The Alpha Torque and Quantum Physics

Zhiliang Cao, Henry Cao
williamcao12252000@yahoo.com, henry.gu.cao@gmail.com

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Abstract

In the center of the universe, there isn't a super massive black hole or any specific energy holding the universe together. The source of this supposed energy is in the space itself. The space itself is not a complete void. In fact, space itself has a simple movement. This very movement dominates every aspect of physical existence. Nothing can exist without it. The movement is called the Torque. This theory can make it easier to understand Quantum Physics.

KEYWORDS: Spacetime, Relativity, Astronomy, Plank Equation, Particle Physics, Quantum Physics

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1 Torque

The following picture illustrates the torque force in Classic Physics.

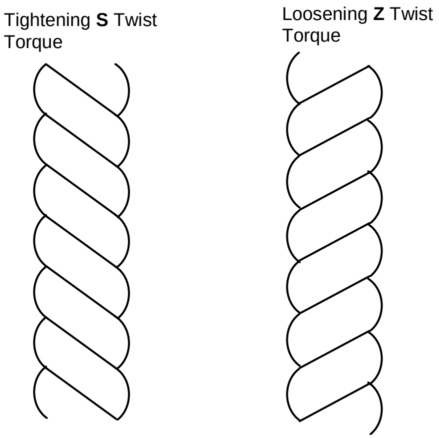


Figure 2-1

The diagram on the left is a tightening torque, while the one on the right is a loosening torque. These two types of torques are twisting in different directions. “Tightening” and “Loosening” are just terms to label the two different directions of torques. The torque movement appears everyday in one’s life. Take for example the act of screwing a lid onto a jar. That is a “tightening” torque. When opening a door with a knob, a loosening torque is taking place.

2 Four Dimensional Space

We can only see objects in 3D space. The space torque is constantly moving. If the space torque movement is 3D only, the tightening torque will make the space tighter and tighter, and the loosening torque will make the space looser over time. Fortunately, the movement of the space torque does not limit itself to 3D space. The space torque extends itself to 4D space.

In 4D space:

Tightening Torque:

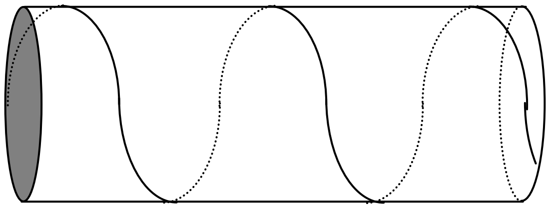


Figure 3-1

Loosening Torque:

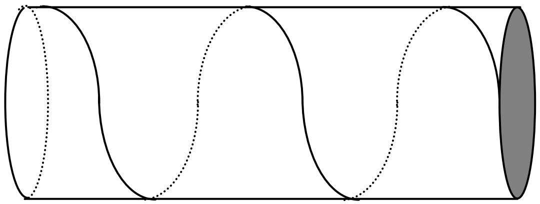


Figure 3-2

In 3D space:

This is a view looking from the side of the 4D cylinder of the figure 3-1 or figure 3-2.

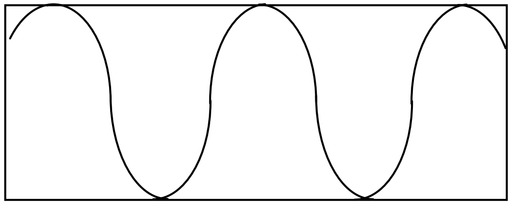


Figure 3-3

This is a view of the torque looking from the front into the 4D cylinder of the figure 3-1 or figure 3-2.

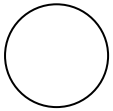


Figure 3-4

3D space is the shadow of 4D space. In 4D space, there is the Tightening Torque and Loosening Torque. When you observe both Torques in 3D space, they are the same. In 3D space, you cannot differentiate the above two Torques, which are different in 4D space. The torque movement becomes a wave movement or a circling movement. In the 3D shadow, the same 4D Tightening Torque can be seen as clockwise or counterclockwise. It can also be the same as a wave going from left to right or right to left. The dynamic wave in 4D can be static in 3D since the movement in the fourth dimension cannot be seen.

3 Space Torque

Assume that our universe is based on the tightening torque. The universal tightening torque is called the Space Torque.

3.1 Definitions

In order to understand the space torque, we need to define the following terms:

Media (Void): The ideal space where there is no space torque.

Space Torque: The tightening 3D torque movements in 4D space in the universe.

Universe: The 3D space bonded by the Space Torque and surrounded by other torqued spaces.

Torque Line: The main line the universal tightening torque goes along.

