

## New theory of Gravitation - Based on Fundamental Theory of Singularity (FTS)

Prabhakaran Natesan\*

Working in UAE, Age: 36, Home country: India, Area of interest: Modern physics

**\*Corresponding Author:** Prabhakaran Natesan, Working in UAE, Age: 36, Home country: India, Area of interest: Modern physics

**Abstract:** Gravitation in reality, is a channel that has a dual face to conduct an up-streaming force from the source (Singularity) for creation of objects and a down streaming force for the objects to free fall and try to settle down with the deepest possible point in the Sp-ti medium at surface level but leads to destruction of objects near or open to the destination (Singularity). It is done through a single impeller mechanism at the depth of the medium which is same like a fan that draws the air from one side and pushes the same on the other side. Here the terms, upstream and downstream shall not be compared to the flow of a river, as it actually means pushing and pulling forces, away and towards the source-destination points respectively. Here the source point is same as the destination point at the depth of the medium called as "Singularity" and denoted as space zero-time zero or simply Sp-ti 0. Now even if, Gravitation is understood in terms of gravity, it is still not a force at any point in the medium. This is because gravity is a resulting effect (felt only with the masses) of this impeller, whose primary action force is to serve the purpose of driving the space-time medium itself in a cyclic manner and perhaps could be responsible for expansion and contraction of the Universe along with the mass-energy of the objects as well. Speaking to the point, free flow of the medium is restricted by some means and allowed only through channels, resulting in suction and driving forces in the space-time medium, discussed in this paper. This journal also clarifies how in existing studies, the black holes are believed to have high gravity in it, is not true but the line of gravitation actually terminates at the edge and gravity is absolutely zero inside a black hole.

### Key-points:

- (i) The meaning for gravitation changes from surface level to depth of the space-time medium. Gravitation is independent of mass and need not necessarily involve the space-time fabric as it fundamentally works with sp-ti 0 points governed by real dimensions. However, mass is dependent on gravitation for its creation and existence.
- (ii) Gravitation model demonstrated by Sir Albert Einstein is applicable only for macro-scale objects and does not apply for quantum physics. The fundamental particles float on Sp-ti waves while the thread of gravitation passes in the middle of the wave. The particle has to cross through the sp-ti 0s along this line which is called as sp-ti 0 axis or line of gravitation.
- (iii) At no point, gravitation is a wave in sp-ti medium as it is believed to be so in existing studies. The line of gravitation terminates or emerges at the edge of the black hole. Black hole is an identification left behind in the vacuum medium by the sinking object.

**Key-words:** Gravitational rope, Gravitational thread, Elasticity, Fluidity, Spacious vacuum, Stationary wave, Sp-ti grid configuration, Sp-ti 0, Sp-ti fabric, primal gravity, Local gravity, Great orbit, Duality, Singularity, Absolute vacuum, General relativity, Quantum mechanics, Gravitational channels and Miniscule conduits.

### 1. INTRODUCTION– HISTORY & EXISTING STUDY

The term Gravitation is popular since 1665 as Sir Isaac Newton thought of what could be the reason behind an apple (objects) falling on the ground, straight downward from the tree and thus he formulated the theory of gravitation. The Earth must have a pulling force over the objects and thus attract them towards the ground, was the first level of understanding about gravitation. Later on, the moon away from the Earth at certain distance is not falling, however revolving around the Earth, required a formula in common for gravitation as below, The formula of gravitation considered to be a force in all daily life calculation as well as in prediction of planetary motions, almost worked perfectly until the orbit of Mercury around the sun is observed closely. There is a precession in the orbit of mercury at the

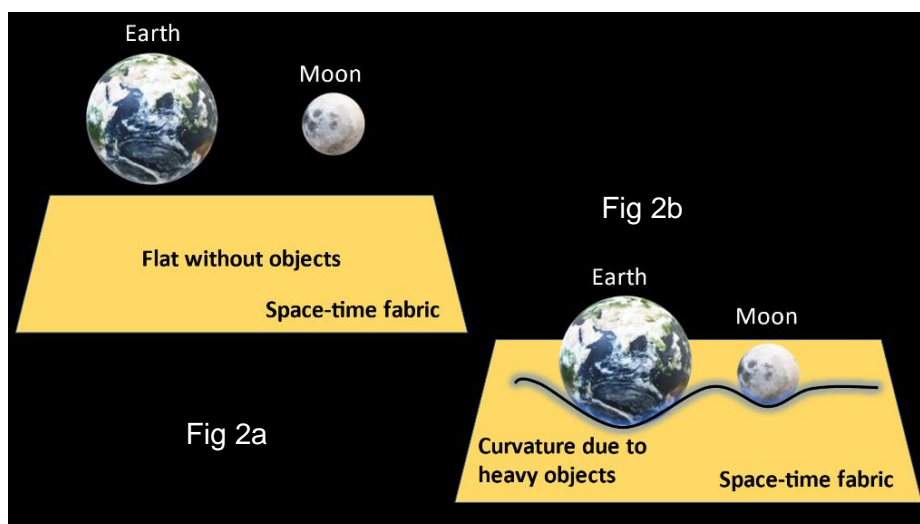
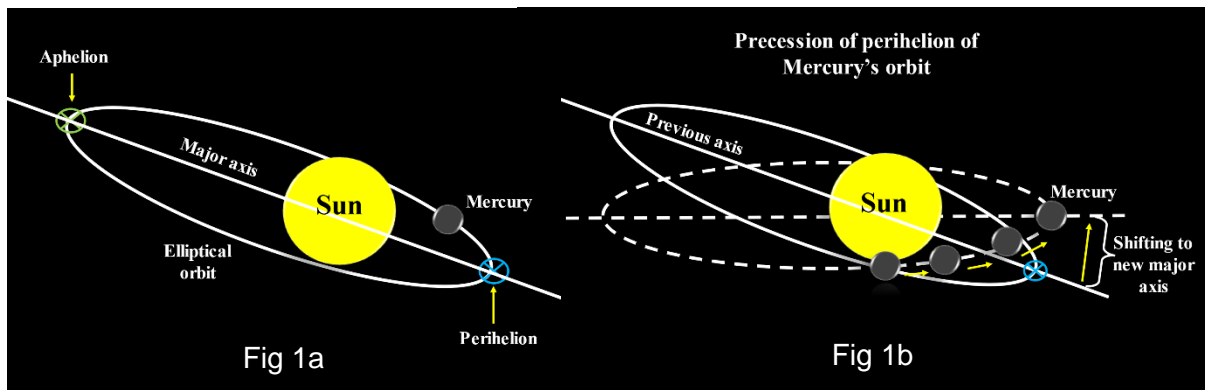
perihelion end. What could probably alter the path of the planet shifting its major axis was not governed by the Newton's formula of gravitation. The planet revolving in free space has nothing to strain to change its path sharply and thus, the factor behind it was unknown. This mystery was unsolved over a couple of centuries.

$$F = G * \frac{m1 \times m2}{d^2}$$

F – Force of Gravitation      G – Gravitational constant  
 m – Mass of the object      d – Distance between the two objects

The formula of gravitation considered to be a force in all daily life calculation as well as in prediction of planetary motions, almost worked perfectly until the orbit of Mercury around the sun is observed closely. There is a precession in the orbit of mercury at the perihelion end. What could probably alter the path of the planet shifting its major axis was not governed by the Newton's formula of gravitation. The planet revolving in free space has nothing to strain to change its path sharply and thus, the factor behind it was unknown. This mystery was unsolved over a couple of centuries.

Later on, Sir Albert Einstein tried to find what is there in between Sun and the planet Mercury except the space. In his time period, he discovered the fact that space is not empty, open and free as we think but it behaves like a fabric for heavenly objects such as Sun, planets, moon and stars. These heavy masses are causing curvature in it and thus the planet Mercury is subjected to some torque due to the motions of other planets along this fabric in the solar system and had to change its path accordingly. This ground breaking discovery brought accuracy in the predictions of planetary motions more than Newton's formula of gravitation. Moreover, this precession was observed not only with Mercury but also with all the other planets revolving around the sun and the hidden factor is accounted in terms of geometry of curvature caused in space-time fabric.

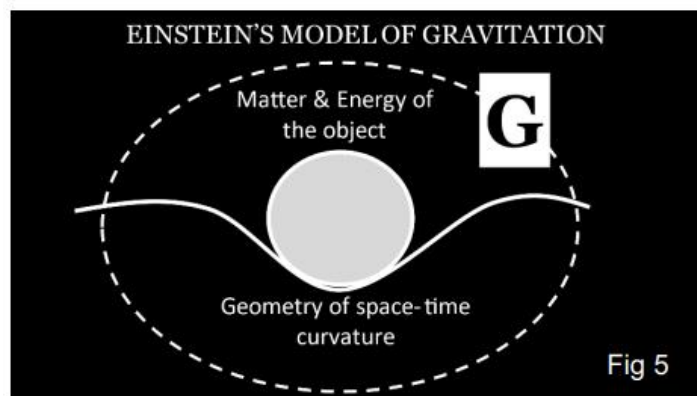
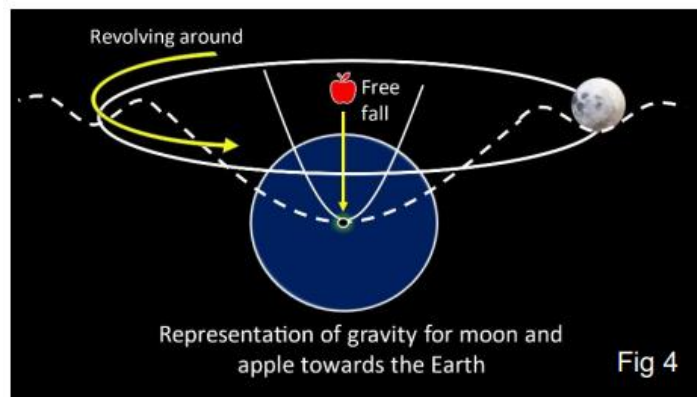
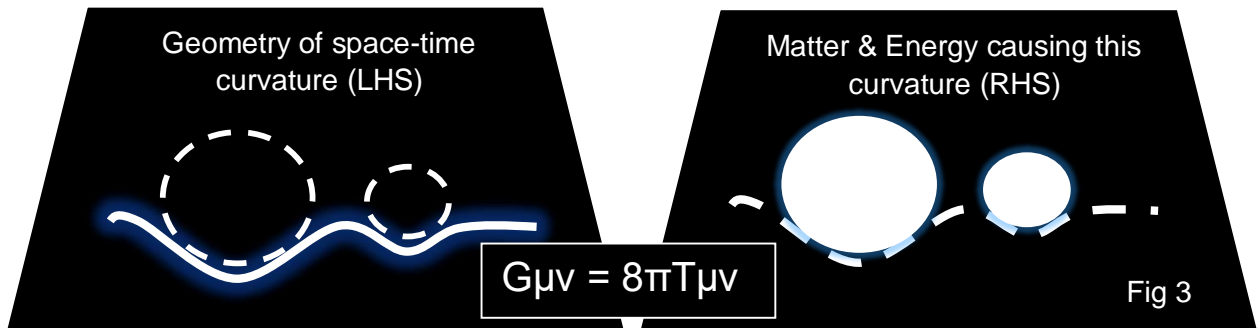


Sir Albert Einstein actually discovered space-time to be a single entity and together behaves like a fabric. If we assume space-time without objects is flat, the heavenly objects cause curvature on it as

shown in the Fig 2b. However, there is no Up and down in space-time medium and it is a simple 2D representation for our understanding.

