

## Contraction of universe with speed C

### Introduction

Distances are the result of sensory perception. Physics is based on images created by us through observation and transmitted for mathematical or experimental confirmations. In modern physics and cosmology, what could not be noticed, being below or above the limit of observation of our instruments, are simple hypotheses that mathematical sciences have to confirm. We evaluate the cosmic space in terms of objects, bodies and particles, dividing the universe into the macrocosm and microcosm and establishing absolute results for relative distances, which is illogical.

An attempt to eliminate the physical use of part of the relative character notions and to overcome the level of knowledge acquired through images created by us by direct observation or by devices and data to confirm mathematical or experimental sciences is that developed by Johan Masreliez, The Theory Expanding Spacetime - a coherent vision of the cosmological world (EST) [1].

The Theory Expanding Spacetime (EST) [1] shows that physical and cosmological theories are the result of modeling the universe using the theory of special relativity. For the question: how could it be an idea that a constant space-time scale is correct, the answer is that scientists have learned that they can not always trust the common interpretations of the sensory perception of reality after they have discovered that the particles can disappear -a certain point and appear elsewhere, and time can progress at different rates in different locations. Space in the EST model [1] can not be extended without extending the time. This is called "scale expansion" [1]. Expansion takes place on a space-time scale, thus preserving our perception of the relative scale of the universe and everything in it [1].

This theory uses a mathematical model in which all four dimensions extend at the same rate.

Given the idea of the space-time continuum, which is the foundation of relativity, then the notion of space and expansion time have an intuitive meaning.

The theory [1] is based on two postulates: the space-time equivalence and the measured light speed that is relatively constant for all observers. EST offers a very different picture of our universe: where everything is always made up of the same recipe and evolves continuously. It links the largest cosmological scale possible with the smallest possible field of quantum physics. Theory is a natural consequence of three fundamental assumptions: there is no absolute universe, all periods and locations are equivalent, and the universe expands by scale change.

And Glenn Borchartt, the director of Berkeley's progressive stationary institute, rejects through the Infinite Universe Theory (IUT) [2] published in 2007 with the theories of modern physics. IUT is not based on experiments but on logic and claims that: time measures the movement; there is a universal ether; the light is just wave, the red galactic shift is mainly due to the light absorbed by the ether; gravity involves a push and not an attraction; Galactic ages can not correlate with distance from Earth; the universe is euclidian and not in expansion; free space between solid materials are ideas without logic, the universe has only three dimensions. It shows that the formula in physics  $E = mc^2$  only transforms only the microcosmic movement of matter into the macrocosmic motion and that the emission of radiation can not occur in a macrocosm without substance

In the theory of stair relativity [3], L. Nottale shows that: the scale as a movement can already be defined as a relative state of the reference systems, so that the stairs transformations, ie dilation and contractions, fall under the principle of relativity, the logarithm of the resolution with which measurement is performed is the measure of such a state and plays in relation to scale the role played by the speed in relativity of motion, the method of the re-normalization can be applied even in space-time (in an enlarged sense: it is applied at length or time "measured" along a space or space-time particle's temporal pathway, i.e., the quantum internal structure of a particle), the variable torque, i.e. the logarithm of the length (or time) as defined above, and the abnormal size of the re-normalization group, plays the same role in the laws of scale as the length and time in motion laws.

The theory of contraction of the universe, is inspired by the ideas expressed by the above theories and includes the following principles :

### 1. The infinite universe

The universe is infinite and consists of an infinite number of elements. Dimensions of elements can not have the value of 0. This value results only from the human observation boundaries and designates these limits at a given time. The universe and the infinite number elements that make up it have an infinite dimension in both directions, and in the both sense of every direction towards the origin of the axes x, y, z.

### 2. The universe full

By shrinkage in an infinite present the univers has no empty spaces between the elements. The absolute vacuum does not exist .

### 3. The contraction of the universe

The universe is contracting by changing the scale. The contraction takes place over an entire space scale, thus preserving our perception of the relative scale of the universe and of all the elements that make up it at a certain moment. The only way we perceive the universe is the reflection of the interactions between the elements of the universe at a certain moment of contraction. Any movement or vibration of an element is instantly transmitted to the entire universe, being perceived with delay by the human observer due to its own contraction with the contraction speed of the universe. Any measurement of distances in the Universe is relative, which has a different value in each moment. Changing the universe's stair by contraction is the way the universe exists. The phenomenon can not be seen because our sense organs and our measurement and observation instruments are composed of elements that contract at the same speed. The contraction velocity of the universe is  $C = 299\,792\,458\text{ m/s}$ . The universe is composed of an infinite number of three-dimensional spherical elements that contract in the direction of the rays that emerge from their geometric center, called rays of time, noted R. In Fig. 1 the rays of time are the spheres concentric. The initial radius of time is  $R_i$ . The time range representing a time of 1 second starting from the initial range is  $R_1 = C \times 1\text{ second}$ , the radius of time representing 2 seconds is  $R_2 = C \times 2\text{ seconds}$ , the radius representing time 3 seconds is  $R_3 = C \times 3\text{ seconds}$ , c is the contraction speed of the universe.

