

## **The contraction of the universe with the speed of light**

### **Abstract**

The theory of relativity establishes the speed of light in the vacuum as the highest possible speed and shows that the speed of light towards different observers is the same. The speed of light is set as an absolute constant. The paradox of constancy of light speed created a great problem for physics, a problem that Albert Einstein considered to have solved it suggesting that physical theories should not depend on the observer's state of motion but also that the speed of light must remain a constant and the rest of the physics has to change to align to this.

Why is this speed the only absolute constant in physics? The question is fundamental, considering that modern physics and all cosmological theories are based on this constant. While the velocity of any body or particle except the photon is relative, why is the propagation velocity of the wave that supports the photon constant? But what if everything is observed and demonstrated is not real?

What if this speed considered to be a constant and a limit in the universe is not the speed of light but the speed of contraction of the infinite universe itself?

What if the radiation and the force fields are oscillations of the molecules, atoms, ions and elementary particles that the contraction of the universe converts into waves?

My hypothesis answers these questions: the universe constricts at the speed of light.

My hypothesis provides the sort of firm advance in general understanding of universe.

### **Introduction**

The lengths and masses are the result of sensory perception and their appreciation as a size made by man. Physics is based on images created by us through observation and data to confirm mathematical or experimental sciences. In modern physics and cosmology what could not be noticed, being below or above the limit of observation of our instruments, have become hypotheses that mathematical sciences have endeavored to confirm or reject as theories. But if we do not have validated consensual information to remain invariant transformations before entering the brain- and as we have seen, we can not rely solely on our perceptual experience to know, then how can we clearly think about reality?

Thus, the whole becomes indeterminable, because we can not in any specific situation be sure that what we observe and measure reflects reality. In this sense, as well as in terms of brain processes, we actually build our own physical reality. The lenses and sensors of the telescopes, microscopes and measuring devices form images similar to those seen through our lenses, which are not objective. We tend to evaluate the outer space in terms of celestial objects, bodies and particles. The very division of the universe into a macrocosm and a microcosm that derives from distance and mass measurement and give absolute results from some relative measures and which set the margins of these two cosmos is illogical.

An attempt to eliminate the use in the physics of a part of the notions of relative character that try to overcome the level of knowledge acquired through images created by us by direct observation or by apparatus and data to confirm, mathematical or experimental sciences is that of C Johan Masreliez who worked out The Expanding Spacetime Theory - A coherent worldview from quantum theory to cosmology(EST) [1].

The The Expanding Spacetime Theory (EST) [1] shows that there never was a Big Bang; That the black holes do not exist; That there is no dark matter that actually consists of particles still uncovered; That there is no inflationary expansion, and that cosmic background microwaves are not radiation from the Big Bang. All these radical notions are the result of modeling the universe using the theory of general relativity, replacing the change of space and time with the expansion of the whole space. For the question: how could an idea that a constantly changing space-time scale be correct, the answer is that scientists have learned that they can not always trust common interpretations of the sensory perception of reality. As they have discovered the particles may disappear in some point and appear elsewhere, and time may progress at different rates in different locations. Space in the EST [1] model can not expand without the time also expanding. This is called "scale expansion"[1]. Expansion takes place on a space-time scale, and thus preserves 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 time in expansion together have an intuitive meaning.

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

Glenn Borhardt, Director of Berkeley's progressive stall institute, rejects in Infinite Universe Theory (IUT) [2] published in 2007, the Big Bang theory (BBT) and the other theories of modern physics that underpinned it, including theory of light and the theory of relativity.

Theory examines the logical flaws of the BBT. A side-by-side comparison of the two theories not only shows the logical superiority of the IUT but shows the way to another way of research and experimentation predicting the results to be achieved. Among the IUT predictions are: time is movement; there is universal ether; light is only waving; the galactic red shift is mainly due to light absorption by the ether; gravity involves a push and not an attraction; galactic ages can not correlate with distance from Earth; the universe is euclidean and not in expansion; empty space and solid matter are ideas- in reality matter has only three dimensions. It was said to find illegitimate: cosmogony, non-euclidean mathematics; the unification of physics through a single equation; time objectification; the energy regarded as matter less motion, the logical impossibility of creating the universe out of nothing.

