Majorana and Sterile Neutrino solutions in the Quantum-FFF model.

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Abstract,

In particle physics it is an interesting challenge to postulate that the FORM and structure of elementary particles is the origin of different FUNCTIONS of these particles.
In my former paper "**3-Dimensional String based alternative particle model,**"
I presented a possible solution based on complex 3-D ring shaped particles.
I will give it the name: Quantum- FFF Theory. (Function Follows Form Theory).
The 3-D ring itself is postulated to represent the "Virgin Mother" of all other particles and is coined non-SM Higgs particle, supplied with the 3-hinges coded (OOO).

This paper presents the possible consequences of such a 3-D string particle system for MAJORANA particles and so called STERILE NEUTRINOS.
It seems to be a surprise that in the Q-FFF model there is a possibility for 4x different shaped Sterile Neutrinos and one symmetrical and two anti-symmetrical Majorana solutions.
At the same time I present some detailed features of how some Q-FFF particles can click-on to form micro black hole nuclei for Ball lightning or other anomalous effects happening inside particle accelerators.

Introduction,

It is assumed that the vacuum is seeded with awesome numbers of "new" massless Higgs vacuum particles. All vacuum particles seem to oscillate inside a chiral vacuum lattice system (reference: 16). this system seems to be are able to transfer all photonic energy in wave form, but magically popping up real particles at collision sites with Fermions (wave particle duality). (Ref. 11)

This is reason to assume that Higgs particles are the origin and bearer of all energy and Matter in the universe.

If by a local energy excess, two oscillating Higgs particles collide head-on with enough excess of energy, it is assumed that at fist an electron and positron emerges by the transformation or remodelling of these two Higgs particles.

Due to the propeller shape of the Fermions, they start to spin automatically by the constant collision and scattering process with the Higgs vacuum, remodelling and changing Higgs particles continuously into different forms of Photon/Gluons as a result.

This scattering system is supposed to be the origin of all radiation and energy in the universe including so called double LeSage gravity. (ref. 10)

It is also proposed, that at the globular horizon of black holes, Higgs particles are constantly producing numerous twins of electrons and positrons, due to spacetime (vacuum lattice) deformation. (Ref. 6)

However it is postulated the new Quantum FFF model allows electrons and positrons to form COMPOUND QUARKS by the new 3-D String particle paradigm (figure 3,4-5) .

At the same time, the complex double spin of fermions (figure 8) seems to be the origin of all material MOTION.

Recent publications reported the existence of so called Majorana (Ref. 19)particles and Sterile Neutrinos. (Ref. 20)
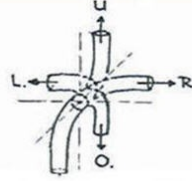
If we look in more detail to the possible transformations and rotations of the New Higgs particle (figure 5) it is clear that there is still room for such particles, as presented in yellow colour in the figure (figure 1)

Alternative standard particle model

All SINGLE (non-compound) elementary particles suggested by Quantum FFF Theory. OLO, ORO have "click-on potential" to form compound quark particles with only 5 different shaped Gluons/Photons. In yellow colour: Quantum-FFF suggestions for NEW PHYSICS particles. The Majoranas: (OUO+ mirroring Majoranas RUR+ LUL) and 4x extra neutrinos (RLU+ RRU+ LLU and LRU) (author:Leo Vuyk)

Explanation of the codes:
U= Up rotation (180 degrees)
O= Unchanged circle.
L= Left rotation (90 degrees)
R= Right rotation (90 degrees)

Summary with oscillation routes : (⟷) or the definite Graviton decay route (⟶).

| Spin 0 particle: | OOO | = Higgs particle. |

| Spin (2) particles: | ROL (or LOR) | = Graviton |

Spin 1 particles:

RLU+RRU+LLU and LRU

RUR and LUL

Only These particles are building-blocks for Quarks.
Direct W. quark oscillations d<=>s

	UOU	= General Photon (also Gluon)
	ROU	=Em. North Photon (also Gluon)
	LOU	=Em. South photon (also Gluon)
	ROR	=E+ photon (also Gluon)
	LOL	=E- photon (also Gluon)

