

Axion-Higgs 3-Dimensional Rigid Transformable Strings and the Compound 650 GeV Z-Z Decay into Quarks/Leptoquarks.

Leo Vuyk,
Architect,
Rotterdam, the Netherlands.
LeoVuyk@Gmail.com

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.

The model which is the result is called “Quantum Function Follows Form” model.

As a consequence, the standard model should be extended with changes for an alternative black hole , quantum gravity, the mass related local lightspeed, a topological superconductive vacuum etc.

In this paper I present possible 3D particle solutions based on only one complex 3-D ring shaped Axion-Higgs particle, which is equipped with three point like hinges and one splitting point, all four points divided equally over the ring surface.

The 3-D ring itself is postulated to represent the “Virgin Mother” of all other particles and is coined Axion-Higgs particle, the ring is equipped with 3-hinges coded (OOO), which gives the particle the opportunity to transform after some sort of mechanical collision with other particles into a different shape, with a different function and interlocking abilities with other particles.

Thus in this Quantum Function Follows Form theory, the Axion-Higgs vacuum particle is interpreted as a massless transformer string particle able to create the universe by transforming its shape after real mechanical collision and merging with other shaped particles into complex and compound knots like quarks, W Z particles and even ball lightning black hole nuclei..

Introduction,

It is assumed that the vacuum is seeded with massive numbers of **massless** Axion-Higgs (A-Higgs) particles, all energetic oscillating inside a chiral vacuum lattice system and as such the origin and bearer of all energy in the universe.

If by a local energy excess, two A-Higgs particles collide with enough energy, it is assumed that an electron and positron emerges by internal hinge transformation.

Due to the propeller shape of the Fermions, these Fermions are assumed to spin by a constant collision and scattering process with the Higgs vacuum, changing A-Higgs particles continuously into different forms of Photon or Gluons.

This collision scattering process is proposed to be the base for the “eigenenergy” of Fermions. Thus Fermions are constantly consuming and transforming vacuum particle energy into photons and gluons.

As a consequence, in Quantum FFF Theory photons should be the same as gluons and gluons become photons after collision with local fermions (atomic fermions) or after 1cm distance being absorbed by the local vacuum.

As a result, I suggest that many “elementary” (Quarks, Z and W) particles should not be elementary, but compound constructions or KNOTS of transformed A-Higgs particles.

Even the Muon and Tau Lepton should be compound particles having the same shape as one of the different coloured “naked” Down- respectively Charm Quarks.

Thus, Muon- and Tau particles are supposed to be naked Quarks!

Recent LHC (Large Hadron Collider) results are telling us that so called di-Higgs resonances lead to a variety of Higgs masses.

In Quantum FFF Theory however the real building block of the universe should be only the Axion-Higgs vacuum particle without any mass.

Thus di Higgs resonances are supposed to be the result of compound rigid string knots, such as Z Z WW knots based on electron positron strings ore combinations of three or four photon knots as the result of photonic interference. (Figure 1 and 2)

Non local realism and massless vacuum Axion-Higgs in the multiverse.

Quantum FFF Theory is based on Non-Local Realism and rigid stringy Axion-Higgs particles able to mutate into all other particles.

The CP(T)-symmetrical raspberry shaped multiverse (with 8-12 berries) is non local instant connected down to each quantum. Each quantum can be visualised as a deformed Higgs ring able to convert into other shapes and able to form compound structures like quarks, muons or even Tau leptons. So realism (cogwheels) connected by symmetric non-local instant entanglement.

The basic elements:

- 1: Black holes (BHs) are the same as Dark Matter, they all consume photons, even gravitons and the Axion-Higgs field, (for short: Higgs field) but REPEL Fermions due to their propeller shape polarisation away from the BH. They produce electric charged plasma.
- 2: Dark Energy is the oscillating (Casimir) energy of the massless Axion-Higgs Field equipped with a tetrahedron lattice structure with variable Planck length around black holes..
- 3: Quantum Gravity = Dual Push gravity= Attraction (Higgs-Casimir opposing Graviton push).
- 4: The Big Bang is a Splitting dark matter Big Bang Black Hole (BBBH), splitting into smaller Primordial Big Bang Spinters (PBBS) forming the Fractal Lyman Alpha forest and evaporating partly into a zero mass energetic oscillating Higgs particle based Higgs field.

18, Different elementary particles have different qualities by their different complex stringy shape. Leptons and Quarks have a propeller shape with left or right handed pitch creating charge difference. Gluons, Photons and Neutrino particles have no pitch.

20 All particles can be converted to one or more Higgs particles, Lepto Quarks are also compound particles with an exception for the electron and positron..

21 All particles are assumed to be present as Higgs particles already in the cyclic Big Bang Black Hole (BBBH) after the former multiverse has collapsed into a Big Crunch Black Hole.

22, We seem to live inside one material universal bubble of an instant entangled (Charge Parity Time) CPT symmetric raspberry bubble multiverse. Each quantum jump or wave function collapse or human choice is guided by this instant entanglement at long distant.

If our material universes has a chiral oscillating Higgs field, then our material Right Handed DNA helix molecule could be explained.

However it also suggests that in our opposing ANTI-MATERIAL multiverse neighbour universe the DNA helix should have a LEFT HANDED spiral.

According to Max Tegmark: in an entangled multiverse we may ask: is there COPY PERSON over there, who is reading the same lines as I do?

If this COPY person is indeed living over there, then even our consciousness should be shared in a sort of DEMOCRATIC form,

Then we are not alone with our thoughts and doubts, see:

Democratic Free Will in the instant Entangled Multiverse.

Conclusion, Quantum FFF Theory is based on Non-Local Realism. The CP(T)-symmetrical raspberry shaped multiverse (with 8-12 berries) is non local instant connected down to each quantum. Each quantum can be visualised as a deformed Axion-Higgs ring able to convert into other shapes and able to form compound structures like quarks, muons or even Tau leptons. So realism (cogwheels) connected by symmetric non-local instant entanglement.
vixra.org/pdf/1401.0071v2.pdf

It was Abdus Salam who proposed that quarks and leptons should have a sub-quantum level structure, and that they are compound hardrock particles with a specific non-zero sized form. Jean Paul Vigièr postulated that quarks and leptons are "pushed around" by an energetic sea of vacuum particles.

David Bohm suggested in contrast with The "Copenhagen interpretation", that reality is not created by the eye of the human observer, and second: elementary particles should be "guided by a pilot wave".

John Bell argued that the motion of mass related to the surrounding vacuum reference frame, should originate real

"Lorentz-transformations", and also real relativistic measurable contraction.

Richard Feynman postulated the idea of an all pervading energetic quantum vacuum. He rejected it, because it should originate resistance for every mass in motion, relative to the reference frame of the quantum vacuum.

However, I postulate the strange and counter intuitive possibility, that this resistance for mass in motion, can be compensated, if we combine the ideas of Vigièr, Bell, Bohm and Salam, and a new dual universal Bohmian "pilot wave", which is interpreted as the EPR correlation (or Big Bang entanglement) between individual elementary anti-mirror particles, living in dual universes.

Rigid String Quantum Knot suggestions for different configuration: 125-375-500-750-1600 GeV and More called dark matter black holes. (According to Quantum FFF Theory architecture)



125GeV+375gEv=500GeV And More



500GeV

375GeV+375gEv=750GeV

2x750GeV+125=1625GeV

Some suggested ring configurations

Figure 1 Multiple combination of quantum knots. Knot 1: left: three magnetic monopole photons (125 GeV, silver) Knot 2: right: 4x x-ray photons (375 GeV, black)

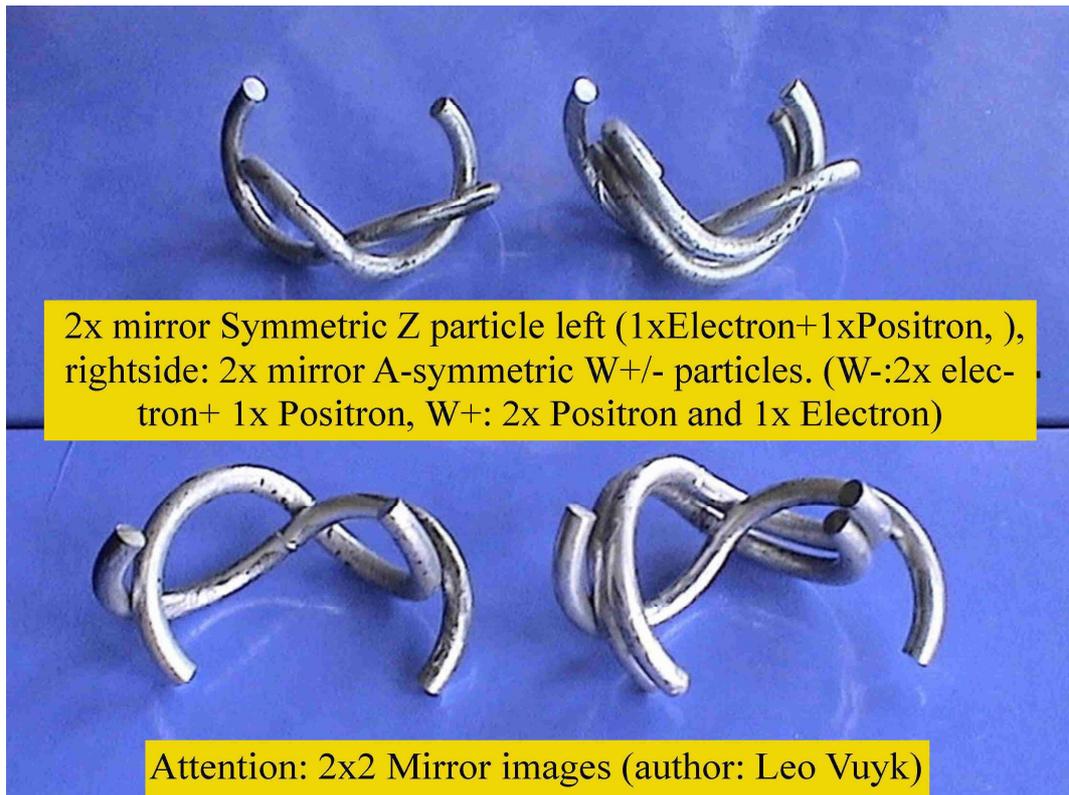


Figure 2 Geometric proposal for the Z and W particles. Z particles are symmetrical without propeller spin effects. W particles are not symmetrical with propeller spin effect left or right spin.

