How repulsive gravity contributes for cold fusion occurrence in Rossi-Focardi experiment

Wladimir Guglinski

Mechanical Engineer graduated in the Escola de Engenharia da Universidade Federal de Minas Gerais-UFMG, (Brazil), 1973, author of the book Quantum Ring Theory-Foundations for Cold Fusion, published in 2006.

ABSTRACT

Quantum Ring Theory (QRT) proposes a new model of neutron, a new hydrogen model, a photon model, a model structure for the aether, a model of electron, a model of proton, and a new nuclear model named Hexagonal Floors Model.

Here we analyze the Rossi-Focardi cold fusion experiment by considering the nuclear properties of the Hexagonal Floors Model.

1- Some Properties of the Hexagonal Floors Model

The Hexagonal Floors Model is constituted by a central 2He4, which produces fluxes of gravitons (Dirac strings), and they capture protons, neutrons, and deuterium nucleons.

Fig. 1 shows an electron with:

- its central body (a ring)
- its principal field Sp(e), formed by a flux of gravitons.
- its secondary field Sn(e), formed by a flux of electric particles of the aether. The field Sn(e) is induced by the spinning of Sp(e); this is one among several induction laws that unify the gravity and electromagnetism into the structure of elementary particles, an induction law similar of that discovered by Faraday for the electromagnetism.

The other laws that unify gravity and electomagnetism are shown in the paper Aether, of the book Quantum Ring Theory.

The secondary field Sn(e) is responsible for the electron's Coulombic electric field. So, the secondary field Sn(e) of the electron has electromagnetic attraction with the secondary field Sn(p) of a proton.

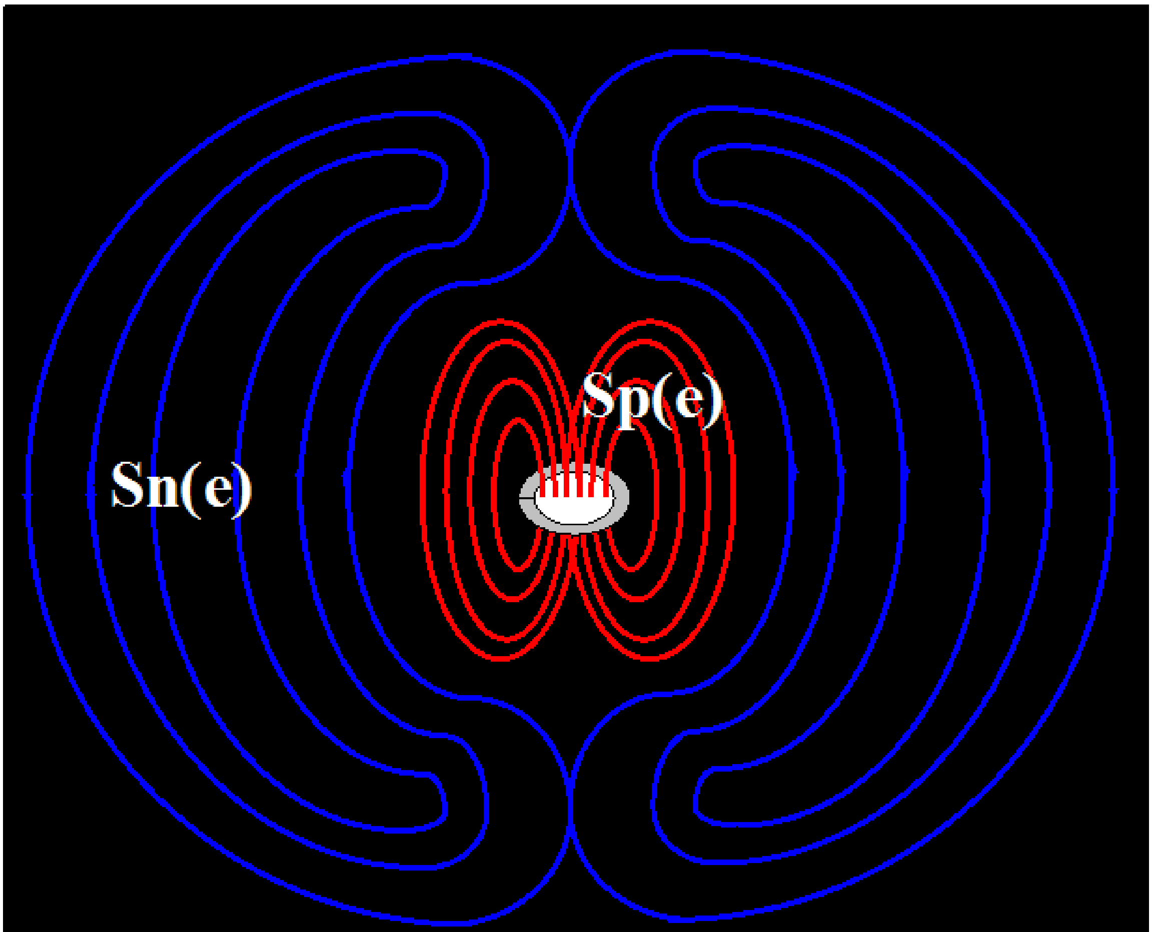


Fig. 1 – the electron

Fig. 2 shows a deuterium captured by a flux in the formation of the 3Li6. When a floor with six deuterium nucleons is completed (for instance the 3th floor of 20Ca), a new floor begins to be filed (the 4^{th} floor of 21Sc).

Note that when a nucleus has several hexagonal floors, the central 2He4 will get an oscillation along the z-axis direction (shown in the Fig. 2).

Obviously the secondary field Sn(3Li) of Lithium has electric positive charge, and it captures 3 electrons (not shown in the Fig. 2), so that the total electric charge of the atom 3Li will be null, because it will be the overlap of 3 fields Sn(e) of electrons and the field Sn(3Li).

