

Aether Structure for unification between gravity and electromagnetism

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ABSTRACT

Here are introduced some changes in the double-field model for elementary particles proposed in the book *Quantum Ring Theory*⁽¹⁾, published in 2006, so that to improve the model for the objective of eliminating incoherences in the model for unification between gravity and electromagnetism.

INTRODUCTION

In the book *Quantum Ring Theory* I had proposed a double-field model for elementary particles (composed by two concentric fields), therefore a field model fundamentally different of the mono-field model considered in the Quantum Electrodynamics (QED). The inner field, named principal field S_p , gyrates and induces the outer field, named secondary field S_n . In the book, published in 2006, it was considered that the outer field S_n gyrates. In this model, the outer field S_n is responsible for the electric charge of the particles as the electron, the proton, etc.

Later in 2010 I changed the double-field model, by considering that the outer field S_n does not gyrate. However, in 2014, after a long discussion with the reader Mr. Joe in the Comments of the *Journal of Nuclear Physics*, he drew our attention to two key points:

- 1- An outer field S_n induced by the rotation of an inner field S_p must have rotation
- 2- A mono-field model violates the monopolar nature of the electric charge in the even-even nuclei with $Z=N$, because they have null magnetic moment, but as all the nuclei have rotation then the even-even nuclei with $Z=N$ would have to have non-null magnetic moment (because the rotation of the positive charge of the proton would have to induce a magnetic moment). Therefore QED violates the monopolar nature of the electric charge in the case of the even-even nuclei with $Z=N$.
- 3- A double-field model in which the outer field S_n gyrates would have to induce a magnetic field in the case of even-even nuclei with $Z=N$, if we consider the field S_n in the classical sense of Euclidian space. But the space considered in *Quantum Ring Theory* is not Euclidian, in order that the rotation of the field S_n never induces magnetic fields, and this is the reason why the even-even nuclei with $Z=N$ have null magnetic moment.

Here we will analyse these questions in details.

1. The new improvements in the structure of the aether

The structure of the aether is composed by the following particles and their antiparticles:

Gravitons $g(+)$ and $g(-)$

Gravitons $G(+)$ and $G(-)$

Electricitons $e(+)$ and $e(-)$

Magnetons $m(+)$ and $m(-)$

Permeabilitons $P(+)$ and $P(-)$

Permeabilitons $p(+)$ and $p(-)$

2. The inner principal field $Sp(p)$ of the proton

The figures 2.1 and 2.2 shows the inner principal field $Sp(p)$ of the proton. The sequence of the formation of the proton structure is the following:

1- The rotation of the proton's body-ring induces the flux $n(o)$ formed by gravitons $g(+)$ and the magnetic fields $M(+)$ and $M(-)$ formed by magnetons $m(+)$ and $m(-)$ respectively, see Fig. 2.1. The magnetic moment $\mu = +2,793\mu_n$ of the proton is due to the fields $M(+)$ and $M(-)$.

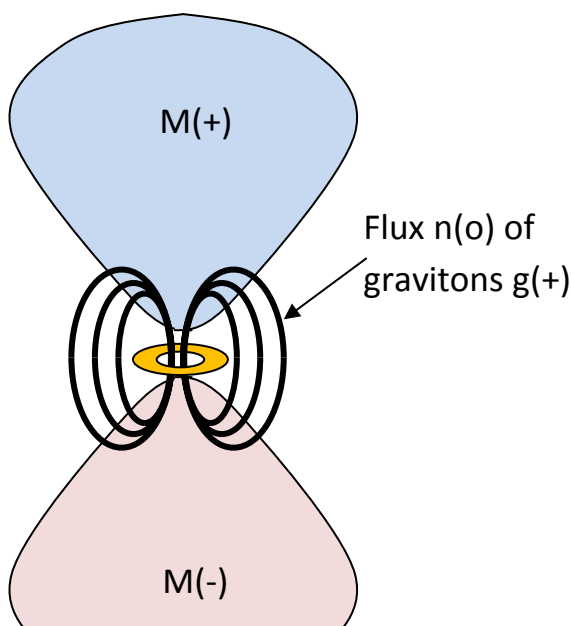


Fig. 2.1

Body-ring of proton crossed by flux $n(o)$ of gravitons $g(+)$ (**black**)

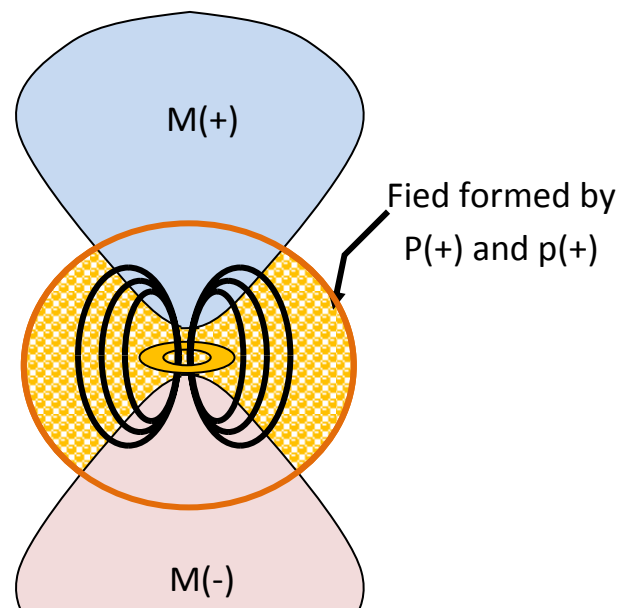


Fig. 2.2

A field formed by permeabilitons $P(+)$ and $p(+)$ is induced by the rotation of the flux $n(o)$

2- The rotation of the flux $n(o)$ induces a field formed by permeabiltons $P(+)$ and $p(+)$, see Fig. 2.2.

3- The field of permeabiltons $P(+)$ induce a field of gravitons $G(+)$ surrounding the field of $P(+)$ and distributed radially along the surface of the field of $P(+)$, see Fig. 2.3.

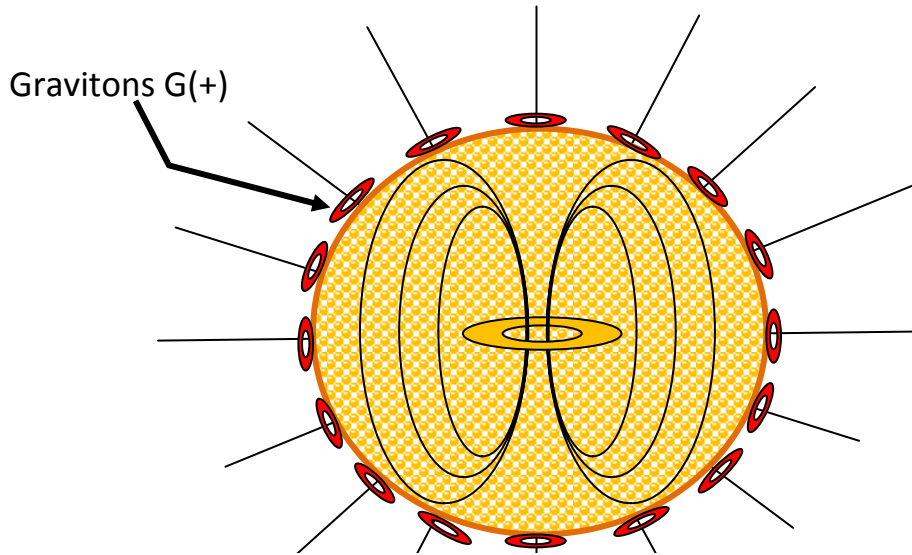


Fig. 2.3

The field formed by permeabiltons $P(+)$ capture gravitons $G(+)$, which are shown in red and are aligned radially along the surface of the field formed by $P(+)$

4- Each one of the gravitons $G(+)$ captured by the field formed by $P(+)$ captures other gravitons $G(+)$ by chain reaction, forming rectilinear strings distributed radially in the outer side of the field of $P(+)$ – Fig. 2.4.