A combination of multiple Z particles could lead to Z-Z decay with 650 GeV as measured by the LHC.

Dual Z particles: a combination of 2x electrons and 2x positrons, according to the Quantum FFF Model.

LHC-CMS in ZZ channel. The massless transformable ring shaped Axion /Higgs vacuum particle is supposed to act as the mother of all single and compound rigid string particles fermions/neutrinos, photons etc. Massive ZZ particles are compound electron /positron interlockers, with 650 GeV in the LHC-CMS (example below)



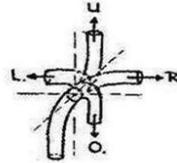
Figure 3, the massive ZZ channel particles

MAJORANA particle's placed in the new extended standard model based on Q-FFF Theory. OUO is e-e+ related, UUU, LUL, RUR are Neutrino related. Called sterile Neutrinos.

The coding of Single Elementary Particles is based on the so called "rotational click positions" of the three hinges, which are assumed to be regularly placed over the ring shaped Higgs "Quatron Torus Particle" (page 2). This ring has one splitting point and three hinges which have consequently four 90 degree click positions each. The best Torus ring diameter ratio to click-on is about 1/7. The ring coding of the hinge positions is as follows.

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:

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)

Only These particles are building - blocks for Quarks.

Direct W. quark oscillations d ↔ s...

Spin 1/2 particles

Weak interactions

Gluon-Neutrino oscillations

OUO = Positron
OUO = Electron

UUU, LUL, RUR

= Electro-Neutrino
 = Anti-electro Neutrino
 = Muonic Neutrino
 = Anti-Muonic Neutrino
 = Tau Neutrino
 = Anti-Tau Neutrino

Higgs particles are supposed to oscillate in Tandem along so called linear Vacuum Lattices, two by two in opposite directions, as the symmetrical opposite pistons of a boxer engine, as the origin of all energy, spin and mass effects. This enables the Tandem Higgs particles to change the form of their own Torus into an Electron and Positron pair at

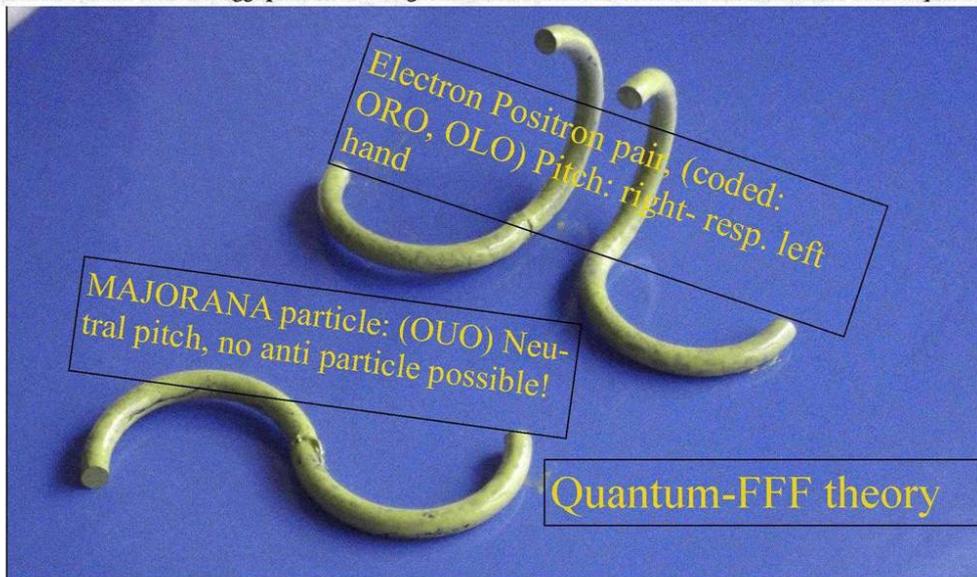


Figure 4, The geometric principle of Quantum FFFModel.

Geometry of a new Physics 3-Dimensional Particle system according to Quantum FFF Theory.

OOO= Higgs particle equipped with internal three HINGES and 79 possibilities for 90 degree rotation. (see below) due to symmetry reasons (underscored particles) only 42 different shaped particles remain. Only 15 different shaped particles are needed to construct all standard model particles according to the Quantum FFF Theory model. (See right panel)

LOO-LOL-LOU-LOR—ROL-UOL-LOL-OOL
 LLO-LLL-LLU-LLR—RLL-ULL-LLL-OLL
 LUO-LUL-LUU-LUR—RUL-UUL-LUL-OUL
 LRO-LRL-LRU-LRR---RRL-URL-LRL-ORL

E photon: LOL ROR
 M photon: LOU ROU
 X-ray /vis photon: UOU
 Graviton; ROL (or LOR)

ROO-ROR-ROU-ROL---LOR-UOR-ROR-OOR
 RLO-RLR-RLU-RLL---LLR-ULR-RLR-OLR
 RUO-RUR-RUU-RUL---LUR-UUR-RUR-OUR
 RRO-RRR-RRU-RRL---LRR-URR-RRR-ORR

Electron: ORO.
 Positron: OLO.
 Majorana: OOU

UOO-UOU-OUU
 ULO-ULU-OLU
 UUU-UUU-OUU
 URO-URU-ORU

HINGE ROTATIONS

O= Ring shape
 L= Left 90 degr.
 R= Right 90 degr.
 U=Up 180 degr.

Neutrinos:
 LLL-RRR = ν E (+/-)
 LLU-RRU = ν Mu (+/-)
 ULU URU = ν Tau (+/-)

OLO-ORO-OOU. Calabi Yau rotation result.

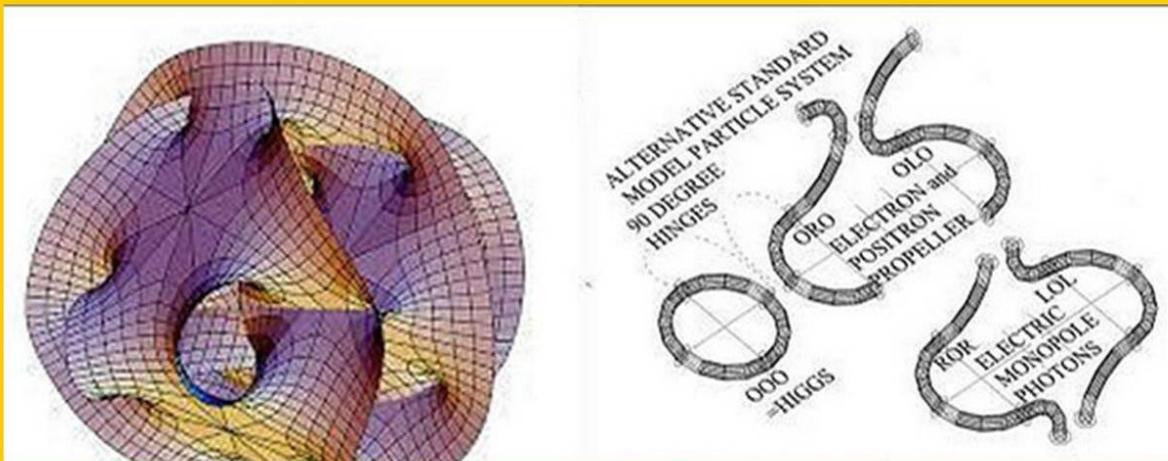
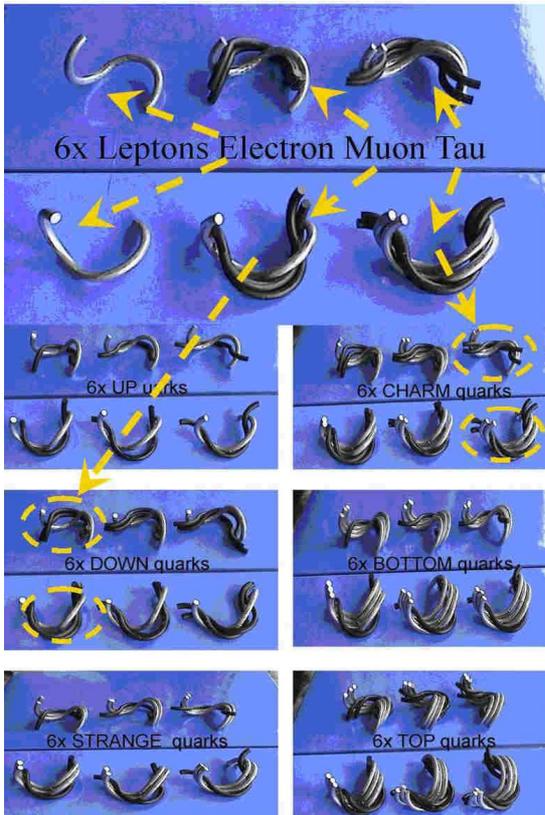


Figure 5, The principle based on 3x hinge rotations of 90 degrees.



Geometrical proposal for the sub-quantum structure of 6 Leptons and Quarks interpreted as compound Photon/Electron Positron propeller combinations. Muon- and Tau particles seem to show up as family members of the Down respectively Charm Quarks. According to Quantum FFF Theory. (Function Follows Form in particle physics)

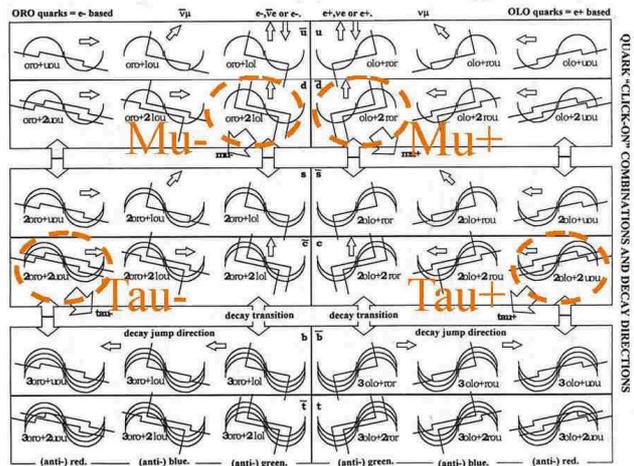


Figure 6, general view of the basic particle zoo.