Spin ½ particles

Weak interactions

Gluon-Neutrino oscillations

| | OLO | =Positron. |
| | ORO | =Electron | ⟶ | OUO |

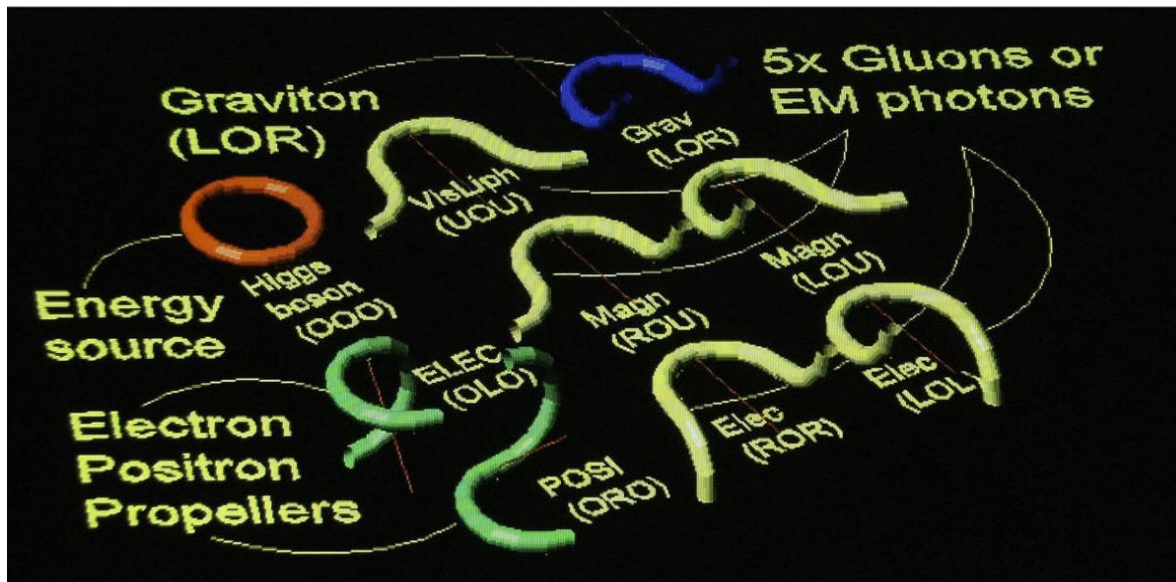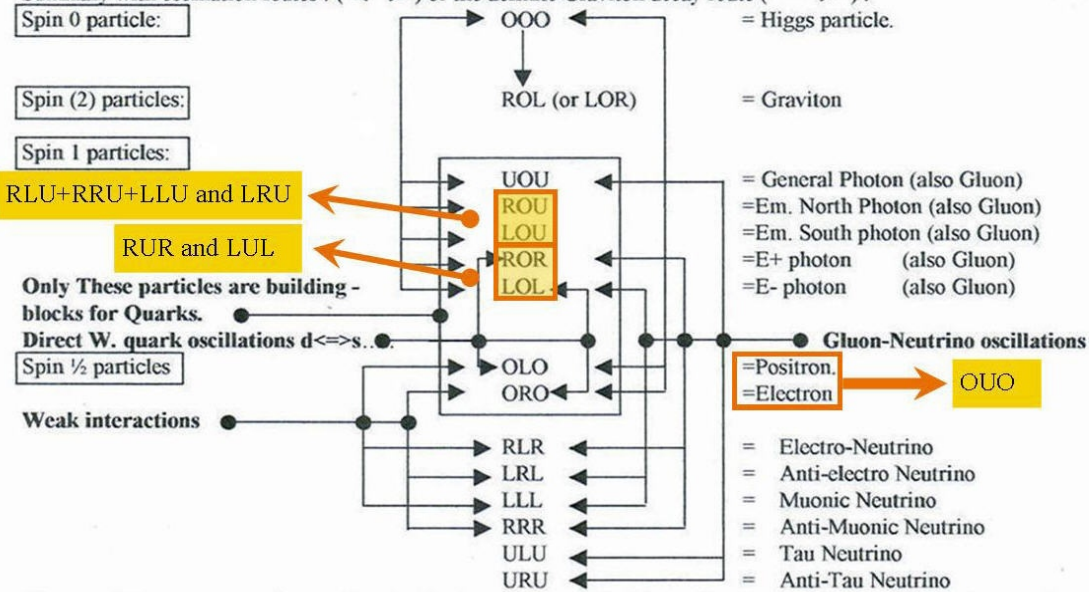| | RLR | = | Electro-Neutrino |
	LRL	=	Anti-electro Neutrino
	LLL	=	Muonic Neutrino
	RRR	=	Anti-Muonic Neutrino
	ULU	=	Tau Neutrino
	URU	=	Anti-Tau Neutrino

Figure 1, 3D image of Basic Singular Particles;
ONE Higgs boson (OOO), TWO basic single mirror symmetrical Fermions: the Electron and Positron (OLO and ORO), ONE Graviton (LOR), TWO sets of mirror symmetrical monopole Gluons/Photons (ROU-LOU, ROR-LOL) One symmetrical Gluon Photon (UOU).
For Majoranas (see upper image) one symmetrical (OUO) and two anti symmetrical (RUR+LUL).
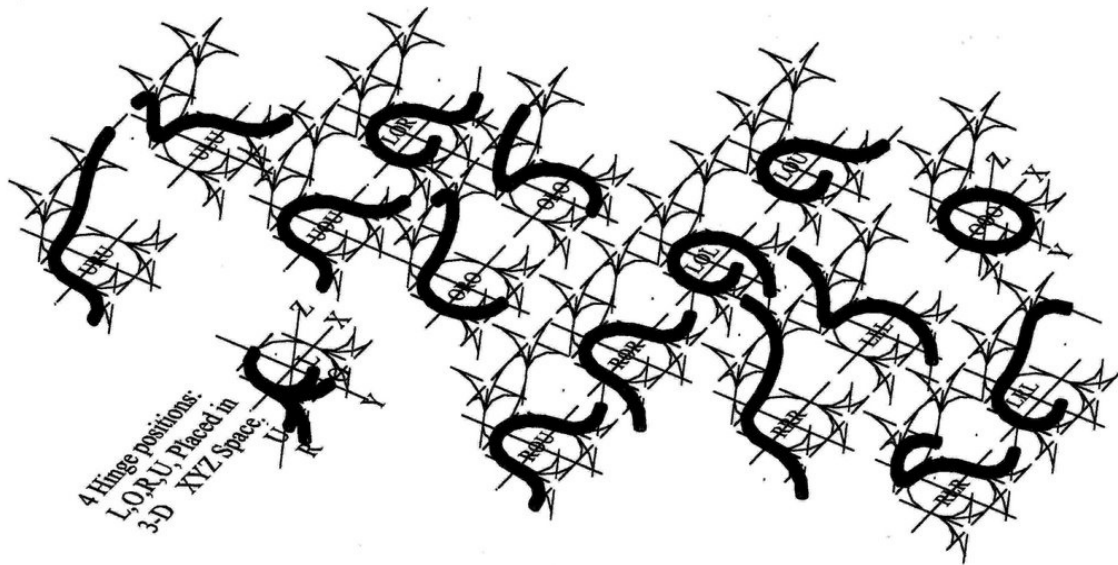**For 4x Sterile Neutrinos: (RLU+RRU+LLU and LRU)**

Figure 2, 3D image of Singular particles including 3 sets of mirror symmetrical Neutrinos: RLR-LRL, RRR-LLL, URU-ULU, bur without the Majoranas and Sterile Neutrinos.