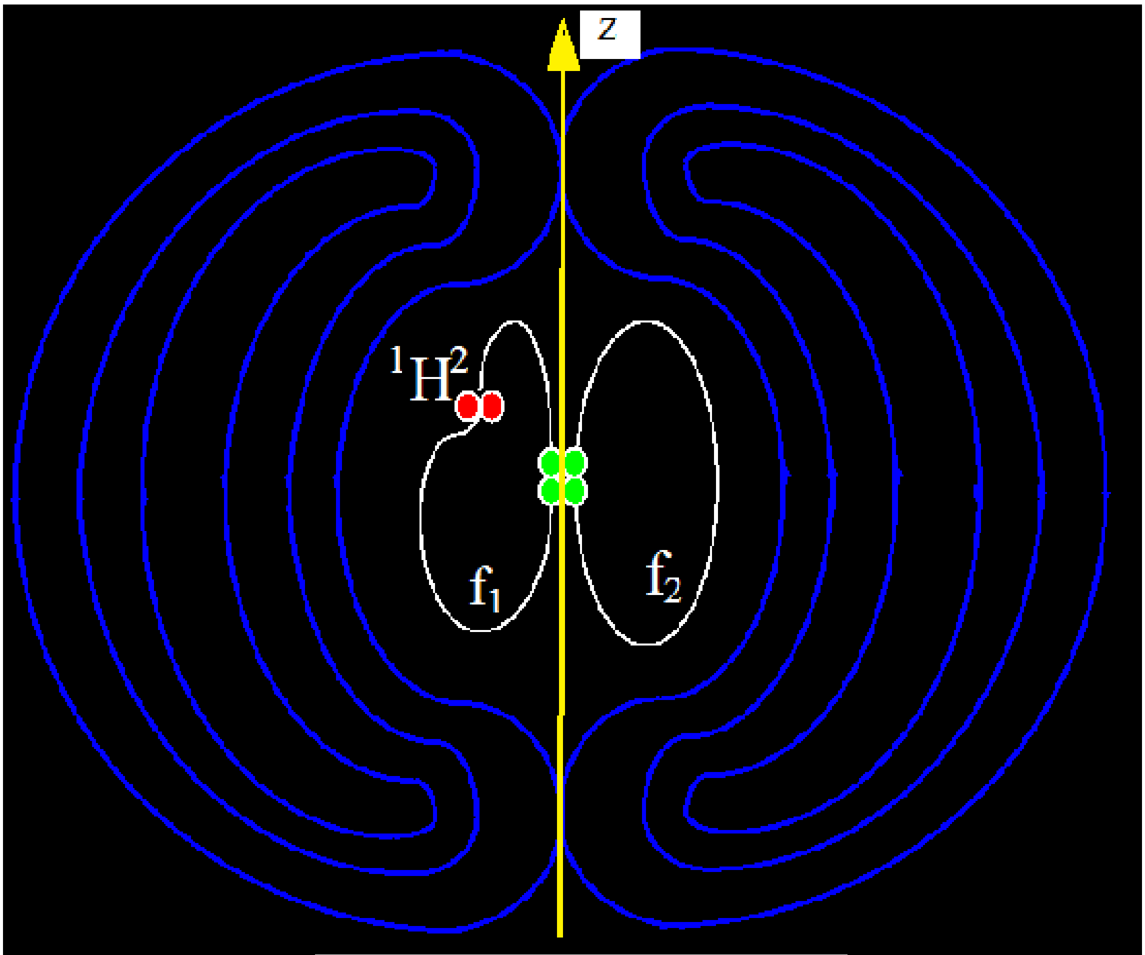


Fig. 2 – the 3Li6

2- Why to consider two concentric fields ?

The scientific method prescribes that when one develops a theory, he has to subordinate his choice of constructs to the requirement of simplicity.

Of course the criterion of simplicity prescribes one unique field for the particles, as adopted in the prevailing theories.

Then if an author adopts two concentric fields for the particles, then obviously he is committing intellectual suicide, since there is very small chance his theory be accepted by the scientific community.

Then why have I adopted two concentric fields in QRT?

Answer:

it's because I arrived to the conclusion that by considering one unique field it's impossible to get a theoretical nuclear model able to describe the nuclear properties of nuclei. Let's see why.

In the end of 1993, after discovering my nuclear model with a central 2He4 producing strings that capture the nucleons, I decided to calculate the binding energy of the lightest nuclei by using my new model, so that to verify if it could be fit to experimental data (I knew that from the current nuclear models it's impossible to calculate the binding energy of lightest nuclei).

Then I invited my friend Claudio Nassif for helping me. At that time he was a student of Physics. Today he is PhD, author of the Symmetrical Special Relativity, in which he proposes a new fundamental principle missed in Einstein's theory: a limit for the minimum speed of elementary particles. He already published two revolutionary papers: the first one in 2008 in the journal Pramana, and the second in the International Journal of Modern Physics (2010).

Then I and Nassif tried to calculate the binding energies according to my nuclear model, along one week. And we did not succeed. After that flaw he went back to Juiz de Fora city where he lived, and I stayed in Cataguases city, where I lived at that age.

Sure that I continued my attempts along some weeks. But after many attempts, I understood that it was impossible to calculate the binding energies from that model, in a way the theoretical results be agree to the experimental data. And finally I realized that something was missing in my model. Some weeks later I had the idea of considering two concentric fields surrounding the nucleons, and that solution was successful. The calculation and the results (agree to experimental data) are shown in the paper New Nuclear Model, of the book Quantum Ring Theory.

So, imagine that the scientific criterion of simplicity cannot be applied here, because the particles in the Nature indeed have two concentric fields, as considered in QRT. Well, then it is obvious that it's impossible from the prevailing nuclear models of Nuclear Physics to calculate the binding energies of lightest nuclei (agree to the experimental data). Also, from the current nuclear models many nuclear properties of nuclei cannot be explained. That's why Heisenberg proposed the isospin concept, in order to explain why two neutrons never form a dineutron, which is very surprising if we consider the current Nuclear Physics. Indeed, there is not repulsion between two neutrons, but they have attraction by the strong force in a distance of 2fm. Only a force could be able to separate the two neutrons linked by the strong force. A postulate, as proposed by Heisenberg, do not create a force.

Other intriguing question not explained by Nuclear Physics is the influence of the spin in the interaction proton-neutron (interaction with parallel spins is 40% stronger). But the interaction proton-neutron occurs through the strong force, while the influence of the spin is electromagnetic, which is 100 times weaker than the strong force. So, according to Nuclear Physics, the spin could not influence in the proton-neutron interaction.

Such problem, as the question of isospin, is solved by considering the two concentric fields Sn(p) and Sp(p) of proton.

3- The Gamow's Paradox

The nucleus 92U238 emits alpha particles with 4MeV, and they cross a Coulombic barrier with 8MeV. A solution for such paradox was proposed by Gamow, but there are some inconsistencies in this theory. Let's see them.

1- Gamow solved the paradox by proposing that alpha particles cross the barrier due to a tunneling efect.

According to QRT, the tunneling effect is due to the helical trajectory of the fundamental particles. When, for instance, an electron tries to trespass a barrier, the success of such enterprise depends upon the position of the electron in its helical trajectory, in the instant when the electron touches the barrier. The electron has a kinetic energy Ek due to its

motion, and also a spinning kinetic energy Eh due to its helical trajectory. In the instant when the electron arrives to the barrier, its total energy can be situated between Ek+Eh and Ek-Eh, depending on the position of the electron (in the helical trajectory) with regard to the barrier. Considering a barrier with energy Eb, then if Ek+Eh > Eb the electron surpasses it.
The success of trespassing the barrier may occur when the barrier is 30, 40, or 50% higher then the particle kinetic energy. But the particle cannot trespass it when the barrier is 100% stronger, as happens in the case of the 92U238, as Gamow supposed.

2- Gamow developed a paradoxical equation: although the success of the particles enterprise depends on the numbers of attempts, according to his theory the attempts are not the most important cause that offers to the enterprise the possibility of success... Gamow had tried to explain a paradox by the introduction of another paradox.

3- Consider a nucleus 92U238 spinning, and an alpha particle trying to surpass its Coulombic barrier. In the instant when the alpha particle is crossing the barrier, it is dragged by the barrier along the time during which it is crossing it. So, the alpha particle must leave out the 92U nucleus by having a tangential vector velocity component. The alpha particle cannot leave out the 92U through a pure radial direction.
However, the experiments have shown that alpha particles leave out the 92U with a pure radial direction, a fact disagree to what we expect from the Gamow's theory considering it as a tunneling efect.

Such experimental evidence is according to the nuclear model of QRT. Indeed, into the 92U nuclei, the central 2He4 has an oscillation along the z-axis direction, and so let's see how it can leave out the nucleus.