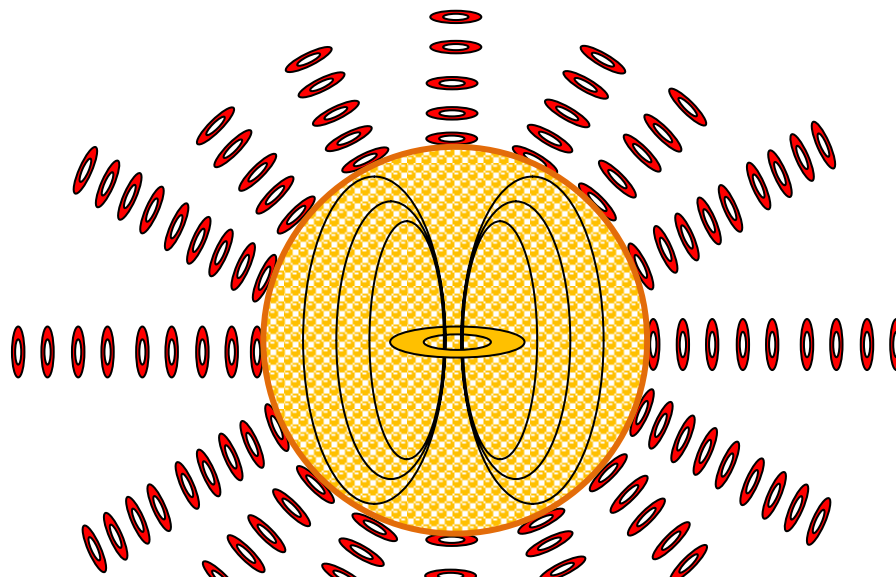


Fig. 2.4

Immediately, each graviton $G(+)$ captures other graviton $G(+)$ and a chain reaction occurs, and several strings are formed and distributed radially about the field of permeabiltons $P(+)$

5- The spin of the gravitons $G(+)$ aligned toward the same ring induce a flux of magnetons $m(+)$ moving within the body-ring of the gravitons $G(+)$ – Fig. 2.5.

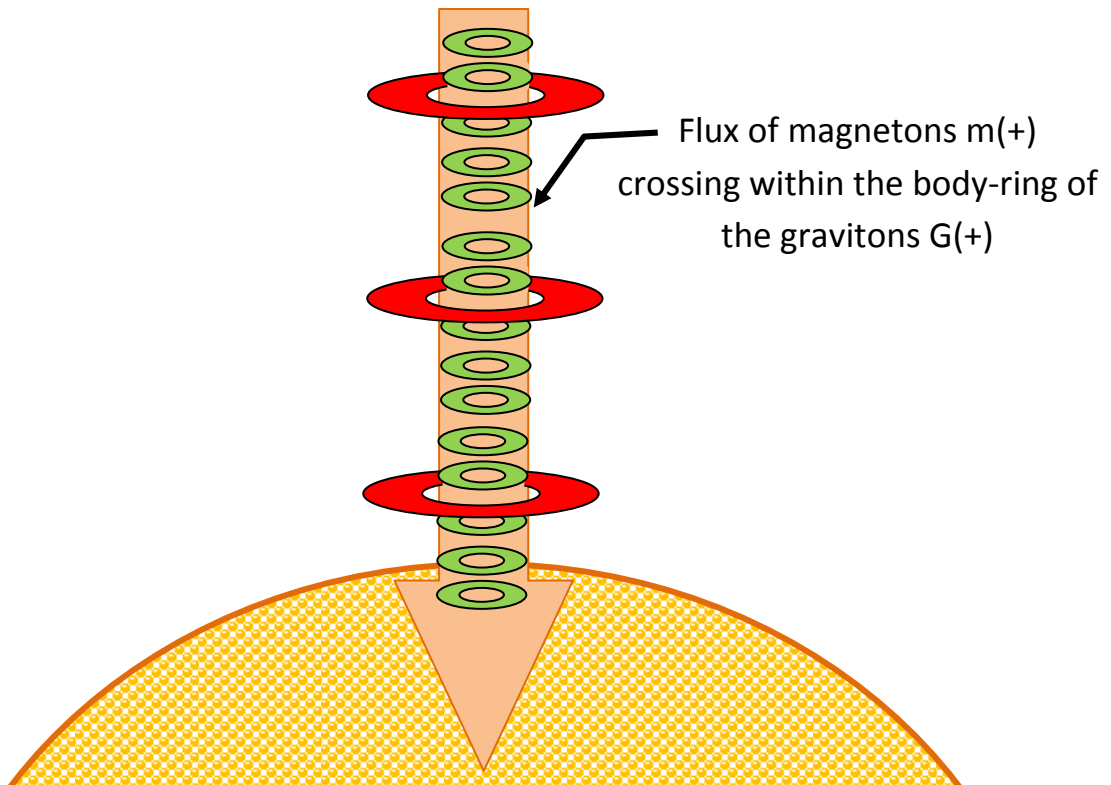


Fig. 2.5

Each string of gravitons $G(+)$ induce a flux of magnetons $m(+)$ crossing within the body ring of the gravitons $G(+)$. Such flux of $m(+)$ born in the limit of the Universe, and ends within the field formed by permeabiltons $P(+)$, where the flux of $m(+)$ finished, and the magnetons $m(+)$ are spread in the aether.

In this process of spreading the $m(+)$ in the aether, there is production of heat.

6- The long travel of the magnetons $m(+)$ is over when they enter within the field of $P(+)$, where the magnetons $m(+)$ spread themselves in the aether. Such process produces heat, which is delivered to the aether.

7- As the travel of the magnetons $m(+)$ is finished within the field of $P(+)$, then new magnetons $m(+)$ must be captured by the strings. The magnetons $m(+)$ are captured in the limit of the Universe.

8 – The quantity of strings formed by gravitons $G(+)$ induced by the field of $P(+)$ depends on the flux of gravitons $g(+)$, responsible for the mass of the proton. As the flux $n(o)$ formed by gravitons $g(+)$ in the proton is stronger than the flux $n(o)$ formed by gravitons $g(-)$ in the electron, then for the proton a big quantity of strings is induced, while for the electron a lower quantity is induced, and that's why the mass of the electron is smaller.

9- Inertia-mass of the proton - Suppose a proton is at rest in the aether. The gravitons $G(+)$ of the proton's field interact with the gravitons $G(+)$ of the ether, and so there is need a force F in order to put the proton moving with velocity v , because the force of interaction between the gravitons $G(+)$ of the proton and the gravitons $G(+)$ of the aether must be won. Imagine that a force F is applied on the proton. Then those gravitons $G(+)$ of the aether are left behind the displacement of the proton, and other gravitons $G(+)$ of the aether (in front of the motion) have interaction with the gravitons $G(+)$ of the proton's field. I call such phenomenon "substitution frequency" (when a graviton $G(+)$ is abandoned and other graviton $G(+)$ is captured ahead the motion), and it is responsible for the Newton's inertia Law. For the proton moving with velocity " v " there is a specific substitution frequency. If another force is applied, and the proton's velocity increases from v to V , then the substitution frequency increases, and so the motion gets a new specific substitution frequency. For each velocity of the proton corresponds a specific substitution frequency. The substitution frequency is responsible for the Newton's inertia Law. But it is also responsible for the Einstein's Law of inertia growth with the velocity, because the growth of the substitution frequency grows according to Einstein's equation of the inertia growth. When the proton approaches the velocity of light, the substitution frequency approaches to a maximum value and the inertia of the proton tends to infinitum.

