

## Consistency of special relativity with the unification of gravity and electromagnetism

It was hypothesized that the Michelson-Morley was zero because of a contraction of distances;

it is easy to show that the contraction of distances is a cosine worth:

$\cos(\arcsin U/C) = \text{contraction of distances,}$

U is the velocity of the Earth in its orbit around the Sun being about 30 km / s,

C is the speed of light.

To get an idea of cosines, I suggest you consider the radius of a circle worth C, with the triangle rectangle of Pythagoras

in one of the dials, the sum of these two sides squared giving  $C^2$ , and if any of these side is U and sinus is  $(U/C)$

(The unknown side) $^2 = C^2 - U^2$  under the rule of Pythagoras, (Equation 1)

$C^2$  divide the left side of this equation and each member of right of this equation, gets:

$(1/C^2) (\text{the unknown side})^2 = (C^2)/(C^2) - (U^2)/(C^2)$ , (Equation 2)

the square root of the left side of equation 2 gives the cosine is:

$(\text{The unknown side})/C = [1 - (U^2)/(C^2)]^{(1/2)}$  (Equation 3a)

$\cos(\arcsin U/C) = [1 - U^2/C^2]^{(1/2)}$  (Equation 3b),

$(\text{Arc sin } U/C) = \arcsin(U/C)$

$\arcsin U / C$  means the angle whose sine is  $(U/C)$ ,

the arcsin function is given by most scientific calculator

example, consider that here U is  $3(10)^4$ (m/s) and C is  $3(10)^8$ (m/s), the  $(U/C)$  is therefore  $(10)^{-4}$

and  $\arcsin(10)^{-4}$  is .0001 radian

$\cos[\arcsin(U/C)]$  is therefore:

$\cos(.0001) = 1$  (approximately), my calculator is not accurate enough to give a value a little a lower one.

The figure against (about the end of this page) the  $\cos[\arcsin(U/C)]$  is represented by  $(V_i)/C$ , it is not necessary to know

$V_i$  is simply a value unknown

representing the unknown side, here is the figure against which represents the contraction of distances  $\cos @$ ,

with  $@ = \arcsin(U/C)$  ,

To check the consistency of relativity of Albert Einstein with the unification of gravity and electromagnetism, simply analyze the forms of law that unifies gravity and electromagnetism, write the first three main forms of this law with  $(U=V)$ :

$(\text{Magnetic strength}) / (\text{Electric strength}) = (V^2) / (C^2)$ , (Equation 4a),

$[(\text{Magnetic strength}) / (\text{Electrical strength})]^2 = (\text{gravitational forces}) / (\text{Force Planck})$  (equation 4b)

(Magnetic energy)/(Electrical energy)=(Total gravitational kinetic energy release)/  
(Equivalent Energy Einstein) (equation 4c)

First we see that the equation 4a,  $V^2/C^2$  is included in the cosine, is the contraction  
distances, this cosine function may represent a dial of a circle (quelquonque a quarter  
circle), as the function  $(V/C)$  or  $(U/C)$  representing a sine,

then in equation 4c, the reference to the Energy Equivalent of Einstein's famous phrase  
that  $mC^2$  demonstrated in his theory of relativity restricted

That is why it seems to me that the theory of restricted relativity of Einstein is  
consistent with  
unification of gravity and electromagnetism.

Reference:

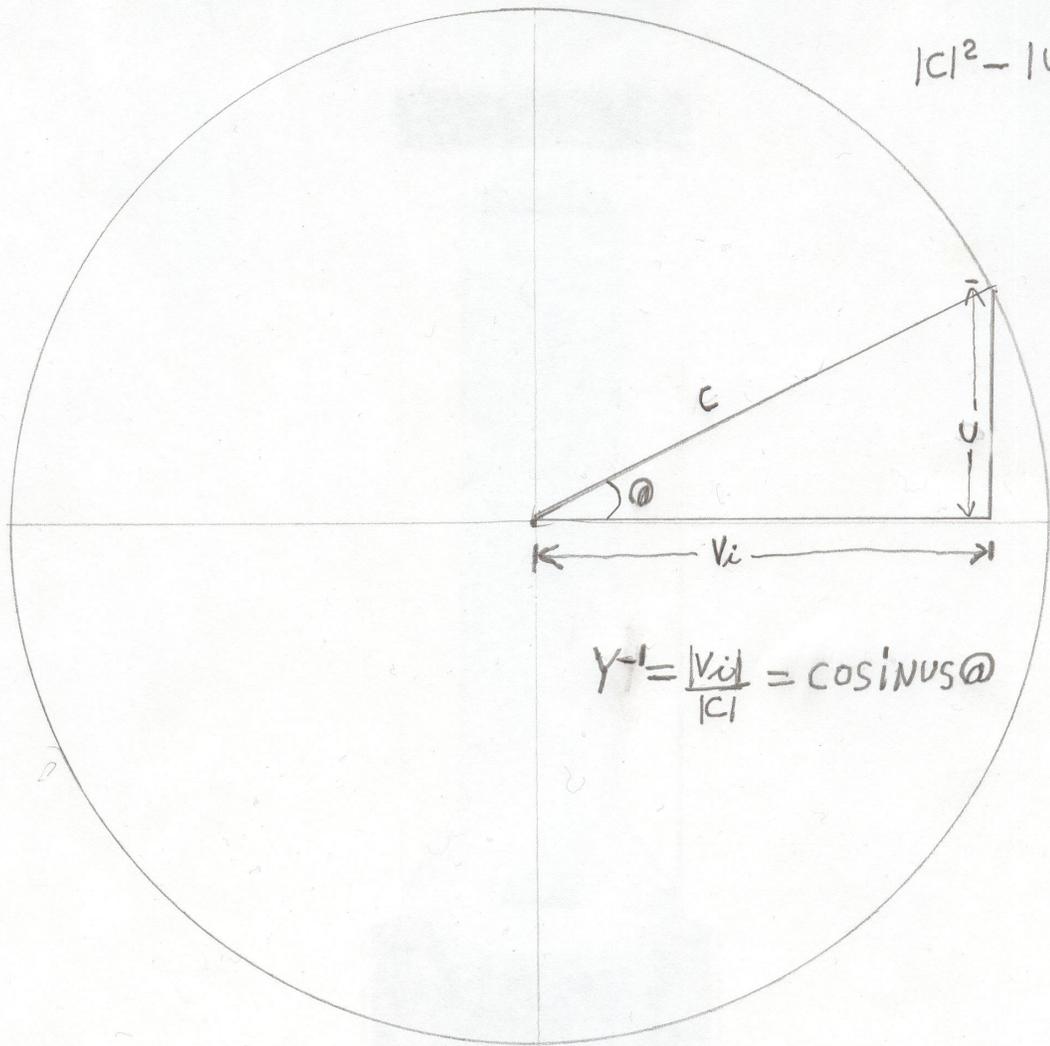
<http://gnralsujet27.blogspot.com>

<http://gnralsujet19.blogspot.com>

## FACTEUR "γ" EN RELATIVITÉ RESTRICTIONNE

SI  $c$  EST LA VITESSE DE LA LUMIÈRE,  $u$  LA VITESSE D'UN  
D'UN REPÈRE INERTIEL,  $v_i$  UNE VITESSE, ALORS:  $\vec{c} = \vec{v}_i + \vec{u}$

$$|c|^2 - |u|^2 = |v_i|^2$$



$$|v_i|^2 = |c|^2 - |u|^2$$

$$\frac{|v_i|^2}{|c|^2} = 1 - \frac{|u|^2}{|c|^2}$$

$$\gamma^{-1} = \frac{v_i}{c} = \sqrt{1 - \frac{u^2}{c^2}} = \cos(\theta) = \gamma^{-1}$$

Référence(following):

Relativity by Albert Einstein

Gravity of Max Planck

Law of Biot and Savard

Coulomb's law

Newton's law of gravity

Table-gravity equation electromagnetism (GEM equations) compare Table equations Maxwell

Theorem of Pythagoras.

Equation of circle

knowledge of the cosine, sine, the arc sin

Schwarzschild radius

Michelson-Morley.