



## **E = mw<sup>2</sup>: DEFINITION OF PHYSICS FOR 21<sup>ST</sup> CENTURY AND BEYOND**

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**Abstract:** During 8<sup>th</sup> October, 2019 the Royal Swedish Academy of Sciences publicized one half of the Nobel Prize to James Peebles, Princeton University, USA “for theoretical discoveries in physical cosmology.” James Peeble’s result manifested that only 5 percent of the universe is known matter and the remaining 95 percent of the universe is unknown Dark Matter and Dark Energy, but his work failed to explain and define what Dark Matter and Dark Energy was. Under the supervision of Senior Professor Sathyamurthy Mahalingiah from the World Community Service Center, Aliyar, Pollachi, Tamil Nadu, India, the author of this paper has introduced a new model of physics namely “The Super-Standard Model of Physics (Vethathiri Model of the Universe)” and defined Dark Matter as “Self-Compressive Surrounding Pressure Force” and Dark Energy as “The volume occupied in space by both Self-Compressive Surrounding Pressure Force (E) and Repulsive Force (w).” The author of this paper has named Dark Matter as Vethon and Dark Energy as Sathyon, which was published in the International Journal of Emerging Technology in Computer Science and Electronics during the year November, 2017 under the paper titled, “Extended Version of Dark Matter (Vethon) and its Relation with God Particles (Yogon) and Climate Change Crave for Green Energy Technology.”

The description of Nature is given in four quantities namely space, time, matter and energy. The mathematical framework evolved by Newton is based on four independent quantities: space, time, matter and energy. During the 1680s Newton set forth the idea that gravity is a predictable “force.” Einstein built a new mathematical framework and showed that space, time, matter and energy are no longer independent quantities. Einstein’s Theory of Relativity led to the unification or coalescence of the three dimensions of space and one dimension of time into a singular four-dimensional space-time. Einstein’s Special Theory of Relativity states that mass and energy are different manifestations of the same thing. Einstein’s General Theory of Relativity depicts gravity as not a force, but the radical or basic “interaction” of gravitation as a sequel or upshot of space-time being curved by energy. Professor Andrea Ghez and her research team from the University of California, who have made direct measurements near a supermassive Black Hole have now disproved Newton’s Theory of Gravity and warned that Albert Einstein’s theory is “starting to fray around the edges.” Professor Andrea Ghez’s team has analysed the data (watching a star known as S0-2) over the past twenty four years. Professor Andrea Ghez says Einstein’s Theory cannot fully explain gravity inside a Black Hole. Therefore, we need to move beyond Einstein’s Theory of Relativity to a new model of physics. The Super-Standard Model (Vethathiri Model of the Universe) points out that Space/Energy is a single entity with four different names, defining mass, defining what a Black Hole is, and highlights when time starts and when time ends in the Universe. Also the Super-Standard Model (Vethathiri Model of the Universe) defines physics as  $E = mw^2$ , the branch of science that deals with Space/Energy (defined as Self-Compressive Surrounding Pressure Force), mass (defined as association of Up Quarks/God Particles/Yogon) and Repulsive Force/Revathon (defined as transformation of Space/Energy).

The author of this paper says that, “There is no problem in the experimental physics, but the problem is only in the theoretical physics, failing to interpret the experiments in the right way.” For example, the theory of Gravitational Lensing Experiment and Laser Interferometer Gravitational-Wave Observatory (LIGO) Experiment, which were interpreted in the wrong way, is highlighted and the correct theory is explained in this paper. The Super-Standard Model (Vethathiri Model of the Universe) vouchsafe the solution for the Quantum Entanglement Experiment and the Double-Slit Experiment (why light and electrons have duality in nature). The author of this paper names the Gravitational Waves as the ‘Narendra Modi Waves’ or ‘NAMO Waves,’ Gravitational Lensing Effect as the ‘Harsh Vardhan Effect,’ Quantum Entanglement Experiment as the ‘Vedha-Sathyam Experiment’ and Double Slit Experiment as the ‘NAP-Kannan Experiment.’

**Key Words:** Dark Matter/Vethon/Energy/Space (Self-Compressive Surrounding Pressure Force); Repulsive Force/Revathon (Transformation of Energy); Dark Energy/Sathyon; Mass/Radhigon (Association of Up Quarks); Light; Time.

## The Structure of Research Work.

### The First Part of Research Work.

Sr. No	Section	Topic
1	I	Introduction (Nicolaus Copernicus to Sir Isaac Newton).
2	II	Gravity from Sir Isaac Newton to Albert Einstein.
3	III	The Super Standard Model of Physics (Vethathiri Model of the Universe).
4	IV	<b>Cosmic catastrophe:</b> Newton's Theory of Gravity <b>vs.</b> Einstein's Theory of Gravity <b>vs.</b> The Super-Standard Model of Physics (Vethathiri Model of the Universe).
The Second Part of Research Work.		
5	V	Major experiments in Physics which favour the Super Standard Model of Physics (Vethathiri Model of the Universe).
6	VI	Summary and Future Work.

## 1. Introduction

### 1.1 From Nicolaus Copernicus to Sir Isaac Newton

**Nicolaus Copernicus (1473-1543):** The history of classical mechanics (Newtonian mechanics) can be thought as having a starting point with the Polish astronomer Nicolaus Copernicus, who proposed heliocentric ideas (the sun was stationary in the center of the Universe and the earth revolved around it) [1, 2].

**Galileo Galilei (1564-1642):** Galileo Galilei, Italian philosopher, astronomer and mathematician experimented and determined correctly that all bodies accelerate at the same rate regardless of their size or mass. For example, if two cannonballs, both with a different size and mass, are dropped they would both fall at the same rate regardless of their respective masses. To determine the nature of bodies in motion Galileo Galilei carried out numerous experiments. He concluded that a body that is already in motion in a horizontal direction, unless some external force or entity prevents it from doing so will continue to move in that direction. Galileo Galilei also observed that missiles and projectiles move in two principle directions simultaneously (horizontal direction and moving in a downward direction – a falling motion). He published this concept in his book named *“Dialogues Concerning Two New Sciences.”* Galileo’s observations of the solar system after the invention of the telescope in 1610 led him to the discovery of the four large moons. Galileo later became more convinced with the Copernican view of the solar system, after studying the objects (Jupiter’s four large moons); the planets of the solar system must orbit the sun [1]. Galileo Galilei says, *“Philosophy is written in this grand book – I mean the Universe – which stands continually open to our gaze, but it cannot be understood unless one first learns to comprehend the language and interpret the characters in which it is written. It is written in the language of Mathematics, and its characters are triangles, circles and other geometrical figures, without which is humanly impossible to understand a single word of it”* [3].

**Johannes Kepler (1571-1630):** Johannes Kepler, the German Mathematician, astronomer, and astrologer endorsed Copernican views of the solar system. In 1609, Johannes Kepler surmised that Mars follows an elliptical orbit around the sun and published his book *“New Astronomy, Based upon Causes or Celestial Physics, Treated by Means of Commentaries on the Motions of the Star Mars, from the Observations of Tycho Brahe, Gent,”* which contains the upshot or sequel of Kepler’s fact-finding on the motion of Mars and his first two laws of planetary motion (The Law of Ellipses & The Law of Equal Areas). In 1615, Johannes Kepler published the third law of planetary motion (The Law of Harmonies) in the first volume of his textbook *“Epitome of Copernican Astronomy.”* Kepler’s third law compares the radius of the orbit of a planet and the orbital period to those of other periods [1, 4].

- *“The sun being located at one focus, the planets move in elliptical orbits (The Law of Ellipses).”*
- *“A non-existent line connecting the center of the sun to the center of the earth sweeps out equal areas in equal intervals of time (The Law of Equal Areas).”*
- *“The ratio of the squares of the periods of any two planets is equal to the ratio of the cubes of their average distances from the sun (The Law of Harmonies)”* [1, 4].

**Isaac Newton (1642-1726):** Classical Mechanics (Newtonian mechanics) is a branch of Physics that was mostly controlled or dominated by the physical laws devised by Sir Isaac Newton. In 1665, thirty five years after Johannes Kepler’s death Isaac Newton became familiar with the work of Galileo Galilei and Johannes Kepler and formulated his ideas on gravitation. Isaac Newton came to the conclusion that the power of the gravitational attraction between two bodies was inversely proportional to the distance that separated them. This conclusion that the gravitation attraction between two bodies must stretch over great distances was generally in agreement with Johannes Kepler’s third law (The Law of Harmonies). In 1687, Isaac Newton’s work laid the foundations of classical mechanics (Newtonian mechanics) and he published his Law of universal gravitation and the three Laws of motion in his textbook *“Mathematical Principles of Natural Philosophy”* [4].

### 1.2 From Michael Faraday to Albert Einstein

**Michael Faraday (1791-1867):** Michael Faraday found that if you move a magnet across a coil of wire without the succour of batteries or other electric supply, you can create an electric current in that wire. He also devised a tiny prototype of the electric generator and electric motor [5, 6].

**James Clerk Maxwell (1831-1879):** In 1865, James Clerk Maxwell published a set of equations that combined the phenomena of electricity, magnetism and light into a single phenomenon of “electromagnetism” [5, 6].

Length and time are absolute in standard transformation of inertial frames (Newtonian physics). However, if taken literally, the Lorentz transformation (many people contributed to this discovery) was different from the standard transformation of inertial frames; time and length do actually change [5, 6].

**Albert Einstein (1879-1955):** Albert Einstein wondered whether time and space were absolute and in 1905 he postulated the principle of relativity. When combined with electromagnetism, the principle of relativity would require that the transformation from one inertial frame to another must have the structure of Lorentz transformation (time and space are no longer absolute). In 1907 Albert Einstein became aware that the principle of relativity did not fit with the Newtonian description of gravity and was only relevant or appropriate for objects moving with a constant velocity. Albert Einstein engaged himself in thought experiments and realised that not just space and time lost their absolute meaning but also geometry itself was not absolute. Einstein discovered that mass was acting on space and finally concluded: gravity is just a consequence of motion through space-time [5, 6].

**1.3 The Super-Standard Model of Physics (Vethathiri Model of the Universe):** Vethathiri (1911-2006) discovered that not only mass is acting on space but also space is acting on mass and named Space as Unified Force, which is defined as 'Self-Compressive Surrounding Pressure Force.' The author of this paper concludes that the 'Unified Force' which is defined as 'Self-Compressive Surrounding Pressure Force' is the 'Dark Matter.' So far in physics, nobody has been able to explain what the 'Dark Matter' and "Dark energy" is [7-9].

Under the supervision of Senior Professor Sathyamurthy Mahalingiah from the World Community Service Center, Aliyar, Pollachi, Tamil Nadu, India, the author of this paper has introduced a new model of physics namely "The Super-Standard Model of Physics (Vethathiri Model of the Universe)" and defines physics as  $\mathbf{E} = \mathbf{mw}^2$ , the branch of science that deals with Space/Energy/Dark Matter/Vethon (defined as Self-Compressive Surrounding Pressure Force), mass (defined as association of Up Quarks/God Particles/Yogon) and Repulsive Force/Revathon (defined as transformation of Space/Energy/Dark Matter/Vethon).

The Super-Standard Model of Physics (Vethathiri Model of the Universe) unites Quantum Mechanics and Relativity into One Grand Theory – a Theory of Everything (Origin)" [7].

**1.4 Original work:** A summary of original work presented in this journal paper is as follows:

1. Define Dark Matter?
2. Define Dark Energy?
3. Define mass?
4. Einstein says gravity is not a 'force' but the satellites are acted upon by the force of gravity, why?
5. Why is quantum mechanics incompatible with general relativity?
6. Why doesn't the Standard Model of Physics not include gravity?
7. Define an atom?
8. Define the Universe?
9. What is the cause for the spinning action of Quarks?
10. What causes the spinning actions of the planets, the sun, the stars etc.?
11. What is the cause for the rippling action of leptons?
12. Why do electrons and light have duality in nature?

## 1.5 Organization of this research paper:

This research paper comprises six sections. Organization of the remaining five sections is presented as follows as shown in Fig. 1.

- Section 2 presents Gravity from Newton to Einstein.
- A new model of physics namely, ‘The Super Standard Model of Physics (Vethathiri Model of the Universe)’ is introduced in Section 3.
- The work in Section 4 aims to investigate Cosmic catastrophe: Newton’s Theory of Gravity vs. Einstein’s Theory of Gravity vs. The Super-Standard Model of Physics (Vethathiri Model of the Universe).
- Section 5 points out those major experiments in Physics which favour the Super Standard Model of Physics (Vethathiri Model of the Universe).
- Section 6 summarizes the work as well as presents future directions.

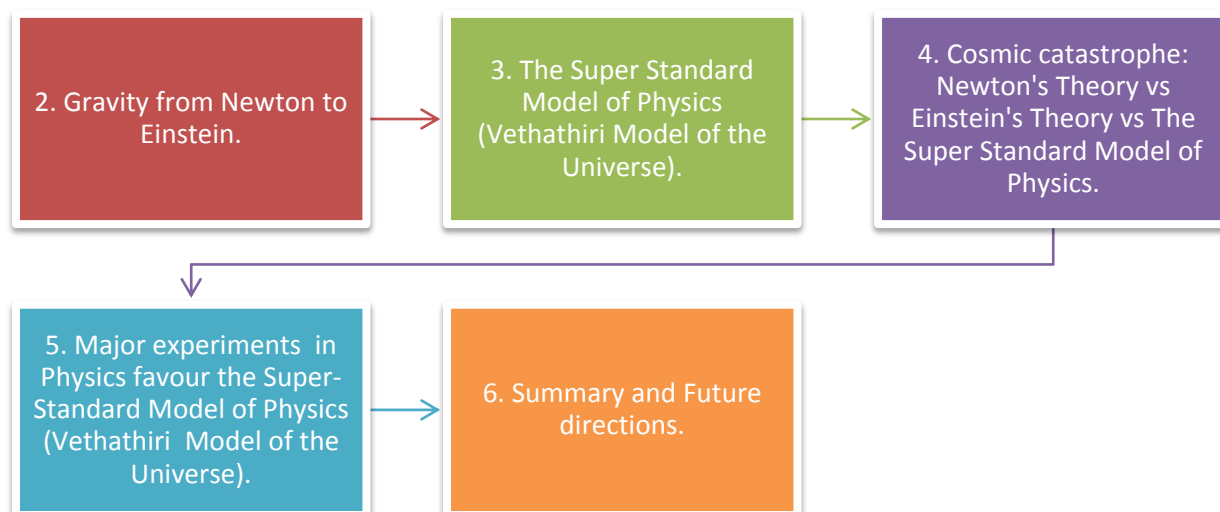


Fig. 1 This research paper comprises six sections.

