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Unified Field Theory and Foundation of Physics

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Abstract The paper "Unified field theory" (UFT) [1] opened a new chapter of physics. The main model of UFT is Torque Grids that unify Space, Time, Energy and Force. The configuration of invisible particles [2] and structure of the grand universe [3] can be logically induced. Visually, the universe can be modeled as single Torque Grids' hierarchy. A simple UDP Java program can be used to prove the space-time-energy-force relationship predicted by the unified field theory and explain why the continents are drifting [4]. One of the applications of UFT is to predict the nuclei topologies [5] of each element. Physics, "knowledge of nature", is defined as a natural science that involves the study of matter and its motion through space and time, along with related concepts such as energy and force. UFT gives a better definition of Physics: "A natural science that involves the study of motion of space-time-energy-force to explain/predict the motion, interaction and configuration of matter."

Keywords: *nuclear physics, particle physics, unified field theory, astronomy, GPS, atomic clock*

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1. Introduction

Unified Field Theory (UFT) [1] physically models the world using Torque Grids that are invisible but understandable. As Physics progresses, it focuses more on invisible particles [2] and the unreachable grand universe [3] as visible matter is studied theoretically and experimentally. The old models focus on visible matter, such as particles, and celestial objects. These models limit themselves to tangible things that failed to serve as the fundamental basis of Physics. The Torque Grid model is logical and self-evident. The concept of space, time, energy and force reflected in the model are most fundamental and physical.

UFT covers all levels of physics, from the most basic concept to the most advanced theory. It derives physics equations one by one using space-time-energy-force in the model of Torque Grid. UFT develops the theories firmly on the foundation of space-time-energy-force with help of the Torque Grid model.

The relationship between space and time is described in Relativity; however, UFT claims that space and time are inseparable. Without time, space has no meaning in Physics, since it requires time to measure motion in space. Similarly, without space, time has no Physics meaning, since space is needed to measure motion in time.

Space and time still have no meaning if there are no differentials in space-time. Energy is the differential. In UFT, there is no true void. Energy in space-time is modeled as distortions.

UFT is a study of fields, which represent forces in space. Therefore, force is a fundamental concept in UFT.

Visually, space is modeled as Grids, energy is modeled as strings, time is modeled as light speed twisting movement of strings, and force is modeled as Grids' resistance to the distortion. Finally, the model becomes Torque Grids.

UFT does not try to prove the existence of Torque Grids experimentally and there is no difference between border of the Grid and the internal part of the Grid. Therefore, physical Torque Grids do not exist. Fortunately, even though they are not tangible, they are understandable. Torque Grids model can explain the existing theory and make useful predictions of motion, interaction and configuration of matter.

2. Torque and Grid

As a natural science that involves the study of motion of space-time-energy-force, UFT studies arbitrary motion in 3D space and time. The directions of an arbitrary 3D movement are changing and correlated. There are two possible movements, S twist and Z twist. Other than twist movements, there are straight line and circular movements as well, but straight line is a 1D movement and circular movement is a 2D movement, only the following twists are true 3D movements:

The Twist movements are called Torques. In the Figure 1, the left image is a tightening Torque, while the one on the right is a loosening Torque. "Tightening" and "Loosening" are the two different directions of Torques. The Torque movement appears in everyday life. For

example, the act of screwing a lid onto a jar is a "Tightening" Torque. When opening a door with a knob, a Loosening Torque is taking place.

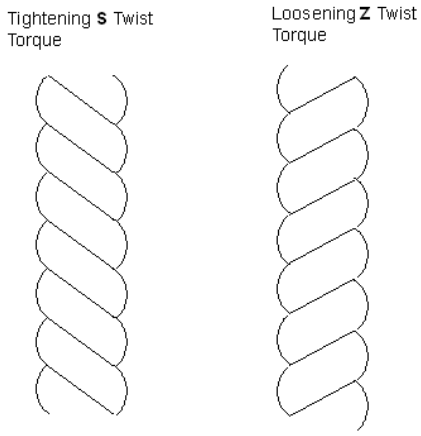

Figure 1. Torques

One can choose three directions in a 3D coordinate system and use a String unit length to form a cube. A Torque Grid system emerges:

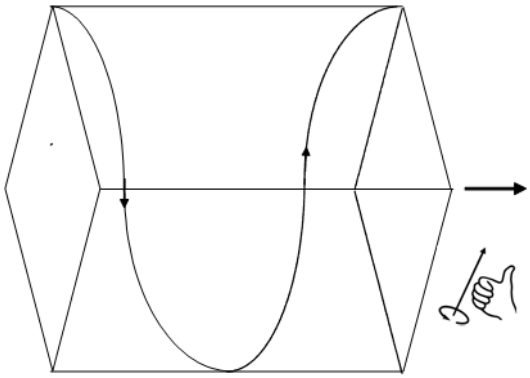

Figure 2. Torque Grid

Figure 2 has a single Torque Grid with a single Torque cycle. To make it easier to remember the movement of the Torque String, this theory assumes that the main Torque String movements in the vacuum of the universe are right-handed. Positive charge has right-handed static Torque, while negative charge has left-handed static Torque. The positive and negative charge is result of natural 3D arbitrary motion.

