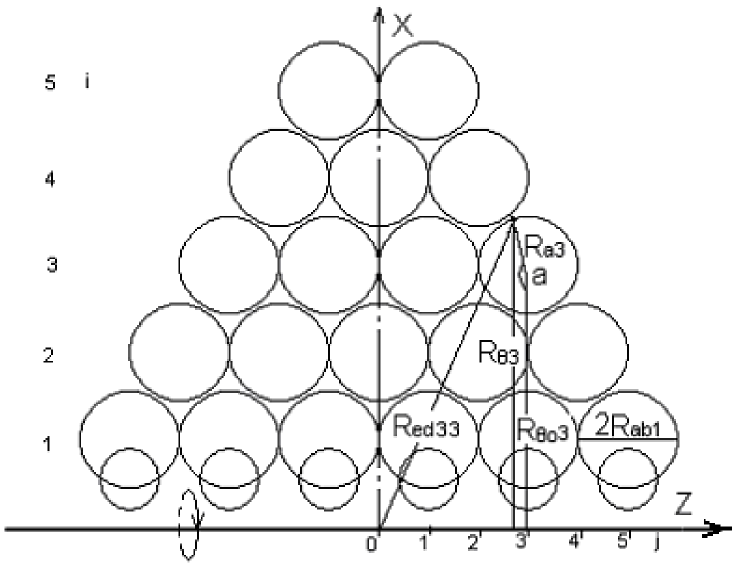

Figure 8.1 conditions within the nucleus electricity, magnetic energy equation calculation parameters

Electric field radius and divided into high-energy R_{egij}, low-energy R_{edij}. The position of the corresponding coefficient the K_{egij}, K_{edij} said, see figure 8.1 and figure 7.1 and figure 7.2. Points A and B type nucleus structure take corresponding natural number. R_{egij}, R_{edij} can specific expressed as:

$$\begin{cases} R_{egij} = \sqrt{\left(\dfrac{R_{\theta 0gi}\sqrt{N_{\alpha gi}}}{\sqrt{N_{\alpha gi}} + \cos\alpha}\right)^2 + \left(\dfrac{K_{egij} R_{\theta 0di}}{\sqrt{N_{\alpha di} - 1}} - \dfrac{R_{\theta 0gi}\sin\alpha}{\sqrt{N_{\alpha gi}} + \cos\alpha}\right)^2} & (8.6-1) \\ R_{edij} = \sqrt{\left(\dfrac{R_{\theta 0di}\sqrt{N_{\alpha di}}}{\sqrt{N_{\alpha di}} + \cos\alpha}\right)^2 + \left(\dfrac{K_{edij} R_{\theta 0di}}{\sqrt{N_{\alpha di} - 1}} - \dfrac{R_{\theta 0di}\sin\alpha}{\sqrt{N_{\alpha di}} + \cos\alpha}\right)^2} & (8.6-2) \end{cases}$$

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By classical electrodynamics and (2.1), in order to spin energy relativistic velocities of each to $\pi^{\pm}$ violation, the potential can be given to:

$$V_e = \oint \frac{e}{4\pi\varepsilon_0 L_\theta R_e \sqrt{1-\beta^2/N_\alpha}} dl_\theta \qquad (8.7)$$

Will (8. 3) into (8. 7), to:

$$V_e = \frac{e}{4\pi\varepsilon_0} \oint \frac{\sqrt{N_\alpha - 1}}{2\pi R_e \left(\sqrt{N_\alpha} + \cos\alpha\right)\sqrt{1-\beta^2/N_\alpha}} d\theta \qquad (8.8)$$

We still will be divided into V_e high-energy V_{egij} and low-energy V_{edij} two kinds. By figure 8.1 shows: varies with the position of the particles spiral ring, they are different. Will (8.6-1), (8.6-2), respectively into (8.8), to:

$$\begin{cases} V_{egij} = \oint \dfrac{e\sqrt{N_{\alpha gi} - 1}}{8\pi^2\varepsilon_0 R_{\theta 0gi}\sqrt{N_{\alpha gi} + \left[\dfrac{K_{egij}R_{\theta 0di}\left(\sqrt{N_{\alpha gi}} + \cos\alpha\right)}{R_{\theta 0gi}\sqrt{N_{\alpha di}-1}} - \sin\alpha\right]^2}\sqrt{1-\dfrac{\beta_{gi}^2}{N_{\alpha gi}}}} d\theta & (8.9-1) \\ V_{edij} = \oint \dfrac{e\sqrt{N_{\alpha di} - 1}}{8\pi^2\varepsilon_0 R_{\theta 0di}\sqrt{N_{\alpha di} + \left[\dfrac{K_{edij}\left(\sqrt{N_{\alpha di}} + \cos\alpha\right)}{\sqrt{N_{\alpha di}-1}} - \sin\alpha\right]^2}\sqrt{1-\dfrac{\beta_{di}^2}{N_{\alpha di}}}} d\theta & (8.9-2) \end{cases}$$

Obviously, within the nucleus of various high and low $\pi^{\pm}$ muon spin direction of electric field energy $\sum W_e$, should be each high, low-energy particle spiral loop net with $\pi^{\pm}$ violation in the spin direction interaction between algebra and electric energy. (See the back calculating examples).

8.3 Conditions within the nucleus $\pi^{\pm}$ meson spin direction

Magnetic field energy equation

First of all, within the nucleus of each layer, low $\pi^{\pm}$ violation, the high and low particles spiral loop composed of the orbital motion of the model, as each layer in nucleus, low-energy charged particles spiral loop combination of current solenoid layer. $\pi^{\pm}$ violation in the movement of the spin of the magnetic field as a classical electrodynamics of solenoid magnetic field. Because the conditions within the nucleus net with $\pi^{\pm}$ muon spin direction magnetic field is far less than the total energy of nuclear energy. According to the continuity of solenoid in the wind, and flux inside the solenoid and ends the basic remain unchanged, the solenoid mutual inductance between the layers of the magnetic field characteristics, with solenoid in axis at various points in the magnetic field strength instead of tube space center of the magnetic field strength. Magnetic field intensity can be H_i simplify calculation. With the spiral ring in net charge along with the spin axis distribution density change has nothing to do.

By (8.3) type, electrodynamics, figure 8.2, the equivalent current I, radius of $\overline{R}_I$ and magnetic field strength of H is given as:

$$\overline{R}_I = \frac{R_{\theta 0}\sqrt{N_\alpha}}{\sqrt{N_\alpha - 1}} \tag{8.10}$$

$$H = \frac{I}{2L_b}(\cos\alpha_1 + \cos\alpha_2) \tag{8.11}$$

Will type (8.10) into (8.11), to:

$$H = \frac{I}{\sqrt{4\overline{R}_I^2 + L_b^2}} \tag{8.12}$$

When determined by each layer particles spiral ring wave rail lateral for each layer solenoid border, from figure 7.1 and figure 7.1, (8.4) - see: make K_{bgij}, K_{bdij} for length coefficient, take the corresponding natural number, its length L_{bgij}, L_{bdij} should respectively:

$$\begin{cases} L_{bgij} = (K_{bdij} - 2)\dfrac{R_{\theta 0di}}{\sqrt{N_{\alpha di} - 1}} + \dfrac{2R_{\theta 0gi}}{\sqrt{N_{\alpha gi} - 1}} & (8.13-1) \\ L_{bdij} = K_{bdij}\dfrac{R_{\theta 0di}}{\sqrt{N_{\alpha di} - 1}} & (8.13-2) \end{cases}$$

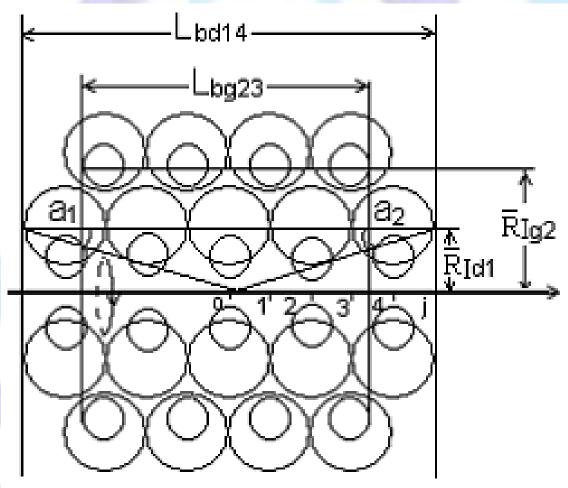

Figure 8.2 particles spiral ring layer in the magnetic energy calculation

When protons and neutrons are eVens within the nucleus, (not as eVen when protons, neutrons "decentralized" $\pi^{\pm}$ mesons in addition). Because high-energy particles spiral ring in net with π^{+} violation number $2P_i$, twice the number of low-energy π^{-} mesons are, (P_i for this layer, low-energy particle spiral rings of the total number of protons), therefore, by (1.5), (8.3), high and low particles spiral loop of the current intensity I_{gi}, I_{di}, respectively:

$$\begin{cases} I_{gi} = \dfrac{2P_i e\beta_{gi}c}{2\pi\overline{R}_{Igi}\sqrt{N_{\alpha gi}}} & (8.14-1) \\ I_{di} = \dfrac{-P_i e\beta_{di}c}{2\pi\overline{R}_{Idi}\sqrt{N_{\alpha di}}} & (8.14-2) \end{cases}$$

Will respectively equations (8.14) into (8.12), to each layer, low-energy particle spiral ring layer in the magnetic field strength, respectively:

$$\begin{cases} H_{gi} = \left(\frac{ec}{2\pi}\right)\frac{2P_i\beta_{gi}}{\bar{R}_{Igi}\sqrt{N_{\alpha gi}(4\bar{R}_{Igi}^2 + L_{bgi}^2)}} & (8.15-1) \\ H_{di} = \left(\frac{ec}{2\pi}\right)\frac{-P_i\beta_{di}}{\bar{R}_{Idi}\sqrt{N_{\alpha di}(4\bar{R}_{Idi}^2 + L_{bdi}^2)}} & (8.15-2) \end{cases}$$

Of each particle spiral ring layer in the magnetic energy W_{bi}, magnetic field mutual inductance between each layer should be considered. We can by the nuclear spin axis to calculate one by one. The outer to the inner have mutual inductance, inner to outer mutual inductance calculation. By classical electrodynamics principle, equations (8.13) ~ (8.15), the particles spiral ring of magnetic energy can be expressed as:

$$\begin{cases} W_{bg1} = \frac{u_0}{2}(H_{g1} + H_{d1} + H_{g2} + H_{d2} \dots\dots\dots + H_{g5} + H_{d5})^2 \pi\bar{R}_{Ig1}^2 L_{bg1j} & (8.16-1) \\ W_{bd1} = \frac{u_0}{2}(H_{d1} + H_{g2} \dots\dots\dots\dots + H_{g5} + H_{d5})^2 \pi(\bar{R}_{Id1}^2 - \bar{R}_{Ig1}^2) L_{bd1j} & (8.16-2) \\ \dots\dots \quad \dots\dots \quad \dots\dots \quad \dots\dots & \dots\dots \\ \dots\dots \quad \dots\dots \quad \dots\dots \quad \dots\dots & \dots\dots \\ W_{bg5} = \frac{u_0}{2}(H_{g5} + H_{d5})^2 \pi(\bar{R}_{Ig5}^2 - \bar{R}_{Id4}^2) L_{bg5j} & (8.16-9) \\ W_{bd5} = \frac{u_0}{2} H_{d5}^2 \pi(\bar{R}_{Id5}^2 - \bar{R}_{Ig5}^2) L_{bd5j} & (8.16-10) \end{cases}$$

8.4 Basic quality $\overline{m}_{d1}$ parameters within the nucleus

In the distribution of elements of the universe, ${}_{1}^{1}H$, ${}_{2}^{4}He$, ${}_{6}^{12}C$, ${}_{26}^{56}Fe$ maintenance... Etc is the stability of the common elements. But, two ${}_{2}^{4}He$ nucleus to form stable ${}_{4}^{8}B_e$ nucleus, consists of two ${}_{3}^{6}Li$ nucleus can stable ${}_{6}^{12}C$ nucleus, and nuclear number is a multiple of 4. Protons and neutrons are eVen, magnetic moment is zero. Don't like ${}_{2}^{6}He$ nuclei have unusual magnetic moment. That ${}_{6}^{12}C$ nucleus nuclear number, proton number should be at least, meet the requirements of chapter 7 nucleus structure model, the energy equation, the most simple of the atomic nuclei. It can be used as a nucleus the basis for the calculation of $\overline{m}_{d1}$, $\overline{m}_{g1}$, benchmark model parameters.

We have ${}_{6}^{12}C$ nucleus only by two pairs of high and low particles spiral ring side by side of the simplest type B nucleus, see figure 7.2. Laboratory determination of the carbon atom energy is 12u. Because electronic itself along the spin track motion of kinetic energy, the nuclei under the action of electric field force still has certain coulomb electrostatic field energy, so the quality of the nucleus for atomic mass minus all electronic rest mass plus all the ionization energy of $\sum \Delta W_{ei}$.

By figure 7.2 and figure 7.6, ${}_{6}^{12}C$ conditions within the nucleus high-energy particles spiral ring net with π_g^+

mesons in a total of 12, its own electric field energy should be $\left(12^2/2\right)eV_{eg11}$; Two side by side of low-energy particles spiral rings net with π_d^- both for six, and both sides symmetrical distribution, its own electric field energy should be $\left(6^2/2\right)eV_{ed11}$; π_d^- both with internal high-energy π_g^+ violation the interaction of electric field energy for $-6\times 12eV_{ed11}$; So, high carbon nuclei in ${}^{12}_{6}C$, low-energy particles spiral ring in excess π_g^+, π_d^- muon spin direction interaction should be total energy of the electric field:

$$W_e = (72V_{eg11} + 18V_{ed11} - 72V_{ed11})e \qquad (8.17)$$

Similarly, in ${}^{12}_{6}C$ nuclear spin direction of the magnetic field energy calculation, K_{bd11}= 4, in equations (8.13), (8.15) equations in P_i = 6, magnetic field total energy is:

$$W_b = W_{bg11} + W_{bd11} \qquad (8.18)$$

By figure 7.6, ${}^{12}_{6}C$ conditions within the nucleus in total by 18 high-energy $\pi_g^\pm$ mesons, 24 low-energy $\pi_d^\pm$ violation, and $\overline{m}_{g1} = 2\overline{m}_{d1}$, so, ${}^{12}_{6}C$ conditions within the nucleus of low-energy $\pi_d^\pm$both average benchmark energy $\overline{m}_{d1}$ should be:

$$\overline{m}_{d1} = \frac{12u - 6m_{e0} + \sum_{i=1}^{6}\frac{\Delta W_{ei}}{c^2} - \frac{(W_e + W_b)}{c^2}}{24 + 18\times 2} \qquad (8.19)$$

$\overline{m}_{d1}$ Parameters specific simulation program are as follows:

1. By (8.1), the determination of the $N_{a1}=N_{ag1}=N_{ad1}$=34/13, generation into (4.9), to: β_1=0.9989866946.

2. Estimate $\overline{m}_{d1}$ initial value, section 8.2 has been mentioned in the beginning, high in nucleus, low-energy particles spiral ring net with $\pi^\pm$ mesons in spin direction, each other can only nucleus of the electric and magnetic field between 0.2~0.5% of the total energy, we will take 0.3%. Measured by the laboratory carbon atoms within 6 electronics are total ionization energy $\sum \Delta W_{ei} = 1030.08\,ev$ ③. Will all these parameters into (8.19), is $\overline{m}_{d1}$ initial value for 3.310209258 x 10-28 kg.

3. The β_1, N_{ag1}, N_{ad1}, $\overline{m}_{d1}$, $\overline{m}_{g1}$ and initial value generation into (8.2), calculate $R_{\theta 0g1}$, $R_{\theta 0d1}$.

4. By figure 7.2 and figure 8.1, (8.9), (8.13) equation coefficient of the position: $K_{eg11} = K_{ed11} = 1$ $K_{bd11} = 4$

5. The $R_{\theta 0g1}$, $R_{\theta 0d1}$, N_{ag1}, N_{ad1} value generation into (8.10), respectively is $\overline{R}_{Ig1}$, $\overline{R}_{Id1}$, value.

6. Will N_{ag1}, N_{ad1}, β_1, $R_{\theta 0g1}$, $R_{\theta 0d1}$, K_{eg11} ……,equivalent generation into the equations (8.9), respectively is: V_{eg11}=1251884.632V , V_{ed11}=831741.7884V

7. Make K_{bd11} = 4, will be N_{ag1}, N_{ad1}, $R_{\theta 0g1}$, $R_{\theta 0d1}$ generation into the equations (8.13), respectively is L_{bg11}, L_{bd11} value.

8. Makes the number of protons P_1 = 6, the β_1, N_{ag1}, N_{ad1}, $\overline{R}_{Ig1}$, $\overline{R}_{Id1}$, L_{bg11}, L_{bd11} value generation into the

equations (8.15), calculate the magnetic field strength H_{g1}, H_{d1} value.

9. Will H_{g1}, H_{d1}, $\overline{R}_{Ig1}$, $\overline{R}_{Id1}$, L_{bg11}, L_{bd11} value generation in equations (8.16) first two type, calculate magnetic energy W_{bg1}=1.071369311×10^{-12}J, W_{bd1}=1.688824137×10^{-13}J

10. Will V_{eg11}, V_{ed11} value generation into (8.17), calculate the total electric energy W_e value.

11. Will W_e, W_b and $\sum \Delta W_{ei}$ value generation into (8.19), is the transition is $\overline{m}_{d1}$=3.304434003×10^{-28}Kg

12. Will transfer value $\overline{m}_{d1}$=3.304434003×10^{-28}Kg instead of 3 calculation program of $\overline{m}_{d1}$ initial value, repeat 3~11 calculation procedure, until the $\overline{m}_{d1}$=3.304461327×10^{-28}Kg for constant.

$\overline{m}_{d1}$= 3.304461327 x 10^{-28} kg benchmark constant said: in the number of protons $P_i \geq 6$ of the nucleus, proton number = neutron number is eVen the first layer of particles spiral rings, the original low $\pi_d^{\pm}$ meson energy is: $\overline{m}_{d1}$=3.304461327×10^{-28}Kg .

Original high-energy $\pi_g^{\pm}$ mesons are 2$\overline{m}_{d1}$ energys. Residual energy is high, low-energy particle spiral loop net with $\pi^{\pm}$ violation in the spin direction of interaction between electric and magnetic energy.

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9. Conditions within the nucleus N_{adi}, N_{agi}, $\overline{m}_{di}$, $\overline{m}_{gi}$ and nuclear Energy density and the electric field parameters

9.1. N_{adi}, N_{agi}, $\overline{m}_{di}$, $\overline{m}_{gi}$ parameters

By (7.2), charged elementary particles in the fluctuation, the spin track movement in the direction of comprehensive force analysis and calculation results show that charged particle in electric and magnetic field force, nuclear power field force, under the action of centrifugal force is along the wave vector rail inside diameter automatic shrinkage in the center of the trend. From figure 7.1 and figure 7.1 within the nucleus of the high and low particles spiral loop combination structure can also be seen in: each layer low-energy particles spiral ring of the spin track occupied space should be minimal, get recently, and not overlap. 2 ~ 5 layers of each pair of high and low particles spiral ring on the inside of the spin track $R_{\theta gi(0)}$, $R_{\theta di(0)}$ in also is such. All high, low-energy particle spiral ring in addition to the first layer, the quantum fluctuations of N_{adi}, N_{agi} shall take natural number.

Refer to section 7.1 of the nucleus kernel forces forming principle, by figure 9.1 low-energy particles spiral ring layer combination that: the bottom low-energy particles spiral ring in excess π_d^- both in the spin track intersec ting in the formation of ampere force can cover the economical and the upper surplus high and low $\pi^\pm$ muon solenoid ring particles of the axial electric field force, should be comprehensive comparison a, b, c, d,... each boundary point, internal non-oil imports all the ampere force and comprehensive relationship between the size of the axial electric field force and. That as space limit set of geometric conditions, by figure 9.1, the first $a_1 < 180°$, if by three same radius. Close packing of the cylinder is $a_1 = 150°$, so, a_1 scope is: $180° > a_1 > 150°$.

According to the set position and fluctuation, the relationship between the spin track parameters, low-energy particles spiral ring of n side by side, we have:

$$\begin{cases} n\overline{R}_{\alpha b2} - R_{\alpha 2}\sin\alpha_2 = (n+1)\overline{R}_{\alpha b1} - R_{\alpha 1}\sin\alpha_1 & (9.1-1) \\ R_{\theta 02} - R_{\theta 01} = R_{\alpha 2}\cos\alpha_2 - R_{\alpha 1}\cos\alpha_1 & (9.1-2) \end{cases}$$

Will (8.1), (8.2) and (8.4) into (9.1) equations, to: $K_d = \beta_2\overline{m}_{d2} / \beta_1\overline{m}_{d1}$ Checking:

$$\begin{cases} \dfrac{\sin\alpha_2}{\sqrt{N_{\alpha d2}} + \cos\alpha_2} = \dfrac{1}{\sqrt{N_{\alpha d2}-1}}\left[n - K_d\left(n+1-\dfrac{\sin\alpha_1\sqrt{N_{\alpha d1}-1}}{\sqrt{N_{\alpha d1}}+\cos\alpha_1}\right)\right] & (9.2-1) \\ \dfrac{\cos\alpha_2}{\sqrt{N_{\alpha d2}} + \cos\alpha_2} = 1 - \dfrac{K_d\sqrt{N_{\alpha d1}^2 - N_{\alpha d1}}}{(\sqrt{N_{\alpha d1}}+\cos\alpha_1)\sqrt{N_{\alpha d2}-1}} & (9.2-2) \end{cases}$$

By (9.2-2), to:

$$\cos\alpha_2 = \sqrt{N_{\alpha d2}}\left[\frac{\sqrt{N_{\alpha d2}-1}(\sqrt{N_{\alpha d1}}+\cos\alpha_1)}{K_d\sqrt{N_{\alpha d1}^2 - N_{\alpha d1}}} - 1\right] \qquad (9.3)$$

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Simultaneous equations (9.2) to:

$$\frac{1}{(\sqrt{N_{\alpha d2}}+\cos\alpha_2)^2}=\frac{1}{N_{\alpha d2}-1}\left\{\begin{array}{l}\left[n-K_d\left(n+1-\dfrac{\sin\alpha_1\sqrt{N_{\alpha d1}-1}}{\sqrt{N_{\alpha d1}}+\cos\alpha_1}\right)\right]^2\\ +\left[\sqrt{N_{\alpha d2}-1}-\dfrac{K_d\sqrt{N_{\alpha d1}^2-N_{\alpha d1}}}{\sqrt{N_{\alpha d1}}+\cos\alpha_1}\right]^2\end{array}\right\} \quad (9.4)$$

Will type (9.3) into (9.4), to:

$$\frac{K_d\sqrt{N_{\alpha d1}^2-N_{\alpha d1}}}{\sqrt{N_{\alpha d1}}+\cos\alpha_1}=\sqrt{N_{\alpha d2}}\left\{\begin{array}{l}\left[n-K_d\left(n+1-\dfrac{\sin\alpha_1\sqrt{N_{\alpha d1}-1}}{\sqrt{N_{\alpha d1}}+\cos\alpha_1}\right)\right]^2\\ +\left[\sqrt{N_{\alpha d2}-1}-\dfrac{K_d\sqrt{N_{\alpha d1}^2-N_{\alpha d1}}}{\sqrt{N_{\alpha d1}}+\cos\alpha_1}\right]^2\end{array}\right\}^{1/2} \quad (9.5)$$

From figure 9.1, the upper and the lower low-energy particles spiral ring inlaid space relationship, equations (9.1) and (9.5) that the mathematical physics graphics meaning is: the upper low-energy particles spiral ring should be staggered as far as possible close to the lower, but in a, b, c, d,... Each point can only as far as possible close to, can't tangent or intersection. So we must in the 180° > a_1 >150° range, solution (9.5), is on behalf of the rail tangent or position of the intersection of equations N_{ad2} the biggest natural number, add 1, make it become no equation, such ability is in recently, and not tangent or intersection, and the inner and outer rail left electric dipole rotation and axial clearance swing adjustment of space.

By (6.2 1), (8.1) and (8.2), a pair of high and low particles spiral ring should be on the inside of the spin track closely adjacent, but can't overlap, we have:

$$\begin{cases} R_{\theta di(0)}=\dfrac{h\sqrt{N_{\alpha di}^2-N_{\alpha di}}}{2\pi\beta_{di}c\overline{m}_{di}(\sqrt{N_{\alpha di}}+1)} & (9.6-1)\\ R_{\theta gi(0)}=\dfrac{h\sqrt{N_{\alpha gi}^2-N_{\alpha gi}}}{2\pi\beta_{gi}c\overline{m}_{gi}(\sqrt{N_{\alpha gi}}+1)} & (9.6-2)\end{cases}$$

Through simulation, we must make $R_{\theta gi(0)}$ is slightly larger than the $R_{\theta di(0)}$. By (7.3), each layer, low-energy particle spiral ring in the number of protons is equal to the number of neutrons are eVen, under the situation of the total magnetic 0 condition is:

$$K_{mui}=\frac{\overline{m}_{gi}}{\overline{m}_{di}}=\frac{2\oint\dfrac{N_{\alpha gi}-1}{(\sqrt{N_{\alpha gi}}+\cos\alpha)^2}d\theta}{\oint\dfrac{N_{\alpha di}-1}{(\sqrt{N_{\alpha di}}+\cos\alpha)^2}d\theta} \quad (9.7)$$

Obviously, by figure 7.5, (9.7), too: when the layer, low-energy particle spiral ring number of protons equals the number of neutrons are eVen, high, low $\pi^{\pm}$ source energy relationship is:

$$6\overline{m}_{gi}+8\overline{m}_{di}=20\overline{m}_{d1} \qquad (9.8)$$

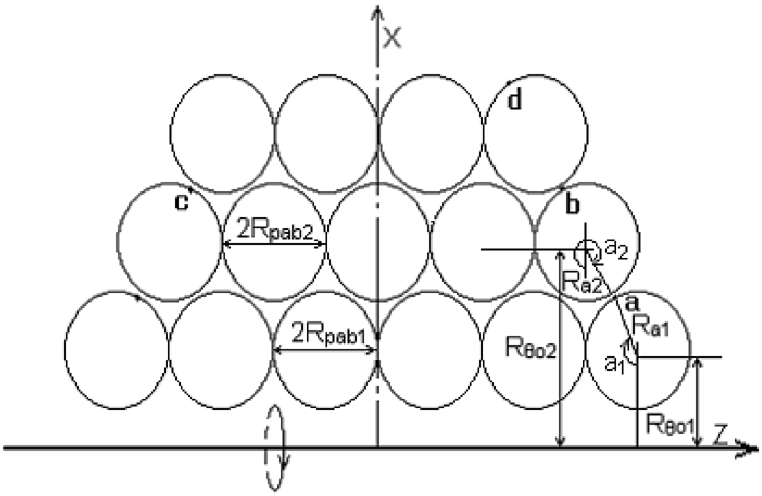

Figure 9.1 low-energy particles in the nucleus of solenoid ring inlaid portfolio

Will K_{mui} value generation into (9.8), to:

$$\overline{m}_{di}=\frac{20\overline{m}_{d1}}{6K_{mui}+8} \qquad (9.9)$$

By equations (9.9) and (9.2), (9.5) in K_d and can be expressed as:

$$K_d=\frac{\beta_{di+1}(6K_{mui}+8)}{\beta_{di}(6K_{mui+1}+8)} \qquad (9.10)$$

To sum up, within the nucleus N_{ad}, N_{ag}, $\overline{m}_{di}$, $\overline{m}_{gi}$, parameters such as simulation program is as follows:

1. Shilling (9.5) in type K_d = 1, N_{ad1}= N_{ag1} = 34/13, n = 5, generation of (9.5) in type, too: N_{ad2} =15 is the largest natural number, at this moment: a_1 = 160.5441181 °

2. Take N_{ad2} = 16, generation of (4.9) in type, have β_{d2} . Behind a K_{mu2} = 1.95, (with the calculation results are expected to), and (9.9), (9.7) in type, have $\overline{m}_{d2}$, $\overline{m}_{g2}$ value.

3. Make N_{ag2} = 48, generation of (4.9) in type, have β_{g2}. Will N_{ad2}、β_{d2}、$\overline{m}_{d2}$, N_{ag2}, β_{g2}, $\overline{m}_{g2}$, respectively into (9.6-1), (9.6-2), to: $R_{\theta d2(0)}$=3.25289×10^{-15}m, $R_{\theta g2(0)}$=3.22557×10^{-15}m，$R_{\theta g2(0)}$<$R_{\theta d2(0)}$, obviously not appropriate.

4. Adjust N_{ag2} = 49, repeat 3 calculation procedure, to: $R_{\theta g2(0)}$=3.26392×10^{-15}m, slightly larger than the $R_{\theta d2(0)}$=3.25289×10^{-15}m, this is question.

5. Will N_{ad2} = 16, N_{ag2} = 49, generation of (9.7) in type, too: K_{mu2} = 1.95655948

6. Repeat 2 ~ 4 calculation program: $R_{\theta d2(0)}=3.25939\times10^{-15}m$, $R_{\theta g2(0)}=3.25948\times10^{-15}m$, the result still. According to (7.3) and the calculation procedure, may have other releVant parameters:

$\beta_{d2}=0.998751741$ $\quad U_{\pi-}=-2.605996272\times10^{-26}J/T$

$\overline{m}_{g2}=6.550745472\times10^{-28}Kg$ $\quad \overline{m}_{d2}=3.348094213\times10^{-28}Kg$

7. The β_{d2}, β_{g2}, $\overline{m}_{g2}$, $\overline{m}_{d2}$ value, again into (9.10), to: $K_d=1.012934831$. To $N_{ad1}=34/13$, $N_{ad2}=15$, generation of (9.5) in type, too: $a_1=158.4362343$ °, than estimated value is small. If N_{ad2} = 16 generation into the duplication in calculation, this equation is still no solution. By the same token, if for n=1~ 7 also have no solution.

Conditions within the nucleus N_{ad}, N_{ag}, $\overline{m}_{di}$, $\overline{m}_{gi}$, parameters such as simulation results table 9.1

Spiral ring layer i	1	2	3	4	5
$N_{ad\,i}$ $N_{ag\,i}$	34/13 34/13	16 50	34 114	58 203	88 316
$\times10^{-15}m$ $R_{\theta d\,i\,(0)}$ $R_{\theta g\,i\,(0)}$	 0.83688 0.41844	 3.25899 3.29768	 5.19382 5.20204	 7.08675 7.09552	 8.96202 8.96994
$\times10^{-28}Kg$ $\overline{m}_{di}$, $\overline{m}_{gi}$	 3.304461327 6.608922654	 3.348508962 6.550192474	 3.325343178 6.581080186	 3.316814573 6.592451659	 3.312652282 6.598001381
$K_{mu\,i}$	2	1.956151991	1.979067974	1.987585231	1.991757909
$\times10^{-26}J/T$ $U_{d\pi--}$ $U_{g\pi+}$	 -3.25301628 1.626508137	 -2.605673491 1.302836745	 -2.578713629 1.289356815	 -2.569286142 1.284643071	 -2.56485582 1.282427909

8. Reference 1 ~ 7 calculation procedure, we find the other layers of N_{adi}, N_{agi}, $\overline{m}_{di}$, $\overline{m}_{gi}$ parameters, such as shown in table 9.1.