## 2. Gravity from Isaac Newton to Albert Einstein

### 2.1 Newton’s Theory of Gravity

When Isaac Newton was hit on the head by an apple, which fell from a tree he had a flash of insight about gravity. Isaac Newton realised that an apple falling on one’s head on the Earth and the Moon’s orbit around the earth could be unified by one mathematical rule. During the year 1686 Isaac Newton formulated his famous inverse square law of gravitation [10, 11].

For example, let  $m_1$  and  $m_2$  be the masses of two objects (the Sun and the Earth), let ‘ $r$ ’ be the distance between two objects (the Sun and the Earth), then Newton’s law says that the gravitational force ( $F$ ) between them is

$$F = (G \times m_1 \times m_2) / (r^2) \quad \dots\dots\dots (1)$$

Here  $G$  is a fixed number, known as Newton's gravitational constant. When very massive objects are involved and when distances and speed are very large, Newton's law becomes inaccurate, but works perfectly well on small scales (to send people to the Moon) [10, 11].

### 2.1.1 The Problem with Newton's Theory of Gravity

When the sun and the earth are moved further apart, according to equation (1) the weakening of the force would happen straight away [11].

## 2.2 Einstein's Theory of Gravity

Einstein's theory of relativity consists of two theories: Special Theory of Relativity and General Theory of Relativity [10, 11].

### 2.2.1 Special Theory of Relativity

The Special Theory of Relativity includes a "special case" where motion is uniform (an object travelling in a straight line at a constant speed). This is referred to as "inertial frame of reference." Einstein's Special Theory of Relativity established a link between space and time. This led to the unification or coalescence of the three dimensions of space and one dimension of time into a singular four-dimensional space-time [10, 11].

The basic principles of the Special Theory of Relativity include [10, 11]:

- *The law of physics must be the same for all observers.*
- *The speed of light is the same for all observers.*

The Special Theory of Relativity states that energy and mass are equivalent and gives us one of the most famous equations  $E = mc^2$ . It shows Energy ( $E$ ) and mass ( $m$ ) are different forms of the same thing; they are interchangeable [10, 11].

### 2.2.2 General Theory of Relativity

The General Theory of Relativity explains the "general case" of any motion which describes the force of gravity and on the other hand, handles "non-inertial form of reference" – i.e. situations that involve acceleration, or curves, like a bend in the road. Einstein's General Theory of Relativity depicts gravity as not a force, but the radical or basic "interaction" of gravitation as a sequel or upshot of space-time being curved by energy [11].

The equation of the general theory of relativity tells us how a given amount of mass and energy wraps space-time [10].

$$R_{\mu\nu} - \frac{1}{2}Rg_{\mu\nu} = \frac{8\pi G}{c^4}T_{\mu\nu} \dots\dots\dots (2)$$

The left-hand side of the equation describes the curvature of space-time whose effect we perceive as gravitational force. The term  $T_{\mu\nu}$  on the right-hand side of the equation describes mass, energy, momentum and pressure that are distributed throughout the Universe.  $T_{\mu\nu}$  goes by the technical term energy-momentum tensor. 'G' is Newton's constant and 'c' is the speed of light. The Greek letter  $\mu$  and  $\nu$  are labels, which can take the values 0, 1, 2, or 3. The value of 0 corresponds to time and the values 1, 2 and 3 to the three dimensions of space [11].

### 2.2.3 The Problems with the Einstein Theory of Gravity

Albert Einstein had a great desire to come up with a unified field theory, a "**theory of everything**" that would disprove the claims of quantum theory, but he was forced to admit to mistakes and back-tracked very quickly, losing credibility and accepting public humiliation in the process [5, 6].

Professor Andrea Ghez and her research team from the University of California, who have made direct measurements near a supermassive Black Hole have now disproved Newton's Theory of Gravity and warned that Albert Einstein's theory is "starting to fray around the edges." Professor Andrea Ghez says Einstein's Theory cannot fully explain gravity inside a Black Hole. Therefore, we need to move beyond Einstein's Theory of Relativity to a new model of physics [12].



### **3. The Super-Standard Model of Physics (Vethathiri Model of the Universe).**

The Super-Standard Model of Physics (Vethathiri Model of the Universe), defines Space/Energy/Dark Matter/Vethon, Dark Energy/Sathyon and explains the first four stages of Evolution.

#### **3.1 What is Space/Energy/Dark Matter/Vethon?**

Space/Energy/Dark Matter/Vethon is the Static-Silent State and primordial state of the Universe. Space/Energy/Dark Matter/Vethon is highly penetrative and highly permeable. Natural inherent or inborn potential with self-compressive, surrounding pressure is the quality of Space/Energy/Dark Matter/Vethon. It can be defined as 'Self-Compressive Surrounding Pressure Force,' which is functioning as surrounding pressure force on all objects like planets, stars, asteroids, comets etc. In the Universe, millions of planets, stars, asteroids, comets etc. are floating in the Space/Energy/Dark Matter/Vethon. Each planet, star etc. may weigh of incalculable tons of weight moving in a rhythmic and precise manner. That is to say, the Space/Energy/Dark Matter/Vethon is supporting and containing the whole Universe [7-9].

#### **3.2 Evolution (Stage I):**

By the self-compression of Space/Energy/Dark Matter/Vethon, the Static-Silent State itself becomes a moving force as a wave and Up Quarks/God Particles/Yogon is expelled from a tiny portion of Space/Energy/Dark Matter/Vethon, which cannot be further divided. Up Quark/God Particle/Yogon is a minute moving part of the Space/Energy/Dark Matter/Vethon, which has emerged directly from Space/Energy/Dark Matter/Vethon and has an infinite velocity of rotational spinning speed. Every Up Quark/God Particle/Yogon is in rotation due to the overlapping (global form) of Space/Energy/Dark Matter/Vethon by its inherent quality of constant 'Self-Compressive Surrounding Pressure Force.' Up Quark/God Particle/Yogon has the innate capacity to resist the Space/Energy/Dark Matter/Vethon [7-9].

The particles which are expelled from a tiny portion of Space/Energy/Dark Matter/Vethon, and do not have the innate capacity to resist the Space/Energy/Dark Matter/Vethon merge back into Space/Energy/Dark Matter/Vethon and become Space/Energy/Dark Matter/Vethon and are known as Anti-God Particles (R-Sathyon). Any particle, which decays in a tiny fraction of a second into lighter Quarks and Leptons, cannot be a God Particle as predicted by the Standard Model of Particle Physics [7-9].

#### **3.2.1 White Holes/Kamalon, Wormholes/Krishnon and Black Holes/Kannon:**

During the first stage of the evolution, White Holes/Kamalon, Wormholes/Krishnon and Black Holes /Kannon are formed when Up Quarks/God Particles/Yogon are expelled from Space/Energy/Dark Matter/Vethon.

#### **3.3 Evolution (Stage II):**

Repulsive Force/Revathon (transformation of Space/Energy/Dark Matter/Vethon) is generated or evolved constantly due to the friction or traction between Up Quarks/God Particles/Yogon (dynamic force) and Space/Energy/Dark Matter/Vethon (Static-Silent State). The magnetic (pressure), electrical (sound and light) and chemical (smell and taste) functions are the transformed waves of Repulsive Force/Revathon. When Repulsive Force/Revathon combines it can't make any physical mass in the evolutionary process since it is qualitative and not quantitative. For example, the taste, smell and colour of an apple are the result of transformation of Repulsive Force/Revathon [7-9].

#### **3.3.1 What is Dark Energy (Sathyon)?**

During the second stage of the Evolution, Repulsive Force/Revathon is generated or evolved constantly. The volume occupied in the Universe by both Self-Compressive Surrounding Pressure Force and Repulsive Force/Revathon is known as Dark Energy (Sathyon) [7-9].

#### **3.4 Evolution (Stage III):**

Repulsive Force/Revathon cannot withstand the surrounding pressure force for a long period of time. The appearance, existence and merging process of Repulsive Force/Revathon folds, curves or twists itself into Space/Energy/Dark Matter/Vethon. Repulsive Force/Revathon gradually merges into the Static-Silent State, Space/Energy/Dark Matter/Vethon and becomes Space/Energy/Dark Matter/Vethon (at one stage the frequency

becomes zero). From the appearance of Evolution of Repulsive Force/Revathon to its disappearance, all the processes occur only in the Space/Energy/Dark Matter/Vethon, which is defined as ‘Self-Compressive Surrounding Pressure Force’ [7-9].

### 3.4.1 Time/Varthon:

Time/Varthon starts when Repulsive Force/Revathon (transformation of Space/Energy/Dark Matter/Vethon) starts during Evolution stage II. Time/Varthon stops when Repulsive Force/Revathon stops during Evolution Stage III.

### 3.5 Evolution (Stage IV):

Mass/Radhigon can be defined as association of Up Quarks/God Particles/Yogon. When Up Quarks/God Particles/Yogon combine they make an appearance such as atoms, molecules, cells, planets, stars and living beings etc. In the universal Evolutionary process, Up Quarks/God Particles/Yogon are quantitative. For example, in seeing an apple or an object, one can understand its physical structure, shape and weight are made up of Up Quarks/God Particles/Yogon [7-9].

Self-Compressive Surrounding Pressure Force binds Up Quarks/God Particles/Yogon together in clusters to form down quarks, protons, neutrons, atoms, planets, stars etc. Repulsive Force/Revathon separates Up Quarks/God Particles/Yogon so that they don’t hit each of the other particles or objects. Repulsive Force/Revathon also keeps the sun and the planets in their orbits so that they don’t hit each other. Table 1 shows the total number of Up Quarks/God Particles/Yogon combined with the particles or objects [7-9].

Table 1: Total number of Up Quarks/God Particles/Yogon associated or present in the particles/objects.

* <b>Self-Compressive Surrounding Pressure Force:</b> Force which binds Up Quarks/God Particles/ Yogon together in clusters to form down quarks, protons, neutrons, atoms, planets, stars etc.		
* <b>Repulsive Force/Revathon:</b> Force which separates Up Quarks/God Particles/ Yogon so that they don’t hit each of the other particles or objects. <b>Repulsive Force/Revathon</b> also keeps the solar system in its orbits so that the planets and the sun don’t hit each other.		
Sr. No	Particle/Object	Number of Up Quarks/ God Particles/Yogon combined with the particles or objects.
1	Down Quark	2
2	Proton	4
3	Neutron	5
4	Hydrogen	4 (1 proton & 0 neutron)
5	Helium	18 (2 protons & 2 neutrons)
6	Lithium	32 (3 protons & 4 neutrons)
7	Beryllium	41 (4 protons & 5 neutrons)
8	Boron	50 (5 protons & 6 neutrons)
9	Carbon	54 (6 protons & 6 neutrons)
10	Nitrogen	63 (7 protons & 7 neutrons)
11	Planets	Trillions and Trillions
12	Stars	Trillions and Trillions



**3.6 The schematic diagrams representing the first four stages of the evolution of the Super-Standard Model (Vethathiri Model of the Universe) are illustrated in Figs. 2 & 3.**



Fig. 2 The Super-Standard Model of physics (Vethathiri Model of the Universe): First four stages of Evolution [7-9].

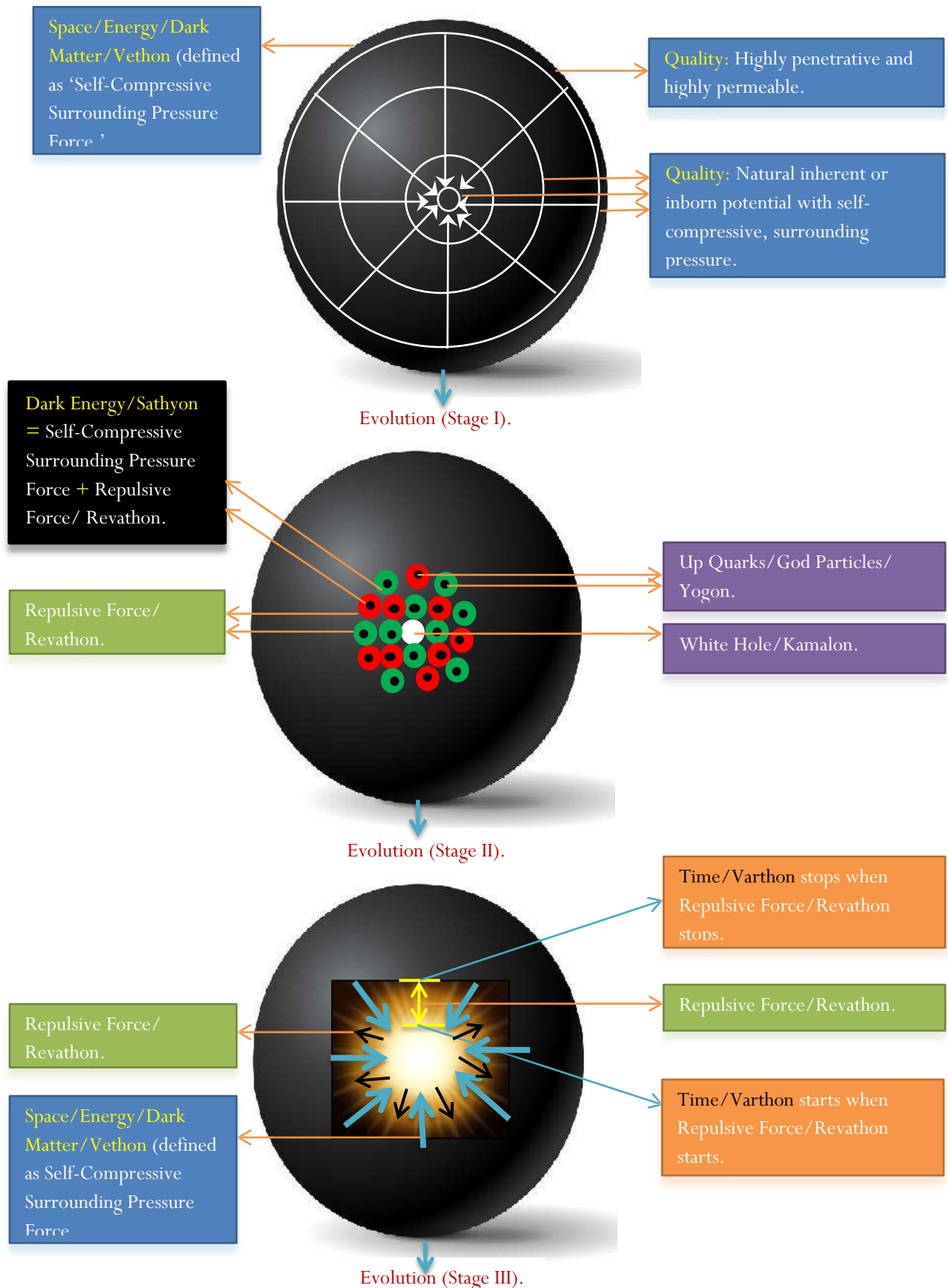


Fig. 3 The Super-Standard Model of Physics (Vethathiri Model of the Universe): First four stages of Evolution [7-9].

