Research Paper Engineering

Our Mistake During Derivation of the 'Time Dilation'

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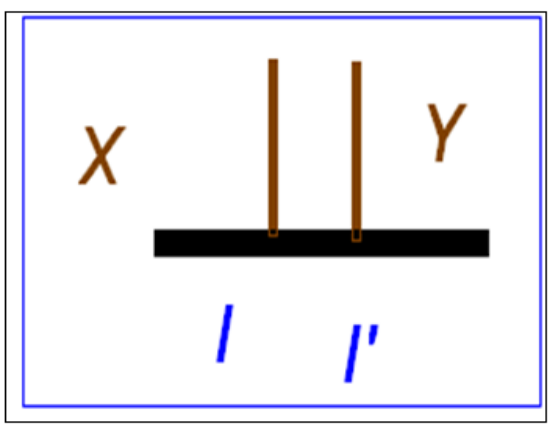
ABSTRACT

I want to say that during derivation of the "Time Dilation" fact we have spent a mistake because we measured time interval for a successive reflection in a light clock respect to both of the reference frame. But the basis of 'Theory of Relativity' is that we should consider velocity, time, length respect to one reference frame. So it is meaningless to measure time interval for a successive reflection of a light clock respect to both of the reference frame. In conclusion I will say that if one reference frame moves respect to another and a person sited at any of these always observe that a clock moves slower in the corresponding reference frame and moves faster in the another reference frame. So 'Time Dilation' fact depends upon the frame from which it is seen like as in a train we observe that platform is moving but in platform we observe that the train is moving.

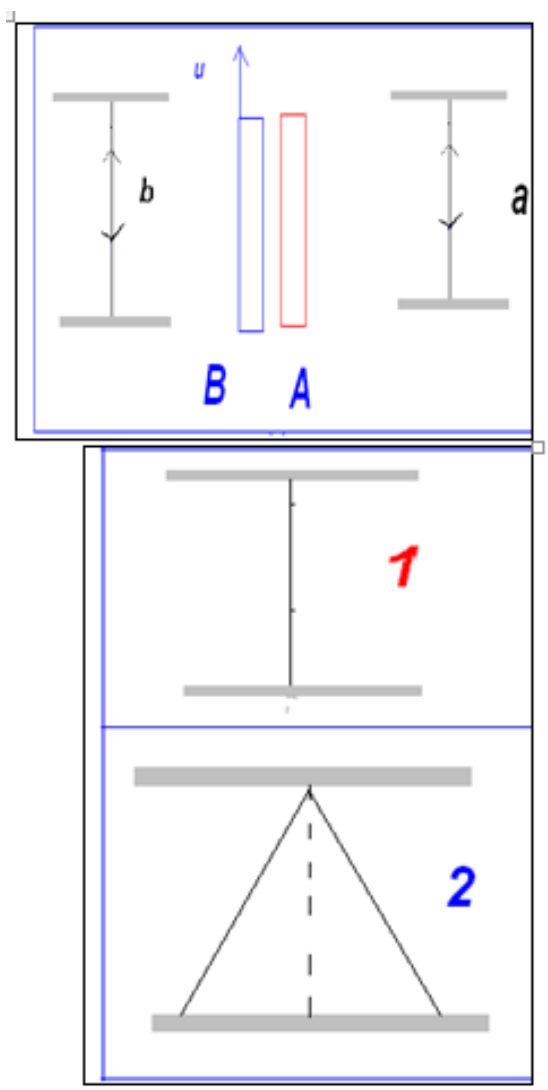
KEYWORDS 'Time Dilation' fact depends upon frame from which it is seen



Discussion:

A person at 'X' will observe that pillar 'l' is bigger than l' but a person at 'Y' will observe that pillar l' is bigger than 'l'. It depends upon the frame from which it is seen. Similar incident occur in the case of time dilation.If one reference frame moves respect to another and a person sited at any of these always observe that a clock moves slower in the corresponding reference frame and moves faster in the another reference frame. It is meaningless to measure one's height respect to both of the point that we have consider in the 'Time Dilation' fact.In the derivation of 'Time Dilation' fact, we consider two reference frame (A & B) and also consider that 'B' is moving respect to 'A' with a uniform speed 'u'. We imagined a light

clock in the frame 'B'and calculate time interval for a successive reflection respect to both of the frame. Then we calculated time dilation. But I want to say that during derivation of the "Time Dilation" fact we have



spent a mistake because we measured time interval for a successive reflection in a light clock respect to both of the reference frame. But the basis of 'Theory of Relativity' is that we

should consider velocity, time, length respect to one reference frame. So it is meaningless to measure time interval for a successive reflection of the light clock 'b' respect to both of the reference frame. So I just want to say that we should measure time dilation between two light clocks situated at different reference frame with respect to one reference frame for a successive reflection.Now I will consider two reference frames 'A' & 'B' and also two light clocks 'a'& 'b' situated at 'A' & 'B' respectively. Then I will consider that 'B' is moving respect to 'A' with a uniform speed 'u'. Now a person sited at 'A' will observe that 'B' moves with a uniform speed 'u' and will observe that path shape of light of the light clock 'b' is like figure 2 and observe that path shape of light of the light clock 'a' is like figure 1. So the person will find that a clock in 'A' moves slower than 'B' (Same equation) Again a person sited at 'B' will observe that 'A' is moving with a uniform speed 'u' and path shape of light of the light clock 'b' is like figure 1 and observe that path shape of light of the light clock 'a' is like figure 2. So the person will find that a clock in 'B' moves slower than 'A'.In conclusion I will say that if one reference frame moves respect to another and a person sited at any of these always observe that a clock moves slower in the corresponding reference frame and moves faster in the another reference frame. (which have a relative velocity respect to the corresponding reference frame). So 'Time Dilation' fact depends upon the frame from which it is seen like as in a train we observe that platform is moving but in platform we observe that the train is moving.Same case happen in 'Length Contraction'. A person sited any of the reference frame always observe that a length becomeslarger in the corresponding reference frame and becomes smaller in the another reference frame (which have a relative velocity respect to the corresponding reference frame).

REFERENCES

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