10- In the case of the neutron, as it is formed by proton+electron, the quantity of gravitational strings is the sum of the quantity of strings induced by the overlap of the principal fields $Sp(p)$ of the proton and $Sp(e)$ of the electron.

11- Note that the strings of gravitons $G(+)$ in the proton are due to the excitation of the permeabilions $P(+)$ by the rotation of the flux $n(o)$ formed by gravitons $g(+)$, while the strings of gravitons $G(-)$ in the electron are due to the excitation of the permeabilions $P(-)$ by the rotation of the flux $n(o)$ formed by gravitons $g(-)$.

3. Production of heat by gravity

The production of heat mentioned in the item 6 above is corroborated by a phenomenon occurring in the Earth, because in our planet loses 44,2 TW of heat to space, while the heat generated by the decay of uranium and torium is only 20 TW, as explained in the paper **Partial radiogenic heat model for Earth revealed by geoneutrino measurements**.

<http://www.nature.com/ngeo/journal/v4/n9/full/ngeo1205.html>

In the paper published by Nature it is written:

"The Earth has cooled since its formation, yet the decay of radiogenic isotopes, and in particular uranium, thorium and potassium, in the planet's interior provides a continuing heat source. The current total heat flux from the Earth to space is 44.2 TW, but the relative contributions from residual primordial heat and radiogenic decay remain uncertain. However, radiogenic decay can be estimated from

the flux of geoneutrinos, electrically neutral particles that are emitted during radioactive decay and can pass through the Earth virtually unaffected. Here we combine precise measurements of the geoneutrino flux from the Kamioka Liquid-Scintillator Antineutrino Detector, Japan, with existing measurements from the Borexino detector, Italy. We find that decay of uranium-238 and thorium-232 together contribute 20 TW to Earth's heat flux. The neutrinos emitted from the decay of potassium-40 are below the limits of detection in our experiments, but are known to contribute 4 TW. Taken together, our observations indicate that heat from radioactive decay contributes about half of Earth's total heat flux."

Therefore, it is reasonable to suppose that 20 TW of the total flux 44.2 TW lost to space comes from the gravity of the Earth.

4. Why is there preference for matter over antimatter in the Universe?

Obviously the Universe could not exist if the aether had a perfect symmetric structure, because there would not be preference for matter over antimatter, and in a fraction of seconds after its creation the Universe would collapse because matter and antimatter would annihilate one each other.

So, the Responsible for the Universe creation had realized that there was need to introduce an asymmetry in the aether structure, so that to get the preference of the matter. And then the solution would be to create an additional particle, so that to introduce the required assymetry.

The question is: what sort of asymmetry He had introduced? Or, in another words, where the additional particle responsible for the asymetry would have to work, so that to get the stability of matter?

Such question will be responded in the future, with the help of experiments.

But we can try to guess what was the solution He had adopted, as follows.

It is possible the stability of the inner principal field Sp of the electron and proton is consequence of the interaction between:

- a) the rotation of the flux $n(o)$ and the field of permeabiltons $P(+)$ in the proton
- b) the rotation of the flux $n(o)$ and the field of permeabiltons $P(-)$ in the electron

But it is reasonable to suppose that:

(1) the fields formed by $P(+)$ and $P(-)$ need the help of some gluons, $Z(+)$ and $Z(-)$

(2) the interaction P(+)&Z(+) in the proton and P(-)&Z(-) in the electron must occur as follows:

- a) The interaction P(+)&Z(+) requires a strong flux $n(o)$ of gravitons $g(+)$. In another words, it requires a heavy mass. As the field of permeabiltons in the positron is formed by P(+)&Z(+), and as the mass of the positron is 2000 times lighter, then the inner field Sp of the positron is not stable, and it explodes.
- b) The interaction P(-)&Z(-) requires a weaker flux $n(o)$ of gravitons $g(-)$. In another words, it requires a lighter mass. As the field of permeabiltons in the antiproton is the inner field Sp of the antiproton is no stable, and it collapses.

4. The outer secondary field $Sn(p)$ of the proton

The rotation of the flux $n(o)$ of gravitons $g(+)$ of the principal field $Sp(p)$ induce a secondary field $Sn(p)$ formed by a flux $n(o)$ of gravitons $g(+)$. Such flux $n(o)$ of the secondary field $Sn(p)$ captures electricitons, as shown in the Fig. 4.1.

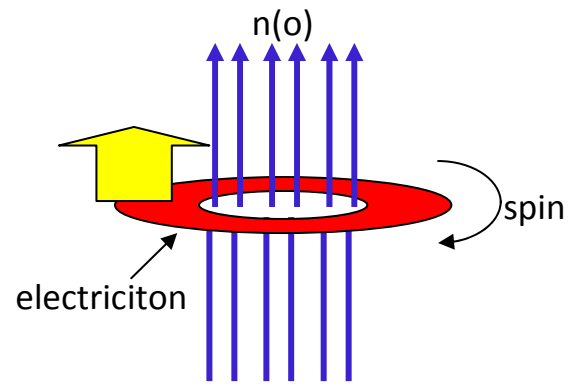


Fig. 4.1

The flux of electricitons $e(+)$ in the outer secondary field $Sn(p)$ is shown in the Fig. 4.2. $Sn(p)$ is induced by the rotation of the flux $n(o)$ of gravitons $g(+)$ of the inner principal field $Sp(p)$. We see in the figure 4.2:

- 1- The red electriciton $e(+)$ with orbit radius $R= n^2$ has spin-down and is situated in a region of aether density proportional to $n=1$.
- 2- The red electriciton $e(+)$ with orbit radius $R= 1$ has spin-up and is situated in a region of aether density proportional to n^2 .

So, the magnetic moment due to the rotation of the field $Sn(p)$ is null, because the two red electricitons in the Fig. 4.2 induce magnetic moments with the same value but with contrary signs.

The same is applied to the other pair of electricitons green, blue, and orange. Therefore the total magnetic moment induced by the rotation of the secondary field $Sn(p)$ is null.

The secondary field $Sn(p)$ of the proton has electric charge +1 . The secondary field $Sn(e)$ of the electron has electric charge -1. Therefore, the intensity of the flux of electricitons does not depend on the intensity of the flux $n(o)$ of gravitons in the principal field $Sp(p)$, because in the proton the flux $n(o)$ formed by gravitons $g(+)$ is heavier than the flux $n(o)$ formed by gravitons $g(-)$ in the electron. It means that the

intensity of the flux of electricitons depends only on the velocity of the gravitons $g(+)$ or $g(-)$.