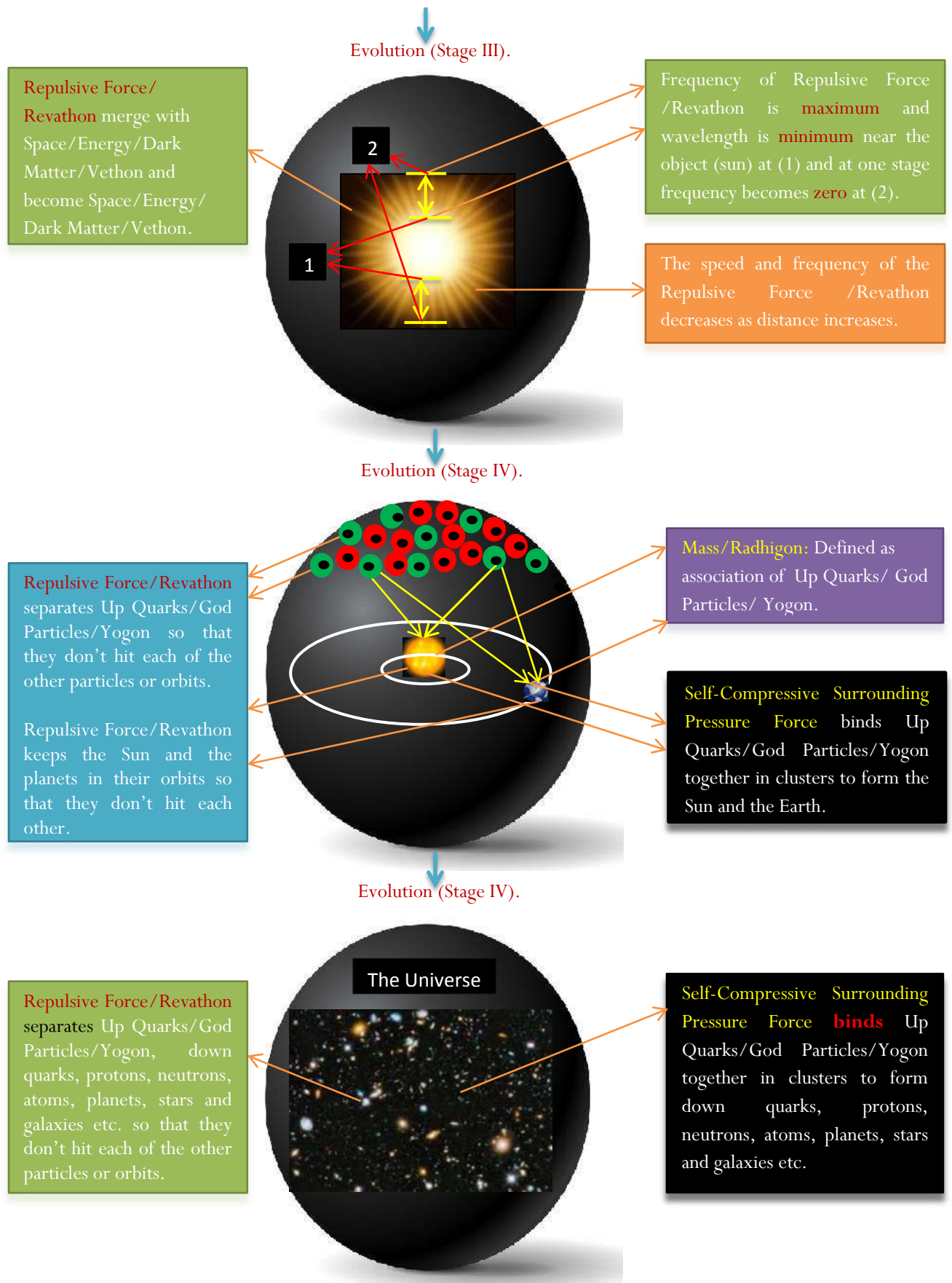


Fig. 3 (cont.) The Super-Standard Model of Physics (Vethathiri Model of the Universe): First four stages of Evolution [7-9].

**3.7 The Super-Standard Model (Vethathiri Model of the Universe), demonstrates Space/Energy/Dark Matter/ Vethon, Dark Energy/Sathyon and the first four stages of Evolution with different analogies as shown in Fig. 4.**



Fig. 4 Analogies to demonstrate the Super-Standard Model (Vethathiri Model of the Universe): First four stages of Evolution.

### **3.7.1 Analogy 1: To demonstrate Space/Energy/Dark Matter/Vethon (defined as 'Self-Compressive Surrounding Pressure Force') is stronger than everything (planets, stars and galaxies) in the Universe.**

For example, Space/Energy/Dark Matter/Vethon, which is defined as 'Self-Compressive Surrounding Pressure Force,' is carrying or supporting the planet Earth and the Sun as shown in Fig. 5. The sun weighs about 333,000 times as much as the Earth. Therefore, the Sun is stronger than the Earth. But Space/Energy/Dark Matter/Vethon, which is defined as 'Self-Compressive Surrounding Pressure Force,' is holding up both the Earth and the Sun and therefore the Space/Energy/Dark Matter/Vethon is stronger than the Earth and the Sun. Since Space/Energy/Dark Matter/Vethon, which is defined as 'Self-Compressive Surrounding Pressure Force,' is carrying or supporting all the objects in the Universe, it is stronger than everything (planets, stars and galaxies) in the Universe [7, 8].

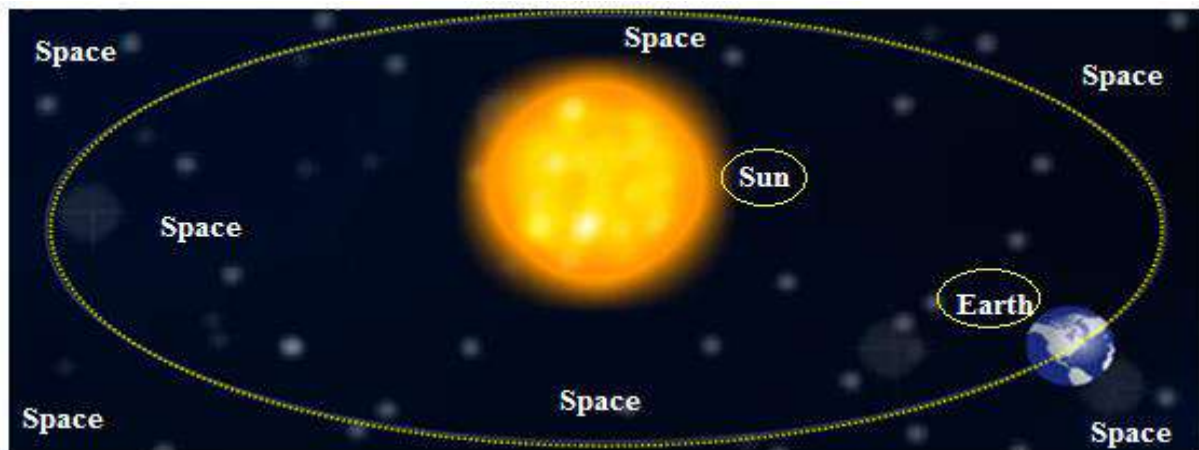


Fig. 5 Space/Energy/Dark Matter/Vethon, which is defined as 'Self-Compressive Surrounding Pressure Force,' is carrying or supporting all the objects in the Universe; it is stronger than everything (planets, stars and galaxies) in the Universe [7, 8].

### **3.7.2 Analogy 2: To demonstrate Space/Energy/Dark Matter/Vethon (defined as 'Self-Compressive Surrounding Pressure Force') are the same entity with four different names.**

For example, if you have a ball and give it a force or impetus in a forward direction it will go forward; if you give it a force or impetus towards the left it will go towards the left; and if you give it a force or impetus towards the right it will move to the right as shown in Fig. 6a. But if you give equal force or impetus in all directions it will move in an elliptical path (the author of this paper has predicted that: Equal pressure in all directions = Elliptical path) as shown in Fig. 6b. The Earth, the Sun and the galaxy do not move on their own. They are forced to move by Space, which is defined as 'Self-Compressive Surrounding Pressure Force.' It is impossible or undoable to stop the movement of the planets, stars and galaxies even for one second [7]. To move an object we need Energy. Without Energy we cannot move the object. Space moves the planets, stars and galaxies. Therefore, Space and Energy are the same entity with four different names. Space/Energy is the 'Dark Matter,' which is defined as 'Self-Compressive Surrounding Pressure Force.' So far in physics, nobody has been able to explain what Dark Matter is. The author of this paper has named the Dark Matter as 'Vethon'. Therefore, Space/Energy/Dark Matter/Vethon are the same entity with four different names.

The earth is constantly in motion, the Sun is constantly in motion as shown in Fig. 6c and also the galaxy is constantly in motion. Some kind of Energy (E) or inexhaustible stock force is required to keep the Earth, the Sun and the galaxy in motion. Scientists have experimentally proved that the time Earth takes to move around the sun once is 365.25 days; while the Earth is also spinning and orbiting the Sun, it is constantly in motion. Some kind of Energy (E) or inexhaustible stock force is required to keep the earth constantly in motion. The author of this paper concludes that the Space, which is defined as 'Self-Compressive Surrounding Pressure Force,' is the source of all forces, which is acting in all directions and in all degrees (360° degrees) is the Energy (E) or inexhaustible stock force, which keeps the Earth orbiting and spinning without changing its polarity (direction of motion). The constant motion of the Earth is the experimental evidence as it proves that the quality of Space/Energy/Dark Matter/Vethon is 'Self-Compressive Surrounding Pressure Force,' the source of all forces, which is acting in all directions and in all degrees (360° degrees) and keeps the Earth orbiting and spinning without changing its polarity (direction of motion) [7, 8].



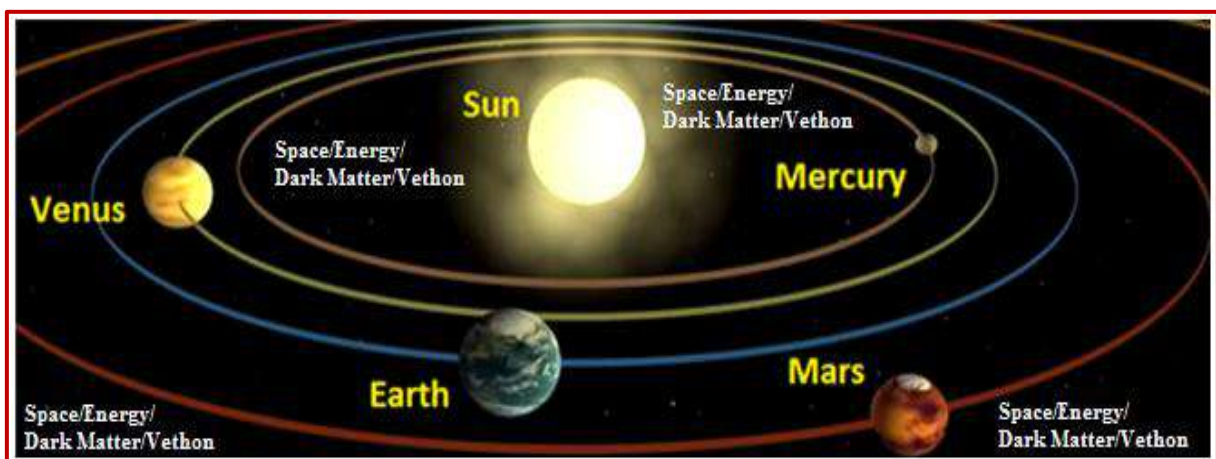
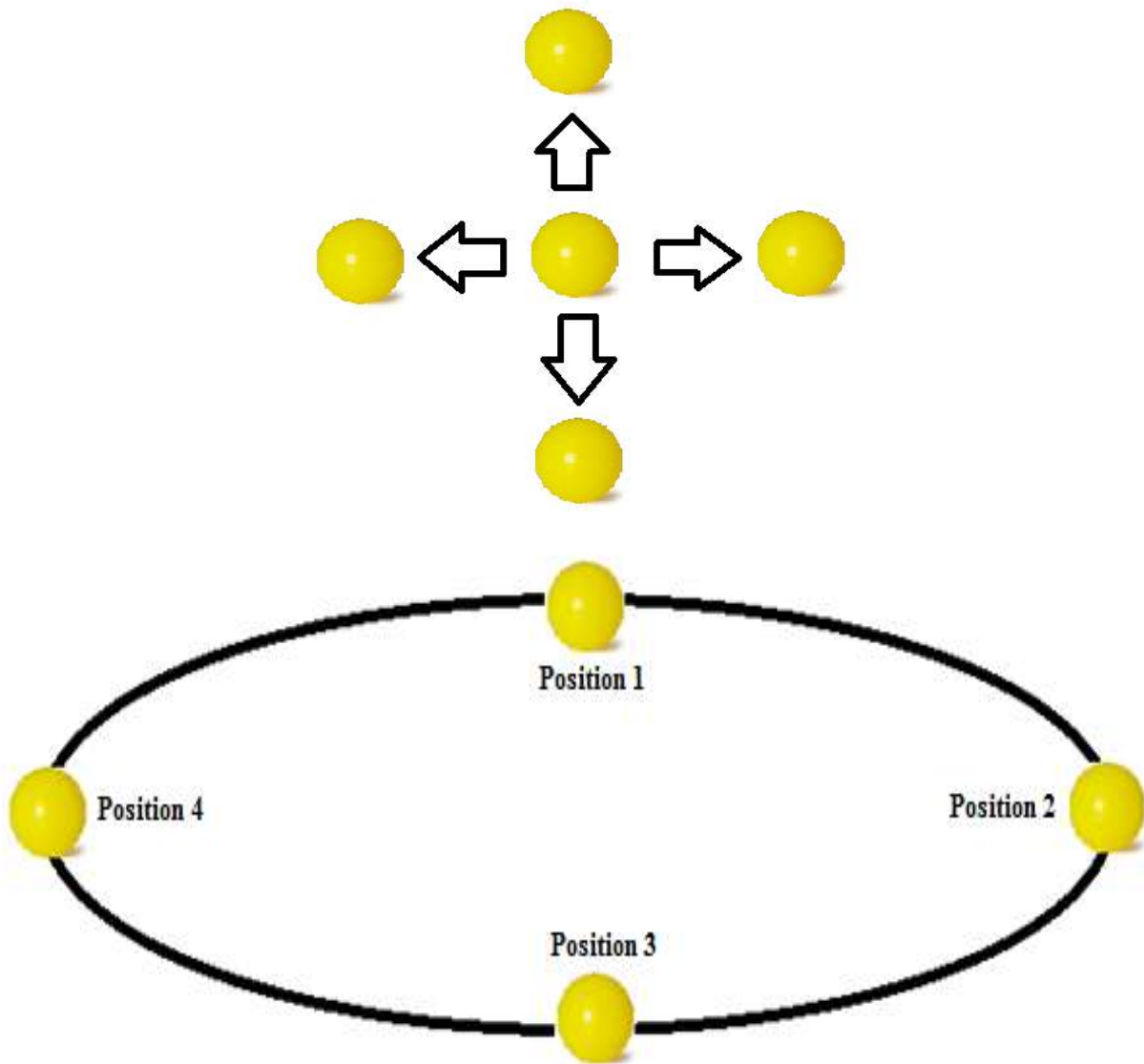


