

4D MODEL OF THE UNIVERSE

SPACE DYNAMICS-V8/2015

1. THE ENTRANCE

Though many space models are being practiced, the Universe cannot be explained within the '3D Special Frame' in which man is so firmly accustomed to live and think. We are born to observe only a narrow domain of 'Space Dynamics' relative to our measuring organs of the body scale.

Even though man has immensely developed his measuring tools to extend the observable domain, he cannot grasp the realities yet at the extreme end dynamics in Contraction and Expansion of 'Space Matter'. That is because the dynamics take place along the 4th dimension which cannot be observed.

2. CLIMATE SETTING

The 4D model requires some general knowledge in Mathematics, Logics, Physics and Geochemistry to understand but it is not so complex such as the famous theories; 'Conservation of Angular Momentum' or 'Curvature of Space Time'.

Logical thinking and deduction power of a mind have to be a bit awakened for easy understanding of the distant reality and a touch of philosophic overview could be of immense supportive.

Let us try some examples to practice philosophic overviewing ability in thinking.

➤ Thinking Exercise -1 (SCALE)

Teacher: Can a mammoth elephant observe an ant?

Students: Yes perhaps if the ant comes very near in to his eye.

Teacher: Well, then can the ant see the mammoth?

Students: Yes... but perhaps, he will observe it as a moving dark cloud only.

Teacher: Most probably, but why can't he figure out the Mammoth?

Students: It seems a problem with the **Scale** teacher.

Teacher: Exactly, Scale is the problem there. We also face the same problem and we can't observe even a plant cell without help of a magnifying lens and then the tiniest worlds so beyond are in total darkness for us. But Scientists have succeeded in grasping the behavior of Matter even in atoms, enough closer to the reality though vigorous experimentation.

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Ant can challenge the Mammoth by a 'Scale Jump'

Mammoth can find the Ant by a 'Scale Drop'

Scale is varied along the 'Void Axis' (Vv) of the 4th Dimension

**SPACE
DYNAMICS**

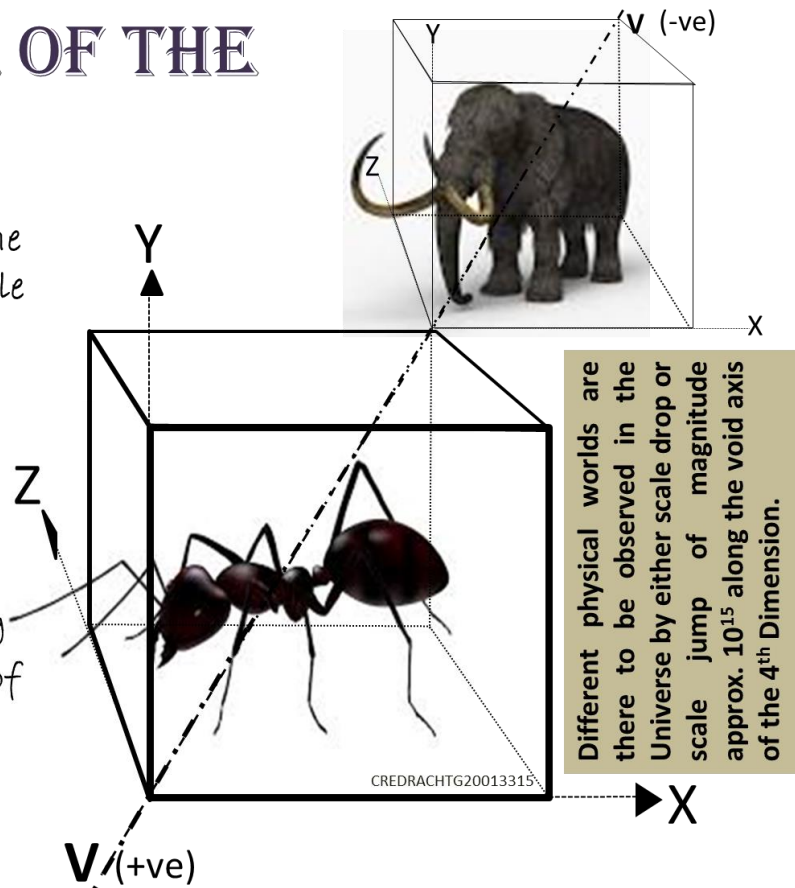


FIGURE-01

What is the Void Axis ?

'Void Axis' makes equal inclination to the other three axes such as; X-axis, Y-axis & Z-axis in a Cartesian 3D frame as shown in the figure-01.

Along the x- axis you can have a walk up to any distance starting from the point where you are. Similarly along Y&Z directions too, we can walk with no difference towards either negative infinity or positive infinity.

But along the void axis, you don't have a negative infinity to go. Instead, starting from the point where you are, you can expand yourself towards the positive infinity. And in contrary you can go to the absolute zero (void) by contracting yourself.

In general walk on other axes, X,Y & Z, you just pass the **zero** point on your way. But along the 4th Dimension you have no other direction to move than towards the **absolute zero** and returning away from it.

By the 1st look you would say the axis 'Vv' is very short and distance to go is very little towards the absolute zero. But that is incorrect and the distance to the absolute zero

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could be millions of light years long along the axis of 4th dimension of which we are not familiar with as yet.

➤ Thinking Exercise -2 (DISTANCE)

Teacher:- Can we measure a distance?

Students:- Yes teacher we can measure any distances by a meter tape.

Teacher:- What is the distance between two meter readings?

Students:- Thousand millimeters teacher.

Teacher:- Then what is the distance between any two millimeter readings?

Students:- Thousand micrometers.

Teacher:- What is the distance between any two micro meter readings?

Students:- Thousand nanometers.

Teacher :- Well, then what is the distance between any two nanometer readings?

Students:- Thousand picometers.

Teacher :- Very well then what is the distance between any two picometer readings?

Students:- A thousand ofsome more finer parts teacher.

Teacher :- Excellent. But what is the distance between any two of your finer parts?

Students:- We don't know teacher?

Teacher:- Can you measure a distance realistically in this manner ?

Students:- No Sir, we cannot measure a distance.

Teacher :- *That's right, we can't, because **distance is immaterial** and the sense of **units** are just **conceptual measures** accepted through convention.*

The Definition for Distance:

"Distance is the Space between any two Destinations and it doesn't exist where, Destinations are not in Existence."

By the way, what is 'Time' then?

