

BLACK HOLE DYNAMICS/2017

1. What is a Black Hole?

Observation is the only way possible of getting information of the distant Nature Reality addressed as '**Black Hole**' and Photon (Light) is the only Messenger to bring any information from millions of light years afar.

But above information is not adequate at all to define what a Black Hole is and hence, the scope arises for '**Scientific Deduction**' upon the solid basis of the so far proven applied theories of **Physics, Logics** and **Mathematics**.

However there is no observation of a real black hole in the so far developed picture base of the background science, rather than artworks of conceptual modeling and computer simulations.

2. Black Hole or Black Globe?

Even though it is addressed as a black hole, the Scientific Deduction shows the possibility of its being, either as a **hole** or a **globe** because no light is emitting out to figure it out.

But in Logical reasoning, there is a big difference between the two terms '**Black Hole**' and '**Black Globe**' because there could be **nothing** in a 'Hole' unless specially mentioned, while a 'Globe' ought to be filled with some **Matter**.

If it is going to be '**Nothing**' in a 'Black Hole', what happens to the huge Energy Mass of Dark Matter?

According to the universal law of '**Conservation of Energy**' ($E=Mc^2$) of **Albert Einstein**, Energy could neither be created nor destroyed. Therefore it could not be a '**Hole of Nothing**' but more acceptably a '**Globe of Matter**'.

*"Then it is much comfortable with Mathematics and Logics to conclude that a **Black Globe** is being **grown** at the center of a **Contracting Galaxy** while a **Black Globe** is being **depleted** in an **Expanding Galaxy**".*

3. Gravity is not the magical force in Black Hole Dynamics to abstract everything:

Nothing could escape from the gigantic force of a black hole and not only the atomic matter but even the tiniest known particles such as photons, heat etc. as well are absorbed in to the rotating center.

With reference to the so far developed knowledge base of Astrophysics, the force is said to be **Gravity**, born due to the '**Curvature of Space Time**'.

As an *Independent Explorer*, I observe that the '**Modern day Physics**' has marched far towards '**Uncertainty**' missing the track for **Reality**, by conservation and believing of some unproven faulty theorizations from the late century.

Confidence in Physics in mindset of the general Global Public has remarkably dropped as a result and even some laymen are shouting that "*Gravity is not found yet*". As the worst of that, some religious extremists point out that "*Physics is not reliable for its theories could be changed from time to time*".

Therefore Physicists of the 21st Century have got the big responsibility upon reclamation of the '**Lost Dignity of Physics**' through filtration of the conserved stock of so far accumulated knowledge base aiming '**Certainty**'.

I dare say, the Reality of theories and principles of Physics could never be changed even among Galaxies if the phenomena are well explained. Therefore categorizations in Physics such as **Classical** and **Modern** should not be there and instead the '**Unique Reality in Nature**' has to be focused with no such differences.

By name of the good will of '**Reformation behalf of Advancement**', I hereby declare the **Challenge** upon the firm basis that "*Gravity is not explained by 'Curvature of Space Time' even though; the Mechanism behind the natural phenomenon was not well explained by the Newtonian Gravity*".

There is neither a realistic logic behind, nor observation in support of the problematic theorization from the late century.

Facts to support the anti-logics:

- There are only two types of **Black Hole Dynamics** to be observed in the Universe such as; '**Contracting Dynamics**' and '**Expanding Dynamics**'.
- In the contracting dynamics, it is observed that everything is absorbed in to a growing globe of **Dark Matter** of the highest rotary dynamics at the center.
- In the expanding dynamics, a globe of **Dark Matter** is depleting in to **Hydrogen** gas as the first step of the gradual evolutionary process of creating of a new Galaxy.(we are living in a Galaxy which is aged but still at the phase of expanding)

The anti-logic:

If **Gravitational Attraction** is born whereas 'Space Time' is curved in, then a **Gravitational Repulsion** too, must be in function whereas the 'Space Time' is curved out. Then "is that **Gravitational Repulsion** which decentralizes matter in an **Expanding Galaxy**?"

No, **Gravity** never repels **Matter** and hence, the interrelation between '**Curvature of Space Time**' and '**Gravitation**', as declared by the famous theory is **contradictory**.

The magical force behind the **Black Hole Dynamics** could not be **Gravity** at all and the **Mechanism** behind Gravity is a different phenomenon in Nature, which could be more simply

explained without curvatures or strings in the space. (Please refer '**Space Dynamics –V2/2009**' of which an edited brief is furnished at <http://www.cyrilhtgamage.com/index.php/publication-engineering/88-publication/174-mechanism-of-gravity>).

4. Black hole Dynamics:

Theory of '**Spherical Vortex**' explains the black hole dynamics on the firm basis of **Fluid Dynamics** and due pressure drop against accelerated rotary speed towards the center. Then the Readers may question "What is the fluid?"

That is the exact point which the Scientists of the late century wronged by overlooking the great importance of the **Galactic Medium** which is also addressed as the **Vacuum**.

[The properties of the **Vacuum** medium are Mathematically derived as; **Density $\rho = 0.400 \text{ g/cm}^3$** and **Pressure $P_0 = 1.8 \times 10^{20} \text{ dynes cm}^{-2}$** -please refer 'The Dynamic Model of Atom'/2017 at www.cyrilhtgamage.com for the derivations]

4.1-Rotary Dynamics to be observed in Nature:

We all are familiar with vortex like dynamics in Nature such as; Tornados, Hurricanes etc.