The curvature of space-time medium is drawn by the big object such as an Earth in all the direction towards its core such that at any point all around the Earth, if the object is thrown up would come back to fall on the ground.

The representation of gravity for small objects within a range like an apple to free fall and heavy mass such as the moon beyond certain distance limit to revolve, could be as shown in Fig 4. However, Sir Einstein derived a field equation, in which the matter & energy is equal to the geometry of curvature caused in space-time.



This is unlike Newton's formula which required factors such as two masses and a distance between them.

Einstein tried to demonstrate gravitation to be like cause & effect rather than a force. The apple falling onto the ground or the moon revolving around the Earth are just the effects whose cause is nothing but the curvature.

So, Einstein's gravitation required at least one mass to cause the curvature in space-time. This gravitation model at macro-scale is not applicable for quantum physics. There is no such a setup of one object causing a curvature in the medium, enabling a nearby object to experience a gravity, at quantum scale.

Thus, the scientists are unsatisfied and are trying to interpret something called quantum gravity in modern physics.

To solve the incompatibility between general theory of relativity (explaining gravitation only at macro-scale) and quantum mechanics (where the nature of gravity is unknown) in existing studies, is the main scope of this journal. The drawings and explanations of “New theory of gravitation” is based on the book “Fundamental Theory of Singularity (FTS)” published in the year 2024.

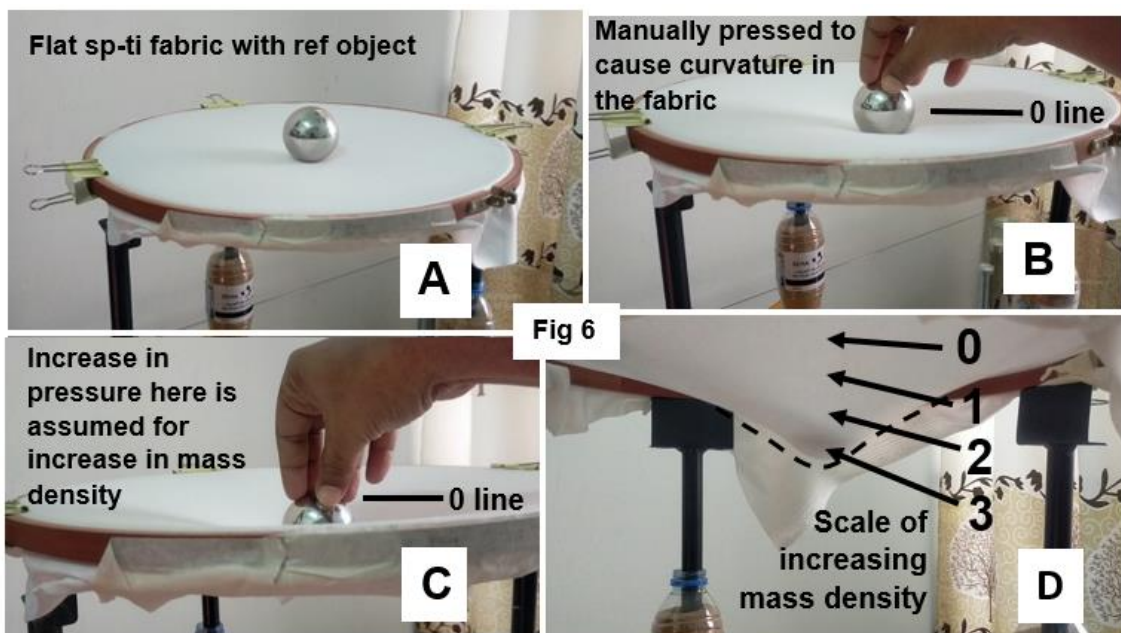
**2. THEORY OF RELATIVITY – TO BE SOLVED FOR ITS DUALITY**

The major unknown fact about theory of relativity is, it is based on dual perspective or duality. Let us see the previous figures and analyze them once again. The field equation involves the matter & energy (LHS) as an accumulation which is more or less like a singular object and the curvature (RHS) caused by it, in the sp-ti medium. However, to physically observe the gravity, it requires a secondary dependent object such as an apple or a moon. Means, Sir Einstein managed to derive an equation that contains only the cause for gravitation and the effect is not considered. Cause & Effect is an inseparable duality and one of the examples is height & depth. It is impossible to separate this duality in such a way that whether it is deeply high or highly deep. Now, even in the cause for gravitation we could see a duality that, the curvature in space-time is caused only as long as the object (matter & energy) exists. If no object then no curvature and in simple terms it is said that, “**matter tells space how to curve and space tells matter how to move**”. When a duality is equated on both the sides of the equation, it will get locked so perfectly and there is no way to derive a further step mathematically. Here comes the singular perspective to solve the major problems and mysteries in theoretical physics.

**3. SPACE-TIME FABRIC AND ITS REAL NATURE**

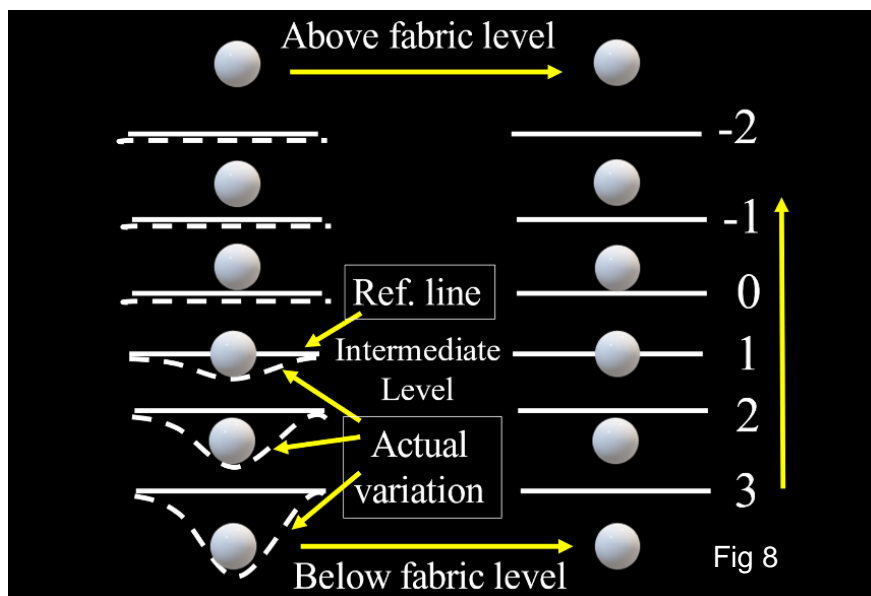
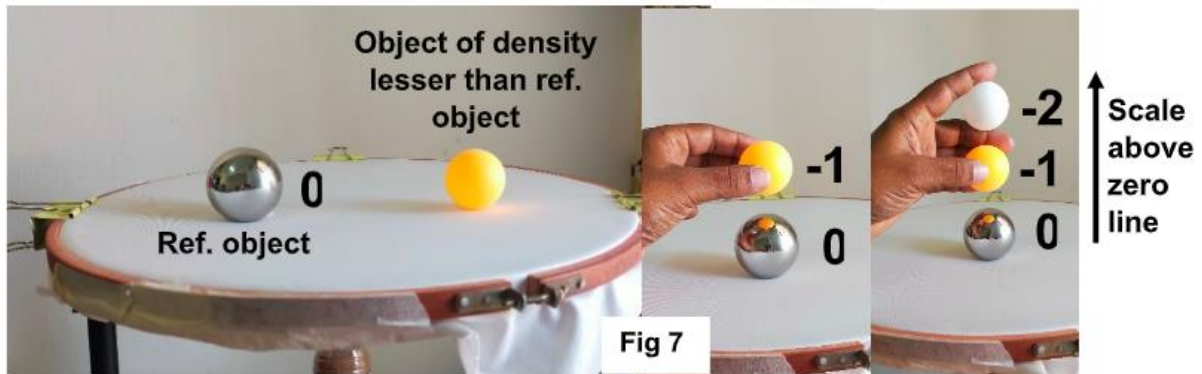
If it is said, only the heavenly objects of high mass densities could cause curvature in sp-ti fabric then it is obvious that objects of less mass densities are away from the point of realizing the fabric. In other words, it means even though the fabric exists, it is not felt by those objects. Also, there must be an object of certain mass density that would just touch or could realize the fabric without causing a curvature, is an important note for further analysis.

A simple experimentation setup is enough for analyzing sp-ti fabric. An embroidery hoop set with a fabric could be felt for its elasticity with some tension. Now, a single object of certain mass density that does not bend or curve the fabric is assumed to be kept on it. When we press this object against the fabric, for sure the curvature is caused and could be visibly seen right underside of the fabric setup. This pressure applied to the object shall be considered for increase in mass density of the object. It enables us to mark three points from the reference point of zero curve in the fabric towards a curvature of high mass density (3) gone through low (1) and medium (2) mass density points. We see the points in the order of 0, 1, 2 and 3 in a scale.



Now, next to the reference ball that is lying on the fabric, we keep another ball whose mass density is lesser than the reference ball. This ball also obviously does not curve the fabric however, what difference it makes compared to the reference ball? In real-time this ball comes to the position of -1 above ref. object which is at zero. Further decrease in mass density occupies -2, -3 and so on in a scale.