In connection with infinity, it is shown that BBT is designed and maintained by mathematicians for the simple reason that mathematics can not satisfactorily treat infinity. About the consciousness of energy it is shown that the first law of thermodynamics assumes that matter and movement of matter can not be created or destroyed and BBT is the most flagrant conservation violation ever conceived. Another reason implies the BBT's claim that conservation could not be violated because there were no fundamental laws before the universe existed. In relation to radiation, IUT states that Einstein popularized the idea that matter could be converted energy. As a result, some even claimed that the primary universe contained no matter, but pure energy. Energy, of course, is the movement of matter, its inseparability being a non-senseless energy-free speechlessness. IUT shows that physical  $E = mc^2$  only converts the microcosmic movement of matter to the macro cosmic movement of matter, and that radiation emission can not occur in a matter-free macrocosm. [2] IUT refers to the reduction of atmospheric pressure versus altitude, derived from the Galaev data [3]. The IUT states that gravity can be either a drag or a push. [2] The IUT denies that cosmogony, the study of the origin of the universe, is legitimate. IUT shows that Big Bang Theory has forced us to choose between two fantastic possibilities: either the universe exploded from nothing or existed all the time. This review of the two possibilities shows that the IUT is by far the most logical of the two, the logical counterpart to infinite macro cosmic is infinitely microcosmic. Both provide a framework to avoid the theory of relativity and the conclusion that the idea of empty space must be abandoned. Any part of the universe is a microcosm that could not exist without the macrocosm. Only a combination of the two can explain the movements in the microcosm. [2]

In the Theory of Scale Relativity , L. Nottale shows that: scale, as motion already does, may be defined as a relative state of reference systems, so that scale transformations, i.e. dilatation and contractions, come under the principle of relativity, the logarithm of the resolution with which a measurement is performed is the measure of such a state, and plays in scale relativity the part played by velocity in motion relativity, the re normalization group method may be applied to space-time itself (in an enlarged sense: it is applied to the length or time virtually "measured" along a space or space-time particle path, i.e. to the internal quantum structure of a particle), the couple of variables , i.e. the logarithm of length (or time) as defined above, and the re normalization group anomalous dimension, play the same role in scale laws as do length and time in motion laws. [4]

## Hypothesis

The Universe constricts at the speed of light. This hypothesis is based on some assumptions of the "The Expanding Spacetime Theory" [1], but instead of using measurements of distance, speed,

mass and time as fourth dimension in an attempt to prove that the universe expands in space and time, I support that the universe has only one absolute and constant value which is the speed of constriction.

Any measurement of distance and mass in the Universe is relative, having a different value every given moment.

The change of scale measurement by the constriction of the Universe. Is the way in which the Universe exists, according Theory of Scale Relativity [4], a phenomenon that cannot be observed due to the fact that our sense organs and our instruments of measurement and observation are parts of the same universe and everything constricts at the same speed

The constricting Universe is infinite and the time is the measure of movements taking place in the Universe, according to Infinite Universe Theory [2].

To conclude :

- a) The radiations and the force fields are oscillations of the components of the universe that are felt as waves and forces, due to the contraction of the universe, with the speed of light.
- b) Modern physics and cosmology must be changed.
- c) The unresolved problems of quantum physics can be solved.
- d) The dark matter can be made up of the components of the universe, all of which are physically below the limits of the human devices. Dark energy is the energy of dark matter in contraction with the speed of light.
- e) The results of the theory of relativity can be partially explained using the laws of classic mechanics but are also modified, considering that the universe is contracting with a constant speed, the speed of light.
- f) -conventionally accepted fundamental interactions can be interpreted from the point of view of classical mechanics.

I am going to detach all these consequences, drawing conclusions and we shall particularly consider the cosmological implications of the contraction of the universe with the speed of light in a forthcoming work.

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#### **References**

[1] Masreliez C.J., The Expanding Spacetime Theory, *Astroph. & Space Science*, 266, Issue 3, pp. 399-447 (1999)

[2] Glenn Borhardt, Infinite Universe Theory, 2007, *Proceedings of the Natural Philosophy Alliance*

[3] Y.M. Galaev, 2002, The measurement of ether-drift velocity and kinematic ether viscosity within optical waves band: *Spacetime & Substance*, v. 3, no. 5, pp. 207-224.

[4] Nottale, L., 1992, The theory of scale relativity, *International Journal of Modern Physics A*, Vol. 7, No. 20 (1992) 4899-4936. c World Scientific Publishing Company. Version complemented by notes and errata (15 May 2003).