



## GAMMA

## A Stumbling Block in the Way of Science

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$$\gamma = \frac{1}{\sqrt{1 - \frac{v^2}{c^2}}}$$

the general science  
journal

**- The first postulate of special relativity** states that nothing can move faster than the speed of light in free space.

**- The second postulate of special relativity** states that the speed of light in free space has the same value for all observers, regardless of their state of motion.

These postulates clearly emerged from Einstein's head, based only without further analysis, on the ill-conceived Michelson and Morley experiment and certainly without attempting to the fact that they calculated velocities such as  $c + v$  and  $c - v$ ! And Einstein relied exactly on this experiment to promulgate his theory of special relativity! He never asked "speed in relation to what?".

As speed, by its very nature, is a relative quantity, just for that reason the meaning of both postulates must, obviously, be considered senseless. The gamma factor  $\gamma$  emerged as a crutch to give support to those postulates. Today we know that, viewed through the right perspective, the result of the M/M experiment could only give a null as a natural result and the application of a Lorentz's factor becomes dysfunctional! However, unfortunately, it came to stay: instead of being rejected, it became a pathogenic element in the progress of science and, to remain academically correct among the relativistic religious community, this goblin continues marking its presence to fashion otherwise ordinary physical phenomena to make them comply with Herr Einstein's theories. Purist mathematicians rejoice in solving the uncountable inconsistencies, puzzles and paradoxes resulting from the application of this wedge. But it is incomprehensible that no one has, hitherto, paid attention to the fact that the indiscriminate use of this factor has become a hindrance in the way of scientific development. Relativists toast us with pearls such as:

--A body can not be accelerated at speeds close to the speed of light because its mass increases with speed obeying to the gamma factor and tends to infinity as it approaches the speed of light !!!.

--A body at speeds called relativistic shrinks in the direction of motion, obeying to the gamma factor. A sphere, for example, when it reaches a speed close to the speed of light, becomes a flat disk whose thickness tends to zero and it's mass to infinity !!!

--Also to be included in the cast is the well known infamous and centennial "twin's paradox" which continues to generate controversy up to this day but it would be boring to start describing it here again. And gamma appears even more widespread, encompassing time dilation, relativistic Doppler and everything that moves. Einstein himself, in his later years of life, began to distrust his theory of relativity.

But all that stuff is candidly accepted and taught as being undisputable physical realities. When someone dares to deny the light in space as the absolute physical velocity limit, the guardians of the hermetic science are quick to take the field and defend the word of their Messiah and accuse the blasphemer of ignorance and threaten him with serious punishments. Since the beginning of the last century all physicists must play in the same orchestra and the one who dare to tune out will be fired. The once famous astronomer and cosmologist the late Dr. Halton Arp became a martyr of relativity when, among other sensible findings, he dared to assert that certain "quasars" are being expelled from the nucleus of some *relatively nearby active galaxies* at *supraliminal velocities*. Due to his adamant statements he was accused of apostasy and lost his job at the Palomar observatory. He managed

painstakingly, afterwards, a humble backrest at a German research institute and, there, the genius of Chip Arp (as he was known) was gradually languishing to oblivion.

In view of the most ridiculous picture wide openly shown above, let us now place all this rubbish aside and start dealing with scientific facts and maintain our feet firmly on solid ground since all phenomena like that can easily be explained by old and good classical mechanics!

Alors voilà. It is high time to give up our beliefs and begin to take science seriously.

The law of conservation of energy and momentum dictates: a body can not be accelerated to an energy greater than the energy imparted by its accelerating agent.

An aircraft can not level fly faster than the air velocity imparted by the propellers or the velocity with which the propellant gases are expelled by the motor-turbines. Your hat will never reach the speed of the wind that blew it from your head and also for the same reason you can not continue to transfer heat from a heat source to an object that has already reached the source's temperature. NASA engineers and scientists do not seem to be devout relativists because they do not use the gamma factor in their calculations since they are always concerned, above all, with operational results .

Let's take two hypothetical real life examples.

