Relativity NBS (Not Bend Space)

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Abstract

Relativity is generated in this universe and as such should be possible to infer it from the universal gravitational field.

It said that the theory of relativity is a field theory.

Therefore we deduce the special and general relativity from the universal gravitational field. This analysis leads us to the Relativity No Bend Space, NBS.

Special relativity is derived from the concepts of equivalence energy / mass in relativity theory and the equivalent energy / frequency in quantum mechanics.

It verified the compatibility of quantum mechanics, with the new theory of relativity which was impossible to reconcile with the old-relativity

Because it was deducted a different relativity from that proposed by Einstein and aware that there may be only a single unified physics, we decided to analyze the principles that led to Einstein's relativity

Keywords: relativity, time, space, gravitational, potential, velocity, speed, energy, mass.

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General relativity inferred from the Universal gravitational potential.

Summary

Relativity is generated in the universe and as such should be possible to infer it from the universal gravitational field.

Therefore it can be argued that the theory of relativity is a field theory.

Keywords: Relativity, space, time, universe, potential, gravitational, gravity, velocity, energy, mass.

Introduction

To, better understand the development of exposition that follows, it is important to have a clear concept of gravitational potential and gravitational field.

The universal gravitational field

Einstein characterized the maximum universal velocity, C:

$$C^2 = 2G\ \rho$$

We are therefore in the presence of a maximum local escape potential. This escape potential is constant everywhere in the universe.

Locally, the velocity of light is constant in any direction in space because it is subject to this constant universal escape potential

C it is the maximum velocity allowed by the universal gravitational field on local.

We will then have anywhere, a universal escape potential given by:

$$U = C^2$$

Measured from our referenced o

Where:

M_i - The universal mass radiation that reaches to local o from local i.

D_i - The distance between local o and local i.

$\rho_o = \sum_{i=1}^{n} \frac{M_i}{D_i}$ – Universal density of potential energy in local o.

G_o - “Constant” universal gravitational on o.

$$C^2 = 2\, G_o \sum_{i=1}^{n} \frac{M_i}{D_i}$$

$$C^2 = 2\, G_o\, \rho_o$$

In different places, with different universal density of potential energy

Generalizing:

Considering the locations “c” and “d”, we get:

ρ_c – Universal density of potential energy at local c measured from our reference o.

ρ_d- Universal density of potential energy at local d measured from our reference o.

G_c – Universal gravitational variable at local c observed from our reference o.

G_d – Universal gravitational variable at local d observed from our reference o.

$$C^2 = 2\, G_c\, \rho_c$$

$$C^2 = 2\, G_d\, \rho_d$$

Since C is constant, then C^2 is also constant:

$$2\, G_c\, \rho_c = 2\, G_d\, \rho_d$$

$$\frac{G_c}{G_d} = \frac{\rho_d}{\rho_c}$$

The value of the gravitational variable in different places, at rest relative, is inversely proportional to the universal density of potential energy at local.

In an expanding universe, with a larger distance from the masses, the universal density of potential energy at all places will decrease because D_i will increase, as seen the gravitational variable, in all places will generally increase.

Let's see if you can find different universal density of potential energy at different locations in the universe.

Let's look at an example at local universe to realize that the universal potential energy density varies from place to place.

1 – On Earth surface, $\boldsymbol{\rho_{uT}}$:

ρ_{uT} – Universal density of potential energy at Earth's surface.

M_T – Mass of the Earth

R_T – Radius of the Earth

$\frac{M_T}{R_T}$ – Universal density of potential energy on Earth's surface caused by the Earth itself.

$$C^2 = 2\ G_T\ \rho_{uT}$$

$$\rho_{uT} = \sum_{i=1}^{n-1} \frac{M_i}{D_i} + \frac{M_T}{R_T}$$

$$\rho_T = \frac{C^2}{2\ G_T}$$

$$\frac{C^2}{2\ G_T} = \sum_{i=1}^{n-1} \frac{M_i}{D_i} + \frac{M_T}{R_T}$$

$$\sum_{i=1}^{n-1} \frac{M_i}{D_i} = \frac{C^2}{2\ G_T} - \frac{M_T}{R_T}$$

2 – In a satellite with H height from Earth surface, ρ_{St}:

ρ_{uSt} – Universal density of potential energy at the satellite.

$\frac{M_T}{R_T+H}$ – Universal density of potential energy at the satellite generated by the Earth.

$$\rho_{usT} = \sum_{i=1}^{n-1} \frac{M_i}{D_i} + \frac{M_T}{R_T+H}$$

$$\rho_{usT} = \frac{C^2}{2\ G_T} - \frac{M_T}{R_T} + \frac{M_T}{R_T+H}$$

$$\rho_{uSt} = \rho_{uT} - \frac{M_T}{R_T} + \frac{M_T}{R_T+H}$$

The differential between the universal density of potential energy in the satellite and Earth will be given:

$$\rho_{uSt} - \rho_{uT} = - \frac{M_T}{R_T} + \frac{M_T}{R_T+H}$$

As we have seen the universal density of potential energy, varies from place to place.

At the same place with different velocity.

When a particle at the same place, moving at velocity V in either direction, has a potential V^2, will soon be subject to a escape potential given by: *)

$$U_v = C^2 - V^2$$

G_v - "Constant" universal gravitation at V observed from our referential o.

$$C^2 = 2\ G_o\ \rho_o$$

$$C^2 - V^2 = 2\ G_v\ \rho_o$$

As ρ_o is constant for the same location in question, we have, dividing one by the other:

$$\frac{U_o}{U_v} = \frac{2\ G_o \rho_o}{2\ G_v\ \rho_o} = \frac{C^2}{C^2 - V^2}$$

$$\frac{G_v}{G_o} = \frac{C^2 - V^2}{C^2}$$

The "constant" universal gravitational, varies with the velocity of that referential. Is not constant and as such we to rename it, the universal gravitational variable.

Now we know how the variable gravitation G from a moving referential relates to the value of the variable gravitation G from another resting referential.

The value of variable gravitational G in the same location but with different velocities is directly proportional to the value of their universal escape potential.

As we know from the time in Einstein's relativity and we have proven in particle accelerators:

$$\frac{t_v}{t_o} = \sqrt{\frac{C^2 - V^2}{C^2}}$$

$$\frac{G_v}{G_o} = \left(\frac{t_v}{t_o}\right)^2$$

$$\frac{t_v}{t_o} = \sqrt{\frac{G_v}{G_o}} \quad \text{a)}$$

The local time is then directly proportional to their square roots of the respective variable universal gravitation.

*) Like a spacecraft that leaves the Earth's gravitational field requires a potential escape of 1,25E+08 m^2/s^2, where the spacecraft already has a speed of 6 km/s or a potential for movement of 3,6 E+07 m^2/s^2 it will require an additional potential 8,91E+07m^2/s^2 in order to leave Earth's gravity field.

References in different locations, with different universal density of potential energy and with different velocity

ρ_c e ρ_d – Universal density of potential energy, respectively at place c and d.

V_c e V_d - Displacement velocity of the referential c and d respectively.

Regarding the velocity V:

$$\frac{G_{Vc}}{G_{Vd}} = \frac{C^2 - V_c^{\,2}}{C^2 - V_d^{\,2}}$$

Regarding the universal density of potential energy on local:

$$\frac{G_{\rho c}}{G_{\rho d}} = \frac{\rho_d}{\rho_c}$$

Together:

$$\frac{G_{\rho c}}{G_{\rho d}} \frac{G_{Vc}}{G_{Vd}} = \frac{\rho_d}{\rho_c} \frac{C^2 - V_c^{\,2}}{C^2 - V_d^{\,2}}$$

$$\frac{G_c}{G_d} = \frac{\rho_d}{\rho_c} \frac{C^2 - V_c^{\,2}}{C^2 - V_d^{\,2}}$$

Time

The local time is then directly proportional to their square roots of the respective variable universal gravitation.

From a):

$$\frac{t_c}{t_d} = \sqrt{\frac{\rho_d}{\rho_c} \frac{C^2 - V_c^{\,2}}{C^2 - V_d^{\,2}}}$$

The measured time is then inversely proportional to the square root of the universal density of potential energy at each local and directly proportional to the square root of potential escape at each local.

The variation of time on different places in the solar system on the basis of our time on Earth

Place the surface with rotation Ref: Earth time in *Washington*, h = 0	Advance per day compared to time on Earth nanosecond ns
Earth	0
Space station h=390 km	-24.743
Satellite h=20.200 km	38.451
Moon	55.852
Orbit around the Sun h=2.000.000km	-69.459.947
Mercury	-1.968.950
Venus	-482.896
Mars	486.549

The time of Messenger spacecraft orbit around the Mercury h=200km advance per day compared to time on Earth 1.972.000 nanosecond (ns) the same of 0,001972 seconds.