Figure 3, 3D image of the Leptons: Electron, Positron, (singular) Muons and Tau particles (Compound particles).

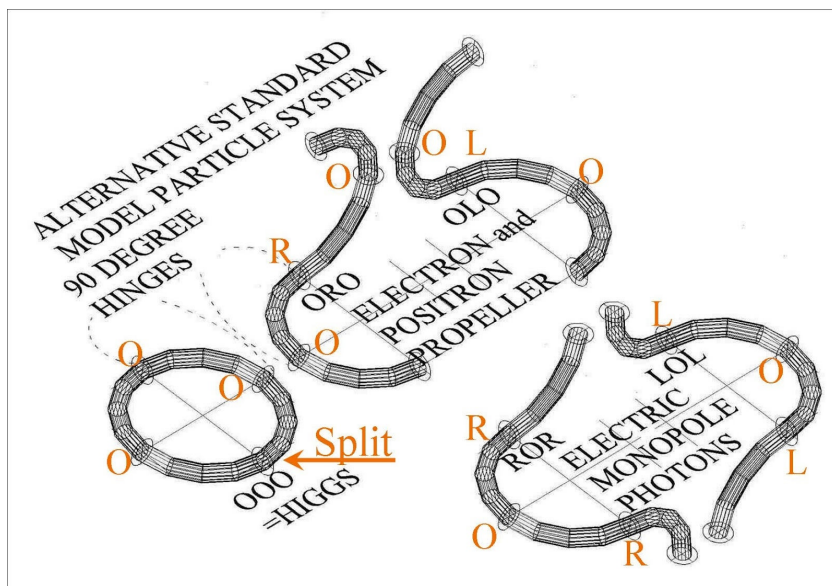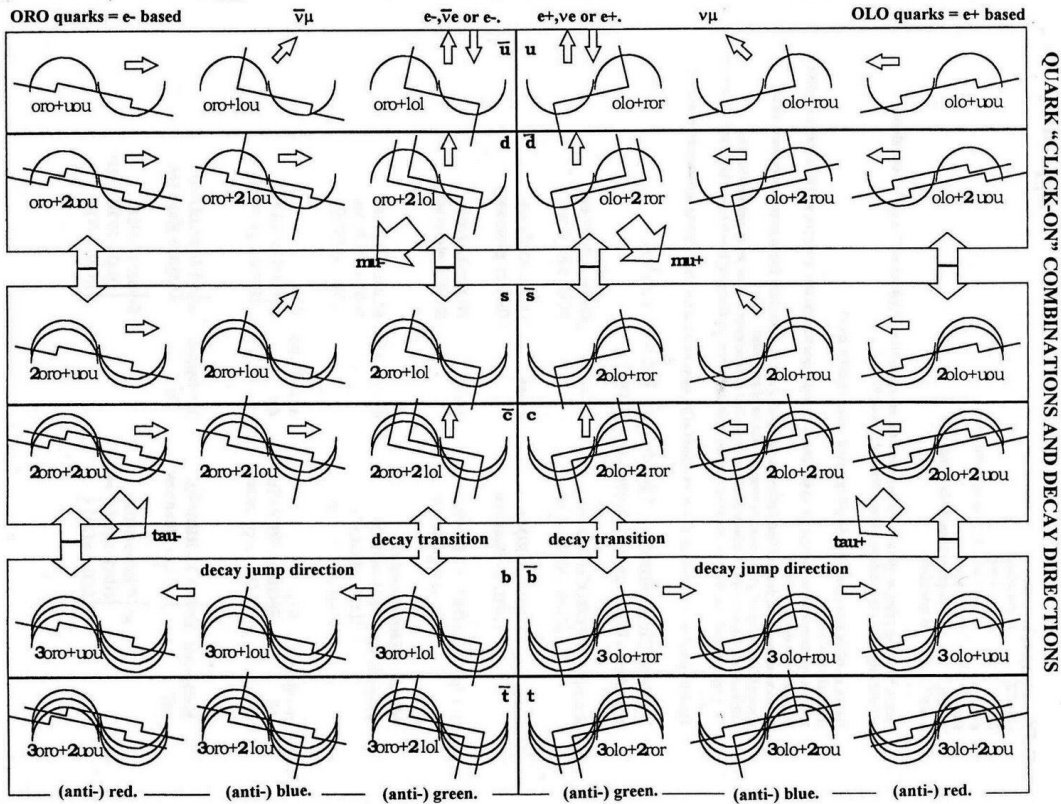**Figure 4,   3D-Image of all 36 Quarks: UP-DOWN-STRANGE-CHARM-BOTTOM-TOP.**

Figure 5.

Figure 6, Simplified 2D image of Leptons and Quarks including indications for Decay routes indicated by arrows.

The Weak force, how change a d-quark (ORO+LLL+LRL) into an u-quark (OLO+ROR) in the case of Neutron-- Proton decay.

semi-leptonic processes

$n \Rightarrow p + e- + \bar{v}e$

$ddu \Rightarrow duu + e- + \bar{v}e$

The principle interaction is :

$d \Rightarrow u + e- + \bar{v}e$

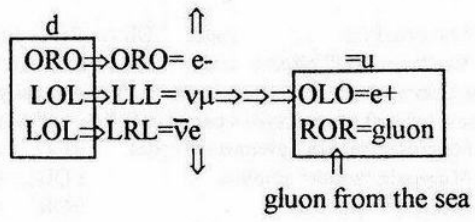| d	⇑	=u
ORO⇒ORO= e-		=u
LOL⇒LLL= νμ⇒⇒⇒	OLO=e+	
LOL⇒LRL=v̄e	ROR=gluon	
	⇓	⇑

gluon from the sea

Figure 7, The WEAK force in action by a complex exchange of particles and without a clear sign of the Weak particle. Conclusion there is no need for a massive Weak particle in this system. The massless Higgs particle, seems to do the job properly by transformation of two compound Gluon particles (LOL) attached to the electron (ORO): (LOL into LLL) and (LOL into LRL) . In succession, the (LLL) particle is changed into (OLO) a Positron, able to combine with a free Gluon (ROR) out of the SEA of Gluon plasma.