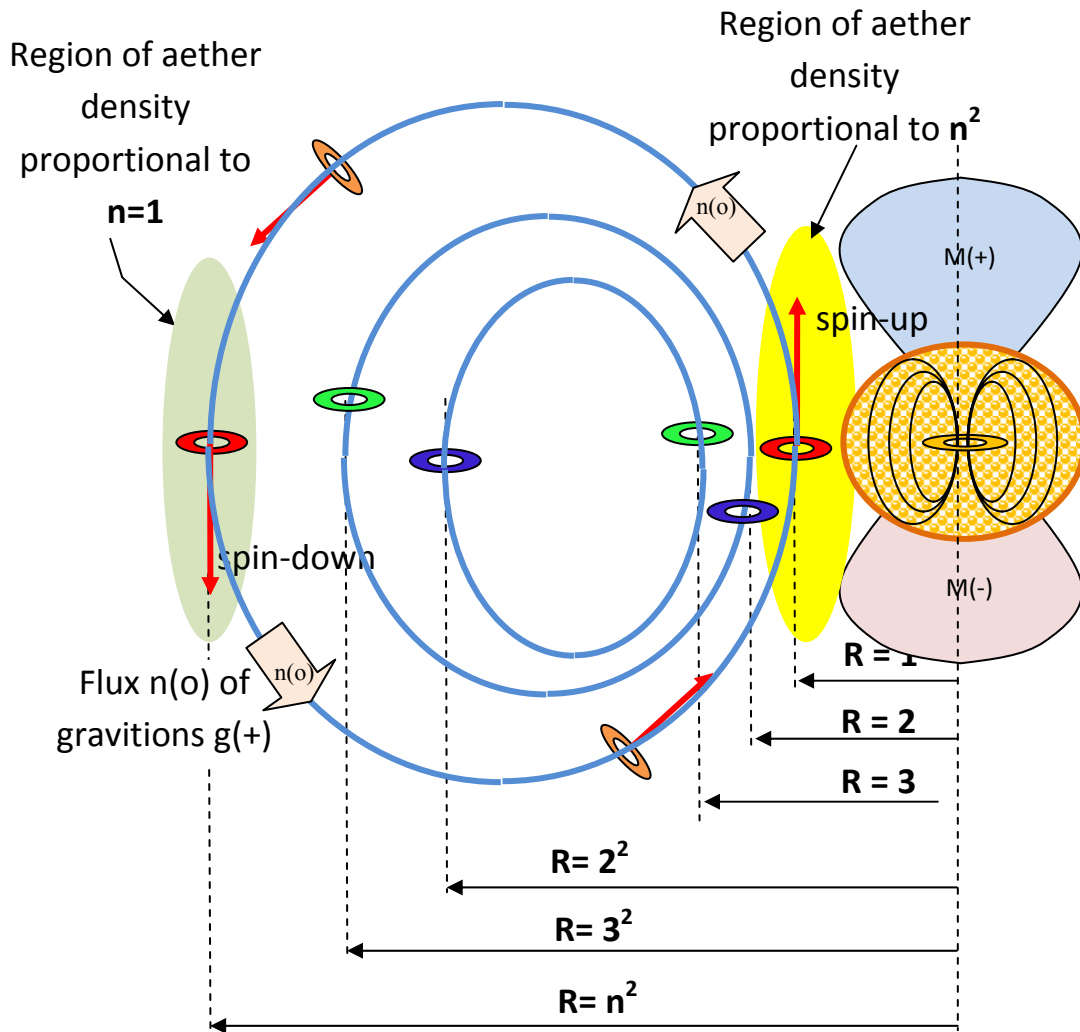


Fig. 4.2

Strings of the flux $n(o)$ captures electricitons $e(+)$ of the outer secondary field $S_n(p)$ of the proton, induced by the rotation of the inner principal field $S_p(p)$. Electricitons of the same colour cancel each other the magnetic moments induced by them

Fig. 4.3 shows the electric field of the proton, due to its secondary field $S_n(p)$. It is the electric field responsible for Coulomb repulsions of the proton with other nucleons with positive charge, and attraction with particles with negative charge, as the electron.

The central $2He4$ existing in all the nuclei has its secondary field $S_n(He4)$ with charge $+2$. In order a proton to penetrate within the field $S_n(He4)$ for the formation of the nucleus $3Li5$, the fields $S_n(p)$ of the proton and the field $S_n(He4)$ of the $2He4$ must be both them perforated. After the perforation of the two secondary fields, the secondary field $S_n(Li5)$ of the newborn $3Li5$ is formed by the overlap of the fields $S_n(p)$ of proton and $S_n(He4)$ of $2He4$, so that $3Li5$ has a charge $+3$.

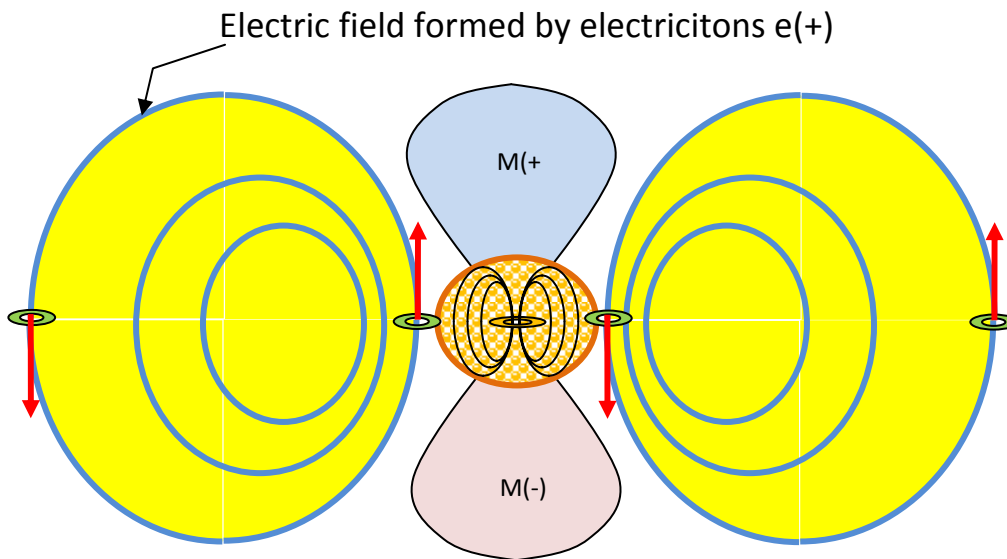


Fig. 4.3

The entire structure of the proton with its electric, magnetic, and gravity field is shown in the Fig. 4.4