Fig. 6a, 6b & 6c Analogy for Space/Energy/Dark Matter/Vethon is the same entity with four different names [7, 8].



### 3.7.3 Analogy 3: To demonstrate Up Quark/God Particle/Yogon is a wave, which is expelled from a tiny fraction of Space/Energy/Dark Matter/Vethon, which cannot be further divided.

If we put a cloth into water the cloth becomes wet. Then, if we take the cloth and squeeze it as shown in Fig. 7, drops of water are expelled from the cloth. These drops of water are similar to the Up Quarks/God Particles/Yogon expelled from Space/Energy/Dark Matter/Vethon (represented by the cloth) due to the inherent property of the Space/Energy/Dark Matter/Vethon (defined as Self-Compressive Surrounding Pressure Force).



Fig. 7 Analogy to demonstrate Up Quark/God Particle/Yogon is a wave, which is expelled from a tiny fraction of Space/Energy/Dark Matter/Vethon, which cannot be further divided.

### 3.7.4 Analogy 4: To demonstrate how White Hole/Kamalon, Wormhole/Krishnon and Black Hole/Kannon are formed when Up Quarks/God Particles/Yogon are expelled from Space/Energy/Dark Matter/Vethon.

One example is: One person is standing as shown in Fig. 8a and there are five people standing around him to make the first circle and then around that is another circle of twelve people, and around this circle is another group of seventeen to twenty people and so on up to hundred circles. Each person is being forced equally by the people surrounding them in the circles. If one in the middle is squeezed by the force of all the people surrounding him in all directions then he will try to find a gap to move to be able to breathe. After a short span of time, the person in the middle will be expelled from his position due to the force of all the people surrounding him in all directions as shown in Fig. 8b. Therefore, he is not moving but he is forced to move in a path that is elliptical because he is squeezed in all directions equally. This is the **quality** of Space/Energy/Dark Matter/Vethon, which is defined as ‘Self-Compressive Surrounding Pressure Force [7].

Since the original person has been expelled another person will take his place as shown in Fig. 8c. And again due to the compression of Space/Energy/Dark Matter/Vethon, which is defined as ‘Self-Compressive Surrounding Pressure Force’ this person will be expelled and so on until a hole appears as shown in Fig. 8d. This is known as a White Hole. The author of this paper names this White Hole as **Kamalon**.

When trillions and trillions of Up Quarks/God Particles/Yogon are being expelled out, another hole is forming in the opposite direction which is known as a Black Hole as shown in Fig. 9a. The author names this Black Hole as **Kannon**. The length between the White Hole (Kamalon) and the Black Hole (Kannon) will be known as the Wormhole as shown in Fig. 9a. The author names the Wormhole as **Krishnon**.

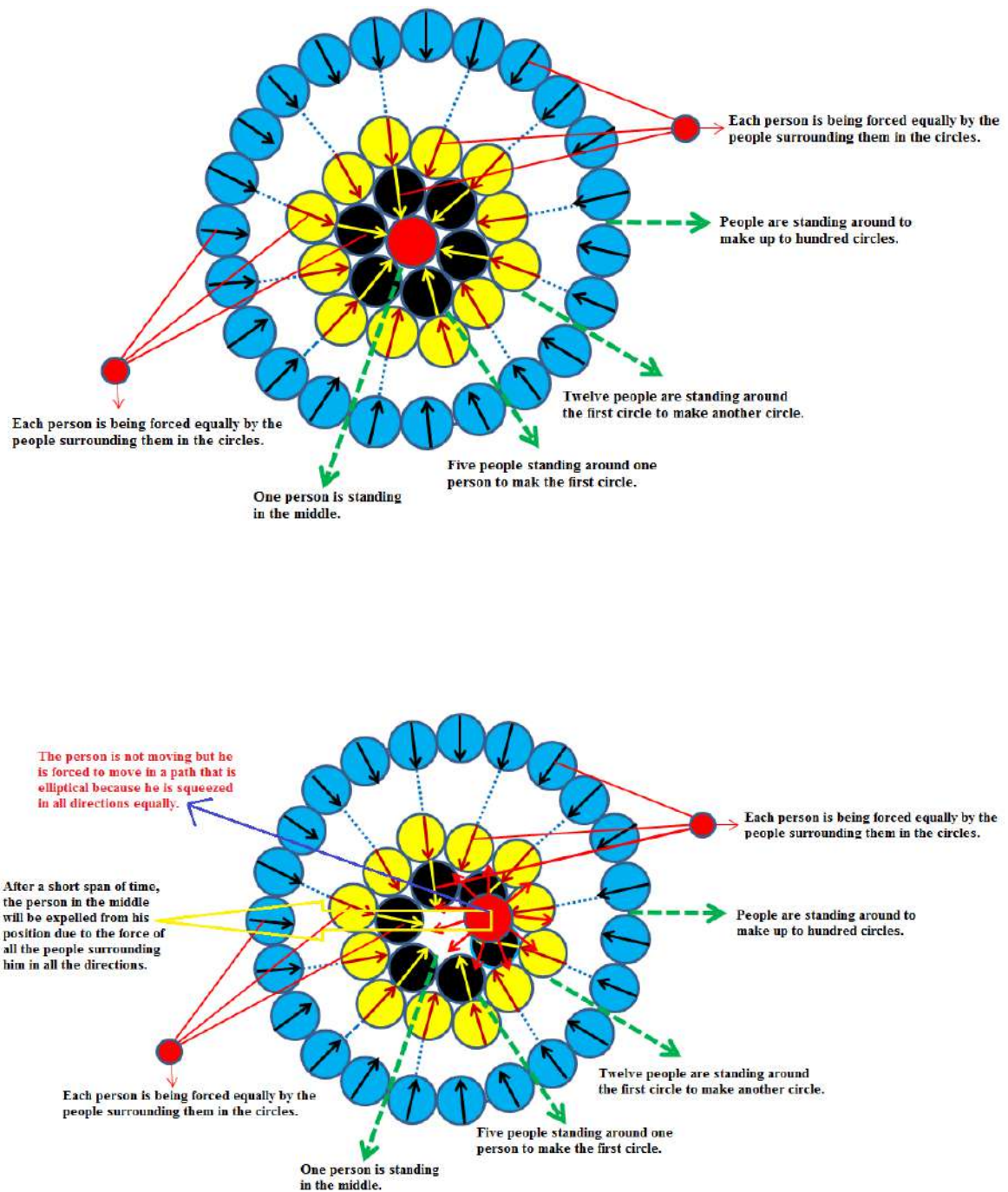


Fig. 8a & 8b Analogy to demonstrate how a White Hole/Kamalon, Wormhole/Krishnon and Black Hole/Kannon are formed when Up Quarks/God Particles/Yogon are expelled from Space/Energy/Dark Matter/Vethon.

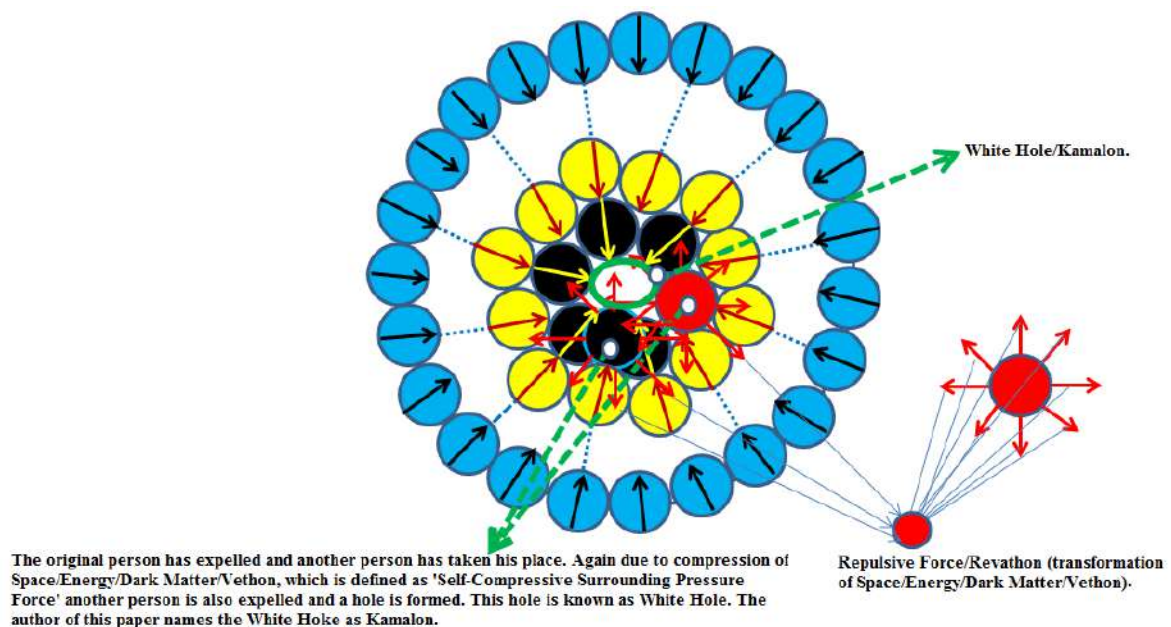
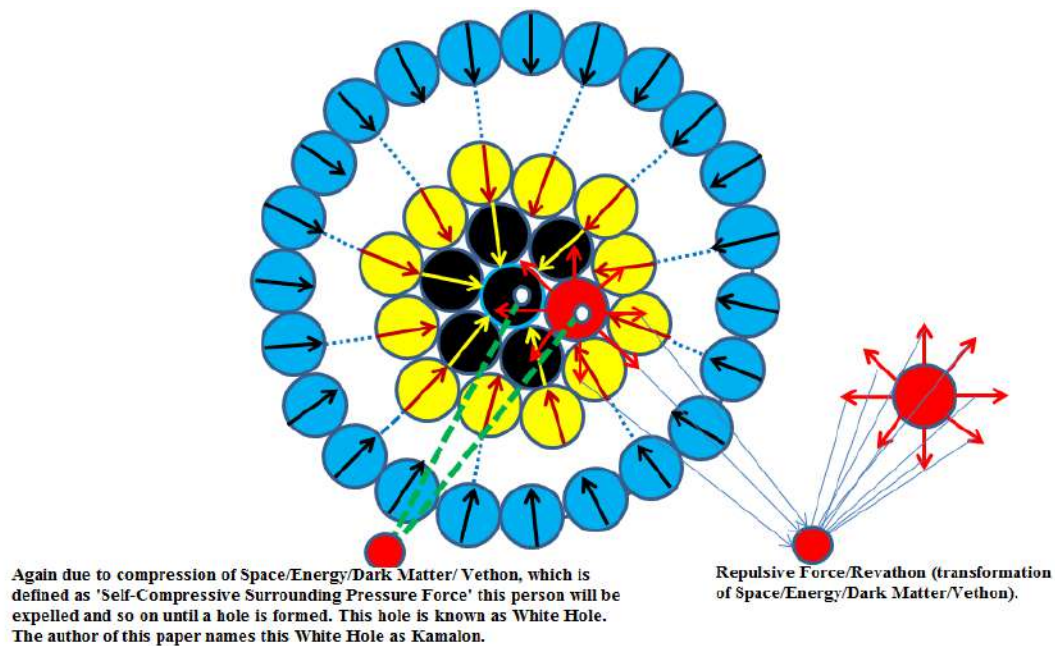


Fig. 8c & 8d Analogy to demonstrate how a White Hole/Kamalon, Wormhole/Krishnon and Black Hole/Kannon are formed when Up Quarks/God Particles/Yogon are expelled from Space/Energy/Dark Matter/Vethon.



