

Siva's theory of quantum gravity

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Abstract: With the help of 'space time fluid' concept and 'Siva's equation for space time & matter' it is concluded that the space time fluid density of a mass varies with distance from its centre. Not only that, space time density of any mass exists in its space time fluid vicinity will also be affected. An equation has been derived to explain the concept. Conceptual analysis of this equation concluded a new model of quantum gravity showing that the space time fluid which plays a major role in creating gravity effect and is quantized. There will be quantized energy levels of space time fluid around a mass. Their energy distribution depends on the distance from the mass. Particles with mass exist in a specific energy level only. If the energy level is not suitable to its mass, that particle will have a tendency to move either to lower level or higher level. And at the same time when a particle jumps from higher energy level to lower energy level, it loses energy and if it moves from lower to higher level it absorbs energy. This is similar to Bohr's atomic theory.

Keywords: Quantum Gravity, Film theory, Space Time fluid, K-Suryon, Siva's Constant 'K', Relativity, Universe

1. Introduction

We have "Siva's equations for space time and matter"[4]

$$1. \quad \gamma_1 d_1^{8/3} = 1.686656885 \times 10^{12}$$

where γ_1 is space time fluid density of any body of mass ' m_1 ' and ' d_1 ' is distance from center of mass ' m '.

$$2. \quad m_1 = 7.06505184 \times 10^{12} d_1^{1/3}$$

Where ' d_1 ' is the radius of space time fluid to calculate its space time fluid density.

With the help of these equations we have tried to find the influence of mass ' m_2 ' on mass ' m_1 ' which is at a distance of ' d ' from mass ' m_2 '. Refer Fig.1.

Thus a new equation showing the relation between ' γ_2 ' (which is a function of ' m_2 '), ' m_1 ' and ' d ' has been derived

$$\frac{\gamma_2 d^{16/3}}{m_1^8} = 2.717 \times 10^{-91}$$

We have predicted a particle 'K-Suryon'[2][6] which is the basic building block of mass creation. This is the least mass that can create space time fluid. Below this mass there will not exist space time. Only space will exist with zero time. Also we have a concept called 'Film theory of the

Universe'[1][2] Which says that there will not occur any events within a quanta of time i.e. 7.6813×10^{-44} sec.[1] According to this, the universe is made up of films which are changing at the rate of 1.3×10^{43} films per sec. Refer Fig.3 Showing arrangement of films of the Universe[1].

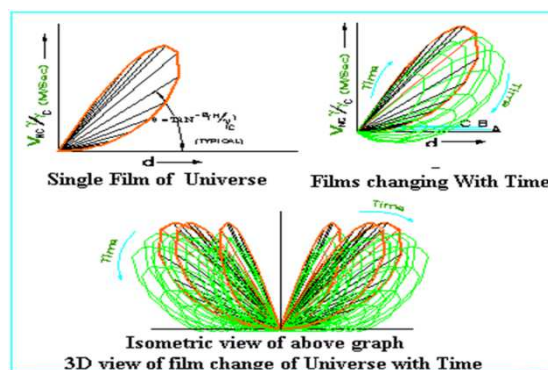


Fig 3. Refer 'Double Relativity & Film theory of Universe'

Now we have assumed m_1 & m_2 are two 'K-suryons' with minimum possible distance and applied the above derived equation to them. This must be the quantum of 'space time fluid' [3][4][5].

Thus we have concluded a theory of quantum gravity by quantum of space time fluid. This new theory says that there

exist space time fluid around a mass and depending upon its mass and distance from its center, the energy level will vary. If any other mass exists, it can exist in one particular level only. If the space time fluid exists for the mass in specific space time fluid level is more, the mass will have a tendency to come to lower level which causes gravity effect and if it is less, it will have a tendency to go away and causes anti gravity (Expansion force in the case of universe). Which is similar to Bohr's atomic model. In this case a 'K-Suryon' will be released or absorbed as per the gravity and anti gravity effects as explained above.

2. Discussion

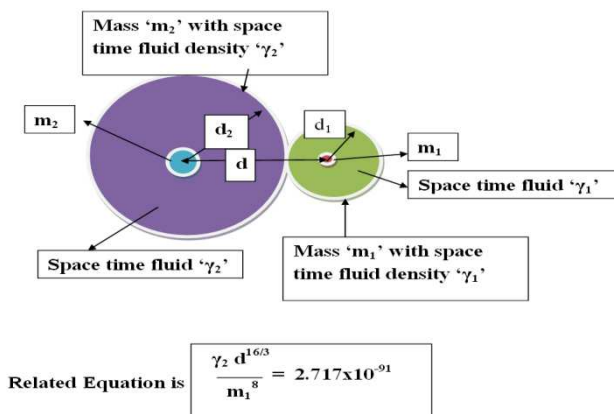


Fig 1. Affect of Space time fluid between two masses

Fig.1 shows that the mass 'm₂' will have a space time fluid with a radius 'd₂' and mass 'm₁' will have a space time fluid with a radius 'd₁'.