(note: the second layer of $R_{\theta g2(0)}$ is only slightly larger than the $R_{\theta d2(0)}$ value, eVen electric dipole rotation space is not enough, so adjust take N_{ad2} = 16, N_{ag2} = 50)

By (8.19), (9.7) ~ (9.9), table 9.1 the results see: within the nucleus, eVery layer, low-energy particle spiral ring of high and low $\pi^{\pm}$source energy and the formation of the spin direction magnetic moment is constant, only with the spin track quantum fluctuations in interest of N_{ai}. Each layers between the high and low $\pi^{\pm}$both original energy and strength are not the same. Number of protons is equal to the number of neutrons and are eVen the nucleus of the fluctuation, the movement of the spin direction of the original total energy for $\sum 5A_i\overline{m}_{d1}$, (A_i for each layer of the nuclear), and magnetic moment is zero.

If the protons and neutrons is not eVen, should refer to section 7.1, first according to the actual total energy and

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strength of the nucleus value simulation. Determination alone protons, neutrons "decentralized" of the $\pi^{\pm}$ mesons in eVery particle of solenoid the distribution state of link layer, and calculated separately by the state's high and low $\pi^{\pm}$ muon accumulative total energy niv original magnetic moment. (see chapter 11, 12).

9.2 Nuclear energy, the electric field parameters within the nucleus

9.2.1 Conditions within the nucleus of each particle spiral ring of nuclear number density

By (1.3-2), (1.6), a low-energy $\pi_d^{\pm}$muon spin elliptical orbit, the average radius, which is elliptic half axis of $\overline{R}_{\theta di}$ for:

$$\overline{R}_{\theta di} = \frac{hN_{\alpha di}}{2\pi\beta_i c\overline{m}_{di}\sqrt{N_{\alpha di}-1}} \qquad (9.11)$$

Experiments have confirmed: nuclear and excess charge are within the nucleus of density distribution, boundary is diffuse layer, see figure 7.3. When we are in carbon conditions within the nucleus of the two side by side particles spiral ring in 12 nuclear, make layer, see figure 7.6, we can based on the average radius of $\overline{R}_{\theta di}$, related parameters according to table 9.1, to the middle of the inner particles spiral ring density for the principle, such as saturated layer, step by step, one by one particle spiral ring outside push each layer of the nucleon.

Conditions within the nucleus nucleon density, the number of each layer of nuclear should be natural, and they must all be eVen. Because each layer of the β_i, $\overline{m}_{di}$ value approximation, (9.11), the $h / 2\pi\beta_i\overline{m}_{di}c$ can be regarded as constant. Set each layer particles spiral rings of nuclear along the spin track average perimeter of $2\pi\overline{R}_{\theta di}$ for density distribution, such as each particle spiral rings of nuclear for A_i, is:

$$A_i = \frac{6N_{\alpha di}\sqrt{N_{\alpha d1}-1}}{N_{\alpha d1}\sqrt{N_{\alpha di}-1}} \qquad (9.12)$$

To N_{adi} = 34/13, 16, 34, 58, 88 respectively into (9.12), results in the most close to the eVen number of each layer to particles spiral ring should fill the number of nuclear respectively: 6, 12, 18, 22, 28.

9.2.2 Within the nucleus high, low-energy particle spiral ring net with $\pi^{\pm}$ mesons in potential can parameters

Refer to section 8.2 conditions within the nucleus net with $\pi^{\pm}$ muon electric field energy equation, according to table 9.1 determine each particle of spiral rings in high and low $\pi^{\pm}$ muon quantum fluctuations of number N_{adi}, N_{agi}, original energy $\overline{m}_{di}$, $\overline{m}_{gi}$, value, high in nucleus, low-energy particles spiral ring net with $\pi^{\pm}$ mesons in potential can parameter calculation procedure is as follows:

1. Will N_{adi}, N_{agi} value respectively into (4.9), calculate each layer $\pi^{\pm}$ both wave velocity coefficient β_{di}, β_{gi} value.

2. Will N_{adi}, N_{agi}, $\overline{m}_{di}$, $\overline{m}_{gi}$, β_{di}, β_{gi} generation into (8.2), respectively is $R_{\theta0di}$, $R_{\theta0gi}$ value.

3. According to figure 7.1 and figure 7.2, decide within the nucleus of A and B type structure, by (8.5) and (8.6)

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equations of each coefficient to the position of the high, low-energy particles spiral ring $K_{egij} = K_{edij} = 0 \sim 6$ of A natural number.

Type A each, low-energy particles spiral ring high within the nucleus Net with $\pi^{\pm}$ mesons in potential being access (unit: v) table 9.2

N_{ai} \ j	0	1	2	3	4	5	6
88 316	144784.2304 y. 151861.9825		141618.5269 z. 148192.4244				
58 203		v. 177326.8464 u. 187584.5213		x. 166483.1247 w. 174745.2164			
34 114	o. 234938.4252 m. 252547.2638		q. 222384.0614 n. 236860.6565		t. 194154.5797 s. 203024.7476		
16 50		h. 337957.7853 g. 366998.7106		k. 279802.5875 i. 293490.8388		r. 219311.3930 p. 223733.7219	
34/13 34/13	b. 978319.7079 a. 1956639.416		d. 624855.4140 c. 771494.0723		f. 385747.0362 e. .416814.5755		l. 271894.2180 j. 282481.5199

4. Will corresponding N_{adi}, N_{agi}, $\overline{m}_{di}$, $\overline{m}_{gi}$, β_{di}, β_{gi} and K_{egij}, K_{edij} value, respectively into (8.9-1), (8.9-2) type, you can work out A and B type all high in nucleus, low-energy particles spiral rings, each net with $\pi^{\pm}$ violation of electric parameters, see table 9.2 and table 9.3. English letters both on behalf of the potential value of parameters in table size order, also as the column parameter in subsequent analysis and calculation the location of the code used (the same below).

Type B each, low-energy particles spiral ring high within the nucleus Net with $\pi^{\pm}$ mesons in potential being access (unit: v) table 9.3

N_{ai} \ j	0	1	2	3	4	5
88 316		v. 143972.9349 u. 150919.0911				
58 203	s. 178836.7777 q. 189396.5791		t. 173016.7819 r. 182445.3143			
34 114		n. 231601.1851 l. 248335.1566		p. 209202.2517 o. 220829.7834		
16 50	f. 348109.8205 e. 380656.7922		j. 312143.6925 h. 333443.6084		m. 247821.4242 k. 255901.5851	
34/13 34/13		b. 830297.5310 a. 1249710.828		d. 481404.0368 c. 543788.4359		i. 319619.5653 g. 336991.4616

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9.2.3 The application of the calculation parameters within the nucleus

Because conditions within the nucleus protons and neutrons are eVen a, its total magnetic is 0, so (9.7) ~ (9.10) and calculation of $\overline{m}_{di}$, $\overline{m}_{gi}$ in table 9.1, the original data is nuclear energy within each layer particles spiral ring of equal number of protons, neutrons and are eVen under the condition of only. From the nuclide commonly used data sheet (4) check: in nature can be stable in the entire nucleus, in addition to the ${}_{2}^{3}He$ nuclear, internal number of neutrons are greater than the number of protons. Unstable nuclei, from nuclear power charge + number 29 of ${}_{29}^{58}Cu$ nucleus, the internal number of neutrons are greater than the number of protons.

Extra neutron in pairs only will be the "decentralized" all of the high and low π± violation according to the figure 7.4 and figure 7.5 a and b solutions into the same layer particles spiral rings, and magnetic moment is zero. So, from the table 9.1 $\overline{m}_{di}$, $\overline{m}_{gi}$, original energy data, calculate each pair of extra neutron in 2, 3, 4, 5 particles spiral ring has the relative 1 layer the original energy increment of $\Delta\overline{m}_{ni}$ is: (if lack of neutron log, $\Delta\overline{m}_{ni}$ take negative, as shown in the figure 11.1) on the right side:

$$\Delta\overline{m}_{ni}=2(\overline{m}_{di}-\overline{m}_{gi})+6(\overline{m}_{di}-\overline{m}_{d1}) \quad (9.13)$$

Similarly, without changing nuclear magnetic and nuclear power load distribution condition, when each pair of high or low π±violation in the particles spiral ring stimulated or transition between layers, will also lead to π±muon original energy changes. We with $\Delta\overline{m}_{gi}^{\pm}$, $\Delta\overline{m}_{di}^{\pm}$, said, (see chapter 11 ~ 14 calculating examples).

Comprehensive table 9.1 and table 9.2 and table 9.3 the calculation of the parameters, we can not only according to the total energy conservation, atoms, the total energy and nuclear magnetic moment, simulation, calculation of a nucleus within the particles spiral ring layer net with π± mesons in the distribution of state, but also can judge of extra neutron distribution leVel, or paired π± mesons, single π± both inspire and transition. (see chapter 11 ~ 14 calculating examples).

10. Nuclear force equation and parameter calculation

10.1. Electric field force equation and parameter calculation within the nucleus

Conditions within the nucleus eVery high, low-energy particle spiral ring in excess of $\pi^{\pm}$ violation, the spin track movement, from the center of a nucleus in R_e, electric field force in spin rail axial component $F_{e\theta j}$, is a very complex variables, we still need integral equation to calculate, see figure 10.1.

According to equations (8.9) in the nucleus in $\pi^{\pm}$ muon derivations of the equations of potential can process, by (8.3), $\pi^{\pm}$ muon spin track along the length of the spin direction L_{θ} is given as:

$$L_{\theta i}=\frac{2\pi R_{\theta 0i}\sqrt{N_{\alpha i}}}{\sqrt{N_{\alpha i}-1}} \qquad (10.1)$$

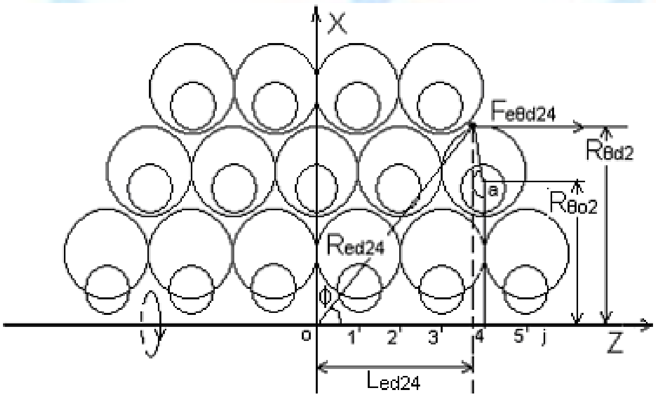

Figure 10.1 $\pi^{\pm}$ muon within the nucleus formation of electri Field force diagram

Each particle spiral ring each of the surplus of $\pi^{\pm}$ muon relative nuclei formed in the center of the electric field force, along the spin axis and the component of $F_{e\theta}$, suppose particles spiral rings surrounded by excess nuclear power charge for K_{ei}, while its general for:

$$F_{e\theta i}=\frac{K_{ei}e^2}{4\pi\varepsilon_0}\oint\frac{R_{\theta i}\cos\phi}{L_{\theta i}R_{ei}^2\sqrt{1-\left(v_{\theta i}/c\right)^2}}d\theta \qquad (10.2)$$

$$\begin{cases}\cos\phi=\dfrac{L_{eij}}{R_{ei}} & (10.3-1)\\ L_{egij}=\dfrac{K_{edij}R_{\theta 0di}}{\sqrt{N_{\alpha di}-1}}-\dfrac{R_{\theta 0gi}\sin\alpha}{\sqrt{N_{\alpha gi}}+\cos\alpha} & (10.3-2)\\ L_{edij}=\dfrac{K_{edij}R_{\theta 0di}}{\sqrt{N_{\alpha di}-1}}-\dfrac{R_{\theta 0di}\sin\alpha}{\sqrt{N_{\alpha di}}+\cos\alpha} & (10.3-3)\\ R_{egij}^2=L_{egij}^2+R_{\theta gi}^2 & (10.3-4)\\ R_{edij}^2=L_{edij}^2+R_{\theta di}^2 & (10.3-5)\end{cases}$$

Similarly, by figure 10.1, (8.4), to: high and low particles spiral ring of L_{ei}, $\cos\Phi$, R_{ei}, stores to see the relationship between the equations (10.3).

Will be respectively equations (10.3) into (10.2), to:

$$
\begin{cases}
F_{e\theta gij}=\oint \dfrac{K_{ei}e^2\sqrt{N_{\alpha gi}-1}\left[\dfrac{K_{edij}R_{\theta 0di}\left(\sqrt{N_{\alpha gi}}+\cos\alpha\right)}{R_{\theta 0gi}\sqrt{N_{\alpha di}-1}}-\sin\alpha\right]\left(\sqrt{N_{\alpha gi}}+\cos\alpha\right)}{8\pi^2\varepsilon_0 R_{\theta 0gi}^2\left\{\left[\dfrac{K_{edij}R_{\theta 0di}\left(\sqrt{N_{\alpha gi}}+\cos\alpha\right)}{R_{\theta 0gi}\sqrt{N_{\alpha di}-1}}-\sin\alpha\right]^2+N_{\alpha gi}\right\}^{\frac{3}{2}}\sqrt{1-\dfrac{\beta_{gi}^2}{N_{\alpha gi}}}}d\theta & (10.4-1)\\
F_{e\theta dij}=\oint \dfrac{K_{ei}e^2\sqrt{N_{\alpha di}-1}\left[\dfrac{K_{edij}\left(\sqrt{N_{\alpha di}}+\cos\alpha\right)}{\sqrt{N_{\alpha di}-1}}-\sin\alpha\right]\left(\sqrt{N_{\alpha di}}+\cos\alpha\right)}{8\pi^2\varepsilon_0 R_{\theta 0di}^2\left\{\left[\dfrac{K_{edij}\left(\sqrt{N_{\alpha di}}+\cos\alpha\right)}{\sqrt{N_{\alpha di}-1}}-\sin\alpha\right]^2+N_{\alpha di}\right\}^{\frac{3}{2}}\sqrt{1-\dfrac{\beta_{di}^2}{N_{\alpha di}}}}d\theta & (10.4-2)
\end{cases}
$$

Refer to 9.2 electricity field energy parameters of calculation program: A and B type all high in nucleus, low-energy particles spiral rings in each net with $\pi^{\pm}$ muon along the spin track the electric field of the axial force parameters see table 10.1 and table 10.1. (K_{ei} valuesfor the time being).

Type A nucleus in all high, low-energy particle spiral loop net with $\pi^{\pm}$ violation Along the spin track the axial electric field force parameters calculation results table (unit: Newton N) table 10.1

j / N_{ai}	0	1	2	3	4	5	6
88 316	 y.		 z.				
58 203		v. 0.4498676718 u. 0.5389700316		x. 1.116732986 w. 1.307093887			
34 114	o. m.		q. 1.749312461 n. 2.156310585		t. 2.327181743 s. 2.715754808		
16 50		h. 2.957833954 g. 3.939440164		k. 5.021374766 i. 6.042344046		r. 4.023396124 p. 4.460667800	
34/13 34/13	b. a.		d. 26.27706782 c. 47.21591785		f. 11.80397946 e. 14.76239942		l. 6.156321505 j. 6.887946657

10.2. low-energy particles in the nucleus of solenoid ring rail Tangent equation and parameter calculation of ampere force

From in figure 7.1 and figure 7.2 see: economical adjacent low-energy particles spiral ring of $\pi_d^{\pm}$ mesons, will remain fixed interval in the same wave, spin speed staggered successively by tangent track; When $v_a \to c$, the fluctuation of electricity, the direction of the magnetic field perpendicular to the wave track, despite the strength is very big, but by (2.1), (2.2), the fluctuation track the tangent direction of electric and magnetic field force is very weak; Only in the spin current direction orbit can have significant interaction, because $K_r = 10^4$, $K_{r'} = 8\times10^{15}$ orders of magnitude, so can become a great track current ampere force itself.

Particles spiral ring of π_g^{+} muon electric field force each other.

By (1.3 1) type, figure 10.2, the two adjacent side by side A and B low-energy particles spiral ring rail on the intersec ting, fluctuation elliptical orbit radius R_a, half axis R_{aa}, half focal length R_{ac}, half R_{ab} short axis, and a_1 value equation is as follows:

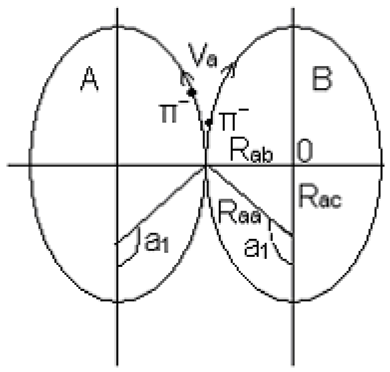

Figure 10.2 fluctuations in elliptical orbit parameters relationship

$$
\begin{cases}
R_\alpha = \dfrac{R_{\theta 0}}{\sqrt{N_\alpha} + \cos\alpha} & (10.5-1) \\
R_{\alpha a} = \dfrac{R_{\theta 0}\sqrt{N_\alpha}}{N_\alpha - 1} & (10.5-2) \\
R_{\alpha c} = \dfrac{R_{\theta 0}}{N_\alpha - 1} & (10.5-3) \\
R_{\alpha b} = \dfrac{R_{\theta 0}}{\sqrt{N_\alpha - 1}} & (10.5-4) \\
\alpha_1 = \arccos\dfrac{-1}{\sqrt{N_\alpha}} & (10.5-5)
\end{cases}
$$

In the fluctuation, the spin track tangent, side by side A and B in low-energy particle spiral ring net with π_d^- both electric dipole rotation diameter $2K_rR_a$ for a—a`、b—b` line, see figure 10.3. In the intersection of plane, the current forming principle as shown in figure 10.3: eVery π_d^- violation by a—a`、b—b` line intersection of plane, is equivalent to a load of charged particles from a to a ` and from b to b ` movement; Formed from a` to a from b to b's current I_a, I_b. When A and B two pairs of high and low combination of particles spiral rings, because of the spin axis of the electric field repelling force, are in A state of tension, as shown by the figure 10.4, as long as the I_a, I_b ampere force is greater than the comprehensive electric field between repelling force, can preVent them from further stretching to disconnect. At this time:

$$
\begin{cases}
\phi = \alpha_1 - 90^\circ & (10.6\text{-}1) \\
L_b = 4K_r\overline{R}_\alpha \sin\phi & (10.6\text{-}2)
\end{cases}
$$

Principle of electrodynamics, each π_d^- both in tangent track along the spin direction of current strength I, magnetic field intensity B respectively:

$$
\begin{cases}
I = \dfrac{-e\beta c}{2\pi\overline{R}_I\sqrt{N_\alpha}} & (10.7-1) \\
B = \dfrac{Iu_0\cos 2\phi}{2\pi L_b} & (10.7-2)
\end{cases}
$$

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Type B all high in nucleus, low-energy particles spiral net with $\pi^{\pm}$ mesons in ring Along the spin track the axial electric field force parameters calculation results table (unit: Newton N) table 10.2

j / N_{ai}	0	1	2	3	4	5	6
88 316		v. 0.2424503354 u. 0.2815204385					
58 203	s. q.		t. 0.8356753262 r. 0.9917450997				
34 114		n. 0.9881705354 l. 1.242583809		p. 2.183956711 o. 2.621118729			
16 50	f. e.		j. 4.654238992 h. 5.908301428		m. 4.647168885 k. 5.33996127		
34/13 34/13		b. 33.60158953 a. 47.21591785		d. 17.42218092 c. 24.62528602		i. 8.351933465 g. 9.747158235	

Note: table 10.2 a column position data for the two side by side of high-energy

Will type (8.10) into (10.7), to:

$$I = \frac{-e\beta c\sqrt{N_\alpha - 1}}{2\pi R_{\theta 0} N_\alpha} \qquad (10.8)$$

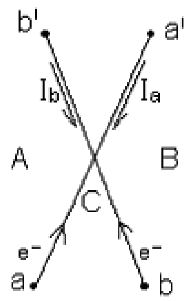

Figure 10.3 π_d^- both within the electric dipole rotation plane current forming principle diagram

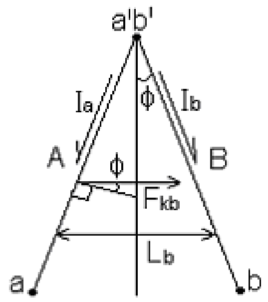

Figure 10.4 Between I_a and I_b current ampere force diagram

Because a\` b\` point I_a and I_b current track overlap, by (3.4), calculateK_r=8.0x10^{-15}, so, each orbit between tangent I_a and I_b current F_{kb} of ampere force is:

$$F_{kb} = \int_{Kr\bullet\bar{R}\alpha}^{2Kr\bar{R}\alpha} IB\cos\phi dl = \int_{Kr\bullet\bar{R}\alpha}^{2Kr\bar{R}\alpha} \frac{u_0 I_a I_b \cos\phi\cos 2\phi}{4\pi\sin\phi(2K_r\bar{R}_\alpha)} d(2K_r\bar{R}_\alpha) \qquad (10.9)$$

Will (10.7-1) and (10.9) in type integral to:

$$F_{kb}=\frac{e^2\beta^2(N_\alpha-1)\cos\phi\cos2\phi}{4\pi\varepsilon_0(2\pi R_{\theta0})^2N_\alpha^2\sin\phi}\ln(2K_r\overline{R}_\alpha)\Big|_{Kr\bullet\overline{R}\alpha}^{2Kr\overline{R}\alpha} \qquad (10.10)$$

For economical adjacent low-energy particles spiral rings, each spin track cycle have N_a tangent track, so:

$$F_{kb}=\frac{e^2\beta^2(N_\alpha-1)\cos\phi\cos2\phi}{4\pi\varepsilon_0(2\pi R_{\theta0})^2N_\alpha\sin\phi}\ln(2K_r\overline{R}_\alpha)\Big|_{Kr\bullet\overline{R}\alpha}^{2Kr\overline{R}\alpha} \qquad (10.11)$$

From table 9.1 to determine the N_{adi}, $\overline{m}_{di}$ parameters, respectively into (4.9), (1.6), (10.5 5) type, find β_i, $R_{\theta 0i}$, a_i value; The β_i, N_{adi}, a_i value generation into (2.10), respectively, for K_{ri} value; Finally by F_{kb} value (10.11), the results shown in table 10.3.

Low-energy particles spiral ring rail tangent place I_a and I_b current parameters of ampere force calculation results

table 10.3

N_{adi} / Parameters	34/13	16	34	58	88
$\overline{m}_{di}\times10^{-28}$Kg	3.304461327	3.348508962	3.325343178	3.316814573	3.312652282
$\beta_{d\,i}$	0.9989866946	0.998751741	0.9987299178	0.9987219848	0.998718171
a°	128.1955197	104.4775122	99.87496139	97.54509259	96.11937788
$K_{ri}\times10^{-5}$	14.1733	6.36539	4.40105	3.37903	2.74688
F_{kbi}(牛)	14.26555772	26.21495095	19.10379436	14.8492151	12.09695581

10.3 Nucleus side by side in adjacent particles spiral ring

The spin direction ampere force equation

For each pair of high and low particles spiral ring, the spin direction each net with $\pi^{\pm}$ muon form the current strength of AA $I_{\theta i}$, by (10.8), to:

$$I_{\theta i}=\frac{e\beta_i c\sqrt{N_{\alpha i}-1}}{2\pi R_{\theta0i}N_{\alpha i}} \qquad (10.12)$$

Because the ampere force between particles spiral ring current not only stronger than the nuclear field, rail tangent of ampere force much smaller; And inversely proportional to the distance between each other, the lower leVel between the smaller; So, we as long as the calculation between adjacent particles spiral ring current ampere force is enough, and to simplify the calculation. First of all, to $\overline{m}_{gi}=2\overline{m}_{di}=2\overline{m}_{d1}$, β_i=1, the type (1.6) into (10.12), to:

$$I_{\theta i}=\frac{ec^2\overline{m}_i}{N_{\alpha i}h} \qquad (10.13)$$

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Set each of high, low-energy particle spiral loop net with π_g^+ number of mesons is N_{egij}, net with π_d^- both for N_{edij}. Each of high, low-energy particle spiral loop net current $\Delta I_{\theta ij}$, for high and low particles spiral rings contain net with $\pi^{\pm}$ muon formed in the spin direction current of algebra and:

$$\Delta I_{\theta ij} = \frac{ec^2\overline{m}_{di}}{h}\left(\frac{2N_{egij}}{N_{\alpha gij}} - \frac{N_{edij}}{N_{\alpha dij}}\right) \qquad (10.14)$$

Side by side adjacent ampere force between two particles spiral ring current $\Delta F_{\theta bij}$, we can reference (10.7-2), (10.9) type simplifies calculation, to:

$$\begin{cases} \Delta B_{\theta ij} = \dfrac{u_0 \Delta I_{\theta ij}}{2\pi(2R_{\alpha bi})} & (10.15-1) \\ \Delta F_{\theta bij} = \Delta I_{\theta ij}\Delta B_{\theta ij}(2\pi\overline{R}_{I\ i}) & (10.15-2) \end{cases}$$

To (8.10), (10.5-4), (10.14) and (10.15) into the equations:

$$\Delta F_{\theta bij} = \frac{e^2}{2\varepsilon_0 N_{\alpha di}^{1.5}}\left(\frac{\overline{m}_{di}c}{h}\right)^2\left(2N_{egi1}\frac{N_{\alpha di}}{N_{\alpha gi}} - N_{edi1}\right)\left(2N_{egi2}\frac{N_{\alpha di}}{N_{\alpha gi}} - N_{edi2}\right) \qquad (10.16)$$

Each pair of high and low particles spiral rings, in addition to the atomic nucleus edge, it is the left and right sides adjacent particles spiral ring of ampere force interaction, therefore, can be made by the resultant force on both sides of the $\Delta F_{\theta bij}$ said:

$$\Delta F_{\theta bij} = \frac{(e\overline{m}_{d1}c)^2}{2\varepsilon_0 h^2 N_{\alpha di}^{1.5}}\left(2N_{egi2}\frac{N_{\alpha di}}{N_{\alpha gi}} - N_{edi2}\right)\left[2\frac{N_{\alpha di}}{N_{\alpha gi}}(N_{egi1} - N_{egi3}) - (N_{edi1} - N_{edi3})\right] \qquad (10.17)$$

By (10.17), $K_{fb} = \dfrac{(e\overline{m}_{di}c)^2}{2\varepsilon_0 h^2 N_{\alpha di}^{1.5}}$, N_{edi} = 34/13, 16, 34, 58, 88. Generation into, K_{fb} respectively: (unit: Newton)

7.660711103、 0.506281966、 0.1634383828、

0.07335512162、0.03925079193

Will table 10.1 ~ 10.3 compared with the corresponding data, as well as after facing the nucleus internal structure parameters integrated computation verification and nucleus radioactive decay analysis of the principle of the calculation results show that low-energy particles between spiral ring current track side by side on the intersec ting oneself ampere force, the range is limited to track tangent $K_r\overline{R}_\alpha$ within the scope of minimal, and mutual attraction is quite large, and the comprehensive electric field within the nucleus repelling force just can be composed of a pair of phase equilibrium of the nuclear force. Side by side of ampere force between particles spiral ring current, only 1 layer must attend calculation, the other can be neglected.

10.4. Same layer adjacent low-energy particles spiral ring the spin direction Ampere force equation comparing the calculation results

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By (10.8), each low-energy particles spiral ring net with π_d^- number of d - violation is N_{ei}, the average current strength is I_i, by the (equations (10.15), (8.10), adjacent low-energy particles spiral ring the spin direction whole ampere force $\overline{F}_{bi}$ average parameter calculation equation is:

$$\overline{F}_{bi} = \frac{u_0 I_1 I_2 (2\pi R_{I\,i})}{2\pi(2R_{\alpha bi})} = \frac{e^2 \beta_i^2 N_{e1} N_{e2}(N_{\alpha i}-1)}{8\pi^2 \varepsilon_0 R_{\theta 0i}^2 N_{\alpha i}^{1.5}} \qquad (10.18)$$

When we use integral method to calculate the F_{bi} of ampere force, because the spin direction of current intersec ting yuan in orbit on both sides of the parallel symmetric distribution, by (10.5-4), (10.8) and (10.18), to:

$$\begin{aligned} F_{bi} &= u_0 I_1 I_2 \oint \frac{R_{\theta i}}{2\pi(2R_{\alpha bi} - 2R_{\alpha i}\sin\alpha)} d\theta \\ &= \frac{e^2\beta_i^2 N_{e1}N_{e2}}{16\pi^3 \varepsilon_0 R_{\theta 0i}^2 \sqrt{N_{\alpha i}}} \int_0^{2\pi/N\alpha} \frac{(\sqrt{N_{\alpha i}}+\cos\alpha)^2}{\frac{\sqrt{N_{\alpha i}}+\cos\alpha}{\sqrt{N_{\alpha i}-1}} - \sin\alpha} d\theta \end{aligned} \qquad (10.19)$$

The ratio is:

$$\frac{F_{bi}}{\overline{F}_{bi}} = \frac{N_{\alpha i}}{2\pi(N_{\alpha i}-1)} \int_0^{2\pi/N\alpha} \frac{(\sqrt{N_{\alpha i}}+\cos\alpha)^2}{\frac{\sqrt{N_{\alpha i}}+\cos\alpha}{\sqrt{N_{\alpha i}-1}} - \sin\alpha} d\theta \qquad (10.20)$$

(10.19) in the fluctuation, the spin track intersec ting in the interval of two current yuan→0, a discontinuous points, point in (10.11) - ampere force have been calculated and shown in table 10.3. We by Δa_i value insert (10.20) of integral upper and lower limits for:

$a_{i0} = 2\pi(a_i+\Delta a_i)/360^\circ N_{ai}$ $a_{ia} = 2\pi(360^\circ + a_i - \Delta a_i)/360^\circ N_{ai}$

Will be data generation in table 10.3 (10.20) in type, the simulation results shown in table 10.4.

From table 10.4 that: when $\Delta a_i \leq 30^\circ$, integral method of ampere force is greater than the overall average calculation of ampere force constants. So in (10.15-2) type of high and low particles spiral ring current overall ampere force, we take low-energy particles spiral ring current average radius of $\overline{R}_{Id1}$, and not take high, low-energy particle spiral ring of average. And, behind the readers will see: in nucleus kernel force balance verification calculation, although light conditions within the nucleus of the whole nuclear power field force, slightly greater than nuclear magnetic force, we still have plenty of reason to will them as stable nucleus.

At the same time, we also see that when $30^\circ \leq \Delta a_i \leq 60^\circ$, AA $F_{bi}/\overline{F}_{bi} \approx 1$, thus can speculate each layer particles spiral ring in nuclear and surplus of high and low $\pi^\pm$ both generally allow density. Surplus of high and low $\pi^\pm$ mesons, especially π^- violation, in neighboring particles spiral ring motion in orbit, affirmation is the proper interval staggered through the tangent track, respectively. So in micro particles adjacent spiral ring rail and the nearby on the intersec ting, current yuan should be discrete. When $\Delta a_i \leq 30^\circ$, integral method of ampere force is meaningless.