### 3.7. 5 Analogy 5: To demonstrate White Holes/Kamalon, Wormholes/Krishnon and Black Holes/Kannon.

Another analogy is water draining out of a kitchen sink. First fill the sink with water. Then remove the plug and watch the water expelled down the drain hole. The water is draining out because all the pressure is exerted towards the drain hole. The drain hole at the bottom of the sink hole where the water is expelled out can be known as a White Hole. As the water continues to drain out, a funnel shape forms representing a Wormhole (length between the White Hole and the Black Hole) and the top of the funnel represents a Black Hole (Kannon).

For instance, a drop of water has been expelled due to overlapping of constant circular waves (two-dimensional) compressing itself toward its centre point as shown in Fig. 8b [7].

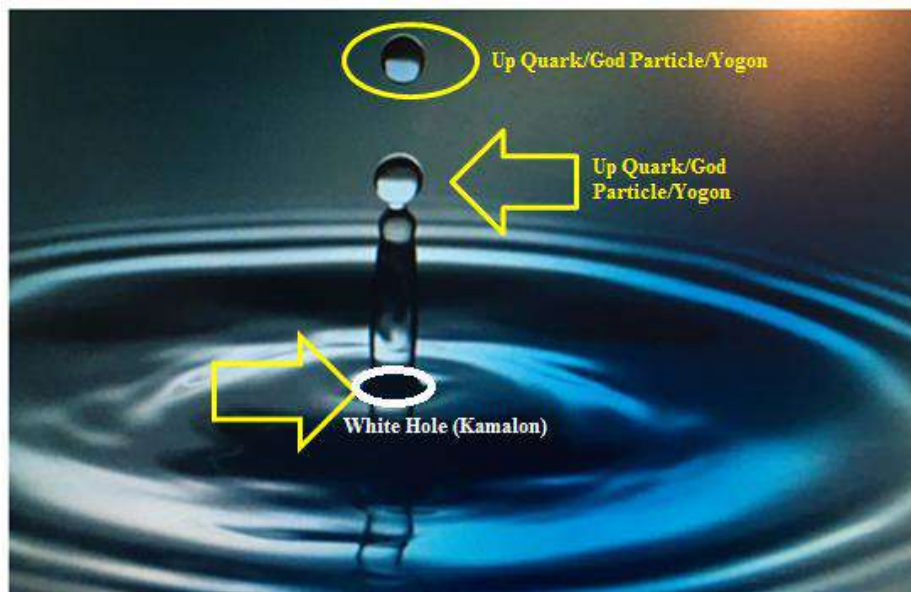
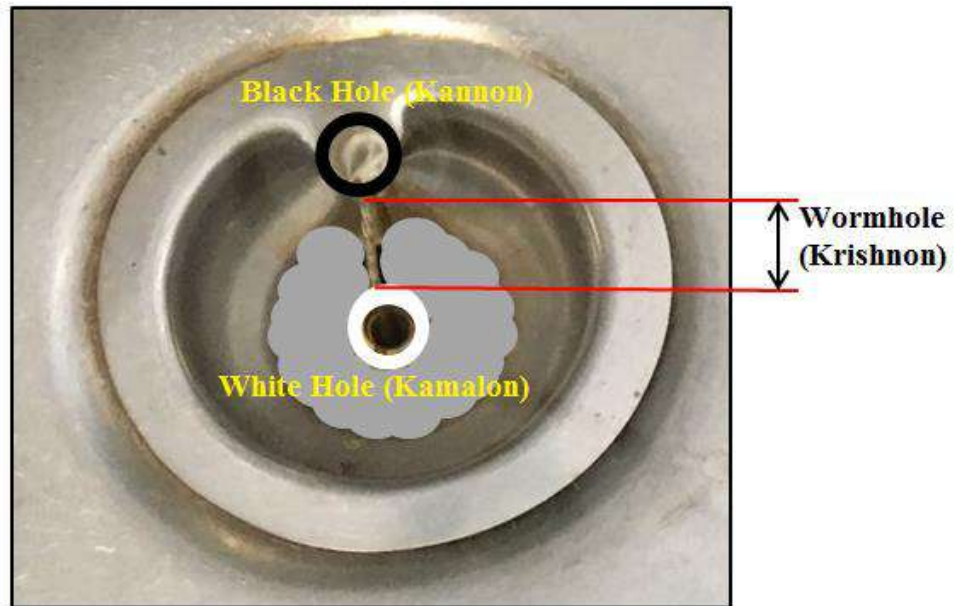


Fig. 9a & 9b Analogy to demonstrate White Holes/Kamalon, Wormholes/Krishnon and Black Holes/Kannon [7].

**3.7. 6 Analogy 6: To demonstrate that the Repulsive Force/Revathon (transformation of Space/ Energy/ Dark Matter/Vethon) is constantly generated due to the friction between Space/Energy/Dark Matter/Vethon and Up Quarks/God Particles/Yogon.**

For instance, a knife can be sharpened by holding it against a speedily rotating stone wheel. Thousands of fiery sparks emerge from the knife due to the friction between the rolling stone (grinding stone) and the knife, and the sparks disappear and dissolve into space in a very short time. Therefore, the author of this paper concludes that the Repulsive Force/Revathon (transformation of Space/Energy/Dark Matter/Vethon) is constantly generated due to the friction between Space/Energy/Dark Matter/Vethon and Up Quarks/God Particles/Yogon as shown in Fig. 10 [7]. Time/Varthon starts when Repulsive Force/Revathon starts.



Fig. 10 Analogy to demonstrate that the Repulsive Force/Revathon (transformation of Space/Energy/Dark Matter/Vethon) is constantly generated due to the friction between Space/Energy/Dark Matter/Vethon and Up Quarks/God Particles/Yogon [7]. Time/Varthon starts when Repulsive Force/Revathon starts.

**37.7 Analogy 7: To demonstrate Dark Energy /Sathyon.**

There is a dam and the water is filling the dam as shown in Fig. 11. When the water hits the dam wall, this water moving in the forward direction is stronger and moves faster than the water moving in the opposite direction after hitting the wall. The water moving in the forward direction will act as an obstacle or impediment for the water moving backwards after hitting the wall. Therefore, the water moving backwards after hitting the dam wall cannot move with the same speed of the water which is hitting the wall in the forward direction and also cannot travel at constant speed and the speed of the water decreases as distance increases and as a result waves are generated. The water moving backwards after hitting the wall travels a certain distance and merges with the water (frequency becomes zero) which is moving in the forward direction, and the water again starts to move in the forward direction to hit the wall again.

- Space/Energy/Dark Matter/Vethon (defined as Self-Compressive Surrounding Pressure Force) = The volume occupied in a dam by water moving only in the forward direction.
- Dark Energy/Sathyon = The volume occupied in a dam by water moving in both the forward direction as well as in the opposite direction.

**3.7.8 Analogy 8: To demonstrate that Repulsive Force/Revathon merges with Space/Energy/Dark Matter/Vethon and becomes Space/Energy/Dark Matter/ Vethon (frequency becomes zero).**

Take a glass of ordinary water and put an ice cube into it as shown in Fig. 12. The process of melting starts and gradually (or by degrees) the ice cube disappears. The volume of the ice cube vanishes (be no more) in this process. The temperature of the ordinary water to cold water occurs on many levels. Similarly, Repulsive Force/Revathon gradually dissolves in Space/Energy/Dark Matter/Vethon and transforms into the magnetic (pressure), electrical (sound and light) and chemical (taste and smell) functions according to the environmental conditions at the point of this merging process. Time/Varthon stops when Repulsive Force/Revathon ends.

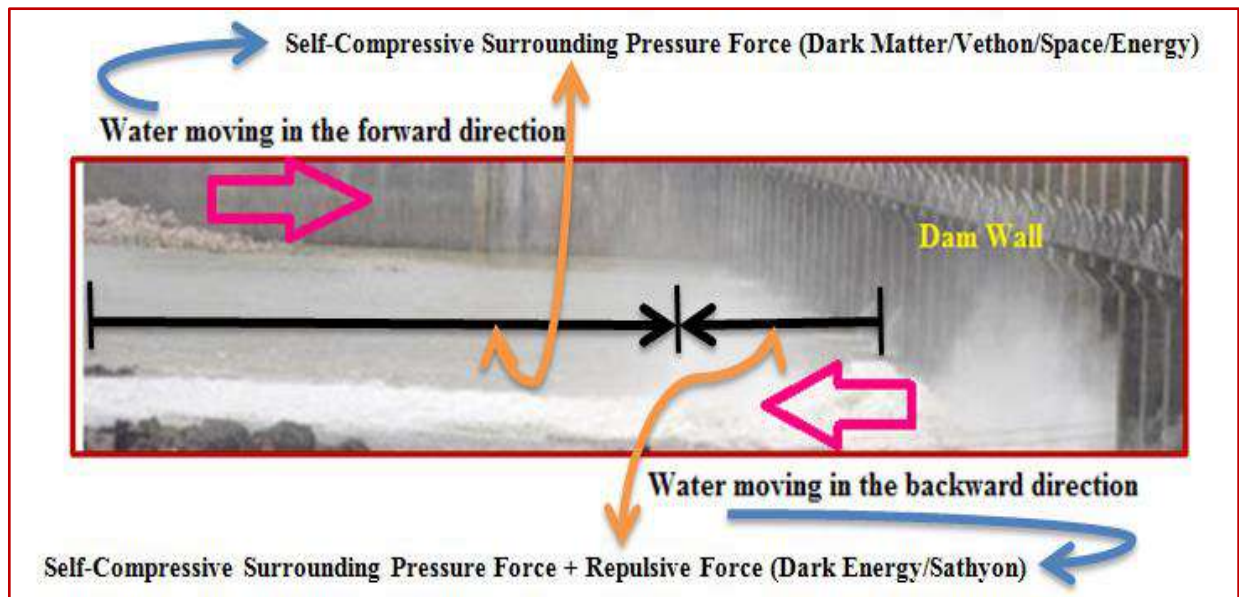


Fig. 11 Analogy to demonstrate Dark Energy (Sathyon).

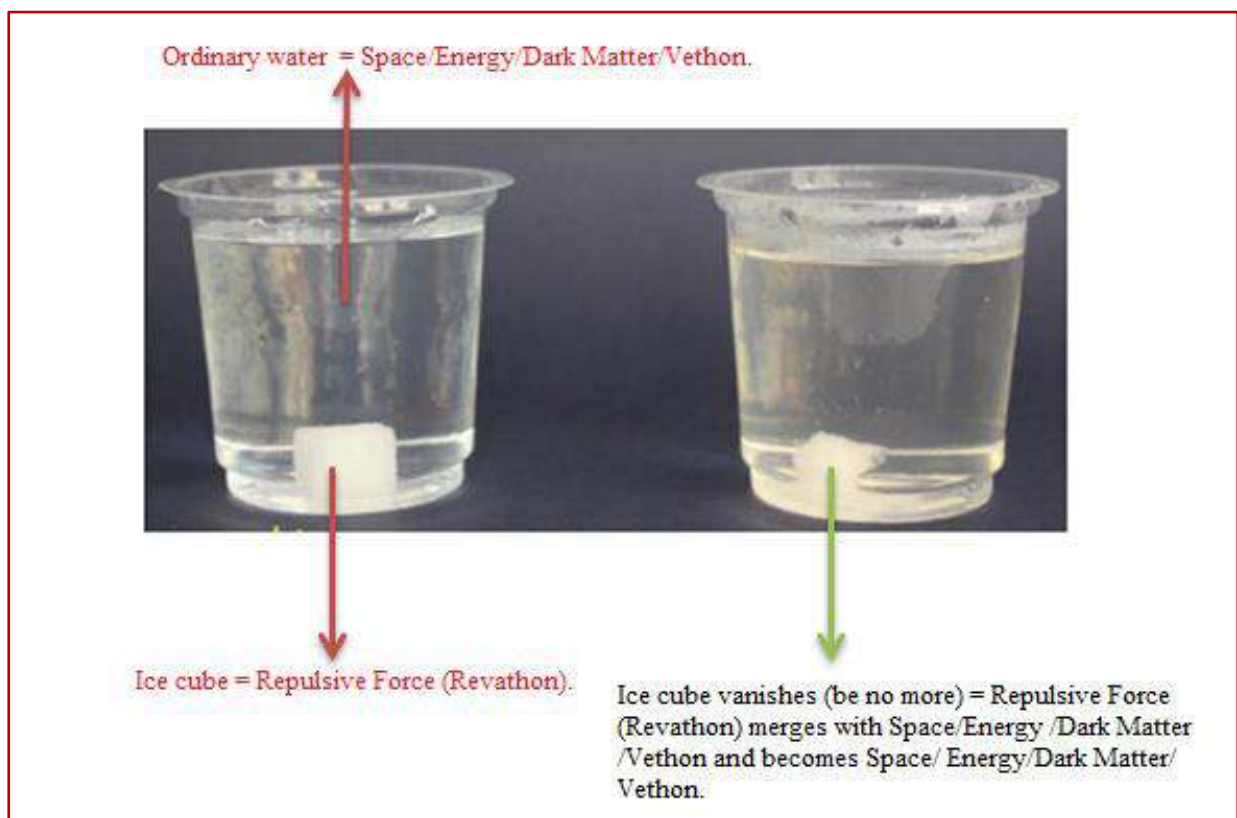


Fig. 12 Analogy to demonstrate that Repulsive Force/Revathon merges with Space/Energy/Dark Matter/Vethon and becomes Space/Energy/Dark Matter/ Vethon (frequency becomes zero). Time/Varthon stops when Repulsive Force/Revathon stops.



#### 4. Cosmic catastrophe: Newton's Theory of Gravity vs. Einstein's Theory of Gravity vs. The Super-Standard Model of Physics (Vethathiri Model of the Universe)

The 'Cosmic catastrophe' is a mental assessment of the implications of a hypothesis (thought experiment) where the sun was to disappear suddenly and completely. What would happen to the earth and the other planets if the sun disappeared suddenly and completely as shown in Fig. 14? [13]. The outline of Section 4 cosmic catastrophe: Newton's Theory of Gravity vs. Einstein's Theory of Gravity vs. The Super-Standard Model of Physics (Vethathiri Model of the Universe) is shown in Fig. 13.

