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When the Speed of a Proton is the Speed of Light

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The relativistic energy formula: $E_r=m_r.c^2 = m_o.\gamma.c^2$ (with c=constant) in Einstein's Special Relativity is applied in LHC. But with Einstein's dilation coefficient $\gamma=\frac{1}{\sqrt{1-\frac{v^2}{c^2}}}$ and when a speed: v of protons is equal to the speed of light: c , nobody can calculate the energy or mass of protons exactly. Because if the speed of protons is equal to the speed of light, v=c , then Einstein's dilated coefficient γ will be $\gamma=\frac{1}{0}$. Furthermore, Einstein's relativistic energy formula is $E_r=m_r.c_r^2$, not $E_r=m_r.c^2$ (with c=constant). So, I think that the experiments to accelerate protons to the speed of light can't be successful.

They can only be successful, if Einstein's dilated coefficient $\gamma=\frac{1}{\sqrt{1-\frac{v^2}{c^2}}}$ and relativistic energy formula $E_r=m_r.c^2$ (with c=constant) are revised by $\gamma=\frac{1}{\sqrt{1-\frac{v^2}{c_r^2}}}=\frac{1}{\sqrt{1-\frac{v^2}{c_o^2+v^2}}}$ (with $c=c_o$), and $E_r=m_r.c_r^2$. This is because from $\gamma=\frac{1}{\sqrt{1-\frac{v^2}{c_r^2}}}=\frac{1}{\sqrt{1-\frac{v^2}{c_o^2+v^2}}}$ and $E_r=m_r.c_r^2$, Although the speed of protons is equal to the speed of light, the scientists at LHC can also calculate its energy or mass exactly to make their machine acceleration.

Assume that the speed of proton is equal to the speed of light: c_o , ($v=c_o$, v is a speed of proton), from coefficient $\gamma==\frac{1}{\sqrt{1-\frac{v^2}{c_o^2+v^2}}}$ we find that $\gamma=\frac{1}{\sqrt{1-\frac{c_o^2}{c_o^2+c_o^2}}}=\frac{1}{\sqrt{1-\frac{1}{2}}}=\sqrt{2}$.

Since $\gamma=\sqrt{2}$ and a formula: $m_r=m_o.\gamma$, we find that $m_r=m_o.\sqrt{2}$, (of which m_r is a mass of proton when it moves with speed of light; m_o is a mass of proton when it doesn't move and it is $m_o=1840$).

But if a mass of proton is increased from m_o to $m_r= m_o.\sqrt{2}$, how much will we spend on energy to make it ? Which formula will we apply to calculate it ? Of course, we must apply formula: $E_r=m_r.c_r^2$, and not formula: $E_r=m_r.c_o^2$. This is because Einstein's first postulate is that physical laws are the same in fixed and uniformly moving frames. (A formula: $E_r=m_r.c_o^2$ with m_r is in a moving frame, but c_o is in a fixed frame. It may be considered as " taking the wrong sow by the ear"). If we apply c_o which is in a fixed frame for a formula which is in a moving frame, it means that Einstein's first postulate in special relativity won't apply.

Since we must apply formula: $E_r=m_r.c_r^2 = m_o.\gamma.(c_o.\gamma)^2 = m_o.\gamma^3.c_o^2$, we find that if the speed of a proton is accelerated to the speed of light so that the mass of the proton is increased from m_o to $m_r= m_o.\sqrt{2}$, then we will expend energy, which is

$$E = E_r - E_o = m_o.\gamma^3.c_o^2 - m_o.c_o^2 = m_o.\left(\sqrt{2}\right)^3.c_o^2 - m_o.c_o^2 = m_o.c_o^2.\left[\left(\sqrt{2}\right)^3 - 1\right] .$$

(Where E_r is the energy of the proton when it moves with the speed of light ; E_o is the energy when it doesn't move ; m_o is the mass of the proton with $m_o=1840$; and $c_o=c=$constant is our light velocity).

If the energy which is equivalent to a magneto-electric force of machine acceleration in LHC is smaller than energy: $E=m_o.c_o^2.\left[\left(\sqrt{2}\right)^3 - 1\right]$, then a machine acceleration in LHC will break down or the speed of the proton will be smaller than the speed of light.

Note : In above, the energy, E is the energy which we must expend for one proton when its mass is increased from m_o to $m_r= m_o.\sqrt{2}$, (from $m_o=1840$ to $m_r=1840.\sqrt{2}$).
$c=c_o=$constant and $c_r=$constant, but $c=c_o$ is different from c_r .

Conclusion :

Everyone is waiting for the result of the experiment in search of particle: "Higg" in LHC, (it will attempt to accelerate the speed of protons to the speed of light in this year, 2009).

I think that if the speed of the proton is equal to a speed of light and an energy which is equivalent to the magneto-electric force of machine acceleration is smaller than energy: E , which was calculated as above so that the machine acceleration in LHC breaks down again, then light velocity won't be a universal constant as per Einstein's second postulate and Einstein's relativistic energy formula will revise from $E_r=m_r.c^2$ (with c=constant) to $E_r=m_r.c_r^2$ absolutely.

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