Same layer adjacent low-energy particles spiral ring the spin direction ampere force equation $F_{bi}/\overline{F}_{bi}$ calculation results comparison table 10.4

N_{ai} / Δa_i	34/13	16	34	58	88
2°	无解 There is no solution				
5°	4.59313587	6.797401516	7.055965601	7.153204956	7.1992218355
10°	2.786828821	3.4747556	3.560352022	3.592408519	3.607980361
30°	1.464674859	1.223998448	1.204626325	1.197666272	1.194335032
60°	0.9610648229	0.6086085346	0.5779770862	0.568871121	0.5615634465
100°	0.5770989581	0.3072239687	0.2856141877	0.2778747804	0.2741756391

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11. ${}^{208}_{82}$Pb, ${}^{232}_{90}$Th, ${}^{256}_{100}$Fm nucleus internal structure and parameter calculation

11. 1 "Assembly" the principle of atomic nuclei

Pass in front of the internal structure of the nucleus, chapter 7 ~ 10 nuclear force, magnetic forming principle and parameters of calculation, we not only have "assembly" the basis of atomic nuclei, and predictable "assembly" nucleus must abide by the principle of a couple of items. At the same time also will to book model, theory of thorough and the strict proof of simulation.

11.1.1 Nuclear in nucleus, with net charge density distribution Principle, etc

According to the experimental determination results, combined with map 7.1 ~ 7.3 nucleus internal structure model, nuclear power load distribution characteristics. We will nuclear, various high, low-energy particle spiral loop net with $\pi^{\pm}$ "assembly", such as violation of density and tend to be spherical. Lining and internal each particle spiral rings, all shall be according to (9.12) is the result of saturated layer and outer layer and edge can be in a state of unsaturated. That are nucleus boundary there natural "dispersion" layer. Nuclear force action radius including low-energy particles spiral ring outside edge, slightly greater than the net with π_g^{+} violation of high-energy particles spiral ring distribution radius. Outside the nucleus edge due to the low particles spiral ring net with π_d^{-} forces, and conditions within the nucleus edge π_g^{+} mesons are weaken the effect of electric field, on the whole reflects the nucleus wrapped in a layer of "neutron skin". These characteristics are shown in figure 7.1 and figure 7.2 are clearly reflected.

11.1.2 Total energy conservation principle

Nucleus total energy is high, low-energy particle spiral ring, all the original $\pi^{\pm}$ mesons total energy $\overline{m}_{di}, \overline{m}_{gi}$, and the high and low particles spiral rings, each net with $\pi^{\pm}$ mesons between spin direction, electric and magnetic field of the interaction of the sum of total energy. Total energy of atoms of each element of the determination of the laboratory, should deduct outside the nucleus of all electronic rest mass $Z_i m_{eo}$, plus all of the electronic ionization energy, (book electronic ionization energy at all). Because all electronic total ionization energy is much smaller than the total energy of the nucleus, so, this book in does not affect the nucleus total energy calculation precision premise, outside the nucleus all electronic total ionization energy estimation values, (see chapter 20 atomic physics).

When protons and neutrons are eVen nucleus, by (9.8), (9.13), high, low particles spiral ring all $\pi^{\pm}$ in violation of the original total energy is: $\sum m_{\pi} = 5A_i\overline{m}_{d1} + \sum \Delta\overline{m}_{ni}$ (A_i is the sum of the number of protons and neutrons).

Nucleus of different eVen protons, neutrons, $\pi^{\pm}$ violation of the original total energy calculation should be two steps. Refer to section 7.2 the nuclear magnetic forming principle, the calculation first $5(A_i-2)\overline{m}_{d1}$ or $5(A_i-3)\overline{m}_{d1}$ the nucleus of the original total energy; Remaining 2 ~ 3 protons, neutrons should according to the experimental value of nuclear magnetic, analysis, simulation computation 2 ~ 3 protons, neutrons "decentralized" $\pi^{\pm}$ mesons, into the high, low-energy particle distribution state of spiral ring; Then on the basis of the listed in table 9.1 $\overline{m}_{di}, \overline{m}_{gi}$, data accumulation respectively.

When we according to the principle of article 1 will be all the protons and neutrons "decentralized" into $\pi^{\pm}$ mesons, filling into each layer in nucleus, various high, low-energy particle spiral ring, we can according to the list of equations (8.16), 9.2 or 9.3 to simulate calculation within the nucleus particles spiral ring, net with $\pi^{\pm}$ mesons spin direction of interaction between electric and magnetic energy. Table 9.2 and table 9.3 in the high and low particles spiral rings $\pi^{\pm}$ violation of electric parameters, refers to each net with $\pi^{\pm}$ mesons relative to the nucleus center for a net with unit of electric charge can parameters. In practical calculation, we can as long as potential parameters from big to small, and then in sequence one by one calculation, high in low-energy particle spiral ring net with $\pi^{\pm}$ violation of, and surrounded by the nucleus of the accumulated net charge left for interaction potential can and their own potential; They all algebra and is all the particles in the nucleus of spiral ring net with $\pi^{\pm}$ mesons in the potential of interaction.

Similarly, we can still by the "assembly" out of the nucleus structure model, by (8.15), (8.16) equations, from inside to outside, step by step calculation conditions within the nucleus layers particles spiral ring, net with$\pi^{\pm}$violation in the spin direction of interaction between magnetic energy and accumulative total magnetic field energy.

11.1.3 Stable electric and magnetic field force balance principle

Forming principle, the parameters derived from the nuclear force, demonstration calculation process is not difficult to forecast: stable nucleus, it should be the whole inside the particles spiral ring, general electric and magnetic field force is eVenly balanced; The low-energy particles spiral ring rail tangent particles and the whole spiral ring spin track current is the ampere force between the sum of all should be eVenly than nuclear power field force in the nuclear spin axial force. If inside a certain position in the nuclear field force the spin axis of the repelling force is greater than the total ampere force of it, it will lead to internal excess $\pi^{\pm}$ mesons adjustment, redistribution, or split the decay, until nuclear force equilibrium is stable. So, we can expect that in 1 ~ 2 principle, under the premise of $^{206}_{82}$Pb, $^{207}_{82}$Pb, $^{208}_{82}$Pb, $^{209}_{83}$Bifour kinds of natural and artificial radiation is the end of the nuclear, internal nuclear force balance stable state of the simulation results, should be close to the critical instability. We could start the $^{208}_{82}$Pb nucleus as validation book the nucleus internal structure, model, the nuclear force balance stable state parameters of the simulation experiment.

11.1.4 Protons, neutrons, $\pi^{\pm}$ mesons maintain appropriate proportion principle

Conditions within the nucleus of protons and neutrons must maintain an appropriate ratio, that is their "decentralized" all the high and low of positive and negative $\pi^{\pm}$ mesons in eVery high, low-energy particle spiral ring, must according to proper proportion of uniform distribution and orderly, make a high or low for each ring particles spiral orbit of $\pi^{\pm}$ violation of excess and $\pi^{\pm}$ between the violation of the electric field force can attract contain each other, which can satisfy various $\pi^{\pm}$ violation within the individual needs of charged particles expansion deformation, and can make the electric field force of each particle spiral ring can maintain the dynamic balance, the whole is in stable condition, the nucleus to ultimate stability.

11.2 $^{208}_{82}$Pb nucleus internal structure and parameter calculation

11.2.1 Nucleus total energy verification calculation

Laboratory determination: $^{208}_{82}$Pb atomic mass is 207.976658u④; It is the element thorium $^{232}_{90}$Th natural radiation is the end of the nucleus. Outside the nucleus of all the electronic total ionization energy $\sum W_{me}$, we take the approximate:

$$\sum W_{me} = K_{\alpha 2} Z_i \tag{11.1}$$

Which Z_i is nuclear charge and K_{a2} is atomic inner electronic ionization energy. Determined by laboratory to: K_{a2} = 72794 eV ④, the K_{a2} layer represents the average atomic ionization energy of all electronic.

According to (8.19), (9.13) types $\overline{m}_{di}$, $\overline{m}_{gi}$ value in table 9.1, $^{208}_{82}$Pb nucleus total energy is:

$$\sum {}^{208}_{82}PbW_i = 208\times 5\overline{m}_{d1} + W_e + W_b + \sum \Delta \overline{m}_{ni} \qquad (11.2)$$

By (11.1), set up atomic mass of ${}^{A}_{z}XM$, must be the original mass of the nucleus $\sum {}^{A}_{z}XW_0$ for:

$$\sum {}^{A}_{z}XW_0 = {}^{A}_{z}XM - Z_i m_{e0} + K_{\alpha 2} Z_i e/c^2 \qquad (11.3)$$

The experimental value generation into (11.3), to: $^{208}_{82}$Pb nucleus of the original total energy:

$$\sum {}^{208}_{82}PbW_0 = 3.452895452\times 10^{-25}Kg$$

The electronic total ionization energy:

$$\sum W_{me} = 5.969108Mev = 1.064090616\times 10^{-29}Kg$$

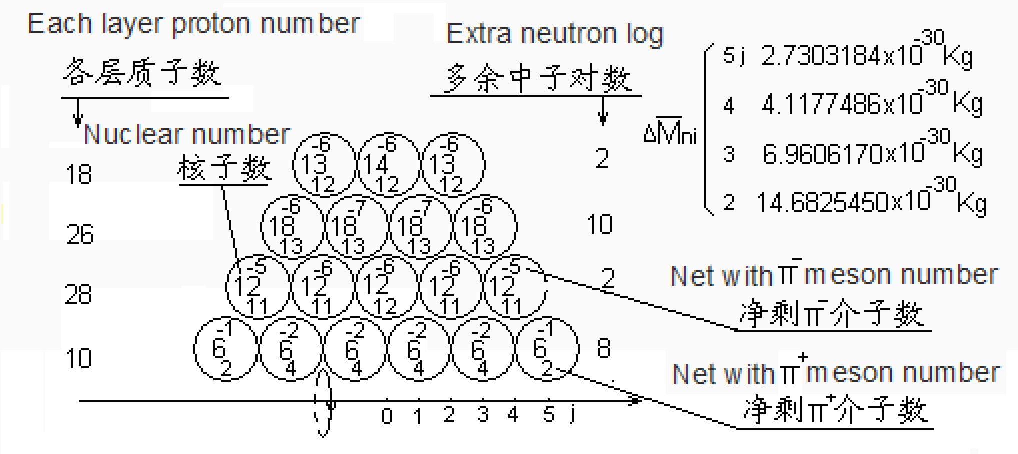

Figure 11.1 ${}^{208}_{82}Pb$ nuclear in nucleus, the net with $\pi^{\pm}$ source distribution

With reference to the principle of figure 7.2 and section 11.1 1, 2, the design of "assembly" $^{208}_{82}$Pb nucleus structure as shown in figure 11.1, it belongs to type B nucleus. Each layer particles spiral rings layer by (9.12) - the number of nuclear calculation results were taken 6, 12, 18, 22, the outermost for unsaturated layer. Layers, various high, low-energy particles spiral ring of protons, neutrons "decentralized" all $\pi^{\pm}$ source, including the net with $\pi^{\pm}$ violation number arrangement principle and distribution status, see section 7.2. We make each layer particles spiral rings with the net high and low $\pi^{\pm}$ mesons total the same, in the nuclear field force and the spin direction under the action of ampere force, position can be adjusted, symmetrical distribution, in order to maintain the balance of nuclear power, magnetic force.

Shown from figure 11.1, the $^{208}_{82}$Pb conditions within the nucleus net with $\pi^{\pm}$ violation in the moving direction spin interaction between the electric and magnetic energy calculation procedure is as follows:

1. By electric potential, as shown in the table 9.3 can parameters, in absolute value from big to small alphabetical order in English first, it represents the net with $\pi^{\pm}$ violation by the nucleus center to the periphery of interaction potential can

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vary, convenient calculation, the total potential energy.

2. According to the electric potential of a system can sum method, each corresponding layer, the corresponding column of high and low particles spiral rings net with $\pi^{\pm}$ violation number accordingly, written in the letter below arrangement, π_g^+ number of mesons is positive, π_d^- number of violation is negative. To nucleus left and right sides is symmetrical distribution of two pairs of high and low particles spiral rings of the net with$\pi^{\pm}$ violation number should be peace. By (9.13), table 9.1 data: redundant excess energy for the rest of the $\Delta\overline{m}_{ni}$ value is shown in figure 11.1 on the right side.

3. (11.4) - each of the electric potential can be calculated parameters before all the $\pi^{\pm}$ violation of algebra and, on behalf of the particles spiral ring inside relative nucleus surrounded by center of net with nuclear power by number, label in the upper part of the parameters of the electric potential can:

$$\underset{8}{Va}\quad \overset{8}{\underset{-4}{Vb}}\quad \overset{4}{\underset{8}{Vc}}\quad \overset{12}{\underset{-4}{Vd}}\quad \overset{8}{\underset{12}{Ve}}\quad \overset{20}{\underset{-6}{Vf}}\quad \overset{14}{\underset{4}{Vg}}\quad \overset{18}{\underset{22}{Vh}}\quad \overset{40}{\underset{-2}{Vi}}\quad \overset{38}{\underset{-12}{Vj}}$$

$$\overset{26}{\underset{22}{Vk}}\quad \overset{48}{\underset{26}{Vl}}\quad \overset{74}{\underset{-10}{Vm}}\quad \overset{64}{\underset{-14}{Vn}}\quad \overset{50}{\underset{26}{Vo}}\quad \overset{76}{\underset{-12}{Vp}}\quad \overset{64}{\underset{12}{Vq}}\quad \overset{76}{\underset{24}{Vr}}\quad \overset{100}{\underset{-6}{Vs}}\quad \overset{94}{\underset{-12}{Vt}}$$

4. EVery high, low-energy particle spiral ring net with $\pi^{\pm}$ both potential can, should be inside relative nucleus center surrounded by the net with total number of nuclear power by the interaction of electric potential energy and its potential. Whole high within the nucleus, low-energy particles spiral loop net with $\pi^{\pm}$ violation of interaction between potential energy, should be each high net, low-energy particle spiral rings with $\pi^{\pm}$ mesons interaction potential can be combined. So, directly from the above parameters, we have:

$$W_e = \frac{e}{c^2}\left[\begin{array}{l} \frac{8^2}{2}Va - \left(8\times 4 - \frac{4^2}{2}\right)Vb + \left(4\times 8 + \frac{8^2}{2}\right)Vc - \left(12\times 4 - \frac{4^2}{2}\right)Vd + \\ \cdots\cdots\cdots + \left(76\times 24 + \frac{24^2}{2}\right)Vr - \left(100\times 6 - \frac{6^2}{2}\right)Vs - \left(94\times 12 - \frac{12^2}{2}\right)Vt \end{array}\right] \quad (11.4)$$

The calculation table 9.3 V_{ei} value generations into (11.4), too: $W_e = 1.503731485 \times 10^{-27}$ kg

5. By each layer, as shown in the table 9.1, low-energy particle spiral loop quantum fluctuations in N_{adi}, N_{agi} value, respectively into (4.9), speed fluctuation coefficient is obtained β_{gi}, β_{di} value; Along with the generation of (1.6) in type $\overline{m}_{di}, \overline{m}_{gi}$ value, obtained $R_{\theta 0gi}$, $R_{\theta 0di}$ value.

6. Each particle spiral ring of N_{adi}, N_{agi}, β_{gi}, β_{di}, $R_{\theta 0gi}$, $R_{\theta 0di}$ value generation into the type (8.10), respectively, $\overline{R}_{Igi}, \overline{R}_{Idi}$ spiral loop current average radius, are obtained.

7. By figure 11.1 shows, the particles spiral ring layer length coefficient of $K_{bd\,l\,j}$ respectively: $K_{bd15} = 12$, $K_{bd24} = 10$, $K_{bd33} = 8$, $K_{bd42} = 6$, along with $R_{\theta 0gi}$, $R_{\theta 0di}$, N_{adi},N_{agi} value generation into the equations (8.13), obtained: L_{bgij}, L_{bdij} value.

8. By figure 11.1 shows, the particles spiral ring layer respectively: the number of protons P_1=10, P_2=28, P_3= 26 and P_4=18, along with the above obtained β_{gi}, β_{di}, $\overline{R}_{Igi}$, $\overline{R}_{Idi}$, L_{bgij}, L_{bdij} and N_{adi}, N_{agi} value generation into the equations (8.15), respectively, for magnetic field strength H_{gi}, H_{di} value.

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9. The H_{gi}, H_{di}, $\overline{R}_{Igi}$, $\overline{R}_{Idi}$ and L_{bgij}, L_{bdij} value generation into the equations (8.16), respectively, for magnetic energy W_{bgi}, W_{bdi} value.

10. The W_{bgi}, W_{bdi} value accumulation, obtained the total magnetic energy, and conversion for quality, to: $W_b = 1.409748336 \times 10^{-29} kg$.

11. By (11.2), too: $\sum {}^{208}_{82}PbW_1$ = 3.452890137 x 10^{-25} kg, compared with the results of the type (11.3), 0.29815 MeV error, is only an outer electrons estimated 5.0% of the total ionization energy, precision has reached the requirement. It can turn to the next topic nuclear force balance test.

12. Figure 11.1 protons and neutrons in nucleus, the distribution of the net with $\pi^{\pm}$ mesons state through variety of solutions are the result of the simulation. If default protons, neutrons, and net with $\pi^{\pm}$ source distribution A scheme after 1 ~ 11 calculation program total energy value is not consistent with the experiment, through adjusting the number of protons, neutrons, or particles spiral rings net with $\pi^{\pm}$ both axial distribution, repeated 1 ~ 11 calculation procedures, can change the total energy of the nucleus. That last until agreement with experimental value. (Behind all nuclear source parameters, calculation procedures and adjusting process are the same).

11.2.2 Nuclear force balance test

Shown by table 10.2 B type high within the nucleus, low-energy particles spiral loop net with $\pi^{\pm}$ both between the spin axis nuclear power field force parameters, we can reference potential can the method, step by step, by the calculation of the axial electric field force.

By 1 calculation program of the electric potential can parameters from big to small order, you can clearly see, each pair of high and low particles spiral ring inside relative nucleus center surrounded by the net with nuclear power charge, then itself should be unilateral net with $\pi^{\pm}$ number mesons, symmetrical should be incorporated into the other side of the total number of net with nuclear power charge within the nucleus. So, each pair of high and low particles spiral loop net with $\pi^{\pm}$ violation of A nucleus within the spin axis of the nuclear power field component should be high, low-energy particle spiral ring the axial electric field component. As shown in figure 11.1: layer 2 i= 2, 4 column j = 4 of the particles spiral rings, location code for k, m, by 1 the calculation program of arrangement parameters, we have:

$$F_{e\theta km}=11\times(26+11)F_{e\theta k}-5\times(74-5)F_{e\theta m} \qquad (11.5)$$

In the table 10.2 $F_{e\theta k}$, $F_{e\theta m}$ parameters into (11.5), to: $F_{e\theta km}$=570.0909716 (Newton).

Similarly, by (11.5), the parameters in the table 10.2, other particles spiral ring in the nuclear field force of axial component of the results shown in table 11.1.

Note: table 11.1 n column redundant, lower particles on the magnetic force of the spiral ring outside nuclear power field force no set limit; do not participate in the whole nuclear force balance calculation, separated with broad, (the same below).

Within the same layer side by side of low-energy particles spiral ring net with π_d^- both in the spin track tangent of ampere force, from (10.7-1) ~ (10.11) in the derivation process of the type, all is a certainly π_d^- as the basis, when they were N_{e1}, N_{e2} π_d^- violation, the strain (10.11) is:

$$F_{b\theta ij}=N_{e1}N_{e2}F_{kbi} \qquad (11.6)$$

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$^{208}_{82}$Pb nucleus kernel force balance test results list (figure 11.1, the unit: Newton) table 11.1

N_a \ j	1	2	3	4	5	Nuclear power, the total magnetic force	
58 $F_{e\theta}$ $F_{b\theta}$		t. 606.0462530 -534.5717436				↑ |	689.131672
34 $F_{e\theta}$ $F_{b\theta}$	n. 591.0889169 -936.0859236		p. 1229.43442 -802.3593631			| |	617.6571626
16 $F_{e\theta}$ $F_{b\theta}$		j. 991.1342691 -943.7382342		m. 570.0909716 -786.4485285		| |	190.5821057
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 352.235612 -57.06223088		d. 439.5655342 -57.06223088 -137.8927999		i. –13.81634162 -28.53111544 -137.8927999	| | |	359.5436277

According to the figure 11.1 shows the low-energy particles spiral ring in the net with π_d^- violation number, will each layer in the table 10.3 F_{kbi} parameters, generation into (11.6), respectively, for each track tangent place ampere force shown in table 11.1.

Adjacent 3 on the high side by side, low-energy particle spiral rings net with $\pi^{\pm}$violation in the spin track movement direction, rail current generated interaction the overall train of ampere force $\Delta F_{\theta bij}$, by (10.17) and K_{fb} parameters, according to the figure 11.1 shows the first layer of particles spiral rings of the net with $\pi^{\pm}$ violation number, we will be the first layer of the calculated value is also listed in table 11.1.

11.2.3 Orbit tangent place ampere force analysis and whole nuclear force balance principle

From table 11.1 that: the entire $^{208}_{82}$Pb conditions within the nucleus particles spiral ring axial nuclear power field force close to the inside of the ampere force in general; Especially the outer layer $F_{e\theta 42}$ and inner layer $F_{e\theta 22}$, are close to ampere force (the same layer of electric and magnetic field force can accumulate); Overall close to unstable state of the critical limits, and the expected results. At the same time, the first layer of the edge of the particles spiral ring $F_{e\theta 15}$<<$F_{b\theta}+\Delta F_{b\theta}$, eVen negative, appear to compress the together! From 1 calculation program CLP energy parameters are top of the net with nuclear power charge number see: they are all positive, and that the high and low particles spiral ring in nuclear power, magnetic field force along axial force is not in a state of tension, but in the compressed state within the nucleus.

Further analysis low-energy particles spiral ring rail side by side on the intersec ting ampere force, we found that, it not only in tensile state phase to resist tensile, more in the compression state show the repelling force to resist the effect of compression, but also with the size of the nuclear power field force to adjust! Table 10.3 the calculation of parameters of ampere force is in tension or compression under the two states are of great value. (the characteristics of the nuclear force is also in the field of astronomy neutron stars and black holes internal resistance gravity field of the strong force, see chapter 26)

See figure 10.2 and figure 10.3 and figure 10.4, in the compression state, rail tangent place π_d^- both positive and load in the formation of charged particles is not the current a\`b\` some overlap, but in ab points coincide. Orbit between the tangents of ampere force to showed in figure 11.2. EVen though mutual attraction, as long as the largest ampere force is

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still greater than nuclear power field force in axial compression force, on the whole still can preVent A and B low-energy particles spiral ring in orbit tangent place further compressed cross-border, so disconnect.

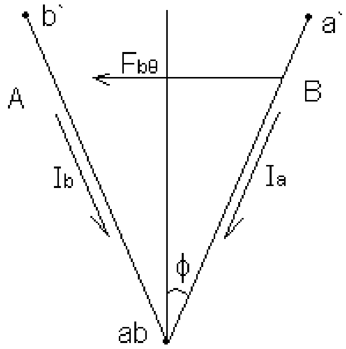

Figure 11.2 I_a and I_b current yuan between ampere force diagram

Similarly, if the rail tangent electric dipole rotation diameter line a—a`, b—b` symmetric intersection as shown in figure 10.3, from chapter 2 elementary particle energy origin of what we already know: elementary particles energy is the wave speed βc, radius of R_a, N_a quantum fluctuations for constituting and electric dipole rotation angle, a rotation radius $K_r\overline{R}_\alpha$, electric dipole log n key parameters comprehensive decision. So the outside of the electric and magnetic field strength unless to big enough to change its energy, otherwise can't change the key parameters, including, figure 11.2 and figure 10.4 (10.6 1) type of a, Φ value. So, current yuan a—a`、b—b` wire under the action of ampere force won't turn around the intersection, can only translation from figure 10.4 tensile state to figure 11.2 state of compression, symmetrical figure 10.3 in the middle position, ampere force general resultant force is zero. By (10.9) ~ (10.11) of integral upper and lower boundaries can be seen, the value of the ampere force in the process of translation will gradually change.

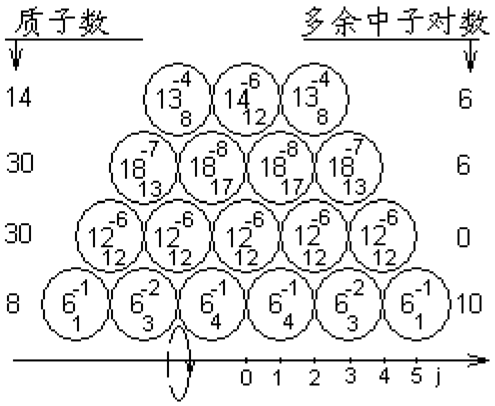

图 11.3 $^{208}_{82}Pb$ 原子核内核子、净剩 π± 介子分配示意图

$$\underset{8}{Va}\quad \overset{8}{\underset{-2}{Vb}}\quad \overset{6}{\underset{6}{Vc}}\quad \overset{12}{\underset{-4}{Vd}}\quad \overset{8}{\underset{12}{Ve}}\quad \overset{20}{\underset{-6}{Vf}}$$

$$\overset{14}{\underset{2}{Vg}}\quad \overset{16}{\underset{24}{Vh}}\quad \overset{40}{\underset{-2}{Vi}}\quad \overset{38}{\underset{-12}{Vj}}\quad \overset{26}{\underset{24}{Vk}}\quad \overset{50}{\underset{34}{Vl}}$$

$$\overset{84}{\underset{-12}{Vm}}\quad \overset{72}{\underset{-16}{Vn}}\quad \overset{56}{\underset{26}{Vo}}\quad \overset{82}{\underset{-14}{Vp}}\quad \overset{68}{\underset{12}{Vq}}\quad \overset{80}{\underset{16}{Vr}}$$

$$\overset{96}{\underset{-6}{Vs}}\quad \overset{90}{\underset{-8}{Vt}}$$

$$W_e = 1.549177931\times 10^{-27} Kg$$
$$W_b = 9.813269321\times 10^{-30} Kg$$
$$\sum {}^{208}_{82}PbW_3 = 3.452894394\times 10^{-25} Kg$$

Thus safely draw the conclusion that each pair of high and low particles spiral ring by nuclear power field force in the spin axis of reality, as long as the rail on the tangent of Ampere force is less than, equal to the maximum, whether tensile force, compression force, or Ampere force will react like spring, and with a—a`, b—b` line of translation, Ampere force will adjust to with nuclear power field force is equal. When nuclear power field repelling force is greater than the left tangent of ampere force, on the tangent of Ampere force reached the maximum. If there is no other force in overcoming nuclear power field force, is where particles spiral rings net with π± violation will be unstable state.

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Economical adjacent particles spiral rings net with $\pi^{\pm}$ overall interaction between violation of ampere force, it will be like spring series, the lateral Ampere force accumulate step by step to the inside. Similarly, inside the nuclear field of repelling force is greater than the left tangent of Ampere force; the spare part will accumulate to the outside edge. Nucleus from figure 11.1 internal layers particles spiral ring stagger Mosaic structure that: as long as the total ampere force is greater than the total nuclear power field, the outside of the inner ring particles spiral foreign the medial layer of particles spiral ring there are space limits to maintain stability. As shown in figure 11.1 in addition to the $F_{e\theta 31}$ and that of high, low-energy particle spiral ring outside, other particles spiral ring embedded structure can be accumulated by the electric and magnetic field force transmission from inner to outer, from outside to inside of the nucleus in general stability of nuclear force balance calculation. From table 11.1 balance accumulated as A result, the nucleus is slightly less than nuclear power of ampere force field force, so the nucleus is not stable, we must to "assemble" $^{208}_{82}$Pb nucleus.

When we adjust figure 11.1 $^{208}_{82}Pb$ within the nuclei of protons, neutrons, the distribution of the net with $\pi^{\pm}$ mesons, can "assembly" out another kind of structure of the $^{208}_{82}Pb$ nucleus, see figure 11.3. According to this section 1 ~ 11 calculation procedure, W_b, W_e, the left figure 11.3 $\sum {}^{208}_{82}Pb$ W_3 value.

Similarly, refer to section nuclear force balance verification calculation method, the results shown in table 11.2.

Nucleus $^{208}_{82}Pb$ kernel force balance to verify results (figure 11.3, unit: N) table 11.2

N_a \ j	1	2	3	4	5	Nuclear electric and magnetic field force accumulated	
58 $F_{e\theta}$ $F_{b\theta}$		t. 410.7162380 -356.3811624				↑	-136.2029571
34 $F_{e\theta}$ $F_{b\theta}$	n. 909.3596443 -1222.642839		p. 1204.566227 -1069.812484			|	-190.5380327
16 $F_{e\theta}$ $F_{b\theta}$		j. 1091.575393 -943.7382342		m. 260.1473009 -943.7382342		|	-325.2917757
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 520.2435589 -14.26555772 -160.8749332		d. 316.4391041 -28.53111544 -183.8570665		i. –179.5180316 -28.53111544 -30.64284441	|	210.4619988

Obviously, this kind of $^{208}_{82}Pb$ nucleus is stable, is we are looking forward to a solution, compared with the first nuclear model in figure 11.1, key in 1 ~ 2 layer net with $\pi^{\pm}$ mesons are different.

11.3 $^{232}_{90}$Th nucleus internal structure and parameter calculation

$^{232}_{90}$Th the nucleus is the natural radiation is thorium is starting, half-life 1.4 x 10^{10}, abundance of 100%. Laboratory determination $^{232}_{90}$Th atomic mass is 232.038074 u, inner electronic K_{a2} ionization energy for 89942 eV.

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By (11.3), to: ${}^{232}_{90}$Th nucleus total energy $\sum {}^{232}_{90}ThW_0 = 3.852409956 \times 10^{-25}$ kg, 10^{-29} kg.

According to figure 11.1 and figure 11.3, the design of ${}^{232}_{90}$Th nucleus internal structure is shown in figure 11.4 and figure 11.5.