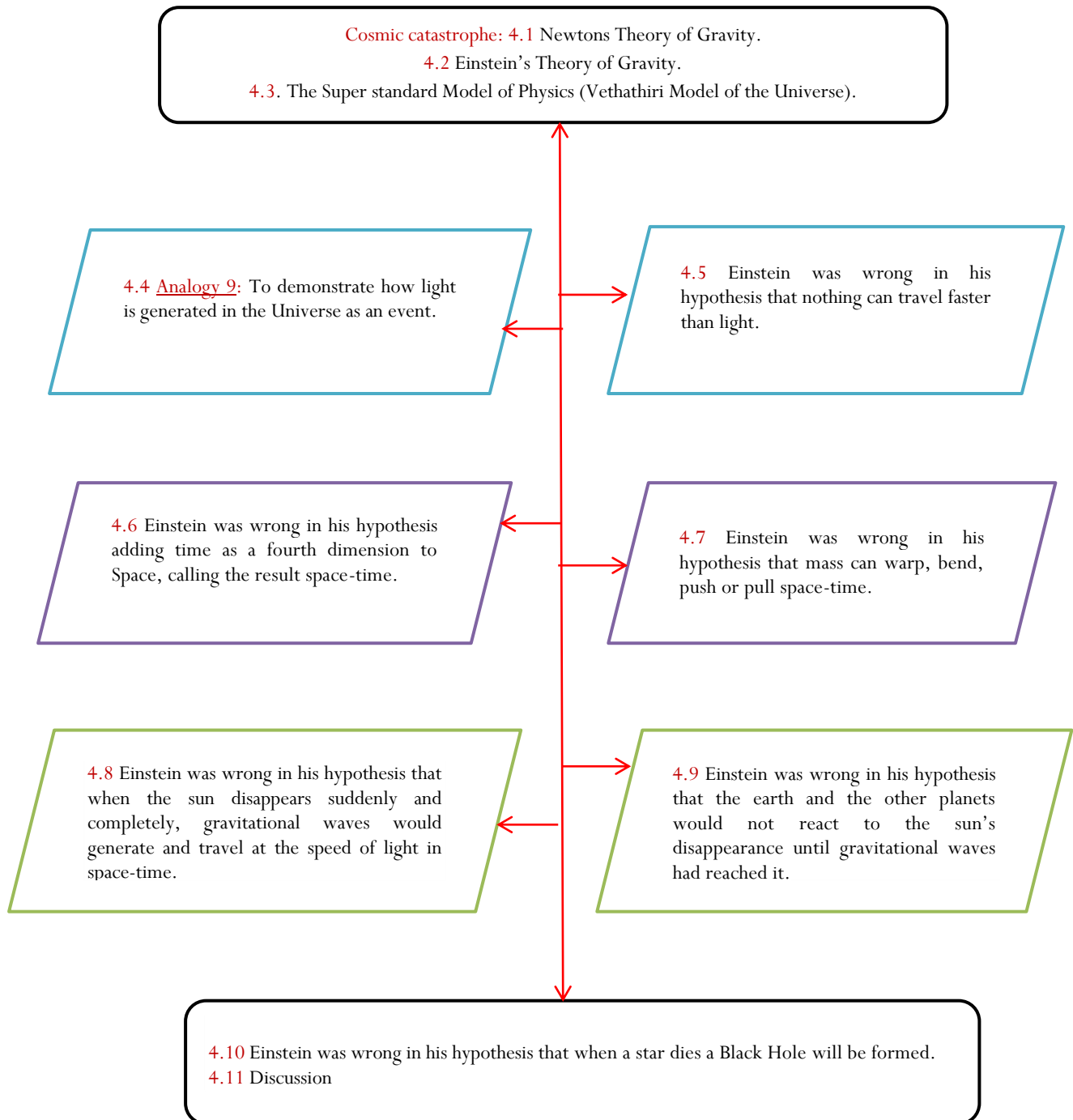


Fig. 13 The outline of cosmic catastrophe: Newton's Theory of Gravity vs. Einstein's Theory of Gravity vs. The Super-Standard Model of Physics (Vethathiri Model of the Universe).

#### 4.1 Newton's Theory of Gravity

According to Newton's Theory of Gravity, when the sun disappears suddenly and completely, the earth and the other planets would immediately leave off or cease to move in a circular motion, and inertia would make earth and the other planets start traveling in a straight line as shown in Fig. 15 [13].

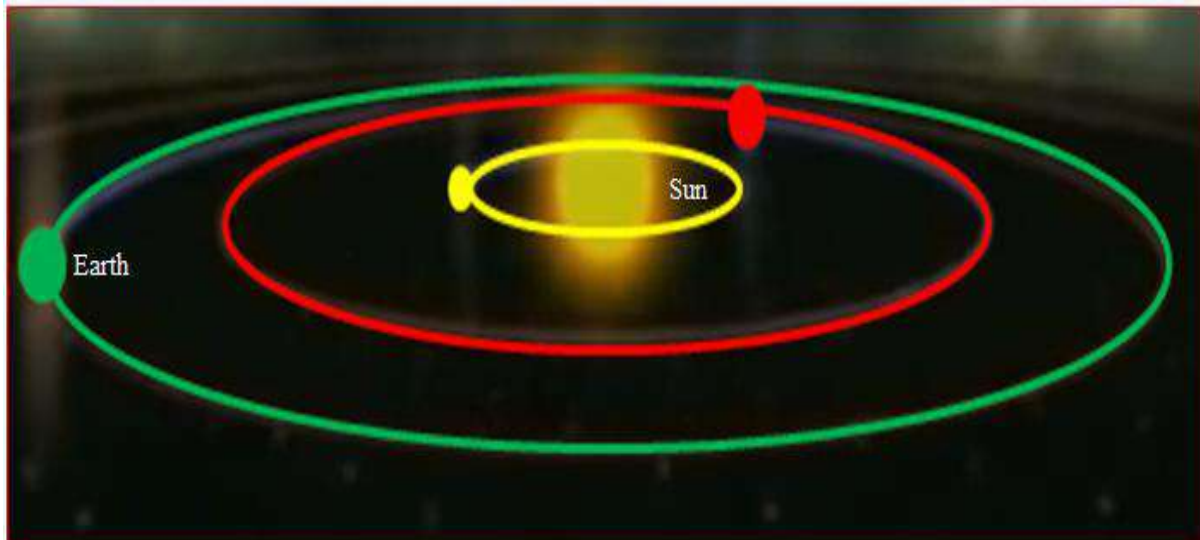


Fig. 14 Solar System: The sun and the first three planets (the mercury, the venus and the earth)

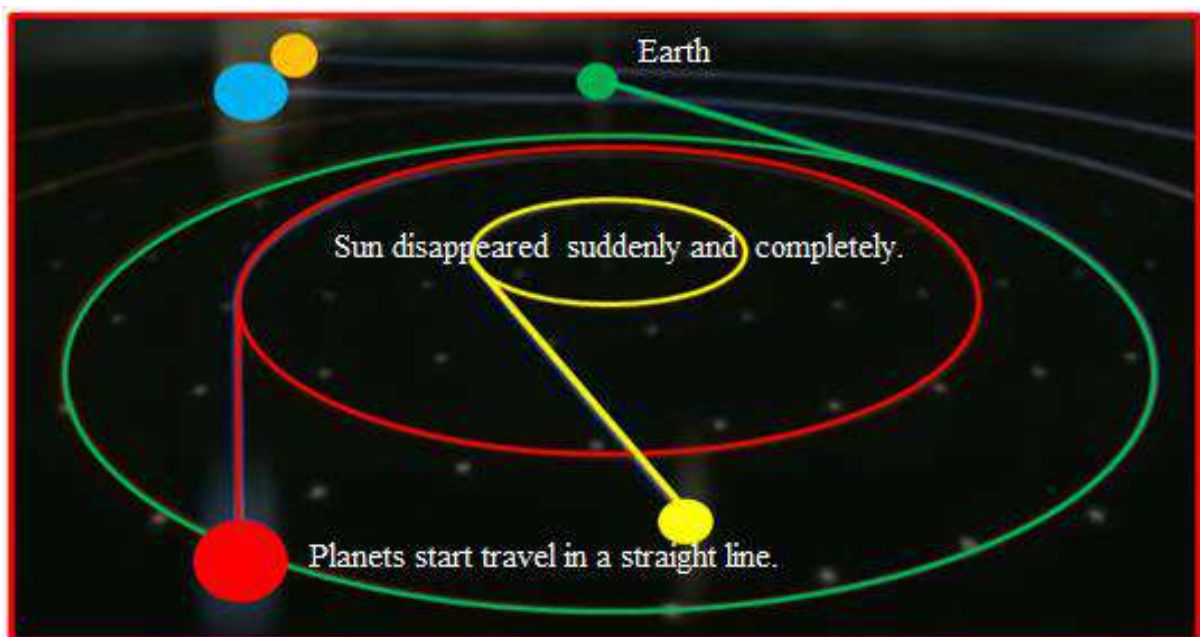


Fig. 15 According to Newton's Theory of Gravity when the sun disappears suddenly and completely, the earth and the other planets start travelling in a straight line.

#### 4.2 Einstein's Theory of Gravity

Albert Einstein saw a lack or dearth in Newton's Theory of Gravity. Einstein's Theory of Special Relativity sets the speed of light as 300 million metres per second (186,000 miles per second), as a cosmic speed limit, a speed that nothing in the Universe can exceed. Albert Einstein discovered that it would take a certain amount of time for the sun's rays to reach the earth as shown in Fig. 16 (about eight minutes for the sun's rays to travel the 93 million miles) and the other orbiting planets. Albert Einstein knew that light doesn't travel instantaneously.

Therefore, when the sun disappears suddenly and completely, why would the earth and the other planets start traveling in a straight line before the darkness from the sun's absence has occurred?[13]. Thus he proved two hundred and fifty years of Newtonian Gravity was wrong.



Fig. 16 It takes about eight minutes for the sun's rays to travel the 93 million miles to reach the earth.

Albert Einstein agreed with Isaac Newton that space has dimension: length, breadth and height. He added time as a fourth dimension to Space, with his 1905 Special Theory of Relativity, calling the result space-time. Albert Einstein discovered that mass is acting on Space. Therefore, Einstein's Theory of Gravity was just a natural outcome of the existence of mass in Space where mass can warp, bend, push or pull space-time. The invention of the General Theory of Relativity and the creation of the concept of space-time allowed Albert Einstein to fix the lack or dearth in Newton's Theory of Gravity. According to Einstein's Theory of Gravity, when the sun disappears suddenly and completely, gravitational waves would generate as shown in Fig 17a and travel at the speed of light in the space-time. Earth and the other orbiting planets would not react to the sun's disappearance until after the gravitational wave had reached it. Only then, the earth and other orbiting planets would start to travel in a straight line as shown in Fig. 17b [13].

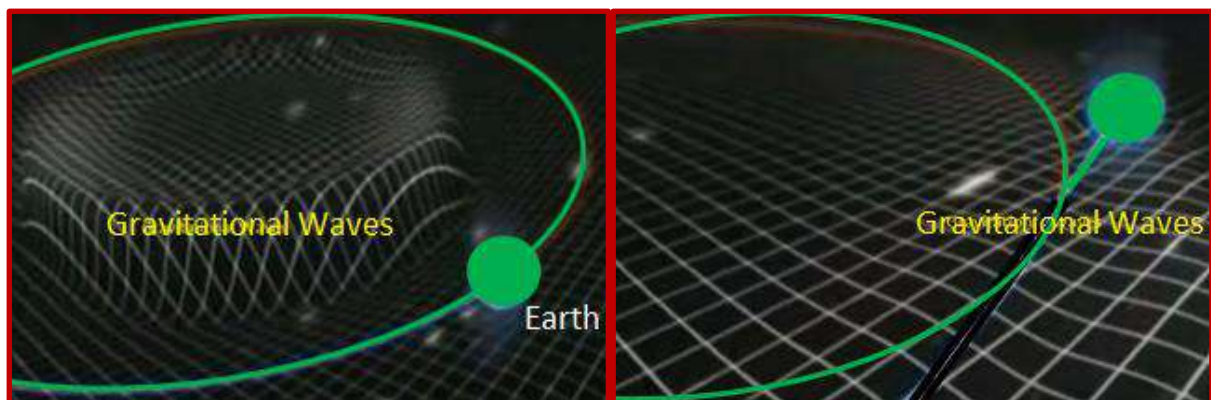


Fig. 17a & b Einstein's Theory of Gravity predicts that when the sun disappears suddenly and completely, gravitational waves would generate.

#### 4.3 The Super-Standard Model of Physics (Vethathiri Model of the Universe)

The author of this paper sees a deficiency in both Newton's Theory of Gravity and Einstein's Theory of Gravity. The author of this paper agrees with Albert Einstein that light doesn't travel instantly and it would take a certain amount of time for the sun's rays to reach the earth (about eight minutes for the sun's rays to travel the 93 million miles) and the other orbiting planets as shown in Fig. 16 [13]. The author of this paper does not agree

with Einstein's Theory of Special Relativity that the speed of light is constant, 300 million metres per second (186,000 miles per second), as a cosmic speed limit, a speed that nothing in the Universe can exceed [7].

#### **4.4 Analogy 9: To demonstrate how light is generated in the Universe as an event.**

When electrons are flowing through a wire which is connected to a light bulb, electrical energy is converted into light energy because the filament tungsten has a high resistance to the flow of electrons as shown in Fig. 17. Similarly, in the Universe the Space/Energy/Dark Matter/Vethon which is defined as 'Self-Compressive Surrounding Pressure Force' acts as a resistance to Repulsive Force/Revathon (transformation of Space/Energy/Dark Matter/Vethon) and as a result light energy is generated as an event in the Universe.

- Space/Energy/Dark Matter/Vethon, which is defined as 'Self-Compressive Surrounding Pressure Force = Tungsten..... (1).
- Repulsive Force/Revathon = Flow of electrons..... (2).
- Result = Light Energy is generated as an event..... (3).