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Time is the other thing that has been much complicated by the people of the 20th century and some have induced even **some life** in to time. But realistically time is also **immaterial** and just a **conceptual measure** like distance.

The Definition for Time:

Time is the Space between any two Changes and it doesn't Elapse Where, things don't Change."

➤ Thinking Practice-3 (4D VISION)

Sometimes things cannot be explained by thousands of words, but possibly by a picture.

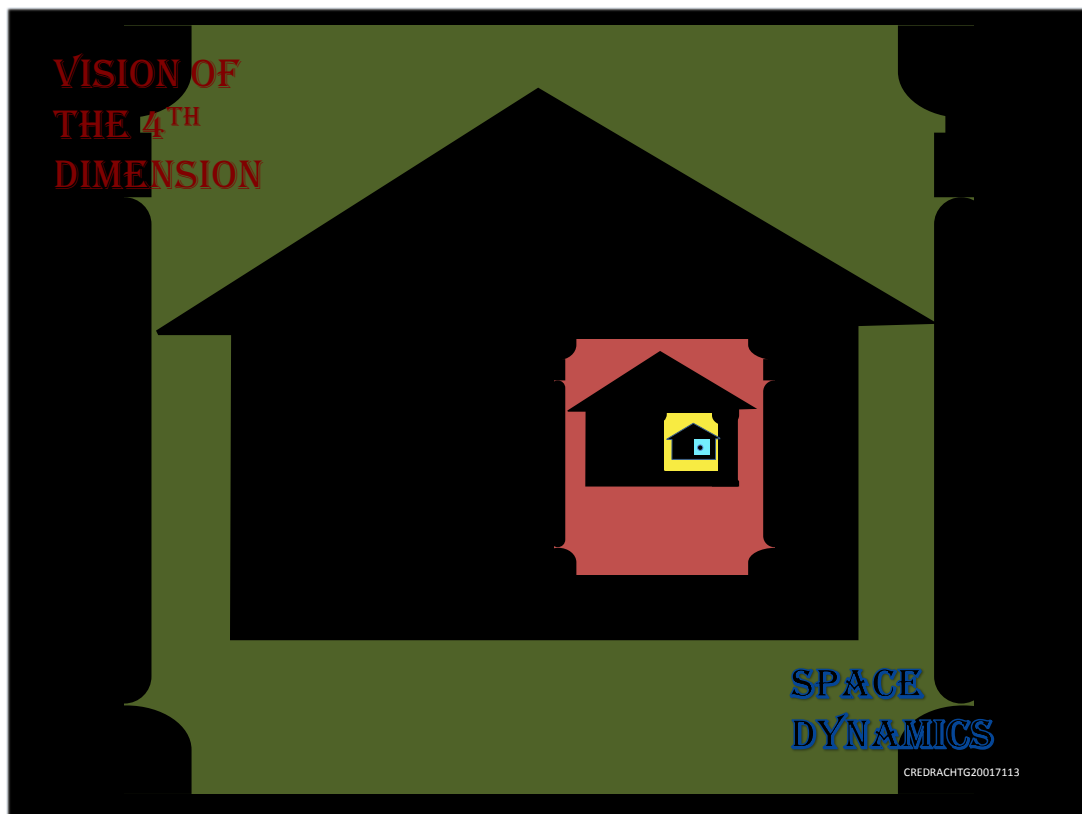


FIGURE-02

The picture exhibits the idea of different worlds of different scales that you come across in the expedition along the 4th Dimension.

Through the window of your house, you would observe your neighbor's house.

Through the window of that house, you observe another distant house of the same passion.

Through that window of the distant house you observe another house.

And again you observe there a.....

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3. DESCRIPTION OF 4D MODEL OF THE UNIVERSE:

By now the climate is set to understand the distant world realities hidden along the axis of the 4th Dimension. There is a certain law (a reality) in nature of 'Scaling Worlds' such as;

Law of 4D Scaling of Worlds:

Different Physical Worlds are observed at each volumetric drop of 10^{15} of Matter.

Let us then start our journey to explore different physical worlds to be observed along the axis of the 4th dimension by starting from the **Nucleus** of an atom.

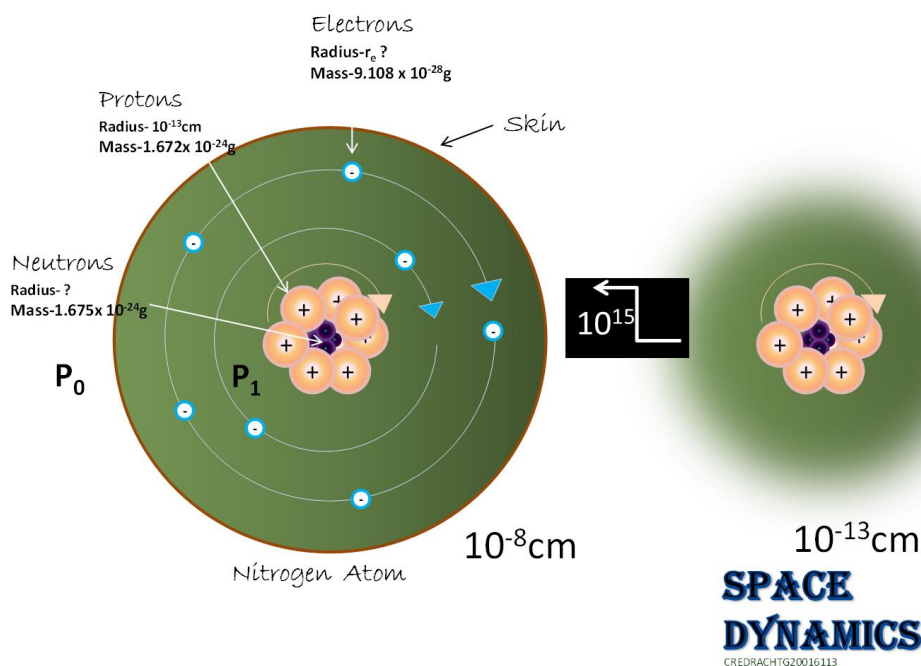
(We have got to convey our gratitude at first for the Chemists and Astronomers who had spent almost their life time attending in vigorous experimentation to provide us with realistic data of macroscopic and microscopic extreme ends of the universe.)