3. Energy and Gravity

Torque model for space-time still have no Physics meaning if there are no differentials in space-time. The differentials are energy. Energy is a result of Torque Grids' distortion [1] when space and time are not evenly distributed.

Our previous Clock-Drifting Experiment [4] proved that space and time are not even in the gravity field. The energy is proportional to the stretching and compression of Torque Grids [1] where matter is presented. The energy differences for same matter in space lead to gravity [1]:

$$F = mc^2 * dD / ds \quad (1)$$

Or,

$$F = mc^2 * (dD / c) / (ds / c) \quad (2)$$

$$F = mc^2 * dT / dt$$

Stretching and compression distortion of Torque Grids do not introduce energy in a vacuum, while the twisting distortion of Torque Grids has energy. Electron-magnetic waves manifest from the twisting distortion of the Torque Grids and they move at same speed as the string of Torque Grids. This is consistent with the Torque Grids model. The energy is related to twisting motions.

4. Twist of Particle

Torque Grids' twist distortion is the basic energy form. When a Torque Grids' twist distortion resonates with Torque Grids, the twist distortion stops moving along with the Torque Strings. The twist distortion forms a twist residue. A stable residue with the lowest possible energy has one Torque Grid twist distortion. The residue is an electron (or positron), or unit charge.

The unit charge forces can be calculated based on the above claims.

The other particles [2] are formed as result of the proper energy distortion wave resonance with unit charge.

The mass of a particle can be expressed in a wave formula [2] that can be used to predict the properties of the particle.

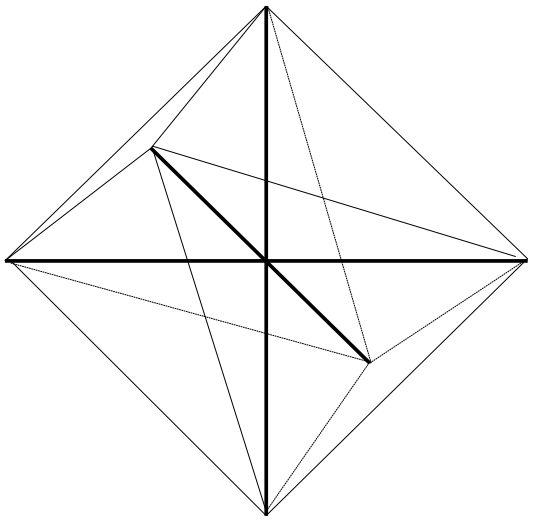

Figure 3. Three Axes Octahedron shape

A proton has an octahedron shape based on its mass formula.

Particle prediction:

The structure of T2 is:

2*(11*12*13) + 23+23+23 +0.195 = 6141.1495

Or 3138.1208MeV

5. Unified Fields

UFT considers gravity and electromagnetic field basic fields. The strong field and weak field are mainly due to the wave formula of the electron:

$$3*5*8 + 3*5 + 2 = 137$$

A unit charge is composed of waves with masses of 137 times the electron mass. The unit charge can have another resonance condition: The Planck distortion and electronic Torque distortion [2] are both one Torque Grid size. The new distortion becomes a stable wave by itself, the strong force wave.

The Planck distortion on the shell of an electron is 1/137 of Grid size.

The weak interaction energy is the product of the two weak distortions. Therefore, total energy is (1/137)* (1/137) of the unit charge energy.

When waves resonate with one another, the weak interaction unit is:

$$\frac{1}{137*137*\prod_{1}^{n} S_i}$$

When waves are dissonant with one another, the compensate wave interaction unit is:

$$\frac{\prod_{1}^{x} P_i}{\prod_{1}^{y} Q_i}$$

In order to properly predict the mass of the particles, the above additional interactions are needed to give calculation of the particle mass much precise as compared to standard model [8-13].

6. Hierarchical Universe

If there is a Torque Grid, then, is there anything inside the Torque Grid? Is there a boundary for our visible universe?

To answer the above questions, UFT logically induced that the universe is hierarchical [3]. It can be infinitely large, or infinitely small in size.

The conclusion is clearly contradicted to the conventional Big Bang Theory (BBT). An experiment [6] is proposed to explain Red Shift of remote galaxies is the result of electron-photon interaction.

Child Grid and parent Grid have different Torque (twisting) directions. Since left and right are relative, each Torque Grid hierarchy shares the same Physics laws.

