Kaushal and Gravity

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Abstract

Energy of gravitational waves is always quantized in a form of its angular momentum. Based on a hypothesis, a variable K, Kaushal constant is introduced as it is constant for a given mass. Using this K, the speed of gravitational waves travelling in mass and in space-time was derived respectively. A loophole based on a hypothesis was used in deriving the equations of consciousness which hold true for Einstein's mass-energy equivalence [1]. Definition of gravity has been redefined and formulas for time and entropy in the form of Kaushal constant were calculated.

Keywords: Gravitational waves; Quantised; Kaushal constant; Equations of consciousness; Massenergy equivalence; Time and entropy

Introduction

Hypothesis one, whenever an object changes its relative position in space-time, it radiates gravitational waves in the direction of motion and this change is opposed by the effective surrounding gravitational waves, object could be anything ranging from an atom to a black hole. Hypothesis two, the origin of gravitational waves is always from the centre of gravity of an object. Hypothesis three, gravitational waves travels in a straight line.

Quantized gravitational waves

Using hypothesis one, energy of gravitational waves is directly proportional to its frequency,

$E_{GW} \propto f$

Removing proportionality constant,

$E_{GW} = Kf$ (1)

Where K is Kaushal constant, determined as follows: Force of gravity in between two objects is given by

$$F = \frac{Gm_1 m_2}{a^2} \quad [2]$$

also Newton's second law of motion says

F=mg   [3],

hence, it can be inferred that $m = \frac{ga^2}{G}$, provided $m_1=m_2=m$. Also, form Einstein's mass-energy equivalence,

$m = \frac{E}{C^2}$ we get $\frac{E}{C^2} = \frac{ga^2}{G}$

Since the energy of photons is always quantised, $E = hf$ [4], hence it can be inferred that $C^2 = \frac{Ghf}{ga^2}$ Again, using

Einstein's mass-energy equivalence, we get $E = \frac{mGhf}{ga^2}$

Comparing this result with equation 1, we get $K = \frac{mGh}{ga^2}$ (2)

If $mG = ga^2$, then $K = h$; where, K is Kaushal constant, m is the mass of an object, G is gravitational constant, h is plank's constant, g is acceleration due to gravity and a is the maximum vertical distance from the centre of gravity of an object. Kaushal constant has been discussed in later sections.

Speed of GWs in mass

Consider a spherical object at rest having a mass (m) and radius (a). Using hypothesis two, by equations of motion [5], $v = u + gt \; or \; v = gt$, since object is at rest. Where, v is the speed of GWs, g is acceleration due to gravity and t is time taken by GWs to travel from the centre to the periphery of mass. Hence,

$$Speed = \frac{g}{f} \qquad (3)$$

Since energy of gravitational waves is always quantized, also, potential energy [6] at the centre of the sphere is given by $E = mga$. Using equation 1

$\frac{g}{f} = \frac{k}{ma}$

From equation 3, it can be inferred that $speed = K/ma$ Using equation 2, speed becomes

$$speed = \frac{Gh}{ga^3} \qquad (4)$$

where G is gravitational constant, h is plank's constant and g is acceleration due to gravity.

From Newtonian gravity [2], $G = \frac{Ea}{m^2}$. From quantization of energy, $h = \frac{E}{f}$, and from potential energy, $g = \frac{E}{ma}$

. Putting the values of G, h and g into equation 4, we get $speed = \dfrac{E}{mfa}$ Using Einstein's mass-energy equivalence,

$$speed = \frac{c^2}{fa}$$ but also

$$speed = \frac{a}{t} \; or \; af \qquad (5)$$

Hence

$$speed^2 = c^2 \; or \; fa = c \qquad (6)$$

The speed of gravitational waves travelling in mass is c i.e. the speed of light.

Speed of GWs in space-time

Consider two objects of identical mass (m) and radius (a) in a cosmic dance, each having an entangled photon right at the centre while both objects are maintaining a distance of a with each other, a is equal to the Schwarzschild radius [7], given by

$a = \dfrac{2mG}{C^2}$ also from Einstein's mass-energy equivalence, $c^2 = \dfrac{E}{m}$ hence it can be formulated as: $E = \dfrac{2Gm^2}{a}$ By