1-Entrance to the Atomic World:

Radius of atomic Nucleus $\approx 10^{-13}$ cm

Radius of an Atom $\approx 10^{-8}$ cm

Volume of Atom : Volume of Nucleus = $[4/3 \pi (10^{-8})^3] : [4/3 \pi (10^{-13})^3] = 10^{15} : 1$



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FIGURE-03

2-Entrance to the Cellular World:

Microbial life and living cells could be observed in this size of the world.

Size of a living cell (approx.) $\approx 10^{-3}$ cm

Radius of an Atom $\approx 10^{-8}$ cm

Volume of Cell : Volume of Atom $\equiv [4/3 \pi (10^{-3})^3] : [4/3 \pi (10^{-8})^3] \equiv \underline{\underline{10^{15} : 1}}$

(In calculating volume, it is assumed a cell is also nearly spherical in shape)

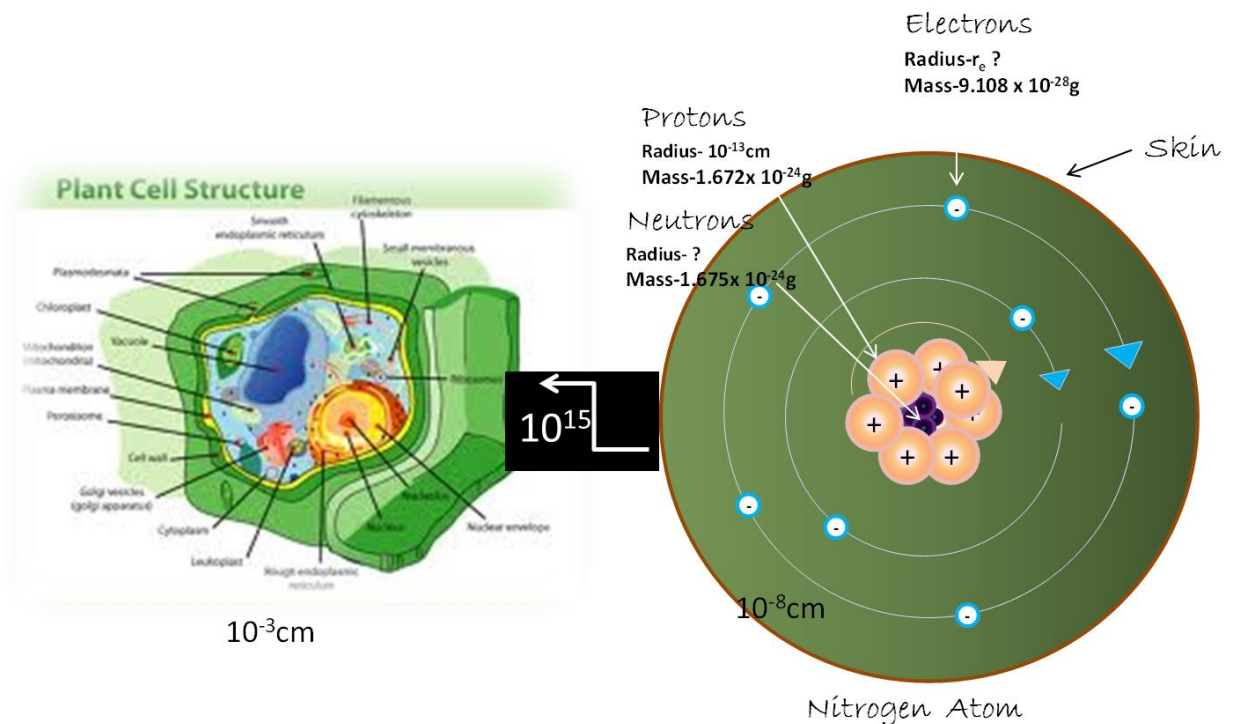


FIGURE-04

3-Entrance to the Biotic World:

Animal life could be observed in this size of the world.

Size of a living cell $\approx 10^{-3}$ cm

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Size of an Animal $\approx 10^2$ cm

Volume of Animal : Volume of Cell $\equiv [4/3 \pi (10^2)^3] : [4/3 \pi (10^{-3})^3] \equiv \underline{\underline{10^{15} : 1}}$