When a 92U nucleus has fission, it emits gamma rays. If a gamma ray collides with a central 2He4 of another 92U nucleus, the 2He4 can leave out the nucleus.
According to current Nuclear Physics, such phenomenon cannot occur. Let's see why:
1- The nucleus has a diameter 20fm
2- Even if we suppose that there are 2He4 particles into the 92U, however the probability they be shot by a gamma ray is very great, because it can shoot the 2He4 particle in any place of the volume with 20fm, and the gamma ray can come from any direction.
3- Then from the current Nuclear Physics is impossible to explain the half-life time of 92U nuclei in order of billion years.
4- That's why the gamma rays as the cause of alpha decay was never considered before.

Let's analyze it according to QRT.
1- The 2He4 has a diameter less than 1fm
2- The 2He4 has oscillation along the z-axis direction.
3- So, in order to expel it from the 92U, the gamma ray must come from a z-axis direction.
4- In the instant of the collision, if the 2He4 is moving in the contrary direction of the gamma ray trajectory, it will not be extracted.

The probability to satisfy all those 4 conditions is very very small. In the paper Contribution of Gamma-rays as the Cause of Alpha Decay (it belongs to the book QRT), it is calculated that such probability is compatible with the half-life time in the order of billion years of the 92U.

So, the 2He4 can leave the 92U without to pierce the Coulombic barrier by tunneling effect. It can passe through the "hole" in the Sn(92U) secondary field (see Fig. 4).

Therefore, as the 2He4 can leave out the 92U by passing through that hole in the secondary field (with no tunneling effect), then under special conditions a particle like H, H2, or 2He4 can enter into a nucleus too (with no tunneling effect), causing a transmutation.

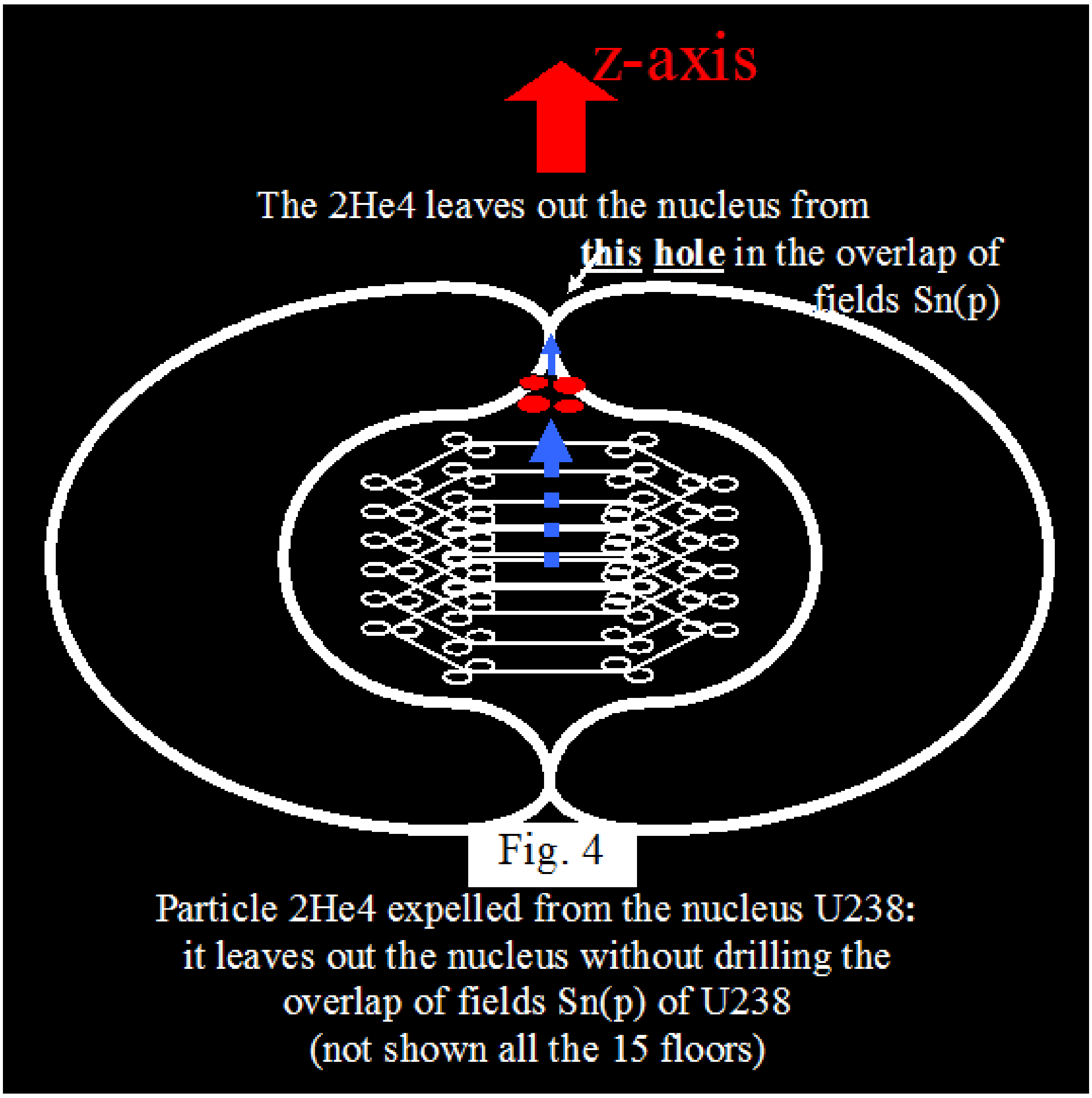


Fig. 4
Particle 2He4 expelled from the nucleus U238: it leaves out the nucleus without drilling the overlap of fields Sn(p) of U238 (not shown all the 15 floors)

4- Repulsive Gravity
In the paper Aether of the book Quantum Ring Theory it is proposed a structure of the aether: it is filed with massless electric particles e(+) and e(-), magnetic particles m(+) and

m(-), permeability particles p(+) and p(-), gravitational particles g(+) and g(-). In 2006 when the book was published I did not realize yet that there is need a second sort of gravitational particles: G(+) and G(-). The particle G(+) has attraction with the particle g(+), and G(-) has attraction with the particle g(-), and so G(+) and G(-) have gravitational nature. However, two particles G(+) repel one each other, and two particles G(-) repel each other too, and G(+) and G(-) have repulsion too, and therefore they produce a sort of repulsive gravity.

Among others, one of the reasons why it's is indispensable to consider the repulsive gravity can be understood by looking at the Fig. 4. The nuclei have 6 Dirac strings produced by the central 2He4, and each one attract each other. So, they could not be distributed symmetrically about the central 2He4. Due to their attraction, they should meet in one side of the nucleus. Nevertheless, look what happens: the protons of the central 2He4 produce a string of particles g(+). They attract particles G(+) around the strings, and they form a field around the string. As two particles G(+) repel one each other, then two consecutive strings repel one each other, and by this way the six strings get a symmetrical distribution about the 2He4.

The photon also has repulsive gravity into its structure. The photon of QRT is formed by one particle and one antiparticle (they move with helical trajectory). Such model of photon is able to explain all the corpuscular and wave phenomena of light, like refraction, Compton effect, polarization, EPR paradox, superluminal propagation, transverse character of light propagation, and it's agree to Lie symmetry. The helical trajectory of light was confirmed by an experiment published in Phys Review Letters in July-2010.

