

# SHAHID theory of Quantum Gravity

Introduction : theory of quantum gravity explained that how gravity work in a subatomic universe. This theory explained the existence of gravitons or gravitational wave between two photons.

Theory : quantum gravity is fundamental theory in quantum physics. Explained that how gravity work at subatomic level or in black hole so in 1687 sir Isaac newton published a theory known as univarsel law of gravitation states that .

force is directly proportional to the product of both masses and inversely proportional to the square of distanced between them

$$F = GM_1M_2/r^2$$

So this type of equation does not work on quantum level because photons does not having mass so according to newton theory of gravitation

$$F=0$$

But this is classical physics

So I start with shahid theory of quantum gravity

Imagine a two photons moving in sub atom universe.



So in quantum level or sub atomic gravity travel in the formed of wave . so sir albert Einstein say in the theory of relativity so the question is how we can write it mathematically?

If we apply the newton idea we get nothing because photons does not having mass and charge so why black hole attract photons because photons does not have mass than why it attract photons because in subatomic particle gravity travel in the form of wave.

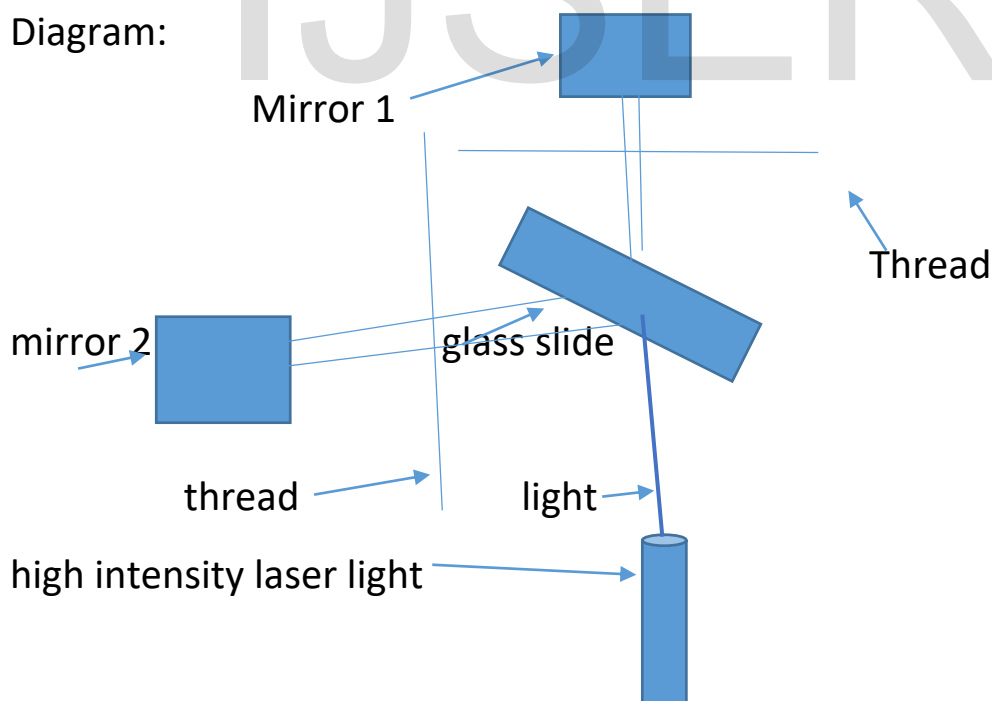
In subatomic level or in black holes gravity does not depend on mass it depend on energy of a body. With the help of this we can create new law of physics.

Experiment:

Equipment: two mirrors, one glass slide a laser light with high intensity. And very thin thread for detection of gravitons or gravitational wave.

Procedure: take a one mirror put in one place and the second mirror in second in second place and there distanced must be equal and after word put the glass slide in middle with the 45 degree angle and keep thread in between them

Diagram:



must put very tiny paper on thread

so when the glass slide split the light into two direction and when the light get reflected by mirror when the light is coming back to glass

slide we will observed the small amount of disturbance in the thread and the paper and this are nothing but a gravitational wave or gravitons

with the help of this experiment

Shahid quantum gravity

gravitational wave or gravitons is directly proportional to product of both energy of particle and inversely proportional to square of distanced between them

So equation will become

$$G\Psi \propto \frac{E_1.E_2}{d^2}$$

$$G\Psi = k \frac{E_1.E_2}{d^2} \dots\dots\dots \text{eq 1}$$

Where  $k=1.040 \times 10^{-33}$

And this is not perfect equation because matters or photons are in dual nature so we need a wave equation so derivation is