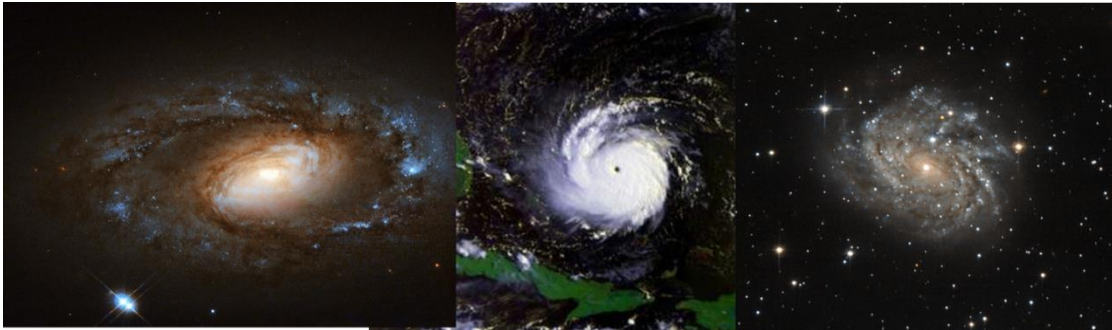


FIGURE-01(A hurricane among Galaxies)

The middle one is just a hurricane vortex among the two pictures of Galaxies in the figure-01 and I am asking "Don't you observe some similarity of things in these rotary dynamic organizations?"

Yes, But **Gravity** is not the **Governor** in case of a Hurricane and neither **Strings** nor **Space Time** is curved there. Then what is the force?

Simply the **Bernoulli's** principle could explain how a low pressure center is created by rotary fluid dynamics to abstract not only the clouds but almost all the things including even roofs of our houses. Isn't that the same principle behind the black hole dynamics too, to abstract even living worlds with entire solar systems?

4.2-What is the function of a Vortex in Nature?:

A vortex is formed naturally whereas a flux of any **Fluidic Medium** is transported to compensate a **Pressure Gap**. In case of a Hurricane or a Tornado, the atmospheric air, as the fluidic medium, is transported to upper atmospheric layers to compensate a created vacuum.

4.3-What is the Direction of a Vortex?:

The most important feature to be noted there is the '**Direction**' of the material flow. It is directed from the **high pressure zone** towards the **low pressure zone**, with no arguments about that. And the direction of the flow can easily be explained in a 1D, 2D or 3D Cartesian plane.

But in case of **Black Hole dynamics**, the '**Direction**' of the material flow cannot be explained by means of the so far known dimensional axes of the Cartesian plane. That is mainly because the material flow of a '**Spherical Vortex**' is directed along the **4th Dimension**.

Direction of a **Spherical Vortex** is therefore defined as;

- 1) From the **Absolute Zero**(Void) towards the **Infinity** in case of **Expansion**
- 2) From the **Infinity** to the **Absolute Zero**(Void) in case of **Contraction**.

4.4-Theory of Spherical Vortex:

'Matter' is formed as an observable 'Rotary Dynamic Organization', by a flux of 'Energy' flown in-between the absolute zero(Void) and the Infinity.

The Spherical Vortex is reversed automatically before reaching towards the both extreme ends (Void or Infinity).