ALTERNATIVE STANDARD MODEL

of elementary (single) particles with click-on potentials to form compound Quarks- and Leptons. (author Leo Vuyk)

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

Summary: with oscillation marks: (←→) or the default: Graviton decay mark (→)

Spin 0 particles: OOO = Higgs particle

Spin 2 particles: ROL (or LOL) = Graviton

Spin 1 particles: UOU, ROU, LOU, ROR, LOR, LOL

Only These particles are building blocks for Quarks

Direct W, quark oscillations: OLO, ORD

Weak interactions: ELR, LRL, LLL, RRR, ULU, UUR

Electro-Neutrino, Anti-glauco Neutrino, Maonic Neutrino, Anti-Maonic Neutrino, Tau Neutrino, Anti-Tau Neutrino

6x UP quarks

6x CHARM quarks

6x DOWN quarks

6x BOTTOM quarks

90 degree rotation of the Higgs ring and merging into coumpound knots...

Figure 7, most common particles.



How a Ball Lightning Micro Black Hole is made?

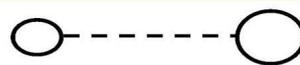
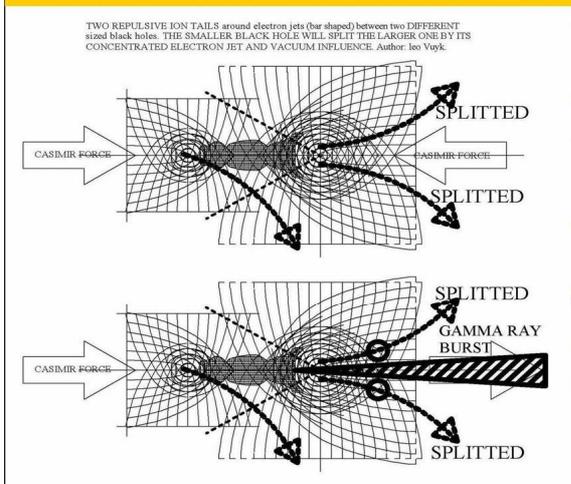


Figure 8, basic elements for black hole formation, with vacuum deformed structure around a black hole.

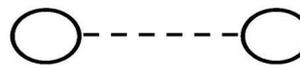
Proposal for the origin of frequent Gamma Ray Bursts (GRBs) Small black holes split larger BHs into two equal parts, both able to create dual Herbig Haro systems. The ratio of the original Black Holes is at least between 0.6 and 0.01?

The origin of Gamma Ray Bursts, by splitting black holes of different size, leaving three BHs behind. Two of them could form a Herbig Haro Object with a dumbbell structure. (Quantum FFF theory@Leo Vuyk).

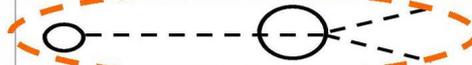
Dual Dark Matter Black Hole merger and splitter Higgs content "size" ratios, now between 0.8 and 0.6x sun mass. See Quantum FFF Theory based new black hole paradigm.



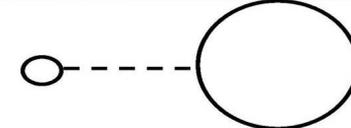
LIGO ratios: 0.8x 0.6x (29:36/8:14)



Herbig Haro creation ratio: 1x



BH Splitter ratio <0.6?x >0.01 ?



Galaxy central merger ratio: <0.01?

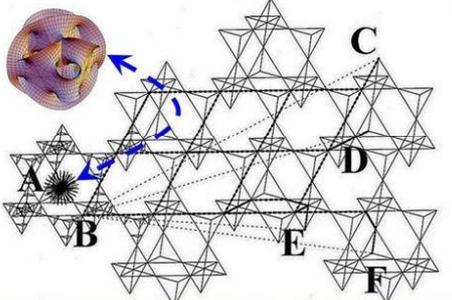
Small black holes should split larger BHs into two equal parts to create dual Herbig Haro hotspots also called bowshocks or accretion outburst sources.

Figure 9, suggestions for black hole nuclear splitting by BH collision.

The massless chiral Axion/Higgs oscillating dark energy vacuum field with a Topological superconductor function.

The massless transformable Axion /Higgs particle is supposed to act as the mother of all single and compound rigid string particles fermions/neutrinos, photons etc.

Topology of the Oscillating Chiral Higgs field vacuum structure, with Dark Matter Quantum Knots inside Black Hole Nuclei, as the second energetic element to make the Multiverse a cyclic self organising system.

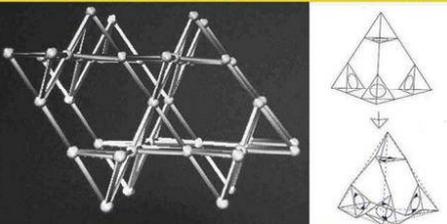


Photon trajectories through the tetrahedral oscillating Higgs vacuum lattice. (Acc. to Quantum FFF Theory)
 A: a real shaped Photon is created by Higgs collision with a dual axis spinning (Calabi Yau) Fermion propeller.
 B: that Photon transfers CODED form information (monopole photon info) and direction information into one Higgs particle which transfers this information by mutual Higgs collisionary oscillations through the vacuum in one specific direction. C,D,E or F
 F: Only magnetic photonic information (2x : North and South) are subject to curvature by an undisturbed symmetric oscillating vacuum
 II: Local Anti-Symmetric Oscillating vacuum Frames are influenced by massive objects like the earth and responsible for semi relativistic effects.
 III The vacuum lattice has helix- or chiral quality being the origin of our material universe.

Dark Matter Quantum Knots inside BH Nuclei.

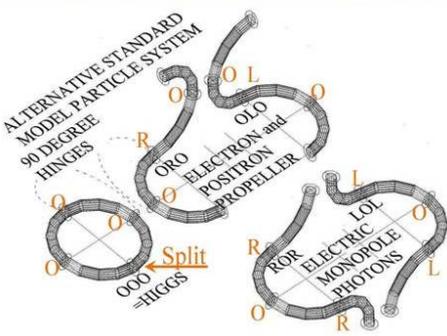



New Dark Matter Black Hole, "Eat" the chiral oscillating Higgs vacuum. (Quantum-FFF Theory)



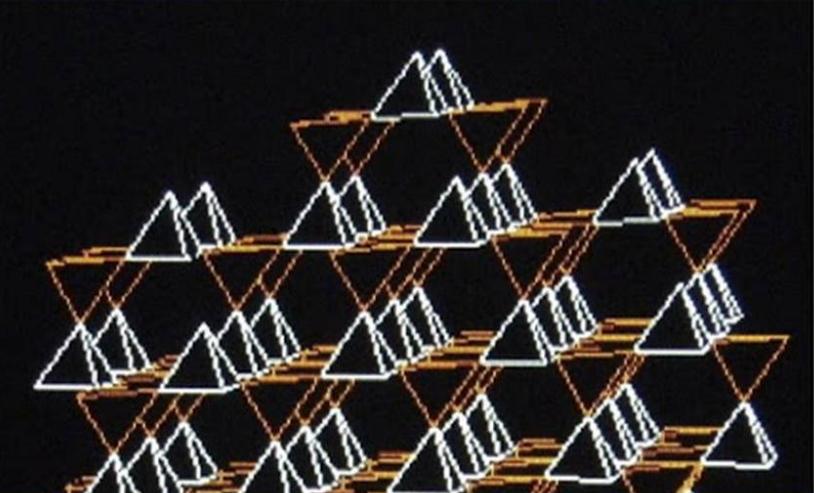
Simplified tetrahedral vacuum lattice structure (left), constructed by complex chiral tetrahedral building blocks (right). Each universe has to choose between a left- or righthanded rotation of its tetrahedral building blocks. Each chiral lattice.

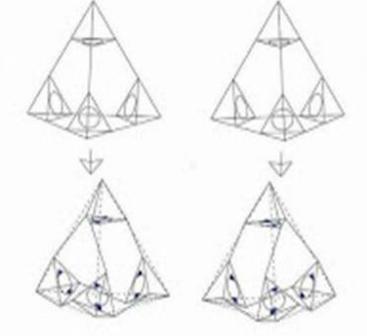
ALTERNATIVE STANDARD MODEL PARTICLE SYSTEM



90 DEGREE HINGES
 ORO ELECTRON and POSITRON PROPELLER
 LOL ELECTRIC MONOPOLE PHOTONS
 Split = HIGGS

3-D image of TWO tetrahedron space fill units with chiral, left or right handed characteristics, the origin of our material universe and our opposite anti-matter universe.





Space fill unit with RIGHT hand rotation. Space fill unit with LEFT hand rotation.

Truncated tetrahedron space according to the Quantum-FFF model. Each tetrahedron lattice has a spiral shape based on three linear units

Figure 10, Dark energy vacuum field with topological superconductor function for local and inter-universal entanglements as a base for a function collapse and democratic free will according to Quantum FFF Theory.

Our position in the 8 or 12 !!! fold raspberry multiverse. Elliptic shaped CMB peak radiations are tell tales. (left). At the rightside a 12 fold symmetric cube octahedron multiverse diagram is depicted with red: matter and green: anti matter entangled universes.