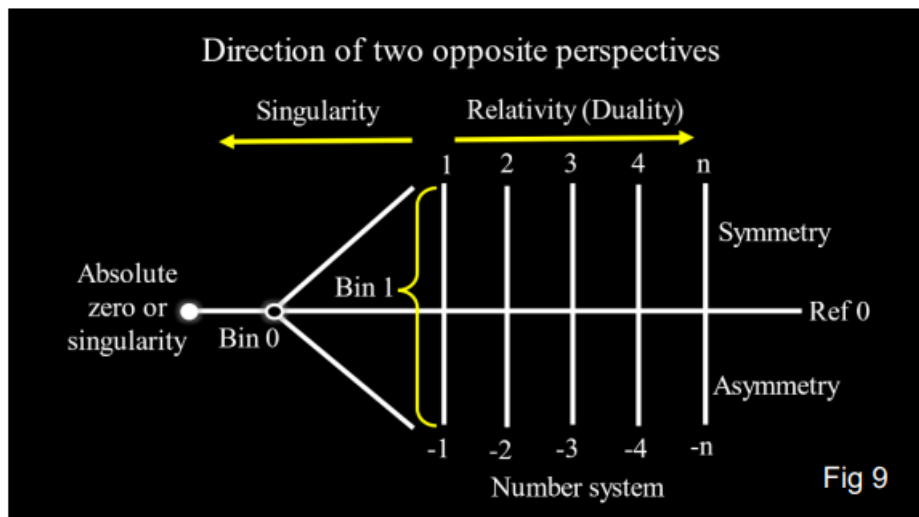
Having said that we are going to apply singular perspective based on FTS, is it required two or more objects to analyze different mass densities in space-time? No. The above experimentation with two or more objects is just for visualization. When it comes to the representation it would be a single object henceforth.



Clearly, it is an open statement in the existing studies that, gravitation is known only at macro-scale and what is the nature of gravitation at quantum scale is unknown or even there could be no such thing called quantum gravity in reality. However, it remains inevitable to think of gravitation because of its role in the evolution process, where the force worked continuously till achieving a system called Universe. Gravitation is a weak force only after things are settled to be like automated systems.

Even after the evolution, Gravitation is still responsible to bind the heavy objects of the Universe for their controlled motions without a collapse or rip apart. Thus, there is a necessity for a new theory of gravitation, not based-on theory of relativity but fundamental theory of singularity. Singularity study does not involve mathematics. The number system arises only out of duality and singular perspective takes us in the opposite direction. Binary 1 and 0 is a duality which means presence and absence of existence respectively. Binary one (i.e.) the existence serves the background to write the number system on top of it. +n always exists with -n so that the net value of the existence is always zero. Simple representation of number system in reality is as shown in the Fig 9. And this is the reason we are experimenting with the singular object to remain in singularity or move towards it.

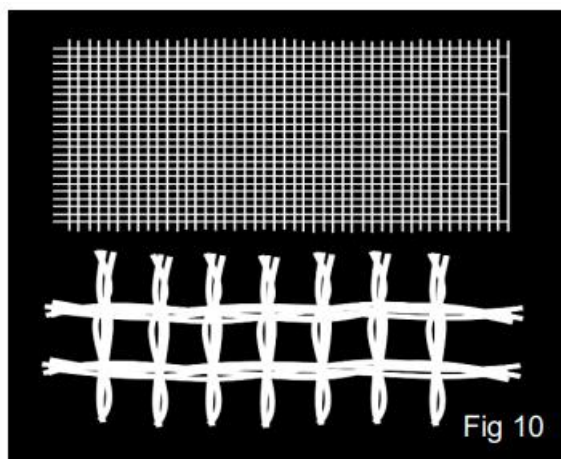
Thus, Einstein's representation of sp-ti fabric needs further or deeper analysis and interpretations which would require focus to bring out the minute ideas which does not require any math calculations but applies lot of informal techniques to extract the details.



In Fig 8, the scale shows that, as the mass density of the object decreases, it is moving away from the line of sp-ti fabric. So, in other words the less mass density objects shall be marked away from this reference line. In reality, this line is not located with a measuring distance but its physical existence is in terms of realization, which is only pertaining to the mass density of the objects, to be noted.

Now we have to bring a representation that could convey the reality without having any scale with values above and below the reference line. Further, this line or point of realization needs different types of representations to understand it firmly in all possible ways. For this we need to investigate the sp-ti fabric in detail. Each representation has a purpose of its own, like to understand the evolution of space-time, the format we use would be different from the one used to plot the objects from macro to quantum scale of an evolved Universe. It will be clearer in fore coming discussions.

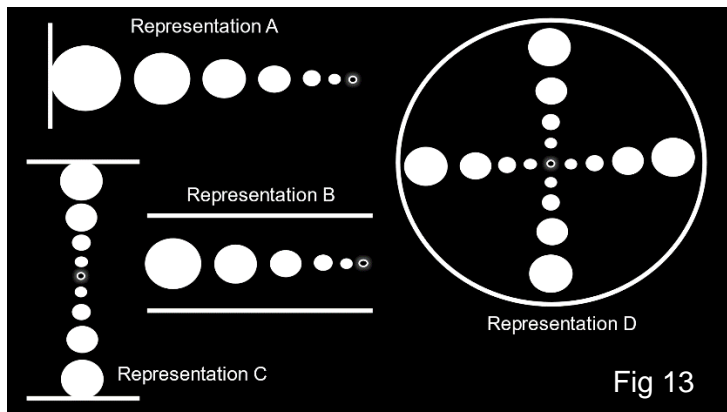
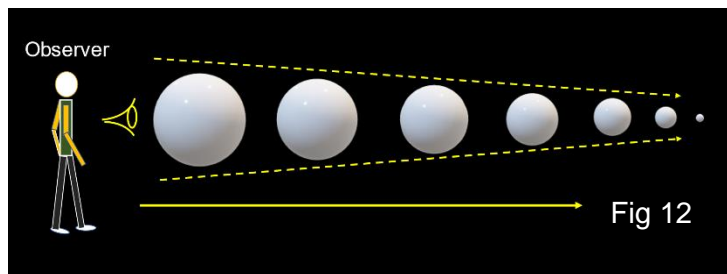
The first observable thing with sp-ti fabric is, a fabric in our day-to-day life is usually weaved with threads across length and breadth. So, if it is said only the heavenly objects such as planets and stars can bend or cause variation in the sp-ti fabric then it is obvious that strength of the fabric must be imagined to be like thick rope network rather than thread weaved.



The sp-ti fabric as imagined by Sir Einstein like a mat or spread like a carpet is insufficient to capture the details. The sp-ti fabric is actually surrounding an object in a spherical manner as shown in Fig 11(b). Here, the point or circle of realization away from the object is in terms of mass density and not about any distance factor, to be remembered. To understand this, we require a single rope from the sp-ti fabric for our reference to demonstrate objects of various mass densities. And as said earlier, we are going to use only a single object to show the variations such that the object of certain mass density would simply touch this ref line or rope and the objects of less mass densities would be away from this rope. How is it possible?

For this, we make use of an idea in our daily life that, when an object is moving away from the observer, it appears smaller and smaller and completely vanishes from sight at a point. Here, the object never undergoes any actual change in volume or mass and it is just an appearance. So, when we use a singular object for the representations, the variation can be shown only with the size factor such that when the

mass density of the object decreases, the size of the object is reduced and could be shown away from the reference rope as well, accordingly (Fig 8). Here, if a reference line picked from the sp-ti fabric is marked at the initial position of the object near to the observer Fig 13 (Representation A) then the objects away from realizing this line or rope could be shown at different positions where the reduced size of the same object represents the less mass density object away from the reference object touching this line. Representation B as said before is useful to plot the objects from macro to Nano scale till it reaches the point of zero mass density. Zero mass point is also called as space-zero time zero or simply sp-ti 0 point. All the representations here do not indicate any distance, direction and even in & out duality of a circle to be noted. Now what about the objects of high mass densities beyond the rope?



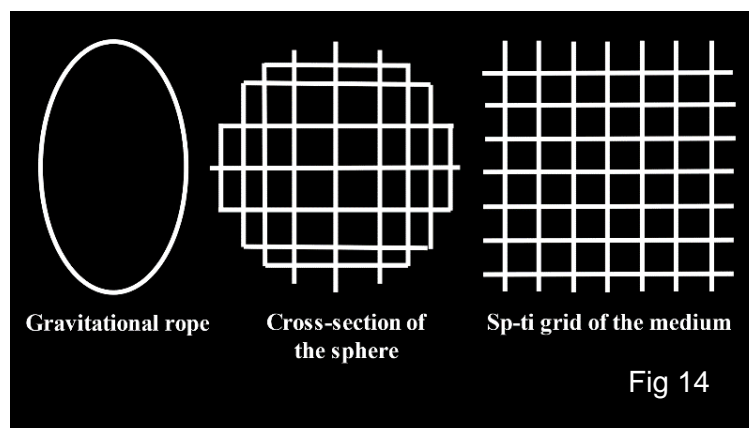
If we continue to track in this way, then obviously there must be a point where an object of certain heavy mass that would break this rope from bearing it. We move on with new ideas on space-time, which are surely unavailable in existing studies. The general theory of relativity explains the medium of space-time to have fabric behavior and string theory on the other hand explains the first level objects i.e., the fundamental particles to behave like rubber bands. The fabric bends or curves with any objects placed on it and becomes flat when removed, same way the rubber band could be stretched and if left, it restores. One thing common in both the cases, is the elastic nature. We call the Universe to be a cosmic ocean. What is the purpose of elasticity or elastic nature in an ocean? There is another nature with same property and more flexible than elasticity called as ‘fluidity’.

A focused mind is the one that always clarifies to segregate what is available and what is not, which is the point for generation of new ideas. To be simple, what is there in prevailing studies to explain the

nature of space-time medium is the elastic nature. Now, what is new that we are introducing to existing studies is the fluid nature of space-time medium.

#### 4. FLUIDITY OF SPACE-TIME MEDIUM (NEW STUDY)

Applying the fluid nature of space-time, we could analyze and explore three important techniques, discussed in a sequence.