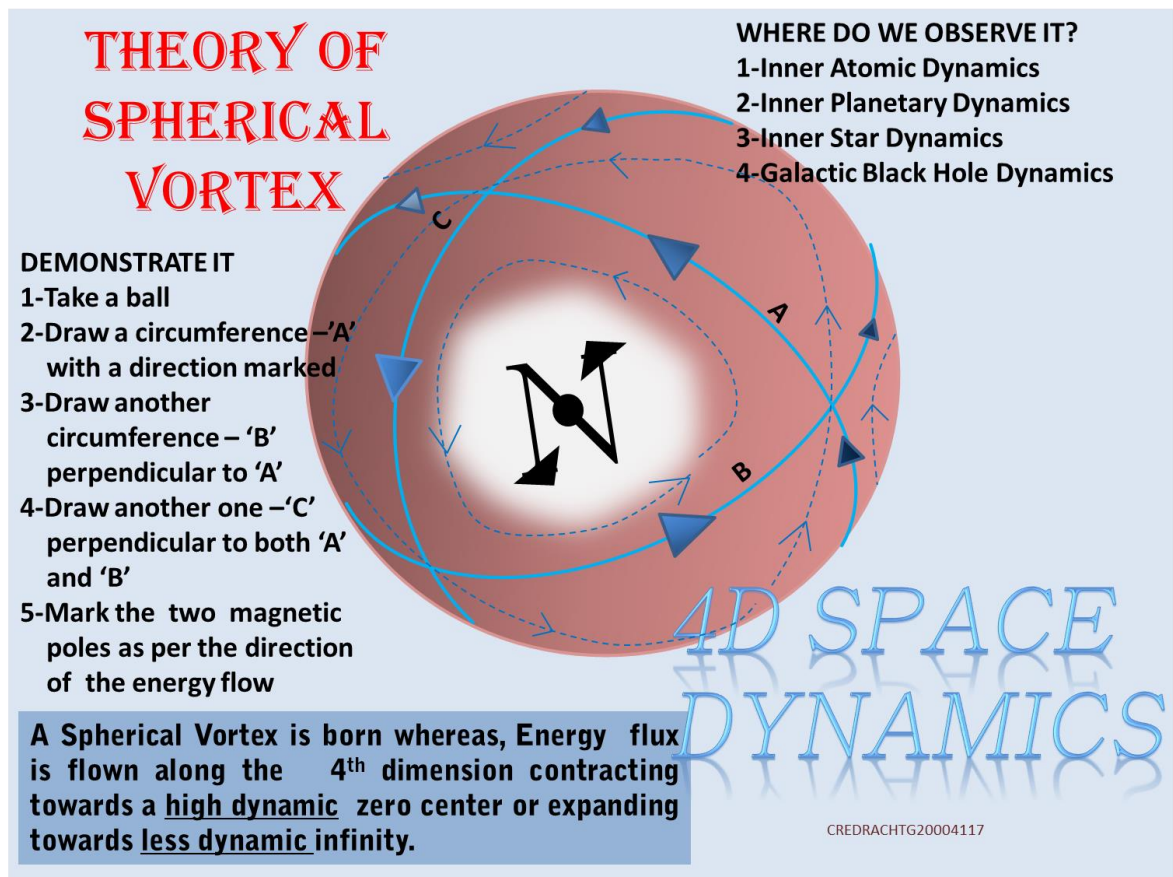


FIGURE-01 (DEMONSTRATION OF THE SPHERICAL VORTEX)

Resultant paths of motion of Energy flux are marked by dotted lines in the figure and it can be observed that almost all the paths are in the same direction about the polar axis-NS. Also it is observed that the flux is moving a bit zigzag way in the equatorial regions of the vortex. Though the paths of flux are as appeared on the surface of the sphere, the flux never repeat the same path twice and instead **converging in** to the globe or **expanding out** in spiral way.

4.5-What is the 4th Dimension?:

Again there is a big conflict between our **Exploration** and the **Acceptance** in the background art. Majority of Physicists believe that, '**Time**' is the 4th dimension as **Albert Einstein** has declared.

But the Exploration emphasizes that the 4th dimension too, ought to be a '**Distance**' just like other three known dimensions 1D, 2D and 3D which could be shown in a Cartesian plane.

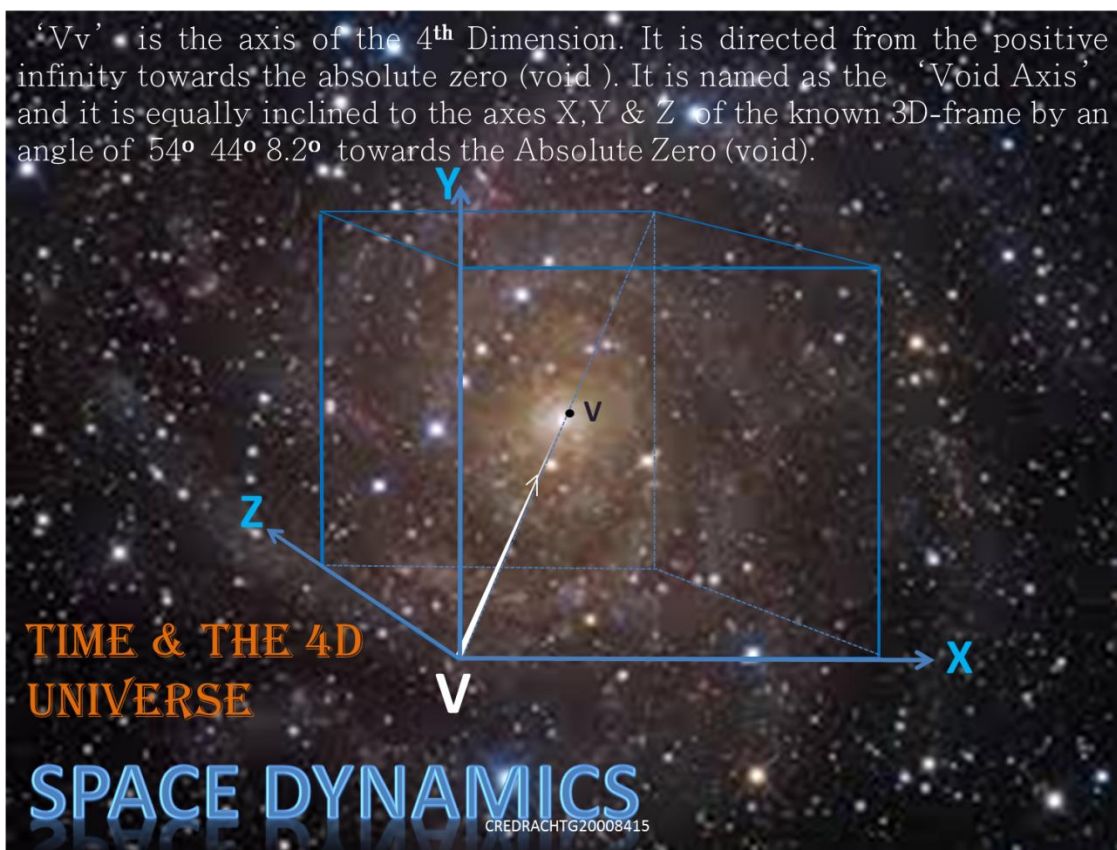


FIGURE-02(DIMONTRATION OF THE 4TH DIMENSION-abstracted from 'Time & The 4D Universe'/2015)