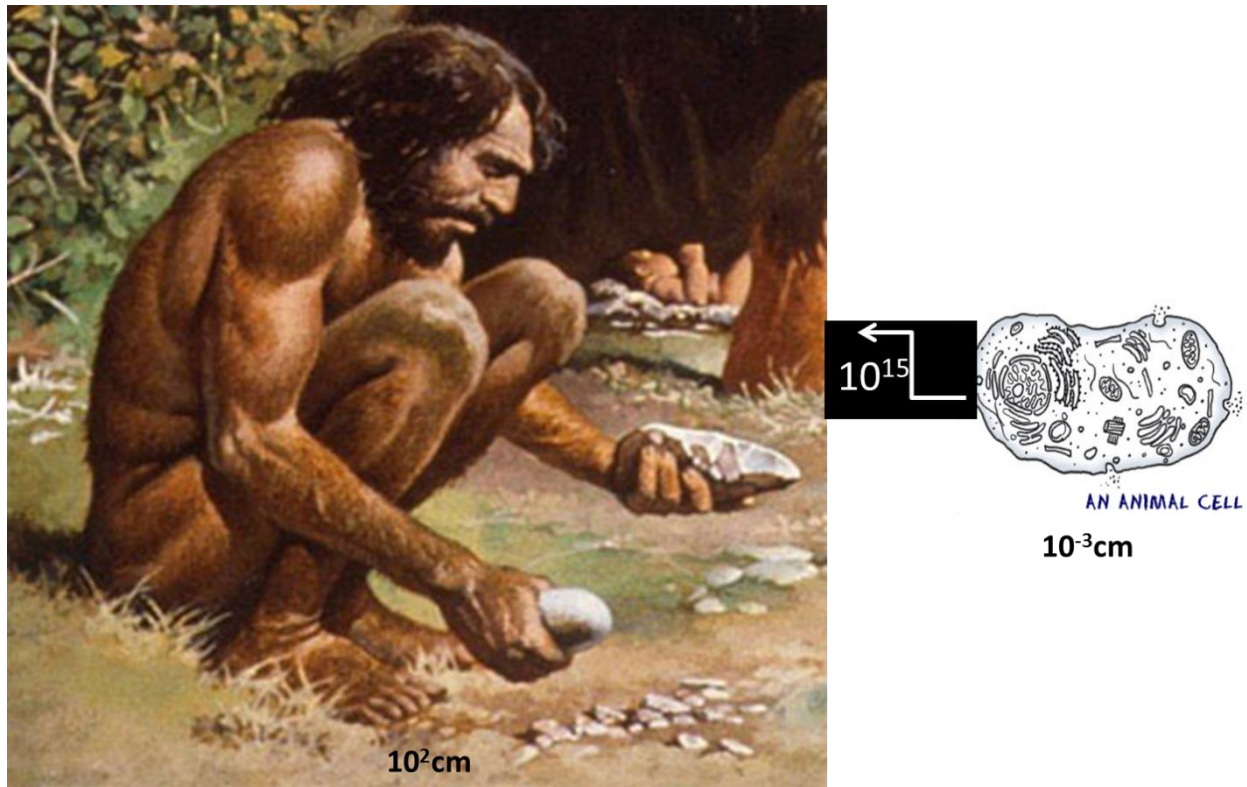


FIGURE-05

(In calculating volumes, it is assumed both animal and a cell are nearly spherical in shape)

*Isn't that awful to think animals and ourselves are just **moving worlds** in which billions of biotic cells and millions of microbial are living in harmony?*

4-Entrance to the Planetary World:

Planets of many different sizes are observed by Astronomers and average size of a planet in the universe is taken as 10^7 cm in this scaling exercise.

Not only planets but moons also of the same volumetric size are considered herein as Planetary worlds. Jupiter is laying in between planets and stars but a bigger inclination is there towards the category of planets.

Size of an Animal $\approx 10^2$ cm

Radius of a Planet $\approx 10^7$ cm

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Volume of Planet : Volume of Animal $\equiv [4/3 \pi (10^7)^3] : [4/3 \pi (10^2)^3] \equiv \underline{\underline{10^{15} : 1}}$

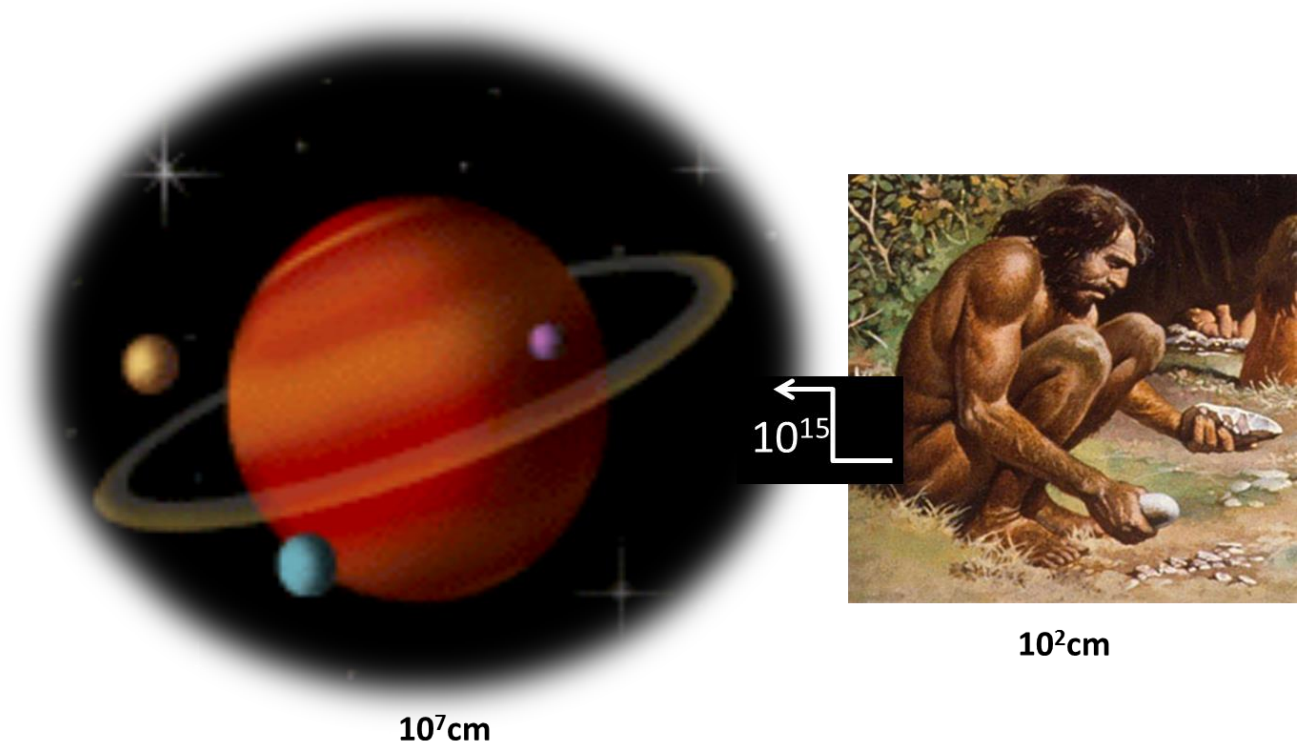


FIGURE-06

5-Entrance to a Star:

Stars of a vast domain of sizes are observed by Astronomers and average size of a Star is taken herein reasonably as 10^{12} cm.

Radius of a Planet $\approx 10^7$ cm

Radius of a Star $\approx 10^{12}$ cm

Volume of a Star : Volume of a Planet $\equiv [4/3 \pi (10^{12})^3] : [4/3 \pi (10^7)^3] \equiv \underline{\underline{10^{15} : 1}}$