THE DECAY OF QUARKS AND LEPTONS

According to my model: elementary particles have a **sub-quantum structure**, caused by the postulate that a kind of Higgs particle is the **basic elementary particle**. (see the relation with the model page: 4)
Two Higgs particles can change form by collision into an electron and positron pair.(ORO+OLO)
Each Higgs particle can change form by collision with a quark or lepton into one of the
 6 different possible types of photons:

1: **The graviton**   code: LOR (or ROL) can **not** "click-on" to e+ or e- particles to form quarks.
2: **The " general" photon** code UOU. can "click-on" to e+ or e- particles, to form quarks for all "**red, anti-red**" (the colors are my own choice) quarks. The general photon has no quark confinement function, so is not a "real" gluon.
The 4 (gluon) photon types can also "click-on" to e+ or e- they are:
3: **Magnetic "north" photon** (in code)   ROU. combining for all "**positive/blue, anti-blue**"   quarks.
4: **Magnetic "south" photon**   LOU. combining for all "**negative/blue, anti-blue**"   quarks
5: **Electric + photon**   ROR. combining for all "**positive/green, anti-green**" quarks.
6: **Electric - photon**   LOL. combining for all "**negative/green, anti-green**" quarks.
Quarks are "click-on" combinations of e- and e+s with 5 different types of photons: **4 gluon** types and **1 general** type.
(so: quarks are not elementary)

Together with 1,2 or 3 **electrons**, 3 photon types can "click on" and combine into different **negative charged quarks**.
The **electron**: ORO can combine with LOL, LOU (gluons) and UOU (general photon)
Together with 1,2 or 3 **positrons**, 3 photon types can "click on" and combine into different **positive charged quarks**.
The **positron**: OLO can combine with ROR, ROU (gluons) and UOU (general photon)

Higgs boson   (in code) OOO
The H-bosons is responsible for:
A: all .photon/gluon production, as continuous collision product with all masscarrying particles.
(OOO+lepton/quark= photon/gluon+lepton/quark
B: spontaneous pair production (OOO+OOO=ORO+ OLO (e- and e+)),

Z	=ORO+OLO	Z-boson (electron + positron can "click" together, without anihilating each other)
Wo, W+ and W-		don't excist as particles.
e-	=ORO	electron.
e+	=OLO	positron.
ve	=RLR	electr. Neutrino.
v̄e	=LRL	anti-electr. Neutrino.
vμ	=LLL	muonic neutrino.
v̄μ	=RRR	anti- muonic neutrino.
vτ	=ULU	tau neutrino
v̄τ	=URU	anti- tau neutrino

For quark click-on combinations: see page 25 (opr).
Quark "up-grading" due to subjoining of extra ORO's (or OLO's) (energy addition)
and extra gluons, joining from the "sea" of gluons (energy addition)

         e- → ū →   d →   s →   c̄ →   b →   t̄
→   ORO→ 1 ORO→1 ORO →2 ORO→2 ORO →3 ORO →3 ORO.
            1gluon→2 gluon →1 gluon→2 gluon-→1 gluon→2 gluon.

         e+ → u →   d̄ →   s̄ →   c →   b̄ →   t
→   OLO→ 1 OLO→1 OLO →2 OLO→2 OLO →3 OLO →3 OLO.
            1gluon→2 gluon →1 gluon→2 gluon-→1 gluon→2 gluon.

The **muon** is equivalent with the **naked** (anti) green d(own)-quark
The **tau** is equivalent with the **naked** (anti) red b(ottom)-quark

The differences between:

e- and $\bar{u}$,	is one gluon,.
$\bar{u}$ and d,	is one gluon,
d and s,	is one gluon changed form into an e- ·
s and $\bar{c}$,	is one gluon,
$\bar{c}$ and b,	is one gluon changed form into an e- ·
b and $\bar{t}$,	is .one gluon .

Quark "down-grading or decay" is going down the energy ladder, "spitting out" e-, e+'s and gluons in their original form (unchanged) or changed into neutrino's.

Quark stability is originated by the sub-quantum structure of the quark
If the structure has
1: an A-symmetric form (such as the (anti-)blue u-,s- and b-quarks), the ability to spin, and the stability is minor to those with a symmetric form.
2: more components, this will lead to:decrease of stability and mass increase due to more protuberances (more vulnerability for Higgs impulses) resp. more production of gravitons)
Lifetimes and decay routes of quarks should be dependant of these rules, but we see interesting changes:
The prefered (anti-) red-blue- green sequences of the decay ladders are changing between the **charm** and the **bottom** quarks.
The differences in the sequences of charges related to the mass ladder is not clear. Further investigation is needed.