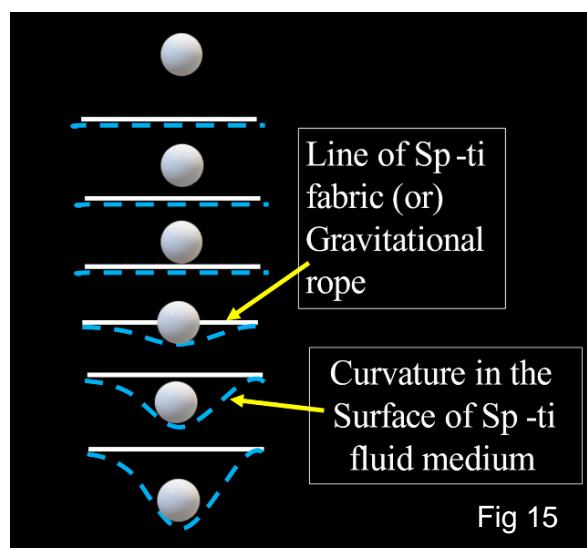
- 1) From fig 11(a & b), the sp-ti fabric in two dimension is visualized to be a spherical ball rather than a mat, surrounding any object of less mass density and from which the circle or a closed line from the edge of the ball is now is said to be two dimensional.

However, the two dimension of the sphere also means its cross section with ropes across length and breadth. What are all the changes happening here? The circular rope picked up from the edge of the spherical ball has become the gravitational rope and the crossings have become Sp-ti grid of the medium. The purpose of these aspects could be discussed later, now we move on to next technique.

- 2) What is the purpose of a rope in our day-to-day life? It is to tie the objects tightly and has to bear the weight of the objects without breaking. Even the gravitational rope ties the heavy objects such as planets and helps for their motions in a controlled manner. In that case, the rope serves the same purpose and at no point of space-time, it could be loose. Which means the gravitational rope could not be bent even by the heavy masses, if so, then the rope loses its purpose.

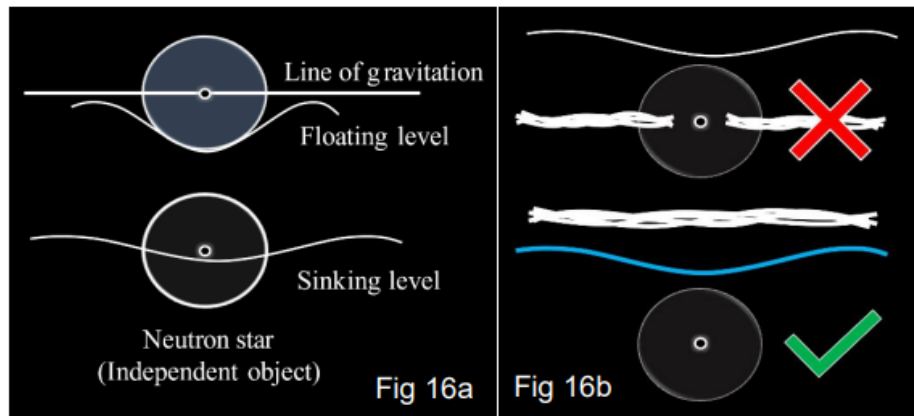
- 3) If gravitational rope doesn't bend at any point of the medium, then what is the curvature caused in the fabric by the object (matter & energy) as shown in Sir Einstein's representation? (Fig 5). Here applies the fluidity of space-time medium.

Now there are some changes to be included in the previous representations. In Fig 8, the dotted lines mean the actual variation caused in the fabric. As now we have clarified the reference line of sp-ti fabric or the gravitational rope is not a bending one then the dotted line represents the surface of fluid sp-ti medium Fig 15. Surface and depth of fluid medium could be seen along with real-time illustrations in fore coming discussions. We continue without breaking the sequence of explanations.

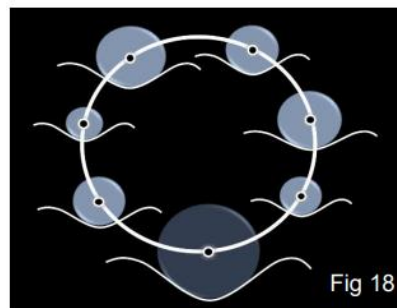
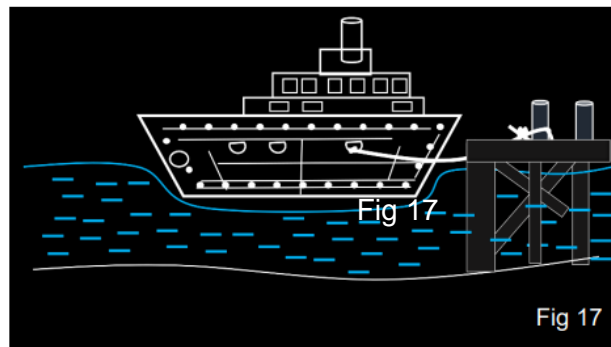




Now it is possible to interpret whether the gravitational rope would break for an object of certain high mass density value or not. Clearly, after applying fluid nature, the gravitational rope would slip out from the heavy object rather than breaking. For example, the neutron star has very high mass density and it is not supported by gravitation anymore. It is moving from the limit of a floating object and start to sink in space-time fluid medium. Such objects are said to be independent in nature whereas gravitation is associated with dependency between any two objects (minimum). Fig 16b shows, the gravitational rope slips away from the sinking object without a breakdown. It is possible to tie the objects with a rope in our daily life, but how to bind the big objects such as planets in sp-ti medium. We will see some real-time illustrations to understand the same.



Let us observe a ship tied to an I-beam structure. Here, the rope is not bearing the whole weight of the ship in tons, but the sea water (medium) does. The rope is just to keep the ship not to move and remain in the destination point. Same way the gravitational rope is not bearing the heavy objects but those masses are actually borne by the sp-ti fluid medium itself.



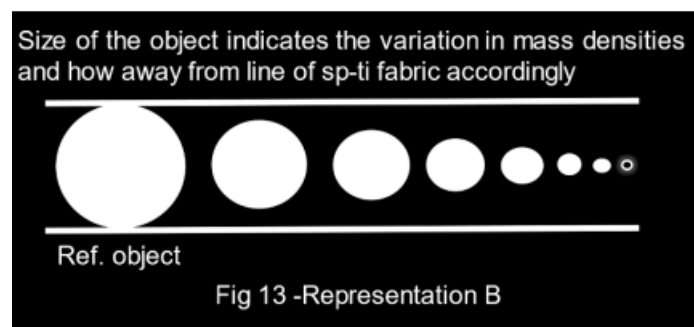
The rope is serving the purpose of controlled motions of the objects but the question is how they are tied? It is absolutely possible, if the rope of gravitation passes through the core of the heavy masses same like beads joined with a thread. Only in this way, the heavy masses would not slip out of the rope and at the same time works in a controlled motion or path. When the mass density is beyond certain limit, the object starts to sink in the medium, leaving this rope, as discussed earlier. Now, we shall see the change in Einstein's field equation after applying the fluid nature to the sp-ti medium.

$$\boxed{\text{Geometry of space-time curvature}} = \boxed{\text{Matter \& Energy of the object causing this curvature}} = \boxed{\text{Amount of space-time fluid medium displaced by this floating object}}$$

We said the neutron star is sinking, but from where to where? Obviously, it is sinking into the sp-ti fluid medium from vacuum medium. Here works the elasticity or elastic nature in sp-ti Ocean such that it acts as a water proof membrane preventing the raw nature of the medium from reaching the evolved objects. The liquid medium is hidden behind the existence in three ways through dimensions such as boundary, base and core - explained in "Fundamental theory of Singularity". Thus, vacuum is a safe medium for the evolution and existence of life, isolated from fluid nature of space-time medium.

So, if the next stage of neutron star is to become a black hole, then it is time to plot the objects of the Universe starting from the fundamental particle to heavy objects like planets and stars to track the point of emergence or termination of gravitation in space-time medium and also see how the neutron star getting out of this gravitational loop as well.

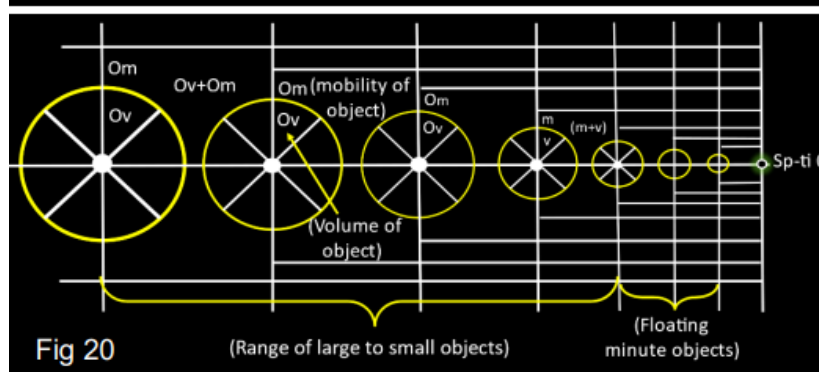
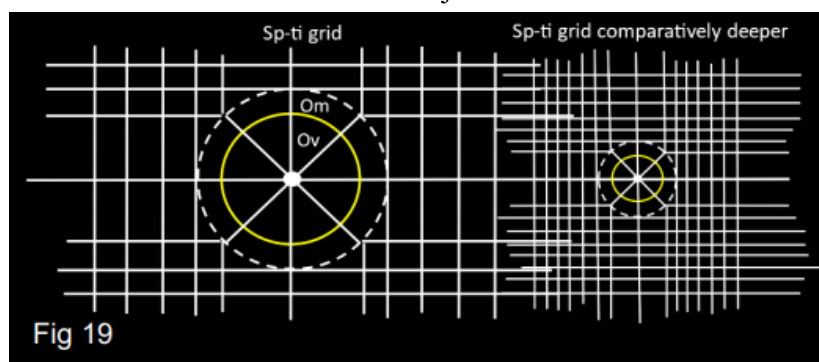
For that, we use the representation B from Fig 13, which has the advantage of showing symmetrical variations. Even though, the fluid medium is not visible and dimensionally hidden beyond the vacuum medium, the nature of fluid still applies. Means, the representation shows starting from the reference object that touches the line of fabric, moves away from it as the mass density decreases.



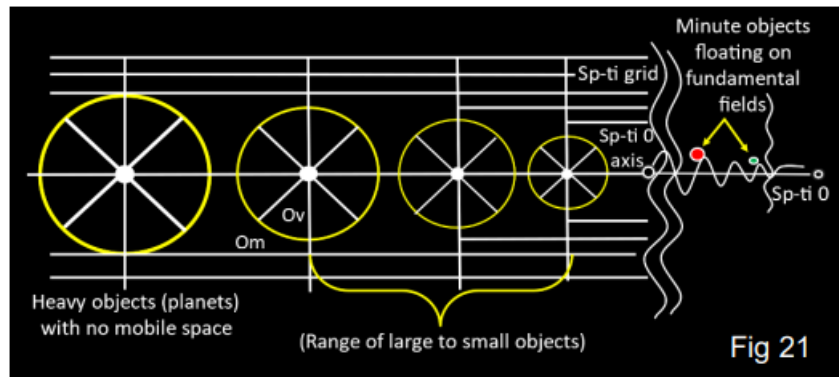
So, one may think, to what extent an object has a low mass density, it would have more free space accordingly. However, in true case, the fluid nature still works such that the sp-ti grid formation surrounds the object like water and the free space remains the same for all mass density objects. This free space available around an object for its mobility is called as 'sp-ti bubble', introduced in FTS.