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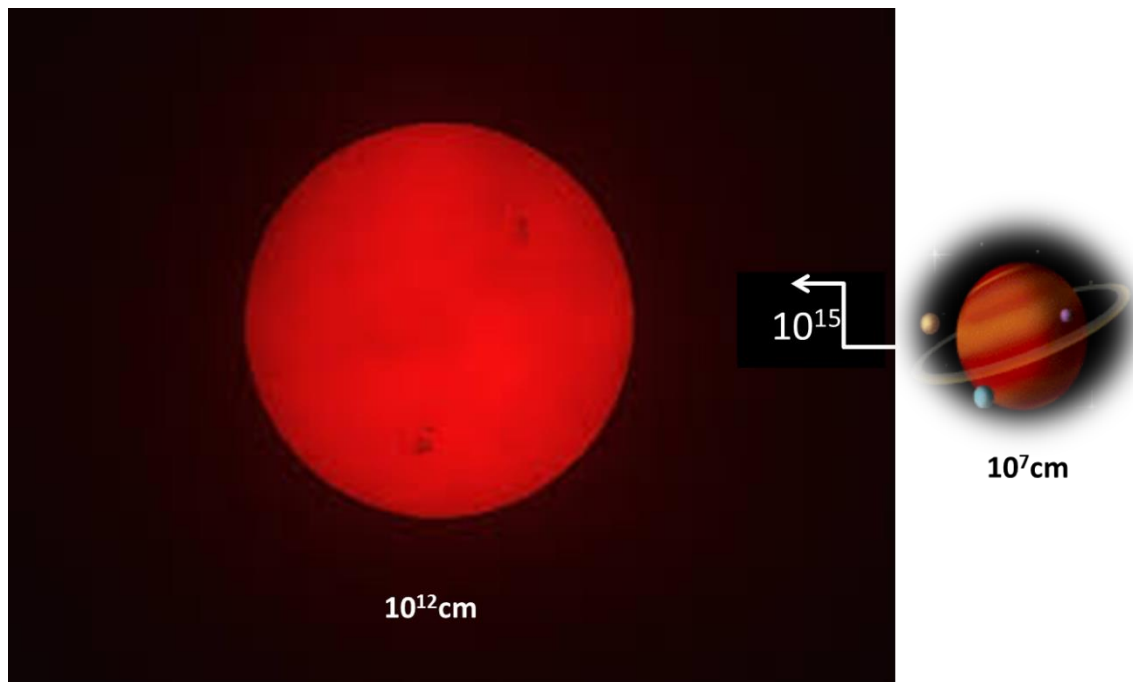


FIGURE-07

The big planets like Jupiter are exhibiting some qualities of stars in size, density and ability of producing energy within themselves.

6-Entrance to Solar Systems:

Solar systems of different sizes are observed by Astronomers and average size of a Solar system is taken as 10^{17} cm in this scaling exercise.

(There is no agreement as yet about boundaries of a solar system but aphelion distance of the far most comet can be reasonably taken as the boundary because the comet should not have returned unless the solar gravity is yet effective there.)

Radius of a Sun $\approx 10^{12}$ cm

Radius of a Solar System $\approx 10^{17}$ cm

Volume of a Solar system: Volume of a Star $\equiv [4/3 \pi (10^{17})^3] : [4/3 \pi (10^{12})^3] \equiv \underline{\underline{10^{15} : 1}}$

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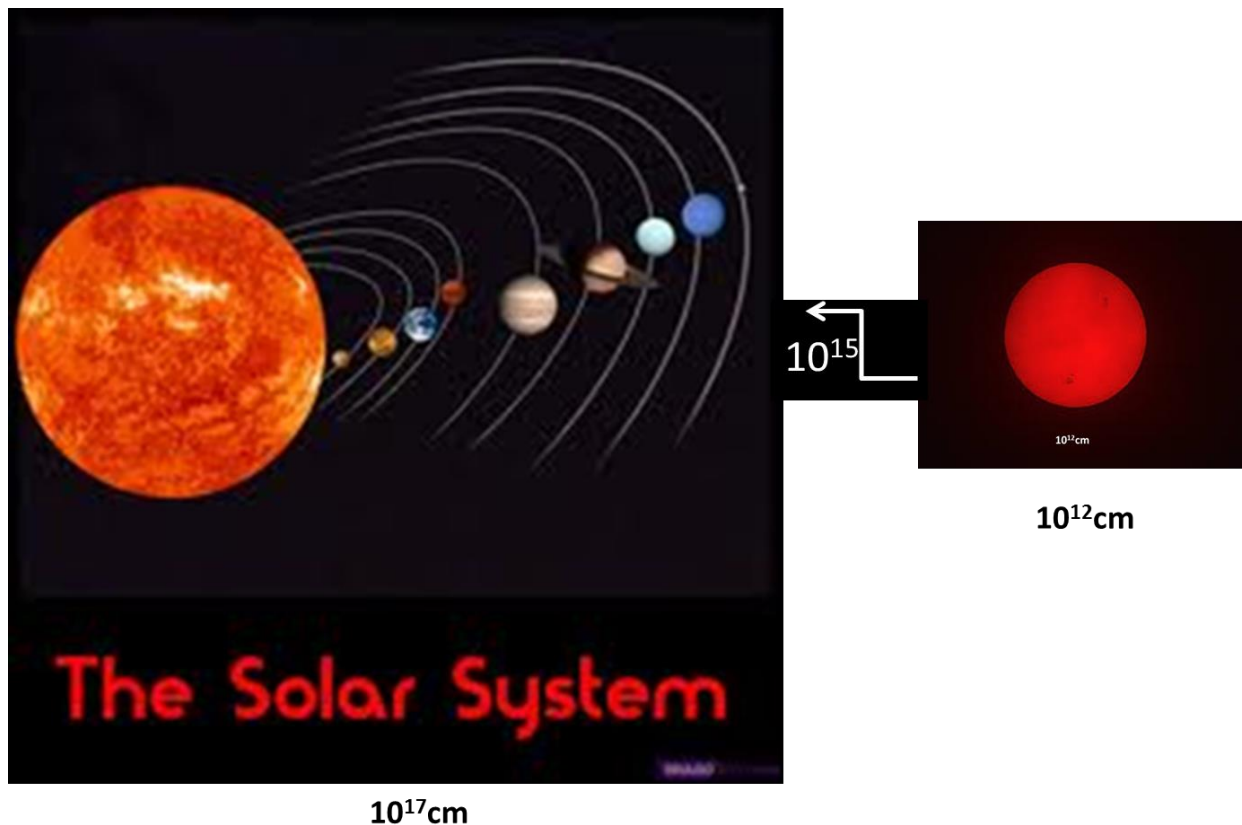


FIGURE-08

7-Entrance to Galaxies:

Galaxies of different sizes are observed by Astronomers and average size of a Galaxy is taken as 10^{22} cm in this scaling exercise. (our galaxy is of the same size)

Radius of a Solar System $\approx 10^{17}$ cm

Radius of a Galaxy $\approx 10^{22}$ cm

Volume of a Galaxy: Volume of a Solar System $\equiv [4/3 \pi (10^{22})^3] : [4/3 \pi (10^{17})^3] \equiv \underline{\underline{10^{15} : 1}}$