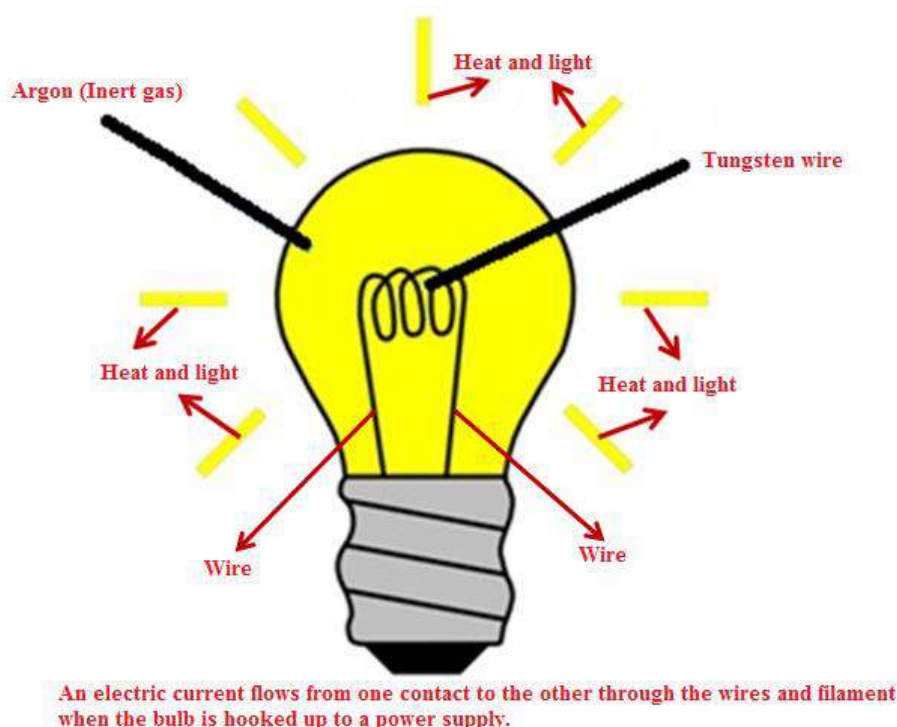


Fig. 17 Analogy to demonstrate Space/Energy/Dark Matter/Vethon (defined as Self-Compressive Surrounding Pressure Force), acts as a resistance to Repulsive Force (transformation of Space/Energy/Dark Matter/Vethon) and as a result light energy is generated as an event in the Universe.

#### **4.5 Einstein was wrong in his hypothesis that nothing can travel faster than light.**

As demonstrated in Analogy 7, there is a dam and the water is filling the dam. When the water hits the dam wall, this water moving in the forward direction is stronger and moves faster than the water moving in the opposite direction after hitting the wall. The water moving in the forward direction will act as an obstacle or impediment for the water moving backwards after the water hits the wall as shown in Fig. 11. What would happen if the dam wall disappeared suddenly and completely? The water will be moving only in a forward direction, when the dam wall disappears suddenly and completely.

As demonstrated in Analogy 2, some kind of Energy (E) or inexhaustible stock force is required to keep the Sun, the Earth and the other orbiting planets constantly in motion. The author of this paper has concluded that Space/Dark Matter/Vethon (E), which is defined as 'Self-Compressive Surrounding Pressure Force,' is the source of all forces, which is acting in all directions and in all degrees (360<sup>0</sup> degrees). Fig. 18 is the Energy (E) or inexhaustible stock force, which keeps the Sun, the Earth and the other planets orbiting and spinning without changing the polarity (direction of motion) like the water moving in the forward direction and hitting the wall.



Therefore, when the Sun disappears suddenly and completely, Repulsive Force/Revathon will stop being generated in the same way as demonstrated in Analogy 7, like the water moving backwards after hitting the dam wall will stop generating [7-9].

- Space/Energy/Dark Matter/Vethon, which is defined as ‘Self-Compressive Surrounding Pressure Force = Water moving in the forward direction and hitting the wall ..... (4).
- Repulsive Force/Revathon = Water moving in the backward direction after hitting the wall..... (5).
- Object (Example: Sun/Earth etc.) = Dam wall ..... (6).

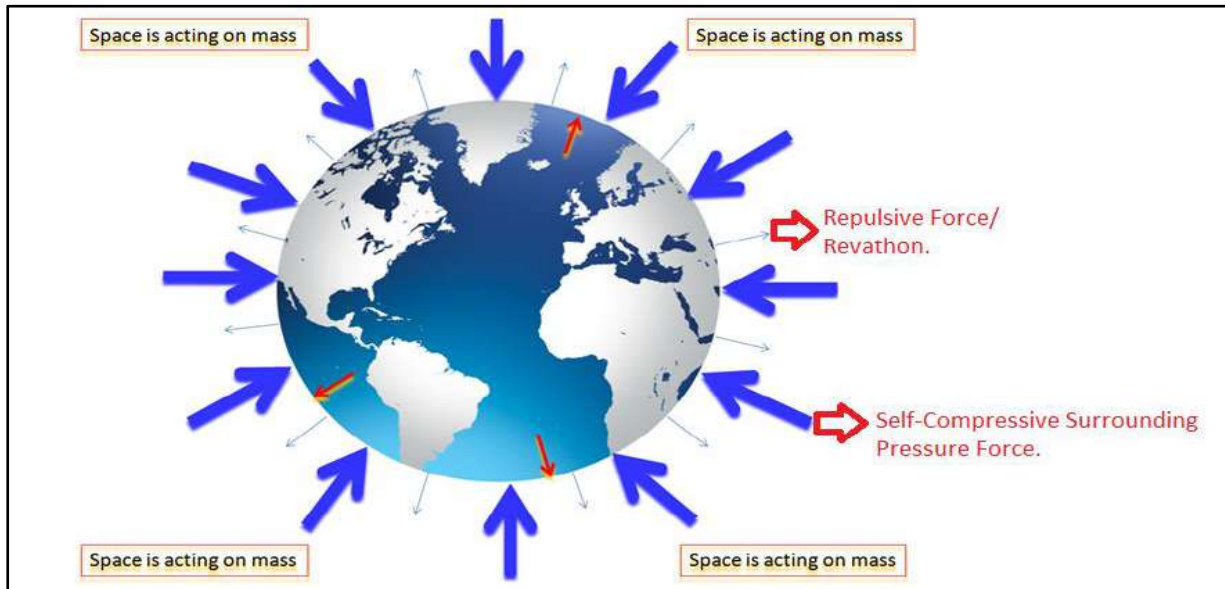


Fig. 18 Space/Dark Matter/Vethon, which is defined as ‘Self-Compressive Surrounding Pressure Force,’ is the Energy (E) inexhaustible stock force, which is acting in all directions and in all degrees (360° degrees), which keeps the sun, the earth and the other planets orbiting and spinning without changing polarity [7-9].

As demonstrated in Analogy 7, the water moving backwards after hitting the dam wall, cannot move with the same speed of the water, which is hitting the wall in the forward direction and also cannot travel at a constant speed and the speed of the water decreases as distance increases and as a result waves are generated. The water moving backwards after hitting the wall, travels a certain distance and merges with the water (at one stage its frequency becomes zero) which is moving in the forward direction, and the water again starts to move in the forward direction to hit the wall again. Similarly, Repulsive Force/Revathon and light moving backwards after hitting the sun cannot move with the same speed of the Space/Energy/Dark Matter/Vethon (defined as Self-Compressive Surrounding Pressure Force), which is hitting the sun in the forward direction. Repulsive Force/Revathon and light cannot travel at a constant speed and the speed of Repulsive Force/Revathon and light decreases as distance increases and as a result frequencies and wavelengths of Repulsive Force/Revathon and light are generated in the Universe. Repulsive Force/Revathon and light moving backwards after hitting the sun travel a certain distance and merge with the Space/Energy/Dark Matter/Vethon (at one stage its frequency becomes zero) which is moving in the forward direction, and Repulsive Force/Revathon and light again starts to move in the forward direction to hit the sun again.

*“The author of this paper has predicted that the speed of the ‘Self-Compressive Surrounding Pressure Force’ is infinity ( $\infty$ ). Nothing can travel faster than the speed of the ‘Self-Compressive Surrounding Pressure Force (E)’ in the Universe and nothing is stronger than the Space/Energy/Dark Matter/Vethon, which is defined as ‘Self-Compressive Surrounding Pressure Force (E)’ in the Universe. The author of this paper has also predicted that Repulsive Force/Revathon covers the distance to the stars roughly less than  $1/10^{\text{th}}$  ( $< 0.1$  sec) of a second and the speed of Repulsive Force/Revathon is completely outside the realm of human experience. The speed of the Repulsive Force /Revathon will be greater than the speed of light and less than the speed of the Self-Compressive Surrounding Pressure Force. Therefore, Einstein was wrong in his hypothesis that nothing can travel faster than light” [7-9].*

#### 4.6 Einstein was wrong in his hypothesis adding time as a fourth dimension to Space, calling the result space-time.

The author of this paper agrees with Isaac Newton and Albert Einstein that space has dimension: length, breadth and height. The author of this paper does not agree with Albert Einstein for adding time as a fourth dimension to Space, with his 1905 Special Theory of Relativity, calling the result space-time [13]. For example, as discussed earlier in a thought experiment in which the dam wall disappears suddenly and completely then what would happen. The water will be moving only in the forward direction, when the dam wall disappears suddenly and completely, and the water moving backwards after hitting the dam wall will stop generating. Another example as shown in Fig. 19a & b when the sun is in position 1 there will be darkness in all three positions (2, 3, & 4) since Repulsive Force/Revathon can travel only a certain distance and merge with Space/Energy/Dark Matter/Vethon (at one stage its frequency will become zero). When the sun has travelled to position 2 there will be darkness in the remaining three positions (3, 4 & 1). This shows there is **one hundred precent (100%)** Space/Energy/Dark Matter/Vethon in the Universe. When the sun disappears suddenly and completely, Repulsive Force/Revathon will stop being generated in the same way as demonstrated in analogy 7, like the water moving backwards after hitting the dam wall will stop generating and there will be only Space/Energy/Dark Matter/Vethon as shown in Fig. 20a & b. Therefore, the author of this paper has predicted that time is directly proportional to Repulsive Force/Revathon in the Universe and time does not depend on Space/Energy/Dark Matter/Vethon. Time/Varthon starts when Repulsive Force/Revathon starts and Time/Varthon stops when Repulsive Force/Revathon stops. Einstein was wrong in his hypothesis adding time as a fourth dimension to Space, calling the result space-time.

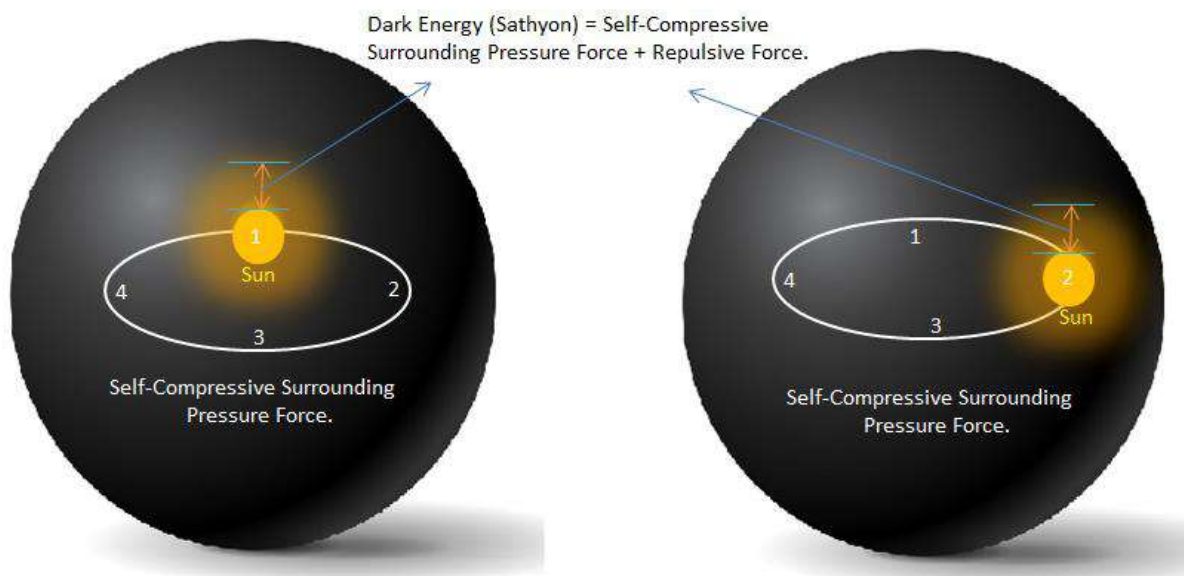


Fig. 19a & b When the sun is in position 1 there will be darkness in all three positions (2, 3, & 4). When the sun has travelled to position 2 there will be darkness in the remaining three positions (3, 4 & 1). This shows there is **one hundred precent (100%)** Space/Energy/Dark Matter/Vethon in the Universe.

#### 4.7 Einstein was wrong in his hypothesis that mass can warp, bend, push or pull space-time.

Einstein's Theory of General Relativity was just a natural outcome of a mass's existence in Space and mass can warp, bend, push or pull space-time [10]. For example, as demonstrated in analogy 1, Space/Energy/Dark Matter/Vethon, which is defined as 'Self-Compressive Surrounding Pressure Force,' is carrying or supporting the planet Earth and the Sun. The Sun weighs about 333,000 times as much as the Earth. Therefore, the Sun is stronger than the Earth. But Space, which is defined as 'Self-Compressive Surrounding Pressure Force,' is holding up both the Earth and the Sun and therefore Space is stronger than the Earth and the Sun. Since Space, which is defined as 'Self-Compressive Surrounding Pressure Force,' is carrying or supporting all the objects in the Universe, it is stronger than everything (planets, stars and galaxies) in the Universe [7-9].