Man is a keen **Observer** and growth of his **Thinking Power** seems to have an evolutionary **Development** in parallel with the knowledge of **Dimensions**, in the far historical march started from the **Stone Age**. (Please refer 'Time & The 4D Universe'/2015 at www.cyrilhtgamage.com to see how 'Time' is differently being elapsed along the 4th Dimension)

Evolutionary Power of Thinking



1D thinking



2D thinking



3D thinking

Readers of 'Open Mind' must comprehend that '**Knowledge**' has a direct relationship with the '**Power of Dimensional Thinking**' of Mind.

But it is very unfortunate of a thing that, Man of the current Age by the 21st century, has reached to a **Stagnancy** of Knowledge at **Uncertainty**, due to Conservation and Believing of some unfiltered faulty theorizations from the 20th century.

❖ Special note:

However to accept or not, I have got to say that, "there could almost be nothing in worlds to remain unexplained by Physics, if the 4th Dimension is accepted as the 'Distance' in the space between the extreme 'Expansion' and extreme 'Contraction' of Matter".

4.6-Black Hole Mechanism:

A huge low pressure zone is created by rotary dynamics at the center of a Contracting Galaxy and everything including solar systems is absorbed by the big pressure gap. Then the readers may question how could a force be induced upon 'Matter' while they are resting in the Vacuum of zero pressure?

But we should not forget that the free space what you call vacuum is not the Absolute Vacuum (**Absolute Rest**) and it is a medium of Matter with a density ($\rho = 0.400 \text{ g/cm}^3$) and a huge pressure ($1.8 \times 10^{20} \text{ dynes cm}^{-2}$) as derived mathematically. Then everything including solar systems is pushed forward towards the zone of **zero pressure** at the high speed dynamic center of the galactic vortex.

That is almost as same as how things are attracted in to the high dynamic center of a Hurricane or a Tornado. Wind flow towards the center of a Hurricane vortex is of very high speed as you observe but it could never exceed the **speed of sound** because it is the **critical speed** of atmospheric air medium and lets work it out;

$$v = \sqrt{\frac{2P}{\rho}} = \sqrt{\frac{2(1.0 \times 10^6 \frac{\text{dyne}}{\text{cm}^2})}{1.293 \times 10^{-3} \frac{\text{g}}{\text{cm}^3}}} = 39,329 \text{ cm/s} = 393.3 \text{ m/s. (dependent upon temperature, humidity etc)}$$

Similarly there is a limit of maximum speed for **Matter** moving in the free space medium (**Vacuum**) and it is the 'Speed of Light';

$$c = \sqrt{\frac{2P}{\rho}} = \sqrt{\frac{2(1.8 \times 10^{20} \frac{\text{dyne}}{\text{cm}^2})}{0.400 \frac{\text{g}}{\text{cm}^3}}} = 3 \times 10^{10} \text{ cm/s} = 300,000 \text{ km/s}.$$

Special note:-

❖ **What happens to Matter if they move exceeding the critical speed of the medium?**

Speed of light is not a property belonged to Light, but a property of the free space medium (vacuum). Not only Photon radiations but other FM waves such as Gravity, Radio, TV & Radar or AM Radio could never exceed the critical speed in the vacuum medium. But neutrons, Gamma rays and Dark Matter can exceed the limit with no difficulty at all. (Please refer 'The Dynamic Model of Atom' at www.cyrilhtgamage.com).

4.61-Contracting Mechanism of a Black Hole:

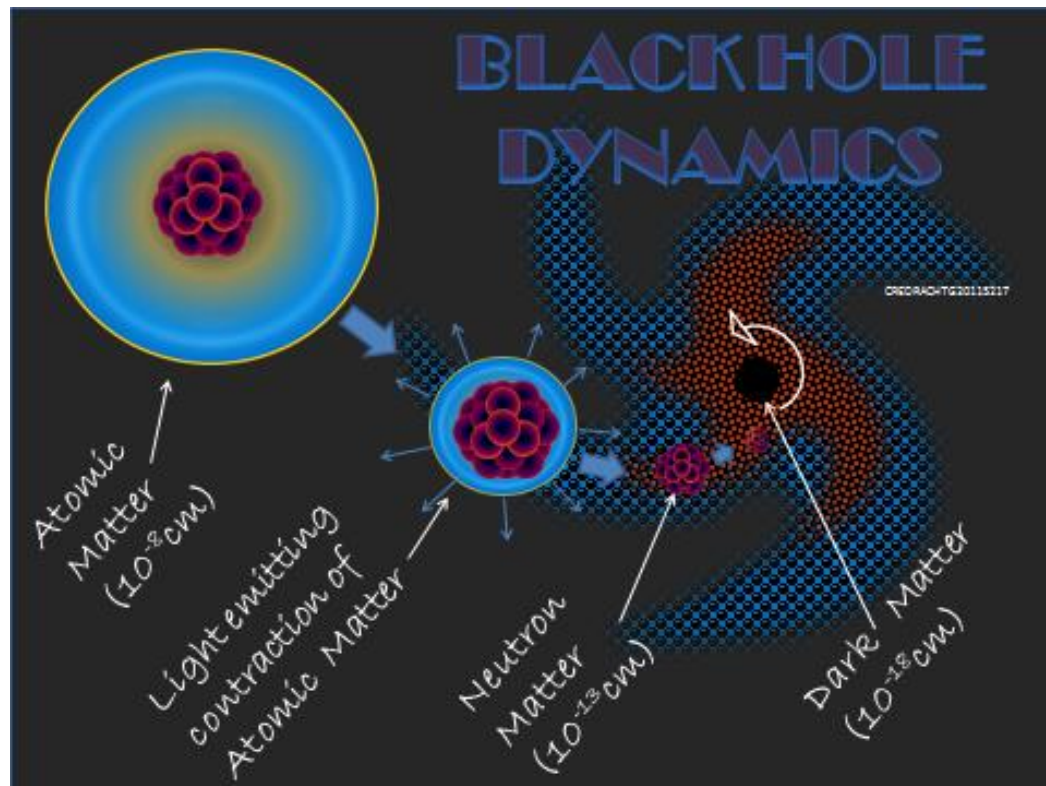


FIGURE-03(CONTRACTING MECHANISM OF BLACK HOLE)

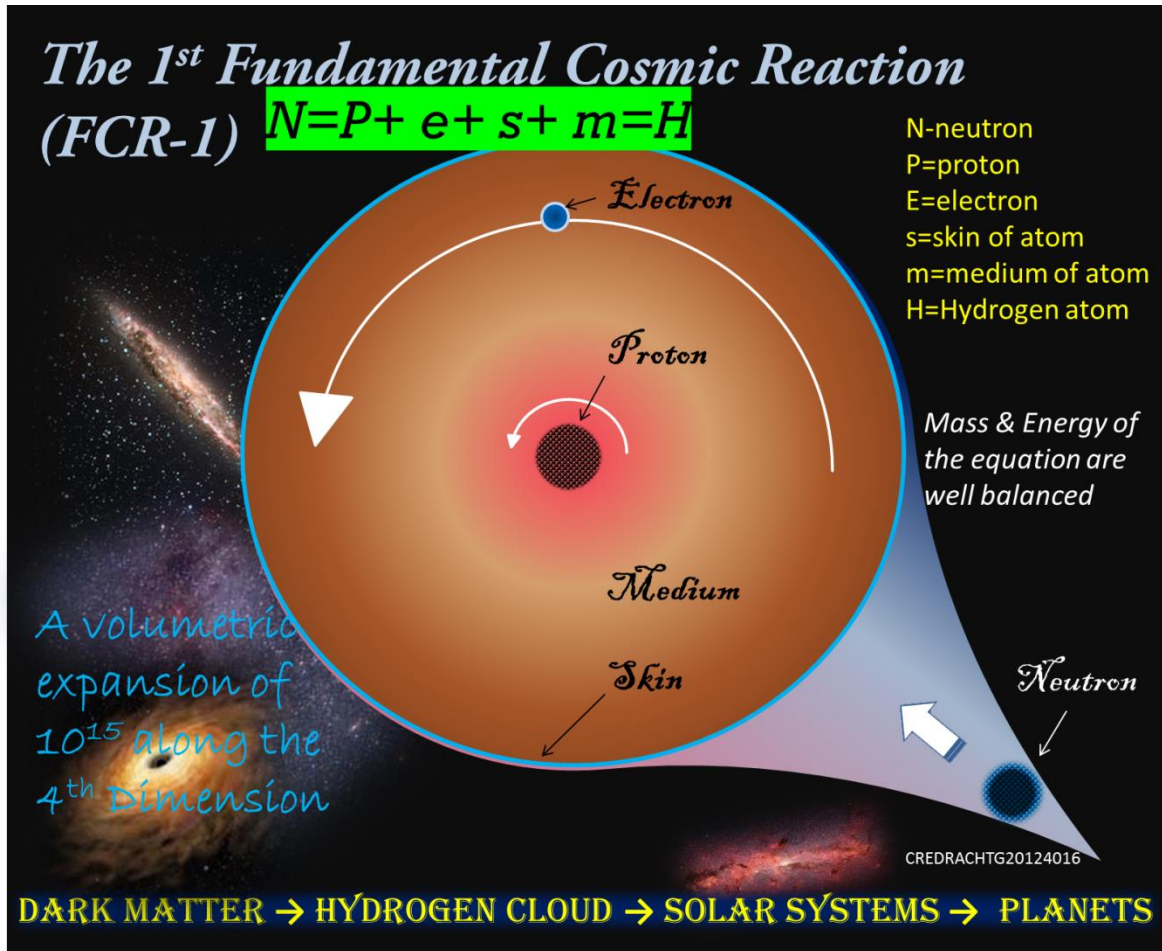
As shown in the figure-03, the atomic bodies in Solar Systems are accelerated towards the Black Hole as explained above by fluid dynamics. By the speed nearing to the speed of light, each atom is undergone to a **phase transformation** that, **skin particles** starts to be emitted out as **Photons** (Light). Consequently the atom is completely contracted up to the size of its **nucleus**, in to the **Neutron Mass**. Further to that, the Neutron mass is contracted in to **Dark Matter**. The total volumetric scale drop up to Dark Matter is ten to the power thirty (10^{30}) in size.

