

Einstein hides variable lightspeed

Roger J Anderton

R.J.Anderton@btinternet.com

Despite the claim of constancy of lightspeed, hidden in special relativity is variable lightspeed.

Dealing with lightspeed as - speed of light in vacuum free of influences on it (from such things as gravity).

In derivation of time dilation, a right-angled triangle for speeds is formed (based on fig.1) of sides:

hypotenuse (light) speed = c ,

horizontal speed = v ,

and from this we get by Pythagorean Theorem vertical speed = $\sqrt{c^2 - v^2}$.

If we multiply all this by time t we have distance triangle of

Hypotenuse distance = ct ,

horizontal distance = vt ,

vertical distance = $[\sqrt{c^2 - v^2}]t$, we could call this the unprimed frame's distance triangle.

And the vertical distance is then equated to distance ct' from primed frame (a frame where distance travelled along horizontal is deemed zero, i.e. from its rest frame), thus giving us:

vertical distance = $[\sqrt{c^2 - v^2}]t = ct'$

then by maths manipulation the time dilation equation can be obtained from this.

But by Newtonian physics why would we have made t different to t' , instead it would have seemed more sensible to have universal time and so we could have written:

vertical = $[\sqrt{c^2 - v^2}]t = c't$

i.e. $c' = [\sqrt{c^2 - v^2}]$

i.e. variable lightspeed c'

So, the link is clear between Newton and Einstein for the equation:

$$\text{vertical} = [\sqrt{c^2 - v^2}] t = c' t'$$

Einstein has $c = c'$, and then t different to t' .

While Newton should have $t=t'$ and $c' = [\sqrt{c^2 - v^2}]$.

However, relativists after having developed this in their maths, then make the mistake of saying as v tends to zero, then t tends to t' in their time dilation equation and special relativity approximates to Newtonian physics for low velocities/speeds.

But that is false they already gave the link in their derivation:

$$\text{Vertical distance} = [\sqrt{c^2 - v^2}] t = c' t'$$

Einstein has $c = c'$, and then t different to t' .

While Newton is $t=t'$ and $c' = [\sqrt{c^2 - v^2}]$.

There is none of this special relativity approximates to Newtonian physics at low speed/velocities. The link is: Einstein hides by manipulation of the maths what would be variable lightspeed (in context of Newtonian physics) as time dilation.

Fig.1

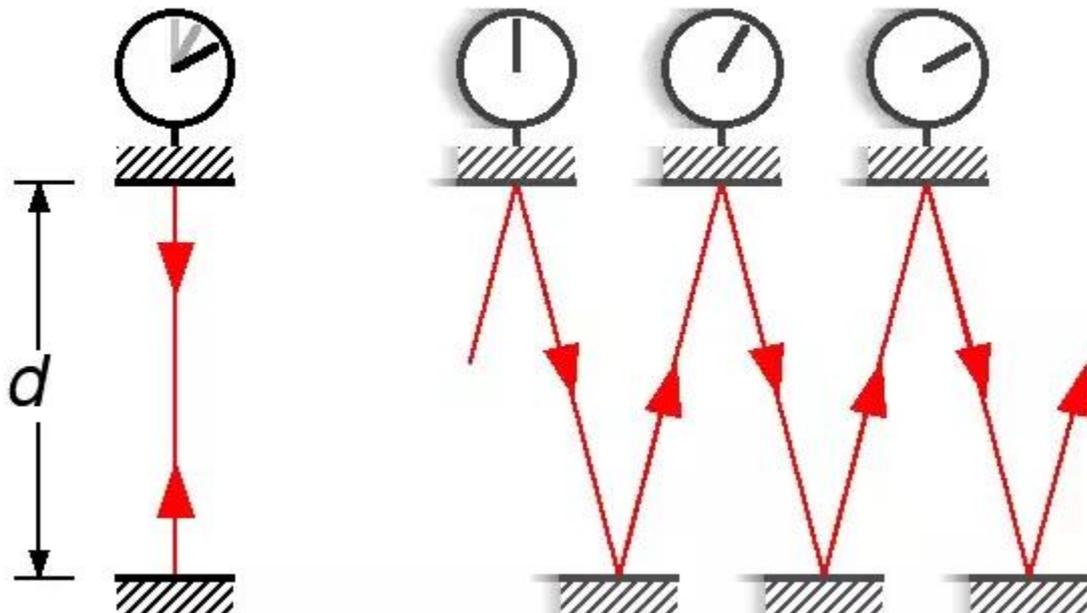


Fig.1 First diagram: Light bouncing up and down between mirrors for stationary clock
Second diagram: Light bouncing between mirrors for moving clock.