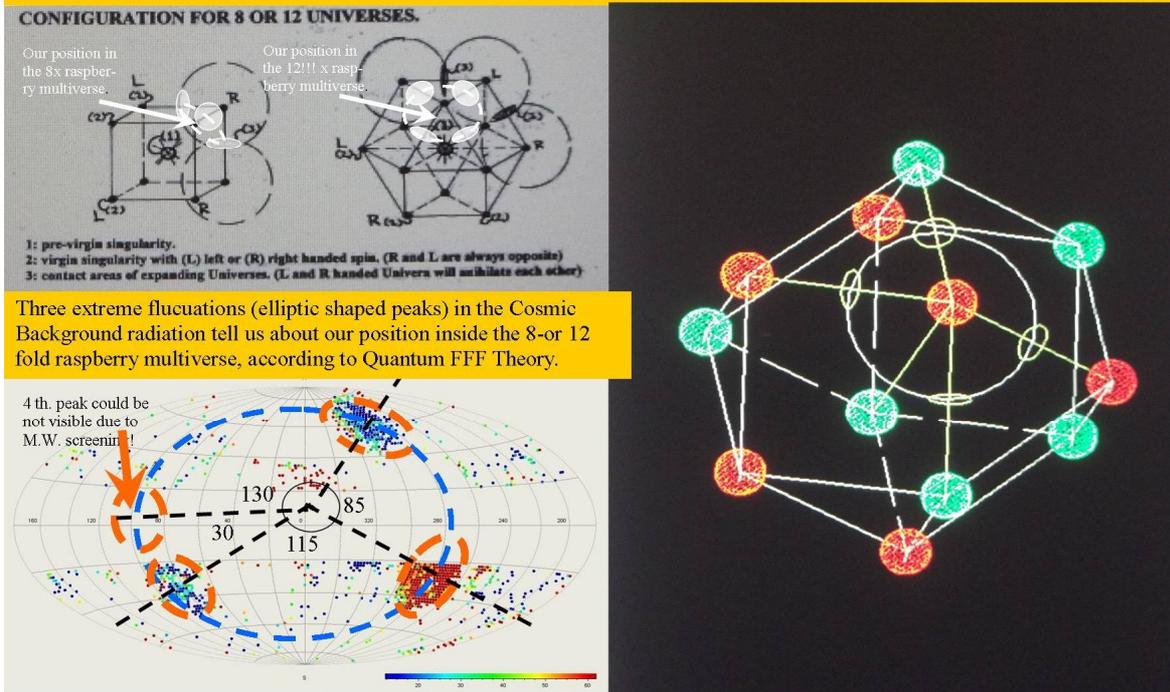


Figure 11, the entangled 8- or 12 fold raspberry multiverse.

The great misconception in Astronomy:

Herbig Haro Bowshocks and Cometary Globules, are not interpreted as Dark Matter Black Holes. See below: Bok- and Cometary Globules with young Herbig Haro Bowshocks in the making in the Carina nebula.

Splitting and pairing electric dark matter black holes. Magic self propelling in space and even on earth according to Quantum FFF theory.

The pairing and splitting of Electric Dark Matter Black Holes into dual Herbig Haro bowshocks, as the fast creation and proliferation of Stars and galaxies after the splitting bigbang.

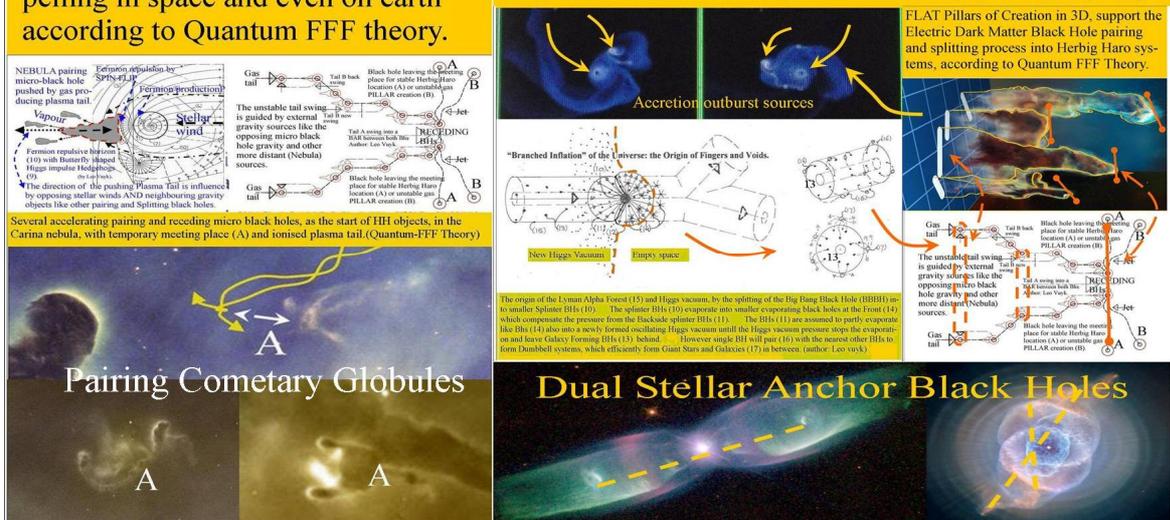
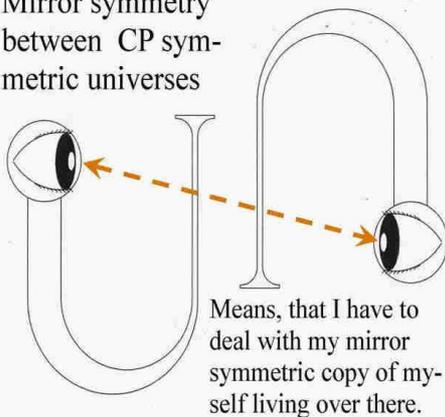


Figure 12, great misconceptions in astronomy and the solution with alternative electric dark matter black holes able to combine into Herbig haro objects with star formation in between.

The Wavefunction collapse in the (CP symmetric) raspberry multiverse by the entangled observation between (anti) copy particles

According to Quantum FFF Theory, the collapse of the wavefunction is assumed to be triggered by particle collisions with instant entanglement between (anti-) COPY universes. So there is Charge and Parity symmetry between the entangled particles living in opposing universes. Each particle is its own observer!! Each human has to deal with one or more opposing anti-COPY humans.

Mirror symmetry between CP symmetric universes



2-D Section through the raspberry multiverse, with huge void in the middle. The void in the middle is supposed to be originated by the start of the Fractal process, when the vacuum density of the former cyclic multiverse was still too high for a fine grained fractal process (see my book)

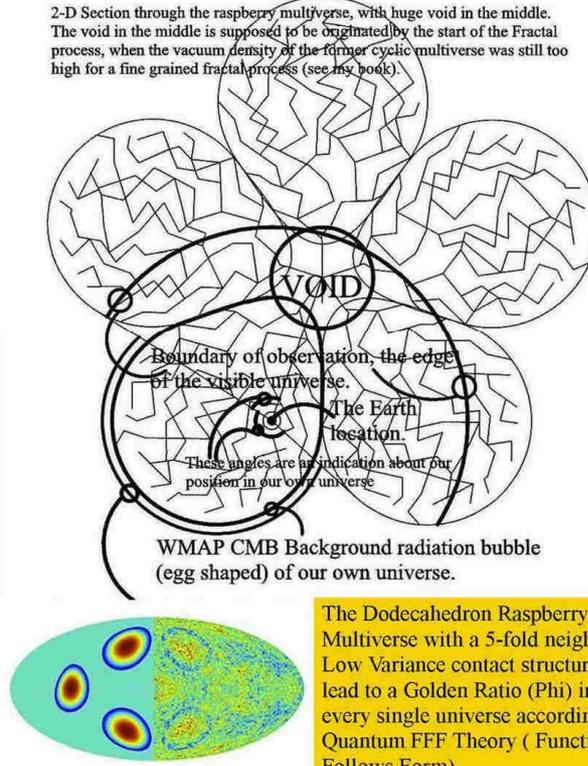


Figure 13, Wavefunction collapse in the multiverse.

The great Penrose High-Low Entropy misconception.

Big Bang and Big Crunch originated by the splitting pairing and recycling via merging of central galaxy S-nova black holes. According to Quantum FFF Theory..

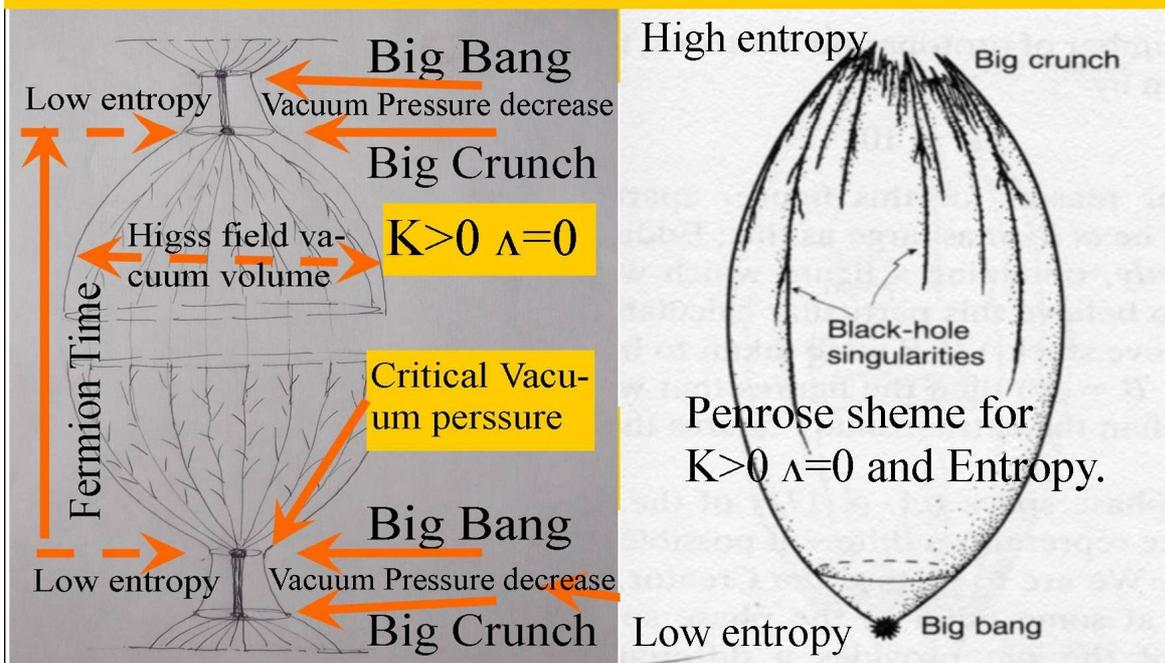


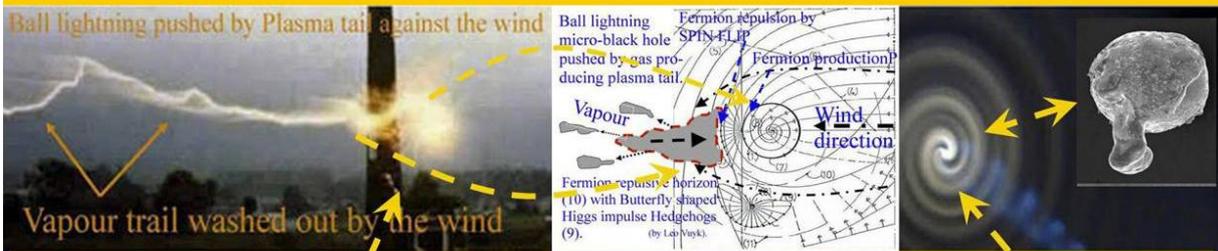
Figure 14, The consequence: a bouncing CP(T) symmetric multiverse.