But well before the entire Galaxy is lost in contraction, the dynamics should definitely be **reversed** automatically because there is no adequate **Energy** (high speed medium flux) remained to run the **Vortex** any further. But why is it reversed without being stopped?

'Black Hole Dynamics' is gradually held up when energy flow is not adequate to run and thence **Bernoulli's** pressure of the medium starts growing due to the **drop of speed** in rotary dynamics.

Dark Matter has no existence in stationary state, other than being moved under zero pressure. Because of the pressure growth from the surrounding, the **Black Globe** starts expanding again in to **Neutrons** as the first step and thence in to **Hydrogen** as per the **1st Fundamental Cosmic Reaction(FCR-1)**.

4.62-Expanding Mechanism of a Black Hole:



The expansion is but almost a **big bang** in consideration of the sudden scale growth of the volumetric hulking by 10^{30} in size. At the same time of the explosion like expansion, a big volume of **Energy Matter** (a speedy flux of the vacuum medium) is emitted as the first step of creating of a new Galaxy within a **balloon like skin boundary**. (Please refer '**Theory of Skin Boundary of Matter**'/2009 as edited in '**The Dynamic Model of Atom**'/2017 at www.cyrilhtgamage.com)

The medium flux (**Galactic Wind**) with Hydrogen gas is issued from the expanding **Black Globe** at the speed of Light. Then we tend to think that a Galaxy should grow up at the speed of light but that is wrong. The **Volumetric Growth** of a Galaxy is at a slower speed well below the speed of light. The reason is the difference of 'Time' behavior in **4D Dynamics** of the spherical vortex. (pl refer '**Time and the 4D Universe**'/2016 at www.cyrilhtgamage.com to see how the speed of light is slowed down wonderfully under 4D dynamics of the Spherical Vortex.)

❖ *Special note:-*

*Our Solar System in the Milky Way is neither at **Stationary** nor orbiting about the center at **uniform** velocity. Instead it is flown by the **Galactic Wind**, expanding spirally out from the galactic center, being succumbed to the **Black Globe Dynamics** in the Expanding Spherical Vortex. But where is the black globe and why it is not observed? Milky Way is just a single wing of the gigantic vortex and the dynamic dark center is not visible because, it is still been expanding in to Hydrogen. Then readers must comprehend that **Gravity**(either Classical or Modern) is not the **Governing Agent** in **Galactic Dynamics**.*

4.7-Formation of a Universe:

The evolutionary process in formation of a Galaxy by starting from Hydrogen has been repeatedly explained in former monographs but a brief is furnished herein too for new Readers;

- A. The Hydrogen mass formed as a Ring cloud by the Vortex is decentralized in to Clusters by Gravity. (**Newtonian Gravity** is born at the same time with the birth of the **Atomic Mass** (Please refer '**Mechanism of Gravity/2009**' at 'Space Dynamics-V2' at www.cyrilhtgamage.com)
- B. **Nuclear Fusion** takes place at the Cluster centers due to Gravity based **High Pressure** growth at the centers and **Helium** is the next baby born for the worlds. Young stars are formed in this manner and Helium is accumulated in the core.
- C. **Solar Spherical Vortex** is formed and a **Low Pressure** is created at the inner core due to high rotary dynamics of the vortex. Under low pressure condition at the inner core, a small globe of **Dark Matter** starts growing by absorption of a percentage of energy from the nuclear fusion itself. (Please refer Solar Black Hole Dynamics and formation of Hollow Globes due to **Inverted Gravity** occurs in the gravity sources- "**Solar Mechanism**"/2010 at www.cyrilhtgamage.com)
- D. **Magma** is the third baby born by **Helium Fusion** under **low pressure** conditions in the outer core region of Stars and it is pushed in to the **crust** by **Inverted Gravity**. However by the time when Hydrogen is depleted and no more adequate for a nuclear fusion, then the globe of Dark Matter grown at the center starts expanding in to Hydrogen all at once by reversing of the dynamic.

- E. At the reversed dynamic state, a **huge pressure** is developed inside and the star is exploded like a **big bang** projecting **Magma** in to the outer space. That is the beginning of a **Planetary System** for the world. (Please refer 'Dynamic Stability in Orbital Motion of Planets'/2016 under Space Dynamics at www.cyrilhtgamage.com)
- F. Dark Matter based **Spherical Vortex Dynamics** is a common phenomenon in the space and most of the planets become **Productive** by activation of the vortex about the core. Magnetic Polarization of a planet and spinning is caused by the spherical vortex which is run by absorption of Energy from the **Solar Wind**. (pl refer 'Earth Mechanism'/2010 and '**Galactic Dimension in Climate Change**'/2011 at www.cyrilhtgamage.com to see how seasonal weather change occur on Earth).
- G. Reversal of the Vortex Dynamics is also a common phenomenon and Growth of Productive Planets is held up at some stage when the flux of solar wind is disturbed under special circumstances. This situation is recognized as **Magnetic Reversal** and perhaps the planet is exploded due to increased inner pressure and one or two tectonic plates could be lifted and projected in to the space. That is the birth of **Moons** to the worlds. (Please refer '**Earth Mechanism**'/2010 under Space Dynamics at www.cyrilhtgamage.com).
- H. Ultimately a similar type of rotary dynamics is observed in the **Atoms** and **Neutrons** as well to comprehend that as a whole, the entire universal dynamics is born by interaction with **Dark Matter**. (Pl refer to '**The Dynamic Model of Atom**'/2017 at www.cyrilhtgamage.com).

