A New Dark Energy Force Theoretically Calculates Faster-than-light-neutrinos.

(this is the first theoretical formulation for the experimental evidence of faster-than light-neutrinos and proves that Einstein's Relativity could be violate under the obligation to accept another cosmological hypothesis: the Double Torus.

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Abstract.

A theoretical calculation with a new dark energy force formula discloses the correctness of the experimental faster-than-light-neutrinos in the CERN-San Grasso experiment. The formulation in this paper theoretically confirms that Einstein's Relativity could be violated. This introduces the obligation to accept a new cosmological model, called the Double Torus hypothesis . The theoretical calculation in this paper is based on a new momentum of dark energy force, formulated by its new force and two extra time dimensions below the Planck scale. In detail this completely new perspective shows that the dark energy force starts to dominate the lowest limit of the Newton-force-acceleration under specific conditions of neutrino-oscillations. This paper theoretically calculates 62.8 nanosecond for the experimental detected early-arrival of muon-neutrinos related to how light-in-vacuum would have arrived. This is a marvelous close match compared to the ((60.7 ± 6.9 (stat.) ± 7.4 (sys.)) nanosecond found during the 'neutrino-flight path' from CERN to San Grasso.

Introduction.

The new dark energy force is part of a new cosmology (Double Torus geometry-hypothesis)[1] Inside this Double Torus a dark matter torus is located, while a dark energy torus encloses, and intertwines, the dark matter torus. The new dark energy force functions as an 'operator' to recalculate mass/energy in the dark matter torus by means of two extra time dimensions below the Planck scale, making the passive information in the upper Planck-surface dynamic . So, this extension into the depth implies an extension of width and shape of the universe, in such a way, that a new cosmological framework emerges as the Double Torus of dark energy and dark matter. In this framework dark energy is no longer Einstein's 'cosmological constant' but a higher order based three-dimensional time process[1.13] . Especially in paper here, these time-aspects are applied.

After the breaking news of the possible violation of Einstein's Relativity caused by 20 muon-neutrinos, which seemed to travel faster than light in a 730 km trajectory from CERN to Gran Sasso (20 out of one million), this paper theoretically presents the mathematical formulation and calculation for the correctness of that event.

The theoretical calculation here in this paper, to proof that event, is new. It is based on the new dark energy force, which is part of a new framework of cosmology, called a Double Torus of

dark energy and dark matter. This means that no longer an accelerating Big Bang is supposed to be the 'reality'. Instead a recalculated connected quantum-space, caused by a higher order three dimensional time[1.15] is the 'reality' .

The formulation and calculation.

I start with the latest dimensional version of my dark energy force formula[1.13; 1.14] (the original formula is described in retrospective in paper[1.4] an in paper[1.1;1.2;1.3]). The dark energy force in the latest version is the 'operator' and recalculates 'reality' in the Double Torus cosmological geometry as follows:

$$F_{de} = \frac{1}{2}c^5 . O_e . m^3 \left[\frac{m^3 m^2 m^3}{s^3} N^2 \right]$$

(1)

Where c is the light speed, O_e is the Planck length squared, and m^3 is mass.The dimensionality is described in meters, seconds and Newton force N^2; where N is squared, because F_{de} has a "+" and "-" strength[1.1, 1.2, 1.3].

Firstly from this follows:

$$F_{de} = k_{de} \left[\frac{m}{s^2} \right] m^3 \left[\frac{m^3 m^1 m^3}{s^1} N^2 \right] = k_{de} m^3 \left[\frac{m^3 m^2 m^3}{s^3} N^2 \right]$$

(2)

Then, because of the "+" and "-" strength, follows:

$$F_{de} = \pm (k_{de})^{\frac{1}{2}} m^3 \left[N \right] \left[\frac{m^3 m^2 m^3}{s^3} \right]$$

(3)

For k = $(k_{de})^{1/2}$ follows:

$$F_{de} = \pm k . m^3 \left[N \right] \left[\frac{m^3 m^2 m^3}{s^3} \right]$$

(4)

Furthermore: The conventional Newton-force is given as:

$$F_N = m.a \left[N \right]$$

(5)