Micro Comet march 2015. 4-8 plasma tails seem to indicate to be related to 4- 8x clustered sprite fireballs. Regio Perm in g.Kizel.

According to Quanum FFF Theory.



Below several other examples of micro comets and Ball Lightning.



Ball Lightning and Micro Comets Based on New ZPE Black Hole Paradigm



Micro Comets (micro black holes) also pushed by plasma tail against the wind

Figure 15, examples of micro black hole based Ball Lightning and micro comets on earth.

This Ball Lightning photo is an important piece of the new physics of Quantum FFF theory. It shows a self produced vapor trail washed out by the opposing wind of the massless BL nucleus, which seem to be pushed against the wind. Just as observed in multiple single- and pairing Black Hole examples in nebula like the Carina.

Ball lightning pushed by Plasma tail against the wind



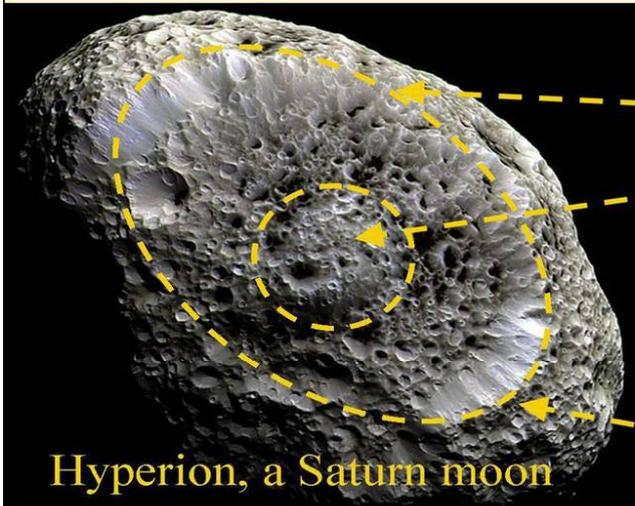
Vapour trail washed out by the wind

Other examples of BLs with plasma tails



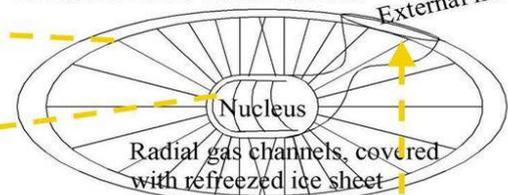
Figure 16, other examples of Ball Lightnings with plasma tails.

Electric Dark Matter Black Hole Comets and Icy remnants (e.g. Hyperion)

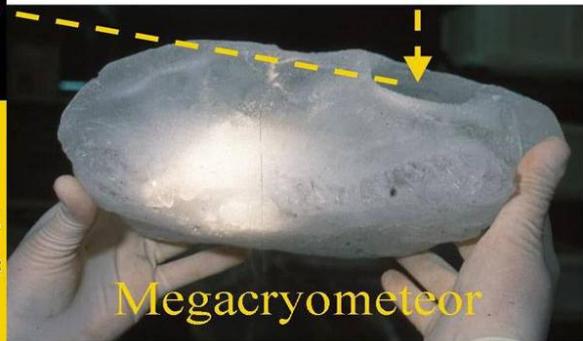


Hyperion, a Saturn moon

Cross section through a Megacryometeor or Terrestrial micro Comet nucleus.

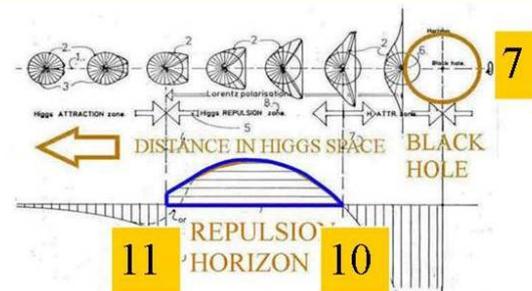
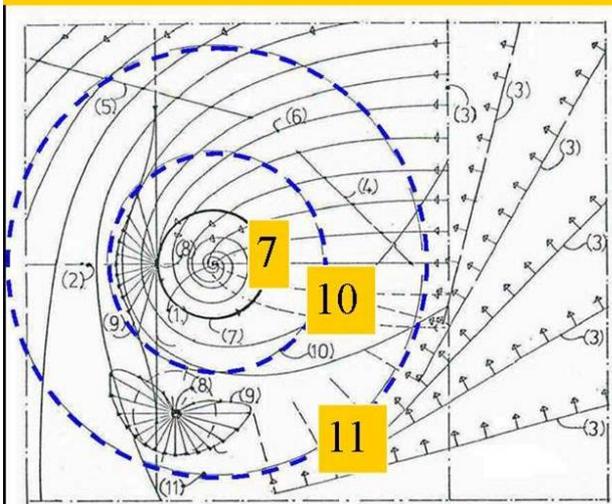


Expected ice structure of the ellipsoidal ice chunk (Megacryometeor) found by J.M.Frais (Madrid). According to Quantum FFF theory this chunk should be the Nucleus of a Terrestrial Micro Comet, produced by a new paradigm black hole, which left the nucleus through the external hole, in consonance with the ice structure of the Hyperion moon. (author Leo Vuyk)



The relation between the Hyperion ice structure and the structure of a Megacryometeor as the result of Micro Black hole ice production inside both nuclei.

According to Quantum FFF Theory, even Nano interference Black Holes have a radial structured electric potential horizon layer (internal positive-protons and external negative electrons charged). They produce H₂ and water leading to the icy nuclei of Comets, Ball Lightning and Megacryometeors. The origin: a Fermion repulsion horizon of the black hole, see below.



7x Higgs quantum curves (2) are depicted for Fermions (3) with different distance to the BH horizon. At location (10) the spin of the fermions will FLIP due to the propeller shape of the Fermion and an opposing force away from the horizon is created by the Higgs vacuum itself down to location (7). The zone between (7) and (10)

Figure 17, The principle of fermion production (also water) and repulsion around a new paradigm black hole.

Early NGC 3801, a cosmic Miracle?

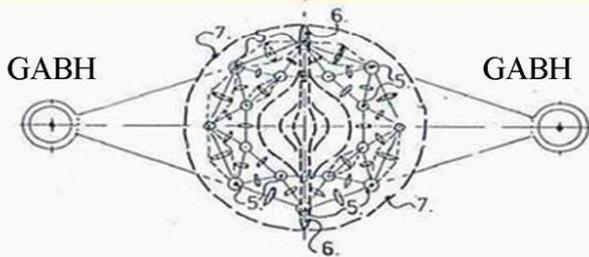
Not so, in Quantum FFF Theory, if we accept to recognize two GABH's (Galaxy Anchor Black Holes) both in line with the central star forming region.



Secondary and tertiary Dual BH Herbig Haro systems, as the origin of different shaped dwarf galaxies and Star clusters.

Below: Simplification of different sized dual black hole (5) based Herbig Haro Systems with dwarf and star formation in between, in the halo of the MW.

Dual Galaxy- and Stellar Anchor Black Holes (G-SABHs) as former Herbig Haro bowshocks, observed in deep space or Planetary Nebula.



Dual black hole systems of all scales, Galaxy and Stars are supposed to be the origin of the self organising universe according to a new electric dark matter black hole model called Quantum FFF Theory. See: Image credit: Prathamesh Tamhane/Yogesh Wadadkar

According to Quantum FFF Theory, Black holes create Proton-Electron plasma at the Fermion repelling horizon. As a consequence dual black hole systems like Herbig Haro objects are equipped with dual EM jets, supported by cone shaped Casimir pressurized Higgs field vacuum polarization. Birkeland and Alfvén current circuits are supposed to be the result. Higgs-Casimir pressure vectors are depicted above and below.

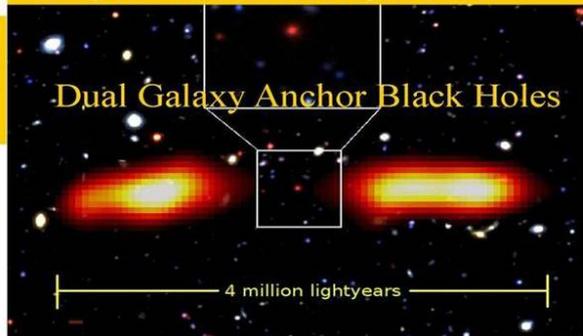
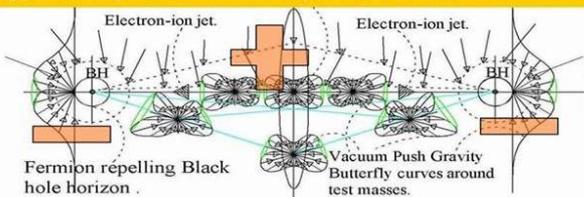
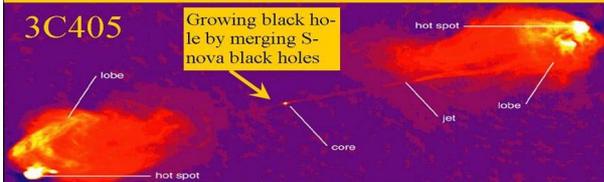


Figure 18, how stars and galaxies are formed by Herbig Haro systems between two equal sized new paradigm black holes.

