New formula for dark energy force gives new connection to quantum-gravity and topology for electron-spin.

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Date: 19 may 2013

Summary.

This article is about a new formula for dark energy force. This has already been published in a series of my articles in the archive vixra, but gets little attention. The new formula is part of a larger universe than the Big Bang, called the Double Torus hypothesis. The new dark energy force is different from dark energy in the Big Bang, because it uses the extension of time. This article emphases the extra time relating gravity and a new topology of quantum-spin of point particles, such as electrons. This article describes that cohesion by my dark energy force formula in a Double Torus Universe.

Explanation of dark energy force and spin-topology of point particles.

Central to the new cohesion between dark energy force and spin-topology of point particles in the universe is time-extension. With time-extension I mean extra time clocks that get added to the ongoing time-arrow of the supposedly ever-expanding Big Bang universe. Extra time makes the universe different in bigger way than telescopes do. In a telescope the image of the existing universe is enlarged, but 'extra time' magnifies the evolutionary time of the universe. This creates a more sophisticated understanding of the time reality. The extra time clocks are from below the Planck time-limit are used as a 'closed time loop'. This I have not just figured out, but is a result of the outcome of my physics-mathematical formula for dark energy force, which I derived from a thought experiment with black holes. This formula fits another and larger universe, wherein a new dark matter-dark energy dynamics performs. Who seeks out what a Double Torus is, comes out on a 'genus-2', which is a torus with two openings side by side. But that is not the shape of the Double Torus from my new hypothesis. This is a dark energy-time torus that encloses and intertwines an inner dark matter torus. The Big Bang is part of that Double Torus. This makes the Big Bang no longer a self-contained model. The new dynamics of the extra time clocks and dark matter creates an illusion of the Big Bang. The Double Torus hypothesis is described by multiple articles in the archive vixra [4].

It is how the use of two additional time clocks below the Planck time limit starts. That is the paradigm-breakthrough. There is experimental evidence that point out my formula could be is correct. Only my Double Torus hypothesis is not excessive known and moreover, the institutional world is not very open to other interpretations which lead to anything other than the Big Bang.

In this article I use the two extra time dimensions as a closed time loop applied to the quantum-spin of elementary particles, such as electrons (point-particles). I put it in perspective of the Double Torus hypothesis, so I also put my new dark energy force (F_{de}) in the perspective of point particles! By the enlargement to a larger time-universe the formula for new dark energy force therefore consist of a combination of two forces: The Newton gravity, depicted on a surface in [m^2], where details about acceleration and mass are no longer visible, and a force that acts on dark matter particles. The latter, the dark matter power, occurs to by the action of a smallest gear on the square of a dark matter particle. Such a dark matter particle can contribute to as well quantum-gravity as to anti-gravity.

The dark matter force is $F_{dm} = \pm (m_{dm})^2 . (k'_{de})^{1/2} [(m^2/s)^3]$. Where $(k'_{de})^{1/2} = (½ c^5 L^2_{planck})^{1/2} = \approx 0.29 . 10^{-14} [m/s^2]$, which is the smallest possible acceleration at which Newton-gravity on quantum scale only exerts gravity in a surface without being able to measure it, according to $F_z = m . (k'_{de})^{1/2} [m^2]$. The experimentally established smallest Newton acceleration is $\approx 5 . 10^{-14} [m/s^2]$. So my found theoretical value is slightly lower, roughly 17 times smaller. Cause: On quantum-gravity scale dark matter power plays along. This creates a combined formula, which is described later in this article.

Although I have derived my formula from a thought experiment since April 2004, and recently could convert it to a formula that comprehends the two forces (gravity and dark matter force), I have been able (since May 14 2013) to put it also in conjunction with a new topology for quantum-spin of electrons, the latter being subject of investigations by others [1]. Quantum-spin is an angular momentum at subatomic scale. It is a fixed amount of rotation. A spin ½ for particles of matter and spin 1 for force-particles. The symmetry for spin ½ is recovered after 180 degrees rotation. For spin 1 that recovery is after 360 degrees. Gravity (with spin 2) is symmetrical restored after 720 degrees rotation. That suggests, actually two geometric linked forces. These are present in my new dark energy force formula.