Fig. 5 shows why there is need a repulsive gravity into photon's structure. The particle and the antiparticle have attraction. As they move in contrary direction along their helical trajectory, they should collide, and vanish one each other. However, the particle of the photon attracts particles G(-), and the antiparticle attracts particles G(+), then the repulsion between G(+) and G(-) avoid the collision between the particle and the antiparticle.

It's interesting to note that the particle and antiparticle of the photon have electromagnetic interaction. So, in order to keep them separated, the repulsion G(+) with G(-) must have the magnitude of the electromagnetism.
We will see how such magnitude of the repulsive gravity contributes for the cold fusion occurrence in Rossi-Focardi experiment.

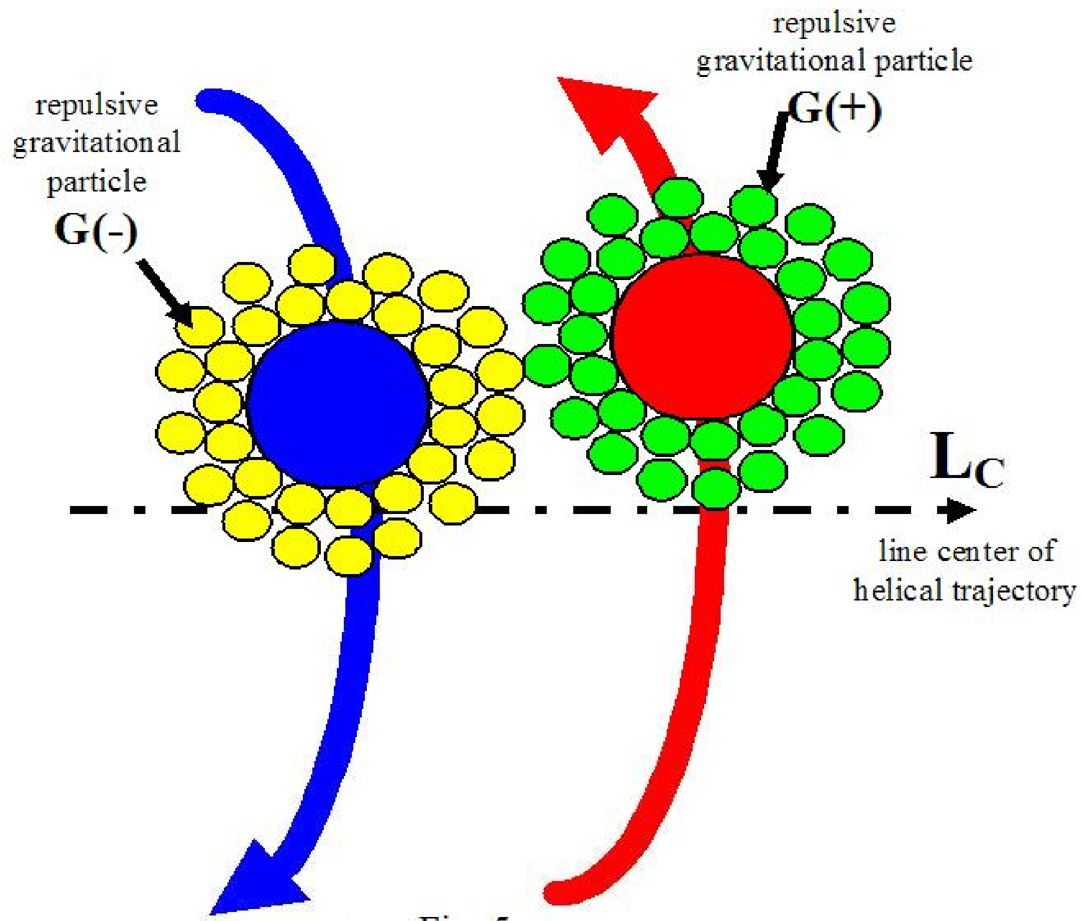


Fig. 5

The hypothesis that repulsive gravity has the same magnitude of electromagnetism is also applied to the hydrogen atom. The proton's principal field Sp(p) attracts particles G(+), while the electron's principal field Sp(e) attracts particles G(-). As they repel one each other, a repulsion field tries to expel the electron from the proton's electrosphere with a force Fr, and it has the magnitude of the electromagnetic attraction proton-electron, which applies an attraction force Fa between them.
When the electron is not captured by the proton yet, Fa > Fr. But when the electron is captured, and they form the hydrogen atom, there is an overlap of their secondary fields, and then there is an equilibrium of forces, Fa = Fr . In such situation, as it is null the resultant of forces on the electron, then when it moves in radial direction its velocity is constant (and so it does not move with acceleration, as expected from current theories). This explains the result of Dehmelt experiment: the electron moves between two points in the electrosphere of atoms (which is impossible according to Quantum Mechanics, because the electron cannot move with constant speed, since it is attracted by the proton).

Figures 5-B and 5-C illustrates what was explained above concerning the interaction proton-electron. In Fig. 5-B there is interaction between the secondary fields only (they do not constitute a hydrogen atom yet).

But in Fig. 5-C there are two overlaps:
a) There is attraction due to the overlap of secondary fields
b) There is repulsion due to the overlap of principal fields.