So, now the acceleration of dark energy force and the conventional Newton-force can be equalized, because both are dimensionally expressed in [Newton]. However, there is a temporarily restriction of neglecting the extra dimension (as expressed in 3). As soon as the acceleration of the dark energy force F_{de} starts to dominate the acceleration-performance beyond the lowest (experimental) Newton-limit of acceleration, than the extra dimensions are starting to play a keyrole of importance. This means the three dimensional mass (m^3) will be involved by two connected spaces through an information-surface, while two extra time dimensions affects these information. That will undoubtedly affect the speed of light as a carrier of information.

Considered from this force domination- perspective, follows for the "+" sign:

$$k.m^3 = m.a \tag{5}$$

$$\frac{k}{a}m^2 = 1 \tag{6}$$

For m = ± 1 follows:

$$\frac{k}{a} = 1 \tag{7}$$

$$100\frac{k}{a} = 100$$

This is congruent to 100% existence for $100\frac{k}{a}$ \hfill (8)

From this follows a dimensionless number, because (k) and (a) are both dimensionally in $[m/s^2]$.

For the acceleration (a) I use the **experimental detected** lowest acceleration of Newton-force[2], being approximately 5.10^{-14} m/s². Then follows:

$$100.\frac{k}{a} = 100.\frac{k^{\frac{1}{2}}}{a} = 100.\frac{\left(\frac{1}{2}c^5.O_e\right)^{\frac{1}{2}}}{a} = 100.\frac{\left(\frac{1}{2}3^5\left(10^8\right)^5(2.6).10^{-70}\right)^{\frac{1}{2}}}{(5).10^{-14}} = 35.547 \tag{9}$$

However, as you can see, this number discloses a possible event to exist for m=±1 as long as the specific ratio suffice to 100.(k/a). This means negative mass is possible. And that means 100% neutrino-oscillation in a wider cosmological perspective than the Big Bang. This can be imagined as neutrinos leaving conventional space time and entering the Double Torus during their m=-1 state during their oscillation. This means Einstein's limit of the light speed violates in a Big bang space time, but belongs to the higher order cosmology of the Double Torus.

Furthermore I need the number, noted under (9), for the following formulation:

Firstly I define the momentum produced by the dark energy force as ($F_{de}.t^{2/3}$), where $t^{2/3}$ is the representation of the two extra time dimensions below the Planck scale, while being a part of the complete time(t) in the higher order Double Torus framework, such, that time in the Big Bang is given by $t^{1/3}$ being one time-dimension. From this follows that $t = t^{1/3} . t^{2/3}$ is defined in the Double Torus. This means the Big Bang is part of the Double Torus. Furthermore a light-second (t) is 299792458 [m]. This means for 1 meter light-travel , (t) = 1/299792458. Second. This is 3.335641×10^{-9} second . This standard light-second will be used in the following continuation.

The following continuation:

For smaller accelerations than the lowest experimental limit for the Newton-force (which means an acceleration k < a), the conventional momentum $F_N .t = m .v$ will be dominated by the momentum of

($F_{de} \cdot t^{2/3}$). This will cause a **Δv** speed-increment, thus faster than light ($c+$**Δv**). This means the momentum of the dark energy force causes mass particles to go faster than light under conditions as expressed in (5) to (9).

This leads to the following equation, where the new dark energy momentum causes a speed increment as follows:

$$F_{de} \cdot t^{\frac{2}{3}} = m.\Delta v \tag{10}$$

$$k.m^3 \cdot t^{\frac{2}{3}} = m.\Delta v \tag{11}$$

$$k.m^2 \cdot t^{\frac{2}{3}} = \Delta v \tag{12}$$

$$\frac{k}{a}.m^2 \cdot t^{\frac{2}{3}} = \frac{\Delta v}{a} = \Delta t \tag{13}$$

$$\frac{\Delta t}{\frac{k}{a}.m^2} = t^{\frac{2}{3}} \tag{14}$$

For m = ± 1 follows:

$$\frac{\Delta t}{100.\frac{k}{a}} = \frac{t^{\frac{2}{3}}}{35.547} \tag{15}$$

Where *Δ*t is the earlier time-arrival of the neutrinos compared to the light-arrival (in vacuum).