Let us suppose the density of the space time fluid surrounded by mass 'm₁' say 'γ₁' and 'm₂' is 'γ₂'.

As per space time fluid equations[4]

$$\gamma_1 d_1^{8/3} = 1.686656885 \times 10^{12} \quad (1)$$

$$\gamma_2 d_2^{8/3} = 1.686656885 \times 10^{12} \quad (2)$$

$$\gamma_1 / \gamma_2 = d_2^{8/3} / d_1^{8/3} \quad (3)$$

$$d_1 \times d_2 = d^2$$

(Since gravity follows inverse square law respect to 'd')

$$\text{Therefore } d_1 = d^2 / d_2$$

If we substitute the d²/d₂ in place of d₁, in the equation .3 the equation can be written as

$$\gamma_1 / \gamma_2 = [d_2^{8/3}]^2 / [(d^2)^{8/3}]$$

If we substitute d₂^{8/3} from equation.2 i.e d₂^{8/3} = 1.686656885 × 10¹² / γ₂ the equation can be modified as

$$\gamma_1 / \gamma_2 = [1.686656885 \times 10^{12} / \gamma_2]^2 / [(d^2)^{8/3}]$$

$$\gamma_1 \gamma_2 d^{16/3} = [1.686656885 \times 10^{12}]^2$$

$$\gamma_1 \gamma_2 d^{16/3} = 2.844811448 \times 10^{24} \quad (4)$$

We have space time fluid equation in terms of mass for

mass 'm₁'

$$m_1 / d_1^{1/3} = 7.06505184 \times 10^{12}$$

$$d_1^{1/3} = m_1 / 7.06505184 \times 10^{12}$$

$$\text{Equation no.1 is } \gamma_1 d_1^{8/3} = 1.686656885 \times 10^{12}$$

$$\text{It can be written as } \gamma_1 (d_1^{1/3})^8 = 1.686656885 \times 10^{12}$$

Therefore

$$\gamma_1 (m_1 / 7.06505184 \times 10^{12})^8 = 1.686656885 \times 10^{12}$$

Therefore

$$\gamma_1 m_1^8 = 1.047 \times 10^{115}$$

Therefore

$$\gamma_1 = 1.047 \times 10^{115} / m_1^8$$

If we substitute this value of γ₁ in equation no.4

$$(1.047 \times 10^{115} / m_1^8) \gamma_2 d^{16/3} = 2.844811448 \times 10^{24}$$

Now final equation can be written as

$$\frac{\gamma_2 d^{16/3}}{m_1^8} = 2.717 \times 10^{-91} \quad (5)$$

With this equation we can understand that the space time density(γ₂) of a body (m₂) will vary with the observer at a distance (d) from the mass 'm₂' and the mass (m₁) in which the observer is existed.

In other words

1. Anybody with mass 'm₂' will have space time fluid density levels around it. Similar to energy levels in the atom.
2. Anybody with mass m₁ existed in that space time fluid density level will have a specific space time fluid as per 'Siva's equation for space time fluid' and will be affected by mass m₂ also.
3. The space time fluid density of any level existing at d₁' distance from center of mass m₂ will be constant and follows the equation no.5
4. We know that as per theory and space time fluid equations for mass and density of anybody depends on its mass. The density of space time fluid calculated by these equations for any individual mass(say m₁) varies with the space time fluid density level existed for mass m₂ at distance d₁ calculated by the equation no.5.
5. If the individual density of mass m₁ is less than the density associated with the space time density level for mass m₂ in which mass m₁ is existed. The body m₁ will have a tendency to move towards the center of mass 'm₂' if it is more, the body mass 'm₁' will have a tendency to move away from the mass m₂.
6. The levels are quantized since time is quantized as per 'Film theory of the Universe' [1][2].
7. Thus gravity and antigravity forces are described as quantum levels of matter.

This model is a new model of 'QUANTUM GRAVITY'. Fig.2 represents the spread of space time fluid levels around a mass. Mass m₂ will have space time fluid density of γ₂ and mass m₁ is at a distance of 'd' from m₂. So mass m₁ will be in a space time fluid band or level associated to mass m₁. But as

per the theory, the space time fluid band or level will have a specific space time fluid density γ_2 only. So there can exist a specific mass m_d in that band or level (m_d can be calculated by equation no.5). If the real mass ' m_1 ' exists in that level, due to the imbalance of space time fluid of ' m_1 ' with the existed space time fluid γ_d (γ_d can be calculated by m_d as per the 'Siva's equations for space time fluid'[4]) the mass real will have a tendency to jump to the next level or the level below it. This is the cause for gravity or anti gravity forces of matter.