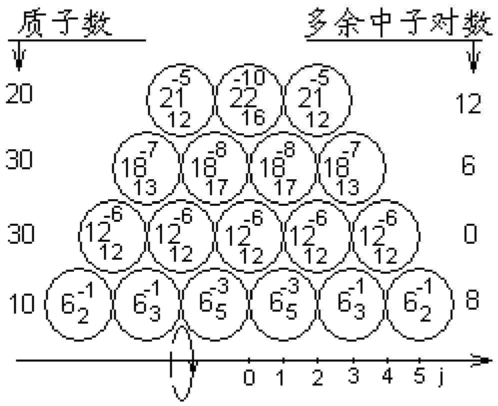

图 11.4 ${}^{232}_{90}Th$ 原子核内核子、净剩 $\pi^{\pm}$ 介子分配示意图

$$
\begin{array}{cccccc}
\underset{10}{Va} & \overset{10}{\underset{-6}{Vb}} & \overset{4}{\underset{6}{Vc}} & \overset{10}{\underset{-2}{Vd}} & \overset{8}{\underset{12}{Ve}} & \overset{20}{\underset{-6}{Vf}} \\
\overset{14}{\underset{4}{Vg}} & \overset{18}{\underset{24}{Vh}} & \overset{42}{\underset{-2}{Vi}} & \overset{40}{\underset{-12}{Vj}} & \overset{28}{\underset{24}{Vk}} & \overset{52}{\underset{34}{Vl}} \\
\overset{86}{\underset{-12}{Vm}} & \overset{74}{\underset{-16}{Vn}} & \overset{58}{\underset{26}{Vo}} & \overset{84}{\underset{-14}{Vp}} & \overset{70}{\underset{16}{Vq}} & \overset{86}{\underset{24}{Vr}} \\
\overset{110}{\underset{-10}{Vs}} & \overset{100}{\underset{-10}{Vt}} & & & &
\end{array}
$$

$$W_e = 1.817530386 \times 10^{-27} Kg$$
$$W_b = 1.437800649 \times 10^{-29} Kg$$
$$\sum {}^{232}_{90}ThW_1 = 3.85240599 \times 10^{-25} Kg$$

According to section 11.2 of the calculation procedure and method, ${}^{232}_{90}$Th nucleus kernel force balance test results see table 11.3 and table 11.4.

From table 11.3,11.4 and table 11.3，11.4 the result shows: the first kind of nucleus near critical permanent stable state; Second nuclear although of permanent stable nuclei, but 3 ~ 4 layer between particles spiral high-energy π_g^+ mesons in ring is too concentrated, nuclear power will also lead to uneVen field force throughout the nucleus are not stable.

${}^{232}_{90}$Th nucleus kernel force balance test results list (figure 11.4, unit: N) table 11.3

j / N_a	1	2	3	4	5		Nuclear electric and magnetic field force accumulated
58 $F_{e\theta}$ $F_{b\theta}$		t. 769.3464573 -742.460755				↑	65.54941594
34 $F_{e\theta}$ $F_{b\theta}$	n. 935.7967653 -1222.642839		p. 1242.139920 -1069.812484			|	38.66371364
16 $F_{e\theta}$ $F_{b\theta}$		j. 1177.523760 -943.7382342		m. 332.5403448 -943.7382342]		|	-133.6637224
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 474.7645661 -128.3900195 -107.2499554		d. 360.3313781 -42.79667316 -153.2142221		i.-30.52020855 -14.26555772 -114.9106665	|	243.7486412

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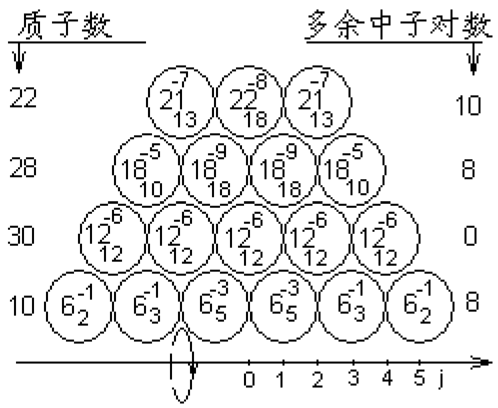

图 11.5 ${}^{232}_{90}Th$ 原子核内核子、净剩 π$^{\pm}$ 介子分配示意图

$\underset{10}{Va}$ $\overset{10}{\underset{-6}{Vb}}$ $\overset{4}{\underset{6}{Vc}}$ $\overset{10}{\underset{-2}{Vd}}$ $\overset{8}{\underset{12}{Ve}}$ $\overset{20}{\underset{-6}{Vf}}$

$\overset{14}{\underset{4}{Vg}}$ $\overset{18}{\underset{24}{Vh}}$ $\overset{42}{\underset{-2}{Vi}}$ $\overset{40}{\underset{-12}{Vj}}$ $\overset{28}{\underset{24}{Vk}}$ $\overset{52}{\underset{36}{Vl}}$

$\overset{88}{\underset{-12}{Vm}}$ $\overset{76}{\underset{-18}{Vn}}$ $\overset{58}{\underset{20}{Vo}}$ $\overset{78}{\underset{-10}{Vp}}$ $\overset{68}{\underset{18}{Vq}}$ $\overset{86}{\underset{26}{Vr}}$

$\overset{112}{\underset{-8}{Vs}}$ $\overset{104}{\underset{-14}{Vt}}$

$$W_e = 1.812742002 \times 10^{-27} Kg$$

$$W_b = 1.434229785 \times 10^{-29} Kg$$

$$\sum {}^{232}_{90}ThW_2 = 3.852414607 \times 10^{-25} Kg$$

${}^{232}_{90}Th$ Nucleus kernel force balance to verify the results (figure 11.5, the unit: Newton) table 11.4

j / N_a	1	2	3	4	5		Nuclear electric and magnetic field force accumulated
58 $F_{e\theta}$ $F_{b\theta}$		t. 708.9523968 -831.5560456				↑ |	-186.4876078
34 $F_{e\theta}$ $F_{b\theta}$	n. 969.7887665 -1547.407343	p. 985.2165362 -859.6707462				| |	-63.88395896
16 $F_{e\theta}$ $F_{b\theta}$		j. 1177.523760 -943.7382342	m. 276.7743182 -943.7382342			| |	-189.429749
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 474.7645661 -128.3900195 -107.2499555	d. 360.3313781 -42.79667316 -153.2142222	i.-30.52020855 -14.26555772 -114.9106666			| | |	243.7486412

11.4 ${}^{256}_{100}$Fm nucleus internal structure and parameter calculation

11.4.1 ${}^{256}_{100}$Fm A type nucleus internal structure and parameter calculation

Laboratory determination ${}^{256}_{100}$Fm atomic mass is 256.091807u, half-life is only 2.63 hours, the inner of electronic K_{a2} ionization energy for 114926 eV. By (11.3), too: $\sum {}^{256}_{100}FmW_0 = 4.251801339 \times 10^{-25}$ kg.

For ${}^{256}_{100}$Fm nucleus more nuclear, we first in 7.1 type A nucleus to the model of "assembly" ${}^{256}_{100}$Fm nucleus. From table 9.1 and table 10.1 types A nucleus calculation of releVant parameters, refer to section 11.2 calculation procedures and nuclear force balance verification calculation method, the result is shown in figure 11.6 and table 11.5.

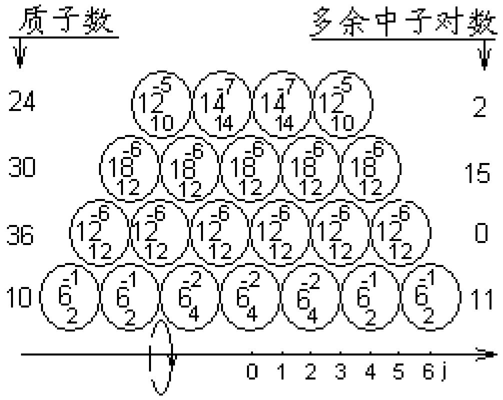

图 11.6 $^{256}_{100}Fm$ 原子核内核子、净剩 π± 介子分配示意图

$$\begin{array}{cccccc}
\underset{4}{Va} & \overset{4}{\underset{-2}{Vb}} & \overset{2}{\underset{8}{Vc}} & \overset{10}{\underset{-4}{Vd}} & \overset{6}{\underset{4}{Ve}} & \overset{10}{\underset{-2}{Vf}} \\
\overset{8}{\underset{24}{Vg}} & \overset{32}{\underset{-12}{Vh}} & \overset{20}{\underset{24}{Vi}} & \overset{44}{\underset{4}{Vj}} & \overset{48}{\underset{-12}{Vk}} & \overset{36}{\underset{-2}{Vl}} \\
\overset{34}{\underset{12}{Vm}} & \overset{46}{\underset{24}{Vn}} & \overset{70}{\underset{-6}{Vo}} & \overset{64}{\underset{24}{Vp}} & \overset{88}{\underset{-12}{Vq}} & \overset{76}{\underset{-12}{Vr}} \\
\overset{64}{\underset{24}{Vs}} & \overset{88}{\underset{-12}{Vt}} & \overset{76}{\underset{28}{Vu}} & \overset{104}{\underset{-14}{Vv}} & \overset{90}{\underset{20}{Vw}} & \overset{110}{\underset{-10}{Vx}}
\end{array}$$

$$W_e = 2.083292346 \times 10^{-27} Kg$$
$$W_b = 1.291733144 \times 10^{-29} Kg$$
$$\sum {}^{256}_{100}FmW_1 = 4.251799043 \times 10^{-25} Kg$$

$^{256}_{100}$Fm nucleus kernel force balance to verify results (figure 11.6, unit: N) table 11.5

N_a \ j		1	2	3	4	5	6		Nuclear electric and magnetic field force accumulated
58	$F_{e\theta}$ $F_{b\theta}$	v. 373.6420907 -727.6115399		x. 720.8090694 -519.7225285				↑	3276.131632
34	$F_{e\theta}$ $F_{b\theta}$		q. 640.1304363 -687.7365970		t. 1331.794967 -687.7365970			|	3075.045092
16	$F_{e\theta}$ $F_{b\theta}$	h. 480.0435425 -943.7382342		k. 1054.873673 -943.7382342		r. 2378.302662 -943.7382342		|	2430.986722
34/13	$F_{e\theta}$ $F_{b\theta}$ $\Delta F_{\theta b}$		d. 712.7489433 -57.06223088 -137.8927999		f. 129.9625756 -28.53111544 -68.94639993	l. 418.2198398 -14.26555772 -68.94639993		|	885.286855

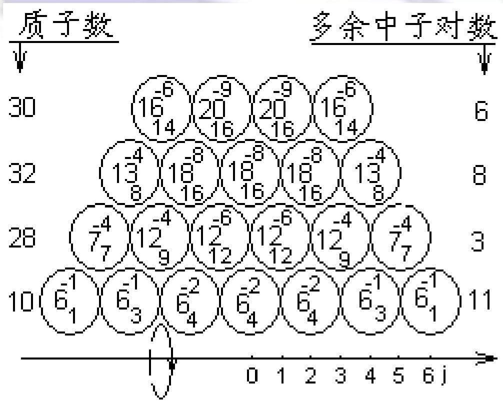

图 11.7 $^{256}_{100}Fm$ 原子核内核子、净剩 π± 介子分配示意图

$$\begin{array}{cccccc}
\underset{4}{Va} & \overset{4}{\underset{-2}{Vb}} & \overset{2}{\underset{8}{Vc}} & \overset{10}{\underset{-4}{Vd}} & \overset{6}{\underset{6}{Ve}} & \overset{12}{\underset{-2}{Vf}} \\
\overset{10}{\underset{24}{Vg}} & \overset{34}{\underset{-12}{Vh}} & \overset{22}{\underset{18}{Vi}} & \overset{40}{\underset{2}{Vj}} & \overset{42}{\underset{-8}{Vk}} & \overset{34}{\underset{-2}{Vl}} \\
\overset{32}{\underset{16}{Vm}} & \overset{48}{\underset{32}{Vn}} & \overset{80}{\underset{-8}{Vo}} & \overset{72}{\underset{14}{Vp}} & \overset{86}{\underset{-16}{Vq}} & \overset{70}{\underset{-8}{Vr}} \\
\overset{62}{\underset{16}{Vs}} & \overset{78}{\underset{-8}{Vt}} & \overset{70}{\underset{32}{Vu}} & \overset{102}{\underset{-18}{Vv}} & \overset{84}{\underset{28}{Vw}} & \overset{112}{\underset{-12}{Vx}}
\end{array}$$

$$W_e = 2.072443525 \times 10^{-27} Kg$$
$$W_b = 1.231082309 \times 10^{-29} Kg$$
$$\sum {}^{256}_{100}FmW_2 = 4.251802433 \times 10^{-25} Kg$$

By data can be seen in figure 11.6 and table 11.5:2 ~ 4 layer particles spiral ring inside although magnetic force is greater than the nuclear field force, but on the inside and outside are not embedded space constraints, leading to the bottom and outside layers nuclear power field force far outweigh the magnetic field strength. The nucleus is not stable, also does not exist. We have to redesign "assembly" ${}^{256}_{100}$Fm nucleus. As shown in the figure 11.7 and figure 11.8. Nuclear force balance test results see table 11.6 and table 11.7.

${}^{256}_{100}$Fm nucleus kernel force balance to verify the results (Figure 11.7, unit: N) table 11.6

j / N_a	1	2	3	4	5	6		nuclearElectric and magnetic field force accumulated
58 $F_{e\theta}$ $F_{b\theta}$	v. 356.0835222 -1202.786423		x. 1083.090634 -801.8576154				↑ |	2465.520852
34 $F_{e\theta}$ $F_{b\theta}$		q.1116.491063 -1222.642839		t. 831.9768966 -611.3214195			| |	2184.287834
16 $F_{e\theta}$ $F_{b\theta}$	h. 543.0960990 -943.7382324		k. 922.5650244 -629.1588228		r. 1404.572717 -419.4392152		| |	1963.632357
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$		d.712.7489433 -57.06223088 -45.96426662		f. 268.7410103 -28.53111544 -191.5177776		l. 79.24720327 -14.26555772 -38.30355552	| | |	685.0926531

By figure 11.6 and figure 11.7 and figure 11.8 and table 11.5 and table 11.6 and table 11.7 the internal structure, nuclear force balance verification calculation parameters is visible, we design three kinds of the nucleus of the difference is very big, $\pi^{\pm}$mesons combination scheme, simulation calculation of type A ${}^{256}_{100}$Fm nucleus, the common features are: nucleus layers inside and the outside edge particles spiral ring in the nuclear field force are far outweigh the magnetic force, obviously, the three type A nucleus is very unstable, also won't exist. Further behind on quality of medium to light nuclei of the nuclear force balance test simulation analysis also showed that the number of nuclear power by $Z_i \geq 6$ all the nucleus, type A nucleus are unreliable, can only is type B nucleus.

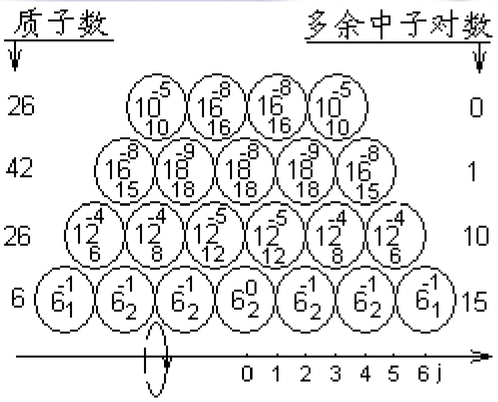

图 11.8 ${}^{256}_{100}Fm$ 原子核内核子、净剩 $\pi^{\pm}$ 介子分配示意图

$Va^{}_{2}$	Vb^{2}_{0}	Vc^{2}_{4}	Vd^{6}_{-2}	Ve^{4}_{4}	Vf^{8}_{-2}
Vg^{6}_{24}	Vh^{30}_{-10}	Vi^{20}_{16}	Vj^{36}_{2}	Vk^{38}_{-8}	Vl^{30}_{-2}
Vm^{28}_{18}	Vn^{46}_{36}	Vo^{82}_{-8}	Vp^{74}_{12}	Vq^{86}_{-18}	Vr^{68}_{-8}
Vs^{60}_{30}	Vt^{90}_{-16}	Vu^{74}_{32}	Vv^{106}_{-16}	Vw^{90}_{20}	Vx^{110}_{-10}

$$W_e = 2.049571000 \times 10^{-27} Kg$$
$$W_b = 5.584920854 \times 10^{-30} Kg$$
$$\sum {}^{256}_{100}FmW_3 = 4.251799918 \times 10^{-25} Kg$$

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$^{256}_{100}$Fm nucleus kernel force balance to verify the results (figure 11.8, unit: N) table 11.7

j / N_a	1	2	3	4	5	6	Nuclear electric and magnetic field force accumulated	
58 $F_{e\theta}$ $F_{b\theta}$	v. 423.420591 －950.3497664		x. 720.8090694 －593.968604				↑	1414.655202
34 $F_{e\theta}$ $F_{b\theta}$		q.1271.796258 -1375.473194		t.1528.592936 -1375.473194			|	1287.814736
16 $F_{e\theta}$ $F_{b\theta}$	h. 481.1898312 －655.3737738		k. 670.5780981 －524.299019		r. 1111.131136 －419.4392152		|	1134.694994
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$		d.246.3420037 -22.98213332		f. 94.52093682 -14.26555772 -45.96426665		l. 76.32070266 -14.26555772 -22.98213332	|	296.7239945

11.4.2 $^{256}_{100}$Fm B type nucleus internal structure and parameter Calculation

$^{256}_{100}$Fm nucleus kernel force balance to verify the results (figure 11.9, unit: N) table 11.8

j / N_a	1	2	3	4	5	Nuclear electric and magnetic field force accumulated	
88 $F_{e\theta}$ $F_{b\theta}$	v. 63.14830698 -48.38782324					↑	290.5680627
58 $F_{e\theta}$ $F_{b\theta}$		t. 954.9819745 -950.3497664				|	275.8075790
34 $F_{e\theta}$ $F_{b\theta}$	n. 879.4710447 -1547.407343		p. 1583.763385 -1203.539045			|	271.1753709
16 $F_{e\theta}$ $F_{b\theta}$		j. 1177.523760 -943.7382342		m. 332.5403448 -943.7382342		|	-109.0489691
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 352.2356112 -57.06223088 -91.92853324		d. 238.3761117 -57.06223088 -30.64284441		i. 96.19284851 -28.53111544 -153.2142221	|	268.3633945

When we use type B nuclei model to "assemble" $^{256}_{100}$Fm nucleus, see figure 11.9 and figure 11.10, the nuclear force balance test simulation results shown in table 11.8 and table 11.9.

By figure 11.9 and figure 11.10 and table 11.8 and table 11.9 the results can be seen, with both the internal structure of the nucleus $^{256}_{100}$Fm, accumulative total nuclear power field force is only slightly greater than the magnetic field strength.

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Such as column of table 11.9 v, t, although ampere force is greater than the nuclear field, as a result of p particles in the column spiral ring no set limit, although that is unstable nuclei, but there can temporarily.

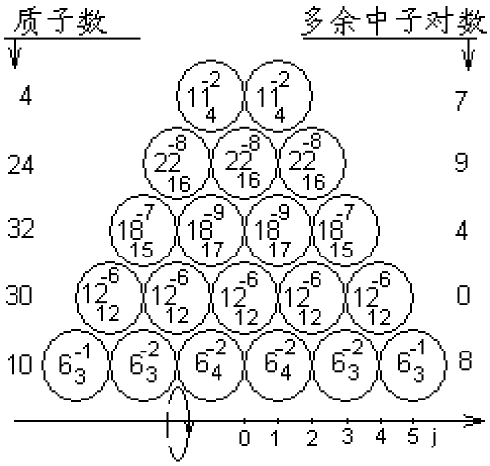

图 11.9 ${}^{256}_{100}Fm$ 原子核内核子、净剩 π± 介子分配示意图

$$\begin{array}{cccccc}
\underset{8}{Va} & \overset{8}{\underset{-4}{Vb}} & \overset{4}{\underset{6}{Vc}} & \overset{10}{\underset{-4}{Vd}} & \overset{6}{\underset{12}{Ve}} & \overset{18}{\underset{-6}{Vf}} \\
\overset{12}{\underset{6}{Vg}} & \overset{18}{\underset{24}{Vh}} & \overset{42}{\underset{-2}{Vi}} & \overset{40}{\underset{-12}{Vj}} & \overset{28}{\underset{24}{Vk}} & \overset{52}{\underset{34}{Vl}} \\
\overset{86}{\underset{-12}{Vm}} & \overset{74}{\underset{-18}{Vn}} & \overset{56}{\underset{30}{Vo}} & \overset{86}{\underset{-14}{Vp}} & \overset{72}{\underset{16}{Vq}} & \overset{88}{\underset{32}{Vr}} \\
\overset{120}{\underset{-8}{Vs}} & \overset{112}{\underset{-16}{Vt}} & \overset{96}{\underset{8}{Vu}} & \overset{104}{\underset{-4}{Vv}} & &
\end{array}$$

$$W_e = 2.110556341 \times 10^{-27} Kg$$

$$W_b = 1.446182535 \times 10^{-29} Kg$$

$$\sum {}^{256}_{100}FmW_4 = 4.251800825 \times 10^{-25} Kg$$

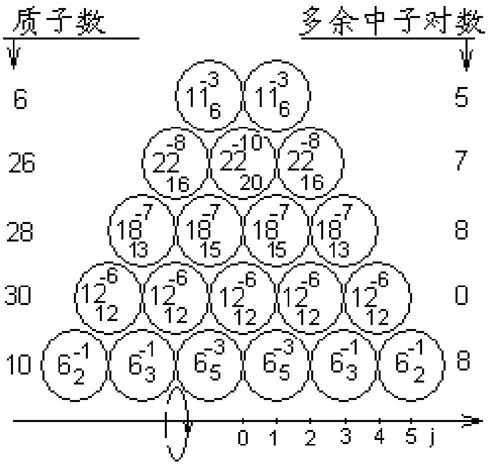

图 11.8 ${}^{256}_{100}Fm$ 原子核内核子、净剩 π± 介子分配示意图

$$\begin{array}{cccccc}
\underset{10}{Va} & \overset{10}{\underset{-6}{Vb}} & \overset{4}{\underset{6}{Vc}} & \overset{10}{\underset{-2}{Vd}} & \overset{8}{\underset{12}{Ve}} & \overset{20}{\underset{-6}{Vf}} \\
\overset{14}{\underset{4}{Vg}} & \overset{18}{\underset{24}{Vh}} & \overset{42}{\underset{-2}{Vi}} & \overset{40}{\underset{-12}{Vj}} & \overset{28}{\underset{24}{Vk}} & \overset{52}{\underset{30}{Vl}} \\
\overset{82}{\underset{-12}{Vm}} & \overset{70}{\underset{-14}{Vn}} & \overset{56}{\underset{26}{Vo}} & \overset{82}{\underset{-14}{Vp}} & \overset{68}{\underset{20}{Vq}} & \overset{88}{\underset{32}{Vr}} \\
\overset{120}{\underset{-10}{Vs}} & \overset{110}{\underset{-16}{Vt}} & \overset{94}{\underset{12}{Vu}} & \overset{106}{\underset{-6}{Vv}} & &
\end{array}$$

$$W_e = 2.096575583 \times 10^{-27} Kg$$

$$W_b = 1.437941511 \times 10^{-29} Kg$$

$$\sum {}^{256}_{100}FmW_5 = 4.251801656 \times 10^{-25} Kg$$

From this chapter three atoms of ${}^{208}_{82}$Pb, ${}^{232}_{90}$Th, ${}^{256}_{100}$Fm the internal structure of nuclide in the design, simulation results can be seen that: in the nuclear in nucleus, net with π± mesons uniform distribution, under the premise of to "assemble" out of accord with a stable nuclei of the total energy of only a few solutions, which can only individual with internal nuclear force balance condition, but this individual (not only) example also shows that exist with nuclear power.

${}^{256}_{100}$Fm nucleus kernel force balance to verify results (figure 11.10, unit: N) table 11.9

j / N_a	1	2	3	4	5	Nuclear electric and magnetic field force accumulated

88 $F_{e\theta}$ $F_{b\theta}$	v. 93.99510946 -108.8726023				↑ |	11.8867131
58 $F_{e\theta}$ $F_{b\theta}$		t. 968.3527797 -1187.937208			| |	26.76420594
34 $F_{e\theta}$ $F_{b\theta}$	n. 813.0135219 -936.0859236	p. 1204.566227 -936.0859236			| |	246.3486342
16 $F_{e\theta}$ $F_{b\theta}$		j. 1177.523760 -943.7382342	m. 444.0723980 -943.7382342		| |	-22.13166916
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 474.7645661 -128.3900195 -107.2499554	d. 360.3313781 -42.79667316 -153.2142221	i. -30.52020855 -14.26555772 -114.9106665		| | |	243.7486412

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12 $^{168}_{70}$Yb, $^{124}_{54}$Xe, $^{54}_{26}$Fe, $^{40}_{20}$Ca, $^{16}_{8}$O maintenance nuclei and stable isotope internal Structure and parameter Calculation

12.1 $^{168}_{70}$Yb nucleus and stable isotope internal structure and parameter calculation

12.1.1 $^{168}_{70}$Yb nucleus and stable isotopes experiment, parameters calculated value

The scientific community has been found that thousands of nuclide, of which only hundreds of stable isotopes. This chapter will purposefully selected the above five kinds of nuclei and isotope, internal structure design, analysis and parameter calculation, so as to fully verify the theoretical model.

$^{168}_{70}$Yb nucleus and stable isotopes energy parameters experiment results table 12.1

Nuclide	The determination of total energy atomic u	Abundance %	Nucleus total energy calculated value x 10^{-25} kg	Net with $\pi^{\pm}$ source electromagnetic field total energy x 10^{-27} kg	Magnetic moment U_P Mri son
$^{168}_{70}$Yb	167.933925	0.14	2.788036725	1.228920997	
$^{170}_{70}$Yb	169.934792	3.0	2.821261926	1.246979758	
$^{171}_{70}$Yb	170.936354	14.3	2.837893265	1.257883058	0.4919
$^{172}_{70}$Yb	171.936405	21.9	2.854499514	1.266277282	
$^{173}_{70}$Yb	172.938234	16.2	2.871135287	1.277623947	-0.678
$^{174}_{70}$Yb	173.938881	31.8	2.887751433	1.287007853	
$^{176}_{70}$Yb	175.942582	12.7	2.921023694	1.309772585	

$^{168}_{70}$Yb nuclide is total of seVen kinds of stable isotopes. In laboratory determination of atoms of each isotope total energy, deduct nucleus all electronic original total energy 70 m_{eo}, plus by (11.1) to estimate the total ionization energy of nuclear electronic 70 x 51326 eV= 6.404786 x10^{-30} kg, obtained $^{168}_{70}$Yb nucleus and stable isotopes energy parameters experiment, the results shown in table 12.1.

Among them, the $\pi^{\pm}$source electromagnetic field temporarily takes no account of $\overline{m}_{di}$, $\overline{m}_{gi}$ and $\overline{m}_{d1}$, $\overline{m}_{g1}$ the energy difference between (the same below).

From table 12.1 that: increases with number of neutrons in the nucleus, nucleus of the particles spiral rings net with $\pi^{\pm}$ mesons spin direction of the electric and magnetic energy gradually increases, it will be for us in the "assembly", adjusting and simulation nucleus total energy provides the net with $\pi^{\pm}$ source distribution state.

12.1.2 $^{172}_{70}$Yb nucleus internal structure and parameter calculation

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Refer to section 11.1 ~ 2, all the particles in the nucleus of solenoid ring "assembly", with net high and low π±source distribution, energy simulation and fitting adjustment process. First to "assemble" ${}^{172}_{70}$Yb with type A nuclear nucleus, see figure 12.1. From table 9.2 type A nuclear potential energy parameters, refer to section (11.4), 11.2 5 ~ 13 calculation procedures, the net can be obtained with π± mesons electric, magnetic energy and nuclear energy. From table 10.1 and table 10.1, (10.17) - calculation data, according to (11.5), (11.6) and (11.7), nuclear force balance test results to shown in table 12.2.

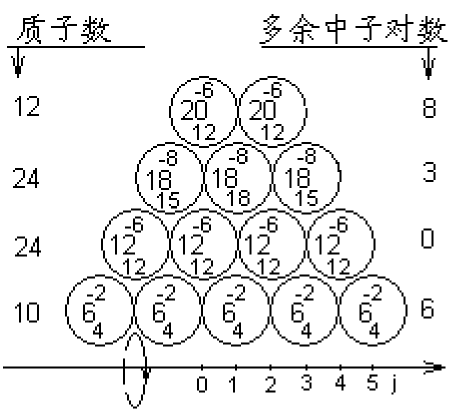

图 12.1 ${}^{172}_{70}Yb$ 原子核内核子、净剩 π±

介子分配示意图

Va_{4} Vb^{4}_{-2} Vc^{2}_{8} Vd^{10}_{-4} Ve^{6}_{8} Vf^{14}_{-4}

Vg^{10}_{24} Vh^{34}_{-12} Vi^{22}_{24} Vj Vk^{46}_{-12} Vl

Vm^{34}_{18} Vn^{52}_{30} Vo^{82}_{-8} Vp Vq^{74}_{-16} Vr

Vs Vt Vu^{58}_{24} Vv^{82}_{-12}

$$W_e = 1.195446297 \times 10^{-27} Kg$$

$$W_b = 1.647200661 \times 10^{-29} Kg$$

$$\sum {}^{172}_{70}YbW_1 = 2.854494163 \times 10^{-25} Kg$$

In figure 12.1 ${}^{172}_{70}$Yb type A nucleus structure model is after many kinds of scheme selection in the simulation of A, all the particles spiral rings net with π±adjusted already tend to limit the distribution of the violation. From can be seen in table 12.2, uneVen size of electric and magnetic field distribution in nuclei, especially the bottom, can't set cover the edge spiral ring particles. That is to say: can't stable ${}^{172}_{70}$Yb "assembly" type A nucleus.

${}^{172}_{70}$Yb nucleus kernel force balance test results list 12.2 (figure 12.1)

j / N_a	1	2	3	4	5	6	Nuclear electric and magnetic field force accumulated	
58 $F_{e\theta}$ $F_{b\theta}$	v. 247.5951682 -534.5717436						↑	
34 $F_{e\theta}$ $F_{b\theta}$		q. 1243.455159 -1222.642839					|	967.2598644
16 $F_{e\theta}$ $F_{b\theta}$	h. 543.096099 -943.7382342	k. 1260.146427 -943.7382342					|	946.4475444
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$		d. 712.7489433 -57.06223088	f. 307.2004698 -57.06223088 -275.7855997				|	630.0393516

Similarly, when we use type B nuclei model, see figure 12.2:

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From table 9.1 and table 9.1 and table 10.2 the calculated data, with reference to the above calculation method, a type B ${}^{172}_{70}$Yb nucleus internal structure parameters and nuclear force balance test results shown in table 12.3.