3D Torque Cartesian coordinate: The 3D coordinate, which the axes are fixed upon the space torque lines.

3D Torque Grid: The 3D coordinate grid based on the 3D Torque Cartesian coordinate system.

Absolute Space Reference Frame (Inert Reference Frame): The space reference frame that is based on the 3D Torque coordinate.

Media Line: The reference line in the Media.

Due to the torque movement, the media line is twisted.

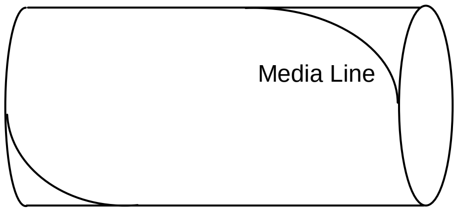


Figure 4-1

Torque Field: When the torque movements stabilize, the Media Line will repeat itself, even though the circular movements continue. The media does not get bigger; instead, the torque movements keep the torque force and Media Line twisted. The Torque Force and the Twisted Media Line is the Torque field.

Space Torque: The stabilized 3D torque movements in 4D space.

In theory, the space torque can be 3D in:

4D, 4D in 5D… nD in (n+1) D.

Stable Torque

There is an inert reference frame. You can find a flat area in the inert space reference frame, S, to have snapshot of the torque force T(s, t).

$$\iint_{s} T(s,t) = F(t) \qquad (4\text{-}1)$$

F(t) is the total force and t is time. In the stable torque field, you can find a minimum constant time of k, we have:

F(kn) is a constant.

Where n=1, 2, 3 …

k is the time it takes to complete one cycle of the torque wave. The frequency of the wave is:

$$f = 1/k \qquad (4\text{-}2)$$

Since the torque wave moves at the speed of light, we can get the wavelength:

$$\lambda = c / f = 2\pi c / \omega \qquad (4\text{-}3)$$

ω is the angular speed.

If a torque field has a steady frequency, it is a stable torque field.

If you have a snapshot of the stable torque in an absolute space reference frame, the torque wave phase should be able to repeat itself at a fixed interval. However, no matter how long you wait; the torque should not be able to have a reverse torque.

You can also express the phase of a plane torque wave as a complex phase factor:

$$\Psi(x,t) = Ae^{i(k.x-\omega t)} \qquad (4\text{-}4)$$

The above equation tells us that the torque wave phase repeats itself when:

$$\omega t = 2\pi$$

$$t = 2\pi / \omega$$

3.2 3D Torque Movement

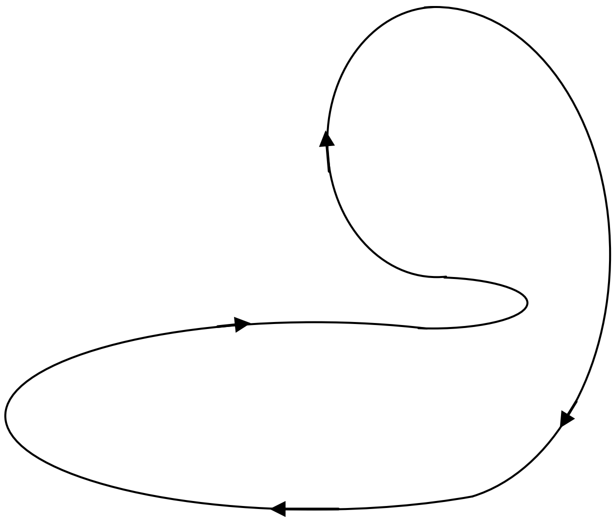


Figure 4-2

The above picture shows how the stable 3D torque movement works. It is simply a random cycle that travels along all three axes in 3D space. The circular movement in 3D keeps changing direction and eventually covers all three dimensions. At any giving time, the media moves at one direction only. The torque movement seems random, but follows the pattern above. The above diagram is an ideal case.

3.3 Light

The basic 3D particle in the world is light, which is also a photon. A photon is a circular media motion in the universe.

Light and torque work together. A photon has a circular motion like a nut circling along the screw. The direction of the light goes along the torque line.

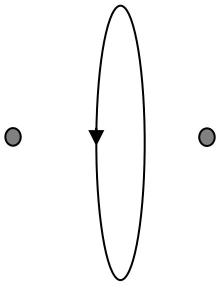


Figure 4-3

3.3.1 Light Speed

The energy is conserved. When the torque moves slower, the photon circles the torque line faster to keep the same energy. Like wise, when the torque moves faster, the photon circles slower. Thus, make the light speed the constant of c.

Light is also the basic 3D energy form.

