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A new relation between mass and velocity

Mohammad Saad

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 us, but speed of light is constant with the value 3*10^8m/s. According to the 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.

Introduction-*As we know that the momentum of a body is defined by P=mv which shows the relation between m & v*

Therefore ***P=mv***

P/m=V

Equations-*Now if we assume that the mass m=1kg and v=1m/s*

Then the momentum obtained is P=1

But now if we reduce the mass by half and put it in the eq. P=mv considering that the momentum remains constant which is 1, then

or 1/0.5=v

or 1/ 5/10

or 10/5

or2

We observe that the reduction of mass resulted in increase of velocity.

This happened because mass and velocity are in an inversely proportional relation.

Hence if we decrease the mass of a body and want to keep the momentum constant, it will result in

increase in the velocity and vice versa, but what if the mass is reduced to 0.

[This could be felt by us while we travel in a vehicle. When the vehicle is at rest, we find it heavy in comparison to the mass which we feel when we are traveling with a speed]

Well this could be answered in the same manner as we do with numbers divided by ***'0'***

Let us consider P as it is and mass as 0

Therefore ***P/0=v***

Well mathematically the answer turns out to be '∞'. As we approach such conditions in mathematics where we find, the smaller the denominator is, the bigger result we will obtain after solving it.

Hence, mathematically the following results are true.

But if we see another corner of physics, we find that at the speed of light, time stops for us.

If we put this statement in a simple distance time formula (s=d/t).

We see [s=3*10^8 d=variable t=o]

or 3*10^8=d/0

or 3*10^8=∞

*Here, we obtain two different values of the speed of light. One is 3*10^8 and the other,*∞.

Now mathematically the eq. does not create any problem for us but in the physical world, ∞ is quite unknown.

Now as we know that according to Albert Einstein's general theory of relativity, at the speed of light mass of a body increases to infinity.

Now since we have two different values of speed of light, we will put both of them in the eq.

$$m' = m/1-(v/c)^2$$

**for $v = 3*10^8$

$$m' = m/(1-3*10^8/3*10^8)$$

$$m' = m/1-1$$

$$m' = \infty$$

**for $v = \infty$

$$m' = m/(1-\infty/3*10^8)$$

$$m' = m/\infty$$

$$m' = 0$$

Once again we are getting to different values of mass too, just like the speed of light.

According to Einstein, m'=∞ is correct, but from a different mathematical approach we also find that m'=0 is also right.

If we consider that m'=0, then the question arises that where has mass vanished?

This might be answered by E=mc^2

$$E = mc^2$$

$$\text{or } E/m = c^2$$

or $\sqrt{E/0}=c$

or $\sqrt{\infty}=c$

or $c=\infty$

*Once again we get the value of '**c**' as '**∞**'.*

Conclusion-*But the question that why or how light could travel with two different speeds remains unanswered. Hence **3*10^8m/s** and* **∞.**

Well this phenomenon might come under the super position quantum mechanics phenomenon, which says that things behave differently when we observe them and differently when we don't.

*Hence when we observe light or measure its speed, it travels with the speed of 3*10^8m/s and when we don't, then with ∞ speed.*