Systematic summary of basic quark decay modes.

e- and e+$\Rightarrow$UOU = general photon   (anihilation)

$\bar{u}\Rightarrow$e-,$\bar{v}$e	ORO$\Rightarrow$ORO = e- LOL $\Rightarrow$LRL =$\bar{v}$e	u$\Rightarrow$e+ ,ve	OLO$\Rightarrow$OLO= e+ ROR$\Rightarrow$RLR=ve
$\bar{u}\Rightarrow$e-	ORO$\Rightarrow$ORO=e- LOL $\Rightarrow$ gluon sea	u$\Rightarrow$e+	OLO$\Rightarrow$OLO=e+ ROR$\Rightarrow$ gluon sea
$\bar{u}\Rightarrow\bar{v}\mu$	ORO$\Rightarrow$RRR=$\bar{v}\mu$ LOL$\Rightarrow$ gluon sea	u$\Rightarrow v\mu$	OLO$\Rightarrow$LLL=vμ ROR$\Rightarrow$ gluon sea

(d (anti-)green is also:μ)

d$\Rightarrow$e-,$\bar{v}$e,vμ	ORO$\Rightarrow$ORO=e- LOL$\Rightarrow$LRL=$\bar{v}$e LOL$\Rightarrow$LLL= vμ	$\bar{d}\Rightarrow$e+,ve,$\bar{v}\mu$	OLO$\Rightarrow$OLO=e+ ROR$\Rightarrow$RLR=ve ROR$\Rightarrow$RRR=$\bar{v}\mu$

π-$\Rightarrow\mu$-,vμ d$\bar{u}$	d=μ- $\bar{u}$=ORO$\Rightarrow$RRR=$\bar{v}\mu$ LOL $\Rightarrow$ gluon sea	π+$\Rightarrow\mu$+,vμ du	$\bar{d}$=μ u=OLO$\Rightarrow$LLL=vμ ROR$\Rightarrow$ gluon sea	

K-$\Rightarrow\mu$-,vμ s$\bar{u}$	$\bar{u}$=ORO$\Rightarrow$RRR=$\bar{v}\mu$ LOL$\Rightarrow$ gluon sea	K+$\Rightarrow\mu$,vμ $\bar{s}$u	u=OLO$\Rightarrow$LLL=vμ ROR$\Rightarrow$ gluon sea	

s=	ORO$\Rightarrow$ORO ORO$\Rightarrow$LOL =μ- LOL $\Rightarrow$LOL	$\bar{s}$=	OLO$\Rightarrow$OLO OLO$\Rightarrow$ROR =μ+ ROR$\Rightarrow$ROR

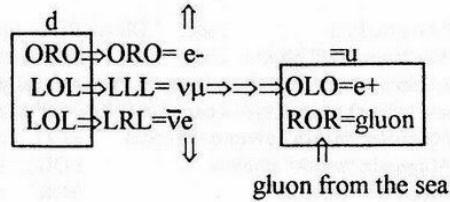# Three different kinds of Weak interactions.

Hydronic decays:

$\Lambda o \Rightarrow \pi- + p$

$uds \Rightarrow udd \Rightarrow \bar{u}d + uud$

The principle interaction is:
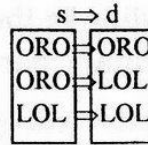
$s \Rightarrow d$ and pair production (addition) of u and $\bar{u}$ from the Higgs and gluon "sea"
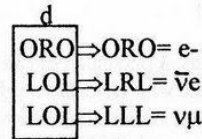
s $\Rightarrow$ d	
ORO $\Rightarrow$ ORO	
ORO $\Rightarrow$ LOL	
LOL $\Rightarrow$ LOL	

semi-leptonic processes

$n \Rightarrow p + e- + \bar{v}e$

$ddu \Rightarrow duu + e- + \bar{v}e$

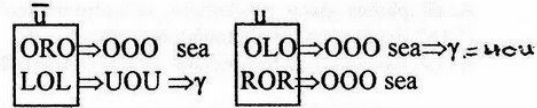The principle interaction is :

$d \Rightarrow u + e- + \bar{v}e$

d ⇑

ORO $\Rightarrow$ ORO= e-	
LOL $\Rightarrow$ LLL= vμ	$\Rightarrow\Rightarrow$
LOL $\Rightarrow$ LRL= $\bar{v}$e	

=u
OLO=e+
ROR=gluon

⇑

⇓

gluon from the sea

leptonic processes

$\mu- \Rightarrow e- + \bar{v}e + v\mu$

$d \Rightarrow e- + \bar{v}e + v\mu$

d

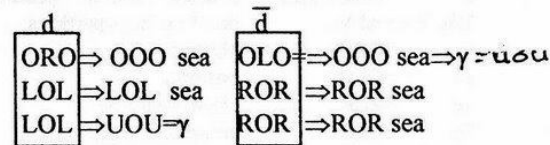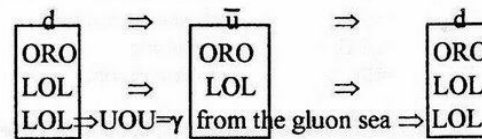| ORO $\Rightarrow$ ORO= e- |
|---|
| LOL $\Rightarrow$ LRL= $\bar{v}$e |
| LOL $\Rightarrow$ LLL= vμ |

Some electromagnetic decays.

$\pi o \Rightarrow \gamma + \gamma$ **ORO+OLO anihilation** $\Rightarrow$ 1x γ

$u\bar{u} \Rightarrow 2\gamma$

$\bar{u}$

ORO $\Rightarrow$ OOO sea
LOL $\Rightarrow$ UOU $\Rightarrow \gamma$

u

OLO $\Rightarrow$ OOO sea $\Rightarrow \gamma$ = ион
ROR $\Rightarrow$ OOO sea

$\eta o \Rightarrow 2\gamma$ **ORO+OLO anihilation** $\Rightarrow$ 1x γ

only: $\bar{d}d$ decays $\Rightarrow 2\gamma$

so first: $\bar{s}s \Rightarrow \bar{d}d$.