The speed of the torque movement cannot be measured. It is faster than the speed of light in order for light to be formed in Torque space. The Torque movement has to shape the light when light travels in torque space.

4 Energy in Moving Reference

4.1 Massive Particle

The difference between massive particles and the photons (or other torque fields) is that massive particles have 4D torques. The 4D movement of the particle “fixes” the particle in 3D space. The axis of the torque movement is in 3D space. The circular torque motion is split up. One remains in 3D space. The other goes into the fourth dimension.

The circular movement is in two dimensions and one of the dimensions is in the fourth dimension.

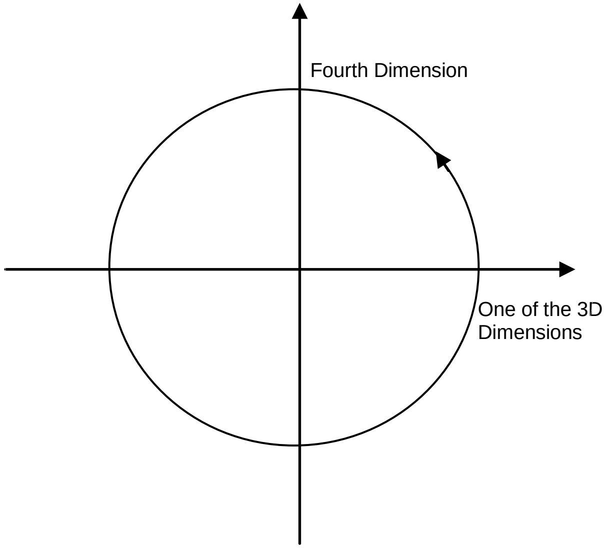


Figure 5-1

Without the participation of the fourth dimension, the only particle that can exist in 3D space is the photon. Space itself is a 3D torque movement in 4D space. Visible particle movement is limited to 3D space.

All particles are condensed torque energy. When the Space Torque makes a particle, the main part of the particle has the same torque as the Space Torque (tightening torque). The main part of the particle has more mass. Therefore, positively charged protons have a tightening torque, and negatively charged electrons have loosening torques.

4.2 Particle Movement

This section shows the movements of particles using the 3D Torque coordinate system. The torque space has the following characteristics:

1. The light speed in the 3D Torque Coordinate is the constant c.
2. The space-time measurement in a moving space is based on how much space and time light takes to travel.
3. When a particle moves in 3D space, the fourth dimension is not involved in its movement. The fourth dimension participates in the torque movement.
4. One of the dimensions in 3D space participates in the particle torque movement.

When a particle moves at speed of v in the Torque coordinate system from point B to A, it results in the following image.

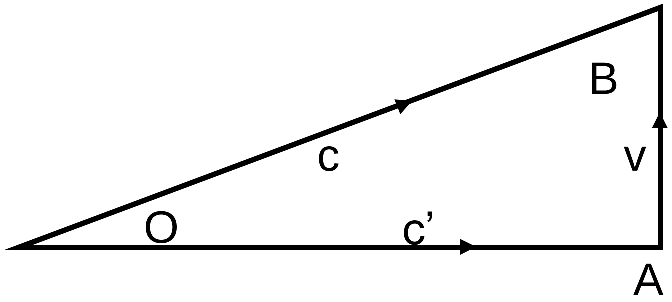


Figure 5-2

In the moving reference, the light appears to move from Point O to A. In the Torque reference, actually, the light moves from Point O to B. The distance of OB and the speed of c are used to measure the torque movement in the moving reference.

It takes more time to travel from O to B than from O to A. In the moving reference, OA is the distance perceived in the moving reference. OB is the actual distance in the torque space. The following defines the shrinking factor:

$$d = OA/OB \quad (5\text{-}1)$$

or

$$d = c'/c \quad (5\text{-}2)$$

or

$$d = \sqrt{1 - \frac{v^2}{c^2}} \quad (5\text{-}3)$$

Along the moving direction, there are two speeds:

c+v and c-v

The stretching factor for v direction movement:

$$d1 = (c+v)/c \quad (5\text{-}4)$$

The stretching factor for reverse v direction movement:

$$d2 = (c-v)/c \quad (5\text{-}5)$$

The average shrinking factor is the average of the following multiplications:

$$\sqrt{\frac{(c+v)}{c}\frac{(c-v)}{c}} = \sqrt{1 - \frac{v^2}{c^2}} \quad (5\text{-}6)$$

In 3D space, each dimension is shrunken by the above factor; the light speed is also shrunken by this too.