The consequence of this is, that I am capable of putting the dimensions of my dark energy force in perspective of a 'chessboard-structure', serving two 'opposite triangular tiles' to capture space-separated quantum-spins, an idea that already was published in 2011 by M. Mecklenburg and C.B. Regan [1] (see fig. 1). The thought behind this is, that electrons are point particles in the Standard Model, which have no surface. So giving them an angular momentum (spin-up and spin-down for rotation clockwise and counterclockwise) is giving them two discrete surfaces . On this basis a development arose for the making of topological insulators [2]. These are used in the development of nanotechnology and quantum computers [3] (see fig. 3).

What appears now is: My dark energy force formula gives a dimensional translation of the two forces (Newton-gravity and dark matter power) to the topological quantum-spin of the regarded point particles-electrons [3] (fig. 3). The new dark energy force formula is worked out in detail in my vixra articles, especially in the last series of articles [4]. However, in this article I reflect it again for the benefit of this cohesion. Several of my articles are no longer sustainable as evidence for wear of the Big Bang. Instead the Double Torus universe takes it place.

Besides a dark energy-time is introduced by two extra time dimensions from under the Planck time-limit, also dark matter is explicitly described in the new hypothesis. A dark matter particle consists of two distinct particles. Each half can + or −, so (+. +) gives + and (−. −) also gives +, but (+. −) gives −, so there is a probability of 2/3 for gravity contribution and a chance of 1/3 of contribution to anti-gravity. This allows the Newton-gravity in $[m^2]$ to be converted from 'static information' to enticing Newton-gravity'. Although the Newton gravity is attracting (+), simultaneously the dark matter power can be + or − too, hence real gravity and anti-gravity can occur. It becomes clear that the new dark energy force-formula is another force than the opposite gravity by the cosmological constant of Albert Einstein: That is negative pressure through vacuum energy, which is not further defined. In the new dark energy force, however, true anti-gravity is given by the combination of dark energy-time and dark matter in vacuüm.

In short, the universe is not a space once started as cosmic inflation from the ' nothing ', but it is a rotating universe, which (re) calculates the reality through dark energy-time and dark matter. Together they form a Double Torus Universe. In other words: The origin of the universe from the ' nothing ' changes in 'cyclic time ' recurring reality.
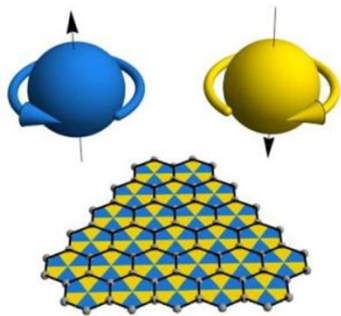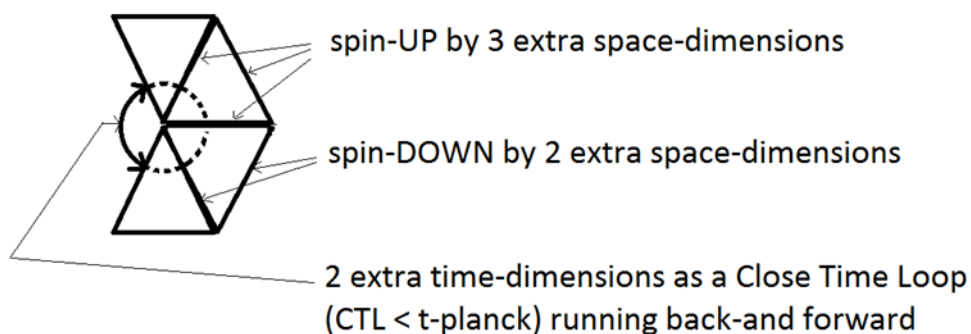
Fig. 1: Electrons are thought to spin, but are point-particles in the Standard Model, and points have no surface, thus cannot spin (angular moment). The alternative is to place the opposite spins in separate spaces, the heart of a 'triangle' (yellow and blue); see the original reference[1,2].