### Symbols:

$E_0$  stays for any energy source (mechanical, gravitational, electromagnetic, thermic etc)

$F_0$  actual force applied to a body by an energy source

$v(t)$  speed at time  $t$  acquired by a body being accelerated

$\varpi$  (curly pi) limiting speed imposed by any physical or mechanical constraints

$M$  mass of object being accelerated

$m$  meter

$\alpha$  acceleration

$\Phi$  factor, equivalent to kg / second, when multiplied by speed equals force

### Pertinent Equations:

$$F = \Phi \cdot (\varpi - v) \quad (1) \quad \leq \text{force transfer}$$

The resulting instantaneous acceleration  $\alpha$  will be

$$\alpha = \frac{F}{M} = \frac{\Phi \cdot (\varpi - v)}{M} \quad (2) \quad \leq \text{acceleration}$$

Initially, when  $v = 0$  we have full acceleration and when  $v$  approaches  $\varpi$  acceleration  $\alpha$  tends to zero.

$$\Phi = \frac{E_0}{\varpi \cdot m} \quad (3)$$

Solving (2) for  $v(t)$ , the velocity as a function of time  $v(t) = \alpha \cdot t$  will be

$$v(t) = \frac{\Phi \cdot t \cdot \omega}{\Phi \cdot t + M} \tag{4}$$

and the force F as a function of time

$$F(t) = \frac{M \cdot \Phi \cdot \omega}{M + \Phi \cdot t} \tag{5}$$

### (1) Electro-Mechanical example:

As a trivial example, let us take an object with a mass of 800 kg which in this case could be an ideal electric car being accelerated by an 84-horsepower constant torque electric motor whose general mechanical contrivance has a top speed limit of 200 km/hr. Factors such as efficiency, friction and other mechanical technicalities are here not at stake.

$$\omega = 200 \frac{\text{km}}{\text{hr}}$$

$$M = 800 \cdot \text{kg}$$

$$\Phi = \frac{84 \cdot \text{hp} \cdot \text{s}}{\omega \cdot \text{m}}$$

<= from Eq. (3)

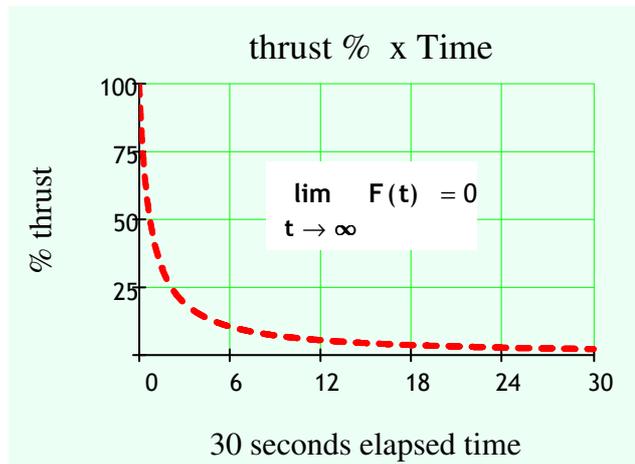
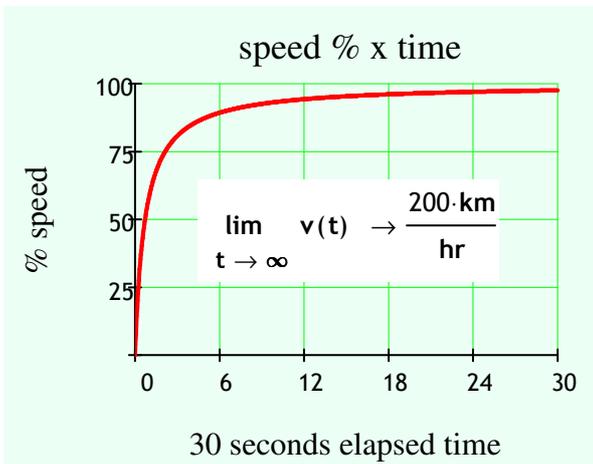
$$v(t) = \frac{\Phi \cdot t \cdot \omega}{\Phi \cdot t + M}$$

<= from Eq. (4)

$$F(t) = \frac{M \cdot \Phi \cdot \omega}{M + \Phi \cdot t}$$

<= from Eq. (5)

Check:



A lack of thrust when approaching  $\omega$ .

### (2) Proton Accelerator example:

Now, let us take as an example a proton being accelerated by an electromagnetic energy source of 1.47 GeV. In this case, since electromagnetism is the source of energy, and the limit to be established must be the speed of light in a vacuum  $\omega = c$ . Practical engineering technicalities are not at stake.