The measured time is then inversely proportional to the square root of the universal density of potential energy at each local and directly proportional to the square root of potential escape at each local.

Practical Example

Space Station (Ee):

t_T – Time measured in Earth

t_{Ee} – Time measured in the International Space Station

$$\frac{t_{Ee}}{t_T} = \sqrt{\frac{\rho_T}{\rho_{Ee}} \frac{C^2 - {V_{Ee}}^2}{C^2 - {V_T}^2}}$$

$\rho_T = \frac{C^2}{2\,G}$ = 6,7346700202E+26 kg/m

H = 390 Km

$\rho_{Ee} = \frac{C^2}{2\,G}$ - $\frac{M_T}{R_T}$ + $\frac{M_T}{R_T + 390.000}$ = 6,734670005715E+26 kg/m

$\frac{\rho_T}{\rho_{Ee}}$ = 1,000000000080

$V_T = V_{Washington}$ = 360,50 m/s(rotational velocity)

$\frac{C^2 - {V_{Ee}}^2}{C^2 - {V_T}^2} = \frac{C^2 - 7.678{,}35^2}{C^2 - 360{,}50^{\,2}} =$ 0,999999999345

$\sqrt{\frac{\rho_T}{\rho_{Ee}} \frac{C^2 - {V_{Ee}}^2}{C^2 - {V_T}^2}} = \sqrt{1{,}000000000080 * 0{,}999999999345}$ = 0,999999999713

∂_t = 0,999999999713-1= -2,87158E-10

∂_t(nanoseconds per day) = -2,87158E-10 * (23 * 3600 + 56 * 60 +4,1) * 1E+09 = -24.743 nanoseconds /day

Velocities

From the escape potential in referential V assessed in our referential is ${C_o}^2$ as our reference in the velocity of light remains C_o, the escape potential measured in our reference remains ${C_o}^2$.

$$U_o = 2\ G_v\ \ \rho_v$$

$$G_v = \frac{U_o}{2\ \rho_v}$$

$$G_o\,\frac{C^2 - V^2}{C^2}\ = \frac{U_o}{2\ \rho_v}$$

$$\rho_v = \frac{U_o\,{C_o}^2}{2G_o\,({C_o}^2 - {V_o}^2)}$$

This is de value of ρ_{ov} assessed in our referential o:

Equivalent value U_v in our referential:

$$U_v = 2\ \ G_o\ \ \rho_v$$

$$U_v = 2\ \ G_o\ \ \frac{U_o\,{C_o}^2}{2G_o\,({C_o}^2 - {V_o}^2)}$$

$$U_v = \frac{U_o\,{C_o}^2}{{C_o}^2 - {V_o}^2}$$

$$C_v = C_o\sqrt{\frac{{C_o}^2}{{C_o}^2 - {V_o}^2}}$$

Given by relativity of velocities:

If the velocities curve, so the space can't curve.

$$L_v = L_o$$

$$L_v = C_v\ t_v$$

$$L_o = C_o\ t_o$$

$$C_v\ t_v = C_o\ t_o \qquad 1)$$

$$C_v = C_o\sqrt{\frac{{C_o}^2}{{C_o}^2 - {V_o}^2}}$$

$$C_v\ \sqrt{{C_o}^2 - {V_o}^2}\ = C_o\sqrt{{C_o}^2} \qquad 2)$$

Dividing 1) by 2):

$$\frac{t_v}{\sqrt{{C_o}^2 - {V_o}^2}} = \frac{t_o}{\sqrt{{C_o}^2}}$$

$$\frac{t_v}{t_o}\ = \sqrt{\frac{{C_o}^2 - {V_o}^2}{{C_o}^2}}$$

$$\frac{t_v}{t_o} = \sqrt{1 - \frac{{V_o}^2}{{C_o}^2}}$$

The value found is equal to the value found by Einstein. The value now found was obtained by the universal gravitational potential, which goes to show that relativity is really a field theory.

This method is more satisfactory because the method of Einstein is not taken into account the factor field and is considered the curvature of space which doesn't happen.

The time and the variable gravitation

$$\frac{G_v}{G_o} = 1 - \frac{V^2}{C^2}$$

$$\frac{t_v}{t_o} = \sqrt{1 - \frac{{V_o}^2}{{C_o}^2}}$$

$$\frac{G_v}{G_o} = \frac{{t_v}^2}{{t_o}^2}$$

Later on we resume the analysis of relativistic mechanics.

Quantity of movement

From first postulate of relativity, the momentum must be constant in all referential.

$$m_v\, C_v = m_o\, C_o$$

$$m_v = m_o \frac{t_v}{t_o}$$

$$m_v = m_o \sqrt{1 - \frac{{V_o}^2}{{C_o}^2}}$$

$$\rho_{ov} = \rho_{oo} \frac{t_v}{t_o}$$

$$\rho_{ov} = \rho_{oo} \sqrt{1 - \frac{{V_o}^2}{{C_o}^2}}$$

Now we can quantify the relativity.

Energy

$$E_v = m_v\, {C_v}^2$$

$$E_v = m_o \frac{t_v}{t_o} {C_o}^2 \left(\frac{t_o}{t_v}\right)^2$$

$$E_v = E_o \frac{t_o}{t_v}$$

$$E_v = \frac{E_o}{\sqrt{1 - \frac{V_o^2}{C_o^2}}}$$

What is, according to Einstein's relativity.

Mass

$$m_v = m_o \frac{C_o}{C_v}$$

$$m_v = m_o \sqrt{1 - \frac{V_o^2}{C_o^2}}$$

In this new concept of mass, whenever V inclines to C, then the mass inclines to 0, or inclines to transform itself into energy, because as we have seen, when V inclines to C, energy inclines to infinity.

Velocity

$$C_v = C_o \frac{t_o}{t_v}$$

$$C_v = \frac{C_o}{\sqrt{1 - \frac{V_o^2}{C_o^2}}}$$

$$V_v = V_o \frac{t_o}{t_v}$$

$$V_v = \frac{V_o}{\sqrt{1 - \frac{V_o^2}{C_o^2}}}$$

Quantity of movement

$$m_v\ C_v = m_o \sqrt{1 - \frac{V_o^2}{C_o^2}} \frac{C_o}{\sqrt{1 - \frac{V_o^2}{C_o^2}}}$$

$$m_v\ C_v = m_o\ C_o$$

Now the quantity of movement is equal to all the referential. Now we check the 1st postulate of relativity.

The theory of Einstein from this principle

He impose the constant speed of light, C_o :

$$E_o\ t_o = E_v\ t_v$$

Energy

$$E_v = \frac{E_o}{\sqrt{1-\frac{V_o^2}{C_o^2}}}$$

Mass

$$m_v\ C_v^2\ t_v = m_o\ C_o^2\ t_o$$

$$m_v\ C_o^2\ t_o\ \sqrt{1-\frac{V_o^2}{C_o^2}} = m_o\ C_o^2\ t_o$$

$$m_v = \frac{m_o}{\sqrt{1-\frac{V_o^2}{C_o^2}}}$$

As we can see in Einstein's relativity, a curious phenomenon occurs, if V inclines to C, m_v inclines to infinity. Increasing velocity imply increasing energy, but only at the cost of the increase of mass. At the speed of light, mass will never incline to transform itself into energy.

Quantity of movement

$$m_v\ C_o = m_o\ C_o$$

$\frac{m_o}{\sqrt{1-\frac{V_o^2}{C_o^2}}} = m_o$ - an impossibility

This impossibility was only resolved beginning with the specific case V=0, or in other words, without leaving our referential.

The quantity of movement is not maintained. Are the laws of physics not the same in all referential?

The local mass which results from the cancelling of a mass with velocity <u>V</u>.

m_l – Local mass.

$$m_l\ C_o^2 = m_v\ C_v^2$$

$$m_l = m_v\ \frac{C_v^2}{C_o^2}$$

$$m_l = m_0 \sqrt{1 - \frac{V_o^2}{C_o^2} \frac{C_o^2}{C_o^2\,(1 - \frac{V_o^2}{C_o^2})}}$$

$$m_l = \frac{m_0}{\sqrt{1 - \frac{V_o^2}{C_o^2}}}$$

When we cancel the velocity of the particle with velocity V, its kinetic energy is transformed into local mass.

The total energy is preserved.

Einstein's theory of relativity reached this mass value. It did not obtain the mass at the referential V but instead, the final mass of the particle, when captured by our referential V=0.