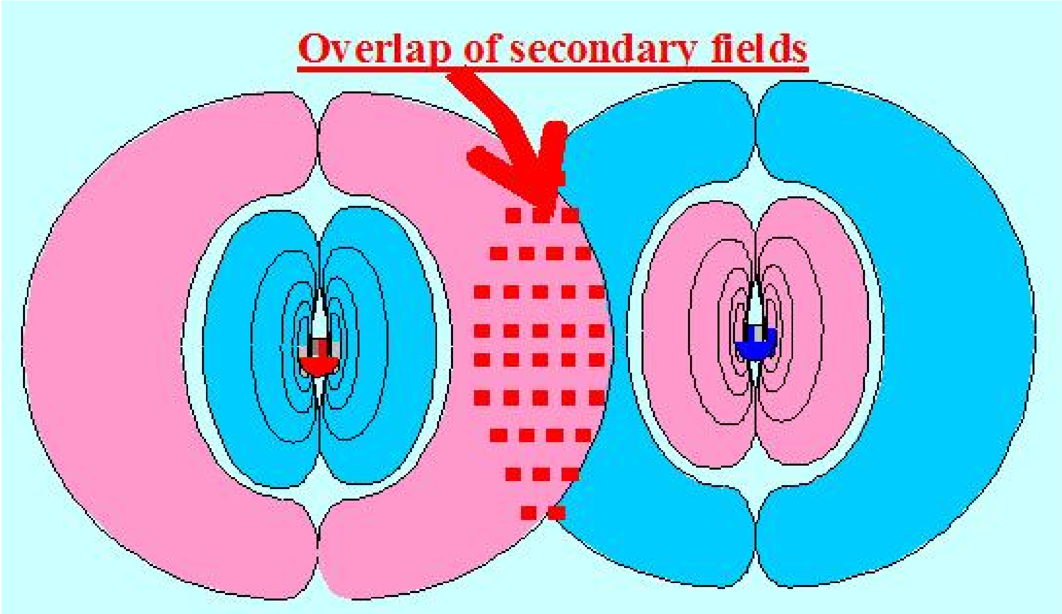

Overlap of secondary fields

Fig. 5-B

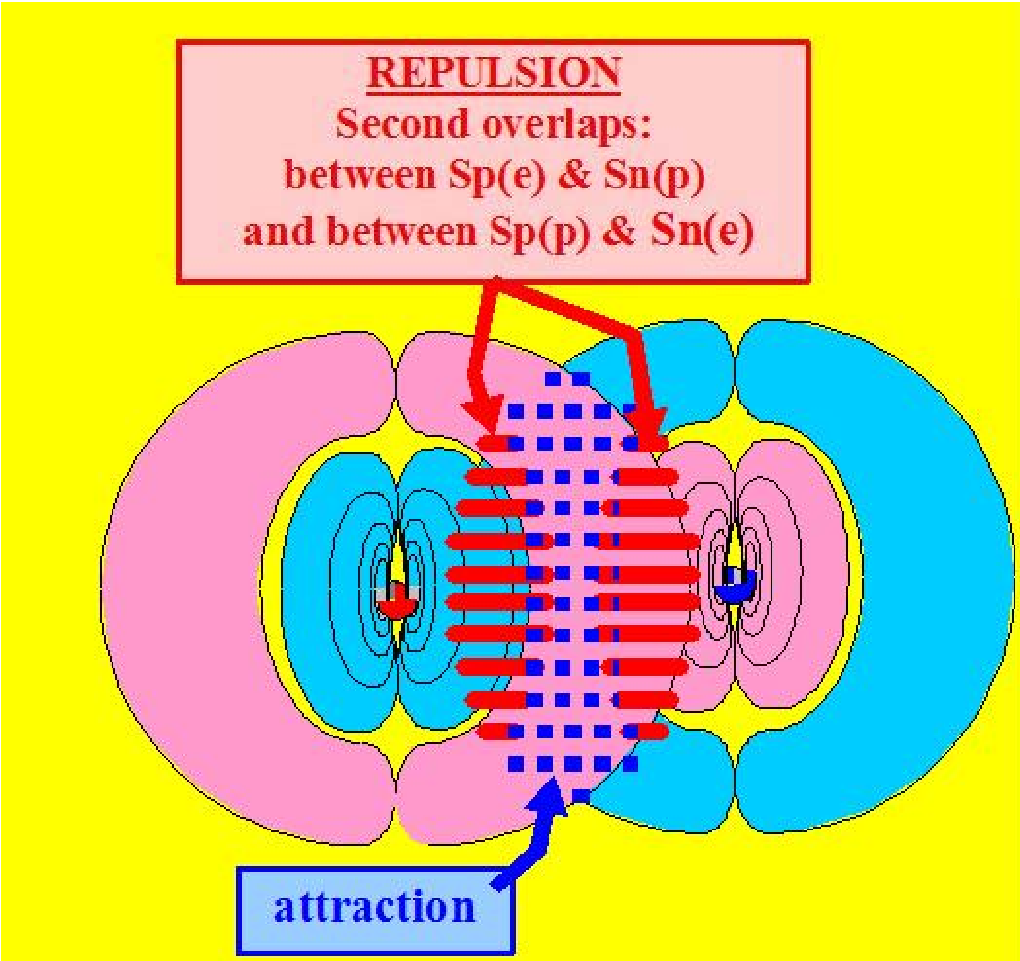

REPULSION
Second overlaps:
between Sp(e) & Sn(p)
and between Sp(p) & Sn(e)
attraction

Fig. 5-C

One of the biggest paradoxes of the whole time in Physics is the mystery of the equilibrium of the electron's electrosphere. It crossed unsolved the 20^{th} Century, and continues with no explanation: why does not collapse the electron ?
The answer lies in its internal structure, because its electromagnetic secondary field Sn(e) gets equilibrium with its principal repulsive gravity field Sp(p), since they have the same magnitude.

As the particles G(+) repeal one each other and there is also repulsion with G(-), they cannot create fields outside the structure of elementary particles. The repulsive gravitational fields are created by the Dirac strings, and therefore such sort of field does not exist in the macroscopic world.

5- The Accordion-Effect

Consider a nucleus 92U238 according to the prevailing models of Nuclear Physics. The repulsion between protons occurs in all the radial directions. So, as 92U238 has pair number of protons and neutrons, we have to expect that an expansion-contraction of the nucleus must occur in all the directions, so that the increase ΔR of the radius must be same in all directions. Therefore the nucleus must have a spherical form when it is expanded, and also a spherical form with it is contracted. In other words, it must occur a same expansion (or contraction) ΔR of the radius along all the directions.

Experiments shows that it does not occur by this way. The nucleus 92U238 actually has an expansion-contraction ΔL along a preferential direction. It is not have a spherical form, actually it becomes an ellipsoid.

Such experimental fact is agree to the Hexagonal Floors Model. Indeed, the distance “d” between the hexagonal floors (see Fig. 6) has expansion-contraction in a preferential direction: the z-axis, because the Dirac strings of the central 2He4 oblige the nucleons to oscillate in the z-axis direction.