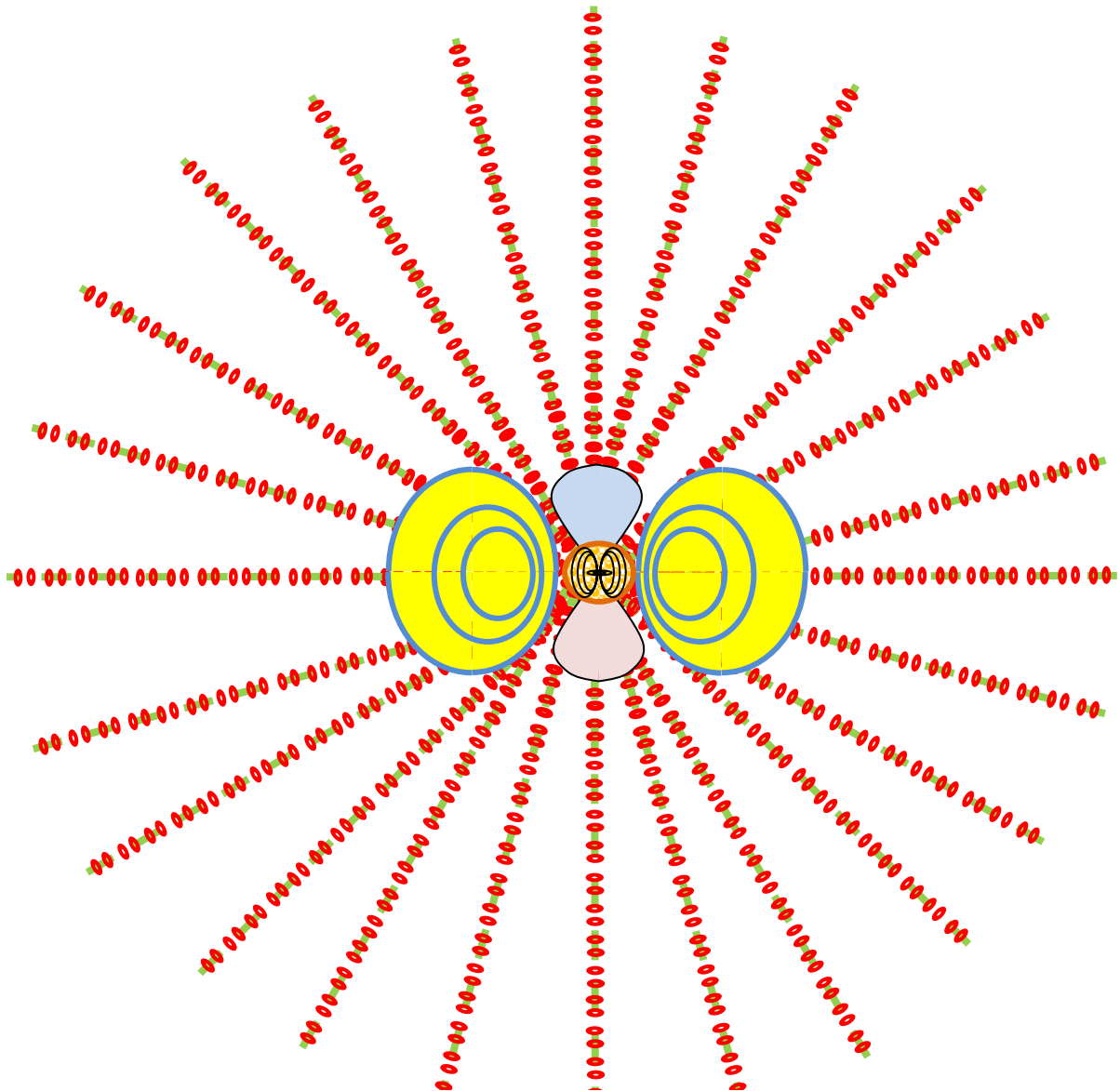


Fig. 4.4

The proton and its fields

5. Nucleons captured by the flux $n(o)$ of the principal field Sp within nuclei

In my paper **Stability of Light Nuclei**⁽²⁾ I had supposed that the stability of deuterons within the principal field Sp of the nuclei would be consequence of the equilibrium between a magnetic force F_m and a centripetal force F_c . That my supposal was suggested to me by an seemingly obvious evidence: deuterons get equilibrium because they have electric charge (able to induce a magnetic force pushing the deuteron toward the direction of the central $2He4$), while neutrons do not get equilibrium because they have no charge, and so they are expelled by the centripetal force. In the case of the proton, in spite of it has charge, however the centripetal force F_c on it would be weaker than the force F_m , and then a proton could not get equilibrium.

However I finally understood that the equilibrium is not promoted by a magnetic force F_m , and actually the force which pushes a deuteron (or a proton) toward the direction of the central $2He4$ is a force F_G of gravity nature. Let us see how the equilibrium occurs.

A) Gravity force F_G on a proton

Consider that a proton perforates the secondary field $Sn(He4)$ of a nucleus $2He4$, and penetrating within the field of the $2He4$ the proton finally touches the principal field $Sp(He4)$. The principal field $Sp(p)$ of the proton is formed by flux $n(o)$ of gravitons $g(+)$, and the principal field $Sp(He4)$ of the $2He4$ is also formed by a flux $n(o)$ of gravitons $g(+)$. So, the rotation of the two fluxes $n(o)$ start to interact, and a gravity force F_G starts to actuate on the proton, pushing it toward the direction of the $2He4$ (see Fig. 5.1).

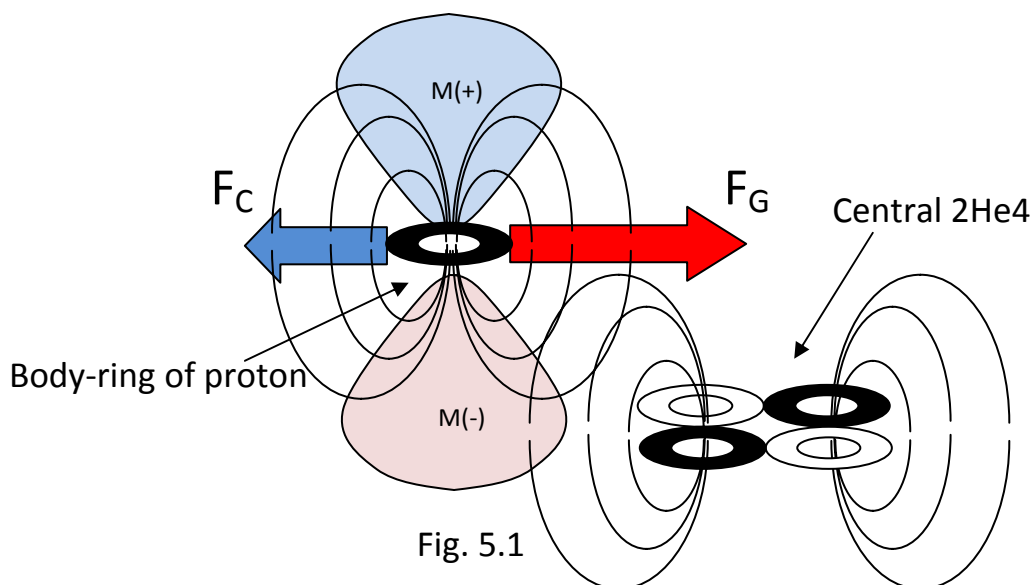


Fig. 5.1

Force of gravity F_G on the proton due to interaction of fluxes $n(o)$ formed by gravitons $g(+)$ in the newborn nucleus $3Li5$

When the body-ring of the proton penetrates within the principal field $Sp(He4)$ and they form the newborn nucleus $3Li5$, the proton's body-ring has no electric charges +1, because:

- a) such charge +1 is actually produced by the secondary field $Sn(p)$
- b) the charge +1 of the field $Sn(p)$ of the proton is transferred to the secondary field $Sn(Li5)$ of the nucleus $3Li5$, where the charge +1 of the proton will be added to the charge +2 of the $2He4$, so that to compose the charge +3 of the $3Li5$. So, the body-ring of the proton in the Fig. 5.1 has electric charge zero, because:

b.1) The flux $n(o)$ of the body-ring in the Fig. 5.1 does not capture electricitons

b.2) The electric charge +1 of the proton was left behind in the outer secondary field $Sn(Li5)$ of the nucleus $3Li5$, composing together with the charge +2 of the $2He4$ the total charge +3 of the nucleus $3Li5$.

b.3) There are no electricitons in the principal field $Sp(Li5)$ of the nucleus $3Li5$. Therefore the rotation of the body-ring of the proton (or the $2He4$) does not induce magnetic moment, because the induction of magnetic moment requires the rotation of electricitons (electric charge) or magnetons (magnetic field).

b.4) Only the magnetic dipole formed by $M(+)$ and $M(-)$ of the proton's body-ring induce magnetic moment, due to the rotation of the principal field $Sp(p)$ of the proton about the central $2He4$ (see Fig. 5.1).

b.5) As the central $2He4$ has null magnetic moment, there is no magnetic attraction between the proton of the nucleus $3Li5$ and the central $2He4$.

The same is applied to the two protons of the central $2He4$ of the nucleus $3Li5$. Those two protons are only two body-rings with no electric charge, and therefore the rotation of the $2He4$ does not induce magnetic moment. The charge +2 of the two protons of the central $2He4$ is situated in the outer secondary field of the $3Li5$.

So, the even-even nuclei with $Z=N$ have magnetic moment zero because the rotation of the body-rings of the protons within the principal field of the nucleus does not induce magnetic moment due to the rotation of the nucleus. Therefore the even-even nuclei with $Z=N$ have magnetic moment zero because:

- a) In spite of the electric charge of the secondary field Sn of the nucleus is positive, however because of the property of the field Sn shown in Fig. 4.2 there is no induction of magnetic field by the rotations of the field Sn .

- b) There is not induction of magnetic moments by the body-rings of deuterons within the principal field Sp of any even-even nucleus with $Z=N$, since each pair of deuterons cancels each other their magnetic moment.

B) Missing of gravity force F_G on a neutron

The neutron is formed by an electron moving about a proton. Therefore the principal field $Sp(N)$ of a neutron is formed by two fluxes $n(o)$, one composed by gravitons $g(+)$ and the other composed by gravitons $g(-)$. As there is no gravity force F_G on the neutron, we have to conclude that the flux $n(o)$ of gravitons $g(-)$ of the neutron have repulsion with the flux $n(o)$ of gravitons $g(+)$ of the central $2He4$.