Albert Einstein discovered that mass is acting on Space but failed to understand that Space is acting on the mass. Vethathiri discovered that not only mass is acting on Space but also Space is acting on the mass and



named Space as Unified Force, which is defined as 'Self-Compressive Surrounding Pressure Force.' The author of this paper concludes that the 'Unified Force' which is defined as 'Self-Compressive Surrounding Pressure Force' is the 'Dark Matter.' So far in physics, nobody has been able to explain what the 'Dark Matter' is. The volume occupied in Space by only Self-Compressive Surrounding Pressure Force is known as 'Dark Matter' as shown in Fig. 19a & b and the volume occupied in space by both 'Self-Compressive Surrounding Pressure Force' and Repulsive Force is known as 'Dark Energy,' which was one of the most famous and most embarrassing problems in physics so far [7-9]. Therefore, Einstein was wrong in his hypothesis that mass can warp, bend, push or pull space-time since he failed to understand that Space/Energy/Dark Matter/Vethon is also acting on mass.

#### 4.8 Einstein was wrong in his hypothesis that when the sun disappears suddenly and completely, gravitational waves would generate and travel at the speed of light in space-time.

According to Einstein's Theory of Gravity, when the sun disappears suddenly and completely, gravitational waves would be generated as shown in Figs. 17a & b and travel at the speed of light in space-time [13]. But according to the Super-Standard Model of Physics (Vethathiri Model of the Universe) when the sun disappears suddenly and completely, Repulsive Force/Revathon will stop generating and there will be only Space/Energy/Dark Matter/Vethon as shown in Figs. 20a & b. As demonstrated in analogy 8, take a glass of water and put an ice cube into it. The process of dilution starts and gradually (or by degrees) the ice cube disappears. The volume of the ice cube vanishes (be no more) in this process. The temperature of the ordinary water to cold water occurs on many levels. Repulsive Force/ Revathon, which is generated before disappearance of the sun suddenly and completely will gradually dissolve in Space/Energy/Dark Matter/Vethon and transform into the magnetic (pressure), electrical (sound and light) and chemical (taste and smell) functions according to the environmental conditions at the point of this merging process like the temperature of water to cold water occurs on many levels. Therefore, Einstein was wrong in his hypothesis that when the sun disappears suddenly and completely, gravitational waves would generate and travel at the speed of light in space-time.

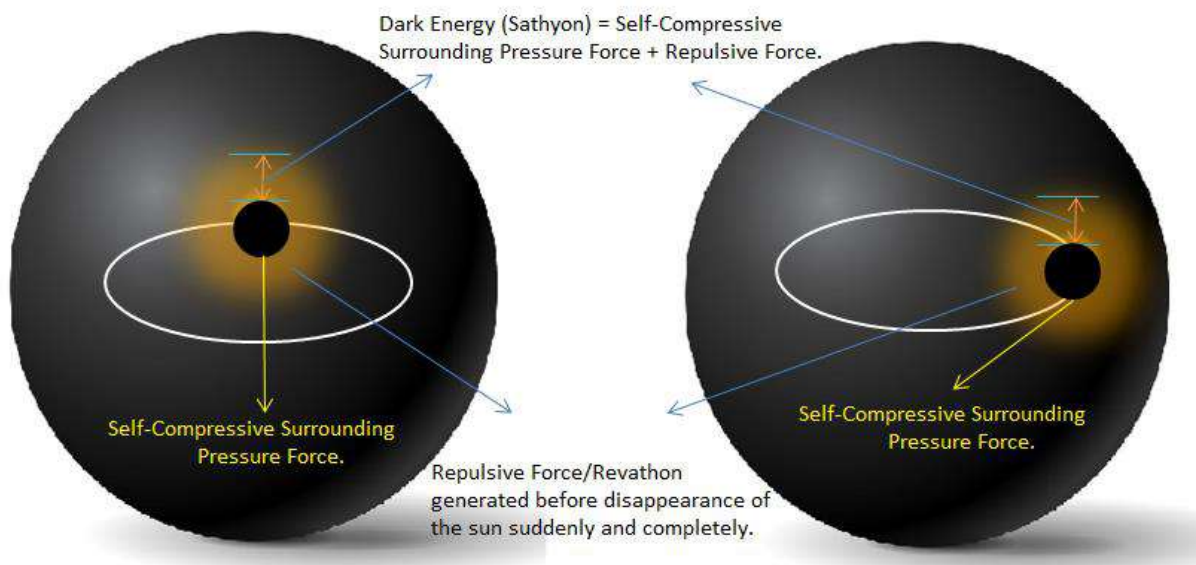


Fig. 20a & b When the sun disappears suddenly and completely, Repulsive Force/Revathon will stop being generated and there will be only Space/Energy/Dark Matter/Vethon.

#### 4.9 Einstein was wrong in his hypothesis that the earth and the other planets would not react to the sun's disappearance until gravitational waves had reached it.

According to Einstein's Theory of Gravity [13], the Earth and the other orbiting planets would not react to the Sun's disappearance until after the gravitational wave had reached it. Since Einstein was wrong in his hypothesis that when the Sun disappears suddenly and completely, gravitational waves would be generated, then how would it be possible for the Earth and other orbiting planets to start travel in a straight line as shown in Fig. 15? Consequently, Einstein was wrong in his hypothesis that the earth and the other planets would not react to the sun's disappearance until gravitational waves had reached it.

The author of this paper has predicted that Space/Energy/Dark Matter/Vethon, which is defined as 'Self-Compressive Surrounding Pressure Force' **binds** the Sun and the planets. Repulsive Force/Revathon keeps the sun and the planets in their orbits so that they don't hit each other. When the Sun disappears suddenly and completely, Repulsive Force/Revathon will stop being generated. Repulsive Force/ Revathon, which is generated before disappearance of the Sun suddenly and completely, will gradually dissolve in Space/Energy/Dark Matter/Vethon.

At one stage the intensity of the Repulsive Force/Revathon, which is generated before disappearance of the sun suddenly and completely, will gradually decrease more than the Repulsive Force/Revathon, which is generated by the earth and the other planets. Only, then the Earth and the other planets would immediately cease to move in a circular motion. The Earth and the other planets will not travel in a straight line but reorientation (change of direction) will occur. Space/Energy/Dark Matter/Vethon, which is defined as 'Self-Compressive Surrounding Pressure Force' **binds** the Earth and the other planets and Repulsive Force/Revathon, generated from the Earth and the other planets, will keep the Earth and the planets in their orbits so that they don't hit each other.

#### 4.10 Einstein was wrong in his hypothesis that when a star dies Black Holes will be formed.

Albert Einstein predicted the existence of Black Holes in 1916, derived from his General theory of Relativity. American astronomer coined the term 'Black Hole' during the year 1967. According to Albert Einstein, a Black Hole is a place or region in Space where gravity is so strong that light is not able to escape. Matter or energy could escape from a Black Hole, only if it is capable of moving faster than the speed of light, which is not possible according to the law of Physics. One way for a Stellar Black Hole (mass can be up to 20 times greater than the mass of the Sun) to form is when the center of a very massive star collapses upon itself. The explosion of a star is known as a supernova. A change in the core, or center of a star can occur in two different ways. The first type of supernova happens when two stars orbit the same point. One of the stars steals matter from its companion star, having too much matter causes the star to explode. The second type of supernova occurs as the single star runs out of nuclear fuel; the core collapses because some of its mass flows into its core, and the core cannot withstand its own gravitational force. NASA's Hubble Space Telescope and Chandra X-ray Observatory are different types of telescopes used to study supernovas. Scientists think Supermassive Black Holes (mass equal to about 4 million suns) are the largest Black Holes, and the Supermassive Black Hole at the center of the Milky Way Galaxy is called Sagittarius A [14, 15].

According to the Super-Standard Model of Physics, there is no gravity in the Universe and a star is nothing but an association of Up Quarks/God Particles/Yogon (composed of both Self-Compressive Surrounding Pressure Force and Repulsive Force/Revathon) as shown in Fig. 21. Self-Compressive Surrounding Pressure Force **binds** Up Quarks/God Particles/Yogon together in clusters to form a star. Repulsive Force/Revathon **separates** Up Quarks/God Particles/Yogon so that they don't hit each of the other particles in a star [7-9].

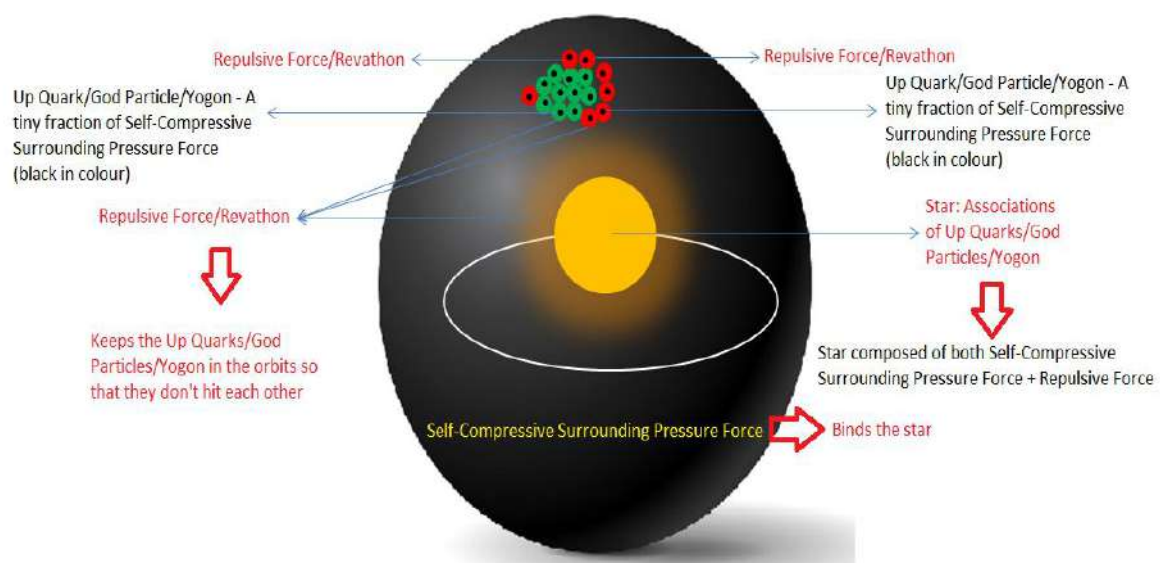


Fig. 21 A star is nothing but an association of Up Quarks/God Particles/Yogon (composed of both Self-Compressive Surrounding Pressure Force and Repulsive Force/Revathon).

Therefore, the author of this paper has predicted that when the star dies, Repulsive Force/Revathon will stop being generated and there will be only Space/Energy/Dark Matter/Vethon, which is defined as Self-Compressive Surrounding Pressure Force as shown in Fig 22. Therefore, Einstein was wrong in his hypothesis that when the star dies, Black Holes will be formed.

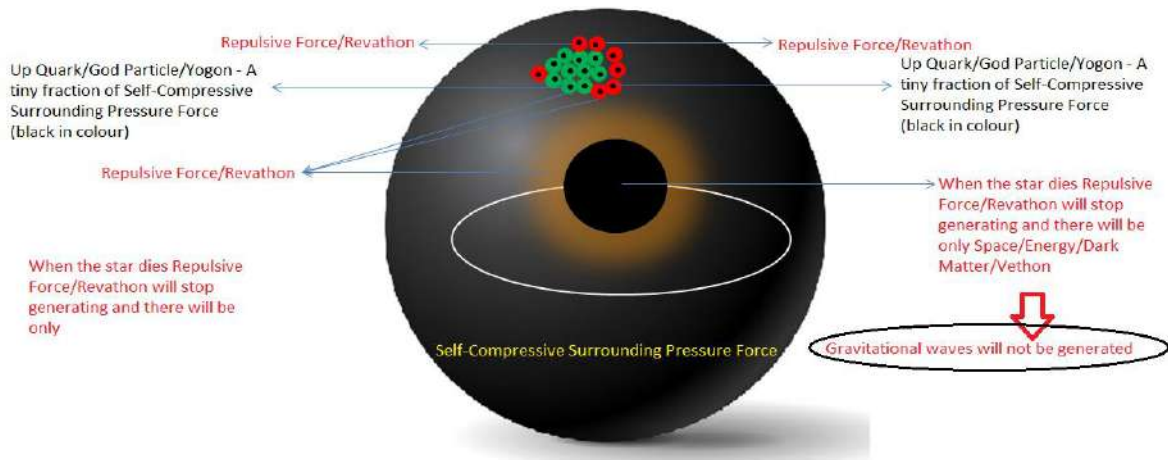


Fig. 22 When a star dies Repulsive Force/Revathon will stop being generated and there will be only Space/Energy/Dark Matter/Vethon.

#### 4.11 Discussion.

The author of this paper saw a deficiency in both Newton's Theory of Gravity and Einstein's Theory of Gravity. The author of this paper has predicted that nothing can travel faster than the speed of the 'Self-Compressive Surrounding Pressure Force (E)' in the Universe and nothing is stronger than the Space/Energy/Dark Matter/Vethon, which is defined as 'Self-Compressive Surrounding Pressure Force (E)' in the Universe. The speed of the Repulsive Force /Revathon will be greater than the speed of light and less than the speed of the Self-Compressive Surrounding Pressure Force.

Einstein was wrong in his hypothesis that:

- Adding time as a fourth dimension to Space, calling the result space-time.
- Mass can warp, bend, push or pull space-time.
- When the Sun disappears suddenly and completely, gravitational waves would generate and travel at the speed of light in space-time.
- The Earth and the other planets would not react to the Sun's disappearance until gravitational waves had reached it.
- When a star dies Black Holes will be formed.

As explained in Section 4.6, when the Sun is in position 1 there will be darkness in all three positions (2, 3, & 4). When the Sun has travelled to position 2 there will be darkness in the remaining three positions (3, 4 & 1) since Repulsive Force/Revathon can travel only to a certain distance and merge with Space/Energy/Dark Matter/Vethon (at one stage its frequency will become zero). This shows there is **one hundred percent (100%)** Space/Energy/Dark Matter/Vethon in the Universe. The real and observable percentage [16] of Space/Energy/Dark Matter/Vethon, Dark Energy/Sathyon and normal matter are shown in Table 2.

**Table 2 Original and observable percentage [16] of Space/Energy/Dark Matter/Vethon, Dark Energy/Sathyon and normal matter in the Universe.**

Sr. No	Composition of the Universe	Original percentage	Observable percentage
1	Space/Energy/Dark Matter/Vethon	100	About 27
2	Dark Energy/Sathyon	About 73	About 68
3	Normal Matter	< 5	< 5

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