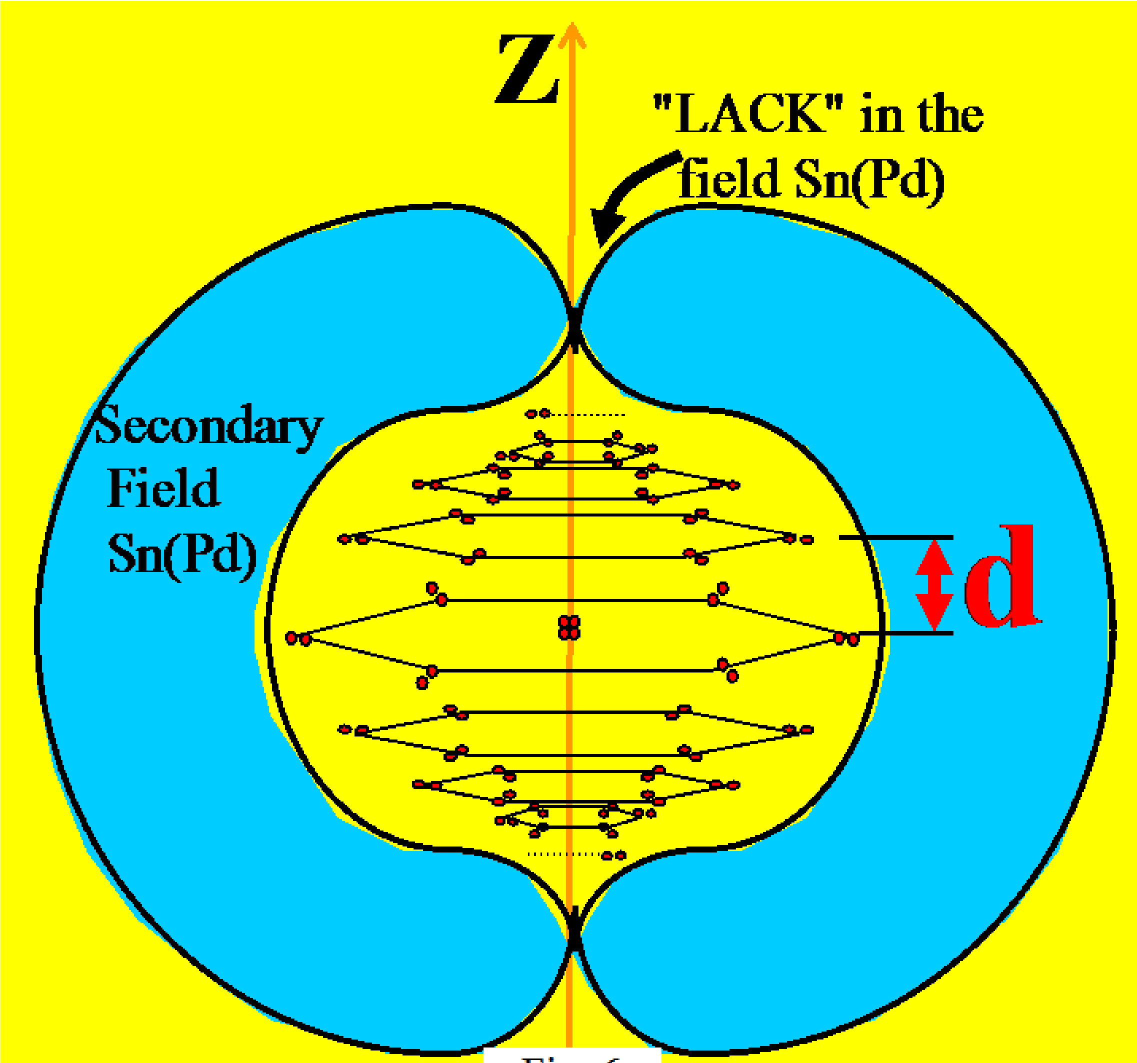


Fig. 6

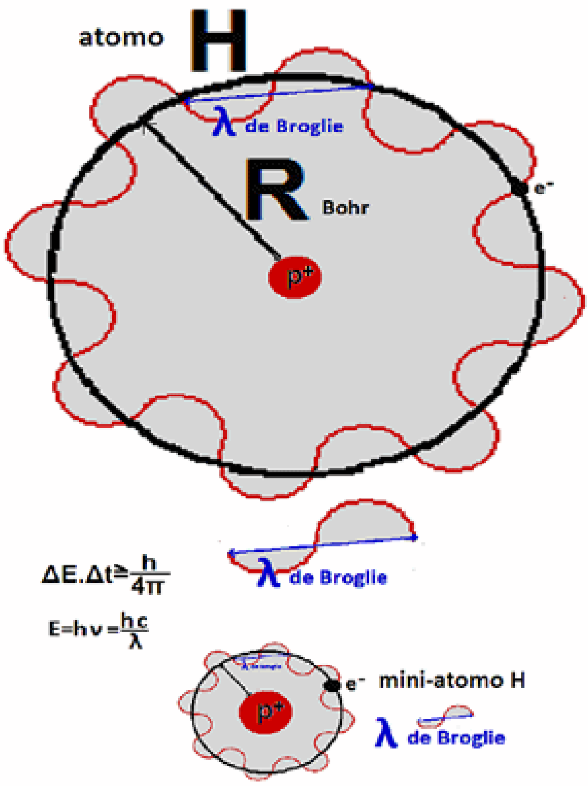
The nucleus 46Pd surrounded by its
field Sn(Pd)

Possibly the accordion-effect of two nuclei can get resonance, and they can help one each other to increase the amplitude of the distance d in each one of them.
Also, if a nucleon like a proton (or deuterium) takes the place between those nuclei in resonance, their accordion-effect can put that proton in resonance with their oscillation.

6- Mechanism proposed by Stremmenos

In his article HydrogenNickel cold fusion probable mechanism, Prof. Ch. E. Stremmenos writes:

"When hydrogen atoms come in contact with the metal (Ni), they abandon their **stationary** state as they deposit their electrons in the conductivity band of the metal, and due to their greatly reduced volume, compared to that of their atom, the hydrogen nuclei (naked protons) readily diffuse into the defects of the nickel crystalline structure as well as in tetrahedral or octahedral void spaces of the crystal lattice. […] For these mini-atoms to fuse with the nickel nuclei, apart from their neutral character for surpassing the Coulomb barrier, they must have dimensions smaller than **10ˆ-14 m**, where nuclear cohesion forces, of high intensity but very short range, are predominant. It is assumed that only a percentage of such atoms satisfy this condition (de Broglie)."



Such hypothesis of micro-hydrogen atom is agree to the hydrogen model of QRT. Indeed, in this new model, in the fundamental status the electron moves about the proton with a circular orbit, traveling by a helical trajectory. The helical trajectory has a Zoon-Effect: the radius of such motion decreases with the growth of the electron's velocity. The Zoom-Effect also occurs by another way: when the distance proton-electron decreases, the density of the Dirac strings increases, and the radius of the helical trajectory decreases, even if the velocity of the electron stays the same.
Such decrease of the radius of the helical trajectory imply in the growth of the kinetic energy of spinning about the center of the helical trajectory. Such a phenomenon is related to the production of hydrino-hidrides obtained by Randell Mills through the technology developed in BlackLight Power Inc.

So, let's see what occurs when the mini-atom of hydrogen is captured between two nuclei (between two 28Ni or between one 28Ni and another nucleus).

7- How it would work Rossi-Focardi experiment without additives
Nickel has 28 protons: 2 in the central 2He4, 24 distributed in the 4 complete hexagonal floors, and 2 protons are initiating the 5^{th} 6^{th} floors.

As the system works with no additives, the mini-atoms of hydrogen are captured between two 28Ni nuclei.
There are the following mechanisms:

1- Each central 2He4 of each nucleus of Ni has an oscillatory motion along the z-axis direction.
2- The proton of the mini-hydrogen atom has an oscillatory motion due to the zero-point energy. Such motion tends to get resonance with the accordion-effect (the oscillation is along the z-axis direction), and resonance with the central 2He4 too.
3- The electron of the mini-hydrogen is captured by one of the two 28Ni nuclei.
4- The proton stays alone, with oscillation between the two 28Ni nuclei.
5- The proton's secondary field has electric repulsion with the secondary fields of the two 28Ni nuclei. The two repulsion forces on the proton are equal, since they both are yield by the two 28Ni.
6- The Dirac strings of the proton are involved by repulsive particles G(+). And the strings of the two Ni nuclei are also involved by repulsive particles G(+). Therefore there is also a gravitational repulsion (with the magnitude of the electromagnetism) on the proton, due to the two nuclei Ni.

As we realize, the repulsive gravity cannot help any one of the 28Ni nuclei to capture the proton, even if the amplitude of the proton's oscillation increases, because the two 28Ni nuclei apply the same force of gravitational repulsion on the proton.
In spite of the accordion-effect in the two 28Ni resonate very well, such resonance has not the help of the repulsive gravity, as we have seen.
And so cold fusion does not occur.

8- How H-Ni reaction occurs in presence of additives

Now let's put an additive into the vessel.
The mini-hydrogen atom is captured between one 28Ni nucleus and another nucleus of the additive.