Binary Star Production in LMC N55 in a System of Evolved Herbig Haro Black Holes alike Quasar 3C405.

Quasars are early HH systems with plasma creation at the hotspots and a growing forerunner Big Crunch black hole at the center. According to Quantum FFF Theory, all Quasars are produced by the trillions of paired black holes spawn by the big bang and creating early Herbig Haro objects, with star and galaxies forming in between. According to Quantum FFF Theory.



The dual black holes (the hotspots) are supposed to produce all the plasma needed for star formation in the center. After stellar Super Nova black hole production, a growing central black hole is created by merging with other BHs being the forerunner of the Big Crunch.

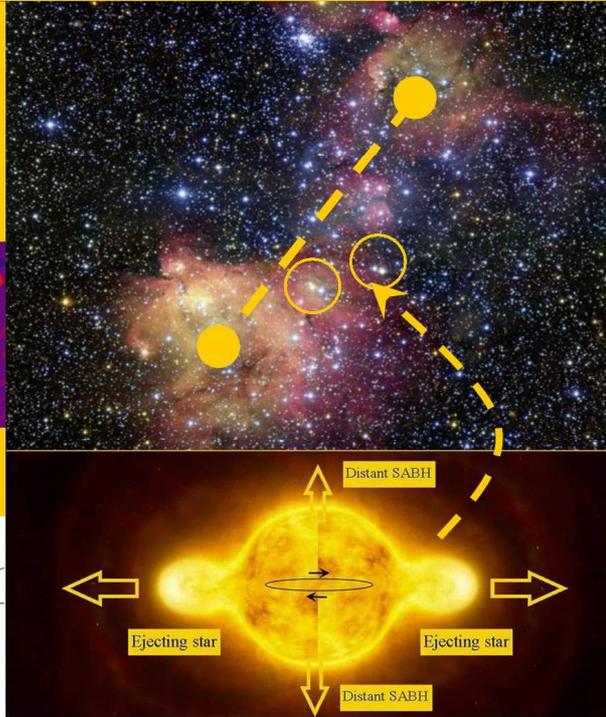
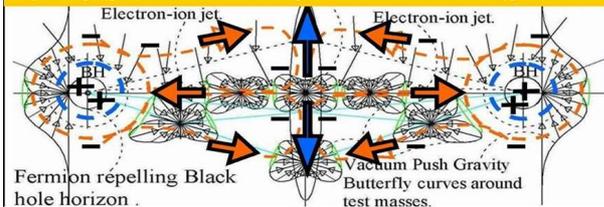
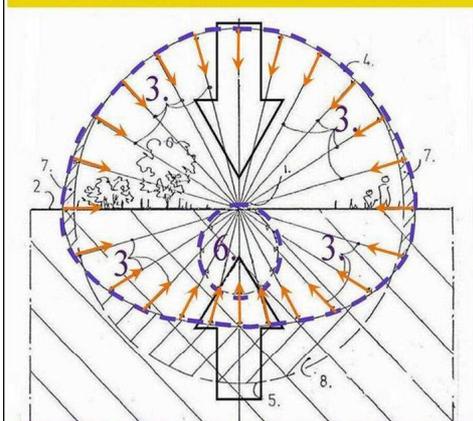


Figure 19, Binary star production .

Equivalence between gravity and acceleration does not hold in Quantum FFF Theory. Mass in motion needs a reference frame of ZPE oscillating Higgs field and Lorentz polarization of conscious propeller Fermions (s) to keep a non accelerated flight.

Quantum Gravity as pressure distribution of the oscillating dual Higgs/Graviton vector field.

Polarized Fermion Mass in motion through the resistive, but also pushing oscillating Higgs vacuum (according to Quantum FFF theory)



Cross section through the dual Higgs/Graviton 3D vector field pressure distribution (or globular Hedgehog) on a point mass (1) located on earth's surface (2), according to Quantum FFF theory. 3+4= Higgs vector field. 6= Graviton vector field originated by the Higgs-graviton field transformation of the earth itself. 7+8= differences with a perfect globular vector distribution. Field variables 3+6 are rendered as inversed arrows. (see also black hole pressure distribution without gravitons)

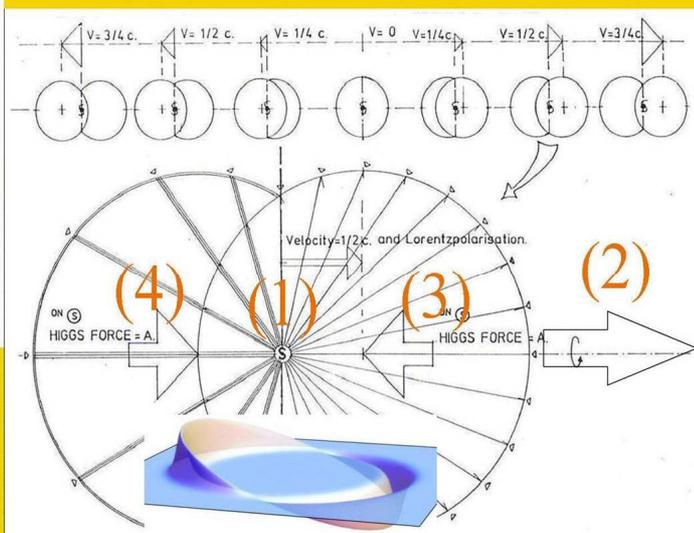
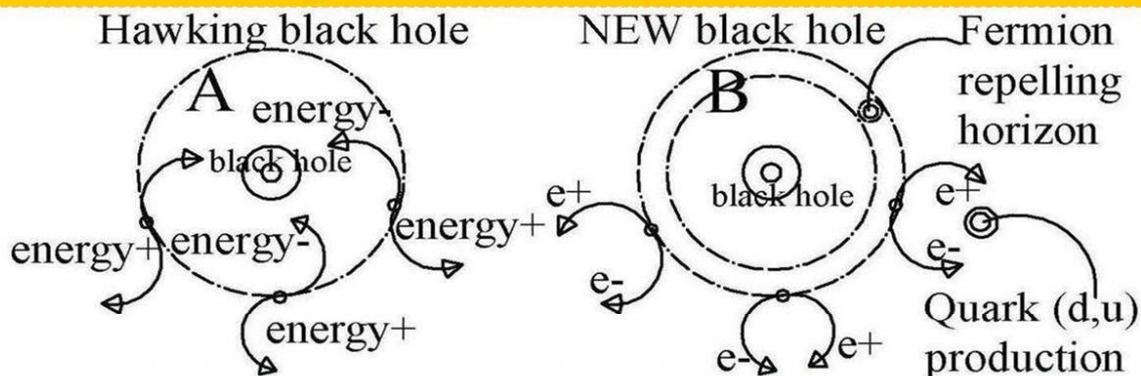


Figure 20, equivalence between gravity and acceleration does not hold in Q-FFF theory.

Fermion/ Dust production and repulsion at small (Herbig Haro) black hole horizons during and after fractal inflation.



According to Quantum FFF Theory, there is no fermion information loss, only photonic information loss in a black hole. Quantum fluctuations around the BH horizon produce pairs of leptons. e^- , e^+ and even compound quarks (d,u, etc, see Fermion 3D string propeller theory: Fermion repelling by spin flip). For tripple BH horizons see image nrs 7, 10 and 11. Event horizon=7, Inner photon ring = 10, Outer photon ring = 11. Conclusion The Big Bang did not produce instantly all the Fermions in the universes. Even now lots of Fermions are produced by all BHs even the largest primordial Big bang splinters located outside large galaxies. see also: <<http://vixra.org/abs/1410.0039>

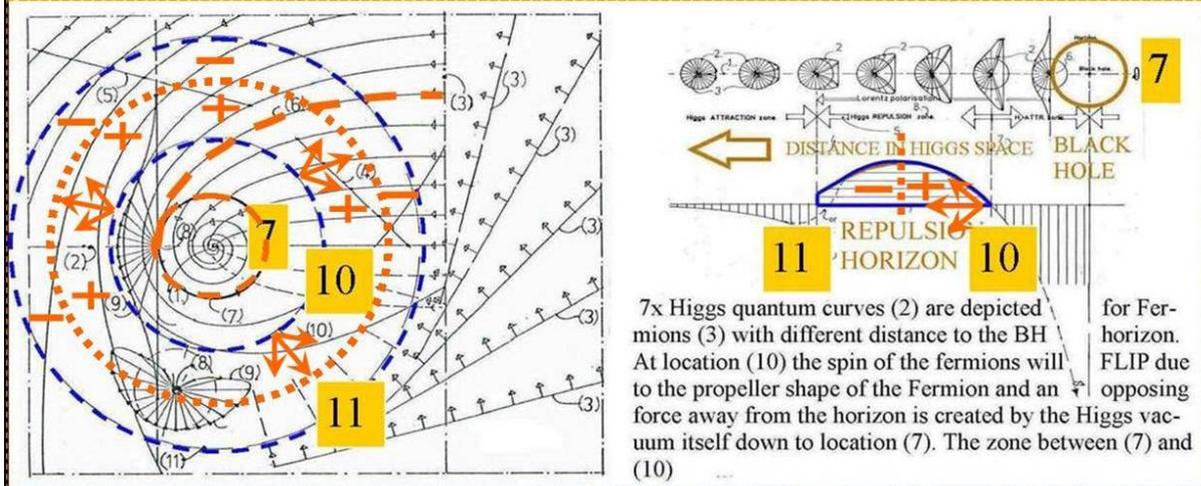


Figure 21, the new electric dark matter Black Hole paradigm.

The New Cyclic Universe with Bang and Crunch.

The Big Bang and Big Crunch originated by Black Hole splitting, pairing and recycling into massive growing central galaxy black holes, according to Quantum FFF Theory.

