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Reality of light

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Apprehension *- According to James C. Maxwell speed of light is constant. Further on this Albert Einstein developed his Special and General theory of relativity, which says the faster we move through space, the slower we move through time. He also gave formula's on time dilation, length contraction etc.*

According to Einstein while traveling at the speed of light time stop's for you ,but speed of light is constant. According to the following calculations, the time dilation experienced by the traveler traveling with the speed of light is '0' which is appropriate and exactly correct according to experiments also, but speed of light observed by the observer gives us the time dilation as '∞',which mean the light never reached the observer. This is contradictory since observer did observe the light.

This gives us a few hint of involvement of Quantum physics phenomenon 'Super position' in the existence of light.

The given research also somewhere unites Quantum physics and General theory of relativity. At the same time solves the problem of speed of signals of quantum entangled particles being faster than the speed of light since actual speed of light is '∞'.

observed value of speed of light is 3*10^8m/s.

{Key points of the previous research work done on speed of light}

Introduction *- In the previous research paper it was proved that the speed of light has dual nature to show which is c=3*10^8 for the observer observing it and ∞ for the one who is experiencing the speed of theory of relativity'. The same theory gives us the equation for length contraction which also satisfies the fact that light has dual nature to show. According the research work, actual speed of light is infinity, since all the formula related to variations occurring at the super high speeds gives us the conclusion to have speed of light as infinity.*

Equations *- Quantum mechanics tells us about the* ***super position of electrons****, in macroscopic terms matter while we are not observing it, but what if the same phenomenon occurs with the light. Few of the equations give us the hint for such thing to take place, such as-*

We know that the total energy of a given body is the sum of its kinetic energy and potential energy.

{the following equation has been solved under the frame reference of a body moving with the speed of light.

$$K.E. = 1/2mv^2$$

According to theory of relativity a body moving with the speed of light will have infinite mass,

$K.E.=1/2\infty(\infty)^2$ *[since speed of light is infinity for the one experiencing it]*

$$K.E.=\infty$$

Now since, Kinetic energy + potential energy = total energy

$$K.E. =\infty$$

Let P.E.= x

Solving the eq.

$$\infty + x = T.E$$

Anything if added to infinity is infinity.

therefore, total energy = ∞

Now as we know that E=mc^2 gives us the relation between energy(Total energy) and mass. If we solve the following equation by taking energy as total energy -

$$E=mc^2$$

$$c=\sqrt{E/m} \quad ....eq.\ 1$$

Relation between frequency, wave length and speed of light

$$c=\nu\lambda \quad ...eq.2$$

Putting eq. 1 and 2 together

$$\sqrt{E/m}=\nu\lambda$$

therefore-

$$\sqrt{\infty/\infty}=\nu\lambda$$

(anything divided by infinity is 0)

$$\nu\lambda=0$$

Conclusion *- The following equation solved questions on the existence of light. We can make a good guess by saying that the light, when we observe it travels in form of* ***'Photon'*** *and travel in form of wave when in not being observed, which is the super position phenomenon of quantum mechanics.*