He did not get the mass of reference in motion but the mass equivalent to our benchmark given the constancy of energy.

The new kinetic

Uniform movement

Time:

$$t_o$$

$$t_v = t_o \sqrt{1 - \frac{V_o^2}{C_o^2}}$$

Velocity:

$$V_o$$

$$V_v = \frac{V_o}{\sqrt{1 - \frac{V_o^2}{C_o^2}}}$$

Space:

$$L_o = V_o\, t_o$$

$$L_v = V_v t_v = \frac{V_o}{\sqrt{1 - \frac{V_o^2}{C_o^2}}}\, t_o \sqrt{1 - \frac{V_o^2}{C_o^2}} = V_o t_o$$

$$L_v = L_o$$

Varied uniform movement (accelerated)

Velocity and acceleration:

$$V_o = a_o t_o$$

$$a_o = \frac{V_o}{t_o}$$

$$V_v = a_v t_v$$

$$a_v = \frac{V_v}{t_v} = \frac{\frac{V_o}{\sqrt{1-\frac{V_o^2}{C_o^2}}}}{t_o\sqrt{1-\frac{V_o^2}{C_o^2}}} = \frac{V_o}{t_o(1-\frac{V_o^2}{C_o^2})}$$

$$a_v = \frac{a_o}{(1-\frac{V_o^2}{C_o^2})}$$

$$a_v = a_o \frac{t_o^2}{t_v^2}$$

$$V_v = \frac{a_o}{(1-\frac{V_o^2}{C_o^2})} t_o \sqrt{1-\frac{V_o^2}{C_o^2}}$$

$$V_v = \frac{a_o}{\sqrt{1-\frac{V_o^2}{C_o^2}}} t_o$$

$$V_v = \frac{V_o}{\sqrt{1-\frac{V_o^2}{C_o^2}}}$$

$$V_v = V_o \frac{t_o}{t_v}$$

Space:

$$L_o = V_o t_o + \frac{1}{2} a_o t_o^2$$

$$L_v = V_v t_v + \frac{1}{2} a_v t_v^2$$

$$L_v = \frac{V_o}{\sqrt{1-\frac{V_o^2}{C_o^2}}} t_o \sqrt{1 - \frac{V_o^2}{C_o^2}} + \frac{1}{2} \frac{a_o}{(1-\frac{V_o^2}{C_o^2})} t_o^2 (1 - \frac{V_o^2}{C_o^2})$$

$$L_v = V_o t_o + \frac{1}{2} a_o t_o^2$$

$$L_v = L_o$$

Relativistic units

In the same local, with different velocities, with measures of self referential

As the electrical charges and mass, are energy, then all measurements are similar.

	Referencial 0	Referencial V
Energy of mass	E_0	$E_v = E_0 \frac{t_o}{t_v}$; $E_v = E_0 \sqrt{\frac{C_o^2}{C_o^2 - V_o^2}}$
Mass	m_0	$m_v = m_0 \frac{t_v}{t_o}$; $m_v = m_0 \sqrt{\frac{C_o^2 - V_o^2}{C_o^2}}$
Speed	V_0	$V_v = V_0 \frac{t_o}{t_v}$; $V_v = V_0 \sqrt{\frac{C_o^2}{C_o^2 - V_o^2}}$
Acceleration	a_0	$a_v = a_0 (\frac{t_o}{t_v})^2$; $a_v = a_0 \frac{C_o^2}{C_o^2 - V_o^2}$
Length	L_0	$L_v = L_0$
Quantity of movement	P_0	$P_v = P_0$
Variable gravitational	G_0	$G_v = G_0 (\frac{t_o}{t_v})^3$; $G_v = G_0 (\sqrt{\frac{C_o^2}{C_o^2 - V_o^2}})^3$
Force	F_0	$F_v = F_0 \frac{t_o}{t_v}$; $F_v = F_0 \sqrt{\frac{C_o^2}{C_o^2 - V_o^2}}$
Frequency	$\surd_0$	$\surd_v = \surd_0 \frac{t_o}{t_v}$; $\surd_v = \surd_0 \sqrt{\frac{C_o^2}{C_o^2 - V_o^2}}$
Wavelength	λ_0	$\lambda_v = \lambda_0$
Energy of electric loads	E_{e0}	$E_{ev} = E_{e0} \frac{t_o}{t_v}$; $E_{ev} = E_{e0} \sqrt{\frac{C_o^2}{C_o^2 - V_o^2}}$
Electric loads	q_0	$Q_v = q_0 \frac{t_v}{t_o}$; $q_v = q_0 \sqrt{\frac{C_o^2 - V_o^2}{C_o^2}}$
Permeability	U_0	$U_v = U_0 \frac{t_o}{t_v}$; $U_v = U_0 \sqrt{\frac{C_o^2}{C_o^2 - V_o^2}}$
Electromagnetic field	B_0	$B_v = B_0 \frac{t_o}{t_v}$; $B_v = B_0 \sqrt{\frac{C_o^2}{C_o^2 - V_o^2}}$

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General relativistic mechanics

Relativistic mechanics can be developed from the expression of the conservation of the relationship between energy and frequency of the matter.

Energy

$$\mathrm{E_v\ t_v = E_o\ t_o}$$

$$\mathrm{E_v = E_o}\sqrt{\frac{C^2}{C^2 - \mathrm{V_d}^2}\frac{\rho_{do}}{\rho_{oo}}}$$

Therefore we consider:

$$\mathrm{E_o} = m_o\ \mathrm{C_o}^2$$

$$\mathrm{E_v} = m_v\ \mathrm{C_v}^2$$

$$m_v\ \mathrm{C_v}^2\ \mathrm{t_v} = m_o\ \mathrm{C_o}^2\mathrm{t_o}$$

Quantity of movement

$$m_v.\ \mathrm{C_v} = m_o\ \mathrm{C_o}$$

Substituting in the expression of the conservation of energy:

$$(m_v\ \mathrm{C_v})\ \mathrm{C_v\ t_v} = (m_o\ \mathrm{C_o})\ \mathrm{C_o\ t_o}$$

$$(m_o\ \mathrm{C_o})\ \mathrm{C_v\ t_v} = (m_o\ \mathrm{C_o})\ \mathrm{C_o\ t_o}$$

$$\mathrm{C_v\ t_v = C_o\ t_o}$$

We make two conclusions:

1st - Velocity curves solely because time curves which leads to a different nature for the light.

$$\mathrm{C_v = C_o}\ \frac{\mathrm{t_o}}{\mathrm{t_v}}$$

$$\mathrm{C_{dv} = C_{oo}}\sqrt{\frac{C^2}{C^2 - \mathrm{V_d}^2}\frac{\rho_{do}}{\rho_{oo}}}$$

It is evidence C curve, also V curve, because we are talking about speeds.

$$\mathrm{V_{dv} = V_{oo}}\ \frac{\mathrm{t_{oo}}}{\mathrm{t_{dv}}}$$

$$V_{dv} = V_{oo}\sqrt{\frac{C^2}{C^2 - V_d{}^2}\frac{\rho_{do}}{\rho_{oo}}}$$

2ª- Space does not curve.

$$C_{dv}\, t_{dv} = L_{dv}$$

$$L_{dv} = C_{oo}\sqrt{\frac{C^2}{C^2 - V_d{}^2}\frac{\rho_{do}}{\rho_{oo}}}\ t_{oo}\sqrt{\frac{\rho_{oo}}{\rho_{do}}\ \frac{C^2 - V_d{}^2}{C^2}}$$

$$L_{dv} = C_{oo}\, t_{oo}$$

$$L_{oo} = C_{oo}\, t_{oo}$$

$$\mathbf{L_{dv} = L_{oo}}$$

Mass

$$m_{dv}\, C_{dv}{}^2\, t_{dv} = m_{oo}\, C_{oo}{}^2 t_{oo}$$

$$m_{dv} = \frac{m_{oo}\, C_{oo}{}^2 t_{oo}}{C_{dv}{}^2\, t_{dv}}$$

$$m_{dv} = \frac{m_{oo}\, C_{oo}{}^2 t_{oo}}{\left(C_{oo}\frac{t_{oo}}{t_{dv}}\right)^2 t_{dv}}$$

$$m_{dv} = \frac{m_{oo}\, t_{dv}}{t_{oo}}$$

$$m_{dv} = m_{oo}\sqrt{\frac{\rho_{oo}}{\rho_{do}}\ \frac{C^2 - V_d{}^2}{C^2}}$$

Going back to quantity of movement:

$$m_{dv}\, C_{dv} = m_{oo}\sqrt{\frac{\rho_{oo}}{\rho_{do}}\ \frac{C^2 - V_d{}^2}{C^2}}\quad C_{oo}\sqrt{\frac{C^2}{C^2 - V_d{}^2}\frac{\rho_{do}}{\rho_{oo}}}$$

$$m_{dv}\, C_{dv} = m_{oo}\, C_{oo}$$

Relativistic units between different references, with measurement made from our reference.

$$G_v = G_0\left(\frac{t_o}{t_v}\right)^2 \quad ; \quad G_v = G_0 \frac{{C_o}^2}{{C_o}^2 - {V_o}^2}$$

Variable universal gravitational at local with measurement made at moving referential.