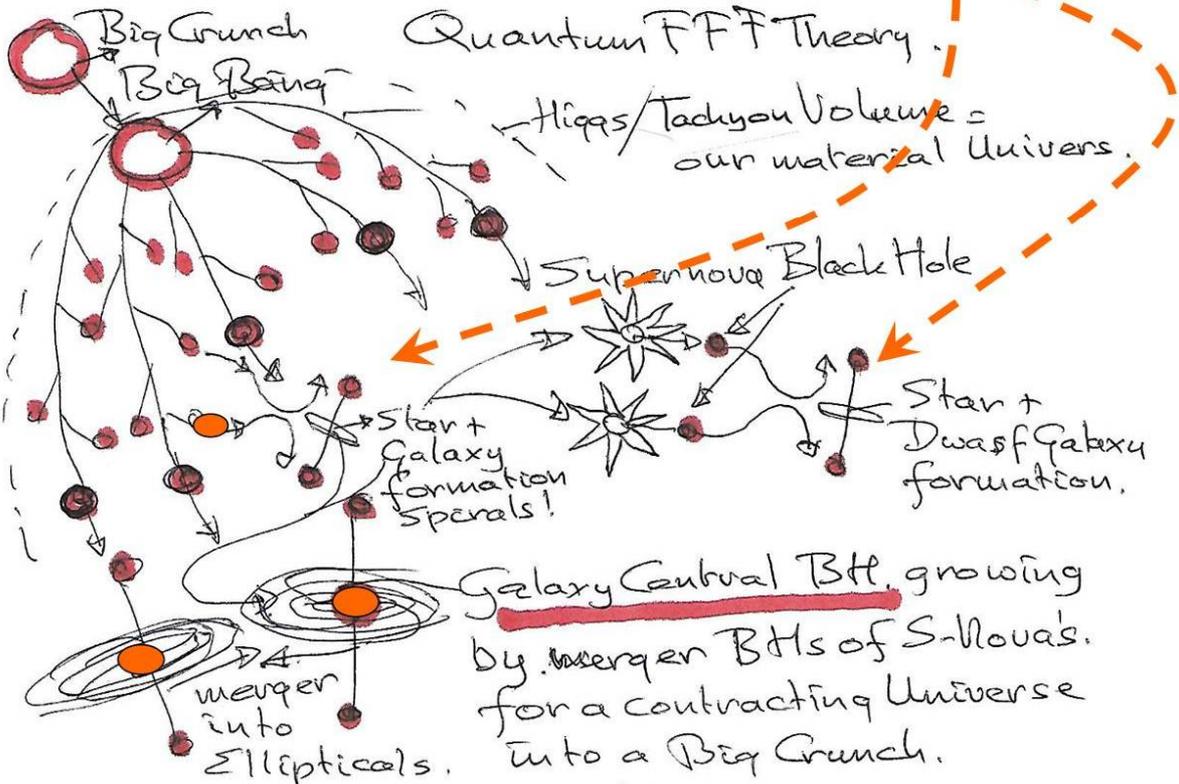
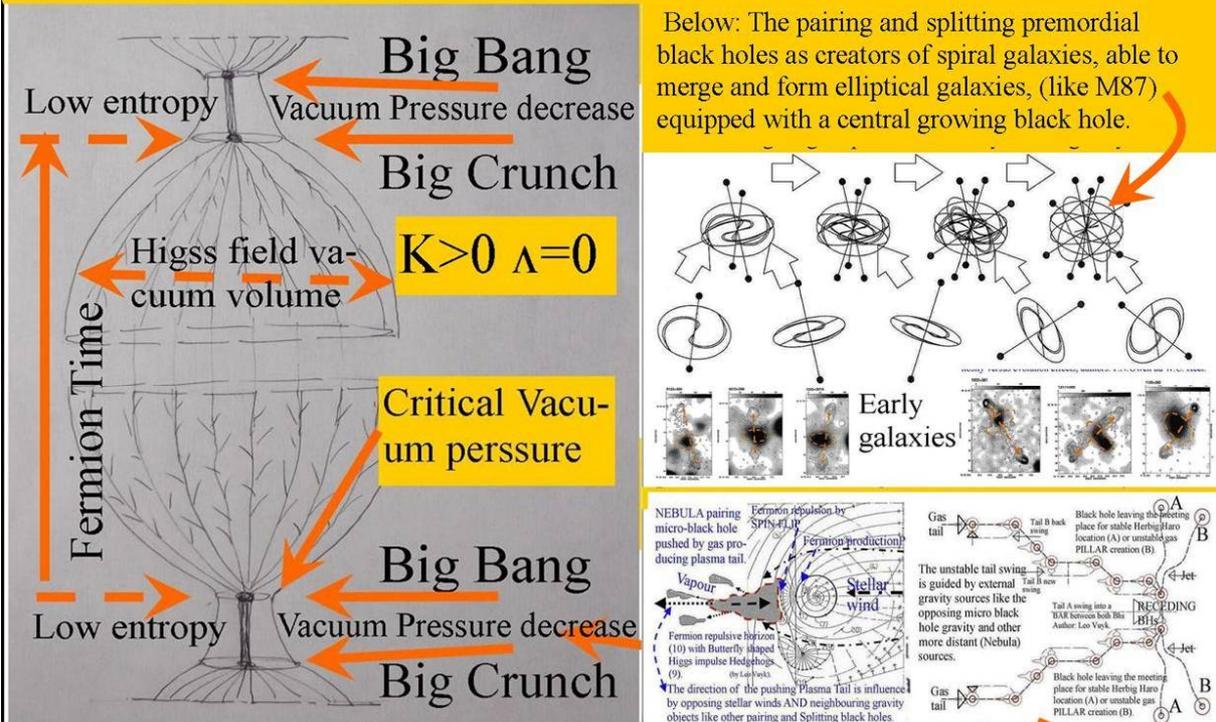
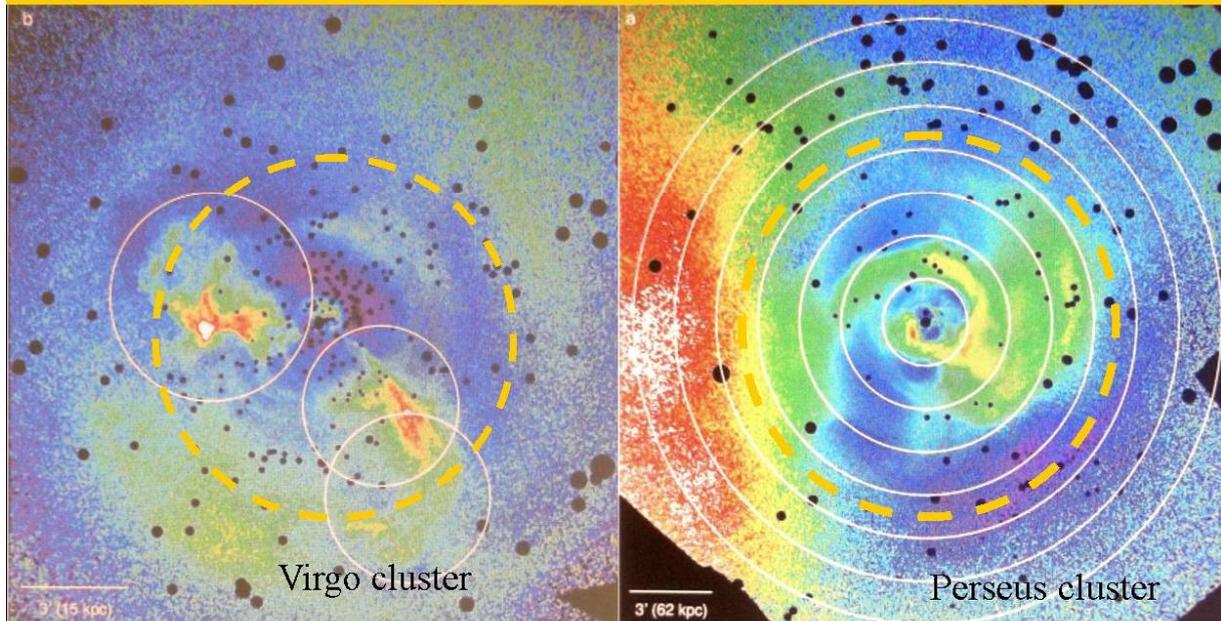


Figure 22, The new Cyclic Multiverse with CP(T) symmetric universes.

X-ray point sources (Dark matter black holes) in Virgo and Perseus cluster centres present evidence for black hole hierarchy. According to Quantum FFF Theory (Function Follows Form), not the giants- but the smallest black holes reside in the centre of galaxies (see M104) and consequently in galaxy clusters. See also: <http://vixra.org/abs/1406.0076>
Images: <http://arxiv.org/ftp/arxiv/papers/1410/1410.6485.pdf>



Below: Example of the galaxy black hole hierarchy model observed at Andromeda (M31 below left) and the Sombrero galaxy (M104 right).