### 5. SPACE-TIME GRID CONFIGURATION AND BLACK HOLES

Two objects of different mass densities picked up from two significantly different positions is compared for the thickness of the sp-ti thread, how closer the grid lines are and also the fluid nature still surrounding the objects even in vacuum, Fig 19. There is a range of large to small objects that bends the sp-ti grid and beyond this limit, the objects are said to be floating as they cannot bend the sp-ti lines. At quantum scale these are also called as 'minute' objects.

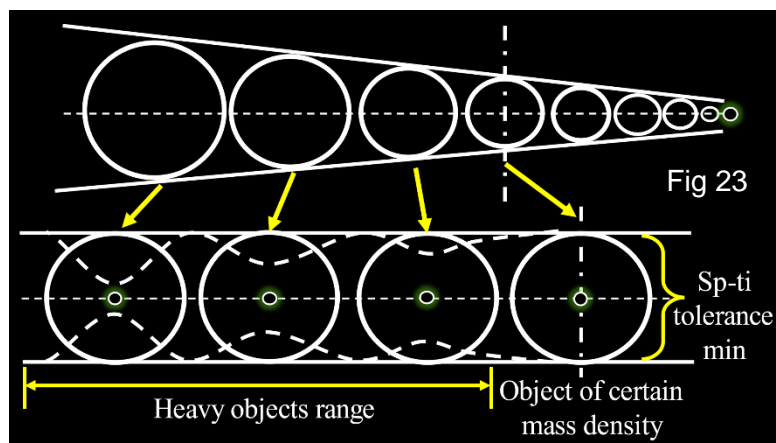
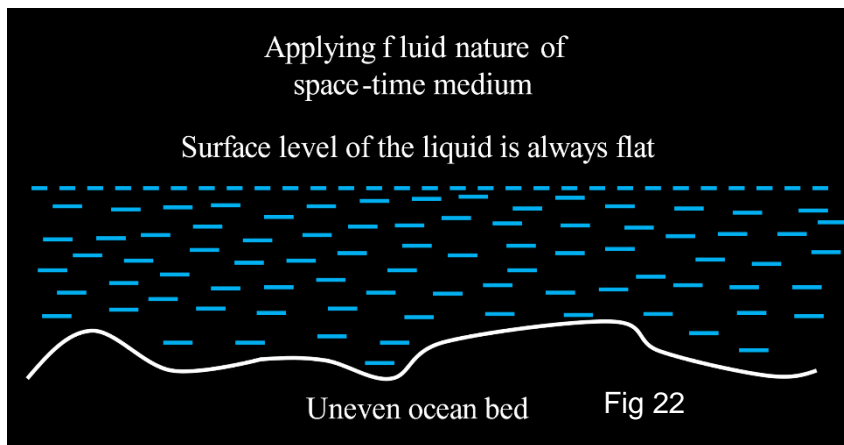


The reference object is common between range of large to small objects and Heavy objects range. The object of certain heavy mass density that simply touches the line of fabric is shown in Fig 21 and it does not have the mobile space to be noted. Now, what if the mass density of the object increases further. There is a line apart from the sp-ti grid lines called as Sp-ti tolerance of the fluid medium that starts bending.



Means, here applies the fluid nature. When an uneven surface of the ground is filled with water, it hides the ups and downs and thus, the surface level of the liquid is always flat. Applying the same to the Sp-ti medium, the objects beyond certain limit i.e., ref. object, parallel lines are used to observe any further variation within these two lines, Fig 23.

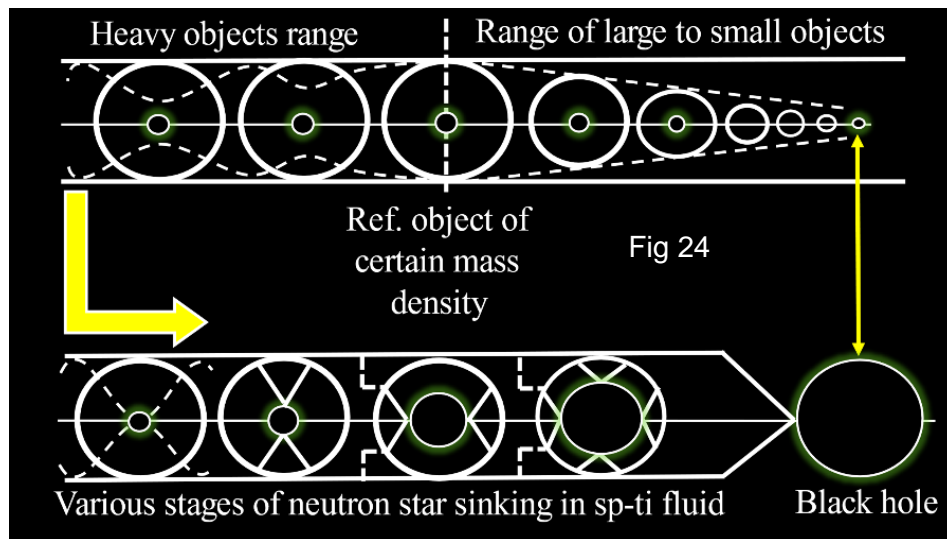
This bending or curvature was the one, said to be caused in sp-ti fabric by Einstein, but we are showing the mobile space-time been used up and started biting the tolerance available for the object in the fluid medium. So, this starting point where the curve begins, we call it as Sp-ti tolerance min (Fig 23). Then this bending has to reach a maximum limit. Beyond which what happens to the object is the next topic of discussion.



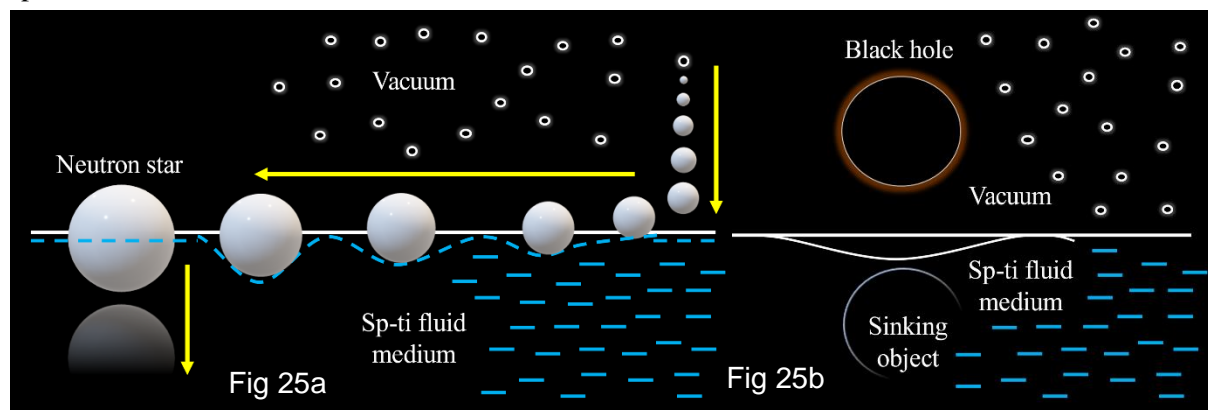
This is understood along with the neutron star sinking from vacuum medium into fluid sp-ti medium. Is this sinking same as an object falling into the sea that reaches the ground at its depth and remain there? The Sp-ti fluid medium being a shoreless ocean, also has no ocean-bed and thus, the depth of

this ocean is not required. We are only seeing the surface of this ocean everywhere and the depth is dimensionally hidden.

Thus, in 2D representation we have two surfaces, up & down to observe symmetrical variations as shown in Fig 24. The axis that run along, between the two symmetrical variations is the line or point from where the object starts to sink, which is enough for our analysis. This is because, as the object sinks in sp-ti fluid Ocean, it becomes one with the medium and that's why only the line from which the object starts to sink is required.

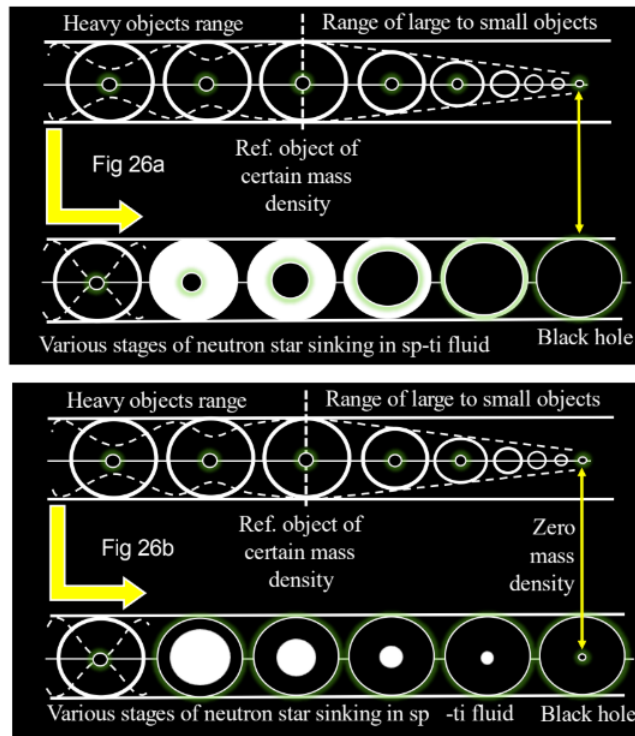


As the objects sinks, it leaves a major identification in the vacuum medium called as 'black hole'. This black hole formation is shown using the Sp-ti tolerance curve starting from the reference object which is touching the minimum and gradually the curve is growing to reach the tolerance maximum. In Fig 25b, black hole is shown to have left behind in vacuum while the vanished object almost drowned in sp-ti fluid medium.