Depending on the speed with the same universal density of potential energy.

_,_ - Local, Velocity

$$\rho_d = \rho_c$$

$$U_{dv} = 2\ G_{dv}\ \ \rho_{dv}$$

$$U_o\left(\frac{t_o}{t_v}\right)^2 = 2\ G_{dv}\ \ \rho_{co}\,\frac{t_v}{t_o}$$

$$G_{dv} = G_{co}\left(\frac{t_o}{t_v}\right)^3$$

$$G_{dv} = G_{co}\left(\sqrt{\frac{C^2 - {V_c}^2}{C^2 - {V_d}^2}}\right)^3$$

Depending on the density of potential energy.

$$U_d = \frac{G_d\ \ M_d}{R_d}$$

$$U_c\ \frac{\rho_d}{\rho_c} = \frac{G_c\ \mathrm{K}\ M_c\sqrt{\frac{\rho_c}{\rho_d}}}{R_c\,\frac{\rho_c}{\rho_d}}$$

$$\mathrm{K} = \sqrt{\frac{\rho_d}{\rho_c}}$$

$$G_d = G_c\sqrt{\frac{\rho_d}{\rho_c}}$$

Globally.

$$G_{dv} = G_{cv\prime}\,\frac{t_{co}}{t_{do}}_{\rho}\left(\frac{t_{cv'}}{t_{dv}}\right)^3_{v}$$

$$G_{dv} = G_{cv\prime}\sqrt{\frac{\rho_{do}}{\rho_{co}}\left(\frac{C^2 - {V_d}^2}{C^2 - {V_c}^2}\right)^3}$$

Relativists units. In different locations (o, d), with different speeds (0, V).

ρ_{ooo} – Universal density of potential energy (M_u/R_u)

	Referential C,v'	Referential d, V
Energy of mass	$E_{c,v'}$	$E_{d,v} = E_{cv}\frac{t_{c,v'}}{t_{d,v}}$; $E_{d,v} = E_{c,v'}\sqrt{\frac{\rho_d}{\rho_c}\frac{C^2 - V'_c{}^2}{C^2 - V_d{}^2}}$
Mass	v'	$m_{d,v} = m_{c,v'}\frac{t_{d,v}}{t_{c,o}}$; $m_{d,v} = m_{c,v'}\sqrt{\frac{\rho_c}{\rho_d}\frac{C^2 - V_d{}^2}{C^2 - V'_c{}^2}}$
Velocity	$V_{c,v'}$	$V_{d,v} = V_{c,v'}\frac{t_{c,v'}}{t_{d,v}}$; $V_{d,v} = V_{c,v'}\sqrt{\frac{\rho_d}{\rho_c}\frac{C^2 - V'_c{}^2}{C^2 - V_d{}^2}}$
Acceleration	$a_{c,v'}$	$a_{d,v} = a_{c,o}\frac{t_{c,v'}{}^2}{t_{d,v}{}^2}$; $a_{d,v} = a_{c,v'}\frac{\rho_d}{\rho_c}\frac{C^2 - V'_c{}^2}{C^2 - V_d{}^2}$
Length (independent from V)	L_o	$L_d = L_c\frac{t_c{}^2}{t_d{}^2}$; $L_d = L_o\frac{\rho_{do}}{\rho_{co}}$
Quantity of movement	P_o	$P_v = P_o$
Variable gravitational	$G_{c,v'}$	$G_{d,v} = G_{c,v'}(\frac{t_c}{t_d})_\rho(\frac{t_c}{t_d})^3{}_v$; $G_{d,v} = G_{c,v'}\sqrt{\frac{\rho_d}{\rho_c}(\frac{C^2 - V'_c{}^2}{C^2 - V_d{}^2})^3}$
Force	$F_{c,v'}$	$F_{dv} = F_{cv'}\frac{t_{oo}}{t_{dv}}$; $F_{dv} = F_{cv'}\sqrt{\frac{\rho_{do}}{\rho_{oo}}\frac{C^2 - V'_c{}^2}{C^2 - V_d{}^2}}$
Frequency	$\surd_{c,v'}$	$\surd_{dv} = \surd_{cv'}\frac{t_{oo}}{t_{dv}}$; $\surd_{dv} = \surd_{cv'}\sqrt{\frac{\rho_{do}}{\rho_{oo}}\frac{C^2 - V'_c{}^2}{C^2 - V_d{}^2}}$
Wavelength	v'	$\lambda_{d,v} = \lambda_{c,v'}$; $\lambda_{d,v} = \lambda_{c,v'}$
Energy of electric loads	$E_{ec,v'}$	$E_{edv} = E_{ec,o}\frac{t_c}{t_d}$; $E_{edv} = E_{eov'}\sqrt{\frac{\rho_{do}}{\rho_{oo}}\frac{C^2 - V'_c{}^2}{C^2 - V_d{}^2}}$
Electric loads	$q_{c,v'}$	$q_{d,v} = q_{c,v'}\frac{t_d}{t_c}$; $q_{d,v} = q_{cv'}\sqrt{\frac{\rho_d}{\rho_c}\frac{C^2 - V_d{}^2}{C^2 - V'_c{}^2}}$
Permeability	$U_{c,v'}$	$U_{d,v} = U_o\frac{t_c}{t_d}$; $U_v = U_{cv'}\sqrt{\frac{\rho_d}{\rho_c}\frac{C^2 - V'_c{}^2}{C^2 - V_d{}^2}}$
Electromagnetic field	$B_{c,v'}$	$B_{d,v} = B_{c,v'}\frac{t_c}{t_d}$; $B_{d,v} = B_{c,v'}\sqrt{\frac{\rho_d}{\rho_c}\frac{C^2 - V_c{}^2}{C^2 - V_d{}^2}}$

Gravity

$$g_{dv} = g_{cv'}(\frac{\rho_{co}}{\rho_{do}})^2\frac{C^2 - V'_c{}^2}{C^2 - V_d{}^2}$$

Text experiments, to be carried out

Many will argue with all the experiences to date show that the curvature of space.

We don't know how they fit, when we have seen in Chapter I of the impossibility of the curvature of space.

Some of the known experiments are devoid of any significant results.

The justification of their results must have another explanation.

Rotational platforms.

Older experience, proving this theory, was held in rotational platforms. The value found directly is only possible of this actual theory doesn't require the use of any inertial transformations.

Deny the directly result found in the rotational platform is denying the principles of relativity.

Change the radius displacement, of charged particles in the particle accelerator.

Until this day, was incomprehensible to increase the radius described by the charged particles in particle accelerators.

We analyze the behavior of particles in the light of relativity NBS

$$R_o = \frac{m_o\, V_o}{|q_o|\ \mathrm{B_o}}$$

In accelerates particles, the magnetic field is not relativistic because it is stopped.

$$R_v = \frac{m_v\, V_v}{|q_v|\ \mathrm{B_o}}$$

$$R_v = \frac{m_o \frac{\mathrm{t_v}}{\mathrm{t_o}} V_o \frac{\mathrm{t_o}}{\mathrm{t_v}}}{|q_o| \frac{\mathrm{t_v}}{\mathrm{t_o}} \mathrm{B_o}}$$

$$R_v = \frac{m_o\, V_o}{|q_o| \frac{\mathrm{t_v}}{\mathrm{t_o}} \mathrm{B_o}}$$

$$R_v = \frac{m_o\, V_o}{|q_o|\ \mathrm{B_o}} \frac{\mathrm{t_o}}{\mathrm{t_v}}$$

$$R_v = R_o\ \frac{\mathrm{t_o}}{\mathrm{t_v}}$$

$$R_v = R_o \sqrt{\frac{\mathrm{C_o}^2}{\mathrm{C_o}^2 - \mathrm{V_o}^2}}$$

The radius described by the particles is inversely proportional to the particle proper time. The radius increases.

Measuring the speed of light in different references

Another confirmation of this theory, happen to measure the speed of light in different referential.

As we all know today, there are two places to which mankind goes to which have different times to those on Earth. We are of course referring to the space station and to the Moon.