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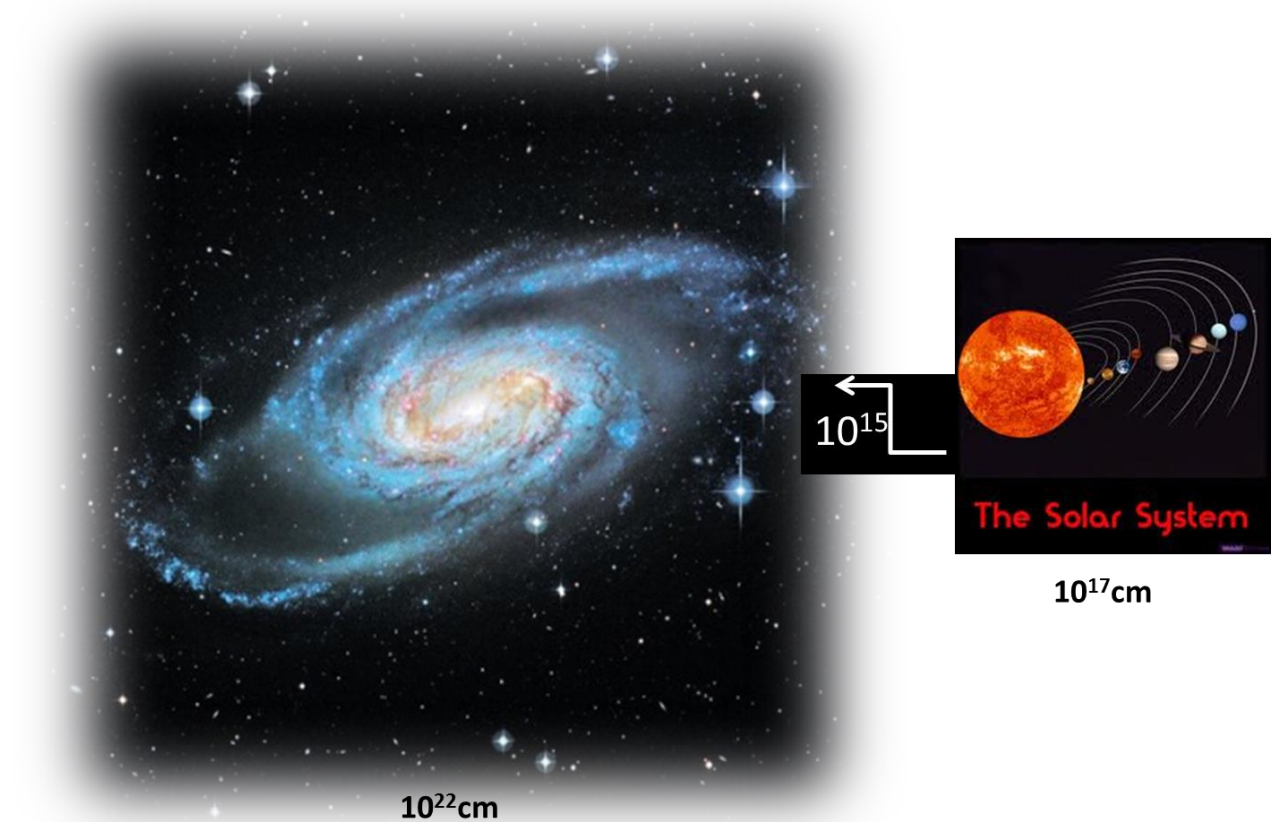


FIGURE-09

4. WORLDS AT EXTREME ENDS OF THE UNIVERSE:

Why do we stop the exploration at the galactic level?

- Because it is the '**Positive Infinity**' according to all the analytical bases and measuring tools of Science, Mathematics, Logics and Philosophic aspects. Matter beyond galaxies could not be centralized by any known pulling forces based on 'Gravity', 'Electromagnetism' or 'Pressure'.
- Galaxies are independent discrete unites and no any force could be extended in between to **centralize** them. **No organization could be established without having a bonding power for centralization.**

Is Universe expanding?

Galaxies in the Universe don't exhibit any **directional motion** either individually or commonly. But they are much dynamic within themselves. Some are expanded creating solar systems and some are contracted in to black holes. Our Galaxy is still being expanded.

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How could a galaxy being contracted in to a black hole?

There should be a great power to call back all the decentralized materials including millions of solar systems towards the center. We have to clarify what is a black hole before getting in to the centralization.

The term with wording 'Black Hole' is somewhat misleading but '**Dark Matter**' should be the correct term to be addressed. Dark matter in action is a vigorously dynamic '**Spherical Vortex**' for the function of drawing 'Matter' converting in to more finer worlds of dropped scale along the 4th Dimension.

'Dark Matter' is nothing else but '**neutron mass**' which is the universal agent of creating and vanishing worlds from our domain of observation.

Dark matter doesn't radiate or reflect light because it **consumes** them for existence and then how could it be observed other than total darkness? (Do you believe if I say that 'atoms too consume energy for existence?' Students can do this simplest experiment to prove it. Keep several different materials in a dark cool room for few hours and just touch them to feel that denser materials are cooler than others and how could it happen? More neutron mass is there in bigger atoms and therefore denser materials absorb more energy from the environment for existence.)

The massive bonding power in black holes is nothing else but drawing of everything ultimately as a flux of energy in to the dark center. That is how the gigantic 'Spherical Vortex' reduces galaxies in to nothing.

How could then a vanished galaxy return back in to the Universe?

According to the universal law of '**Conservation of Energy**', Matter cannot be destroyed. The spherical vortex consumes energy and whence no more energy remains in the system the function is slowed down gradually. Before swallowing the entire galaxy the spherical vortex is decelerated and the huge globe of dark matter tends to expand again creating worlds back by reversing of the magnetic poles. Oscillation of energy in this manner along the 4th Dimension, creates and demolishes worlds of Matter from time to time.

How a Hydrogen cloud could born at the Origin of a Galaxy?

This is the exact point where, so far developed Science is lagging in reasoning out. The Global Knowledge Departments must focus their resources to find the relation between Hydrogen and Dark Matter through experimentation.