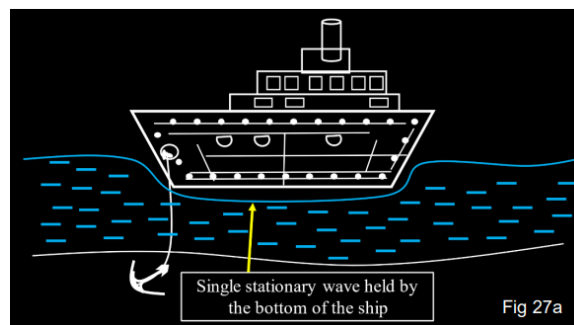
The maximum point is reached when the tolerance curves touch the axis, beyond which the hole is developing from the core of the object, Fig 24. It is possible to track the object even during various stages of a disintegrating neutron star even though it is crumbling within itself and does not have a shape to define as an object anymore. Fig 26a, after having reached the sp-ti tolerance max, the neutron star starts becoming a black hole. This maximum point of still being the star is called as Chandrasekhar limit, named after an Indian-American scientist for discovering it. A proper hole developing inside the neutron star is shown only for representation purpose and it is a big destruction process in real-time.

Now, during various stages of neutron star converting into a black hole, the same reducing mass could be shown in a clarified way even more. The representation could be flipped so that the reducing mass is a sphere which diminishes and becomes zero mass density or simply zero mass at sp-ti 0. The ending point is same as that of the starting point of an object except for a difference, the end point is surrounded by hollow dark space called black hole. This black hole is supposed to be filled by the energy for curing so as to recover the spacious medium for objects. These static representations capture the whole cyclic process and thus, clearly there exists no incompatibility between general relativity (macro-scale) and quantum mechanics (Nano-scale).

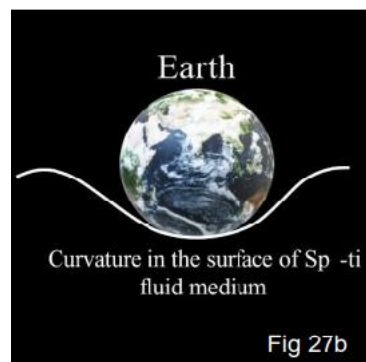


### 6. GRAVITATIONAL WAVES - A MISCONCEPTION IN SCIENCE AND TECHNOLOGY

Collision of two black holes in space-time is a heavy process during which the ripples are formed in the medium. These waves are said to be a big destructive nature by the scientists that it could rip apart even an entire Universe however, these waves having travelled long distances and on reaching the Earth, it becomes feeble that the devices used to detect these waves shows a negligible reading. These waves are predicted by Sir Einstein as gravitational waves earlier and was confirmed to exist or detected using modern day technology. However, these waves belong to sp-ti fluid medium and at no point gravitation is a wave is our new study. Let us see it with some real-time illustrations. Now, consider a ship stopped by an anchor in the sea. The bottom of the ship presses the surface of water and displaces it with its weight. If the surface of the sea is assumed to be a reference line, then this curvature caused by the ship displacing the sea water could be called as a stationary wave held by the bottom of the ship.

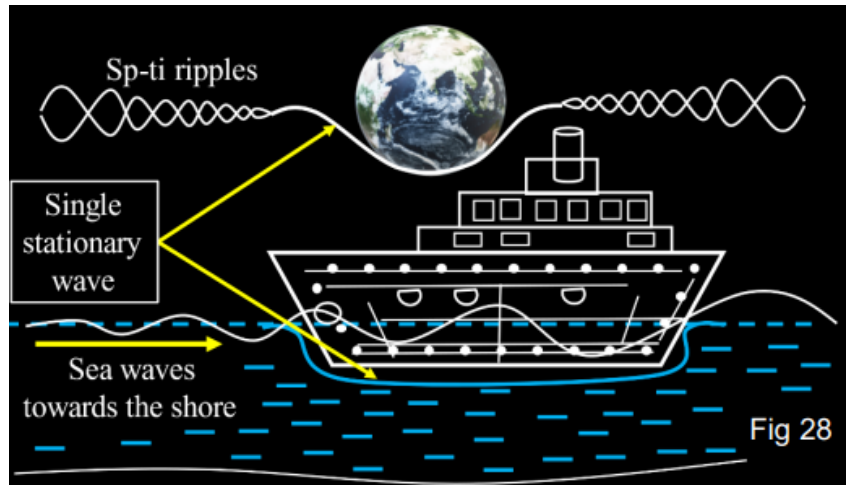


The same is the case with the planets such as the Earth, its mass density curves the surface of sp-ti fluid medium.



As we discussed earlier, the objects of the Universe are insulated from the Sp-ti fluid medium through the elastic nature same like a water proof membrane. This membrane has the tolerance for the heavy masses and has a breakdown at certain maximum limit reached by objects such as a neutron star (Fig 24), point to be remembered.

Now, as the ripples formed and moved away from the point of two black holes collision pervades the Universe. These waves hardly reach the Earth or sometimes detected at very small scale. How these waves could be shown to connect with the above said macro-scale stationary wave held by the planet Earth? The ship near to the shore holds one big wave and apart from this, there are waves on the surface of the sea that continuously hits the shore.



However, in case of sp-ti ocean there is no shore, the waves raising on the surface has to reach a maximum level and again fall and reduce through travelling over distances, become feeble and then attain sp-ti 0. So, it is same like sea waves, it could even add up with the stationary wave based on the consequences or how near some heavy process is happening in the medium.

### 7. GRAVITATIONAL ROPE AT THE BACKGROUND OF A SOLAR SYSTEM

Now we will move onto representing the rope for heavy mass objects below the line of sp-ti fabric or the gravitational rope. As discussed earlier, the gravitational rope is not bearing the heavy masses and the objects are simply floating on the fluid medium itself. The rope is just governing the controlled motions of those heavy objects. The objects such as neutron stars become independent of the rope and sinks in the medium, slip out from the rope. So, below the reference line the heavy objects are shown with rope of certain unchanging thickness. Again, to solve the incompatibility between general relativity and quantum mechanics, we have to trace the line of gravitation from sp-ti 0 that begin as a quantum thread of gravitation at Nano scale to gravitational rope for objects at macro-scale. Here, even the macro-scale has a break-line undefined in theory of relativity shall be discussed as follows.

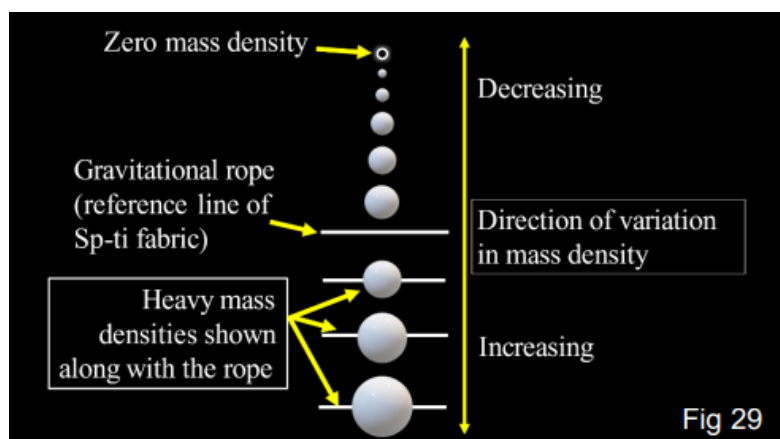
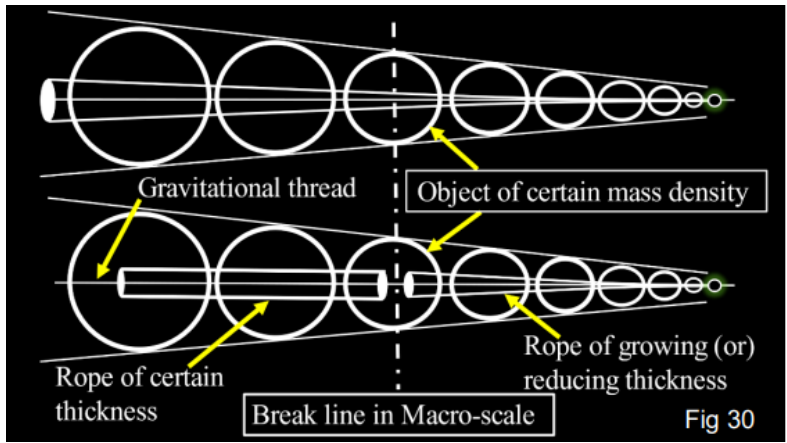
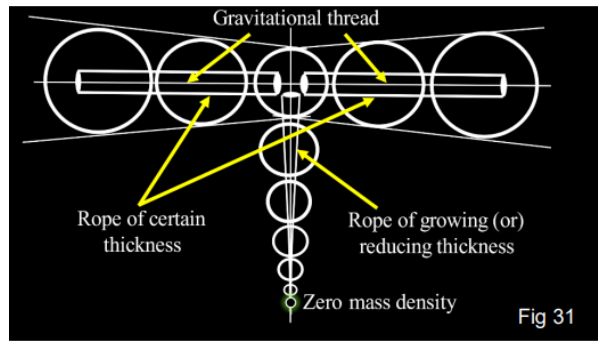


Fig 30 shows the gravitational rope originating from sp-ti 0. The objects are placed in a row along with the rope of growing thickness. This representation is infinite with both, size of the objects and the thickness of the rope. How this could be solved to learn that sp-ti is finite? First, we mark the reference object of certain mass density.