As the flux $n(o)$ of the proton is about 2000 times stronger than that of the electron, we had to expect that the influence of the gravitons $g(-)$ would be despicable. However there is need to consider the following:

- a) The electron moves about the proton. Therefore the flux $n(o)$ of the electron has an additional motion, orbiting the proton. Such additional motion causes a growth in the repulsion force between the gravitons $g(-)$ of the electron and the gravitons $g(+)$ of the central $2He4$, because the relative speed interaction between the two fluxes of $g(-)$ and $g(+)$ is faster than the relative speed interaction between the two fluxes of $g(+)$ and $g(+)$.
- b) Besides, within the structure of the neutron, the flux $n(o)$ of the electron is surrounding the flux $n(o)$ of the proton, and so the flux $n(o)$ of the electron is closer to the flux $n(o)$ of the $2He4$, while the flux $n(o)$ of the proton is farthest. This is other advantage which increases the interaction of repulse force between gravitons $g(-)$ and gravitons $g(+)$.

Actually we have to expect that the gravity force F_G on the neutron is not zero. However, the actuation of the repulsive force between the gravitons $g(-)$ and $g(+)$ diminishes drastically the gravity force F_G on the neutron, and so the gravity attraction force cannot compete with the centripetal force F_c , and that's why neutrons are not retained within the nuclei, unless they get spin-interaction with deuterons.

Note that the flux of gravitons $g(-)$ and $g(+)$ of the neutron actuate independently in the excitation of permeabilions of the aether. The flux of gravitons $g(-)$ of the electron excites permeabilions $P(-)$ and $p(-)$, helping the formation of the field of permeabilions of the principal field $Sp(Li5)$ of the nucleus $3Li5$, while the flux of gravitons $g(+)$ of the proton excites permeabilions $P(+)$ and $p(+)$, helping the formation of the field of permeabilions of the principal field $Sp(Li5)$. However the gravitons $g(-)$ and $g(+)$ actuate independently on the flux $n(o)$ of gravitons $g(+)$ of the central $2He4$, in order that gravitons $g(-)$ of the electron interact via repulsion with the gravitons $g(+)$ of the

$2\text{He}4$, while the gravitons $g(+)$ of the proton interact via attraction with the gravitons $g(+)$ of the $2\text{He}4$.

The conclusion that there is repulsion between the fluxes $n(o)$ formed by gravitons $g(-)$ and $g(+)$ is reinforced by the structure of the neutron, the photon, and the neutrino, as we will see ahead.

6. Stability between proton and electron within the structure of the neutron

Due to the Coulomb attraction between the proton and the electron, the electron would have to fall down within the proton. The stability of the neutron is due to the repulsive interaction between the fluxes of gravitons $g(+)$ of the proton and $g(-)$ of the electron.

Nowadays the physicists are perplexed with a new puzzle regarding the neutron decay: a difference of 9 seconds in two different methods of measuring its time-decay:

http://www.huffingtonpost.com/2014/05/13/neutron-decay-mystery-physicists_n_5316963.html?utm_hp_ref=science

However actually the puzzle is not only concerning the difference of 9 seconds, because the theorists do not know also why the neutron decay spends 15 minutes, because if its structure had been formed by quarks, as they believe, the neutron time-decay would have to be in order of 10^{-10} seconds, which is the order of the time-decay of the barions.

Because of the difference of 9 seconds, some theorists are already thinking about the need of a New Physics beyond the known particles and processes in the universe, as says Jeffrey Nico in the link above. But of course any New Physics cannot be successful if they keep the model of neutron formed by quarks, $n=(d,u,d)$. The 15 minutes of the neutron's time-decay requires a structure formed by proton+electron, via the spin-fusion mechanism. It is the presence of a lepton within the neutron the cause of its long time-decay.

7. Stability between particle and antiparticle within the structure of the photon

The photon is composed by a particle $Ph(+)$ formed by electricitons $e(+)$ and an antiparticle $Ph(-)$ formed by electricitons $e(-)$, moving with helical trajectory. Therefore, as $Ph(+)$ and $Ph(-)$ are very close, due to the Coulomb attraction the particle and the antiparticle would have to meet together, and the photon would have to collapse. So, how to explain the stability of the photon?

The answer is in the repulsion force created by the interaction between the flux $n(o)$ of gravitons $g(+)$ induced by the spin of the particle $Ph(+)$ with positive charge and the flux $n(o)$ of gravitons $g(-)$ induced by the spin of the antiparticle $Ph(-)$ with negative charge. Such repulsion between the two fluxes $n(o)$ of the photon gets equilibrium with

the Coulomb force of attraction, and the photon gets stability thanks to the repulsive interaction between the flux formed by $g(+)$ and the flux formed by $g(-)$.

8. Stability between positron and electron within the structure of the neutrino

In the book Quantum Ring Theory it is proposed that neutrino is formed by positron and electron moving in helical trajectory. In the book it is proposed that the positron moves with helical trajectory, while the electron moves about the positron. In the case of the antineutrino, the positron moves about an electron moving with helical trajectory.

In the neutron the electron moving with relativistic speed about the proton loses its intrinsic spin $\frac{1}{2}$ due to the spin-fusion phenomenon, and so the neutron has spin $\frac{1}{2}$.

In the neutrino the electron loses its spin $\frac{1}{2}$ moving about the positron, similar to what happens in the neutron. And in the antineutrino the positron loses its spin $\frac{1}{2}$ moving about the electron.

Due to the Coulomb attraction between the positron and the electron, they would have to meet together, and the neutrino would have to collapse. The equilibrium is due to the repulsive interaction between the fluxes of gravitons $g(+)$ of the positron and $g(-)$ of the electron.

9. The structure of the deuteron

It seems the deuteron can take two different structures. When two deuterons are bonded in the structure of the $2\text{He}4$, each neutron of each deuteron does not gyrate about the proton. However it seems the neutron gyrates about the proton in the structure of a free deuteron, and ahead is explained why.

- 1- Magnetic moment of the proton is $\mu = +2,793$
- 2- Magnetic moment of the neutron is $\mu = -1,913$
- 3- Difference: $\Delta\mu = +0,880$

Therefore, if the deuteron had no rotation, and the neutron would not be moving about the proton, **the magnetic moment of the deuteron would have to be $\mu = +0,880$.**

In Wikipedia the calculation of the deuteron magnetic moment gives:

For the $s = 1, l = 0$ state ($j = 1$), we obtain

$$\mu = \frac{1}{2} (\{g^{(s)}\}_p + \{g^{(s)}\}_n) = \mathbf{0.879}$$

For the $s = 1, l = 2$ state ($j = 1$), we obtain

$$\mu = -\frac{1}{4}(\{g^{(s)}\}_p + \{g^{(s)}\}_n) + \frac{3}{4} = \mathbf{0.310}$$

<http://en.wikipedia.org/wiki/Deuterium>

As the calculation by considering the Standard Nuclear Physics do not give the experimental result, they consider that the magnetic moment of the deuteron is a combination of two states.

In Wikipedia they say:

The measured value of the deuterium magnetic dipole moment, is $0.857 \mu_N$. **This suggests that the state of the deuterium is indeed only approximately $s = 1, l = 0$ state, and is actually a linear combination of (mostly) this state with $s = 1, l = 2$ state.**

Now let us consider a conjecture supposing that the neutron gyrates about the proton in the structure of the deuteron.