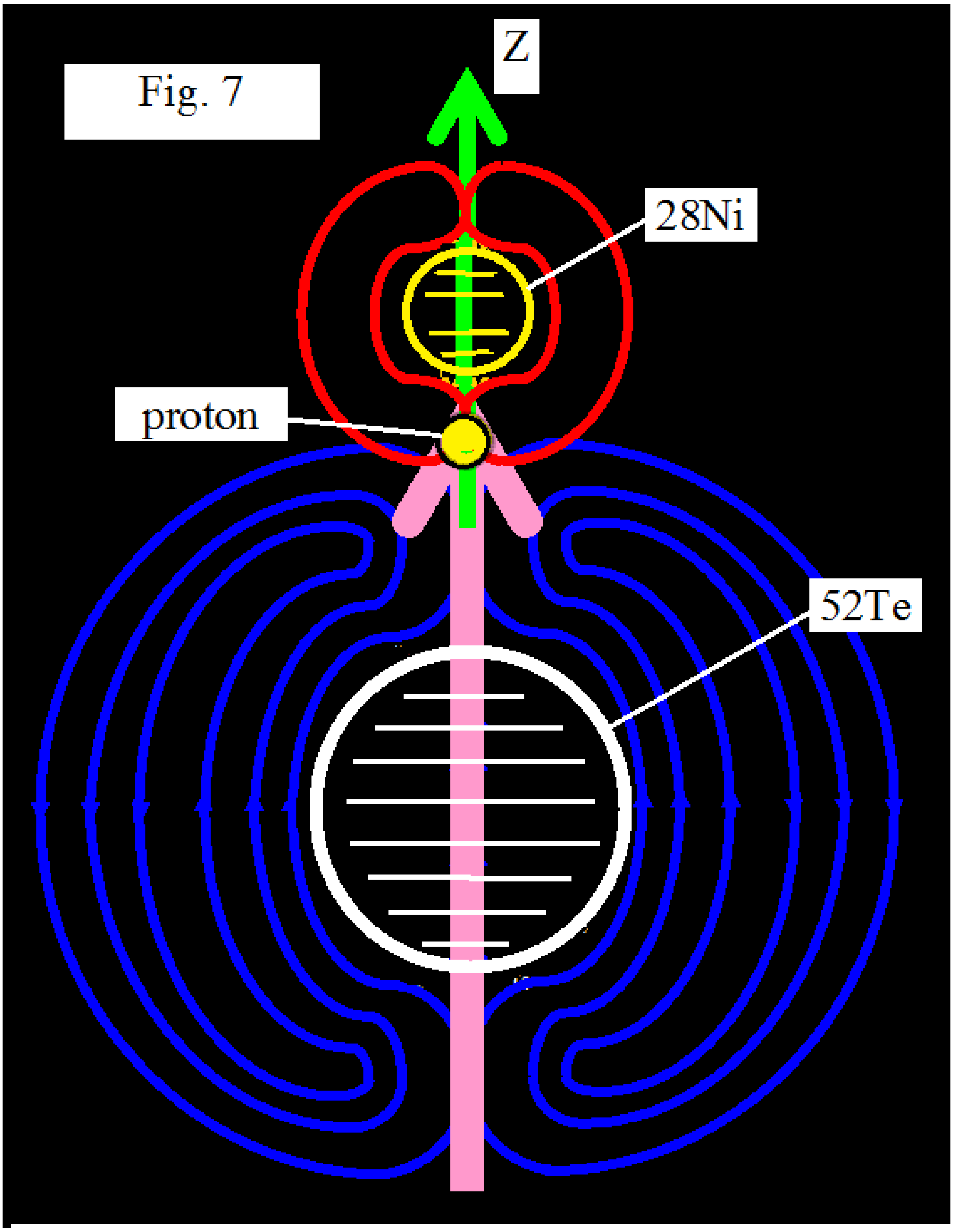
Palladium is not a good choice. It has 46 protons: 2 in the central 2He4, 42 distributed in 7 complete hexagonal floors, and 2 protons are initiating the 8^{th} and 9^{th} floors.
There is a central hexagonal floor (because the number of floors is odd). Then the palladium does not tends to have a good resonance with the 28Ni nucleus (it has pair number of floors, so it has not a hexagonal floor in the center of the nucleus).
Any nucleus with odd quantity of hexagonal floors is not advisable to resonate with Nickel.

A good resonance we can expect from a nucleus with 8 complete hexagonal floors (pair), plus two deuterium nucleons (they initiate the 9^{th} and 10^{th} floors). It is the Tellurium 52Te, with 52 protons.
The accordion-effect of hexagonal floors in 28Ni can get a good resonance with the accordion-effect of the hexagonal floors in 52Te. The amplitude of proton oscillation can be maximum.

Perhaps Zirconium can get a satisfactory resonance (not so good like Tellurium), because 40Zr has 6 complete hexagonal floors (pair), and 2 protons are initiating the 7^{th} and 8^{th} floors.
Gadolinium 64Gd can also be considered, with 10 complete hexagonal floors (pair), plus 2 protons initiating the 11^{th} and 12^{th} floors.

As 52Te is the best additive, then let's see how the proton is captured by the 28Ni.

Consider one nucleus 28Ni and one nucleus 52Te with their oscillation due to the accordion-effect aligned toward the z-axis, as shown in the Fig. 7. The proton was captured between the two nuclei, and it also oscillates along the z-axis direction (the proton already lost one of its electrons to the 28Ni).



Before the electron to leave out the proton, its helical trajectory was compressed in the mini-hydrogen atom. So, when the electron leaves the proton a high energy photon is emitted.

The increase of one more electron in the electrosphere of 28Ni decreases the positive electric charge of the Sn(28Ni) field due to the 28 protons: it is not so positive as it was before the capture. This brings an additional help for cold fusion to occur.

Along the time, the proton tends to increase the amplitude of its zig-zag motion along the z-axis direction, thanks to the resonance between the oscillation of the accordion-effect of 28Ni and 52Te, and also the oscillation of the two central 2He4 of 28Ni and 52Te along the z-axis direction.

The repulsive gravity field of 52Te is stronger than that of 28Ni, and such difference imply in a force that pushes the proton toward the 28Ni along the z-axis direction.
When the proton gets its maximum amplitude of oscillation due to the resonance, with the help of the repulsive gravity of 52Te the proton is pushed in the z-axis direction, and it succeeds to enter into the 28Ni nucleus, through the "hole" in the secondary field Sn(28Ni), and it is captured by a Dirac string. By this way, 28Ni becomes 29Cu.

9- Why electromagnetism is 10^{40} times stronger than gravity

Fig. 9-1 shows the principal field Sp(p) of a proton, showing the central ring producing the flux n(o) of particles g(+). Such flux n(o) captures particles G(+), and a field of particles G(+) is formed about the flux n(o), and so it appears a repulstion between two consecutives fluxes n(o).