The torque movement of the particle is proportional to light speed:

$$T = Ac \quad (5\text{-}7)$$

The torque energy can be calculated as follows:

VTT_{fourth}

V is the volume of the dimensions participating in the torque movement.

In the Torque reference, we will study a unit cube where each dimension has one unit of length:

V=1*1*1*1 = 1

$$E_{torque} = TT_{fourth} \quad (5\text{-}8)$$

To use the torque reference frame for the unit cube, the volume must be calculated. One of the dimensions is the fourth dimension; its length remains the same. The other two dimensions are shrunken by d in the moving reference. In the torque reference, the length is stretched by 1/d:

$$V_{moving} = 1*(1/d)*(1/d) = 1/d^2 \quad (5\text{-}9)$$

$$T_{moving} = Ac' = Acd = Td \quad (5\text{-}10)$$

$$E_{moving} = V_{moving}T_{moving}T_{fourth} = (1/d^2)TdT_{fourth} = (1/d)TT_{fourth} = (1/d)E_{torque} \quad (5\text{-}11)$$

We have:

$$E_{moving} = (1/d)E_{torque} \quad (5\text{-}12)$$

Or:

$$E_{moving} = \frac{E_{torque}}{\sqrt{1 - \frac{v^2}{c^2}}} \quad (5\text{-}13)$$

The Torque reference is the actual inert reference in the Theory of Relativity. We can also have:

$$E = \frac{E_0}{\sqrt{1-\frac{v^2}{c^2}}} \tag{5-14}$$

The energy is proportional to the mass.

$$E=Am \tag{5-15}$$

That is:

$$E_{moving} =(1/d)E_{torque} \tag{5-16}$$

Or:

$$A\ m_{moving} =(1/d)Am_{torque} \tag{5-17}$$

Simplified to:

$$m_{moving} =(1/d)m_{torque} \tag{5-18}$$

Or:

$$m_{moving} = \frac{m_{torque}}{\sqrt{1-\frac{v^2}{c^2}}} \tag{5-19}$$

Relativity form:

$$m = \frac{m_0}{\sqrt{1-\frac{v^2}{c^2}}} \tag{5-20}$$

We can solve the factor A as follows:

When v is small, we have:

$$A(m-m_0)=(1/2)\ m_0v^2 \tag{5-21}$$

or

$$Am_0\left(\frac{1}{\sqrt{1-\frac{v^2}{c^2}}}-1\right) = \frac{1}{2}m_0v^2 \tag{5-22}$$

$$A\ m_0\frac{v^2}{2c^2} = \frac{1}{2}m_0v^2 \tag{5-23}$$

$$A= c^2 \tag{5-24}$$

From (5-15) and (5-24):

$$E=mc^2 \tag{5-25}$$

5 Space Wave and Plank Equation

In Torque space, the particle stops the Torque wave from moving past the particle. The amount of torque energy stopped by the particle is proportional to the particle's mass. When the stopped energy passes a fixed quantum limit, the torque wave moves past the particle. Eventually, a static wave pattern forms.

5.1 Plank Equation and Space Wave

In water, the waves move, but space waves do not move away or move closer to the source particle. The more mass the particle has, the less time the Torque wave takes to pass the particle. Or:

$$mT=K \tag{6-1}$$

Since

m is the particle mass

T is the wave cycle time

K is a constant

Assume that v is the frequency:

$$v=1/T \quad (6\text{-}2)$$

We know that: (Equation (5-25)):

$E= mc^2$

Equation mT=K can be changed to:

$$(E/ c^2)(1/v)=K \quad (6\text{-}3)$$

Or:

$$E=vKc^2 \quad (6\text{-}4)$$

Assume that

$$Kc^2=h \quad (6\text{-}5)$$

We have:

$$E=hv \quad (6\text{-}6)$$

The above equation is the Plank–Einstein equation.

The space wave is the source of the wave characteristics of the particles. A particle is surrounded by the space wave as follows:

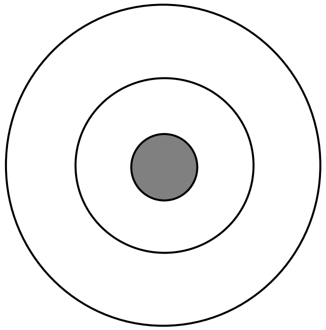


Figure 6-1

The Torque wave in space is faster then the speed of light. The speed of the particle is slower than light. Because the Space Torque movement is faster, the above wave structure can form.