To clarify the above, we give some interim results in the article titled "The curvature of the time under the action of a gravitational field"

To a photon with very low energy.

Place the surface with rotation Ref: Earth time in Ecuador, h = 0	Advance the clock for a day, for the time on Earth nanoseconds	Speed of light m/s	Differential C local - C Earth m/s	Universal gravitation variable (G)
Earth	0	299.792.458,49	0	6,6726000000E-11
Space station h=380 km	-24.936	299.792.458,58	0,09	6,6725999932E-11
Satellite h=20.200 km	38.556	299.792.458,36	-0,13	6,6725999948E-11
Moon	56.007	299.792.458,30	-0,19	6,6725999955E-11
Orbit around the Sun h=2.000.000km	-69.650.115	299.792.700,16	241,67	6,6725981020E-11
Mercury	-1.974.340	299.792.465,34	6,85	6,6725998451E-11
Venus	-484.218	299.792.460,17	1,68	6,6725998879E-11
Marte	487.881	299.792.456,80	-1,69	6,6725999088E-11

As we will see in the same article, the speed of light on Earth will also vary throughout time. It currently decrease around -0.009808 m/s by year, (-1 m/s in the next 102 years).

If we repeat the experiment in 1976 by the English group, Woods and Others, which concludes that the speed of light would be 299.792.458.8 ± 0.2 m / s, it appears that the value measured today, 31 years later, varying 0.32 m / s which are already outside the margin of error.

. We believe that, given the time elapsed; it should repeat the experiment under the same conditions of 1976

II

Restricted relativity inferred from concepts of the mass-energy equivalence in theory of relativity, of energy - frequency in quantum mechanics.

The notion of what is the time.

Introduction

Einstein introduced the concept that any mass has an associated energy and vice versa. This relationship is expressed by the formula of equivalence:

$$E = m\,C^2$$

Any energy is associated with its intrinsic frequency, and this energy, according to quantum mechanics, should be proportional to the frequency and is related in the form:

√ - Intrinsic frequency of energy

$$E = h\,\surd$$

T - period of the electromagnetic wave (time):

$$\surd = \frac{1}{T} \text{ – inverse of the period.}$$

The period in a referential has to be necessarily proportional to the time of referential.

$$T = y\ t$$

$$\surd = \frac{1}{y\,t}$$

$$E = \frac{h}{y\,t}$$

$$E\,t = \frac{h}{y}$$

h and y are constant.

$$\frac{h}{y} = k$$

$$E\ t = k$$

If this relationship is a constant in a referential, should be so in all referential.

$\_o$ - On the referential O. At rest.

$\_V$ - On the referential V, moving with speed V.

$$E_v \, t_v = K$$

$$E_o \, t_o = K$$

$$E_v \, t_v = E_o \, t_o$$

Relativistic mechanics

The relativistic mechanics can be developed from the previous term.

Energy

$$E_v \, t_v = E_o \, t_o$$

$$E_v = E_o \frac{t_o}{t_v}$$

$$\frac{t_o}{t_v} = \frac{E_v}{E_o}$$

$$\frac{t_o}{t_v} = \frac{h\surd_v}{h\surd_o}$$

$$\frac{t_o}{t_v} = \frac{\surd_v}{\surd_o}$$

$$\frac{t_v}{t_o} = \frac{\surd_o}{\surd_v}$$

Now we really know what time is, and why the time curve.

When we change the energy of matter, kinetic energy, changes its energy and thus changes its frequency.

The increased power is a reduction of the time.

An increase in energy, moor frequency, corresponds to a reduction in time or period. Time its invert proportional to frequency. Time is a property of matter of its energy level. We have concept of time because we are matter.

Therefore we consider:

$$E_o = m_o \, C_o{}^2$$

$$E_v = m_v \, C_v{}^2$$

$$m_v\ C_v^{\ 2}\ t_v = m_o\ C_o^{\ 2} t_o$$

Quantity of movement

Through the 1st Postulate of Einstein, with which I completely agree, the quantity of movement must be constant in all the referential.

$$m_v .\ C_v = m_o\ C_o$$

$$m_v = m_o\ \frac{C_o}{C_v}$$

Velocity

Replacing in the expression of the proportion of energy - frequency:

$$(m_v\ C_v)\ C_v\ t_v = (m_o\ C_o)\ C_o\ t_o$$

$$(m_o\ C_o)\ C_v\ t_v = (m_o\ C_o)\ C_o\ t_o$$

$$C_v\ t_v = C_o\ t_o$$

We make two conclusions:

1st - Velocity curves solely because time curves which leads to a different nature for the light.

$$C_v = C_o\ \frac{t_o}{t_v}$$

It is evidence C curve, also V curve, because we are talking about speeds.

$$V_v = V_o\ \frac{t_o}{t_v}$$

It would be like having an "absolute" velocity of the constant light which is read with a different value at each referential due to the curved time of the referential itself.

“Absolute”, only in the inverse concept of “relative”. A reference to an imaginary constant time the velocity of light would always be constant.

Light runs the same course in the equivalent curved times of all the referential, not in the unit of time, but the light run course in the curved times equivalent to all the referential, is constant.

Mass

$$m_v\ C_v^{\ 2}\ t_v = m_o\ C_o^{\ 2} t_o$$

$$m_v = \frac{m_o\ C_o^{\ 2} t_o}{C_v^{\ 2}\ t_v}$$

$$m_v = \frac{m_o\ C_o^{\ 2} t_o}{\left(C_o \frac{t_o}{t_v}\right)^2\ t_v}$$

$$m_v = \frac{m_o\, \mathrm{t_v}}{\mathrm{t_o}}$$

In this new concept of mass, whenever V inclines to C, then the mass inclines to 0, mass inclines to transform itself into energy, because as we have seen, when V inclines to C, energy inclines to infinity.

Going back to quantity of movement

$$m_v.\, \mathrm{C_v} = \frac{m_o\, \mathrm{t_v}}{\mathrm{t_o}} \mathrm{C_o} \frac{\mathrm{t_o}}{\mathrm{t_v}}$$

$$m_v.\, \mathrm{C_v} = m_o\, \mathrm{C_o}$$

Now the quantity of movement is equal to all the referential.

Considerations

Beyond the previously mentioned relation to Einstein's relativity with regard to the wrong curvature of space, which leads to inappropriate notion of mass and a lack of momentum to be constant in all references, no guarantee that the laws of physics are valid in all references, we note that:

We can get, the relativistic mechanics, from the proportionality between energy and frequency of the matter, regardless of the referential.

That time is an intrinsic property of matter, their level of unit energy.

In the near future to measure the speed of light, made in another referential, or in the same location but at another future time will prove my decision.

As space does not bend, then Einstein to consider the value of constant speeds, in any referential did not come out of their own referential. He was not in play any other referential to be valid for another referential, the speed had to curve/change.

He created the relativity for our own reference, $\mathrm{V_o} = \mathrm{V_v}$.

The relativity of Einstein is the local equivalent of universal relativity.

Because Einstein's relativity is the local equivalent of universal relativity, it has become undoubtedly a great advance for science

III

Critical analysis of Einstein's relativity principles

The current paradigm

Einstein's postulates:

1st - Postulate

The laws of Physics are the same in all inertial referential. This is true both for mechanics and for electromagnetism.

The laws of Physics are certainly the same in all referential, because if this was not so, we would not have physics.

2nd - Postulate

The velocity of light in a vacuum is constant (c=+- 300.000 km/s) regardless of the velocity of the observer, (and the source).

For the 1st postulate there is no repair.

The laws of physics are certainly the same in any reference, as if it were we would not physical. For the 2nd postulate there are some doubts, which are the reason for writing this article.

Einstein's method:

Now we apply the same reasoning used by Einstein to calculate the curvature of time and the curvature of space.

Let us bring here, the famous example of the observation of a light signal emitted within a train, which is emitted from the floor of the train in the direction of the roof, where there is a mirror that reflects back to the floor of the train.

The phenomenon is interpreted by an observer on the train stopped, referential V, and other in the train in motion, referential O.

- The observer O in motion will observe the light path indicated on the left.

- The observer V, stopped, see the route indicated on the right.