Extension.

My new dark energy force formula is a fundamental pillar of my Double Torus hypothesis. It extends the idea of the 'yellow and blue triangles' in a chessboard-structure for making possible the electron-spin to understand. The ones that hit their 'top' form a 'quantum-time-cone of the point-particle. The ones sharing their baseline are the up- and down-spins. Of course, the point-particle in the centre of the CTL also represent spin up and down, although their 'top-to-top' triangles connect. Hence, the discrete spin-topology (fig .2) is correlated to a ratio of 5 extra space-dimensions and 2 extra time dimensions.

Applied to a point-particle in 3D-space:

spin-UP by 3 extra space-dimensions

spin-DOWN by 2 extra space-dimensions

2 extra time-dimensions as a Close Time Loop
(CTL < t-planck) running back-and forward

Dan Visser, Almere, Netherlands; May 14 2013

Fig. 2: Discrete spin-topology correlated to a ratio of 5 extra space-dimensions and 2 extra time dimensions.
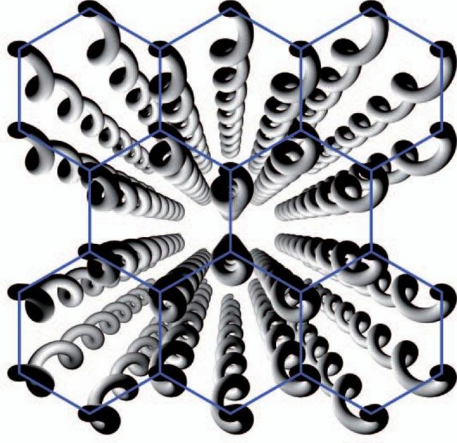
Fig. 3: Topological insulator-structure [3]. These are used in the development of nanotechnology and quantum-computers. Inside they insolate electrons. At the edge they conduct electrons. It blocks scattering towards the inside.

My formulas.

The topology shown in fig. 2 immediately explains the dimensions of the dark energy force is as follows:

$$\pm F_{de}\left[\left(\frac{m^8}{s^3}\right)N^2\right] \tag{1}$$

where a physics force of both Newton-gravity and dark matter force are applied to a geometric dimension.

By dividing it in a product of point-particles in 3D-space as $\left[\left(\frac{m^3}{s}\right)\right]$ and the geometric ratio of 5 space-dimensions and 2 time-dimensions as $\left[\left(\frac{m^5}{s^2}\right)\right]$, the geometric projection of fig.2 exists.

The product of both forces in the new dark energy force is:

$$F_{de} = F_z\left[m^2\right].\pm F_{dm}\left[\left(\frac{m^2}{s}\right)^3\right] \tag{2}$$

where $F_{dm} = \pm\left(m_{dm}\right)^2.k'_{de}\left[\left(\frac{m^2}{s}\right)^3\right]$ dimensionally being a dark flow.

$$\tag{3}$$

and where $k'_{de} = \frac{c^5 L^2_{planck}}{2}\left[\left(\frac{m}{s^2}\right)\right] = 0.28659 \times 10^{-14}[m/s^2]$ $\tag{4}$

Here k'_{de} is the lowest Newton-acceleration. Experimentally determined at 5 x 10^{-14} [m/s^2]. The difference is caused by the current state of technology. I am convinced when technology becomes more precise, my theoretical lowest Newton-acceleration will be measured. As you can see the theoretical limit is about 17 times lower.