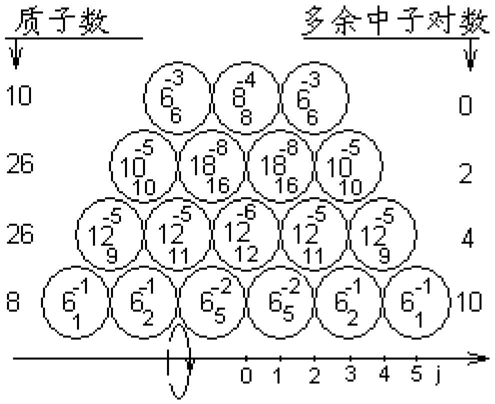

图 12.2 ${}^{172}_{70}Yb$ 原子核内核子、净剩 π± 介子分配示意图

$\overset{}{\underset{10}{Va}}$ $\overset{10}{\underset{-4}{Vb}}$ $\overset{6}{\underset{4}{Vc}}$ $\overset{10}{\underset{-2}{Vd}}$ $\overset{8}{\underset{12}{Ve}}$ $\overset{20}{\underset{-6}{Vf}}$

$\overset{14}{\underset{2}{Vg}}$ $\overset{16}{\underset{22}{Vh}}$ $\overset{38}{\underset{-2}{Vi}}$ $\overset{36}{\underset{-10}{Vj}}$ $\overset{26}{\underset{18}{Vk}}$ $\overset{44}{\underset{32}{Vl}}$

$\overset{76}{\underset{-10}{Vm}}$ $\overset{66}{\underset{-16}{Vn}}$ $\overset{50}{\underset{20}{Vo}}$ $\overset{70}{\underset{-10}{Vp}}$ $\overset{60}{\underset{8}{Vq}}$ $\overset{68}{\underset{12}{Vr}}$

$\overset{80}{\underset{-4}{Vs}}$ $\overset{76}{\underset{-6}{Vt}}$

$$W_e = 1.184427299 \times 10^{-27} Kg$$
$$W_b = 9.366575355 \times 10^{-30} Kg$$
$$\sum {}^{172}_{70}YbW_2 = 2.854501194 \times 10^{-25} Kg$$

${}^{172}_{70}$Yb nucleus kernel force balance to verify results (figure 12.2, unit: N) table 12.3

j / N_a	1	2	3	4	5		Nuclear electric and magnetic field force accumulated
58 $F_{e\theta}$ $F_{b\theta}$		t. 257.3219278 -178.1905812				↑	-71.2372154
34 $F_{e\theta}$ $F_{b\theta}$	n. 734.3693282 -1222.642839	p. 862.8853063 -764.1517744				|	-150.368562
16 $F_{e\theta}$ $F_{b\theta}$		j. 1033.35848 -786.4485285	m. 32.34284588 -655.3737738			|	-249.1020939
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 642.7725138 -57.06223088 -306.4284441	d. 237.204948 -28.53111544 -160.8749332	i. -162.8141647 -14.26555744 -22.98213331			|	127.0188825

12.1.3 ${}^{170}_{70}$Yb nucleus internal structure and parameter calculation

Similarly, stable isotopes of ${}^{172}_{70}$Yb nucleus ${}^{170}_{70}$Yb nucleus, we can in the ${}^{172}_{70}$Yb nucleus, figure 12.2 model "assembly" on the basis of the protons, neutrons, π± source distribution adjust state for the internal structure and related parameters.

As shown in the figure 12.3, ${}^{170}_{70}$Yb nucleus nuclear force balance test results shown in table 12.4.

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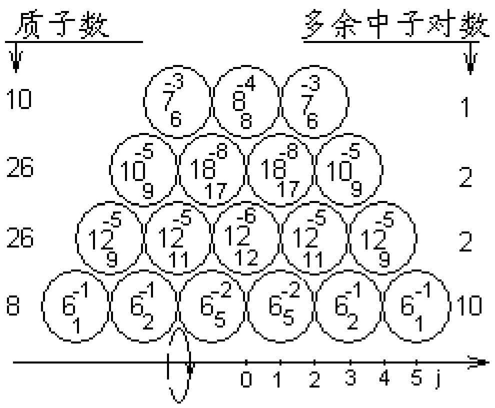


图 12.3 $^{170}_{70}Yb$ 原子核内核子、净剩 $\pi^{\pm}$ 介子分配示意图

$\underset{10}{Va}$	$\overset{10}{\underset{-4}{Vb}}$	$\overset{6}{\underset{4}{Vc}}$	$\overset{10}{\underset{-2}{Vd}}$	$\overset{8}{\underset{12}{Ve}}$	$\overset{20}{\underset{-6}{Vf}}$
$\overset{14}{\underset{2}{Vg}}$	$\overset{16}{\underset{22}{Vh}}$	$\overset{38}{\underset{-2}{Vi}}$	$\overset{36}{\underset{-10}{Vj}}$	$\overset{26}{\underset{18}{Vk}}$	$\overset{44}{\underset{34}{Vl}}$
$\overset{78}{\underset{-10}{Vm}}$	$\overset{68}{\underset{-16}{Vn}}$	$\overset{52}{\underset{18}{Vo}}$	$\overset{70}{\underset{-10}{Vp}}$	$\overset{60}{\underset{8}{Vq}}$	$\overset{68}{\underset{12}{Vr}}$
$\overset{80}{\underset{-4}{Vs}}$	$\overset{76}{\underset{-6}{Vt}}$				

$$W_e = 1.190401554 \times 10^{-27} Kg$$

$$W_b = 9.366575355 \times 10^{-30} Kg$$

$$\sum {}^{170}_{70}Yb W_1 = 2.82126385 \times 10^{-25} Kg$$

$^{170}_{70}$Yb nucleus kernel force balance to verify results (figure 12.3, unit: N) table 12.4

j / N_a	1	2	3	4	5		Nuclear electric and magnetic field force accumulated
58 $F_{e\theta}$ $F_{b\theta}$		t. 257.3219278 -178.1905812				↑	-251.3859595
34 $F_{e\theta}$ $F_{b\theta}$	n. 814.2375529 -1222.642839		p. 729.2082511 -764.1517744			|	-330.5173061
16 $F_{e\theta}$ $F_{b\theta}$		j. 1033.35848 -786.4485285		m. -14.12884298 -655.3737738		|	-295.5737828
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 642.7725138 -57.06223088 -306.4284441		d. 237.204948 -28.53111544 -160.8749332		i. -162.8141647 -14.26555772 -22.98213331	|	127.0188825

12.1.4 $^{173}_{70}$Yb nucleus internal structure and parameter calculation

$^{173}_{70}$Yb inside protons and neutrons are not eVen, nuclei are U = 0.678 U_P strength. Because a single nuclear for m_n+2 m_p, according to section 7.2 magnetic moment within the nucleus formation principle, we make the m_n + 2 m_p "decentralized" all the $\pi^{\pm}$ violation, as shown in figure 7.4 a, d, d to plan in each layer, low-energy particle spiral ring rail. By (7.6-4), nuclear magnetic synthesis solution for:

$$\sum U = 5U_{g1}^{+} + U_{d1}^{-} + 2U_{d2}^{-} + U_{d3}^{-} + U_{d4}^{+} \qquad (12.1)$$

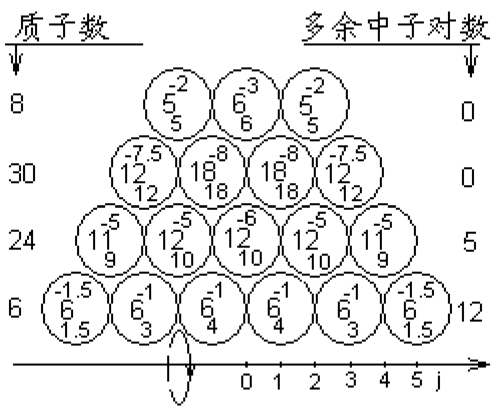
Will each to $\pi^{\pm}$ mesons in table 9.1 the original magnetic moment of value generation into (12.1), and converted to MRI son have to: $\sum U = -0.6756 U_p$.

From table 9.1 of the $\pi^{\pm}$ mesons $\overline{m}_{di}$, $\overline{m}_{gi}$, data quality, m_n + 2 m_p "decentralized" of the $\pi^{\pm}$ violation according to (12.1) of the scheme in the high and low particles spiral ring, the m_n+2m_p total quality, quality will be increased by:$\Delta m=1.213303744\times10^{-29}$Kg.

So, ${}^{173}_{70}$Yb total energy equation of nucleus $\sum {}^{173}_{70}$YbW_1 should be expressed as:

$$\sum {}^{173}_{70}YbW_1 = 173\times 5\overline{m}_{d1} + \Delta m + \sum N_i \overline{m}_{ni} + W_b + W_e \qquad (12.2)$$

According to the above scheme, design of ${}^{173}_{70}Yb$ nucleus to showed in figure 12.4. Convenient for calculating, we will be alone $\pi^{\pm}$ violation "into" two and a half to nuclear power charge number calculation. This does not mean that charged particles can "decentralized", on the contrary, ${}^{173}_{70}Yb$ nucleus of electric quadrupole moment love you just book the correctness of the model and charged particles cannot "disassemble. ${}^{173}_{70}Yb$ Nucleus kernel force balance test results shown in table 12.5.



Va_{8} Vb^{8}_{-2} Vc^{6}_{6} Vd^{12}_{-2} Ve^{10}_{10} Vf^{20}_{-6}

Vg^{14}_{3} Vh^{17}_{20} Vi^{37}_{-3} Vj^{34}_{-10} Vk^{24}_{18} Vl^{42}_{36}

Vm^{78}_{-10} Vn^{68}_{-16} Vo^{52}_{24} Vp^{76}_{-15} Vq^{61}_{6} Vr^{67}_{10}

Vs^{77}_{-3} Vt^{74}_{-4}

$$W_e = 1.182004425\times10^{-27}Kg$$
$$W_b = 1.051690152\times10^{-29}Kg$$
$$\sum {}^{173}_{70}YbW_1 = 2.871139719\times10^{-25}Kg$$

图 12.4 ${}^{173}_{70}Yb$ 原子核内核子、净剩 $\pi^{\pm}$ 介子分配示意图

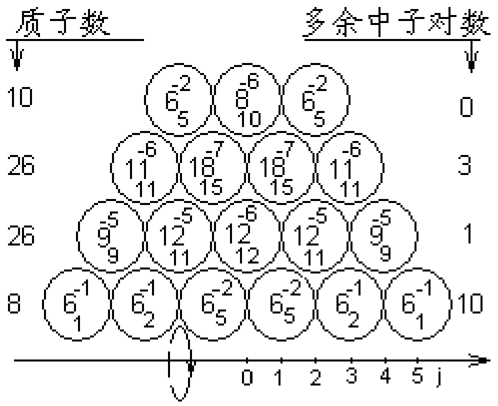
${}^{173}_{70}Yb$ Nucleus kernel force balance to verify results (figure 12.4, unit: N) table 12.5

Na \ j	1	2	3	4	5		Nuclear electric and magnetic field force accumulated
58 $F_{e\theta}$ $F_{b\theta}$		t. 236.6909889 -89.0952906				↑	-389.2552892
34 $F_{e\theta}$ $F_{b\theta}$	n. 867.6686567 -1222.642839		p. 891.0114236 -1146.227662			|	-536.8509875
16 $F_{e\theta}$ $F_{b\theta}$		j. 920.3767317 -786.4485285		m. -110.2481458 -655.3737738		|	-281.6347491

$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 520.2435589 -14.26555772 - 107.2499554	d. 473.2387324 -14.26555772 -210.6695553	i. –218.119028 -21.39833658 -57.45533327	| | |	350.0589672

12.1.5 $^{168}_{70}$Yb nucleus internal structure and parameter calculation

Similarly, refer to section 12.1.2 ~ 12.1.3, $^{168}_{70}$Yb nucleus internal structure and the nuclear force balance verification calculation is shown in figure 12.5 and table 12.6.



$$\overset{}{\underset{10}{Va}} \quad \overset{10}{\underset{-4}{Vb}} \quad \overset{6}{\underset{4}{Vc}} \quad \overset{10}{\underset{-2}{Vd}} \quad \overset{8}{\underset{12}{Ve}} \quad \overset{20}{\underset{-6}{Vf}}$$

$$\overset{14}{\underset{2}{Vg}} \quad \overset{16}{\underset{22}{Vh}} \quad \overset{38}{\underset{-2}{Vi}} \quad \overset{36}{\underset{-10}{Vj}} \quad \overset{26}{\underset{18}{Vk}} \quad \overset{44}{\underset{30}{Vl}}$$

$$\overset{74}{\underset{-10}{Vm}} \quad \overset{64}{\underset{-14}{Vn}} \quad \overset{50}{\underset{22}{Vo}} \quad \overset{72}{\underset{-12}{Vp}} \quad \overset{60}{\underset{10}{Vq}} \quad \overset{70}{\underset{10}{Vr}}$$

$$\overset{80}{\underset{-6}{Vs}} \quad \overset{74}{\underset{-4}{Vt}}$$

图 12.5 $^{168}_{70}Yb$ 原子核内核子、净剩 $\pi^{\pm}$ 介子分配示意图

$$W_e = 1.18362812 \times 10^{-27} Kg$$

$$W_b = 9.366575355 \times 10^{-30} Kg$$

$$\sum {}^{168}_{70}YbW_1 = 2.788033106 \times 10^{-25} Kg$$

$^{168}_{70}Yb$ Nucleus kernel force balance to verify results (figure 12.5, unit: N) table 12.6

j / N_a	1	2	3	4	5		Nuclear electric and magnetic field force accumulated
58 $F_{e\theta}$ $F_{b\theta}$		t. 251.5671654 -178.1905812				↑ |	-37.68937437
34 $F_{e\theta}$ $F_{b\theta}$	n. 705.4066273 -936.0859236	p. 893.9238096 -802.3593631				| |	-111.0659586
16 $F_{e\theta}$ $F_{b\theta}$		j. 1033.35848 -786.4485285	m. 78.81453473 -655.3737738			| |	-202.6304051
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 642.7725138 -57.06223088 -306.4284441	d. 237.204948 -28.53111544 -160.8749332	i.–162.8141647 -14.26555772 -22.98213331			| | |	127.0188825

12.1.6 Y$^{174}_{70}$b nucleus internal structure and parameter calculation

Similarly, refer to section 12.1.2 ~ 12.1.3, 12.1.5, $^{174}_{70}$Yb nucleus internal structure and the nuclear force balance

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verification calculation is shown in figure 12.6 and table 12.7.

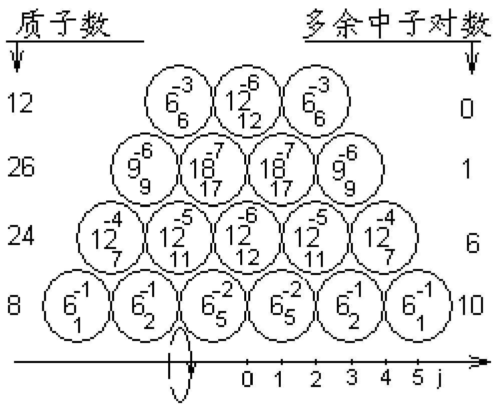

图 12.6 $^{174}_{70}Yb$ 原子核内核子、净剩 π± 介子分配示意图

$$
\begin{array}{cccccc}
\underset{10}{Va} & \overset{10}{\underset{-4}{Vb}} & \overset{6}{\underset{4}{Vc}} & \overset{10}{\underset{-2}{Vd}} & \overset{8}{\underset{12}{Ve}} & \overset{20}{\underset{-6}{Vf}} \\
\overset{14}{\underset{2}{Vg}} & \overset{16}{\underset{22}{Vh}} & \overset{38}{\underset{-2}{Vi}} & \overset{36}{\underset{-10}{Vj}} & \overset{26}{\underset{14}{Vk}} & \overset{40}{\underset{34}{Vl}} \\
\overset{74}{\underset{-8}{Vm}} & \overset{66}{\underset{-14}{Vn}} & \overset{52}{\underset{18}{Vo}} & \overset{70}{\underset{-12}{Vp}} & \overset{58}{\underset{12}{Vq}} & \overset{70}{\underset{12}{Vr}} \\
\overset{82}{\underset{-6}{Vs}} & \overset{76}{\underset{-6}{Vt}} & & & &
\end{array}
$$

$$W_e = 1.182568429 \times 10^{-27} Kg$$
$$W_b = 9.223978353 \times 10^{-30} Kg$$
$$\sum {}^{174}_{70}YbW_1 = 2.887749837 \times 10^{-25} Kg$$

$^{174}_{70}Yb$ Nucleus kernel force balance to verify results (figure 12.6, unit: N) table 12.7

N_a \ j	1	2	3	4 5		Nuclear electric and magnetic field force accumulated
58 $F_{e\theta}$ $F_{b\theta}$		t. 269.2228690 -267.2858718			↑	-418.1139802
34 $F_{e\theta}$ $F_{b\theta}$	n. 795.9492798 -936.0859236	p. 600.3548052 -802.3593631			|	-420.0509774
16 $F_{e\theta}$ $F_{b\theta}$		j. 1033.35848 -786.448285	m. -67.67623443 -524.299019		|	-218.0464195
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 642.7725138 -57.06223088 -306.4284441	d. 237.204948 -28.53111544 -160.8749332	i.–162.8141647 -14.26555772 -22.98213331		|	127.0188825

12.1.7 $^{176}_{70}$Yb nucleus internal structure and parameter calculation

Similarly, referring to the 12.1.5 ~ 12.1.6, internal structure and the $^{176}_{70}Yb$ nucleus nuclear force balance verification calculation is shown in figure 12.7 and table 12.8.

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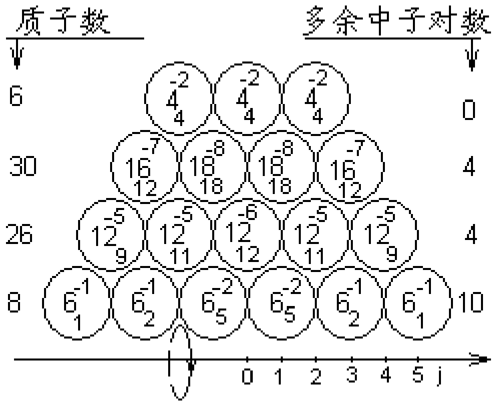

图 12.7 ${}^{176}_{70}Yb$ 原子核内核子、净剩 π± 介子分配示意图

Va_{10} Vb^{10}_{-4} Vc^{6}_{4} Vd^{10}_{-2} Ve^{8}_{12} Vf^{20}_{-6}

Vg^{14}_{2} Vh^{16}_{22} Vi^{38}_{-2} Vj^{36}_{-10} Vk^{26}_{18} Vl^{44}_{36}

Vm^{80}_{-10} Vn^{70}_{-16} Vo^{54}_{24} Vp^{78}_{-14} Vq^{64}_{4} Vr^{68}_{8}

Vs^{76}_{-2} Vt^{74}_{-4}

$$W_e = 1.214035693 \times 10^{-27} Kg$$
$$W_b = 9.43993031 \times 10^{-30} Kg$$
$$\sum {}^{176}_{70}YbW_1 = 2.921026450 \times 10^{-25} Kg$$

${}^{176}_{70}Yb$ Nucleus kernel force balance to verify results (figure 12.7, unit: N) table 12.8

N_a \ j	1	2	3	4	5		Nuclear electric and magnetic field force accumulated
58 $F_{e\theta}$ / $F_{b\theta}$		t. 165.2853417 / -59.3968604				↑	-315.4699263
34 $F_{e\theta}$ / $F_{b\theta}$	n. 896.5909453 / -1222.642839	p. 990.4995480 / -1069.812484				|	-421.3584076
16 $F_{e\theta}$ / $F_{b\theta}$		j. 1033.35848 / -786.4485285	m. -60.60053183 / -655.3737738			|	-342.0454716
$F_{e\theta}$ / 34/13 $F_{b\theta}$ / $\Delta F_{\theta b}$	b. 642.7725138 / -57.06223088 / -306.4284441	d. 237.204948 / -28.53111544 / -160.8749332	i. -162.8141647 / -14.26555772 / -22.98213331			|	127.0188825

12.2 ${}^{130}_{54}$Xe nucleus and stable isotope internal structure and parameter calculation

12.2.1 ${}^{130}_{54}$Xe nucleus and stable isotopes of the calculated value

${}^{130}_{54}$Xe isotopes and stable isotopes of nine, with reference to the section on ${}^{168}_{70}$Yb nucleus and table 12.1 the parameters of the calculation method of ${}^{130}_{54}$Xe nucleus and stable isotopes parameter experimental data, the results shown in table 12.9. Of atoms inside the K_{a2} layer of electronic ionization energy K_{a2} = 29485 eV, generation of (11.1) in type, too: $\sum W_{me} = 2.838337718 \times 10^{-30}$ Kg.

${}^{130}_{54}$Xe nucleus and stable isotopes parameter experiment, the results table table 12.9

Nuclide	The determination of	Abun	Nucleus total energy	Net with π± source	Magnetic

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	total energy atomic u	dance %	calculated value $\times 10^{-25}$Kg	electromagnetic field total energy $\times 10^{-28}$Kg	moment U_P
${}^{124}_{54}$Xe	123.90612	0.096	2.057047409	8.281386454	
${}^{126}_{54}$Xe	125.904279	0.09	2.090227643	8.417006639	
${}^{128}_{54}$Xe	127.9035323	1.92	2.123426047	8.570798115	
${}^{129}_{54}$Xe	128.904784	26.44	2.140052234	8.674678462	-0.7768
${}^{130}_{54}$Xe	129.9035108	4.08	2.156636494	8.736631829	
${}^{131}_{54}$Xe	130.9050847	21.18	2.173268032	8.845862436	0.69066
${}^{132}_{54}$Xe	131.9041568	26.89	2.189858025	8.913549648	
${}^{134}_{54}$Xe	133.905398	10.44	2.22308944	9.100351003	
${}^{136}_{54}$Xe	135.907222	8.9	2.256330532	9.296829987	

12.2.2 ${}^{130}_{54}$Xe nucleus internal structure and parameter calculation

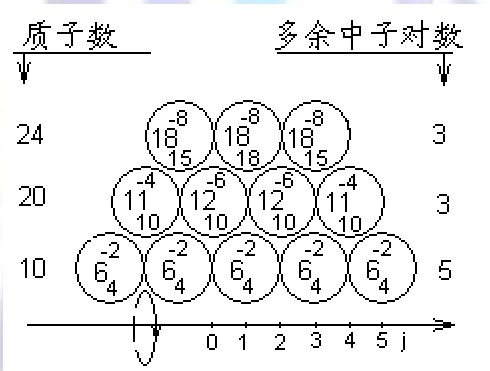

图 12.8 ${}^{130}_{54}Xe$ 原子核内核子、净剩 π±

介子分配示意图

$\underset{4}{Va}$	$\overset{4}{\underset{-2}{Vb}}$	$\overset{2}{\underset{8}{Vc}}$	$\overset{10}{\underset{-4}{Vd}}$	$\overset{6}{\underset{8}{Ve}}$	$\overset{14}{\underset{-4}{Vf}}$
$\overset{10}{\underset{20}{Vg}}$	$\overset{30}{\underset{-12}{Vh}}$	$\overset{18}{\underset{20}{Vi}}$	Vj	$\overset{38}{\underset{-8}{Vk}}$	Vl
$\overset{30}{\underset{18}{Vm}}$	$\overset{48}{\underset{30}{Vn}}$	$\overset{78}{\underset{-8}{Vo}}$	Vp	$\overset{70}{\underset{-16}{Vq}}$	

$$W_e = 7.926277014 \times 10^{-28} Kg$$

$$W_b = 1.614707866 \times 10^{-29} Kg$$

$$\sum {}^{130}_{54}XeW_1 = 2.15663905 \times 10^{-25} Kg$$

Refer to section 12.1 ${}^{172}_{70}$Yb nucleus internal structure and parameter calculation method, the nuclear force balance verification calculation process, we are still in 7.1 type A nucleus model of the first "assembly" ${}^{130}_{54}$Xe nucleus, see figure 12.8. ${}^{130}_{54}$Xe nuclear force balance test results shown in table 12.10.

With the table 12.2, uneVen distribution of electric and magnetic field force in the nuclear, especially the bottom, not set edge of particles spiral ring, this kind of type A nucleus is still not stable. So, we should adopt the type B nuclei model to "assemble" ${}^{130}_{54}Xe$ series nuclide atom, see figure 12.9 and table 12.11.

$^{130}_{54}Xe$ Nucleus kernel force balance to verify results (figure 12.8, unit: N) table 12.10

j / N_a	1	2	3	4	5	6	Nuclear electric and magnetic field force accumulated	
34 $F_{e\theta}$		q. 1170.054522					↑	
$F_{b\theta}$		-1222.642839					|	
16 $F_{e\theta}$	h. 361.9599434	k. 1008.949365					|	1009.829894
$F_{b\theta}$	-943.7382342	-629.1588228					|	
$F_{e\theta}$		d. 712.7489433	f. 307.2004698				|	630.0393516
34/13 $F_{b\theta}$		-57.06223088	-57.06223088				|	
$\Delta F_{\theta b}$			-275.7855997					

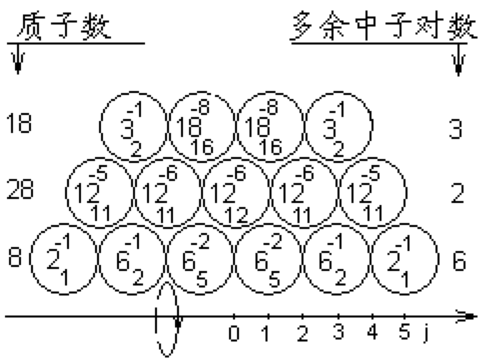

图 12.9 $^{130}_{54}Xe$ 原子核内核子、净剩 $\pi^{\pm}$ 介子分配示意图

$$Va_{10}\quad Vb^{10}_{-4}\quad Vc^{6}_{4}\quad Vd^{10}_{-2}\quad Ve^{8}_{12}\quad Vf^{20}_{-6}$$

$$Vg^{14}_{2}\quad Vh^{16}_{22}\quad Vi^{38}_{-2}\quad Vj^{36}_{-12}\quad Vk^{24}_{22}\quad Vl^{46}_{32}$$

$$Vm^{78}_{-10}\quad Vn^{68}_{-16}\quad Vo^{52}_{4}\quad Vp^{56}_{-2}$$

$$W_e = 8.136574665\times10^{-28}Kg$$

$$W_b = 9.346342627\times10^{-30}Kg$$

$$\sum {}^{130}_{54}XeW_2 = 2.15663237\times10^{-25}Kg$$

$^{130}_{54}$Xe nucleus kernel force balance to verify results (figure 12.9, unit: N) table 12.11

j / N_a	1	2	3	4	5	Nuclear electric and magnetic field force accumulated	
34 $F_{e\theta}$	n. 758.3212815	p. 162.9632036				↑	-316.36408
$F_{b\theta}$	-1222.642839	-152.8303549				|	
16 $F_{e\theta}$		j. 917.0025056	m. 359.6684459			|	-326.4969287
$F_{b\theta}$		-943.7382342	-786.448285			|	
$F_{e\theta}$	b. 642.7725138	d. 237.204948	i. - 162.8141647			|	127.0188825
34/13 $F_{b\theta}$	-57.06223088	-28.53111544	-14.26555772			|	
$\Delta F_{\theta b}$	-306.4284441	-160.8749332	-22.98213331			|	

12.2.3 $^{131}_{54}$Xe nucleus internal structure and parameter calculation

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${}^{131}_{54}$Xe nucleus, the experiment measured strength value of 0.69066 U_p, electric quadrupole moment for $-0.12\times10^{-24}cm^2$. Refer to section 7.2 (12.1) and type of magnetic synthesis principle. By figure 7.4 shows, still take a, d, d, its magnetic synthesis formula is:

$$\sum U = 5U_{g1}^{+} + U_{d2}^{+} + 3U_{d2}^{-} + U_{d3}^{-} \qquad (12.3)$$

${}^{131}_{54}$Xe nucleus kernel force balance to verify results (figure 12.10, unit: N) table 12.12

j / N_a	1	2	3	4	5	Nuclear electric and magnetic field force accumulated	
34 $F_{e\theta}$	n. 663.5682269		p. 294.3919560			↑	-160.7918113
$F_{b\theta}$	-687.7365970		-401.1796816			|	
16 $F_{e\theta}$		j. 1028.200151	m. 308.1758925 -943.7382342			|	-54.00408574
$F_{b\theta}$		-943.7382342				|	
$F_{e\theta}$	b. 520.2435589		d. 473.2387324	i.–78.21443493		| |	497.0963392
34/13 $F_{b\theta}$	-14.26555772		-14.26555772	-14.26555772		|	
$\Delta F_{\theta b}$	-107.2499554		-191.5177776	-76.60711103			

Will each layer in the table 9.1 net with $\pi^{\pm}$mesons original strength value generation into (12.3), too: $\sum U = 0.67806U_p$.

Similarly, according to this kind of alone $m_n + 2\ m_p$ "decentralized" $\pi^{\pm}$ mesons in (12.3) of the scheme, the $\overline{m}_{di}, \overline{m}_{gi}$, in table 9.1, alone the $m_n + 2m_p$ its total quality increment is: $\Delta m=1.9707240905\times10^{-29}$Kg . So, according to (12.2), ${}^{173}_{70}$Yb nuclear magnetic moment, internal structure and parameter calculation, assembly of type B ${}^{131}_{54}$Xe nucleus is shown in figure 12.10, the nuclear force balance test results shown in table 12.12.