By plank energy equation

$$E=h\nu$$

Where h stand for plank constant  $\nu$  is frequency so if we substitute this value in equation 1 we get

$$G\Psi = k \frac{h\nu_1.h\nu_2}{d^2}$$

$$G\Psi = k \frac{h(\nu_1.\nu_2)}{d^2}$$

$V=c/\lambda$  where c stand for velocity of light and  $\lambda$  stand for wave length if we substitute this value in above equation we get

$$G\Psi = k \frac{h(\frac{c}{\lambda_1}.\frac{c}{\lambda_2})}{d^2}$$

Arranging this equation we get

$$G\Psi = k \frac{h.c}{d^2 \lambda_1 \lambda_2}$$

$$C = \frac{G\Psi d^2 \lambda_1 \lambda_2}{h..k}$$

By wave equation

$$\frac{\delta^2 \Psi}{\delta t^2} = c^2 \frac{\delta^2 \Psi}{\delta x^2}$$

$$\frac{\delta^2 \Psi}{\delta t^2} = \frac{G\Psi^2 d^4 \lambda_1^2 \lambda_2^2}{h^2 . k^2} \frac{\delta^2 \Psi}{\delta x^2}$$

So this is a required equation of quantum gravity

So matters having dual nature so if the disturbance between two photons having happened in the form of particle so it must be a gravitons or if it having wave nature it must be gravitational wave.

With the help of this we can understand why all planet revolving in elliptical orbit

The kepler second law or orbital state that. The line joining the planet and sun sweeps with equal area and equal interval of time

So imagine and earth revolving in elliptical orbit around the sun

Case 1

Planet earth having less distanced from sun. so if distanced is less then the potential energy of earth is less if potential energy is less kinetic energy will be more if kinetic energy is more then the velocity will more if velocity is more then earth take less time to travel the more distanced

case 2

the distanced between earth and sun is more or large if distanced is more then potential energy is more if potential energy is more then kinetic energy is less if kinetic energy is less then velocity is less then it take more time to cover small distanced.

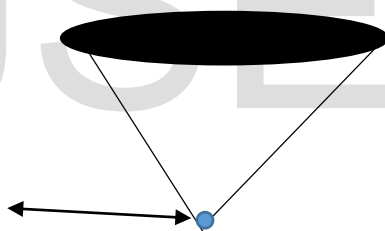
So no object in the universe are in rest so if sun is also moving it creating some gravitational wave or gravitons between space time because sun having  $3.9 \times 10^{26}$  joule energy and because of this planet revolving in elliptical orbit .

For case 1 the distanced is less from the sun so if distanced is less by this equation 1 the gravitational wave or gravitons are more

For case 2 the distanced is more then gravitational wave or gravitons is less

So in case 2 the distanced is more then the gravitational field is more it means the gravity between planet and sun is not constant. If gravity is not constant at some point earth loss its gravitational field so that's why motion of planets are in elliptical

So if we relate the theory of quantum gravity with black holes.



this blue point is known as space time singularity

at this point the volume is zero and the mass is infinity gravity is infinity density is infinity space time curved is infinity so and that's wrong because if volume of any object is zero the mass will be zero by mass volume density equation

$v = \text{mass} / \text{density}$  if volume is zero then  $m=0$   $d=\infty$  or if black hole having mass infinity density infinity by mathematics the volume become infinity and that's the biggest question is does black hole really suck mass. That's not write black hole does not suck mass or

not take masses to grow up it take the energy of a stars to grow up because gravity does not depend on mass it depend on energy that's the reason the gravity is so strong that not even light can't escape.

And with the help of this theory we can understand time very well so newton says time is absolute. After that theory of relativity published and said that time is relative. so with the help of this theory we can understand time very well.

Time depend on gravitational field that's why time get slow in black hole because black hole having very high gravitational field.

Time is inversely proportional to gravitational field it that's why time goes slow in black hole because it having more gravitational field so the equation of time become

$$T=1/G\psi$$

$$T=\frac{1}{K.E1.\frac{E2}{d^2}}$$

$$T=\frac{d^2}{K.E1.E2}$$

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So simply we can say that energy is inversely proportional to time

Postulates of quantum gravity.

1] in quantum scale and black hole gravity does not depend on mass it depend on energy

2] there is another universe known as quantum or subatomic universe and the proof is the life span of one electron is  $6.6 \times 10^{28}$  years means 66000 yotta years five quintillion time the current age our universe it means that electron are present before the formation of universe so this will proof that universe is made up of subatomic

or a quantum particle. So is we universe died or destroyed but still subatomic particle or quantum paricle will be there to form a new universe.

3] the gravity between planet is not constant because the distanced is not constant and because of this planet revolving in eliptical orbit.

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