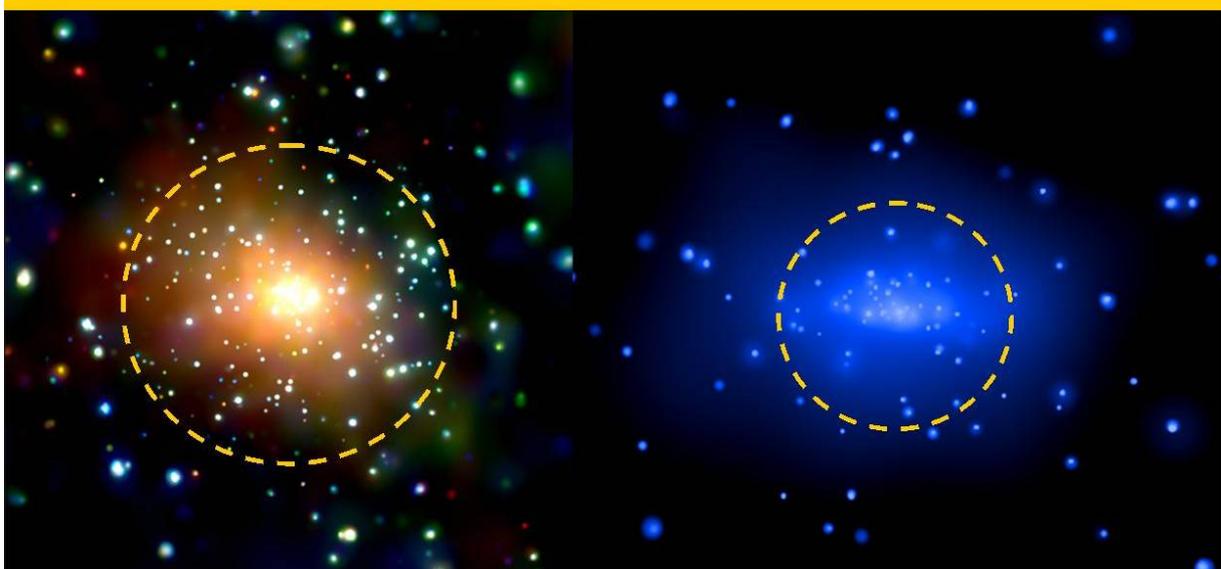
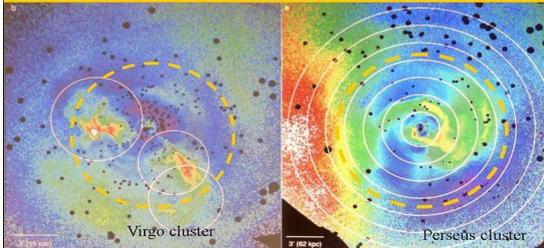


Figure 23, Black hole hierarchy in the center of galaxies and even clusters Virgo and Perseus. As support for Central Monster black holes eating/ merging with small central BHs.

The cool corus mystery of galaxy clusters: small black holes

The Virgo and Perseus cluster have cool corus and show unresolved 3.5 KeV radiation. The solution: In these centers only small black holes are pushed to be eaten by the central giant black hole.

X-ray point sources (Dark matter black holes) in Virgo and Perseus cluster centres present evidence for black hole hierarchy. According to Quantum FFF Theory (Function Follows Form), not the giants- but the smallest black holes reside in the centre of galaxies (see M104) and consequently in galaxy clusters. See also: <http://vixra.org/abs/1406.0076> Images: <http://arxiv.org/ftp/arxiv/papers/1410/1410.6485.pdf>



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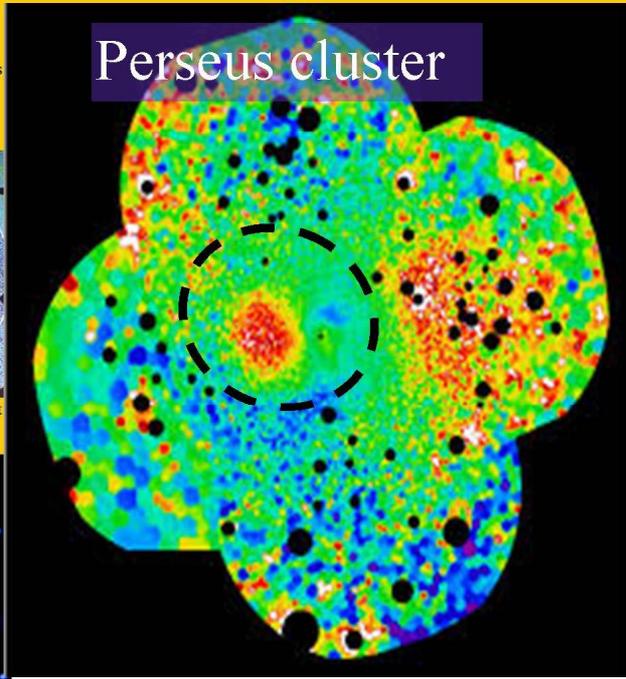
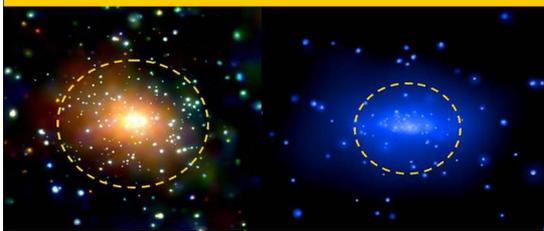


Figure 288,

Charge differences of $1/3$ and $2/3$ between d and u quarks should be originated by the chirality differences with the vacuum.

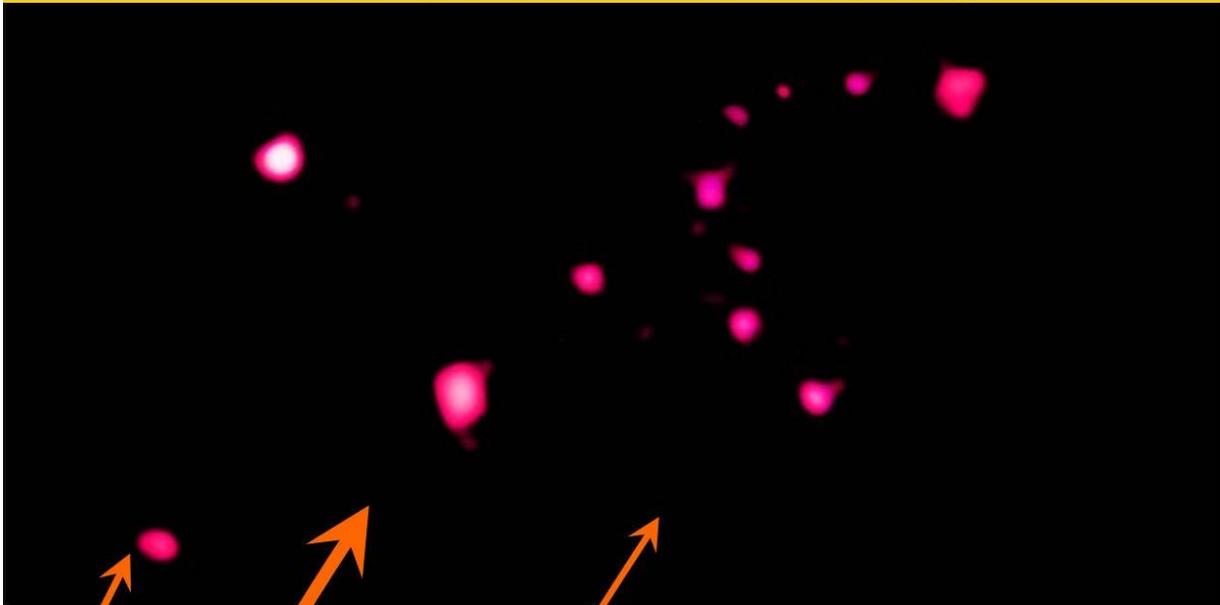
Left, the D and U Quarks of a neutron are depicted. Below the chiral oscillating Higgs field vacuum, according to Quantum FFF Theory.

Axions, Weyl Fermions

Simplified tetrahedral vacuum lattice structure (left), constructed by complex chiral tetrahedral building blocks (right). Each universe has to choose between a left- or righthanded rotation of its tetrahedral building blocks. Each chiral lattice has the Planck length and is supposed to be equipped with at least two oscillating massless new Higgs particles.

Figure 29,

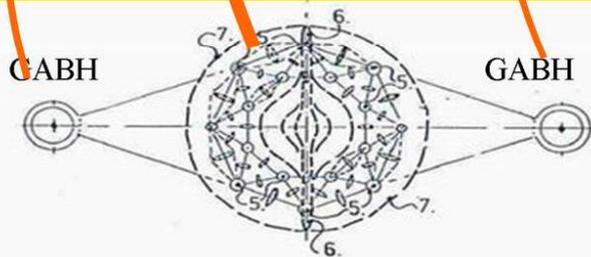
Nasa: "Our Milky Way Galaxy is Embedded Within a Vast Sphere of Black Holes" Quantum FFF Theory says YES!



Secondary and tertiary Dual BH Herbig Haro systems, as the origin of different shaped dwarf galaxies and Star clusters.

Below: Simplification of different sized dual black hole (5) based Herbig Haro Systems with dwarf and star formation in between, in the halo of the MW.

Dual Galaxy- and Stellar Anchor Black Holes (G-SABHs) as former Herbig Haro bowshocks, observed in deep space or Planetary Nebula.



Dual black hole systems of all scales, Galaxy and Stars are supposed to be the origin of the self organising universe according to a new electric dark matter black hole model called Quantum FFF Theory. See: Image credit: Prathamesh Tamhane/Yogesh Wadadkar

According to Quantum FFF Theory, Black holes create Proton-Electron plasma at the Fermion repelling horizon. As a consequence dual black hole systems like Herbig Haro objects are equipped with dual EM jets, supported by cone shaped Casimir pressurized Higgs field vacuum polarization. Birkeland and Alfvén current circuits are supposed to be the result. Higgs-Casimir pressure vectors are depicted above and below.

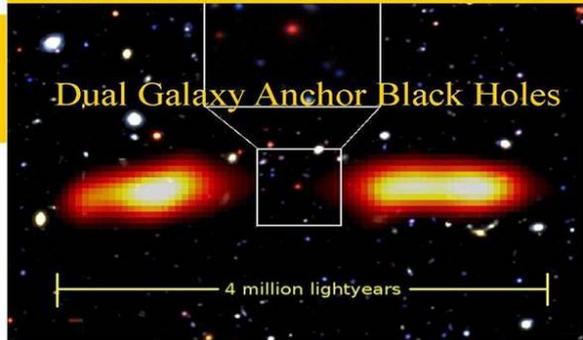
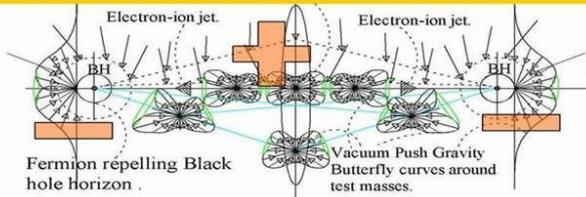


Figure 30,

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