From this follows the value for *Δ*t:

$$\frac{\Delta t}{100.\frac{k}{a}} = \frac{(3.335641)^{\frac{2}{3}}.(10^{-9})^{\frac{2}{3}}}{35.547} \sec = 62.8 nano \sec \tag{16}$$

Eventually this **62.8 nanosecond** is very close enough to the result of the CERN-San Grasso experiment of approximately 60 nanosecond; to be precise: ((60.7 ± 6.9 (stat.) ± 7.4 (sys.)).

Even further analysis of my above found theoretical result is sinful, as follows:

- I used the **experimental value** for the lowest limit of the Newton acceleration; if this value would be slightly smaller, for example **100.(k/a) is 37.2,** than the result would be the approximately *60 nanosecond*s found in the CERN-San Grasso experiment. For(k) is constant this would give **a = 4,77688 . 10^{-14} m/s^2** , instead of the approximately 5 .10^{-14} m/s^2. Such an analysis is plausible, because the experimental value of the lower acceleration-Newton-limit could not be measured precisely enough to determine where exactly the gravitational

force should end in affecting small particles. Nevertheless the 62.8 nanosecond is marvelous close enough to claim that for the first time a theoretical calculation is in accordance with the experiment. However, normally the theory would be there first and then the experiment. Apparently the CERN-collaboration couldn't wait for that due to a lack of understanding.

- Furthermore I used 3. 10^8 m/s for the light speed in the calculation of (k).
- And I used as the light-second 3.335641 x10^{-9} s as a standard.

So, I think I can conclude 4 fundamental implications.

Conclusion.

1. Eventually this **62.8 nanosecond** is very marvelous close match to the result of the CERN-San Grasso experiment of approximately 60 nanosecond; to be precise: ((60.7 ± 6.9 (stat.) ± 7.4 (sys.)).
2. Some neutrinos can go faster than the light speed in vacuum, if their mass m=±1. This means, according to the equation- conditions (5) to (9), they must have maximum mass, or maximum energy. For neutrinos, which have smaller mass/energy, the (a) in 100.(k/a) will be larger (because k is constant and 100.(k/a) equals to 1). That means that the Newton-force recaptures its dominance again. Hence these neutrinos will adapt to the speed of light or less.
3. A Breaking result is, that the neutrino trajectory s of no importance. In the experiment this was 730 km, but an experiment with a larger 'neutrino-fight-path' will result in the same early arrival related to light-in-vacuum. Just a specific amount of neutrinos that have the maximum mass/energy will go faster than light-in-vacuum, because their maximum oscillation range, from +1 to -1, gives them the property to enter in a wider cosmology. The rest of the neutrinos is bound to the light-speed or less speed; these are fully captured in conventional space time. – I want to point out specifically, that extra space-dimensions, as are predicted by for example in the string theory, are 'fantasy'. We need to implement two time dimensions extra in standard cosmology.
4. More experiments are necessary from the awareness that the universe is recalculated by two extra time dimensions from below the Planck scale, which affect the two surface-connected smallest quantum spaces towards far back into the Big Bang. Inherently the Big bang becomes a false impression.

Appendix A, B and C:

A) In this paper I describe the dark energy force formula being part of the higher order Double Torus cosmology. With this I proof speeds faster than light are possible in the Double Torus. Theoretical proof concerning this, also follows in particular from the 1th derivative of the dark energy force, which transforms its operating function to a lower cosmology, based on black holes, dark matter and visible matter [1.5]. The 1th derivative mathematical equation shows how dark matter is being gravitational equal to light-giving matter for ¼ of the density of

dark matter in galaxies, independent of the galaxies-history. Within these equations a disclosure of a light-horizon and event-horizon of a black hole is found. This confirms in an alternative way that Einstein's Relativity emerges from a higher order cosmology into the lower dimensional cosmology of the Big Bang. For this theoretical formulation also experimental proof is available[3].