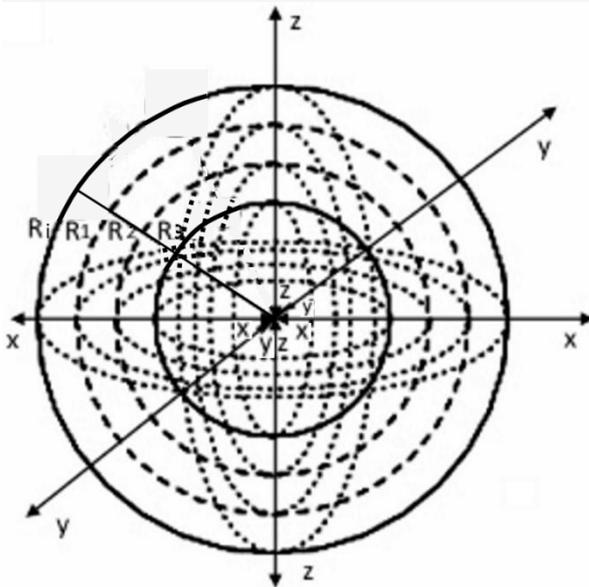


Figure 1

### 4. The time, the measure of the contraction of the universe

The time is represented by the time rays according to Fig.1. The universe having an infinite dimension in both directions of the coordinate axis and the number of time rays is infinite. This means that both the past dimension and the future dimension of time are infinite, the present dimension is infinite in the other sense of the coordinate axes.

### 5. Radiation

Radiation is the way the human observer perceives, the oscillations of the elements in the universe that in the full universe are instantly transmitted. Oscillations are perceived by the human observer as transmitted at the contraction speed of universe C.

### 6. The contraction force of the universe

Any element in the contraction universe is in accelerated motion. The shrinkage acceleration on the x-axis contraction radius is:

$$a = \frac{d}{dt} \frac{dx}{dt} = \frac{d^2 x}{dt^2} \quad (3)$$

Mass M is a measure of the sum of the quantities of universe contained by an element at a given moment. The universe by contraction creates a force felt at the level of each element oriented towards its center.

$$F_c = M \frac{d^2 x}{dt^2} \quad (4)$$

### 7. The energy of contraction of the universe. The contractile energy of the universe is:

$$E_c = MC^2 \quad (5)$$

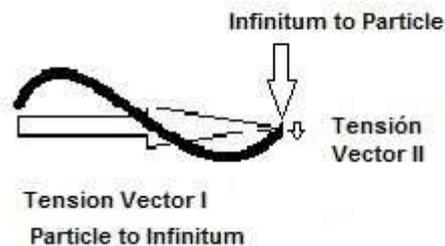
### Conclusions

The theories of classical mechanics and the quantum mechanics theory, the classical theory of the universe with the unified theory of the field, explain from the point of view of the observer the forms of micro and macro manifestation of the contraction of the universe. The four fundamental forces explain from the viewpoint of the observer the manifestations at the micro and macro levels of the contraction force of the universe  $F_c$  and the measured energies are the contraction energies of the universe  $E_c$  according to the mass M of the element.

In the „Evaluation of the gravitational acceleration with length and speed of light without using Newton's universal gravity constant,” [4], Rodolfo Sergio González Castro derive an equation relating the gravitational acceleration with speed of light and the gravitational wavelength corresponding to the energy density at a point in space without using the gravitational constant of Newton (G) :

$$a = \left( \frac{c^2 \lambda_{[e]}^Y}{2\pi r^2} \right) \quad g = \left( \frac{c^2 \lambda_{[g]}^Y}{2\pi r^2} \right)$$

Where  $(a)$  is the electrostatic acceleration;  $(g)$  is the gravitational acceleration and  $(\gamma)$  is the Lorentz contraction factor and  $(r)$  is the radius between the two particles interacting or massive objects,  $\lambda_{[e]}$  is the wavelength of Broglie (Tension Vector I), and  $\lambda_{[g]}$  is the gravitational wave length (Tension Vector II) and the draw a conceptually wave example in two axis :



The physical interpretation of the Tension Vector I, is the product of the tangential acceleration of energy distributed in the wave curve along the wavelength (X axis) with the corresponding pressure on space and the physical interpretation of tension and Vector II corresponds to the component of normal acceleration (gravitational acceleration) occurring wave inward, towards the center of mass-energy.

The conclusions of Castro's theory are:

1. Having derived clean and natural equation gravity and shape of the same equation gravitational acceleration without using the gravitational constant of Newton, with a different way to Newton and Einstein, using as components only terms of energy and wavelength; or speed of light and wavelength, the way for a new interpretation of gravity opens:
2. That to derive the equations of gravity in terms electrostatic necessarily need to include the concept of "Gravitational Energy" and the concept of Second Tension Vector derived Planck Area and the limit defined by the Planck Energy Square.
3. That it is possible to derive equations for the electrostatic acceleration and gravitational acceleration on the basis of the same principles.
4. That in the case of the force equation Gravity, because the length of wave pilot of resting energy and "gravitational energy" wave pilot length, are vastly different and also originate nearly so "simultaneous"; "Gravitational" wave length should fit variable length electrostatic wave form, which had hitherto hindered its calculation electrostatically.
5. However, to derive the equation of gravitational acceleration , gravitational coupling factor disappears, generating a surprising equivalence of gravitational wave length and gravitational acceleration.
6. Energy density and its corresponding wavelength does not exert a gravitational force on objects that attracts, but this force is exerted on it actually surrounding space is so rapid orthogonal contraction towards the center of ensity of energy in proportion overriding the gravitational wave length.
7. The electrostatic force is not exerted on the mass of the second particle in interaction but surrounding space there on which is accelerated in a repulsive or contraction depending on the signs of the charge of the particles interact.
8. That the final equation in 8.6 here developed for the estimation of the gravitational acceleration, is actually an electrostatic acceleration equation where the fine structure constant is the Lorentz contraction factor for the wavelength in the context of the special theory Relativity of Einstein. "

The theory of contraction of universe with speed C , will interpret it in addition , these conclusions according to the principles stated in theory .

#### **References :**

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