Referential <u>O</u> Referential <u>V</u>

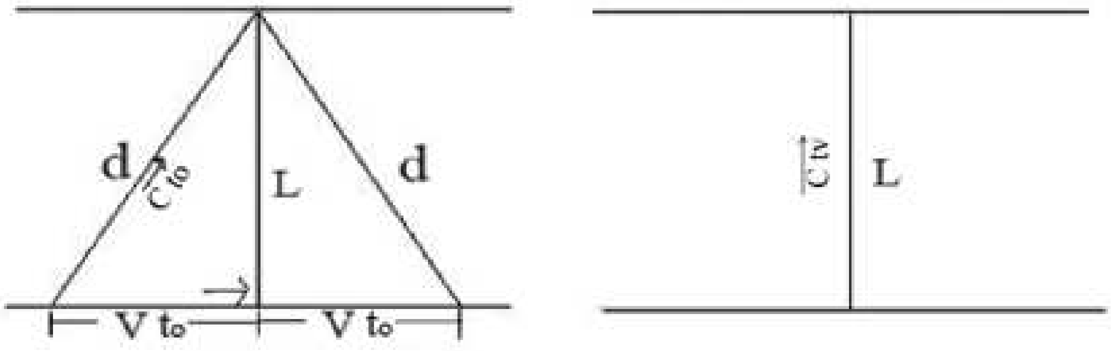

Figure1.

Our stopped referential <u>V</u>, is the result of an initial in motion referential <u>O</u>.

To the observer who is in referential <u>V</u> (right).

The time of go and return is given by:

$$L_V = L$$

$$t_V = \frac{2\,L}{C}$$

$$C = \frac{2\,L}{t_V} \qquad \text{a)}$$

$$2\text{ L} = t_V\ C$$

If we look to this model, to the referential moving Einstein uses **L**.

- L is the length not curved.

That is the analysis of referential in motion <u>V</u> Einstein used the length not curved.

To the observer who is in referential <u>O</u> (left).

The time of go and return is given by:

$$L_o = L$$

$$\text{S} = 2\text{ d} = 2\sqrt{L^2 + \left(\frac{V\,t_o}{2}\right)^2}$$

$$t_o = \frac{2\sqrt{L^2 + \left(\frac{V\,t_o}{2}\right)^2}}{C}$$

$$t_o = \frac{2\text{ L}}{\sqrt{C^2 - V^2}}$$

$$\sqrt{C^2 - V^2} = \frac{2\text{ L}}{t_o} \qquad \text{b)}$$

$$2\text{ L} = t_o\,\sqrt{C^2 - V^2}$$

He equated the lengths:

$$L_V = L_o$$

$$2 \text{ L} = 2 \text{ L}$$

$$t_V \text{ C} = t_o \sqrt{C^2 - V^2}$$

$$t_V = t_o \sqrt{1 - \frac{V^2}{C^2}}$$

$$\frac{t_V}{t_0} = \sqrt{1 - \frac{V^2}{C^2}}$$

The time curve, with the premise that L not curve.

The space in this model is not curved.

The value found for the curvature of time is only possible with equal lengths, lengths not curved.

On the other hand velocity is always given by the ratio between length and the time it takes to go that length.

At referential V, a) the velocity of light it C.

At referential O, b) the velocity of light it $\sqrt{C^2 - V^2}$

Clarification:

Let us look at the expressions just discussed:

In reference v:

$$t_V = \frac{2\ L}{C}$$

All factors belong to the reference v.

t_V - It is time that light takes to go from dog to roof and back in the referential v

$2\ L$ - Can only be twice the distance between floor and ceiling in the frame v, therefore:

$$2\ L = 2\ L_V$$

C – It is the speed of light in the reference v, therefore:

$$C = C_V$$

Then:

$$t_V = \frac{2\ L_V}{C_V}$$

In referential o:

$$t_o = \frac{2\text{ L}}{\sqrt{C^2 - V^2}}$$

All factors belong to the reference o.

t_0 - It is time that light takes to go from dog to roof and back in the referential o

$2\ L$ - Can only be twice the distance between floor and ceiling in the frame v, therefore:

$$2\ L = 2\ L_o$$

$\sqrt{C^2 - V^2}$ – The speed at which light moves away from the floor and near vertical of the observer moves at speed v, so the speed of light in reference v, therefore:

$$\sqrt{C^2 - V^2} = C_o$$

Then:

$$t_o = \frac{2\ L_o}{C_o}$$

If not, we will have to change their model.

Concludes.

$$2\ L_v = 2\ L_o$$

$$2\ L_v = 2\ L_o$$

e

$$t_V\ C = t_o\ \sqrt{C^2 - V^2}$$

$$t_V\ C_v = t_o\ C_o$$

$$\frac{C_V}{C_0} = \frac{t_V}{t_0} = \sqrt{1 - \frac{V^2}{C^2}}$$

Let us pass the reference v to the referential o that is the premise of our referential.

The light in the frame o moving at the speed $\sqrt{C^2 - V^2}$ time t_o, so goes the distance:

$$L_o = \sqrt{C^2 - V^2}\ t_o$$

As the observer is traveling at a speed v your time becomes:

$$t_V = t_0 \sqrt{\frac{C^2 - V^2}{C^2}}$$

The speed that now the observer measures, is:

$$\text{V V} = \frac{L_o}{t_V}$$

$$\text{V V} = \frac{\sqrt{C^2 - V^2}\; t_o}{t_0 \sqrt{\frac{C^2 - V^2}{C^2}}}$$

$$\text{V V} = \sqrt{C^2} = C$$

The velocity of light in our referential.

Einstein's reasoning for lengths.

The 2nd postulate of Einstein leads, a length.

It is incomprehensible experience in which Einstein based its conclusion that the velocity of light was constant in all references.

From the experiments conducted on Earth, our reference, the only possible conclusion to draw is that the velocity of light is independent of the direction of propagation.

How is equal in all directions the only possible conclusion is that the velocity of light depends only on the velocity of the reference.

Later we analyze the problem.

The distance is given by:

$$L_V = t_V \text{ C}$$

$$L_o = t_o \text{ C}$$

$$L_V = \frac{t_V}{t_0} L_o$$

$$t_V = t_o \sqrt{1 - \frac{V^2}{C^2}}$$

$$L_V = t_o \sqrt{1 - \frac{V^2}{C^2}} \text{ C}$$

$$L_V = L_o \sqrt{1 - \frac{V^2}{C^2}}$$

The space come curved?

This contrasts with the premise to the calculation of the curvature of the time when the space is considered not curved.

To determine the space curved Einstein enters with the curvature of the time factor that derives from spaced not curved.

In the curvature of the time assumed $2L_V$ = 2L and $2L_o$ = 2L. To obtain the value of the curvature was assumed 2L=2L, then $L_V = L_o$.

This famous expression of the curvature of space is a mathematical impossibility.

A curved space can't be generated by a space not curved.

The space in the same model can´t be simultaneously, curved and not curved at the same time.

Einstein can't propose a model in which space does not curve, using the curvature of the time generated in this model of equally spaced, to calculate and define a curved space.

We are convinced that this manipulation was not intentional.

Consider the constant velocity of light in all referential is the source of the problem.

Mathematical proof

$$L_V = \frac{t_V}{t_0} L_o$$

$$L_V = \frac{\frac{2\,L_V}{C}}{\frac{2\,L_O}{\sqrt{C^2 - V^2}}} L_O$$

$$C = \sqrt{C^2 - V^2}$$

It's impossible.

If he had considered the length curved, the calculation for the motion referential V, would conclude, $t_V = t_O$.

Let's see what happens with the speed in this model.

In the moving referential we have:

$$L_V = t_V \; C_V$$

In the referential at rest we have:

$$L_o = t_o \; C_o$$

In equating the lengths:

$$t_V\ C_V = t_o\ C_o \quad 1)$$

From the curvature of the time (equating the lengths too):

$$t_V\,\mathrm{C}= t_o\,\sqrt{C^2 - V^2} \quad 2)$$

Dividing 1) by 2):

$$\frac{C_V}{\mathrm{C}} = \frac{C_o}{\sqrt{C^2-V^2}}$$

$$C_V = \frac{C_o}{\sqrt{1-\frac{V^2}{C^2}}}$$

We conclude that within this model we find, the relativity between the velocity of light.

Let us now consider what will happen when the direction of light coincide with the direction of displacement V.

Einstein's reasoning.

Reference V Reference O

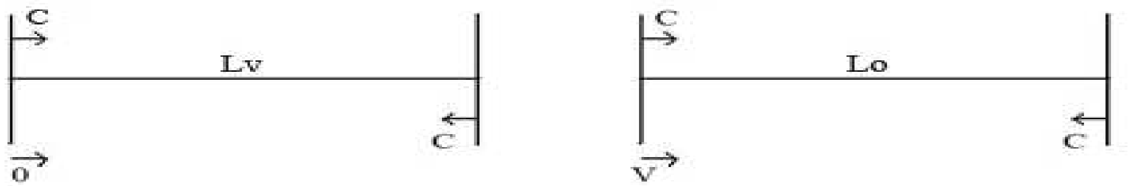

Figure2.