Newtonian gravity, $E = \dfrac{2Gm^2}{a}$ we get $E = 2E \Rightarrow 2 = 1 \; or \; 1 = 0$. These are known as equations of consciousness in terms of teleportation and quantum entanglement respectively, which is discussed in later sections. Using equation 6, $c = fa^1$, after applying equation of consciousness for quantum entanglement, 1=0, we get, $c = f$, since quantum entanglement is independent of distance. Also, equation 5 can be rewritten as $speed = af^1$, using equation of consciousness for teleportation, 2=1, $speed = af^2 \; or \; aff$, this is due to the diffraction of GWs when they cross the periphery of mass and enter into space-time which is analogous to diffraction of light [8]. Using $c = f$ and equation 6, we get, $speed = c^2$. Hence quantum teleportation is breaking the singularity and the speed of gravitational waves travelling in space-time is c^2, or of the order of 10^{15}. That is why in recent detection of GWs, GW170817, gravitational waves deviation from the speed of light was less than few parts in 10^{15}.

Defining Kaushal

Using hypothesis one and three, the earth is tilted at 23.4^o with respect to the sun, to make it simple only earth's rotation in a certain plane is taken into consideration, it must be radiating gravitational waves at this angle while the effective surrounding gravitational waves are coming from the sun at an angle of 0°. A web of infinite and increasing quadrilaterals will be created in between them which can be approximated as a parallelogram over a short distance and this one parallelogram is one Kaushal. Moreover, this web is known as the gravity of the earth. Constant K, Kaushal is defined in terms of time and entropy or heat.

Time

Speed of GWs in mass is c which can be written as $c = \dfrac{a}{t}$ taking squares on both sides, $c^2 = \dfrac{a^2}{t^2}$. Where $c^2 = \dfrac{E}{m}$

on equating while using equation 1,

$$t = \frac{ma^2}{k} \qquad (7)$$

Where t is time, m is mass, a is maximum vertical distance from centre of gravity of an object and K is Kaushal constant. It can be inferred that time and Kaushal constant are inversely proportional to each other; as we move away from earth, the size of Kaushal increases, hence time starts flowing faster as compared to that on earth.

Entropy

From equation 2, using dimensions it can be inferred,

$$k = \frac{kgm^2}{s}$$

Dividing by Tt on both sides, we get

$$\frac{k}{Tt} = \frac{J}{K}$$

where J/K is entropy (S), using equation 7, we get

$$S = \frac{K^2}{ma^2 T}$$

comparing it with the laws of thermodynamics, which says $S = \dfrac{Q}{T}$, hence,

$$Q = \frac{K^2}{ma^2}$$

where Q is the heat absorbed or released and a is maximum vertical distance from centre of gravity of an object.

Equations of Consciousness

2=1 is the equation of consciousness for teleportation and it signifies Einstein's mass-energy equivalence. Let us try it out.

Newton's law of motion says, $F = mg$, also Newtonian gravity says, $F = G\dfrac{m^2}{a^2}$

on equating them, we get, $Gm = ga^2$ (8). From Schwarzschild radius, $2 = \dfrac{ac^2}{Gm}$ and from potential energy $1 = \dfrac{E}{mga}$

Using equation 8 in combination with 2=1, we will get $E = mc^2$. Equation of consciousness for teleportation is valid proof of Einstein's mass-energy equivalence. Also, these equations can only be used according to the reasonable will of a conscious mind.

Conclusion

Energy of gravitational waves is always quantised in a form of its angular momentum. Speed of GWs travelling in mass and in spacetime is c and c^2 respectively. Formulas for time and entropy are derived in terms of Kaushal constant. 2=1 is the

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equation of consciousness for teleportation which signifies mass-energy equivalence. Also, an attempt has been made to redefine gravity of an object.

REFERENCES

1. Jentschel, Michael. Einstein's mass-energy equivalence principle. Access Science. 2011.

2. Poisson E, Will CM. Foundations of Newtonian gravity. Gravity. 2014; 1-62.

3. Murdin P. Newton's Laws of Motion. The Encyclopaedia of Astronomy and Astrophysics. 2000; 11.

4. Stephenson L. Quantisation of energy. Journal of the Institution of Electrical Engineers, 1963; 516-16.

5. Blackwell. Equation of Motion. Dynamics of Structures. 2013; 25-36.

6. Book. Potential Energy Transform. Risk Management. 2015.

7. Shelton JD. Simple Interpretation of the Schwarzschild Radius. American Journal of Physics. 1973; 41:1368-69.

8. Beeson S, Mayer JW. Diffraction and Interference. Patterns of Light. 1987; 91-102.