d

ORO $\Rightarrow$ OOO sea
LOL $\Rightarrow$ LOL sea
LOL $\Rightarrow$ UOU= γ

$\bar{d}$

OLO $\Rightarrow$ OOO sea $\Rightarrow \gamma$ = ион
ROR $\Rightarrow$ ROR sea
ROR $\Rightarrow$ ROR sea

$\Sigma o \Rightarrow \Lambda o + \gamma$

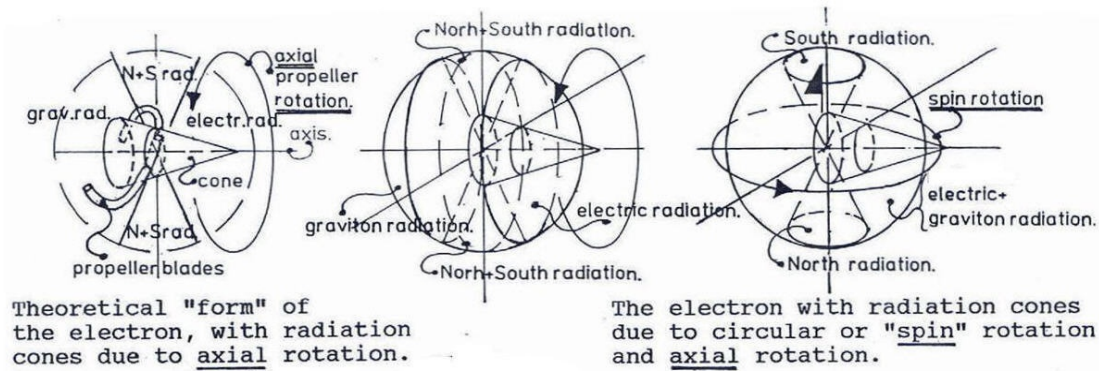$uds \Rightarrow sdu + \gamma$ $d \Rightarrow \bar{u} \Rightarrow d$

d $\Rightarrow$

ORO
LOL
LOL $\Rightarrow$ UOU= γ

$\bar{u}$ $\Rightarrow$

ORO
LOL
from the gluon sea $\Rightarrow$

d

ORO
LOL
LOL

Some strong interactions.

$\Lambda++ \Rightarrow p + \pi+$: $uuu \Rightarrow duu + u\bar{d}$

⇑———⇑

$d\bar{d}$ pair production from the Higgs and gluon sea

$\Delta o \Rightarrow p + \pi-$: $ddu \Rightarrow duu + d\bar{u}$

⇑———⇑

$u\bar{u}$ pair production from the Higgs and gluon sea

$\Delta o \Rightarrow n + \pi o$: $ddu \Rightarrow ddu + u\bar{u}$

⇑———⇑

$u\bar{u}$ pair production from the Higgs and gluon sea

The double spin of Fermions.

Theoretical "form" of
the electron, with radiation
cones due to <u>axial</u> rotation.

The electron with radiation cones
due to circular or "<u>spin</u>" rotation
and <u>axial</u> rotation.

The "Eigen energy" distribution around the spinning Fermion propeller, is supposed to come in cone form. The Fermion spin and radiation is the product of a scattering process with oscillating Higgs vacuum particles. As a result, the Fermion has a double spin around two polar axes. This is supposed to be the origin of a dipole Magnetic field with North and South monopole photon radiation and the circular distribution of graviton and electric radiation. In addition it must be stated that all Fermions are entangled with their object /subject particle far away.