As we have seen, if the deuteron had no rotation, and the neutron would not be gyrating about the proton, the magnetic moment of the deuteron would be: $\mu = +0,880$

But as the deuteron has rotation, then the positive $\mu = +0,880$ induces an additional positive $\Delta\mu$. Suppose that $\Delta\mu = +0,02$

Therefore, if the neutron had no rotation about the proton, the magnetic moment of the deuteron, by considering the rotation of the deuteron, would be:

$$\mu = +0,880 + 0,02 = +0,900$$

But as the rotation of $\mu = +0,880$ induces $\Delta\mu = +0,02$, then the neutron moving about the proton with magnetic moment $\mu = -1,913$ will induce in the structure of the deuteron:

$$\Delta\mu = -0,02 \times (1,913 / 0,88) = -0,043$$

And therefore the magnetic moment of the deuteron (considering its rotation and the neutron gyrating about the proton) is:

$$\mu = +0,88 + 0,02 - 0,043 = \mathbf{+0,857}$$
, which is the experimental value of the magnetic moment of the deuteron.

So, **we dont need to consider the magnetic moment of the deuteron as a combination of two states**, as considered in the Standard Nuclear Physics (which is a very strange hypothesis).

And so we realize that the conjecture of the neutron gyrating about the proton in the deuteron has experimental corroboration: its magnetic moment measured in experiments.

10. Why a flux of magnetons within the strings of the gravitons ?

After some years of disbelief and skepticism from the scientific community, finally overunity magnetic motors are today a reality, as we see in the links ahead:

- **BlackLight Power, Inc. Announces Sustained Production of Electricity**

<http://zpenegy.com/modules.php?name=News&file=article&sid=3535>

- **Muammer Yildiz Magnet Motor demo at Delft University**

<https://www.youtube.com/watch?v=mHW6b1aFPfU>

- **Steorn ORBO Overunity Technology**

<https://www.youtube.com/watch?v=zO1bOfIEqoI>

The next step now is to try to understand how the overunity magnetic technology works. And since the overunity energy supply comes from the aether, then obviously there is no way to discover how they work if we did not discover the structure of the aether.

The flux of magnetons within the string of gravitons proposed here was suggested to me by the work of the Brazilian inventor Francisco Figueiredo, inventor of the Figueiredo Motor, a magnetic motor which works without any source of energy supply known from what we know about the current theories of Physics.

The working of the Figueiredo Motor, and how to build it, is explained in my paper published in Peswiki:

Article: How magnet motors work

http://peswiki.com/index.php/Article:_How_magnet_motors_work

In his book **Teoria Universal do Magnetismo**⁽³⁾ published in 1969, Figueiredo proposes a mechanism responsible for the working of his motor, explained ahead.

The motor is basically composed by:

- 1) a circular sheet of paper of about 20cm diameter (**rotor**)
- 2) a magnet
- 3) a plate M made of iron, where the magnet is fixed
- 4) a bearing of rotation for the circular paper (styrofoam disc floating on water is used)

The idea proposed by Figueiredo is shown in the Fig.10.1. Obviously Figueiredo did not know that the flux of magnetons supposed by him actually belongs to the Sun's gravity field, as supposed here. According to his proposal, the flux of magnetons divides the rotor in two polarities S and N. The polarity of the rotor causes two regions of attraction and repulsion between the rotor and the plate M, as shown in the Fig. 10.2, responsible for the torque on the rotor.

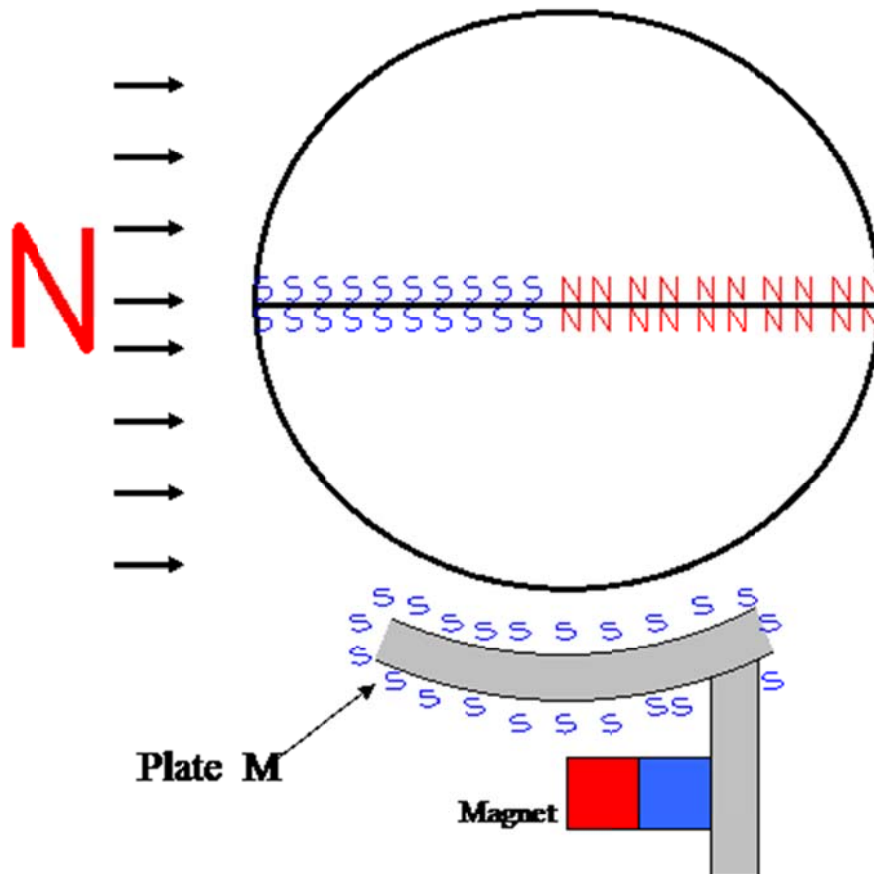


Fig. 10.1

Obviously the relative position between the Earth and the Sun can help the working of the motor. At sunrise and sunset the gravity flux of the Sun touches tangentially the surface of the planet where the Figueiredo Motor is working, and the gravity flux is parallel to the plane of the rotor. But at mid day and mid night the gravity flux is perpendicular to the rotor, as we realize from the Fig. 10.3. The plate must be positioned as shown in the Fig. 10.1.