Neutrons are **highly dynamic rotary systems** in which Matter is more densely packed. Nobody can observe a neutron at a stop because its structure is stable only at low pressure created by motion nearly at the speed of light. Even in an atom it must be rotating with the nucleus more speeded than how electrons rotate. If you try to stop a neutron somehow in

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any experimentation, it will explode like a bomb creating a Hydrogen atom. It is an explosion of the volumetric size of 10^{15} and therefore the experimentation has to be carried out under highly controlled conditions.

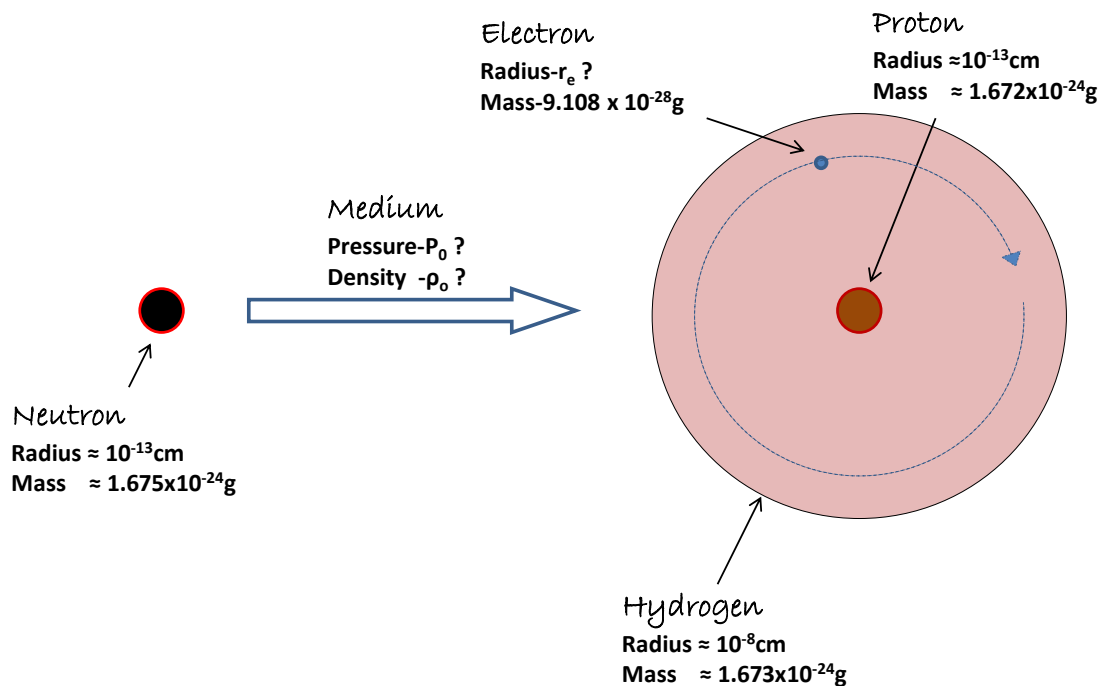


FIGURE-10

That is how a hydrogen cloud is born by expansion of dark matter and the rest of the story of how solar systems are formed has been explained acceptably enough by the Scientists.

(pl ref 'Star Mechanism'/Space Dynamics-V3/2010 for more of the four Fundamental Cosmic Reactions)

1. DYNAMIC ORGANIZATIONS OF MATTER IN THE UNIVERSE:

In the 4D model exhibition of the Universe as explained above there are seven worlds that we could identify and they can be categorized further in to three types of dynamic organizations in the Universe such as;

1. Gravity Based Organizations:
2. Pressure Based Organizations?

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3. Life Based Organizations?

(Gravity base must be clear enough for the reader but majority would certainly put a question mark at the end of the other two.)

1-Gravity Based Organizations in the Universe:

Most of us tend to think that all the things in the world are gravity based. But that is incorrect because energy matter such as, Light(photon) ,Heat(blackbody radiation), Electrons(current), inner atomic particles, Solar wind, Galactic wind etc. don't respond for Newton's Gravity at all. (pl ref 'The Mechanism of Gravity'/Space Dynamics-V2 /2009)

Definition for Gravity Based Organizations:

Once any organization of physical matter is scattered, if only it could be recentralized back by Gravity, it is a Gravity based Organization.

Examples:-

- i. Earth is a gravity based organization but mountain Everest is not a gravity based organization. If you throw even a stone out of the Earth it is immediately called back by Earth's Gravity. If you could demolish and flatten the mountain Everest, it will not be rebuilt by its gravity.
- ii. Moon is a Gravity Based Organization because it could preserve its hydrostatic spherical shape by self-gravity.
- iii. Solar systems are Gravity Based Organizations because all the planets, moons, asteroids, comets etc. interact with Sun by the **bond of Solar Gravitation**. Anything away from the limit of Sun's Gravitation, doesn't belong to our Solar System.
- iv. Galaxies are not gravity based organizations because dynamics in both decentralization and centralization as well, are based on another principle as described by the '**Theory of Spherical Vortex**' (pl ref 'Star Mechanism'/Space Dynamics-V3 (2011)). Our Galaxy is a decentralizing organization at present stage of its dynamics. A '**center of high pressure**' is the root cause for an expanding galaxy. In contrary, a '**center of low pressure**' is the root cause for a contracting galaxy.

2-Pressure Based Organizations in the Universe:

'**Pressure**' is the most significant physical parameter in the Universe even though it had been overlooked by the prominent Scientists of the 20th century. Probably they might have not come across the 'Space Medium' in their theorizations. But it is wonderful how could scientists of the medieval period so far up to the 21st century could rely upon '**Curvature of Space**' without even arguing '**what is there to be curved**'?

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(As I think the great scientist Einstein might be the first person who has grasped the existence of the 4th Dimension and most probably 'curvature' could be the wording upon which he theorized his finding.)

Matter is scattered off by a 'Pressure Center' and in contrary, Matter is gathered backed by a 'Vacuum Center', in dynamics through activation of the 'pressure based organization -Spherical Vortex' along the axis of 4th Dimension.