5.2 Particle Wave

When a particle is moving, the space wave moves along with the moving particle. Let's study two particles, A and B. Assume particle A is moving towards B:

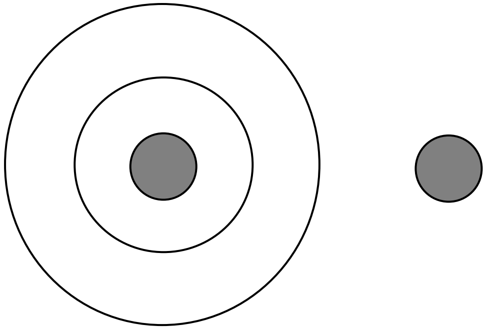


Figure 6-2

Assume that the speed of particle A is V, the wavelength is L, and the time it takes to travel distance L is T.

$$T=L/V \quad (6\text{-}7)$$

When the space waves of particle A meet particle B, particle B interferes with the space waves and generates a new moving wave traveling at the speed of the light. The new waves are called particle waves.

Assume that the wavelength of the particle wave is λ:

$$\lambda = Tc = (L/V)c \quad (6\text{-}8)$$

From the Plank equation (6-6): E=hv

We have:

$$E=h(c/L) \tag{6-9}$$

$L=hc/E=hc/mc^2=h/mc$

$$\lambda=(L/V)c=\frac{\mathrm{h/mc}}{V}c \tag{6-10}$$

Or:

$$mV=h/\lambda=h\upsilon \tag{6-11}$$

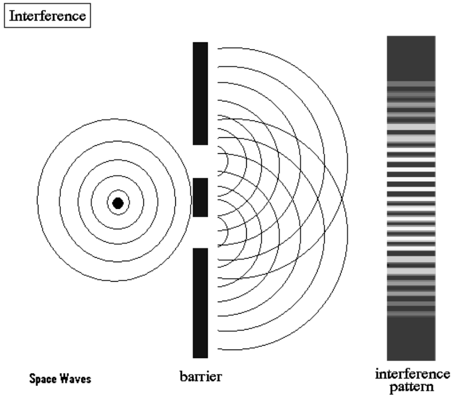
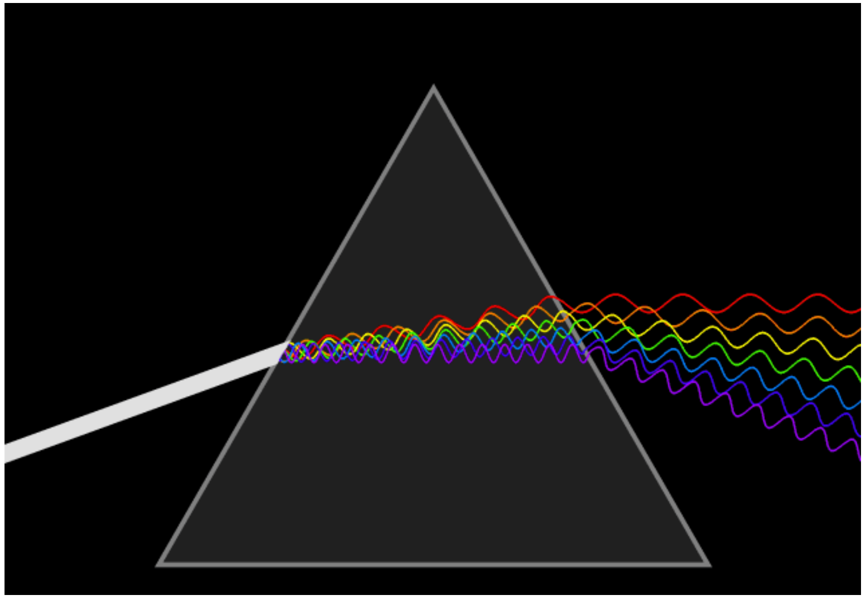


Figure 6-3

In the above Double-Slit Experiment, the space wave interacts with the barrier and generates particle waves through two slits beyond the barrier. The particle moves through one slit only. After passing the slit, the particle pauses and allows the creation of a new stable space wave. The particle waves of the particle and space waves from two slits merge to form a new space wave. The new stable space waves choose a direction that makes the new space wave the strongest and most stable with the above three waves. The direction with the stronger particle wave, which results from interference, has a higher possibility to be the chosen direction. The actual process is more complex, but as of now, we will stop here.

5.3 Light Speeds and Frequency of Lights

When light passes a media, the space waves are distorted. New space waves will be formed from the distorted waves and particle waves.



The process slows down the light. The shorter the wavelength, the slower the speed is. This is because there are more waves to be rebuilt during the same time frame.

6 References

[1] Zhiliang Cao, Henry Cao: The Alpha Torque and the Charged Field, http://vixra.org/pdf/1006.0067v1.pdf