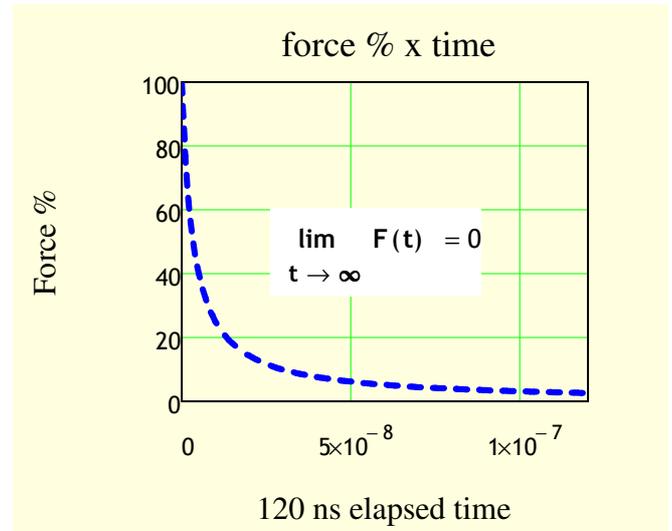
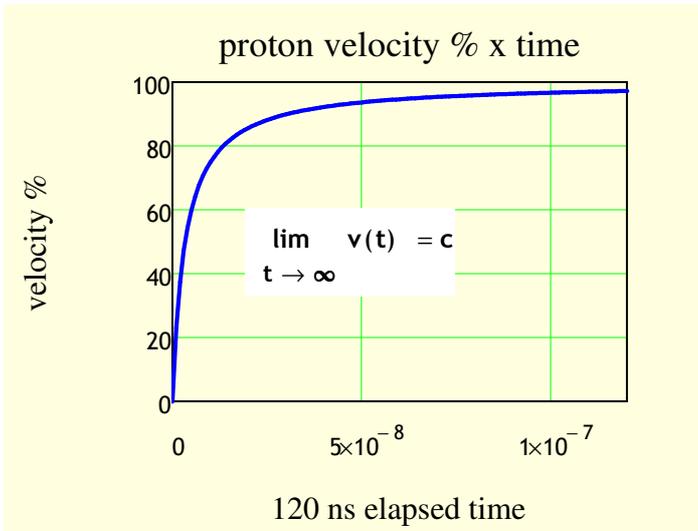
$M_p = 2.62496325 \cdot 10^{-27} \cdot \text{kg}$  where  $M_p$  stays for the proton mass

$\varpi = c$        $M = M_p$        $M \cdot c^2 = 1.472 \cdot \text{GeV}$        $\Phi = \frac{M \cdot c^2}{\varpi \cdot m}$        $\leq$  from Eq. (3)

$v(t) = \frac{\Phi \cdot t \cdot \varpi}{\Phi \cdot t + M}$        $\leq$  from Eq. (4)       $F(t) = \frac{M \cdot \Phi \cdot \varpi}{M + \Phi \cdot t}$        $\leq$  from Eq. (5)

Check:

$t = 0, \text{ ns}.. 120 \cdot \text{ns}$



No mass increase, time delay or length contraction! No gamma. Just a lack of thrust when approaching  $c$ . The net effect of increasing the accelerator energy is to cause the proton to approach the energy limit  $M_p \times c^2$  in a shorter time and, from there on, there is almost nothing to be gained in practical terms!

Energy, Force, Mass, Time and Speed have all been intertwined with gamma. It's "a la carte" You chose! But, if you prove only one of those bonds to be senseless, all other links are concomitantly broken, and gamma shall be dumped! Gamma is unnatural. Instead of accepting nature's normal course, relativists pretend that natural phenomena bow down to their will, and want everyone to believe it. This goes beyond the limits of ridicule. As seen, gamma is just a stumble block without direct physical connection to anything. The two real life examples given in this paper suffice to cut all those links. Any theory, or calculation, that leads to infinities must, always, be viewed with suspicion.

"Trying to extract experience only from theory is like appeasing hunger by just reading the menu."

"Do not be afraid to think differently from others. Be afraid to think alike and find out that they are all wrong! "

*I disagree, in that I think if we do not understand why science is failing to self-correct, it will not be possible to fix it. At this point, I believe we must look for salvation from the non-specialists, amateurs and interdisciplinary thinkers, those who form judgments on the general thrust of the evidence, those who are skeptical about any explanation particularly official ones, and above all are tolerant of other people's theories. (When the complete answer is not known, in a sense everyone is a crackpot - Gasp!*

**Halton Arp**