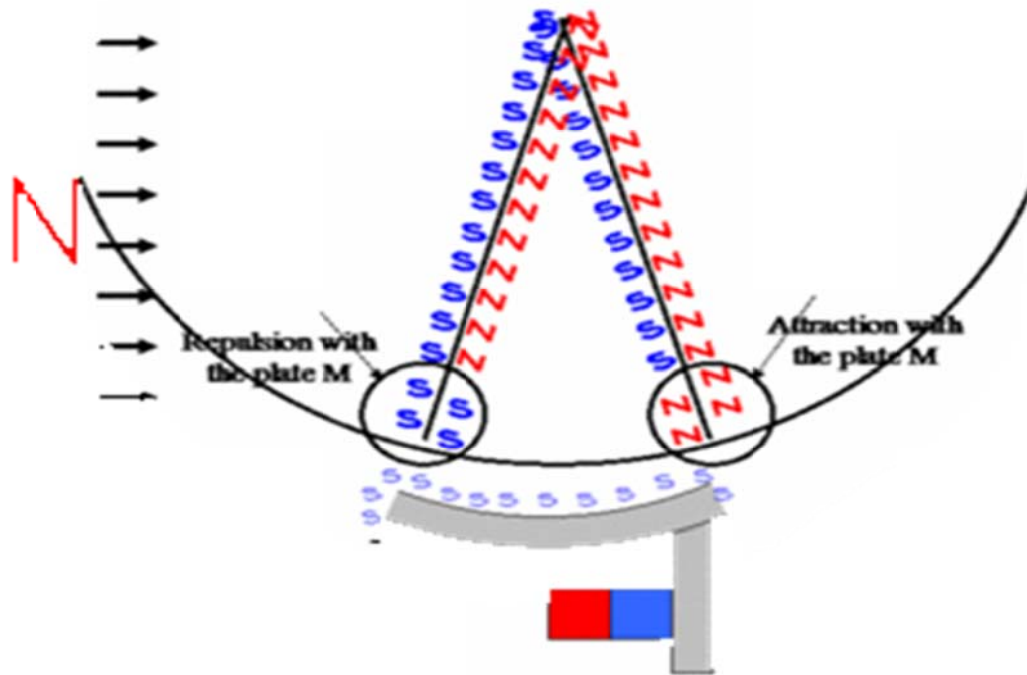
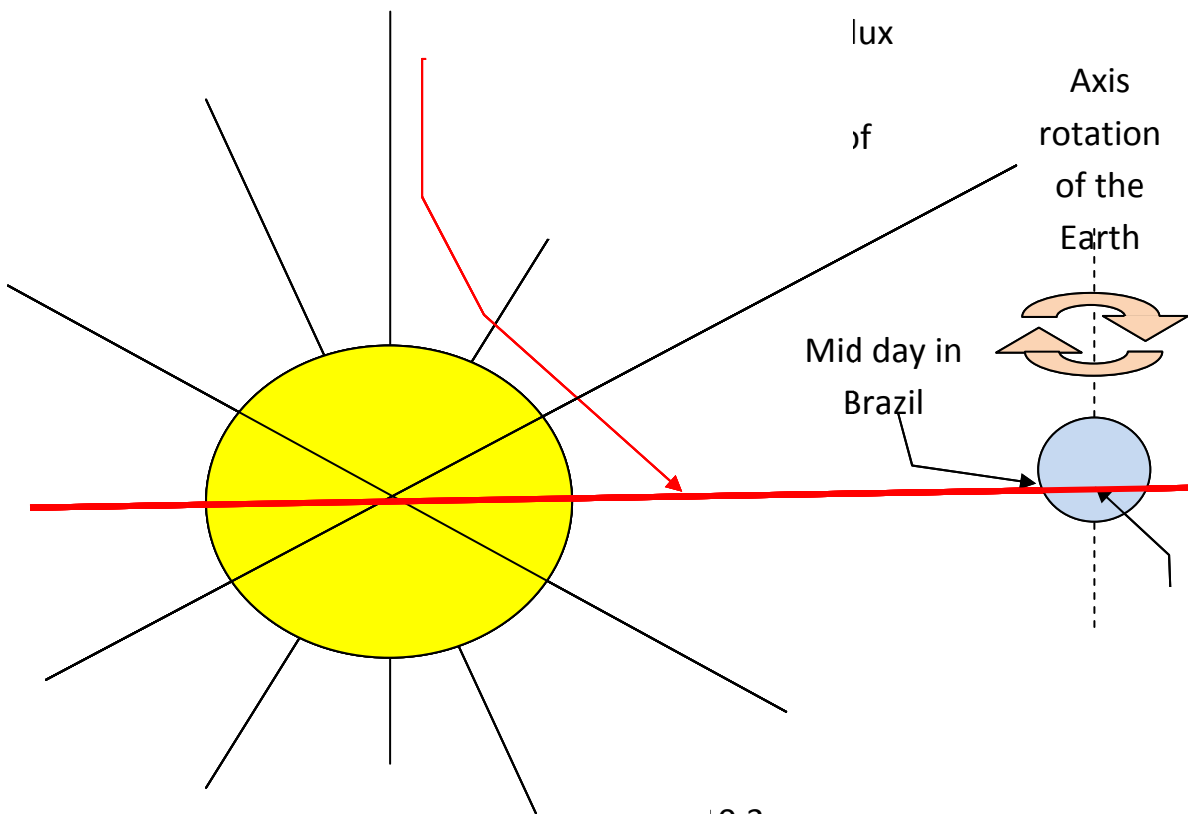


Fig. 10.2

Figueiredo exhibits in his book a collection of data showing that indeed the best performance of the motor happens during 3 hours between 6:00h (sunrise) and 9:00h, while the worst performance happens around the mid day and mid night, when the flux gravity is perpendicular to the rotor.



10.3

11. The different mechanisms for energy-matter interaction

Till the middle of the 19th Century the physicists used to suppose that energy is absorbed or emitted by matter continuously. But the results of the experiments with the black body made by Kirchhoff were incompatible with the assumption that matter and energy interact according to that classical concept considered by the theorists of the 19th Century. Then Planck proposed his postulate, according to which energy interact with matter discretely, via packages of energy named later “quanta”, multiples of a fundamental quantum “ h ”. And then Bohr proposed his hydrogen model of atom.

Kirchhoff's three laws of spectroscopy

1. A hot solid object produces light with a continuous spectrum. Kirchhoff coined the term black-body radiation.
2. A hot tenuous gas produces light with spectral lines at discrete wavelengths (i.e. specific colors) which depend on the energy levels of the atoms in the gas.
3. A hot solid object surrounded by a cool tenuous gas (i.e. cooler than the hot object) produces light with an almost continuous spectrum which has gaps at discrete wavelengths depending on the energy levels of the atoms in the gas.

Today we know very well the mechanisms of the second and third laws, thanks to the contribution of the Bohr theory of the atom, as follows:

- a) A hot tenuous gas is formed by atoms, and they **emit** photons in specific wavelengths.
- b) A hot solid object surrounded by a cool tenuous gas produces a continuous spectrum with gaps with discrete wavelengths because the atoms of the gas **absorb** photons in the same specific wavelengths as they were emitted by the hot tenuous gas. According to Quantum Mechanics, the photons are absorbed thanks to a mechanism of resonance between the photon and the atom

One could try to explain the first Kirchhoff by supposing that hot solid object produces a continuous spectrum because a solid object is made by molecules, and not by atoms. However, how does to explain how a solid object **absorbs** the energy of photons?

According to Quantum Mechanics, an atom of a solid object would have to absorb photons by a process of resonance between the atom and the photon which falls upon the surface of the object. However such process of resonance is not possible, because the atoms of the object are tied to other atoms, forming molecules.

So, how does explain how a solid object is able to absorb the energy of photons?

It seems the answer for this question lies on the following property of matter: the processes of emission and absorption in solid objects occur via different mechanisms.

So, let us suppose how the energy of photons can be absorbed by a solid object.

- 1- The particles of the aether in a region of the space absent of matter are in a minimum fundamental status of excitation.
- 2- The particles of the aether in a region of the space filled by a solid object are in a status of excitation proportional to the temperature T of the object.

When a photon falls upon a surface of a solid no translucent object, as the photon is stopped it is disintegrated in the fundamental particles of the aether which compose the particle and the antiparticle of the photon. So, we have:

- a) The particles of the aether filling the space between the molecules of the solid object have a level of excitation E_T , proportional to the temperature T of the object.
- b) After the collision of the photon with the surface of the object, the particles of the aether which constitute the body of the photon deliver their energy for the particles of the aether filling the space between the molecules of the object, in order that their level original level of excitation E_T has a growth, responsible for an increase in the excitation of the molecules of the object, and therefore the object has a temperature rise.

From his new mechanism of absorption of energy by matter, we are able to understand how heat is produced by gravity in stars and planets, because the energy of the flux of the magnetons of the gravity field is transferred to the particles of the aether filling the space between the molecules, increasing the level of excitation of the aether within the planet, rising the excitation of the molecules, and so producing heat.

References

- 1- W. Guglinski, Quantum Ring Theory-foundations for cold fusion, Băuu Press, 2006
- 2- W. Guglinski, Stability of Light Nuclei⁽²⁾, <http://www.journal-of-nuclear-physics.com/files/Stability%20of%20light%20nuclei.pdf>, 2013, Journal of Nuclear Physics
- 3- F. Figueiredo, Teoria Universal do Magnetismo, 1969, Gráfica Esperança, Brazil