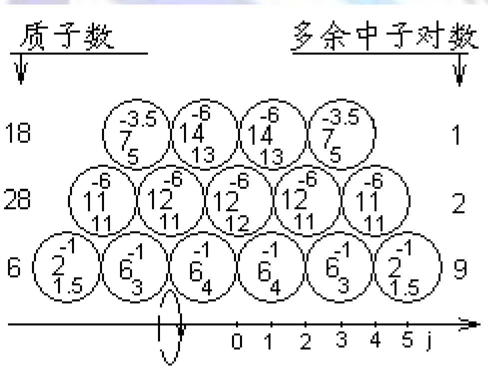

图 12.10 ${}^{131}_{54}Xe$ 原子核内核子、净剩 $\pi^{\pm}$ 介子分配示意图

$$\begin{array}{cccccc}
\underset{8}{Va} & \overset{8}{\underset{-2}{Vb}} & \overset{6}{\underset{6}{Vc}} & \overset{12}{\underset{-2}{Vd}} & \overset{10}{\underset{12}{Ve}} & \overset{22}{\underset{-6}{Vf}} \\
\overset{16}{\underset{3}{Vg}} & \overset{19}{\underset{22}{Vh}} & \overset{41}{\underset{-2}{Vi}} & \overset{39}{\underset{-12}{Vj}} & \overset{27}{\underset{22}{Vk}} & \overset{49}{\underset{26}{Vl}} \\
\overset{75}{\underset{-12}{Vm}} & \overset{63}{\underset{-12}{Vn}} & \overset{51}{\underset{10}{Vo}} & \overset{61}{\underset{-7}{Vp}} & &
\end{array}$$

$$W_e = 8.186479798\times10^{-28}Kg$$
$$W_b = 1.086864991\times10^{-29}Kg$$
$$\sum {}^{131}_{54}XeW_1 = 2.173277665\times10^{-25}Kg$$

12.2.4 ${}^{124}_{54}$Xe nucleus internal structure and parameter calculation

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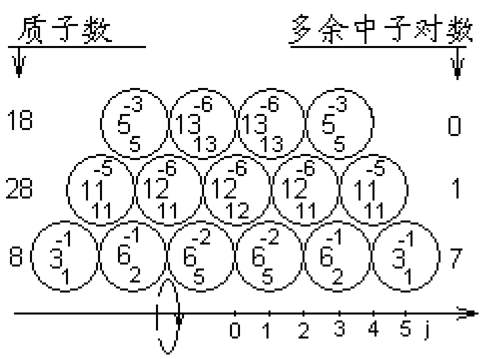

图 12.11 $^{124}_{54}Xe$ 原子核内核子、净剩 $\pi^{\pm}$

介子分配示意图

$$\underset{10}{Va}\quad \overset{10}{\underset{-4}{Vb}}\quad \overset{6}{\underset{4}{Vc}}\quad \overset{10}{\underset{-2}{Vd}}\quad \overset{8}{\underset{12}{Ve}}\quad \overset{20}{\underset{-6}{Vf}}$$

$$\overset{14}{\underset{2}{Vg}}\quad \overset{16}{\underset{22}{Vh}}\quad \overset{38}{\underset{-2}{Vi}}\quad \overset{36}{\underset{-12}{Vj}}\quad \overset{24}{\underset{22}{Vk}}\quad \overset{46}{\underset{26}{Vl}}$$

$$\overset{72}{\underset{-10}{Vm}}\quad \overset{62}{\underset{-12}{Vn}}\quad \overset{50}{\underset{10}{Vo}}\quad \overset{60}{\underset{-6}{Vp}}$$

$$W_e = 8.048187241 \times 10^{-28} Kg$$

$$W_b = 9.346342627 \times 10^{-30} Kg$$

$$\sum {}^{124}_{54}XeW_1 = 2.057054499 \times 10^{-25} Kg$$

$^{124}_{54}Xe$ Nucleus kernel force balance to verify results (Figure12.11 units: N) table 12.13

j / N_a	1	2	3	4	5		Nuclear electric and magnetic field force accumulated
34 Feθ Fbθ	n. 621.0364816 -687.7365970		p. 347.3510529 -343.8682985			↑ |	-183.5991077
16 Feθ Fbθ		j. 917.0025056 -943.7382342		m. 499.0835125 -786.4485285		| |	-187.0818621
Feθ 34/13 Fbθ ΔFθb	b. 642.7725138 -57.06223088 -306.4284441		d. 237.204948 -28.53111544 -160.8749332		i. -162.8141647 -14.26555772 -22.98213331	| | |	127.0188825

12.2.5 $^{136}_{54}$Xe nucleus internal structure and parameter calculation

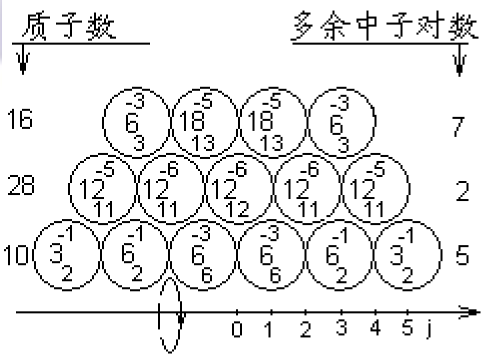

图 12.12 $^{136}_{54}Xe$ 原子核内核子、净剩 $\pi^{\pm}$

介子分配示意图

$$\underset{12}{Va}\quad \overset{12}{\underset{-6}{Vb}}\quad \overset{6}{\underset{4}{Vc}}\quad \overset{10}{\underset{-2}{Vd}}\quad \overset{8}{\underset{12}{Ve}}\quad \overset{20}{\underset{-6}{Vf}}$$

$$\overset{14}{\underset{4}{Vg}}\quad \overset{18}{\underset{22}{Vh}}\quad \overset{40}{\underset{-2}{Vi}}\quad \overset{38}{\underset{-12}{Vj}}\quad \overset{26}{\underset{22}{Vk}}\quad \overset{48}{\underset{26}{Vl}}$$

$$\overset{74}{\underset{-10}{Vm}}\quad \overset{64}{\underset{-10}{Vn}}\quad \overset{54}{\underset{6}{Vo}}\quad \overset{60}{\underset{-6}{Vp}}$$

$$W_e = 8.384428902 \times 10^{-28} Kg$$

$$W_b = 1.384307482 \times 10^{-29} Kg$$

$$\sum {}^{136}_{54}XeW_1 = 2.256337456 \times 10^{-25} Kg$$

See from the table above, the lateral force in general is slightly less than nuclear power. When we consider the first layer side by side low-energy particles spiral ring rail tangent and near because of the spin direction current yuan interval is small, with the integral method to calculate the overall ampere force will increase, as shown in the (10.20), table 10.4, may be affirmed, the nucleus is still stable, (the same below).

$^{136}_{54}Xe$ Nucleus kernel force balance to verify results (Figure12.12 units: N) table 12.14

j / N_a	1	2	3	4	5		Nuclear electric and magnetic field force accumulated
34 $F_{e\theta}$ $F_{b\theta}$	n. 693.8586526 -477.5948590	p. 74.75470508 -286.5569154				↑ |	45.44894326
16 $F_{e\theta}$ $F_{b\theta}$		j. 991.1342691 -943.7382342	m. 570.0909716 -786.4485285			| |	40.98735998
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 792.5301253 -128.3900195 -413.6783996	d. 237.204948 -42.79667316 -137.8927999	i. -13.81634162 -14.26555772 -68.94639993			| |	209.948882

12.3 $^{56}_{26}$Fe, $^{40}_{20}$Ca, $^{16}_{8}$O The nucleus and stable isotopes

The internal structure and parameter calculation

12.3.1 $^{56}_{26}$Fe nucleus and stable isotope internal structure and parameter calculation

$^{56}_{26}$Fe nuclide and stable isotopes of 5 kinds of K_{a2} layer electronic ionization energy K_{a2} = 6390 eV, generation of (11.1) in type, too: $\sum W_{m\varepsilon}=2.961715803\times10^{-31}$Kg . According to the atomic energy, computing parameters to showed in table 12.15.

$^{56}_{26}Fe$ Nucleus and stable isotopes parameter experimental data results table 12.15

Nuclide	The determination of total energy atomic u	Abundance %	Nucleus total energy calculated value $\times10^{-26}$Kg	Net with π± source electromagnetic field total energy $\times10^{-28}$Kg	Magnetic moment UP
$^{54}_{26}$Fe	53.9396120	5.8	8.954550586	3.250500278	
$^{56}_{26}$Fe	55.9349339	91.7	9.285881808	3.339009277	
$^{57}_{26}$Fe	56.9353907	2.19	9.452011682	3.429689989	0.0902
$^{58}_{26}$Fe	57.9332745	0.31	9.617714298	3.477645002	

We first to type A nucleus model to "assemble" $^{56}_{26}$Fe nucleus, see figure 12.13, $^{56}_{26}$Fe nuclear force balance verification calculation shown in table 12.16. From figure 12.13 shows: in nuclear magnetic moment = 0, under the premise of nuclear in net with $\pi^{\pm}$mesons, each layer nuclear number no further can be adjusted. At this time, we can adjust the pairs of high or low $\pi^{\pm}$ mesons in each layer of particles spiral ring number of distribution. According to table 9.1 each

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layer $\overline{m}_{di}$,$\overline{m}_{gi}$, differences in values, see table 13.3 the calculated value of also can rise to adjust the nucleus of the total energy of function.

Train to $\overline{m}^{\pm}_{d1} \rightarrow \overline{m}^{\pm}_{d2}, \overline{m}^{\pm}_{g2} \rightarrow \overline{m}^{\pm}_{g1}$, the$\sum\Delta$m = 2.05555632 x 10^{-29} kg. After adjusting $^{56}_{26}$Fe nucleus total energy for $\sum {}^{56}_{26}$Fe W_2 =9.285869531×10^{-26}Kg, coincided with experimental value. But by shown in table 12.16, 1 layer particles spiral ring in the nuclear field force far outweigh the magnetic field, the second layer of the magnetic field strength is big, but the first layer of the lateral particle spiral ring doesn't set stability, so the nucleus is also does not exist.

$^{56}_{26}$Fe maintenance nucleus kernel force balance to verify the results table (figure 12.13, the unit: Newton) table 12.16

N_a \ j	1	2	3	4	5	Nuclear electric and magnetic field force accumulated
16 $F_{e\theta}$ $F_{b\theta}$	h. 484.0435425 -943.7382342					
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$		d. 1257.573065 -85.59334632 -536.2497772				↑ | 635.7299415

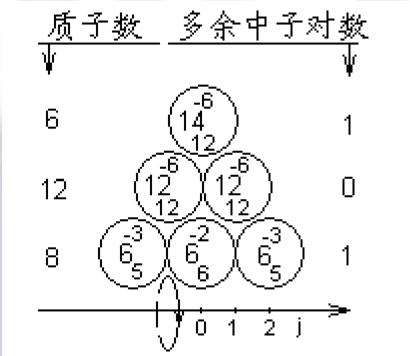

图 12.13 $^{56}_{24}Fe$ 原子核内核子、净剩 π± 介子分配示意图

$$
\begin{array}{cccccc}
\underset{6}{Va} & \overset{6}{\underset{-2}{Vb}} & \overset{4}{\underset{10}{Vc}} & \overset{14}{\underset{-6}{Vd}} & Ve & Vf \\
\overset{8}{\underset{24}{Vg}} & \overset{32}{\underset{-12}{Vh}} & Vi & Vj & Vk & Vl \\
\overset{20}{\underset{12}{Vm}} & Vn & \overset{32}{\underset{-6}{Vo}} & & &
\end{array}
$$

$$W_e = 2.892590098 \times 10^{-28} Kg$$
$$W_b = 1.700296422 \times 10^{-29} Kg$$
$$\sum {}^{56}_{26}FeW_1 = 9.283813975 \times 10^{-26} Kg$$

When we use type B nuclei model to "assemble" $^{56}_{26}$Fe nucleus, see figure 12.14 and table 12.17. Although nuclear power field force is greater than the nuclear magnetic force, but it's better than figure 12.13 and table 12.16 shows the type A much more stable nucleus.

Of course, we also can consider to increase the layer 3 particles spiral rings, and the first layer of particles spiral ring number of protons to 10. Interested readers can do it yourself "assembly", simulated calculation exercises.

To make AA $2\overline{m}^{\pm}_{d1} \rightarrow 2\overline{m}^{\pm}_{d2}$, the $\pi^{\pm}$ source energy increment processed Δm = 1.76190544×10^{-29}Kg, for type B nucleus $^{56}_{26}$Fe after the adjustment the total energy $\sum {}^{56}_{26}$Fe W_4=9.285944876×10^{-26}Kg.

If maintain figure 12.14, $^{56}_{26}$Fe within the nucleus of the net with $\pi^{\pm}$mesons distribution state, the nuclear net with $\pi^{\pm}$

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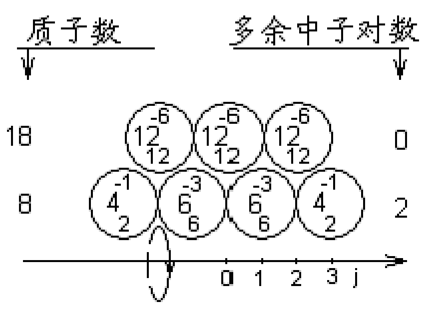
mesons electric and magnetic field total energy and nuclear force equilibrium constant, as shown in the table 12.17. $^{58}_{26}$Fe nucleus, shillings a neutron into the first layer particles spiral ring, then to: $\overline{m}^{\pm}_{g2} \rightarrow \overline{m}^{\pm}_{g1}$, 则$\sum ^{58}_{26}FeW_1$=9.617565612×10^{-26}Kg。

Similarly, $^{54}_{26}$Fe nucleus, as long as in the figure 12.14 1 layer particles spiral ring in the edge of the two neutron take out, then to $\overline{m}^{\pm}_{d2} \rightarrow \overline{m}^{\pm}_{d1}$, the $\sum ^{54}_{26}$Fe W$_1$ =8.95461779×10^{-26}Kg . These parameters and the experimental results are very close.



$$\overset{}{\underset{12}{Va}}\quad \overset{12}{\underset{-6}{Vb}}\quad \overset{6}{\underset{4}{Vc}}\quad \overset{10}{\underset{-2}{Vd}}\quad \overset{8}{\underset{12}{Ve}}\quad \overset{20}{\underset{-6}{Vf}}$$

$$Vg\quad \overset{14}{\underset{24}{Vh}}\quad Vi\quad \overset{38}{\underset{-12}{Vj}}$$

$$W_e = 3.039936250 \times 10^{-28} Kg$$
$$W_b = 1.291892102 \times 10^{-29} Kg$$
$$\sum {}^{56}_{26}FeW_3 = 9.28418297 \times 10^{-26} Kg$$

图 12.14 $^{56}_{26}Fe$ 原子核内核子、净剩

π$^{\pm}$介子分配示意图

$^{56}_{26}$Fe nucleus kernel force balance to verify results (figure 12.14, unit: N) table 12.17

j / N_a	1	2	3	4	5	Nuclear electric and magnetic field force accumulated	
16 $F_{e\theta}$ / $F_{b\theta}$		j. 949.7761591 / -943.7382432				↑	244.0687062
$F_{e\theta}$ / 34/13 $F_{b\theta}$ / $\Delta F_{\theta b}$	b. 792.5301253 / -128.3900195 / -413.6783998	d. 237.204948 / -42.79667316 / -206.8391998				|	238.0307813

12.3. 2 $^{40}_{20}$Ca nucleus and stable isotope internal structure and parameter calculation

$^{40}_{20}$Ca nuclide and stable isotopes are 5 kinds of atoms. K$_{a2}$ layer electronic ionization energy K$_{a2}$=3688 eV, generation of (11.1) in type, too: $\sum$W$_{me}$=1.314892005×10^{-31}Kg. According to the atomic energy, computing parameters to showed in table 12.18.

We use first type A nucleus model to "assemble" $^{40}_{20}Ca$ nucleus. Because of equal number of protons, neutrons, we have no choice, only in 12.15 "assembly" $^{40}_{20}Ca$ nucleus, and make $2\overline{m}^{\pm}_{g2} \rightarrow 2\overline{m}^{\pm}_{g1}$, $\overline{m}^{\pm}_{d2} \rightarrow \overline{m}^{\pm}_{d1}$,to: $\sum ^{40}_{20}Ca$ W$_2$ = 6.634256 x 10^{-26} kg.

Although agreement with experimental data, and figure 12.13 and table 12.16 types A $^{56}_{26}$Fe nucleus, 1, 2 layer particles spiral ring nuclear force parameters in exactly the same, so the nucleus is still unstable or does not exist.

$^{40}_{20}$Ca nucleus and stable isotopes parameter experimental data results table 12.18

Nuclide	The determination of total energy atomic u	Abun dance %	Nucleus total energy calculated value $\times10^{-26}$Kg	Net with π± source electromagnetic field total energy $\times10^{-28}$Kg	Magnetic moment UP
$^{40}_{20}Ca$	39.9625921	96.94	6.634140339	2.521768481	
$^{42}_{20}Ca$	41.9586281	0.65	6.965590141	2.622135397	
$^{43}_{20}Ca$	42.9587774	0.14	7.131668953	2.707709949	-1.31721
$^{44}_{20}Ca$	43.9554875	2.08	7.297176671	2.736175201	
$^{46}_{20}Ca$	45.953689	0.003	7.628986063	2.872501116	

When we use type B "assembly" $^{40}_{20}Ca$ nucleus, nucleus model is shown in figure 12.16 and table 12.19.

To make $3\overline{m}^{\pm}_{d1} \rightarrow 3\overline{m}^{\pm}_{d2}$, too: $\sum {}^{40}_{20}Ca$ W$_3$ = 6.634091126 x 10^{-26} kg

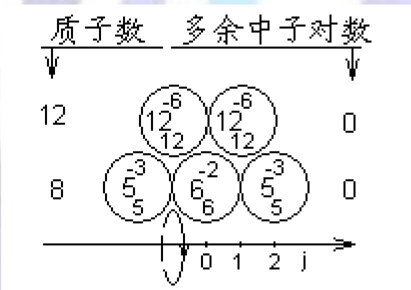


图 12.15 $^{40}_{20}Ca$ 原子核内核子、净剩 π$^{\pm}$介子分配示意图

$$Va_{6} \quad Vb^{6}_{-2} \quad Vc^{4}_{10} \quad Vd^{14}_{-6} \quad Ve \quad Vf$$

$$Vg^{8}_{24} \quad Vh^{32}_{-12}$$

$$W_e = 2.216685332\times10^{-28}Kg$$

$$W_b = 1.698237985\times10^{-29}Kg$$

$$\sum {}^{40}_{20}CaW_1 = 6.632787745\times10^{-26}Kg$$

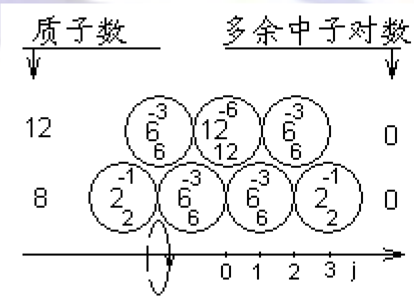


图 12.16 $^{40}_{16}Ca$ 原子核内核子、净剩 π$^{\pm}$介子分配示意图

$$Va_{12} \quad Vb^{12}_{-6} \quad Vc^{6}_{4} \quad Vd^{10}_{-2} \quad Ve^{8}_{12} \quad Vf^{20}_{-6}$$

$$Vg \quad Vh^{14}_{12} \quad Vi \quad Vj^{26}_{-6}$$

$$W_e = 2.126232534\times10^{-28}Kg$$

$$W_b = 1.263288342\times10^{-29}Kg$$

$$\sum {}^{40}_{20}CaW_2 = 6.631448268\times10^{-26}Kg$$

To maintain figure 12.16, the net in $^{40}_{20}Ca$ nucleus with π$^{\pm}$both scheme is changeless, adjust new neutron and high in pairs, low-energy π$^{\pm}$violation to the distribution of the leVels, we can make the simulation $^{40}_{20}Ca$ isotopes, the internal structures and parameters of at this time, the nuclear spin direction of electric and magnetic energy, the nuclear force equilibrium state is unchanged.

$^{40}_{20}Ca$ nucleu, nucleus model is shown in figure 12.16 and table 12.19.

N_a \ j	1	2	3	4	5		Nuclear electric and magnetic field force accumulated
16 $F_{e\theta}$ $F_{b\theta}$		j. 387.8536809 -471.8691171				↑	154.0153451
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 792.5301253 -128.3900195 -413.6783996	d. 237.204948 -42.79667316 -206.8391998				|	238.0307813

$^{40}_{20}Ca$ Nucleus kernel force balance to verify results (figure 12.16, unit: N) table 12.19To $^{42}_{20}$Ca atomic nuclide, make a new pair of neutron into the layer 2 particles spiral ring, is: $\sum {}^{42}_{20}CaW_1=6.963362655\times10^{-26}$Kg

To $2\overline{m}^{\pm}_{g2} \to 2\overline{m}^{\pm}_{g1}$, to: $\sum {}^{42}_{20}CaW_2 = 6.965711862 \times 10^{-26}$ kg

To $^{44}_{20}$Ca atomic nuclide, make 2 to new neutrons are into the layer 2 particles spiral ring, is:

$$\sum {}^{44}_{20}CaW_1=7.295277042\times10^{-26}Kg$$

To $\overline{m}^{\pm}_{d1} \to \overline{m}^{\pm}_{d2}$, $\overline{m}^{\pm}_{g2} \to \overline{m}^{\pm}_{g1}$, the $\sum {}^{44}_{20}CaW_2=7.297332599\times10^{-26}$Kg

To $^{46}_{20}$Ca atomic nuclide, make 3 to add neutron full into the layer 2 particles spiral ring, is:

$$\sum {}^{46}_{20}CaW_1=7.62719143\times10^{-26}Kg$$

And then to $2\overline{m}^{\pm}_{d1} \to 2\overline{m}^{\pm}_{d2}$, to: $\sum {}^{46}_{20}CaW_2 = 7.628953335 \times 10^{-26}$ kg

Synthesis of $^{43}_{20}$Ca nucleus, magnetic or in figure 7.4 a, c, d or b, d, d, by (7.6 1) type, to:

$$\sum U = U^{+}_{g1} + U^{-}_{g1} + 3U^{+}_{g2} + 2U^{+}_{d2} + 3U^{-}_{d1} \qquad (12.4)$$

Will the original magnetic strength values in table 9.1 generation into (12.4), too: $\sum U=-1.26551U_p$.

Similarly, quality increment is: train $\Delta m = -8.80952673 \times 10^{-30}$ kg

"Assembly" $^{43}_{16}Ca$ nucleus figure 12.17, the nuclear force balance test results shown in table 12.20.

To $3\overline{m}^{\pm}_{g2} \to 3\overline{m}^{\pm}_{g1}$,to: $\sum {}^{43}_{20}CaW_2 = 7.131671671 \times 10^{-26}$ kg

${}^{43}_{20}$Ca nucleus kernel force balance to verify results (figure 12.17, unit: N) table 12.20

N_a \ j	1	2	3	4	5	Nuclear electric and magnetic field force accumulated	
16 $F_{e\theta}$ $F_{b\theta}$		j. 433.3100386 -209.7196076				↑ |	227.5599386
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 792.5301253 -128.3900195 -517.0979995		d. 67.33868407 -106.9916829 -103.4195999			| | |	3.969507647

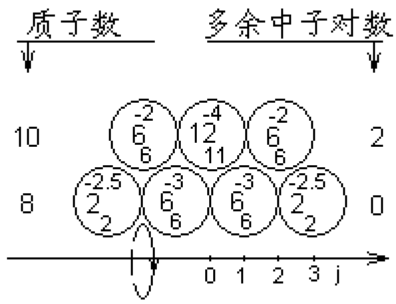


图 12.17 ${}^{43}_{16}Ca$ 原子核内核子、净剩

$\pi^{\pm}$介子分配示意图

$$\underset{12}{Va}\quad \overset{12}{\underset{-6}{Vb}}\quad \overset{6}{\underset{4}{Vc}}\quad \overset{10}{\underset{-5}{Vd}}\quad \overset{5}{\underset{11}{Ve}}\quad \overset{16}{\underset{-4}{Vf}}$$

$$Vg\quad \overset{12}{\underset{12}{Vh}}\quad Vi\quad \overset{24}{\underset{-4}{Vj}}$$

$$W_e = 2.023653299\times10^{-28}Kg$$
$$W_b = 1.263917481\times10^{-29}Kg$$
$$\sum {}^{43}_{20}CaW_1 = 7.12814786\times10^{-26}Kg$$

12.3.3 ${}^{16}_{8}$O nuclei and stable isotope internal structure and parameter calculation

${}^{16}_{8}$O atom nuclide is only 3 and stable isotopes. K_{a2} layer electronic ionization energy K_{a2}=523 eV, generation of (11.1) in type, to:$\sum W_{me}$=41804eV=7.45866×10^{-33}Kg. Calculated according to the atomic energy, energy parameters to showed in table 12.21.

We first to type A nucleus model "assembly" ${}^{16}_{8}$O nuclei, see figure 12.18 and table 12.22.

${}^{16}_{8}$O nuclei and stable isotopes energy parameters experimental data the results table 12.21

Nuclide	The determination of total energy atomic u	Abun dance %	Nucleus total energy calculated value ×10^{-26}Kg	Net with π± source electromagnetic field total energy ×10^{-28}Kg	Magnetic moment U_P
${}^{16}_{8}O$	15.99491502	99.76	2.655291933	1.172287172	
${}^{17}_{8}O$	16.9991333	0.039	2.822046416	1.325428772	-1.89371
${}^{18}_{8}O$	17.99915996	0.205	2.988104863	1.408966837	

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Can be seen from the above results is that ${}^{16}_{8}O$ conditions within the nucleus net with $\pi^{\pm}$violation can such distribution, and nuclear power, magnetic field is a maximum total energy, nuclear energy, but still less than the value, the nuclear force is also unable to balance. So, A type ${}^{16}_{8}O$ nuclear model also cannot exist. Similarly, "assembly" type B ${}^{16}_{8}O$ nucleus figure 12.19, the nuclear force balance verification calculation shown in table 12.23.

${}^{16}_{8}O$ nuclei kernel force balance test results list (figure 12.18, unit: N) table 12.22

N_a \ j	1	2	3	4	5	Nuclear electric and magnetic field force accumulated	
$F_{e\theta}$		d. 1257.573065				↑	635.7299417
34/13 $F_{b\theta}$		-85.59334632				|	
$\Delta F_{\theta b}$		-536.24977762				|	

Make to $\overline{m}^{\pm}_{g2} \to \overline{m}^{\pm}_{g1}$, to: $\sum {}^{16}_{8}OW_2$=2.65522486×10^{-26}Kg

To ${}^{18}_{8}O$ nuclei, and make a pair of neutron into layer, layer 2 particles spiral ring: $\sum {}^{18}_{8}OW_1$=2.985964633×10^{-26}Kg

To make $\overline{m}^{\pm}_{g2} \to \overline{m}^{\pm}_{g1}$, $\overline{m}^{\pm}_{d1} \to \overline{m}^{\pm}_{d2}$, to: $\sum {}^{18}_{8}OW_2$=2.98802019×10^{-26}Kg

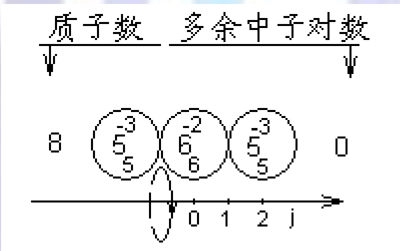


图 12.18 ${}^{16}_{8}O$ 原子核内核子、净剩

$\pi^{\pm}$介子分配示意图

$$\underset{6}{Va} \quad \overset{6}{\underset{-2}{Vb}} \quad \overset{4}{\underset{10}{Vc}} \quad \overset{14}{\underset{-6}{Vd}}$$

$$W_e = 9.560477373 \times 10^{-29}\,Kg$$
$$W_b = 1.689408034 \times 10^{-29}\,Kg$$
$$\sum {}^{16}_{8}OW_1 = 2.654818947 \times 10^{-26}\,Kg$$

Synthesis of ${}^{17}_{8}O$ nuclei, magnetic take in figure 7.4 a, d, d, by (7.6-4) and table 9.1 data:

$$\sum U = 5U^{+}_{g1} + 2U^{-}_{d1} + U^{+}_{d2} + 2U^{-}_{d2} = -1.93864U_p \qquad (12.5)$$

Δm =1.321429084×10^{-29}Kg

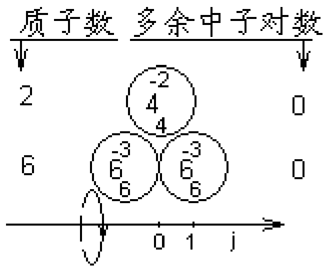
Its internal structure and the calculation result is shown in figure 12.20 and table 12.24.

To make $\overline{m}^{\pm}_{g1} \to \overline{m}^{\pm}_{g2}$, $\overline{m}^{\pm}_{d1} \to \overline{m}^{\pm}_{d2}$, and to:

$\sum {}^{17}_{8}OW_2$=2.82206546×10^{-26}Kg

${}^{16}_{8}$O nuclei kernel force balance test results list (figure 12.19, unit: N) table 12.23

N_a \ j	1	2	3	4	5	Nuclear electric and magnetic field force accumulated
$F_{e\theta}$		b. 792.5301253				↑ 43.62250648
34/13 $F_{b\theta}$		-128.3900195				
$\Delta F_{\theta b}$		-620.5175993				



$$\underset{12}{Va}\quad \overset{12}{\underset{-6}{Vb}}\quad Vc\quad Vd\quad \overset{6}{\underset{4}{Ve}}\quad \overset{10}{\underset{-2}{Vf}}$$

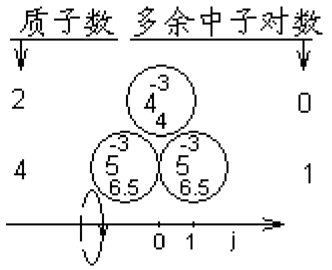
图 12.19 ${}^{16}_{8}O$ 原子核内核子、净剩

π±介子分配示意图

$$W_e = 9.10194656 \times 10^{-29} Kg$$
$$W_b = 1.379237908 \times 10^{-29} Kg$$
$$\sum {}^{16}_{8}OW_1 = 2.654050246 \times 10^{-26} Kg$$

${}^{17}_{8}$O nuclei kernel force balance test results list (figure 12.20, unit: N) table 12.24

N_a \ j	1	2	3	4	5	Nuclear electric and magnetic field force accumulated
$F_{e\theta}$		b. 986.8248433				↑ 92.36371348
34/13 $F_{b\theta}$		-128.3900195				
$\Delta F_{\theta b}$		-766.0711103				



$$\underset{13}{Va}\quad \overset{13}{\underset{-6}{Vb}}\quad Vc\quad Vd\quad \overset{7}{\underset{4}{Ve}}\quad \overset{11}{\underset{-3}{Vf}}$$

图 12.20 ${}^{17}_{8}O$ 原子核内核子、净剩

π±介子分配示意图

$$W_e = 1.061847095 \times 10^{-28} Kg$$
$$W_b = 1.62708268 \times 10^{-29} Kg$$
$$\sum {}^{17}_{8}OW_1 = 2.822359111 \times 10^{-26} Kg$$

Through the chapter 11, 12 of seVeral nuclei and isotope internal model design, the nuclear force balance test simulation results, we can see that: the number of nuclear A≥12 all the nucleus, nucleus is B, internal nuclear force to balance. Because each layer particles spiral ring high and low $\pi^{\pm}$ violation of, neutron energy fluctuation in the original slightly difference, in neighbouring particles spiral ring in motivating, transition does not affect the distribution of nuclear power, but it can reflect the total energy of the nucleus, it is without the γ rays, x rays, formation conditions, nuclear small changes in the internal energy and nuclear power.

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12.4 Light nuclei supplement internal structure and parameter calculation

12.4.1 Light $N_{\alpha di}$、$N_{\alpha gi}$、$\overline{M}_{di}$、$\overline{M}_{gi}$ added calculation parameters within the nucleus

Front chapter 7 of section 7.1 shown in figure 7.1 and figure 7.2, the first layer, low-energy particle spiral loop combination model with 2 ~ 5 layers. But this scheme is applicable to the quality of medium to heavy nuclei. To light nuclei and the simulation results can be seen from the preVious section: common small total energy and nuclear electric field in repelling force slants big; therefore, to light nuclei, we can consider using the first layer and 2 ~ 5 layers, low-energy particle spiral rings set combination model of the same.

Refer to chapter 8 ${}^{12}_{6}C$ $\overline{M}_{\pi d1}$ forces within the nucleus of the benchmark constant calculation method. Shilling $N_{\alpha d1} = 34/13$, and (4.9) in type $\beta_{\alpha d1}$ are obtained. Refer to chapter 9 $N_{\alpha di}$、$N_{\alpha gi}$、$\overline{M}_{di}$、$\overline{M}_{gi}$ parameter simulation calculation method, the $N_{\alpha gi}$ = 4, 5, 6 of a natural number. Respectively into (9.7) and (9.9) and (9.6) equations, get $N_{\alpha gi}$ = 5. Finally by chapter 8 section 8.4 the last 1 ~ 12 simulation procedures, simulation is obtained:

$$\overline{M}_{\pi d1} = 3.572742815\times10^{-28}\text{Kg}$$

${}^{56}_{26}Fe$、${}^{40}_{20}Ca$、${}^{16}_{8}O$ Uclei original energy simulation results ratio table 12.25

Atomic nuclide / The project	${}^{56}_{26}Fe$	${}^{40}_{20}Ca$	${}^{16}_{8}O$
Experimental value (10^{-26} kg)	9.285881808	6.634140339	2.655291933
Type B the simulation predicted value of the nucleus	9.28418297	6.631448286	2.654050246
The ratio of experimental data and the simulation value	1.000182982	1.000405952	1.000467846
Electromagnetic field the ratio of total energy and nuclear energy	0.0034135	0.0033968	0.0039491

Us from in front of all the particles in the nucleus of solenoid ring of surplus high and low $\pi^{\pm}$ violation, the spin direction of electromagnetic field energy accumulated in the already know, the electromagnetic field energy is always positive. Accounted for the nucleus of the total energy of 0.003 ~ 0.004, see table 12.25.