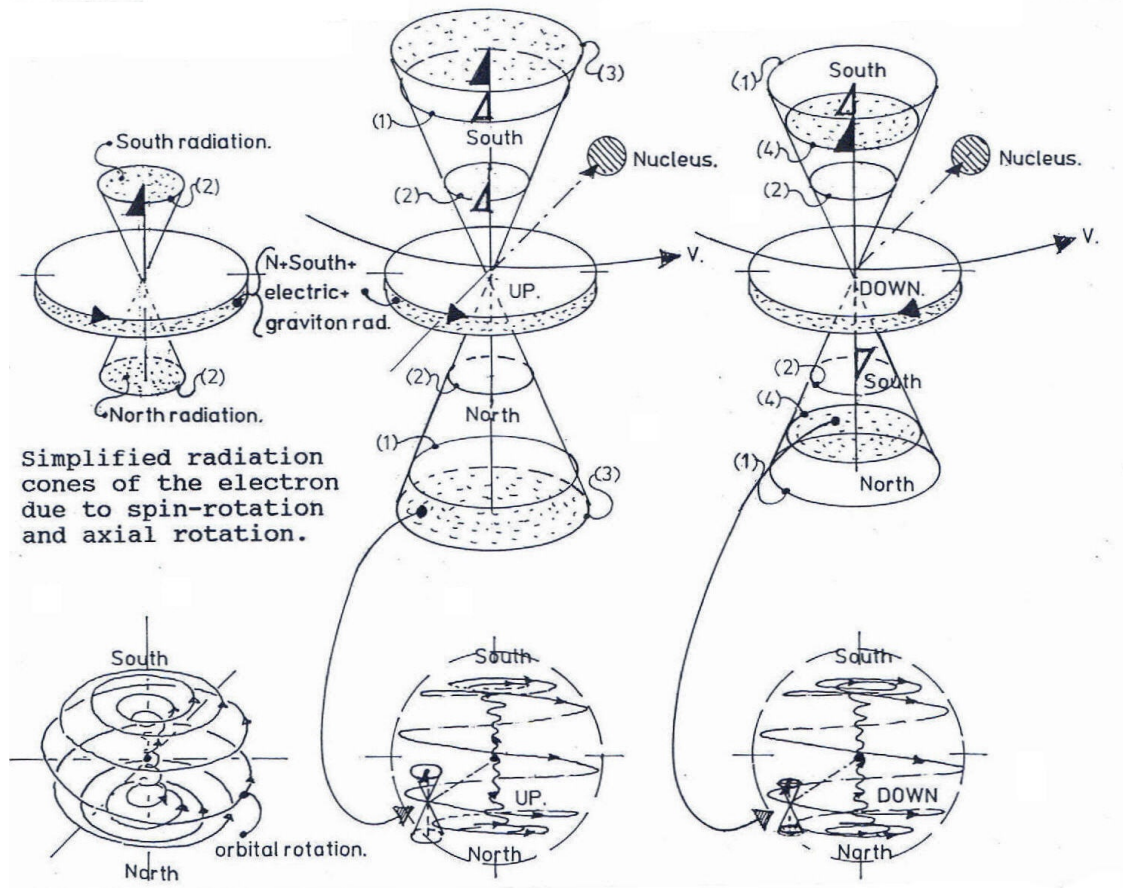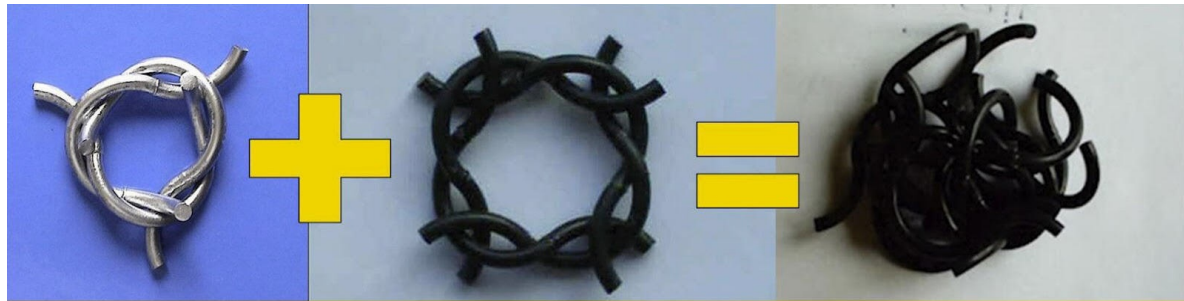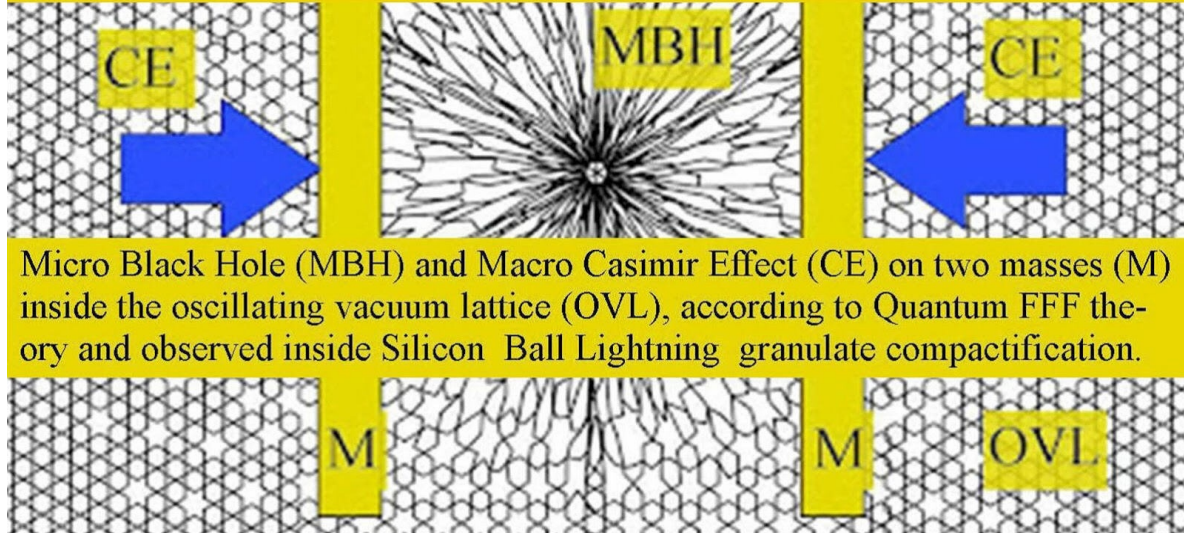**Figure 8, double spin of Fermion and Quark propellers.**

Simplified radiation
cones of the electron
due to spin-rotation
and axial rotation.

Figure 9, The difference between up and down Atoms.

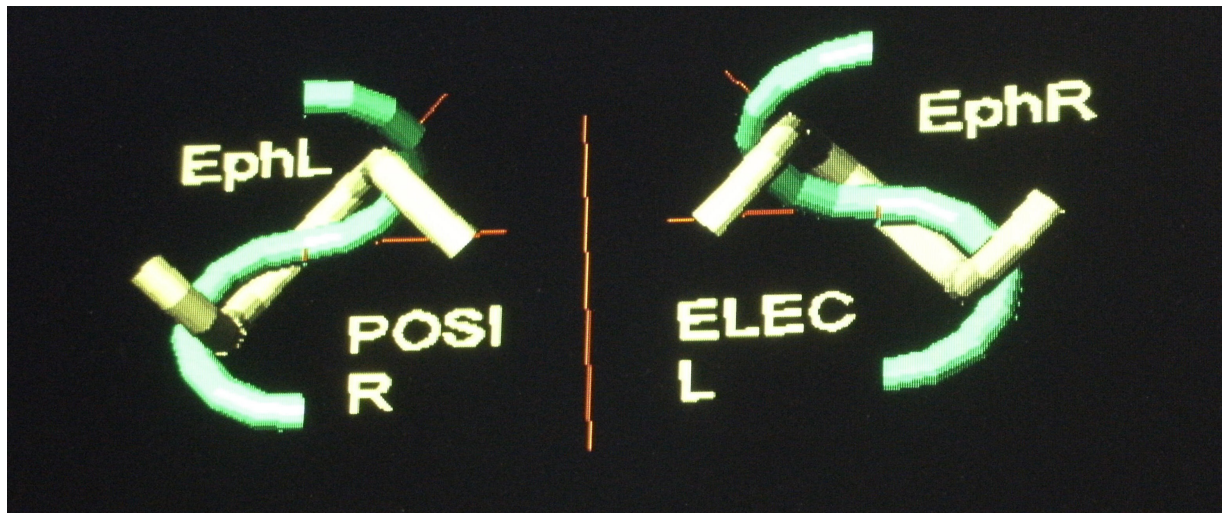**Figure 10, Micro Black Hole production by interference of 3x magnetic North or South photons or 4x general photons**