To the observer who is in referential V, (left).

The time of go and return is given by:

$$t_v = \frac{2\,L}{C}$$

$$2\,L = t_V\mathrm{C}$$

To the observer who is in referential O, (right).

The time to go is given by:

$$t_{01} = \frac{2\,L}{C-V}$$

The time to return is given by:

$$t_{02} = \frac{2\,L}{C+V}$$

$$t_0 = t_{01} + t_{02} = \frac{2\,L\,C}{C^2 - V^2}$$

$$t_0 = \frac{t_V\,C\;C}{C^2 - V^2}$$

$$\frac{t_V}{t_0} = \frac{C^2 - V^2}{C^2}$$

Einstein's reasoning for lengths.

The 2nd postulate of Einstein leads, a length.

The distance is given by:

$$L_V = t_V\;\mathrm{C}$$

$$L_o = t_o\;\mathrm{C}$$

$$L_V = \frac{t_V}{t_0} L_o$$

$$L_V = \frac{C^2 - V^2}{C^2} L_o$$

This curvature of space has nothing to do with what we are accustomed.

But we can’t lose the principle of reasoning.

In the first model, Einstein, study the curvature of time and concludes:

$$\frac{t_V}{t_0} = \sqrt{\frac{C^2 - V^2}{C^2}}$$

We maintain consistency, and to study the curvature of time for the 2nd model.

As we have seen:

$$\frac{t_V}{t_0} = \frac{C^2 - V^2}{C^2}$$

We found one, bending time, different from the 1st model.

If we notice the different curves we find for the time, are for different angles between the direction of displacement and direction of the ray of light.

Einstein chose to analyze the angle $\frac{\pi}{2}$ between the displacement and the ray of light to study the curvature of time, without realizing the selection criterion.

Why not the angle 0 to study the curvature of the time?

Why not another any angle, through, in random order?

The curvature of time can’t depend on the direction of displacement, only depends on the speed, regardless of their direction.

There must be any one phenomenon that has not yet managed.

We now need to study the model in all its dimensions.

Let us study the model in which the angle between the ray of light and the displacement is a variable.

Perhaps looking at the general term we reach any conclusion.

For the time and space

Let us bring here, the famous example of the observation of a light signal emitted within a train, which is emitted from the floor of the train in the direction of the roof, where there is a mirror that reflects back to the floor of the train.

Let's allow the movement of the train is not only in the direction perpendicular to the ray of light or the direction of the light ray itself.

We deduce the general expression of the curvature of time, depending on the angle between the direction of the displacement with the direction of the ray of light.

We consider the direction of the ray of light fixed and vary the direction of displacement.

The new proposal

Referential V **Referential O**

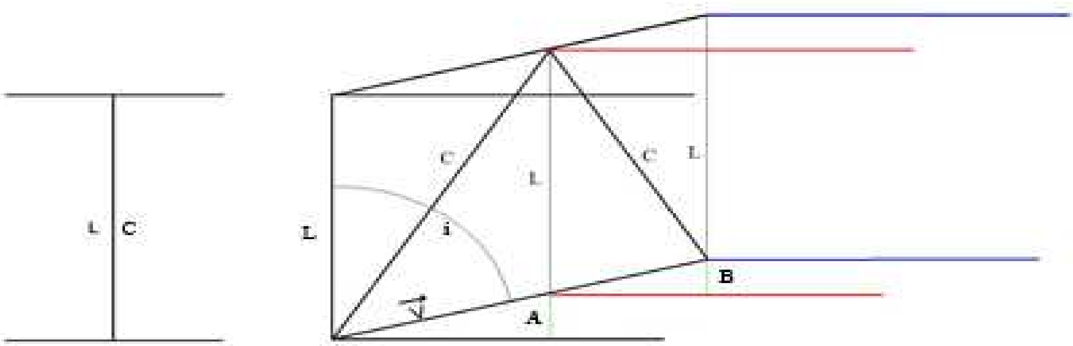

Figure3.

To the observer who is in referential V (left).

The time of go and return is given by:

$$t_V = \frac{2\,L}{C}$$

$$C = \frac{2\,L}{t_V}$$

$$2\ \text{L} = C\ t_V$$

For the referential V, with time t_V Einstein considered the speed of light in our referential C_V takes the value C.

$$C_V = \text{C}$$

If we look to the curvature of the time, to the referential moving Einstein uses **L**.

- L is the length not curved.

That is the analysis of referential in motion V Einstein used the length not curved.

To the observer who is in referential O (right).

The time of go and return is given by:

$$t_{o1} = \frac{\text{L+V Cos(i)}\ t_{o1}}{\sqrt{C^2 - V^2 (Sin(i))^2}}$$

$$t_{o1} = \frac{\text{L}}{\sqrt{C^2 - V^2 (Sin(i))^2} - \text{V Cos(i)}}$$

$$t_{o2} = \frac{\text{L−V Cos(i)}\ t_{o2}}{\sqrt{C^2 - V^2 (Sin(i))^2}}$$

$$t_{o2} = \frac{\text{L}}{\sqrt{C^2 - V^2 (Sin(i))^2} + \text{V Cos(i)}}$$

$$t_{o1} + t_{o2} = t_o = \frac{2\ \text{L}\sqrt{C^2 - V^2 (Sin(i))^2}}{C^2 - V^2 (Sin(i))^2 - V^2\ (Cos(i))^2}$$

$$t_o = \frac{2\ \text{L}\sqrt{C^2 - V^2 (Sin(i))^2}}{C^2 - V^2 ((Sen(i))^2 + (Cos(i))^2)}$$

$$t_o = \frac{2\ \text{L}\sqrt{C^2 - V^2 (Sin(i))^2}}{C^2 - V^2}$$

$$t_o = \frac{2\ \text{L}\sqrt{C^2 - V^2 (Sin(i))^2}}{C^2 - V^2}$$

Here **L** is not curved.

Equating the lengths:

$$\frac{t_V}{t_o} = \frac{C^2 - V^2}{\sqrt{C^2 - V^2 (Sin(i))^2}}$$

For this expression there are a multitude of solutions to the curvature of the time.

The choice of Einstein now seems random, as for the curvature of the time chose **i=$\frac{\pi}{2}$** and the space **i=0**.

If i=0:

$$\frac{t_V}{t_o} = \frac{C^2 - V^2}{C^2}$$

If i=$\frac{\pi}{2}$:

$$\frac{t_V}{t_o} = \sqrt{\frac{C^2 - V^2}{C^2}}$$

This value is only possible with the space not curved.

In the interval between **0** and $\frac{\pi}{2}$ would have a very solutions.

But so it is not.

The time of a referential can only depend on the speed of displacement of the observer referential and not the direction of displacement.

Cannot be, the emission of a ray of light, in any direction, in motion referential, the cause of change in their own, time curved.

If the time of the referential, does not depend on the direction of its displacement, then the factor Sin (i) has to be eliminated in the expression.

For any angle (i):

$$t_o = \frac{2\,L\sqrt{C^2 - V^2}}{C^2 - V^2}$$

$$t_o = \frac{2\,L}{\sqrt{C^2 - V^2}}$$

$$\frac{2\,L}{t_o} = C_o$$

$$C_o = \sqrt{C^2 - V^2}$$

This is the speed of light measured by an observer at O, with velocity V in the time t_o at a referential O, C_o.

Solving now the expression and substituting 2L.

$$\frac{t_V}{t_o} = \frac{C^2 - V^2}{C\sqrt{C^2 - V^2}}$$

$$\frac{t_V}{t_o} = \sqrt{\frac{C^2 - V^2}{C^2}}$$

The time curve, with the premise that <u>L</u> not curve.

The time is independent of the direction of displacement of the referential.

The time in referential only depends on the value of the speed of displacement of the referential.

Given the uncertainty we feel in the options of Einstein, the curvature of the time deducted or was a coincidence or a result of a priori knowledge of that.

The independence of the referential time relative to the direction of the light ray makes it clear that the space does not curve.

Now, we know the value of the curvature of the time, whatever the direction of movement.

Velocity:

In the moving reference we have:

$$L_V = t_V \ C_V$$

In the frame at rest we have:

$$L_o = t_o \ C_o$$

In equating the lengths:

$$t_V \ C_V = t_o \ C_o \quad 1)$$

From the curvature of the time:

$$t_V \, \mathrm{C} = t_o \sqrt{C^2 - V^2} \quad 2)$$

Dividing 1) by 2):

$$\frac{C_V}{\mathrm{C}} = \frac{C_o}{\sqrt{C^2 - V^2}}$$

$$C_V = \frac{C_o}{\sqrt{1 - \frac{V^2}{C^2}}}$$

We can only find the value we found for the curvature of the time, if the space does not curve.