When we take $N_{\alpha g1}$ = 5, $N_{\alpha d1}$ = 34/13, and figure 7.1 and figure 7.2 2 ~ 5 layers of particles spiral ring of the same set of ring structure, simulation results $\overline{M}_{\pi d1}$ values being beyond 8%! Far outweigh the electromagnetic field energy, clearly obvious. So, further simulation and comparison, see table 12.26, the appropriate value is: $N_{\alpha d1} = N_{\alpha g1}$ = 17/6. It can properly increase the quality of the light nuclei, and may be appropriate to reduce nuclear power field force, make the

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internal nuclear force equilibrium.

The first layer of particles spiral ring different quantum fluctuations benchmark constant

Changes $\overline{M}_{\pi d1}$ simulation result table12.26

$N_{\alpha d1}$ $N_{\alpha g1}$	34/13 34/13	21/8 21/8	17/6 17/6	34/13 17/6	34/13 5
$\overline{M}_{\pi d1}\times10^{-28}$Kg	3.304461327	3.304486416	3.304966183	3.351764984	3.572742815
与原基准常数的比值	1	1.000007592	1.00015278	1.014315089	1.081187662

Light conditions within the nucleus $N_{\alpha di}$、$N_{\alpha gi}$、$\overline{M}_{di}$、$\overline{M}_{gi}$ parameters

Complement the results table 12.27

Particles spiral link layer		1	2	3
波动量子数 Quantum fluctuations number	$N_{\alpha di}$ $N_{\alpha gi}$	17/6 17/6	16 50	34 114
$R_{\theta di(0)}/R_{\theta gi(0)}$		2	0.9882663482	0.9984184964
$\overline{M}_{di}\times10^{-28}Kg$ $\overline{M}_{gi}\times10^{-28}Kg$		3.304966183 6.609932366	3.349020548 6.551193213	3.325851224 6.582085645
K_{mui}		2	1.956151991	1.979067974
$U^{-}_{\pi di}\times10^{-26}$J/T $U^{+}_{\pi gi}\times10^{-26}$J/T		3.177738798 1.588869399	2.605275456 1.302637728	2.578319713 1.289159857
Neutron of surplus energy$\times10^{-30}Kg$		0.0	14.6847884	6.9616804
$\pi^{\pm}$ Violation of transition energy $\Delta\overline{M}^{\pm}_{di}\times10^{-30}Kg$ $\Delta\overline{M}^{\pm}_{gi}\times10^{-30}Kg$			8.810873 11.7478306	4.6338648 6.1784864

Table 9.1 similarly, refer to chapter 9 nucleus of internal related parameters calculation method of the added calculation, and calculate the result of light conditions within the nucleus $N_{\alpha di}$、$N_{\alpha gi}$、$\overline{M}_{di}$、$\overline{M}_{gi}$ parameters shown in table 12.27.

Obtained by the same token, by (9.12), light nucleus layers particles spiral ring number of nuclear density respectively:

6, 12, 18 and 24.

12.4.2. Light nuclei internal parameters of the nuclear power field energy supplement

Similarly, refer to section 9.2 and chapter 10 conditions within the nucleus electric energy parameters and the analysis of the electromagnetic force calculation method, added calculation for light conditions within the nucleus electric energy, the parameters of the electromagnetic force results see table 12.28 ~ 12.28.

Type A high light within the nucleus, low-energy particles spiral ring net with to $\pi^{\pm}$ mesons in potential can supplement parameter calculation table (unit: V) 12.28

$N_{\alpha di}$ $N_{\alpha gi}$	$\overline{M}_{dgi} \times 10^{-28} Kg$	0	1	2	3	4
34 114	3.325851224 6.582085645	m. 234974.3191 k. 252585.8481		n. 222418.0372 l. 236896.8441		
16 50	3.349020548 6.551193213		h. 338009.4186 g. 367054.7807		j. 279845.3358 i. 293535.6784	
17/6 17/6	3.304966183 6.609932366	b. 923649.0682 a. 1847298.136		d. 604437.8209 c. 751517.3235		f. 375758.6618 e. 406970.8136

Type B high light within the nucleus, low-energy particles spiral ring net with to $\pi^{\pm}$ mesons in potential can supplement parameter calculation table (unit: V) 12.29

$N_{\alpha di}$ $N_{\alpha gi}$	$\overline{M}_{dgi} \times 10^{-28} Kg$	0	1	2	3	4
34 114	3.325851224 6.582085645		j. 231636.5691 i. 248373.0973			
16 50	3.349020548 6.551193213	f. 348163.0047 e. 380714.9489		h. 312191.3818 g. 333494.552		
17/6 17/6	3.304966183 6.609932366		b. 793951.3881 a. 1208875.642		c. 467932.561 d. 530611.8724	

Type A high light within the nucleus, low-energy particles spiral ring net with to $\pi^{\pm}$ mesons in electric field force parameters added calculation (unit: N) table 12.30

$N_{\alpha di}$ $N_{\alpha gi}$	$\overline{M}_{dgi} \times 10^{-28} Kg$	0	1	2	3	4
34 114	3.325851224 6.582085645	m k		n. 1.749847022 l. 2.156969519		
16	3.349020548		h. 2.958737819		j. 5.022909216	

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50	6.551193213		g 3.940643992	i. 6.044190487		
17/6 17/6	3.304966183 6.609932366	b a		d. 24.75830452 c. 45.66700726	f. 11.41675181 e. 14.39055243	

Type B high light within the nucleus, low-energy particles spiral ring net with to $\pi^{\pm}$ mesons in electric field force parameters added calculation (unit: N) table 12.31

$N_{\alpha di}$ $N_{\alpha gi}$	$\overline{M}_{dgi} \times 10^{-28} Kg$	0	1	2	3	4
34 114	3.325851224 6.582085645		j. 0.988472504 i. 1.242963523			
16 50	3.349020548 6.551193213	f e		h. 4.655661251 g. 5.910106907		
17/6 17/6	3.304966183 6.609932366		b. 30.20475342 a. 45.66700726	c. 16.72091553 d. 23.95612641		

12.4.3. Light nuclei internal ring particles spiral magnetic force parameters calculation

Light conditions within the nucleus low-energy particles spiral ring current

magnetic field force parameters complement the results table 12.32

$N_{\alpha di}$ 参数（公式）	17/6	16	34
$M_{di} \times 10^{-28} Kg$	3.304966183	3.349020548	3.325851224
β_i (4.9)	0.9989628612	0.998751741	0.9987299178
α_1° (10.5-5)	126.4476824	104.4775122	99.8749614
$K_{ri} \times 10^{-5}$（2.10）	13.7902	6.36539	4.40105
$F_{kbi}(N)$ (10.11)	17.51945005	26.22296182	19.10963214
$K_{fbi}(N)$ (10.17)	6.796082125	0.5200280083	0.1655611159

Similarly, refer to section 9.2 and chapter 10 section 10.2 conditions within the nucleus particles spiral ring the analysis of the magnetic field strength calculation method, added calculation for light nuclei within the parameters of the magnetic field strength results shown in table 12.30.

12.5 $^{56}_{26}$Fe, $^{40}_{20}$Ca, $^{16}_{8}$O nuclei and stable isotope internal Structure and parameters calculation

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12.5.1 ${}^{56}_{26}$Fe nucleus and stable isotope internal structure and Parameters calculation

${}^{56}_{26}$Fe nucleus kernel added calculation result is proved force balance table

(Figure 12.21 units: Newton) of 12.33

N_a \ j	1	2	3		Nuclear electric and magnetic field force accumulated (original Nuclear force parameters)
16 $F_{e\theta}$ $F_{b\theta}$	h. 484.1914583 -944.0266255				
$F_{e\theta}$ 17/6 $F_{b\theta}$ $\Delta F_{\theta b}$		d. 1237.991278 —105.1167003 —475.7257488		↑ |	657.148829 (635.7299415)

By in front of the results of table 12.15, we first to type A nucleus model to add "assembly" ${}^{56}_{26}$Fe nucleus, see figure 12.21, ${}^{56}_{26}$Fe nuclear force balance verification calculation shown in table 12.33.

To $\overline{m}^{\pm}_{g2} \rightarrow \overline{m}^{\pm}_{g1}$, accidents are $\sum \Delta m = 11.7478306 \times 10^{-30}$ kg. After adjusting ${}^{56}_{26}$Fe nucleus total energy for $-\sum {}^{56}_{26}FeW_2 = 9.285931988 \times 10^{-26}$ kg, with experimental value ratio of 1.0000054, is also very consistent. Shown by table 12.33, howeVer, nuclear power magnetic field force of value is slightly larger than the original.

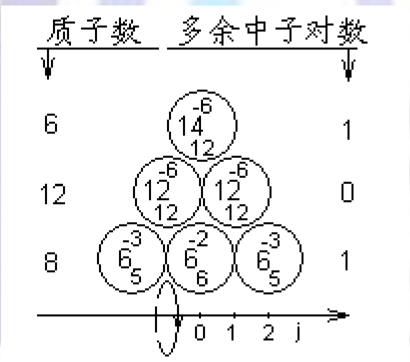

图 12.21 ${}^{56}_{24}Fe$ 原子核内核子、净剩 π$^{\pm}$

介子分配补充示意图

$$\begin{array}{cccccc} Va_{6} & Vb^{6}_{-2} & Vc^{4}_{10} & Vd^{14}_{-6} & Ve & Vf \\ Vg^{8}_{24} & Vh^{32}_{-12} & Vi & Vj & Vk^{20}_{12} & Vl \\ Vm^{32}_{-6} & Vn & & & & \end{array}$$

$$W_e = 2.859518388 \times 10^{-28} Kg$$
$$W_b = 1.560541023 \times 10^{-29} Kg$$
$$\sum {}^{56}_{26}FeW_1 = 9.284757205 \times 10^{-26} Kg$$

When we use type B nuclei model to add "assembly" ${}^{56}_{26}$Fe nucleus, see figure 12.22 and table 12.34.

To make $\overline{m}^{\pm}_{d1} \rightarrow \overline{m}^{\pm}_{d2}$, the π$^{\pm}$source energy increment $\Delta m = 8.810873 \times 10^{-30}$ kg, for type B nucleus ${}^{56}_{26}$Fe after the adjustment the total energy $\sum {}^{56}_{26}FeW_4 = 9.2861754 \times 10^{-26}$ kg.

Of course, we also can consider to increase the layer 3 particles spiral rings, and the first layer of particles spiral ring number of protons to 10. Interested readers can do it yourself "assembly", simulated calculation exercises.

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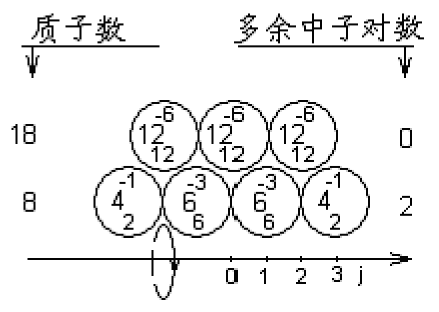

图 12.22 $^{56}_{26}Fe$ 原子核内核子、净剩 π±介子补充分配示意图

$$Va^{}_{12} \quad Vb^{12}_{-6} \quad Vc^{6}_{4} \quad Vd^{10}_{-2} \quad Ve^{8}_{12} \quad Vf^{20}_{-6}$$

$$Vg^{14}_{24} \quad Vh^{38}_{-12}$$

$$W_e = 3.019635581 \times 10^{-28} Kg$$

$$W_b = 1.192644484 \times 10^{-29} Kg$$

$$\sum {}^{56}_{26}FeW_3 = 9.285294313 \times 10^{-26} Kg$$

$^{56}_{26}$Fe nucleus kernel added calculation result is proved force balance

Table (Figure 12.22 units: Newton) of 12.34

j / N_a	1	2	3	4	5	Nuclear electric and magnetic field force accumulated	
16 $F_{e\theta}$ $F_{b\theta}$		h. 950.0663948 -944.0266255				↑ |	306.6174184 （244.0687062）
$F_{e\theta}$ 17/6 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 828.483919 -157.6750505 -366.9884348	d. 232.8097828 -52.55835015 -183.4942174				| |	300.5776491 （238.0307813）

If maintain figure 12.22, $^{56}_{26}$Fe within the nucleus of the net with π±mesons distribution state, the nuclear net with π± mesons electric and magnetic field total energy and nuclear force equilibrium constant, as shown in the table 12.34. $^{58}_{26}$Fe nucleus, shillings a neutron into the first layer particles spiral ring, then make: $\overline{m}^{\pm}_{g2} \rightarrow \overline{m}^{\pm}_{g1}$, then $\sum^{58}_{26}$FeW$_1$=9.617846802 x 10^{-26} kg.

Similarly, $^{54}_{26}$Fe nucleus, as long as in the figure 12.22 1 layer particles spiral ring in the edge of the two neutron, then $\sum^{54}_{26}$FeW$_1$ = 8.954797695 x 10^{-26} kg. These parameters and the experimental results are very close.

12.5.2 $^{40}_{20}$Ca nucleus supplement internal structure and parameter calculation

We first use type A nucleus model to add "assembly" $^{40}_{20}Ca$ nucleus. Because of the equal number of protons, neutrons, we have no choice, only in 12.23 "assembly" $^{40}_{20}Ca$ nucleus, and order: $\overline{m}^{\pm}_{d1} \rightarrow \overline{m}^{\pm}_{d2}$, to:

$\sum^{40}_{20}Ca$ W$_2$=6.63420698 x 10^{-26} kg.

Although agreement with experimental data, and figure 12.21 and table 12.33 type A $^{56}_{26}$Fe nucleus, 1, 2 layer particles spiral ring nuclear force parameters in exactly the same, so the nucleus is still unstable or does not exist.

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When we use type B nuclei model added "assembly" ${}^{40}_{20}Ca$ nucleus, see figure 12.24 and table 12.35.

To $\overline{m}^{\pm}_{d1} \rightarrow \overline{m}^{\pm}_{d2}$ $\overline{m}^{\pm}_{g2} \rightarrow \overline{m}^{\pm}_{g1}$, to: $\sum {}^{40}_{20}Ca$ W_3=6.63421×10^{-26}Kg.

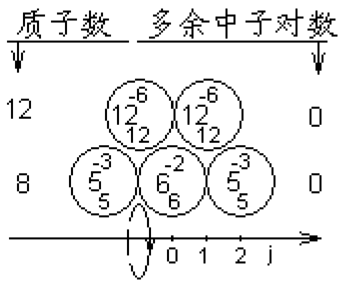

图 12.23 ${}^{40}_{20}Ca$ 原子核内核子、净剩 π$^{\pm}$介子分配补充示意图

$$\underset{6}{Va} \quad \overset{6}{\underset{-2}{Vb}} \quad \overset{4}{\underset{10}{Vc}} \quad \overset{14}{\underset{-6}{Vd}} \quad Ve \quad Vf$$

$$\overset{8}{\underset{24}{Vg}} \quad \overset{32}{\underset{-12}{Vh}}$$

$$W_e = 2.183510355\times10^{-28}Kg$$
$$W_b = 1.5584234\times10^{-29}Kg$$
$$\sum {}^{40}_{20}CaW_1 = 6.633325893\times10^{-26}Kg$$

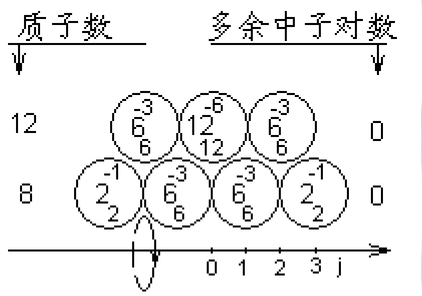

图 12.24 ${}^{40}_{20}Ca$ 原子核内核子、净剩 π$^{\pm}$介子分配补充示意图

$$\overset{}{\underset{12}{Va}} \quad \overset{12}{\underset{-6}{Vb}} \quad \overset{6}{\underset{4}{Vc}} \quad \overset{10}{\underset{-2}{Vd}} \quad \overset{8}{\underset{12}{Ve}} \quad \overset{20}{\underset{-6}{Vf}}$$

$$\overset{14}{\underset{12}{Vg}} \quad \overset{26}{\underset{-6}{Vh}} \quad Vi \quad Vj$$

$$W_e = 2.105792269\times10^{-28}Kg$$
$$W_b = 1.163840951\times10^{-29}Kg$$
$$\sum {}^{40}_{20}CaW_2 = 6.63215413\times10^{-26}Kg$$

${}^{40}_{20}Ca$ Added calculation result is proved nucleus kernel force balance table (figure 12.24 units: Newton) of 12.35

j / N_a	1	2	3	4	5	Nuclear electric and magnetic field force accumulated	
16 $F_{e\theta}$ $F_{b\theta}$		j. 387.9722025 −472 .0133128				↑ |	216.5365388 (154.0153451)
$F_{e\theta}$ 17/6 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 828.483919 -157.6750505 -366.9884348	d. 232.8097828 -52.55835015 -183.4942174				| | |	300.5776491 (238.0307813)

12.5.3 ${}^{16}_{8}O$ nuclei supplement internal structure and parameter calculation

We first to type A nucleus model "assembly" ${}^{16}_{8}O$ nuclei, see figure 12.25 and table 12.36.

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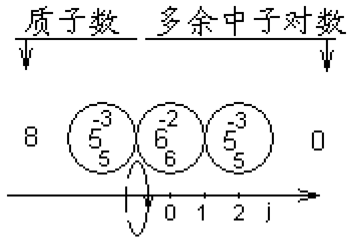

图 12.25 $^{16}_{8}O$ 原子核内核子、净剩

π±介子分配补充示意图

$$\underset{6}{Va}\quad \overset{6}{\underset{-2}{Vb}}\quad \overset{4}{\underset{10}{Vc}}\quad \overset{14}{\underset{-6}{Vd}}$$

$$W_e = 9.226801614\times10^{-29}Kg$$
$$W_b = 1.532931683\times10^{-29}Kg$$
$$\sum {}^{16}_{8}OW_1 = 2.65473268\times10^{-26}Kg$$

$^{16}_{8}$O nuclei kernel added calculation result is proved force balance table (figure 12.25 units: Newton) of 12.36

Na \ j	1	2	3	4	5	Nuclear electric and magnetic field force accumulated
$F_{e\theta}$		d. 1237.991278				↑ 657.1488285
17/6 $F_{b\theta}$		－105.1167003				| （635.7299417）
$\Delta F_{\theta b}$		－475.7257488				|

Can be seen from the above results is that $^{16}_{8}$O conditions within the nucleus net with π± violation can such distribution, and nuclear power, magnetic field is a maximum total energy, nuclear energy, but still less than the value, the nuclear force is also unable to balance. So, A type $^{16}_{8}$O nuclear model also cannot exist.

Similarly, "assembly" type B $^{16}_{8}$O nucleus figure 12.26, the nuclear force balance verification calculation shown in table 12.37.

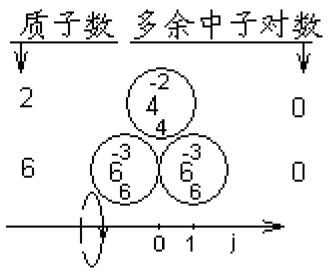

图 12.26 $^{16}_{8}O$ 原子核内核子、净剩

π±介子分配补充示意图

$$\underset{12}{Va}\quad \overset{12}{\underset{-6}{Vb}}\quad Vc\quad Vd\quad \overset{6}{\underset{4}{Ve}}\quad \overset{10}{\underset{-2}{Vf}}$$

$$W_e = 8.927862779\times10^{-29}Kg$$
$$W_b = 1.250605562\times10^{-29}Kg$$
$$\sum {}^{16}_{8}OW_1 = 2.654151415\times10^{-26}Kg$$

To make $\overline{m}^{\pm}_{g2} \rightarrow \overline{m}^{\pm}_{g1}$， to：$\sum {}^{16}_{8}OW_2 = 2.655326198\times10^{-26}Kg$

Front has stressed that the parameters of the simulation in nucleus, energy conservation and nuclear force balance is two important principles. From the 12.4 and 12.5 of this chapter two within the nucleus of the related parameters of simulation results is to see that by the law of conservation of energy only allowed particles spiral loop quantum fluctuations of the first layer of $N_{\alpha g1} = N_{\alpha d1} = {}^{17}\!/_{6}$, but nuclear force balance simulation results of the system increases, so, the original of the parameters of the conditions within the nucleus is the best choice.

${}^{16}_{8}$O nuclei kernel added calculation result is proved force balance table (figure 12.26 units: Newton) of 12.37

j / N_a	1	2	3	4	5	Nuclear electric and magnetic field force accumulated	
$F_{e\theta}$		b. 828.483919				↑	120.3262164
17/6 $F_{b\theta}$		－157.6750505				|	（43.62250648）
$\Delta F_{\theta b}$		－550.4826521				|	

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13 γ Rays in nucleus forming principle and parameter calculation

13.1 Conditions within the nucleus formation principle of γ rays

13.1.1 $\beta^{\pm}$ Electronics and photon, neutrino associated principle

Conditions within the nucleus only have high and low $\pi^{\pm}$ violation of spiral ring particles. When a $\pi^{\pm}$ split mesons decay, internal 2 of charged particles and a charged particle collection divided, can be generated by a pair of charged particles and a charged particles composed of electrons, left a pair of charged particles formed neutrinos or photons. With nuclear power by the number of the same isotopes, less number of neutrons, main show is β^{+} positron emission. Along with the increased number of neutrons, transition to stable isotopes. If the neutron number to continues increase, the performance of β^{-} electron emission.

Both β^{+} or β^{-} electron emission, the total number of nuclear are the parent nucleus remain unchanged. When launching a β^{+} electronic, number of nuclear power by reducing 1, within a proton nuclear will be transformed into neutrons. By figure 7.4, protons, neutrons "decentralized" $\pi^{\pm}$ source distribution graph to: particles spiral rings a high-energy π_g^{+} source must be continuously absorbs neutrinos in game 4 of neutrinos, then split decay into a pair of low-energy $\pi_d^{\pm}$ mesons, an electronic β^{+}; A low-energy $\pi_d^{\pm}$ mesons to low-energy particles spiral ring rail, β^{+} positron emission form β^{+} rays, complete the protons and neutrons transformation process. Similarly, if the diffusion β^{-} launch, the mother will have a neutron nuclear into protons. At this time, as long as A low-energy π_d^{-} violation will be their most primitive wave motion direction of electromagnetic field energy transfer to another low π_d^{+} after mesons, its direct split into a β^{-} electronics and A photon or neutrinos emission; Another low π_d^{+} mesons after absorbing energy is emitted into the high-energy π_g^{+} mesons orbit, complete the neutrons and protons.

13.1.2 γ Rays forming principle

Conditions within the nucleus does not exist, electrons and photons neutrinos, but is a nucleus in the ubiquity of neutrino field, the neutrino through at any moment. When conditions within the nucleus by net with $\pi^{\pm}$ mesons electric and magnetic field, the formation of nuclear force and energy distribution is uniform, do not need to adjust, stable, eVen more neutrino through nucleus, also won't produce.

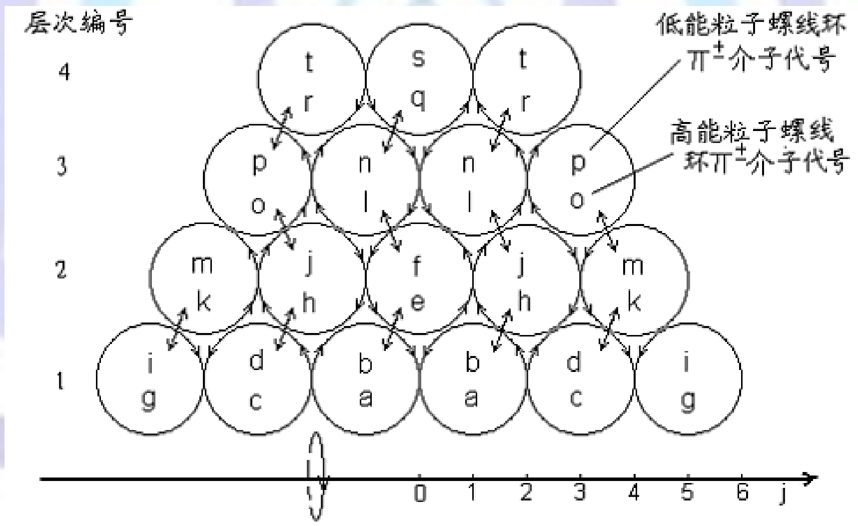
When nucleus kernel force balance, not nuclear power, nuclear power by uneVen distribution, to adjust itself to nuclear power, nuclear force distribution, make whole nuclei tend to be stable, the particles spiral ring net with to $\pi^{\pm}$ mesons in the state of the distribution adjustment is ineVitable. Net with $\pi^{\pm}$ mesons in each particle spiral loop adjustment, redistribution will cause the change of electric and magnetic energy in nuclear. When it is reduces the surplus electricity, magnetic energy through stimulating through nucleus formation of neutrino photons. Such already can transfer surplus energy, and can produce γ rays. Neutron or in pairs, of course, $\pi^{\pm}$ violation in the particles spiral ring layer between the adjustment, redistribution, residual energy can also produce γ rays.

13.1.3 γ Ray spectrum energy form model

From chapter 11, 12 nucleus structure calculation and analysis in the know, nature can stability of nuclide atom, the number of nuclear power by $Z_i \leq 83$. All the nucleus of $Z_i \geq 6$, nuclear power charge can be eVenly distributed, the nuclear force balance without splitting the moment of the nucleus is type B nucleus. When the first layer is 6 to particles spiral ring side by side, 4 ring particles spiral layer composed of nearly spherical nuclei, saturated when the total number of nuclear is 234, and the department of radiation starting nuclear quite; When after the first layer of 4, 3 layers particles spiral loop composed of the nearly spherical nuclei saturated when the total number of nuclear is 96. So, the nuclear of $234 \geq A \geq 96$ all the nucleus, may think they have A combination of particles spiral ring structure shown in figure 13.1. The difference is that with the increase of the nuclear number, nuclear power by number, nucleus layers and the lateral particle spiral rings filling nuclear number increase, gradually saturated, nuclear power load distribution of the edge of the diffusion layer gradually thinning.

If a pair of particles spiral rings, high low $\pi^{\pm}$mesons same direction of the wave motion, see figure 7.2; High and low $\pi^{\pm}$ violation can only in the direction of the adjacent particles spiral wave motion transition in the ring. By the relationship of the space, the same layer, low-energy particle spiral rings π_g^+,π_d^- or π_g^-,π_d^+ combination of lateral migration. Due to the symmetry, the first floor there are 12 seating arrangement, 2, 3, 4 layer respectively in 12, 6, 6 seating arrangement, a total of 36 seating arrangement. By figure 13.1 shows, between the upper and the lower migration, 1 ~ 2 layer particles spiral ring in five transitions. 2 ~ 3, 3 ~ 4 layer between respectively have four, three, a total of 12 channel. If each channel is π_g^+,π_d^- or π_g^-, π_d^+ combination of transition, it also have 36 seating arrangement.

To the nucleus internal excess $\pi^{\pm}$violation of saturated layer, unable to increase; Adjust some of the seating arrangement will make mother nuclear total energy increases, it can only be achieVed under the external energy to participate in; Most minor adjustment in the edge of the nucleus, will make the nuclear energy is reduced, to get through the formation of neutrino γ rays. Due to the different positions within the nucleus of the excess $\pi^{\pm}$mesons distribution, lateral migration, the lower leVel migration, transition to another position, the electric and magnetic energy change value is not the same. The table 9.1 shows that transition between adjacent layers will lead to high, low $\pi^{\pm}$mesons original the slight variations of wave energy. So, different size of nuclei formation energy spectrum of the γ rays, combination and different features, these can only through the calculation of concrete examples to illustrate.



13.2 γ Ray energy parameters calculation model

13.2.1 ${}^{194}_{79}$Au, ${}^{194}_{78}$Pt nucleus internal structure and parameter calculation

${}^{194}_{79}$Au nuclide atomic energy is 193.965406 u, 39.5 hours half-life, and magnetic ±0.074U_p. Launch β^+ rays, electron kinetic energy is 1.487, 1.230, 0.950 MeV three groups. Decay into ${}^{194}_{78}$Pt nucleus in the process of the communist party of China launch 49 leVel of γ rays, energy distribution range of 0.20291 ~ 2.1142 MeV [4], eVentually become a stable ${}^{194}_{78}$Pt nucleus. So, we could start from decay and the internal structure of two nuclei model, calculation and analysis to γ rays forming principle and energy.

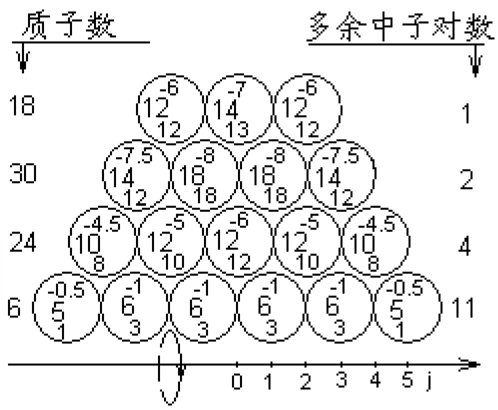
For ${}^{194}_{79}$Au nucleus, refer to section 12.1 for the magnetic moment of a nucleus simulation method. Make protons, neutrons according to figure 7.4 a, c, or b, d scheme "decentralized", from table 9.1, 7.4 (1) type, ${}^{194}_{79}$Au nucleus combined magnetic and can be expressed as:

$$\sum U = U_{g1}^{+} + U_{g1}^{-} + U_{g4}^{+} + 2U_{d1}^{-} + U_{d2}^{+} + U_{d3}^{+} = -0.07325U_p \qquad (13.1)$$

Take the a and the d state combination, by (7.4-2) type:

$$\sum U = 2U_{g1}^{+} + U_{g4}^{+} + U_{d1}^{+} + U_{d2}^{-} + U_{d3}^{-} + U_{d4}^{-} = 0.07325U_p \qquad (13.2)$$

If according to (13.2) type magnetic combination of calculation model, have$\pi^{\pm}$ both original energy increment: $\Delta\overline{m}$ =6.081173925×10 $^{-30}$Kg.



$$\underset{6}{Va} \quad \overset{6}{\underset{-2}{Vb}} \quad \overset{4}{\underset{6}{Vc}} \quad \overset{10}{\underset{-2}{Vd}} \quad \overset{8}{\underset{12}{Ve}} \quad \overset{20}{\underset{-6}{Vf}}$$

$$\overset{14}{\underset{2}{Vg}} \quad \overset{16}{\underset{20}{Vh}} \quad \overset{36}{\underset{-1}{Vi}} \quad \overset{35}{\underset{-10}{Vj}} \quad \overset{25}{\underset{16}{Vk}} \quad \overset{41}{\underset{36}{Vl}}$$

$$\overset{77}{\underset{-9}{Vm}} \quad \overset{68}{\underset{-16}{Vn}} \quad \overset{52}{\underset{24}{Vo}} \quad \overset{76}{\underset{-15}{Vp}} \quad \overset{61}{\underset{13}{Vq}} \quad \overset{74}{\underset{24}{Vr}}$$

$$\overset{98}{\underset{-7}{Vs}} \quad \overset{91}{\underset{-12}{Vt}}$$

$$W_e = 1.401321064 \times 10^{-27} Kg$$
$$W_b = 7.827518402 \times 10^{-30} Kg$$
$$\sum {}^{194}_{79}AuW_1 = 3.220247476 \times 10^{-25} Kg$$

图 13.2 ${}^{194}_{79}Au$ 原子核内核子、净剩 $\pi^{\pm}$ 介子分配示意图

Refer to section 11.2 of the nucleus structure model, design and energy balance calculation procedures, the nuclear force numerical comparison results. The design of the ${}^{194}_{79}$Au, ${}^{194}_{78}$Pt nucleus internal structure is shown in figure 13.2 and figure 13.3; nuclear force balance test results see table 13.1 and table 13.2. ${}^{194}_{79}$ Au, ${}^{194}_{78}$Pt of the experimental value of nuclear energy, respectively:

$$\sum {}^{194}_{79}AuW_0 = 3.220244434 \times 10^{-25} Kg \qquad \sum {}^{194}_{78}PtW_0 = 3.220208825 \times 10^{-25} Kg$$

To mother nuclear ${}^{194}_{79}$Au, ${}^{194}_{78}$Pt internal structure comparison, can see mother son become nuclear fission failure when net with high and low $\pi^{\pm}$mesons and extra neutron to adjust the migration trend. By the law of conservation of energy, we can calculate ${}^{194}_{79}$Au eVery position in nucleus, each net with high and low $\pi^{\pm}$violation or to each pair of $\pi^{\pm}$violation adjustment migration when launching the γray energy. It must be pointed out that this is just our ideal model. By this model, we can see by the numerous nuclides ${}^{194}_{79}$Au→${}^{194}_{78}$Pt, γrays in the process of energy spectrum, the trend of the chance.