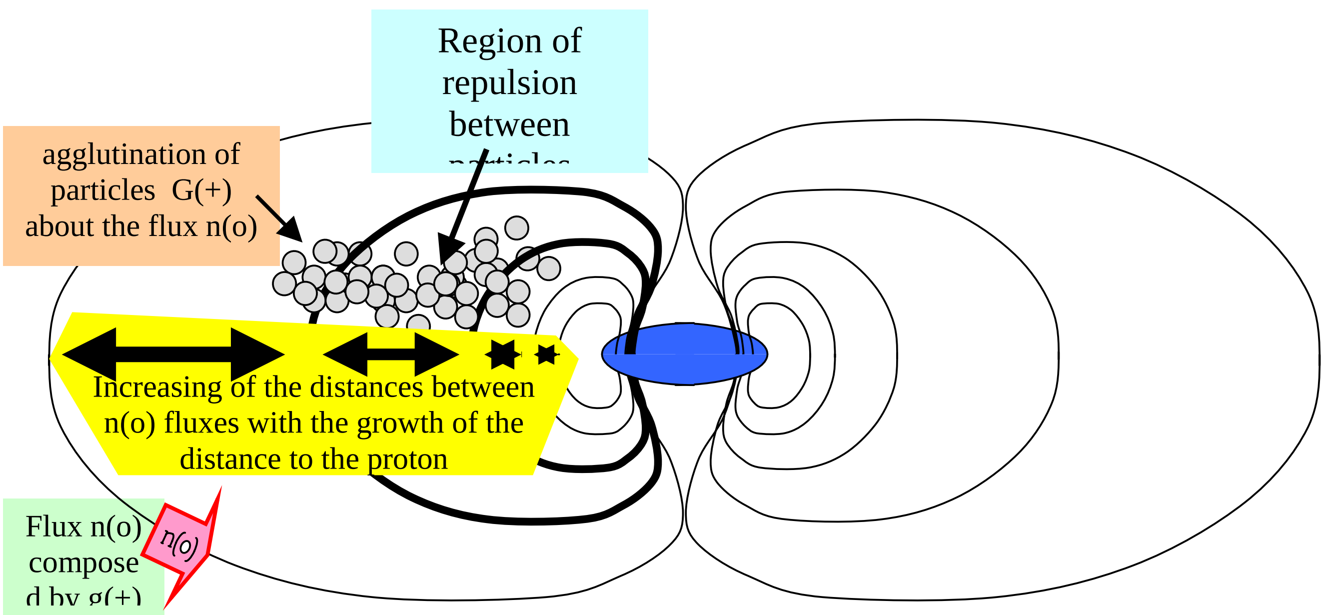


Fig. 9-1 - The proton and its principal Sp(p) field

Suppose the magnitude of interaction of the particles g(+) and g(-) has also the magnitude of the electromagnetism.

Then some questions arise:

1- As the interaction of particles g(+) has the same magnitude of the particles G(+), then the gravitational flux n(o) of particles g(+) into the proton's structure should have to attract particles g(+) of the aether, and not only particles G(+). And with the capture of particles g(+) about the flux n(o), a repulsive field of particles G(+) would not be formed, and so the condition shown in Fig. 5-3 could not occur.

2- Why does the magnitude of the gravity observed in Nature is 10^{40} times weaker than the electromagnetism ?

Let's respond these two questions.

<u>1- FIRST QUESTION</u>:

- <u>why gravitons g(+) are not captured by the flux n(o)</u>

<u>Properties of the particles G(+) and g(+)</u>:

1- The particles G(+) are induced by the **<u>motion</u>** of the particles g(+) into the flux n(o).
CONCLUSION: the flux n(o) produces a field of particles G(+) around it.

2- The particles g(+) are **<u>not</u>** induced by the motion of the particles g(+) into the flux n(o).
CONCLUSION: the flux n(o) does not produce a field of particles g(+) around it.

3- Two particles g(+) have not attraction

4- There is attraction between g(+) and G(+)

The same is aplied to the particles g(-) and G(-).

<u>Fields within elementary particles</u>:

Therefore, **<u>within</u>** the elementary particles as the proton and the electron, only the particles G(+) and G(-) are able to form fields, since they are captured into the principal field.

Consider the proton. As the density of Dirac strings that form the proton principal is very high, a very dense field of particles G(+) is formed, and particles g(+) does not enter within the principal field.

<u>2- SECOND QUESTION</u>

- <u>why the gravity is 10^{40} times weaker than the electromagnetism</u>

<u>Gravitational fields formed by G(+) and g(+)</u>

1) LAWS OF INTERACTIONS :

a) There is <u>not</u> any interaction between two particles g(+)
b) There is attraction between g(+) and G(+)
c) There is repulsion between G(+) and G(+)

2) MAGNITUDE OF FORCES:

2.1) The attraction force F_{Gg} between G(+) and g(+) has the same magnitude of the electromagnetism

2.2) The repulsion force F_{GG} between two particles G(+) is the following;

$$F_{GG} = (1 – 10^{-40}).F_{Gg}$$

So, $F_{GG} / F_{Gg} =$ 0,999 999 999 999 999 999 999 999 999 999 999 999

The same considerations are aplied to fields formed by g(-) and G(-)

<u>Concerning the particles g(+) and g(-)</u>:

1- The particles g(+) and g(-) are **<u>neutral</u>**
2- They work only through a partnership with the particles G(+) and G(-)
3- They don't have attraction or repulsion with the particles e(+) and e(-)
4- They are not attracted by the flux n(o)
5- However the relative **<u>motion</u>** between g(+) and e(+) & e(-) **<u>induces</u>** the flux n(o)

Of course the flux n(o) is also induced by relative motion between g(+) and e(+) & e(-)

<u>9.1 On the macroscopic gravitational fields of bodies</u>

Therefore, the origin of the macroscopic gravitational field of bodies is the field formed by the particles G(+) and G(-), captured by the flux n(o) into the elementary particles. The field of particles G(+) and G(-) capture particles g(+) and g(-), and they form the big macroscopic gravitational fields of bodies.

Then consider a field formed by a soup of g(+) and G(+) outside the principal field of the proton. Its gravitational field is formed by a soup of particles G(+) and g(+).

Now suppose that two protons are close. Their gravitational fields overlap, and so it is formed a soup of the mixture of particles g(+) and G(+). These two protons will be attracted by a gravitational force F_{Gg} , while they will be repelled by a gravitational force F_{GG} , and the resultant shall be a force with magnitude 10^{40} times weaker than the electromagnetism.

So, the macroscopic gravitational fields formed by the macrospcopic bodies is formed by a soup of g(+), g(-), G(+), G(-), and the resultant magnitude of the interaction of such mixture of repulsive and attractive gravitons is 10^{40} times weaker than the electromagnetism, in spite of the interactions between gravitons has the same magnitude of the electromagnetism.

In 2006 an experiment made by the European Space Agency detected gravity with the magnitude of the electromagnetism:

Towards a new test of general relativity?
23 March 2006
Scientists funded by the European Space Agency believe they may have measured the gravitational equivalent of a magnetic field for the first time in a laboratory. Under certain special conditions the effect is much larger than expected from general relativity and could help physicists to make a significant step towards the long-sought-after quantum theory of gravity.
http://www.esa.int/esaCP/SEM0L6OVGJE_index_0.html

This structure of the gravity proposed in Quantum Ring Theory also explains why its range is so large, while the range of the electromagnetism is very short. Indeed, in the case of the electromagnetism, the fields are formed by electric and magnetic particles, and there is only attraction between them. So they agglutinate in a short volume, and form a concentrated field. Unlike, in the case of gravitational fields, the repulsive gravity causes an expansion of the field, and so its range becomes very large.

10- Future impact of Rossi's cold fusion

Three days ago Sterlling Allan wrote in Peswiki:

"Why didn't more scientists jump on board this technology sooner? It will be blatantly obvious that alternative media sites were covering this breakthrough long before the mainstream media. Hopefully, they will begin to ask even more questions. Maybe they will ask questions about the failure of the scientific community over the last 20 years to take cold fusion seriously"

Yes, let's hope it. Because Quantum Ring Theory is not ready. It is missing yet its mathematical formalism. I have discovered some laws, models, and the fundamental mechanisms that rule their working. However the accurate development of the theory will require several brains. There are a lot of experimental parameters to be found. It is not a task for one man only.

Quantum Mechanics was developed by several genii, as Planck, Einstein, Bohr, de Broglie, Schrödinger, Dirac, Heisenberg, Pauli, Fermi, and other ones, and along the 20^{th} Century hundred of theorists and experimentalists worked for the discovery of its foundations, equations, laws, and axioms.

A collective effort must be done for development of Quantum Ring Theory.