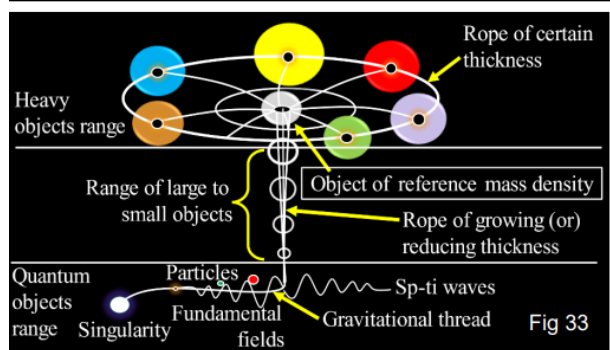
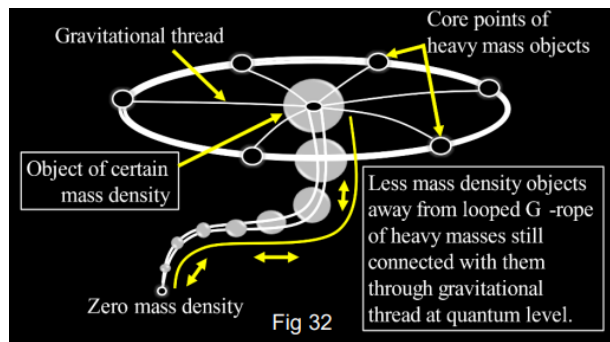


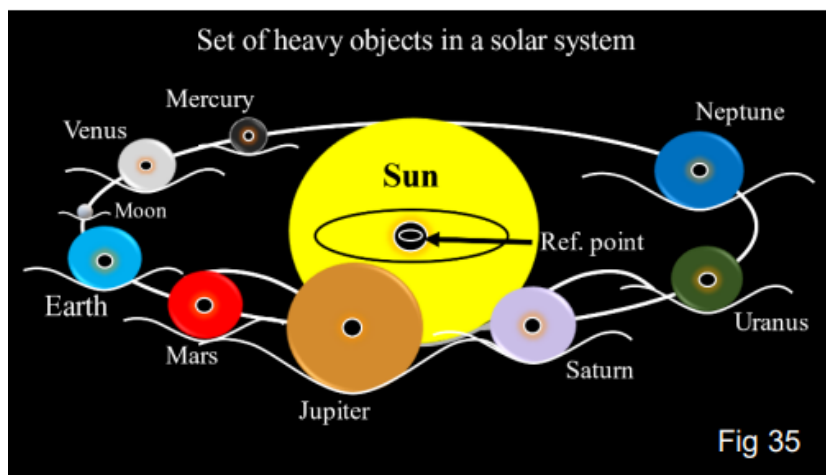
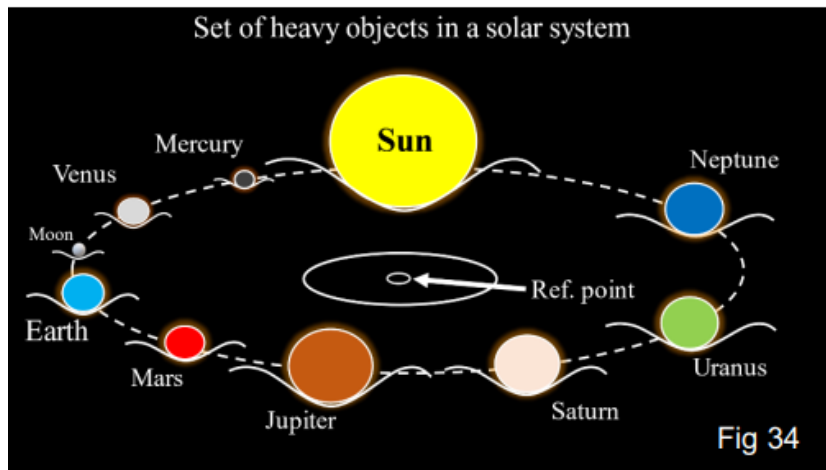
Here we see the reference object is common between heavy masses and the range of large to small objects. So, even in macro-scale there is a break line that, the rope passing through all the heavy objects has the same thickness whereas it has a growing thickness from zero to reference object. So, the rope of certain thickness could be shown circular and finite.

What about the size of the object that keep on increasing in a scale? As we have seen the surface level of liquid is flat, these growing objects could be shown with same size, as clearly it is the increase of mass density and not the volume. So, the variations for further increase in mass density is the more bending of tolerance curve towards the sp-ti 0 point or axis, refer Fig 23 & 24.

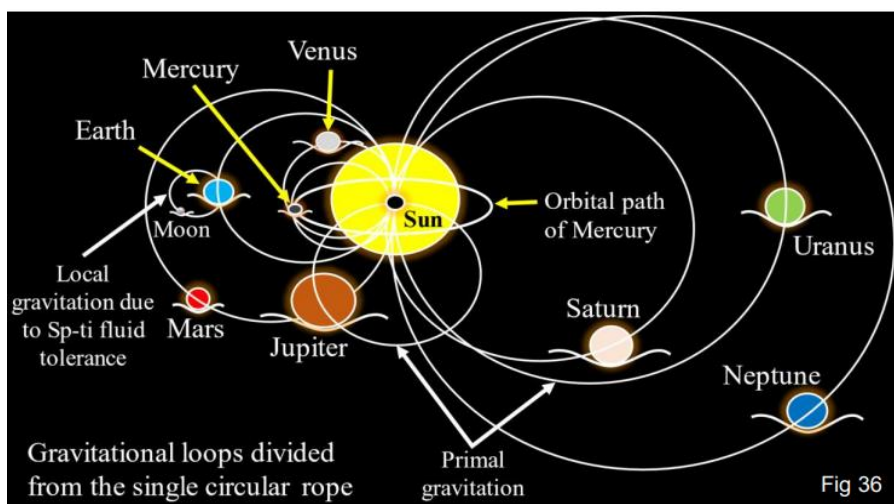


It is possible to arrive at the design of a solar system. The circular rope passes through all the heavy objects in a solar system. The reference object common between the two ranges of objects in macro-scale could be shown at the center. The tail of the rope decreasing from the ref. object is terminating at sp-ti 0 point which is bi-directional to understand to be emerging from sp-ti 0 too.



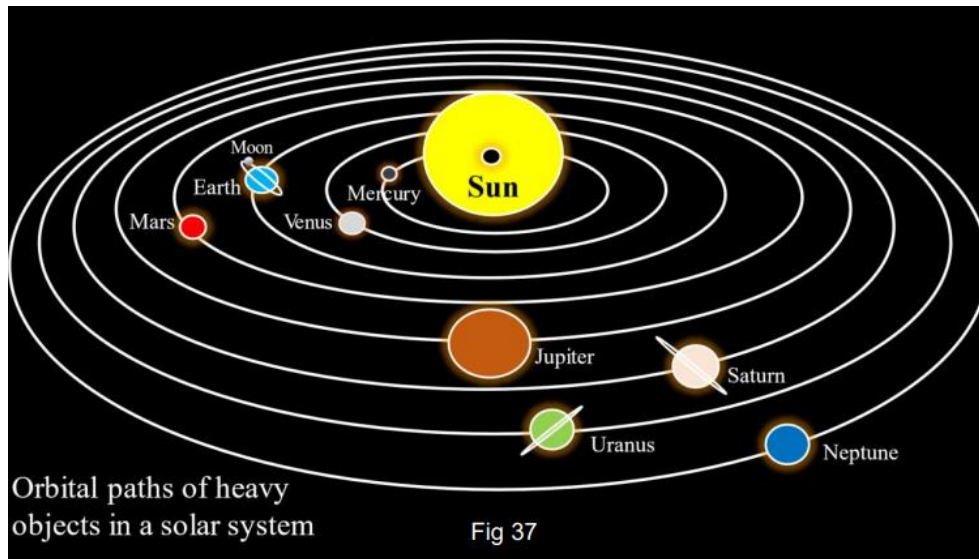


So, the gravitational rope of reducing thickness from the ref. object shown to drop down is towards the depth of the sp-ti medium. Now, comes the quantum scale of objects again to be distinguished from range of large to small objects. The quantum or minute objects are floating above and below the quantum thread of gravitation in waves and it passes through the sp-ti 0 points of the thread too. Even though the particles are floating on waves, it is called as fundamental field waves distinguished from sp-ti fluid waves. Gravitational thread could be shown even to pass through the center of the gravitational rope such that the reference object separated from the loop of heavy masses and positioned at the center of the solar system is still connected with those objects with quantum thread. So, quantum thread of gravitation exists throughout the Universe, to be noted. Now, clearly Sun is not the center of the solar system as per the static design, however when fluidity is applied here, it would make the heavy mass objects float and re-arrange. Thus, the Sun moves to reach the balancing center for all the other heavy objects. Now, the main circular rope passing through all the heavy objects breaks into many smaller loops such that each heavy object is looped to the sun, Fig 36.



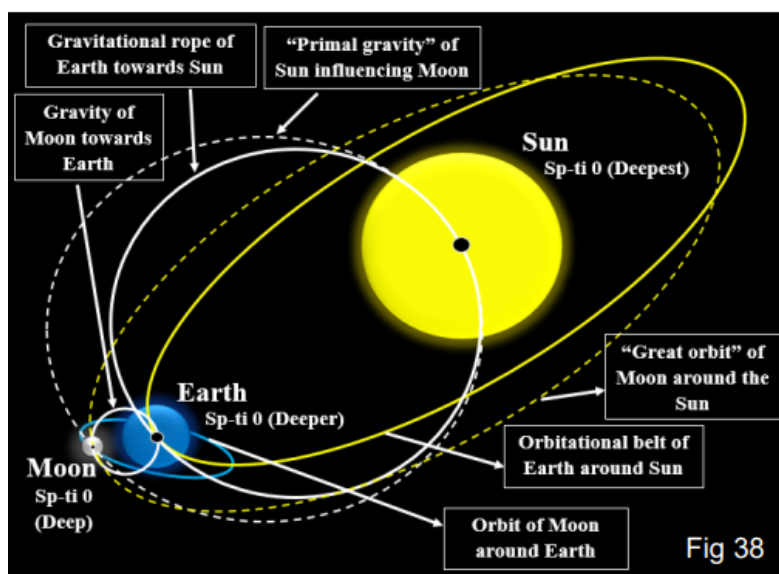


Then every single loop has a path around the sun called orbits. There are further sub-divided loops called as local gravitational loop, in case of moon and the planet. This is due to the difference in tolerance curves by the objects which is same as the Einstein's gravitation model however, it is differentiated in terms of local gravity from primal gravity, as the new study. Once looped by gravitation, the object revolves around the sun. Thus, the path around the Sun is a duality of gravitation called as Orbitation or orbital path for the planetary motions, Fig 37.



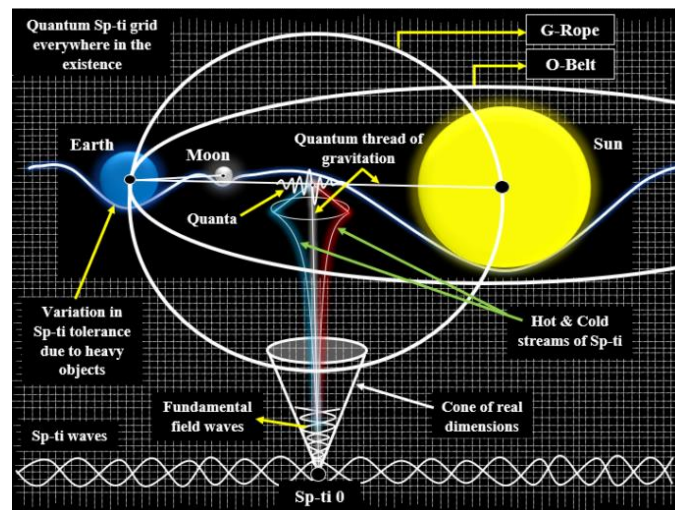
Now, we will come back to the representation of Space-time fabric in the existing studies to see how it is modified after applying the fluid nature. Sir Einstein tried to simplify gravitation with one mass causing the curvature in fabric and derived a field equation. But FTS shows general relativity is a duality that when there is a cause for gravitation its effect could not be neglected. Thus, the singular perspective is applied for further analysis of sp-ti fabric and revealed the new study of gravitation along with the fluid nature of space-time medium. The FTS also clearly explains how gravitation network, works only with sp-ti 0 points throughout the existence, even without object and thus, independent of mass.