${}^{194}_{79}$Au nucleus nuclear force balance to verify the results (figure 13.2, the unit: Newton) table 13.1

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N_a \ j	1	2	3	4	5		Nuclear electric and magnetic field force accumulated
58 $F_{e\theta}$ $F_{b\theta}$		t. 597.2865265 -623.6670342				↑	-538.2026478
34 $F_{e\theta}$ $F_{b\theta}$	n. 845.3021482 -1222.642839	p. 891.0114236 -1146.227662				|	-511.8221401
16 $F_{e\theta}$ $F_{b\theta}$		j. 838.0225225 -786.4485285	m. 106.3890735 -598.8363964			|	-256.6059021
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 256.935313 -14.26555772	d. 360.3313781 -14.26555772 -134.0624443	i. –2.039445479 -7.13277886 -57.45533327			|	388.0455737

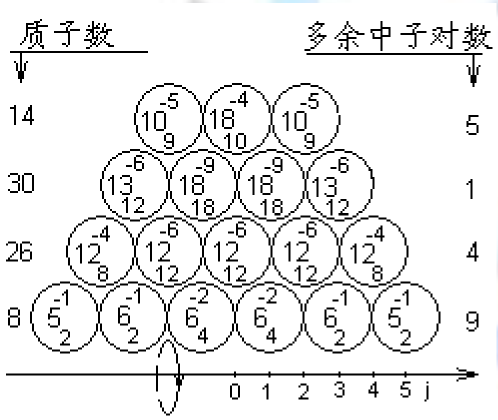

图 13.3 $^{194}_{78}Pt$ 原子核内核子、净剩 π± 介子分配示意图

$$Va_{8} \quad Vb^{8}_{-4} \quad Vc^{4}_{4} \quad Vd^{8}_{-2} \quad Ve^{6}_{12} \quad Vf^{18}_{-6}$$

$$Vg^{12}_{4} \quad Vh^{16}_{24} \quad Vi^{40}_{-2} \quad Vj^{38}_{-12} \quad Vk^{26}_{16} \quad Vl^{42}_{36}$$

$$Vm^{78}_{-8} \quad Vn^{70}_{-18} \quad Vo^{52}_{24} \quad Vp^{76}_{-12} \quad Vq^{64}_{10} \quad Vr^{74}_{18}$$

$$Vs^{92}_{-4} \quad Vt^{88}_{-10}$$

$$W_e = 1.392890861 \times 10^{-27} Kg$$

$$W_b = 9.474618808 \times 10^{-30} Kg$$

$$\sum {}^{194}_{79}PtW_1 = 3.220213937 \times 10^{-25} Kg$$

$^{194}_{78}$Pt nucleus nuclear force balance test results see (figure 13.3, unit: N) table 13.2

N_a \ j	1	2	3	4	5		Nuclear electric and magnetic field force accumulated
58 $F_{e\theta}$ $F_{b\theta}$		t. 394.0283291 -296.984302				↑	-145.8833932
34 $F_{e\theta}$ $F_{b\theta}$	n. 799.4848898 -1547.407343	p. 1095.757365 -1031.604895				|	-242.9274203
16 $F_{e\theta}$ $F_{b\theta}$		j. 1091.575393 -943.7382342	m. 76.90747548 -629.1588228			|	-307.0798898
$F_{e\theta}$ 34/13 $F_{b\theta}$ $\Delta F_{\theta b}$	b. 352.2356112 -57.06223088 -137.8927999	d. 173.5481658 -28.53111544 -68.94639993	i. –52.80497456 -14.26555772 -68.94639993			|	97.33429869

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13.2.2 γ ray spectrum simulation principle

The data in the table 9.1 shows that the net with high and low $\pi^{\pm}$mesons in different particles spiral ring transition between layer, due to the high and low $\pi^{\pm}$mesons original wave motion direction of the original energy $\overline{m}_{gi}$, $\overline{m}_{di}$, a slight differences, so the total energy a little influence. Behind us in order to convenient calculation, first the energy difference between the value of $\Delta\overline{m}_{gi}$, $\Delta\overline{m}_{di}$, direct conversion into MeV, shown in table 13.3.

Each layer particles spiral rings are made by the original PI to wave energy is the same as $\pi^{\pm}$violation, in addition to the net with $\pi^{\pm}$ violation of migration, antiparticle $\pi^{\pm}$ both migration is also exist. Position as shown in figure 13.1, p a low-energy π_d^- both migrated to m position, and can be expressed as $p\pi_d^- \rightarrow m\pi_d^-$. If antiparticle migration, the m position a low-energy π_d^+ mesons migrated to p for nuclear power charge distribution adjustment effect is the same, only difference is calculated in table 13.3 nucleus total energy, $\Delta\overline{m}_{di}$ school when is take the positive or negative. It is in the law of conservation of energy, under the premise of judgment with net high and low $\pi^{\pm}$mesons migration channel can be formed an important basis for adjustment.

Different particles spiral ring between $\pi^{\pm}$mesons original energy differences $\Delta\overline{m}_{gi}$, $\Delta\overline{m}_{di}$, table 13.3

$N_{\alpha d,g}$ / $\overline{m}_{di.gi}$	$\frac{34}{13}$、$\frac{34}{13}$	16 50	34 114	58 203	88 316	
$\left.\begin{matrix}\overline{m}_{di}\\ \overline{m}_{gi}\end{matrix}\right\} \times 10^{-28} Kg$	3.304461327 6.608922653	3.348508963 6.550192473	3.325343178 6.581080185	3.316814573 6.592451659	3.312652281 6.598001381	
$\Delta\overline{m}_{d(i\sim i+1)} \times 10^{-30} Kg$ MeV		4.4047636 2.470890	2.3165785 1.299505	0.8528605 0.478419	0.4162292 0.233487	
$\Delta\overline{m}_{g(i\sim i+1)} \times 10^{-30} Kg$ Mev		5.873018 3.294520	3.0887712 1.732673	1.1371474 0.637893	0.5549722 0.311316	

By know in chapter 11, 12, to split the decay naturally mother nucleus and the stability of the son, and there is a variety of meat with nuclear power. Laboratory detection to launch out 49 in the process of the decay of nuclear fission energy leVels of γ rays is lucky and rock atomic number N_A constituting for coefficient of $^{194}_{79}$Au nuclei with nuclear power, in the process of decay released all the comprehensive results of γ ray spectrum. Most of the energy leVel of the γ rays appear less risk of poor, but also do not eliminate the energy behind the data error range is composed of seVeral leVel is close to the results of the comprehensive reflection of γ rays. With existing experimental detection technology leVel, we can't separate detection to the whole process of the decay, with a particular internal structure, energy of $^{194}_{79}$Au nuclei with nuclear power, completely failure become stable another has certain internal structure, the IeVel of $^{194}_{78}$Pt nuclei with nuclear power, in the whole process of all the γray energy spectrum and time sequence. In fact also doesn't exist the physical condition of the external environment. Because and thermodynamics of the statistical laws of gas molecules thermal motion completely, the entire field of neutrinos, one neutrino one at a time through the nucleus of a particular position, is completely random, unpredictable.

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therefore, can think of: laboratory detected a γ ray energy leVels and the risk of appear, is a large number of nuclei with nuclear power, $^{194}_{79}$Au→$^{194}_{78}$Pt during the whole process of split decay, a particular internal structure adjustment, specific energy of nuclide $^{194}_{79}$Au atoms, one of the characteristics of the location of the high and low $\pi^{\pm}$ mesons migration, adjust to another leVel of nuclide $^{194}_{79}$Au atoms, or change to another $^{194}_{78}$Pt atoms nuclide characteristics of a certain position, excess energy release in the form of γ rays. Nuclide in gram atom coefficient as the unit of atoms, this process can only be the two $^{194}_{79}$Au, $^{194}_{78}$Pt atoms of two particular nuclides with nuclear power risk existing in the process of transformation, only statistical significance. We can't figure out, is the parent nucleus transformation before or after transformation launch γ rays.

So, we can use a kind of as shown in figure 13.2 $^{194}_{79}$Au the parent nucleus with nuclear power, as the reference standard. When its internal structure, nuclear and clean with $\pi^{\pm}$ mesons in total energy conservation under the premise of to the son, as shown in the figure 13.3 nuclear $^{194}_{78}$Pt with nuclear power, adjust the transformation, each γ ray energy that is released in the adjustment process, as the reference value of the γ ray energy spectrum. Obviously, it is only a small part of the actual γ ray spectrum of possible.

13.2.3 γ ray energy spectrum of applications

According to the principle of γ rays in the above form, design of γ ray spectrum calculation procedure is as follows:

1. According to section 11.2 nucleus total energy calculation procedure, we repeated computation as shown in the figure 13.2 $^{194}_{79}$Au nuclei with nuclear power of total energy $\sum{}^{194}_{79}AuW_1=3.220247476\times10^{-25}Kg$

2. According to the figure 13.1, high, low $\pi^{\pm}$ mesons possible migration channel, make $f\pi^{-}\rightarrow b\pi^{-}$, into another with nuclear power, 2, and the power, and nuclear energy calculation parameters of Vb ~ Vf of coefficient table 13.4 line 4; Other coefficient remain unchanged. Similarly, nucleus total magnetic energy will also change. Repeating section 11.2 1 ~ 12 calculation program: power, total energy 2 $\sum{}^{194}_{79}AuW_2=3.220192308\times10^{-25}Kg$

3. Make two states with nuclear power, the energy difference as ΔW_e:

$$\Delta W_e=\sum{}^{194}_{79}AuW_1-\sum{}^{194}_{79}AuW_2=3.094686MeV$$

For laboratory detects γ rays energy spectrum is the range of 0.20291_6 ~ 2.1142_2 MeV, (subscript for terminal error range). $\Delta\overline{m}_{gi}$、$\Delta\overline{m}_{di}$ Data from table 13.3, the total of the law of conservation of energy, is a particle transition, $f\pi^{-}\rightarrow b\pi^{-}$, the γ ray energy W_γ is:

$$W_\gamma=\sum{}^{194}_{79}AuW_1-\sum{}^{194}_{79}AuW_2+\Delta\overline{m}_{d(1\sim2)}=5.565576MeV;$$

Similarly, if the antiparticle transition, $b\pi^{+}\rightarrow f\pi^{+}$ to W_γ is:

$$W_\gamma=\sum{}^{194}_{79}AuW_1-\sum{}^{194}_{79}AuW_2-\Delta\overline{m}_{d(1\sim2)}=0.623796MeV;$$

The former far outweigh the laboratory value 2.1142 MeV, obviously does not exist, the latter is one of our

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expectations.

13.3 γ ray spectrum calculation example

To calculated according the above program, ${}^{194}_{79}Au \rightarrow {}^{194}_{78}Pt$ nucleus of γray spectrum simulation in table 13.4.

${}^{194}_{79}Au$ conditions within the nucleus on the lower $\pi^{\pm}$ mesons warp

Gammaγray spectrum simulation table 13.4

$\pi^{\pm}$Mesons transition position	Electric energy coefficient changes	$\sum W_i \times 10^{-25}$Kg $\sum W_0 - \sum W_i$(MeV)	$\pi^{\pm}$ Mesons transition way （W_{γ}=MeV）
$e\pi^{+} \rightarrow a\pi^{+}$	$\underset{7}{Va}\ \overset{7}{\underset{-2}{Vb}}\ \overset{5}{\underset{6}{Vc}}\ \overset{11}{\underset{-2}{Vd}}\ \overset{9}{\underset{11}{Ve}}$	3.220355938 -6.084245	
$e\pi^{+} \rightarrow a\pi^{+}$ $f\pi^{-} \rightarrow b\pi^{-}$	$\underset{7}{Va}\ \overset{7}{\underset{-3}{Vb}}\ \overset{4}{\underset{6}{Vc}}\ \overset{10}{\underset{-2}{Vd}}\ \overset{8}{\underset{11}{Ve}}\ \overset{19}{\underset{-5}{Vf}}$	3.220292476 -2.524305	
$f\pi^{-} \rightarrow b\pi^{-}$	$\overset{6}{\underset{-3}{Vb}}\ \overset{3}{\underset{6}{Vc}}\ \overset{9}{\underset{-2}{Vd}}\ \overset{7}{\underset{12}{Ve}}\ \overset{19}{\underset{-5}{Vf}}$	3.220192308 3.094736	$b\pi^{+} \rightarrow f\pi^{+}$ 0.623796
$h\pi^{+} \rightarrow a\pi^{+}$	$\underset{7}{Va}\ \overset{7}{\underset{-2}{Vb}}\ \overset{5}{\underset{6}{Vc}}\ \overset{11}{\underset{-2}{Vd}}\ \overset{9}{\underset{12}{Ve}}\ \overset{21}{\underset{-6}{Vf}}\ \overset{15}{\underset{2}{Vg}}\ \overset{17}{\underset{19}{Vh}}$	3.220371749 -6.971214	
.$j\pi^{-} \rightarrow b\pi^{-}$ $h\pi^{+} \rightarrow a\pi^{+}$	$\underset{7}{Va}\ \overset{7}{\underset{-3}{Vb}}\ \overset{4}{\underset{6}{Vc}}\ \overset{10}{\underset{-2}{Vd}}\ \overset{8}{\underset{12}{Ve}}\ \overset{20}{\underset{-6}{Vf}}\ \overset{14}{\underset{2}{Vg}}\ \overset{16}{\underset{19}{Vh}}\ \overset{35}{\underset{-1}{Vi}}\ \overset{34}{\underset{-9}{Vj}}$	3.220290444 -2.410299	
.$j\pi^{-} \rightarrow b\pi^{-}$	$\overset{6}{\underset{-3}{Vb}}\ \overset{3}{\underset{6}{Vc}}\ \overset{9}{\underset{-2}{Vd}}\ \overset{7}{\underset{12}{Ve}}\ \overset{19}{\underset{-6}{Vf}}\ \overset{13}{\underset{2}{Vg}}\ \overset{15}{\underset{20}{Vh}}\ \overset{35}{\underset{-1}{Vi}}\ \overset{34}{\underset{-9}{Vj}}$	3.220175306 4.048447	$b\pi^{+} \rightarrow j\pi^{+}$ 1.577557
$h\pi^{+} \rightarrow c\pi^{+}$	$\overset{4}{\underset{7}{Vc}}\ \overset{11}{\underset{-2}{Vd}}\ \overset{9}{\underset{12}{Ve}}\ \overset{21}{\underset{-6}{Vf}}\ \overset{15}{\underset{2}{Vg}}\ \overset{17}{\underset{19}{Vh}}$	3.220300167 -2.955736	$c\pi^{-} \rightarrow h\pi^{-}$ 0.338784
.$j\pi^{-} \rightarrow d\pi^{-}$ $h\pi^{+} \rightarrow c\pi^{+}$	$\overset{4}{\underset{7}{Vc}}\ \overset{11}{\underset{-3}{Vd}}\ \overset{8}{\underset{12}{Ve}}\ \overset{20}{\underset{-6}{Vf}}\ \overset{14}{\underset{2}{Vg}}\ \overset{16}{\underset{19}{Vh}}\ \overset{35}{\underset{-1}{Vi}}\ \overset{34}{\underset{-9}{Vj}}$	3.220253522 -0.339149	$c\pi^{-} \rightarrow h\pi^{-}$ $d\pi^{+} \rightarrow j\pi^{+}$ 0.484481
.$j\pi^{-} \rightarrow d\pi^{-}$	$\overset{10}{\underset{-3}{Vd}}\ \overset{7}{\underset{12}{Ve}}\ \overset{19}{\underset{-6}{Vf}}\ \overset{13}{\underset{2}{Vg}}\ \overset{15}{\underset{20}{Vh}}\ \overset{35}{\underset{-1}{Vi}}\ \overset{34}{\underset{-9}{Vj}}$	3.220203747 2.453013	
$k\pi^{+} \rightarrow c\pi^{+}$	$\overset{4}{\underset{7}{Vc}}\ \overset{11}{\underset{-2}{Vd}}\ \overset{9}{\underset{12}{Ve}}\ \overset{21}{\underset{-6}{Vf}}\ \overset{15}{\underset{2}{Vg}}\ \overset{17}{\underset{20}{Vh}}\ \overset{37}{\underset{-1}{Vi}}\ \overset{36}{\underset{-10}{Vj}}\ \overset{26}{\underset{15}{Vk}}$	3.220339459 -5.159881	
$k\pi^{+} \rightarrow c\pi^{+}.m\pi^{-} \rightarrow d\pi^{-}$	$\overset{4}{\underset{7}{Vc}}\ \overset{11}{\underset{-3}{Vd}}\ \overset{8}{\underset{12}{Ve}}\ \overset{20}{\underset{-6}{Vf}}\ \overset{14}{\underset{2}{Vg}}\ \overset{16}{\underset{20}{Vh}}\ \overset{36}{\underset{-1}{Vi}}\ \overset{35}{\underset{-10}{Vj}}\ \overset{25}{\underset{15}{Vk}}$ $\overset{40}{\underset{36}{Vl}}\ \overset{76}{\underset{-8}{Vm}}$	3.220260705 -0.7420794	$d\pi^{+} \rightarrow m\pi^{+}$. $c\pi^{-} \rightarrow k\pi^{-}$ 0.081551

$m\pi^-\to d\pi^-$	$\overset{10}{\underset{-3}{Vd}}\ \overset{7}{\underset{12}{Ve}}\ \overset{19}{\underset{-6}{Vf}}\ \overset{13}{\underset{2}{Vg}}\ \overset{15}{\underset{20}{Vh}}\ \overset{35}{\underset{-1}{Vi}}\ \overset{34}{\underset{-10}{Vj}}\ \overset{24}{\underset{16}{Vk}}\ \overset{40}{\underset{36}{Vl}}\ \overset{76}{\underset{-8}{Vm}}$	3.22017302 4.176686	$d\pi^+\to m\pi^+$. 1.705796
$k\pi^+\to g\pi^+$	$\overset{14}{\underset{3}{Vg}}\ \overset{17}{\underset{20}{Vh}}\ \overset{37}{\underset{-1}{Vi}}\ \overset{36}{\underset{-10}{Vj}}\ \overset{26}{\underset{15}{Vk}}$	3.220297748 -2.820064	$g\pi^-\to k\pi^-$ 0.474456
$k\pi^+\to g\pi^+$ $m\pi^-\to i\pi^-$	$\overset{14}{\underset{3}{Vg}}\ \overset{17}{\underset{20}{Vh}}\ \overset{37}{\underset{-2}{Vi}}\ \overset{35}{\underset{-10}{Vj}}\ \overset{25}{\underset{15}{Vk}}\ \overset{40}{\underset{36}{Vl}}\ \overset{76}{\underset{-8}{Vm}}$	3.220259066 -0.650160	$i\pi^+\to m\pi^+$. $g\pi^-\to k\pi^-$ 0.173470
$m\pi^-\to i\pi^-$	$\overset{36}{\underset{-2}{Vi}}\ \overset{34}{\underset{-10}{Vj}}\ \overset{24}{\underset{16}{Vk}}\ \overset{40}{\underset{36}{Vl}}\ \overset{76}{\underset{-8}{Vm}}$	3.22021208 2.090572	
$l\pi^+\to e\pi^+$	$\overset{8}{\underset{13}{Ve}}\ \overset{21}{\underset{-6}{Vf}}\ \overset{15}{\underset{2}{Vg}}\ \overset{17}{\underset{20}{Vh}}\ \overset{37}{\underset{-1}{Vi}}\ \overset{36}{\underset{-10}{Vj}}\ \overset{26}{\underset{16}{Vk}}\ \overset{42}{\underset{35}{Vl}}$	3.220308713 -3.435152	
$l\pi^+\to e\pi^+$ $n\pi^-\to f\pi^-$	$\overset{8}{\underset{13}{Ve}}\ \overset{21}{\underset{-7}{Vf}}\ \overset{14}{\underset{2}{Vg}}\ \overset{16}{\underset{20}{Vh}}\ \overset{36}{\underset{-1}{Vi}}\ \overset{35}{\underset{-10}{Vj}}\ \overset{25}{\underset{16}{Vk}}\ \overset{41}{\underset{35}{Vl}}\ \overset{76}{\underset{-9}{Vm}}\ \overset{67}{\underset{-15}{Vn}}$	3.220239193 0.464617	$f\pi^+\to n\pi^+$ $e\pi^-\to l\pi^-$ 0.031449 $l\pi^+\to e\pi^+$ $n\pi^-\to f\pi^-$ 0.897785
$n\pi^-\to f\pi^-$	$\overset{20}{\underset{-7}{Vf}}\ \overset{13}{\underset{2}{Vg}}\ \overset{15}{\underset{20}{Vh}}\ \overset{35}{\underset{-1}{Vi}}\ \overset{34}{\underset{-10}{Vj}}\ \overset{24}{\underset{16}{Vk}}\ \overset{40}{\underset{36}{Vl}}\ \overset{76}{\underset{-9}{Vm}}\ \overset{67}{\underset{-15}{Vn}}$	3.220179757 3.798768	$n\pi^-\to f\pi^-$ 2.499263
$l\pi^+\to h\pi^+$	$\overset{16}{\underset{21}{Vh}}\ \overset{37}{\underset{-1}{Vi}}\ \overset{36}{\underset{-10}{Vj}}\ \overset{26}{\underset{16}{Vk}}\ \overset{42}{\underset{35}{Vl}}$	3.220292902 -2.548183	
$l\pi^+\to h\pi^+$ $n\pi^-\to j\pi^-$	$\overset{16}{\underset{21}{Vh}}\ \overset{37}{\underset{-1}{Vi}}\ \overset{36}{\underset{-11}{Vj}}\ \overset{25}{\underset{16}{Vk}}\ \overset{41}{\underset{35}{Vl}}\ \overset{76}{\underset{-9}{Vm}}\ \overset{67}{\underset{-15}{Vn}}$	3.220241025 0.361859	$l\pi^+\to h\pi^+$ $n\pi^-\to j\pi^-$ 0.795027
$n\pi^-\to j\pi^-$	$\overset{35}{\underset{-11}{Vj}}\ \overset{24}{\underset{16}{Vk}}\ \overset{40}{\underset{36}{Vl}}\ \overset{76}{\underset{-9}{Vm}}\ \overset{67}{\underset{-15}{Vn}}$	3.220196759 2.845007	$n\pi^-\to j\pi^-$ 1.545502
$o\pi^+\to h\pi^+$	$\overset{16}{\underset{21}{Vh}}\ \overset{37}{\underset{-1}{Vi}}\ \overset{36}{\underset{-10}{Vj}}\ \overset{26}{\underset{16}{Vk}}\ \overset{42}{\underset{36}{Vl}}\ \overset{78}{\underset{-9}{Vm}}\ \overset{69}{\underset{-16}{Vn}}\ \overset{53}{\underset{23}{Vo}}$	3.220323499 -4.264582	
$o\pi^+\to h\pi^+$ $p\pi^-\to j\pi^-$	$\overset{16}{\underset{21}{Vh}}\ \overset{37}{\underset{-1}{Vi}}\ \overset{36}{\underset{-11}{Vj}}\ \overset{25}{\underset{16}{Vk}}\ \overset{41}{\underset{36}{Vl}}\ \overset{77}{\underset{-9}{Vm}}\ \overset{68}{\underset{-16}{Vn}}\ \overset{52}{\underset{23}{Vo}}\ \overset{75}{\underset{-14}{Vp}}$	3.220245594 0.105570	$o\pi^+\to h\pi^+$ $p\pi^-\to j\pi^-$ 0.538738
$p\pi^-\to j\pi^-$	$\overset{35}{\underset{-11}{Vj}}\ \overset{24}{\underset{16}{Vk}}\ \overset{40}{\underset{36}{Vl}}\ \overset{76}{\underset{-9}{Vm}}\ \overset{67}{\underset{-16}{Vn}}\ \overset{51}{\underset{24}{Vo}}\ \overset{75}{\underset{-14}{Vp}}$	3.220171221 4.277613	
$o\pi^+\to k\pi^+$	$\overset{25}{\underset{17}{Vk}}\ \overset{42}{\underset{36}{Vl}}\ \overset{78}{\underset{-9}{Vm}}\ \overset{69}{\underset{-16}{Vn}}\ \overset{53}{\underset{23}{Vo}}$	3.220284207 -2.060437	
$o\pi^+\to k\pi^+$ $p\pi^-\to m\pi^-$	$\overset{25}{\underset{17}{Vk}}\ \overset{42}{\underset{36}{Vl}}\ \overset{78}{\underset{-10}{Vm}}\ \overset{68}{\underset{-16}{Vn}}\ \overset{52}{\underset{23}{Vo}}\ \overset{75}{\underset{-14}{Vp}}$	3.220238175 0.521720	$m\pi^+\to p\pi^+$ $k\pi^-\to o\pi^-$ 0.088522

			$o\pi^+ \to k\pi^+$ $p\pi^- \to m\pi^-$ 0.954888
$p\pi^- \to m\pi^-$	$\overset{77}{\underset{-10}{Vm}}\ \overset{67}{\underset{-16}{Vn}}\ \overset{51}{\underset{24}{Vo}}\ \overset{75}{\underset{-14}{Vp}}$	3.220201948 2.553941	$p\pi^- \to m\pi^-$ 1.254436
$q\pi^+ \to l\pi^+$	$\overset{41}{\underset{37}{Vl}}\ \overset{78}{\underset{-9}{Vm}}\ \overset{69}{\underset{-16}{Vn}}\ \overset{53}{\underset{24}{Vo}}\ \overset{77}{\underset{-15}{Vp}}\ \overset{62}{\underset{12}{Vq}}$	3.220315827 -3.834195	
$q\pi^+ \to l\pi^+$ $s\pi^- \to n\pi^-$	$\overset{41}{\underset{37}{Vl}}\ \overset{78}{\underset{-9}{Vm}}\ \overset{69}{\underset{-17}{Vn}}\ \overset{52}{\underset{24}{Vo}}\ \overset{76}{\underset{-15}{Vp}}\ \overset{61}{\underset{12}{Vq}}\ \overset{73}{\underset{24}{Vr}}\ \overset{97}{\underset{-6}{Vs}}$	3.220252627 -0.288933	$q\pi^+ \to l\pi^+$ $n\pi^+ \to s\pi^+$ 0.827379
$s\pi^- \to n\pi^-$	$\overset{68}{\underset{-17}{Vn}}\ \overset{51}{\underset{24}{Vo}}\ \overset{75}{\underset{-15}{Vp}}\ \overset{60}{\underset{13}{Vq}}\ \overset{73}{\underset{24}{Vr}}\ \overset{97}{\underset{-6}{Vs}}$	3.220185034 3.502738	
$r\pi^+ \to l\pi^+$ $t\pi^- \to n\pi^-$	$\overset{41}{\underset{37}{Vl}}\ \overset{78}{\underset{-9}{Vm}}\ \overset{69}{\underset{-17}{Vn}}\ \overset{52}{\underset{24}{Vo}}\ \overset{76}{\underset{-15}{Vp}}\ \overset{61}{\underset{13}{Vq}}\ \overset{74}{\underset{23}{Vr}}\ \overset{97}{\underset{-7}{Vs}}\ \overset{90}{\underset{-11}{Vt}}$	3.220252345 -0.273141	$r\pi^+ \to l\pi^+$ $n\pi^+ \to t\pi^+$ 0.843171
$t\pi^- \to n\pi^-$	$\overset{68}{\underset{-17}{Vn}}\ \overset{51}{\underset{24}{Vo}}\ \overset{75}{\underset{-15}{Vp}}\ \overset{60}{\underset{13}{Vq}}\ \overset{73}{\underset{24}{Vr}}\ \overset{97}{\underset{-7}{Vs}}\ \overset{90}{\underset{-11}{Vt}}$	3.220175644 4.029504	
$r\pi^+ \to o\pi^+$	$\overset{52}{\underset{25}{Vo}}\ \overset{77}{\underset{-15}{Vp}}\ \overset{62}{\underset{13}{Vq}}\ \overset{75}{\underset{23}{Vr}}$	3.220294461 -2.635665	
$r\pi^+ \to o\pi^+$ $t\pi^- \to p\pi^-$	$\overset{52}{\underset{25}{Vo}}\ \overset{77}{\underset{-16}{Vp}}\ \overset{61}{\underset{13}{Vq}}\ \overset{74}{\underset{23}{Vr}}\ \overset{97}{\underset{-7}{Vs}}\ \overset{90}{\underset{-11}{Vt}}$	3.220247685 -0.011747	$r\pi^+ \to o\pi^+$ $t\pi^- \to p\pi^-$ 0.147727 $r\pi^+ \to o\pi^+$ $p\pi^+ \to t\pi^+$ 1.104565
$t\pi^- \to p\pi^-$	$\overset{76}{\underset{-16}{Vp}}\ \overset{60}{\underset{13}{Vq}}\ \overset{73}{\underset{24}{Vr}}\ \overset{97}{\underset{-7}{Vs}}\ \overset{90}{\underset{-11}{Vt}}$	3.220201183 2.596849	$t\pi^- \to p\pi^-$ 2.118430
note	W_γ field, part of the γ ray energy spectrum calculation result is negative, the part beyond the experimental range, are no longer to calculate.		