The time is independent of the direction of displacement of the referential.

The only time depends solely on the value of the forward speed of the referential of the observer.

Only the curvature of time and no curvature of space its able to respond to the principles of relativity.

Now we know the value of the curvature of the time, whatever the direction of movement.

This shows the curvature of time depending on the non curvature of space, which forces the curvature of speeds.

We can conclude that the velocity of light, is relativistic, is not constant in all referential.

The value of the velocity curve, in inverse proportion, to the time curved of the referential.

It follows that the space is constant, not curve.

Note: In experiments on the speed of light in time, what changed was the direction of the ray of light and not the referential. The only possible conclusion is that the velocity of light did not change with the change in the direction on propagation. Not understand how they drew the conclusion that the velocity of light was the same in all referential. No change of the referential, not out of the Earth.

Consider a ray of light emitted at one end of ruler over this and that is reflected at the other end to its point of origin.

K - Is the coefficient of curvature of the time:

$$C_V = \frac{C}{K}$$

Observer stopped **Observer in motion**

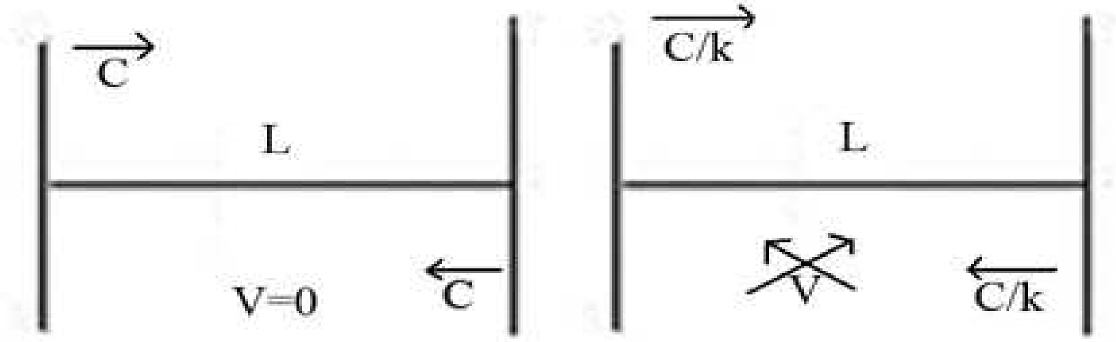

Figure4.

Ruler stopped

To observer stopped.

$$t_o = \frac{2\,L}{C}$$

To one observer in motion at speed V:

The direction of V is random.

$$t_v = \frac{2\,L}{\frac{C}{K}}$$

$$t_v = \frac{2\,L\,K}{C}$$

$$t_v = t_o\;K$$

$$K = \frac{t_v}{t_o}$$

$$\frac{C}{K} = \frac{C}{\frac{t_v}{t_o}}$$

$$C_v = \frac{C}{K} = \frac{C t_o}{t_v}$$

$$C_v\,t_v = C_o\,t_o$$

$$L_v = L_o$$

Ruler in motion

If we consider the ruler moving at the velocity V_1 in the direction of the displacement along the ruler, we get precisely the same conclusion.

To observer stopped.

$$t_o = \frac{2\,LC}{C^2 - {V_1}^2}$$

$$2\,L = \frac{C^2 - {V_1}^2}{C}\,t_o$$

To one observer in motion at velocity V

The direction of V is random.

$$t_v = \frac{2\,LC_v}{{C_v}^2 - {V_1}^2}$$

$$t_v = \frac{2\,L\frac{C}{K}}{\frac{C^2 - {V_1}^2}{K^2}}$$

$$t_v = \frac{\frac{C^2 - {V_1}^2}{C} t_o\, CK}{C^2 - {V_1}^2}$$

$$t_v = t_o\, K$$

$$t_v = t_o \sqrt{1 - \frac{V^2}{C^2}}$$

The curvature of time is unique to the observer and is independent of the velocity of the rule and only depends on the velocity of displacement of the observer.

If the observer moves at the same velocity and direction of the ruler, the curvature of the time, due to the velocity of the observer, and is independent of the velocity of the ruler.

The method proposed by Einstein was not the best.

If the space does not curve so we have a serious problem with the 2nd postulate of Einstein. The 2nd postulate is wrong.

So we have a problem with the constancy of the velocity of light at all referential.

We have to admit, a different velocity of light to the referential motion, C_V concerning the velocity of light to the referential C_o at rest.

Later we will confirm the value of the curvature of time based on the universal gravitational potential.

Let us analyze the reality.

We now know that space does not curve and as such we have:

Time

$$\frac{t_v}{t_o} = \sqrt{\frac{C^2 - V^2}{C^2}}$$

Space

$$L_o = t_o\ C_o$$

$$L_V = t_V\ C_V$$

$$L_V = t_o \sqrt{1 - \frac{V^2}{C^2}}\ \frac{C_o}{\sqrt{1 - \frac{V^2}{C^2}}}$$

$$L_V = L_o$$

Velocity

$$t_V \ C_V = t_o \ C_o$$

$$C_V = C_o \frac{t_o}{t_V}$$

$$C_V = \frac{C_o}{\sqrt{1 - \frac{v^2}{C^2}}}$$

All velocities will come curved in referential motion.

$$V_V = \frac{V_o}{\sqrt{1 - \frac{v^2}{C^2}}}$$

Regardless of the referential, we will always:

$$\frac{{V_o}^2}{{C_o}^2} = \frac{{V_V}^2}{{C_V}^2}$$

IV

The new principles of relativity NBS (No Bend Space)

The universe we live is the universal gravitational field.

Relativity has to be a field theory.

We will deduct the following articles relativity from the perspective of relativistic energy and quantum energy, subject to the universal gravitational field and deduce the general relativity from a field theory.

The deduction of relativity as a field theory seems of utmost importance, because the current method this view is implied but not clearly.

New principles of the theory of relativity

1fst Postulate it the same.

Space does not curve, time curve.

The second postulate will have to be re-written:

Principle deducted: The velocity of light in a vacuum, in the current curved time of our referential is 300.000 Km/s. The curse of light in a vacuum is constant in relation to the equivalent and simultaneous curved times of any referential.

Or:

Light runs the same course in the equivalent and simultaneous curved times of all the referential. In our referential, the current velocity of light is 300.000 Km/s.

Conclusions

Space and time

The space run by light in the equivalent curved times of all referential will be the same.

The velocity of light itself, "absolute to a absolute time", is invariant in the universe, in each referential will have a different unit reading because with the curvature of time, when we divided the quantity run by the unit of time, we will have different quantifications.

$$\frac{L}{t_v} \neq \frac{L}{t_o}$$

$$C_v \neq C_o$$

The space-time curvature, entity which has accompanied us for so long, will have to be abandoned because only time curve.

Now galaxies that move at a greater velocity are further from the centre of the Big-Bang, in any referential.

One day we will be able to travel close to the velocity of light and go on a long trip. If we followed the previous theory, we would practically stay at home.

The revolution is felt at a level of astrophysics.

After all we have the local relativity, the local equivalent of general relativity, responding to local issues, because in our place with V = 0, the space in Einstein's theory does not curve and therefore the theory responds to local needs.

Einstein's relativity doesn’t respond correctly when we left for the universe.

As we shall see in later articles opens up a window for reconciliation of all physical and much more information.

Changes in the relativity of space not curved, NBS.

$$t' = t \frac{1}{\sqrt{1-\frac{V^2}{C^2}}}$$

$$X' = X - V\,t$$

$$X' = X - V'\,t'$$

$$V' = V\frac{t}{t'} \qquad ; \qquad V' = \frac{V}{\sqrt{1-\frac{V^2}{C^2}}}$$

$$X - V'\,t' = X - \left(\frac{V}{\sqrt{1-\frac{V^2}{C^2}}}\,t\,\sqrt{1-\frac{V^2}{C^2}}\right) \quad ; \quad X - V'\,t' = X - V\,t$$

$$Y' = Y$$

$$Z' = Z$$

The transformation matrix:

$$\begin{bmatrix} C't' & 1 & 0 & 0 & 0 & Ct \\ X' & 0 & 1 & 0 & 0 & X \\ Y' & 0 & 0 & 1 & 0 & Y \\ Z' & 0 & 0 & 0 & 1 & Z \end{bmatrix}$$

The matrix is symmetric, then, all the laws of physics are unchanged under the transformations of relativity, NBS.

Porto, 6 de October de 2009

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