

Re: Calculating  $v[t]$ ,  $x[t]$ , and  $t'[t]$  for an constant accelerated object.

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*Source:* <http://sci.tech-archive.net/Archive/sci.physics.relativity/2005-06/msg00955.html>

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- *From:* "\*\*\* rD" <paulpsremove@xxxxxxxxxxx>
  - *Date:* Wed, 8 Jun 2005 17:38:31 +0100
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Repost as previous seems to have got lost

"Sue..." <suzysewnshow@xxxxxxxxxxx> wrote in message

[news:1118130196.430100.67420@xx](mailto:news:1118130196.430100.67420@xx)

| <<

| I am currently studying AE's EoMB (SR)? papers to try and find the  
| justification

| for relativistic velocity correction from an energy pov.

| >>

|

| A goalie repeatedly fires a rifle at a hocky puck to accelerate it.

| When the pucks velocity equals the rifles muzzle velocity,

| the process is incapable of further accelerating the puck.

|

Yes but if he stands on the puck his potential velocity is infinity or  
untill he runs out of bullits.

| If the goalie skate after the puck, still firing, he can add  
| his velocity wrt the ice to the muzzle velocity and accelerate  
| the puck a bit more.

|

| Now... if you accept that the puck's velocity was asymptotically  
| approaching the muzzle velocity because it was getting heavier,

No I dont, it was just a reducing velocity differential that was reducing  
the acceleration

| then you must explain how pucks loose weight when chased  
| by goalies. ;-)

I don't think or think I need to explain why pucks loose weight ? except  
under the condition of the goalie standing on the puck firing.

|

| << So now, if we still want to maintain some meaning for relativistic  
| mass, then we'll have to realise that it has a directional  
| dependence—as if the object somehow has more mass in the direction of

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| its motion, than it has sideways. Evidently the idea of relativistic  
| mass is becoming a little more complicated than at first we might have  
| hoped! And this is another reason why, in the end, it's so much easier  
| to just take the mass to be the invariant quantity  $m$ , and to put any  
| directional information into a separate, matrix, factor. >>

| <http://math.ucr.edu/home/baez/physics/Relativity/SR/mass.html>

| Ah, relativistic mass, have not read your link yet but I will.

Mass is an energy property of a multi dimensional structure. A structure can also contain energy in a single axial form, you cant just add them together as if they were the same thing as to transform one energy state to the other needs considerable amount of energy.

| Sue...

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• ***Follow-Ups:***

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◇ *From: sue jahn*

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