Figure 11, How particles knot together by a click-on connection.

The OLD and NEW Black Hole differences.

The OLD BH

1; has an "event" horizon.
2; has spacetime decrease.
3; has increasing entropy.
4; has infinite gravity in the centre (the zero point).
5; has (a lot of) mass.

Spacetime decrease
gravity increase

"Light" and "time" horizon
(event horizon).

The NEW Black Hole

1; nas an "event" horizon.
2; has spacetime decrease.
3; has decreasing entropy.
4; has finit gravity on the nucleus
5; has no mass!
6; has a "higgsrepulsionzone"

"Light" and "time" horizon
(event horizon).

"Higgs" gravity reversal

"Higgsrepulsion zone"

"Higgs" gravity reversal

Spacetime decrease
gravity increase

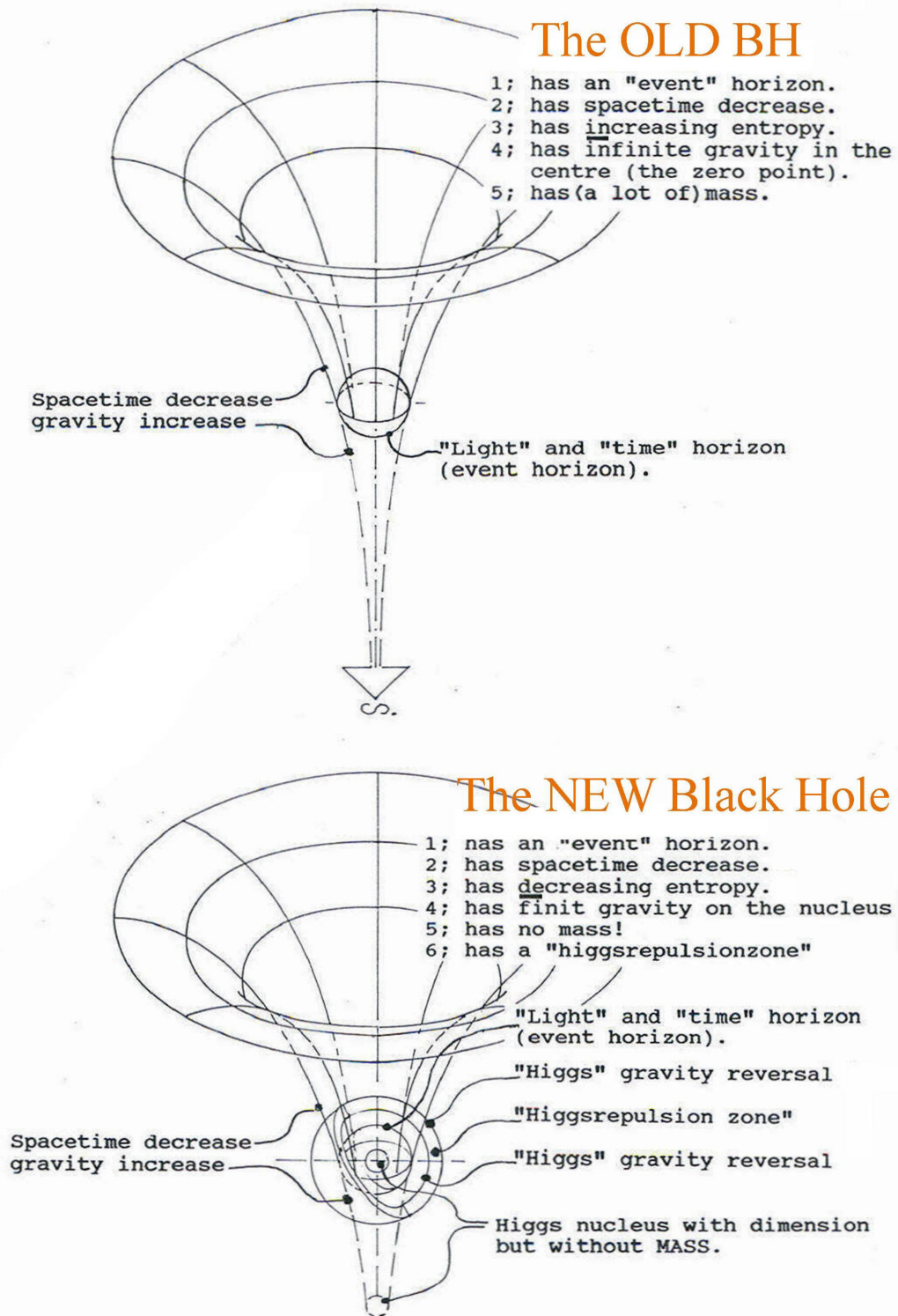Higgs nucleus with dimension
but without MASS.

Figure 12, Comparison between the Old and New Black hole.

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Mass in Motion in Quantum FFF Theory

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[6] **viXra:1104.0044** *submitted on 13 Apr 2011*
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