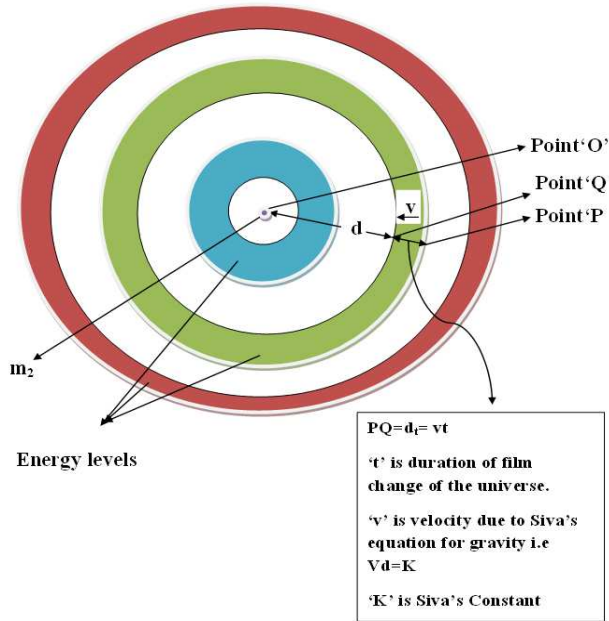


Fig 2. Distribution of Quantum Gravity around mass

Now let us quantify the energy level exists as gravitational force associated to a mass.

We know that the energy level is that area in which space time will not exist. As per 'film theory of universe' there will not be any time in that level only space can be considered.

We have Mass ' m_2 ' with space time density ' γ_2 '.

We have an energy level at point 'P' at a distance ' d ' from the center 'O'. So as per Siva's equation for gravity ' $vd=K$ '[1][5] there exist a velocity ' v ' for any mass at point 'P' towards the center 'O'.

We know that as per film theory of the universe 'a film of the universe shows the position of mass which will have a velocity ' v ' towards 'O'. Immediately after 7.6813×10^{-44} sec the position of the mass at 'P' will be changed to 'Q'. This distance must be equal to ' vt '

Therefore distance

$$PQ=d_t=vt$$

$$= Kt/d \quad (\text{since } v=K/d)$$

$$= 1.55738 \times 10^{-41}/d$$

$$(\text{since } K= 2.0275 \times 10^2 \text{ sqmt/sec})$$

$$\text{And } t = 7.6813 \times 10^{-44} \text{ sec}$$

With in the distance d_t There will not be existence of time As per 'Film theory of the Universe'[1]

So, only space with space time fluid density will exist. This distance of band shown as 'space time fluid level'.

Now let us see how much energy level will exist for that band width PQ. We can call it as quantum of space time fluid and it spreads in that band width.

Below which even the least mass 'K-Suryon' also will not exist. So the quanta must be equal to Mass of K=Suryon' i.e. 1.15×10^{-64} kgs[2]. Now energy equivalent to that mass will be in that energy level of space time fluid. But this energy is also dependent on distance ' d ' from the center of mass m_2 with space time fluid γ_2 . So if we suppose this m_2 is also 'K-suryon' with space time fluid density 10^{64} [6].

Now the whole theory of quantum gravity can be explained by two 'K-suryons' one is adjacent to another. Thus the quanta of space time fluid is energy equivalent to a K-Suryon. One influence ' γ_2 ' and the other influence ' m_1 ' as shown in Fig.1. The space time fluid quanta is fixed and varies with the distance ' d ' mass ' m_1 ' and mass ' m_2 '. If we substitute the values of ' γ_2 ' and ' m_1 ' in equation no.5 we can find the value of ' d ' which is the radius of 'K-Suryon'. Here we can not notice a difference between 'space time fluid radius' of K-Suryon and ' d ' if we consider a single K-suryon. But when it combines with another K-Suryon the space time fluid of newly created mass (two K-Suryons) will affect the distance ' d '. The reason is that the K-Suryon is a singularity by definition itself. When two K-Suryons combines each other, the space time fluid density will be increased. It effects as 'the density of created mass is reduced'. Thus it will try to float in the space time fluid. The decrease in the density of combined mass may be due to increase of its volume. That means- Increase of radius. (One cannot overlap on another completely. This result as increase of dia. Finally when a group of K-Suryons combines to form matter that float in the space time fluid. Thus the equation no.5 can be applied to find the affect of combining two black holes. This will be elaborated in further works.

3. Conclusions

1. Every mass will have 'space time fluid density levels' around it. When any other mass placed in this space time fluid density levels, It will have a tendency to move to a lower level or to a higher level. These tendencies are described as Gravity and anti-gravity (expansion in case of Universe) forces.
2. The levels are spread in such a way that in one particular level one K-Suryon only will exist. These levels are quantized. Thus, if any particle travels to a lower level it releases a K-Suryon and travels to higher level it absorbs a K-Suryon. It is similar to Bohr's atomic model.
3. This model is a 'New model of Quantum Gravity' and is described by equation

$$\frac{\gamma_2 d^{16/3}}{m_1^8} = 2.717 \times 10^{-91}$$

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