5.0 The Infinite Null Universe (Multiverse):

5.1- Albert Einstein's universal law of '**Conservation of Energy**' quantifies the **Ultimate Energy Content** in **Matter** (by $E = Mc^2$) and it could never be destroyed rather than changing in to different forms.

5.2- Sir Isaac Newton has defined Kinetic Energy of Matter as $\frac{1}{2}Mv^2$ and whence the Matter is moving at the speed of light, the ultimate kinetic energy content $= \frac{1}{2}Mc^2$. As such, it is just a half of **Albert Einstein's** total energy content of Matter and then what has happen to the other half?

5.3-The both late Scientists are perfectly correct and we- *the people from 21st century-* have to realize that the other half is nothing else but **Volumetric Energy** of Matter. What is it?

As abstracted from 'Space Dynamics-VI' /2009:-

6.22-Volumetric Energy:

It is the potential energy that any object gains by owing a volume in a pressure medium as defined in the technical paper '*Space Dynamics-VI*' published in 2009 such as;

2.3 VOLUMATRIC ENERGY

Volumetric Energy of matter is defined hereby as the work done by the matter in its expansion from the zero volume in to the present volume, against the external pressure..

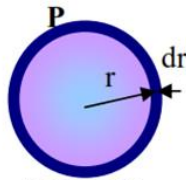


FIGURE-01

$$E_v = P \int_0^R 4\pi r^2 dr = P \frac{4\pi r^3}{3}$$

$$E_v = PV \dots\dots\dots(3)$$

Where. P-external pressure & V-volume

Therefore any matter in the space, which holds a volume against the medium pressure, possesses a volumetric energy.

5.4- It has been mathematically proven that, $PV = \frac{1}{2}Mc^2$. (please refer 'The Dynamic Model of Atom'/2017 at www.cyrilhtgamage.com).

Then the Ultimate Energy Content of Matter = Kinetic Energy + Volumetric Energy

$$E = \frac{1}{2}Mc^2 + \frac{1}{2}Mc^2 = Mc^2 .$$

Therefore **Albert Einstein's** Universal Law of $E = Mc^2$ is a **Reality** and applicable with no difference for any Matter within the Universe (in side of a Galaxy).

Then what is the **Reality** in outside of a Galaxy?

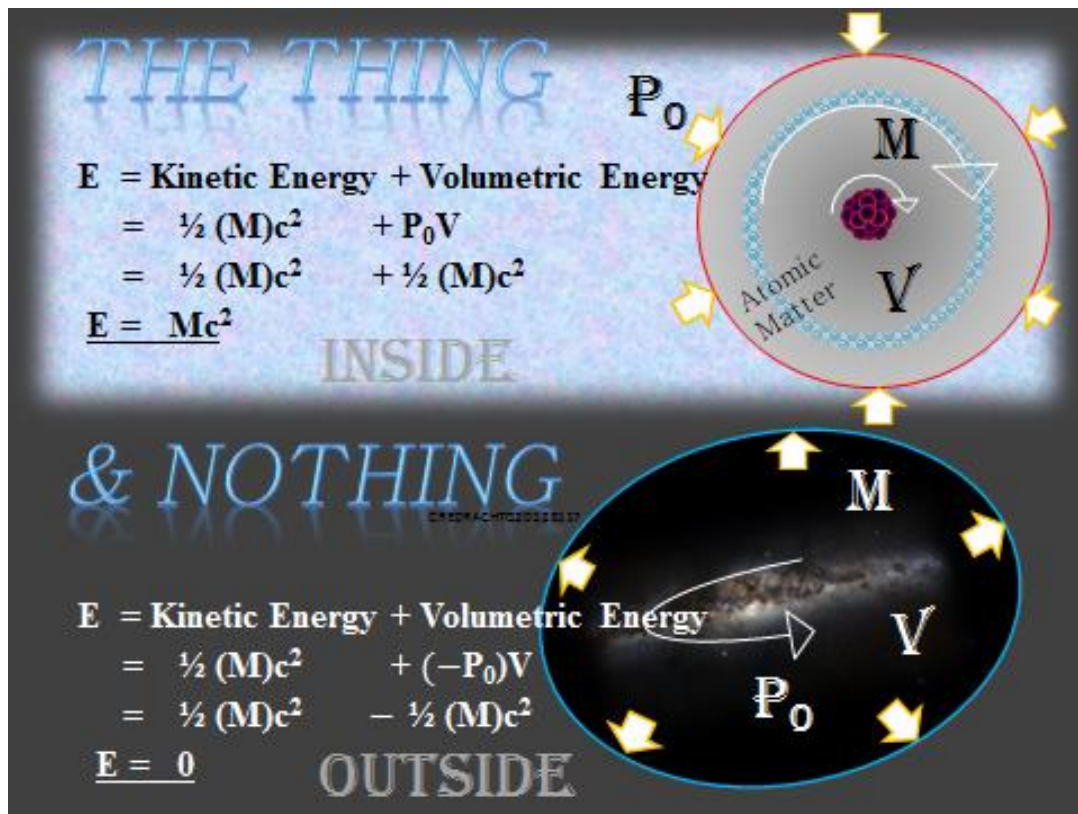


FIGURE-05(NOTHING REMAINS AS MATTER IN THE OUTSIDE)

5.5- What is Multiverse?