Means, mass is required only for a physical understanding. And even in that case, it is not one or two masses as said by Newton or Einstein but properly need three different masses to demonstrate gravitation at surface level as follows.



Even the moon has a direct loop with the sun and has the influence called primal gravity however, it is more attracted towards the Earth due to the difference in Sp-ti tolerance curve which causes a local gravity stronger than the primal gravity. So, there is a great orbit available for moon around Sun besides its local orbit around the Earth, to be noted. The gravitation here fundamentally works with three sp-ti 0 points with different surface or depth levels. This gravitation model is more or less same as Sir Einstein's representation.

However, relativity did not cross the limit of sp-ti fabric and derived a field equation only at the surface level. FTS has revealed the fluidity covered by this elastic membrane and have shown the sp-ti ocean to exist beneath this fabric hidden behind three real dimensions. Thus, the working of gravitation even without the masses is newly introduced to studies. Also, quantum gravity is connecting all the objects of the Universe like a thread at the depth of sp-ti medium whereas the gravitational rope is governing the macro-scale objects only. The rope is circular and perhaps have a disconnection between the solar systems or galaxies and have different roots towards singularity. Thus, a tree diagram is shown in FTS.



[Above 2 representations are from Fundamental Theory of Singularity (FTS)]

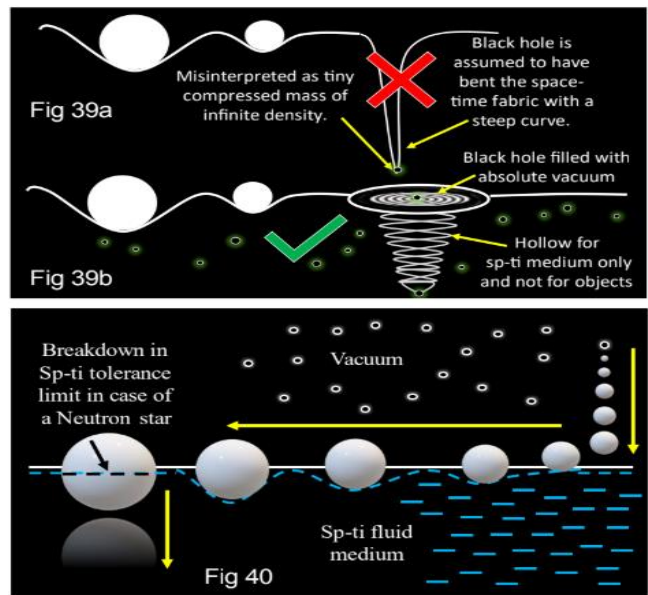
### 8. THE FORCE INVOLVED IN A BLACK HOLE IS NOT GRAVITY

Even though the journal is not focusing on black holes, the topic is inevitable. The sp-ti grid configuration is used to plot the objects from sp-ti 0 in the order of zero mass density – quantum or minute or Nano scale objects – range of large to small objects - heavy mass density objects - neutron stars which end up in sp-ti 0 again. Here the configuration begins from a point which is a black hole and the point where it ends, means the evolved object such as a neutron star beyond certain limit breakdown within itself, is also becoming a black hole. This enables us to show the line of gravitation at point level for its emergence and termination. Now, the problem to be solved is, the existing science and technology believes gravity is high inside a black hole and even space and time are warped. This is not the true case, the sp-ti grid and the line of gravitation terminates at the edge of the black hole. Then what is the destructive force inside a black hole that pulls the objects of the Universe? There is an impeller action at the depth of the sp-ti medium, whose mechanism is basically to drive the sp-ti fluid in a cyclic manner. Besides this, the force is utilized for creation of objects pushed away from singularity and the resulting force is pulled by the other face of the same impeller that draws the medium or the objects towards singularity.

We will discuss a simple idea here that, drinking the water from the glass tumbler by mouth directly is different from drawing the water with a straw. Same way, the flow of fluid medium is restricted by channels and thus, driving and suction forces are possible. Representations for these ideas can be discussed in a different journal. For now, the force involved in a black hole is actually not pertaining to the black hole but just exposed through it, as the hole is open between surface and depth of the medium, to be understood. The gravitation is said to have no connection with this force, as the primary action of this impeller force is intended for driving the medium only. And gravitation at its deepest nature are the channels to conduct the forces and does not mean to be any force itself. Gravitational rope to gravitational thread has external effects with objects whereas the cross section of the thread behaves like miniscule conduits for the very internal cyclic flow of the sp-ti medium.

### 9. CONCLUSION

The sp-ti fabric has an elastic nature whose limit is undefined in theory of relativity and thus, the representation (Fig 39a) for black hole by Sir Einstein is wrong, it must be a loop on the surface itself. New theory of gravitation picks up the reference line of sp-ti fabric to show it as a thick gravitational rope that loops the heavy mass density objects, while the layer of elastic nature is actually spread to prevent the raw fluid nature of sp-ti medium from reaching the objects of the Universe or leak through object itself.

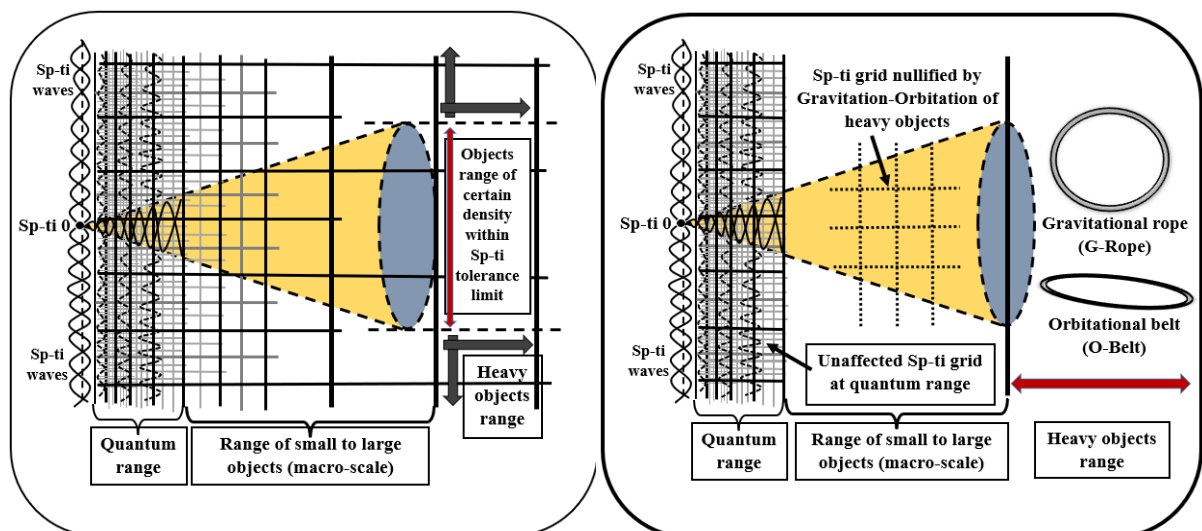


(ii) The elastic nature of the fabric is to hold the objects on the surface level and hiding the fluid medium underneath as well. The fluidity has sp-ti tolerance max for the objects and thus, the neutron star has a breakdown limit, beyond which it sinks to the depth of the medium.

(iii) The gravitation is revealed to be independent of mass and fundamentally works with difference in surface or depth levels of Sp-ti Os. Masses of the objects are only at the surface level to demonstrate gravity at macro-scale.

(iv) In simple words, basically the sp-ti fabric splits into two aspects, (a) the tensile strength of the fabric, spread everywhere is accumulated into a rope to control the heavy mass densities. (b) A liquid proof membrane that insulates the objects unaffected by the raw nature of sp-ti fluid medium and it is an elastic layer over the medium itself, as well. Further, the existence of this rope or the membrane could not be detected by scientific tools and again it is about the point or line of realization for the range of heavy mass density objects at macro-scale externally, while the quantum thread of gravitation connects all the objects of the Universe same like nervous system of human body internally.

(v) The reason for why the gravity is not happening with two sp-ti Os close to each other in vacuum medium is an important query that, the sp-ti grid for range of large to small objects is actually nullified by the gravitational rope to create an absolute free space (explained in FTS). So, to create a level difference between two sp-ti Os present at the core of the heavy masses such as Sun and the Earth, have to cause curvatures on the overall fabric or elastic membrane itself. This is how the gravitation works at macro-scale while basically quantum gravity is the same effect between two significant sp-ti Os for which no masses or even the fabric is required.



[Above 2 representations are from Fundamental Theory of Singularity (FTS)]

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Available in online stores – Notion press, Amazon, Flipkart etc.

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**Prabhakaran Natesan**, Tamil Nadu, India. Bachelor’s degree in Electrical and Electronics Engineering (2011) – Affiliated to Anna University, Chennai. “*All the problems in the existence are already solved, means the solutions are always available in one of the Sp-ti frames. All that a man has to do is, just to put himself in the way that progresses towards the ultimate nature called nothing, in which everything that shows up is only for a time-being*”.

I see the fundamental theory of singularity and its application to arrive at the new theory of gravitation, to have evolved in time for which I just admitted myself as a medium to conduct the knowledge to flow through me to take its own course and evolve into the shape of a scripture. Only the time that decides when, where and how the secrets of space-time to be revealed to this world in some format picked up from its ever-living library. Otherwise, anyone trying to come up with these ideas to tell the people or open the secrets by any means, which is not permitted by time, would disappear from this world itself without a trace. The work involves such a dying commitment that the efforts are blind and energy is spent in all the directions in darkness. The source and destination points being the one saved me to be still alive in this process. So, this very research work is evident for space-time to be finite...And of course, need some support to work for more clarity in this proposed study, to be useful for education...Thank you.

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