B) Another extra theoretical proof is given by the hypothesis of a Conformal Cyclic Cosmology (formulated by Sir R. Penrose and colleagues), which discloses observational 350 points in the Cosmic Microwave Background (CMB). Around every point two concentric circles are located at least. Penrose's interpretation is, that these circles are due to black hole collisions in a universe before the Big Bang. However, my interpretation is, that these circles are the projection of the recalculation of dark matter by the three dimensional time property of dark energy as formulated in the Double Torus cosmology. I wrote paper [1.13] in order to explain that with a calculation-example that explains why we only observe approximately 4% visible matter.

C) Other archives should have the possibility to register this paper. For this it is necessary to support me in having it published in arXiv, where also the CERN-paper is registered. Is viXra willing to help me with two endorsers to realize that? I point out that my author-rights are being respected .

[1] Reference-list to viXra papers:

[1.1] **http://vixra.org/abs/0909.0005** ; September 1 2009; Authors: Dan Visser, Cristhopher Forbes, Keith Lees, titled: "A Short Article On A Newly Proposed Model Of Cosmology".

[1.2] **http://vixra.org/abs/0910.0016** ; October 11 2009; Author Christopher Forbes, titled "Mathematical and Phenomenological Elements of the Twin-Tori Model of Physics and Cosmology".

[1.3] **http://vixra.org/abs/0911.0061** ; November 28 2009; Authors Christopher Forbes, Dan Visser, titled: "A New Quantum Gravity Framework Based on the Twin-Tori Model of Cosmology (Part 1)".

[1.4] **http://vixra.org/abs/1010.0013** ; October 7 2010; Author Dan Visser: Describing the original "dark energy formula" in retrospective.

[1.5] **http://vixra.org/abs/1010.0014** ; October 7 2010; Author Dan Visser, titled: "Deeper Properties derived from the 1-st derivative of the Dark Energy Force Formula".

[1.6] **http://vixra.org/abs/1010.0063** ; October 29 2010; Author Dan Visser, titled: "Dark matter and visible matter fundamentally related to a new cosmological Model and Recalculated".

[1.7] **http://vixra.org/abs/1101.009**6 ; February 2 2011; Authors Dan Visser, Christopher Forbes, titled: "Entanglement related to cosmology-TTM."

[1.8] **http://vixra.org/abs/1103.00**12 ; March 11 2011; Authors Dan Visser, Christopher Forbes, titled: "Double torus cosmology reveals cosmic backround to measure dark energy."

[1.9] **http://vixra.org/abs/1104.0085** ; April 29 2011; Author Dan Visser, titled: "Dark Matter Formula for Fundamental Calculation of Satellite Flybys in Hyperbolic Orbits."

[1.10] **http://vixra.org/abs/1105.0022** ; May 13 2011 ; Author Dan Visser, titled: "Hard theoretical evidence for the dark energy force formula in a double torus universe."

[1.12] **http://vixra.org/abs/1105.0033** ; May 23 2011; Author Dan Visser, titled: "Discussion Needed About Three (New) Cosmological Models Based on Mathematics and Physics."

[1.13] **http://vixra.org/abs/1107.0017** ; July 10 2011; Author Dan Visser, titled: "Recalculation-mechanism of the Big Bang in a Double Torus Universe".

[1.14] **http://vixra.org/abs/1108.0048** ; August 29 2011; Author Dan Visser, titled: "New value for the Higgs Mass".

[1.15] This paper.

[2] *Phys. Rev. Lett.* **98** 150801 (2007); Laboratory test of Newton's second Law For small Accelerations.

[3] *Nature* **461**, 627-628 (1 October 2009) | doi:10.1038/nature08437; Received 28 April 2009; Accepted 18 August 2009; Universality of galactic surface densities within one dark halo scale-length

[4] Measurement of the neutrino velocity with the OPERA detector in the CNGS beam, arXiv 1109.4897 (CERN-collaboration).

[5] Concentric circles in WMAP data may provide evidence of violent pre-Big-Bang activity, arxiv 1011.3706 (V.G Gourzadyan, R. Penrose).

[6] owner of www.darkfieldnavigator.com