Without accepting existence of the **Space Medium** , even at this very late stage, Science would never be succeeded even by an inch, in the exploration for distant World Realities. (pl ref 'Space Dynamics-V1/2009 for mathematical derivation for density and pressure of the space medium)

Examples:-

- i. Tornados and cyclone are the exemplary pressure based dynamic organizations to be observed in the nature. Vortexes in fluids too are of the same kind but in each case the medium has a direction of motion and accordingly the shape of the organization could be conical or cylindrical.
- ii. A Galaxy is a pressure based dynamic organization where Space Matter is dragged by the flux of space medium expanding towards **Positive Infinity** or contracting towards **Absolute Zero** along the 4th Dimension. Our Galaxy is an expanding one at present phase of its dynamics. Gravity is also there in the galaxy as far as atomic matter is there in existence, but *medium pressure* is the dominating factor which decides dynamics in a galaxy.
- iii. A Star is an exhibition of both Gravity and Spherical Vortex based dynamics. Gravity dominates there and the commanding region of a 'Solar System' is decided by gravity. But gravity doesn't explain how Sun is rotated or how the gigantic magnetic field is born. (pl ref 'Star Mechanism'/Space Dynamics-V3/2011)
- iv. The polarized planets too exhibit both characters and they are essentially spinning about the magnetic polar axes. Such productive planets are grown in size & mass due to absorption of charged particles from solar wind and they give birth for moons perhaps at magnetic reversals. (pl ref 'Origin of Moon by the Earth Bang'/Space Dynamics-V3/2010)
- v. Atom is a world we find at the tiniest level of scaling in the exhibition of worlds under 4D modeling. What are the governing factors in this world? Is there gravity? No. there is no Newtonian Gravity in atoms. But still there is a sort of gravity named as 'Moola Gravity' which is the most strong force that we have ever experienced. It is the same gravity in the dropped scale of worlds and also based on a medium wave transmitted through the medium.

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It can attract neutrons and protons together. (To understand the mighty force of 'Moola Gravity' students can do a simple experiment. Take a thin steel cord and hang weights by it increasing to see how much of load could be taken before failing. Now measure the cross section area of the string and divide it by a cross section area of an atom. You can deduce then what a huge load could be taken by a single atom. That is 'moola gravity' and it is applied as far as the atoms are in touch. Because, the wave of 'moola gravity' cannot go out from the atomic boundary. When the two atoms are in close touch only, the medium wave vibration is transmitted in to the other world to attract neutrons and protons in the nucleus) But as yet the governing force in this atomic world is not explained.

There is a spherical vortex in action at the nucleus of an atom. Naturally where there is dark matter (neutron mass) there is a spherical vortex in action and it polarizes the globe. It is a medium vortex which consume energy for existence. Low pressure at the vigorously rotating nucleus tends to attract electrons but centrifugal force on electrons, make them orbit in balance. Electro magnetism is the name by which the great scientist Coulomb had introduced the phenomenon to the world. However the governing factor of this scale of worlds is medium 'Pressure' and thence belong to the category of pressure based organizations.

3-Life Based Organizations in the Universe:

As exhibited above in scaling under the 4D model of the Universe, there were two life based organizations such as;

1. Cellular world of the general size of 10^{-3} cm

- i. Plant and animal cells are belonged to this category of life based organizations and Microbes of a vast diversity too are belonged to this scale of living worlds. This scale of physical worlds do consume energy from organic food bases, do breeding, make movements, take signals from organs and respond to changes of the external set of conditions(environment).
- ii. They respond for Gravity because they are made up of atomic matter but Gravity is not the governing factor there in those worlds.
- iii. No different **character capabilities** could be observed between any two of them of the same kind in the vast diversity.
- iv. **Biotic life** is the governing factor there and it is also gone when cells are died under adverse changes of set of external conditions (environment).

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2. Animal world of the general size of 10^2cm

- i. This is the most wonderful world that we come across in the scaling exercise along the 4th Dimension. It is not pleasant however to think that billions of living cells and **microbes** are living well in those dynamic worlds.
- ii. Motion is not only to respond the change from external set of conditions (environment) like microbes but based on the special **decision making ability**.
- iii. **Mind Set** is the wisdom with this worlds and it is operated accordingly with the **signals** received and transmitted by **censer organs** of the body.
- iv. **Different character capabilities** could be observed between any two worlds of the same race in the vast diversity.
- v. **Man** is the wisdom in this scale of worlds and it draws the unanswerable question 'How man alone could achieve such a vast difference in qualities and capabilities than his college animal?
- vi. Mankind only keep solid **records** of his past experiences and it helps immensely by providing pre analyzed stock of data for quicker and correct decision making.
- vii. The other unanswerable problem is 'what is there behind the vast **gap of character capabilities** between any two men?' (Lets take two kids of 10 years and test their character capabilities to find the big difference. Besides that some talents could never be believed to achieve from a period of just 10 years. How can explorers explain this difference without touch of **reincarnation?**)
- viii. However biotic life is not the only governing factor for this kind of worlds and **mind set** seems to keep some vague records of past experience in a long term journey of existence in the Universe though the **biotic body** is lost many times under physical set of adverse changes. (Religious philosophies in the world, have not rejected this possibility and interact with **God** after death, is a direct indication of long term existence of a **soul**. But a political philosophy puts a **full stop** for you at the death and it fights no more on behalf of your rights or freedom beyond the cemetery.)
- ix. Let's repeat the same experiment of the two kids and this time wait another 10 years and observe the differences of the two children, grown under same set of conditions. Perhaps you would not reason out how they are succumbed to **different fates**. Isn't that an indication of 'some **past deposits** (good or bad) too are affording as another governing factor by standing behind?

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- x. Otherwise a hand of some invisible care must be a governing factor which option made us inclined towards **Religion**. However Science cannot reject existence of God so rigidly because there are things in this world, which could not be grasped by so far developed measuring tools of Science. (pl ref 'Hidden Worlds beyond the Reach of Science'/Space Dynamics-V5 /2013) .
- xi. Roundness of the globe was a myth till it was proven by Science and ultimately everything would be science whence Physics could prove the Reality.

I should like to put a full stop here for the letter, because I am finding my limits before concluding things under this deep exploration of '4D Model of the Universe' .

A man explored the worlds to find a good answer for his kid's question
"Father, tell me How all that happened in the world?"

However the man succeeded ultimately in his tiring exploration and explained the child about *"how all that happened"*.

The child looked a bit satisfied but no sooner he asked the next question.

"Father, tell me Why all that happened?"

END.

(Origin and End are the distinct destinations created by Linear Thinking)

If anything novel to the world is introduced herein by this technical paper, all that is exposed for the world community to be used freely on good will of experiments, researches and practices on behalf of Coexistence of the Global Ecosystem and Human Civilization.

- Cyril H. Thalpe Gamage -

(22nd Sunday March, 2015)-