The dimension of the dark matter force is
$$\left[\left(\frac{m^2}{s}\right)^3\right] = \left[\left(\frac{m^4}{m^4}\right)m^2 s\right] = \left[\frac{1}{G}Nm.ms\right] = \left[\frac{N}{\frac{G}{m^2 s}}\right] \qquad (5)$$

So, what follows is: $F_{de} = F_z\left[m^2\right].\pm F_{dm}\left[\dfrac{N}{\frac{G}{m^2 s}}\right]$ \qquad (6)

This means: As soon as a Newton-acceleration (g') becomes above the lowest limit k'_{de} it generates quantum-gravity, which will integrate into gravity as soon as the gravitational-strength becomes larger. On the other hand when F_z doesn't carry the Newton-constant (G) then F_{dm} carries it dimensionally. In that case the acceleration is smaller than the lowest limit (equation (6)).

So gravitation exists when:

$$F_{de} = F_z\left[m^2.\frac{G}{m^2}\right].(\pm)F_{dm}\left[\frac{N}{s}\right] = F_z.(\pm)F_{dm}\left[N.\frac{N}{s}\right] = (\pm)(F_z.F_{dm})\left[\frac{N^2}{s}\right] \qquad (7)$$

This physic-force must be applied to the spin topology, as follows:

$$F_{de} = \pm(F_z.F_{dm})\left[\frac{N^2}{s}\right]\left[\frac{m^8}{s^2}\right] = \left[\frac{m^8}{s^3}N^2\right] \qquad (8)$$

This is what equation (1) dimensionally is. More detailed analyses are given in my latest vixra articles [4].

Retrospect.

Remarkably already in 1947 theoretical instructions were known for a rotation of the universe, only then there was very little understanding of what dark matter and dark energy meant. It was the day that Albert Einstein got a present for his birthday from his mathematician friend Kurt Gödel in Princeton-USA in the form of a bizarre solution of Einstein's field equations. This meant that the universe of Einstein could rotate. Later this was extended by Stephen Hawking and John Ellis with mathematical proof. That meant that a point event could converge and that a rotary event field could exist. Light cones play a role in that. A light cone is shape like a 'diabolo' and is the distribution of light rays from a point to the past and a pooling of light rays from the future to the point event. However, the light cones change in two 'glued ' point hats ', once the point event is represented by a rotary event area. Gödel called it Closed Time Curves (CTC's). This leads to the (re) convergence of light rays in the form of a spiral (wavy light) to the past and the future. As a result, one could see his own past and future. I have called those Closed Time Loops (see fig. 2).

Summarized: Einstein and Gödel had no idea of what dark energy and dark matter actually were. But now with my dark energy force formula this substantially changes in periodic cyclic (re) calculation by the dynamics of dark energy-time and dark matter producing Newton-quantum-gravity. In such a way this can also be interpreted as observing the cosmic microwave background of the Big Bang (CMB). We only observe the frozen quantum-gravity from a distance, but deeper in the process the application of extra time performs. Elementary particles and combinations thereof, get their mass through a new force and time, which do not come from the Big Bang, but from a rotating universe ad a new formula for dark energy force. Meanwhile there is proof for a rotating universe: The 'dark flow'. The dark flow is dimensionally emerging from my new dark energy force formula. Moreover, A cold and hot-spot is observed in the CMB. This can also be related to a rotating universe.

References:

[1] Matthew Mecklenburg, C.B. Regan. Spin and the Honeycomb Lattice: Lessons from Grapheme. *Physical Review Letters*, 2011; 106 (11) DOI: 10.1103/PhysRevLett.106.116803

[2] University of California - Los Angeles (2011, March 20). Is space like a chessboard? *ScienceDaily*. Retrieved May 7, 2011, From: http://www.sciencedaily.com/releases/2011/03/110319085514.htm

[3] http://physicsworld.com/cws/article/news/2013/apr/10/topological-insulator-created-for-light

[4] Dan Visser, overview of his articles about the Double Torus hypothesis. http://vixra.org/author/dan_visser

[5] DAN Visser(*1947), independent cosmologist, founder of the dynamics of the Double Torus hypothesis, who is also an ART-painter.