If a Galaxy can be considered as one **Universe**, thence the outer space in which Galaxies crop up and die down is named as the **Multiverse**.

Relative to the outside space, Energy is balanced to zero because **Volumetric Energy** of Matter is a **negative factor** there. Pressure in the outside **Null Universe** is at the **Absolute Zero** and hence the Galaxies have consumed their own energy, in order to own a space for **Existence**.

5.6-What is the World?

As Albert Einstein had foreseen, the 'World' is a '**Pendulum type of a Dynamic Package**' of which '**Time**' is '**Relative**' to the '**Observer**'.

5.7-What is Absolute Rest?

Sir Isaac Newton has struck upon the **End Reality** as he named it as the '**Absolute Rest**'.

6.0 Conclusion:

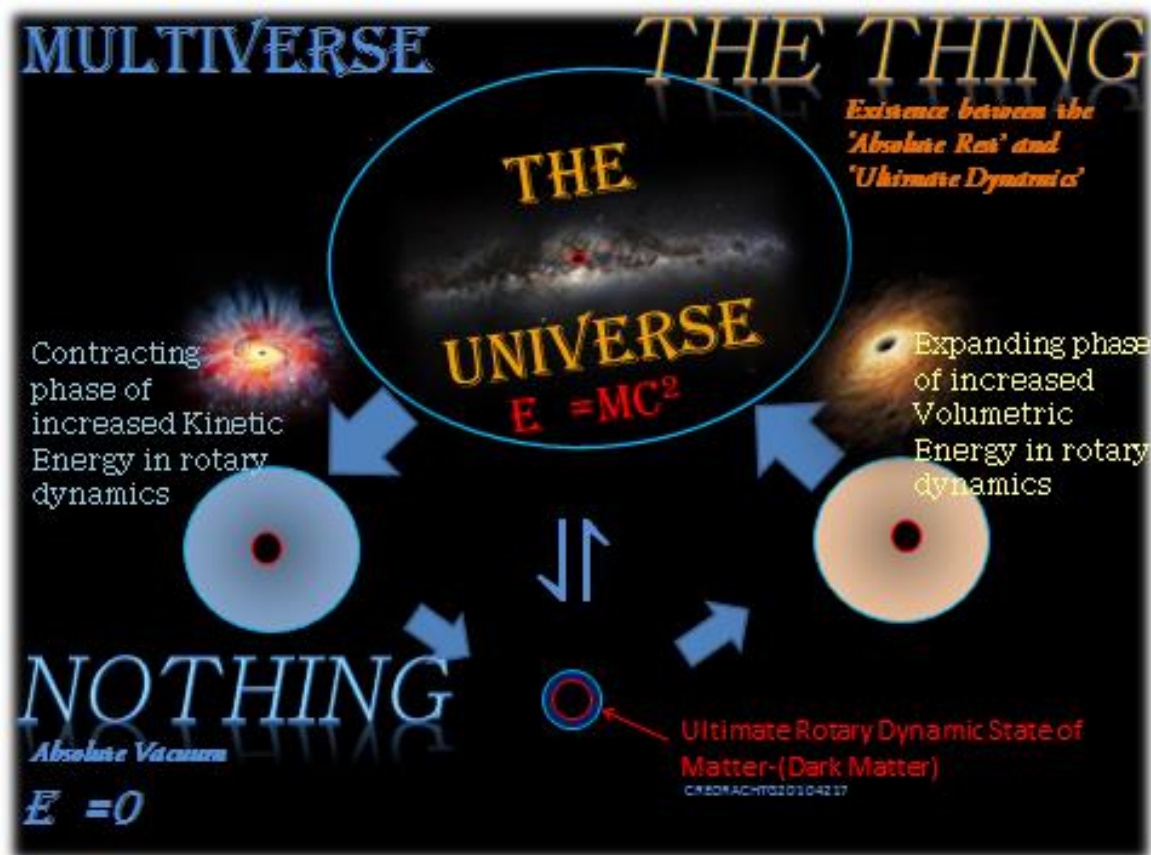
6.1- 'Matter' is contracted in **Volume** with increased **Speed** of Dynamics (rotary or linear)

6.2- At the extreme end of Contraction the Matter loses its **Volume** completely. In the view of Mathematical and Logical aspects, there is '**Nothing**' at last without having a body to exist.

6.3-At the other extreme end by **Expansion**, Matter dilutes (loses) '**Mass**' almost completely in to '**Nothing**' at last.

6.4- Therefore at both extreme ends of the '**Spherical Vortex Dynamics**', the Matter is lost in to **Nothing**.

6.5- But the phenomenon 'Spherical Vortex' has proven **Reversible Dynamics** before reaching towards the both extreme ends and the 'Matter' has been preserved as '**Matter**' for the '**Observer**'.



END

Cyril H Thalpe Gamage

25th Dec.2017