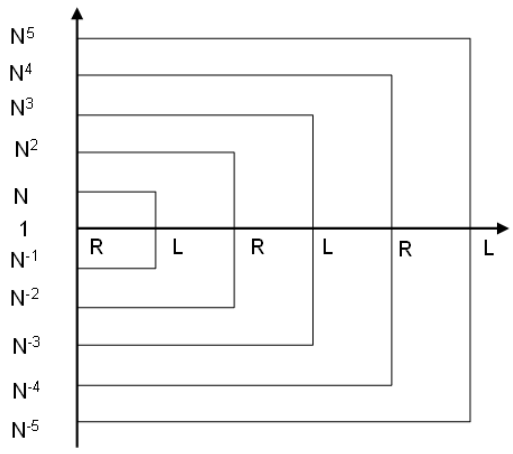

Figure 4. Torque Grid Hierarchy

The hierarchical universe gives us an insight regarding how things are related since there is a single universe modeled as Torque Grids which is deeply rooted in the ancient ideology:

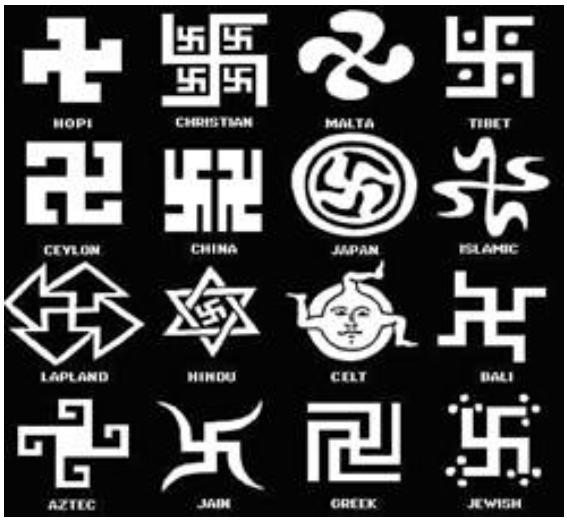

Figure 5. Symbolic Torque

Ancient religions [14-21] considered that symbol [22-31] of Torque had magic power of universe. UFT discovered that Torque Grids unify Space, time, energy, and force. The universe is single hierarchy of Torque Grids.

7. Topology of Nuclei

Without knowing the structures of protons and neutrons, the topology of the nucleus is “unclear”. Fortunately, an important prediction of UFT regarding nuclear structure is the shape of the proton. A nucleus is made up of protons and neutrons. Both proton and neutron share the same octahedron shape.

Octahedron protons and neutrons pile themselves up to make a nucleus. The configuration of proton/neutron octahedron pile decides the characteristics of a nucleus.

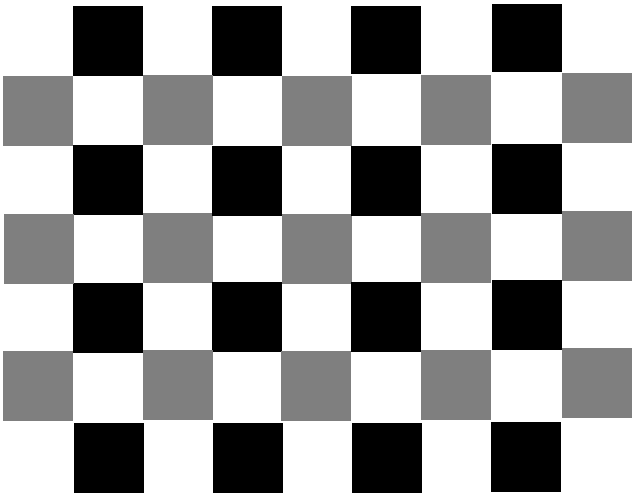

Figure 6. [31] Phosphorus

One of the important prediction of UFT is the configuration of Phosphorous. The none perfect square topology of the phosphorous gives its special crystal structure and roles in DNA [32-39] twisting:

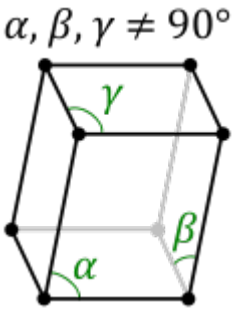

Figure 7. Phosphorous Crystal

8. GPS and Earthquake

The key to knowing the relative time is to understand time drift in gravity fields. The simplest way to test clock drift is to use a computer program. Even though it takes a few days to see the clock drifting pattern [4], you can test it using distributed data centers in most companies.

Clock drift tests can be conducted with a regular computer clock, while an atomic clock is needed for a commercial GPS [40-103] system. One nanosecond equals to 0.3 meter in distance, the width of a human body. As gravity introduces clock drifting, it also reduces the effectiveness of the atomic clock. Land based global time [4] proposed by UFT is an engineering solution that resolves the gravity issue and achieves two goals for GPS: accuracy improvements and cost reductions.

In addition to GPS, the precise clock drifting patterns can be used to understand the forces that move the continents. The clock in New York is faster the Chicago. According to UFT, a force is moving the continent. From equation (2), the value dt is distance between New York and Chicago divided by light speed:

1145/c = 0.00382

Clock drifting per second is 30 ns.

The clock drifting rate is:

0.0000000001146

Force per square meter is 0.033 kg.

Even though the force is small, it can move the whole continent since there are weak structures on earth shell. Before earthquake, the internal earth moves gradually along the weak structures as the stronger structure resists the movements until it snaps. A sensitive atomic clock can detect clock drifting originated by the uneven earth movements introduced.

The continents are moving as follow:

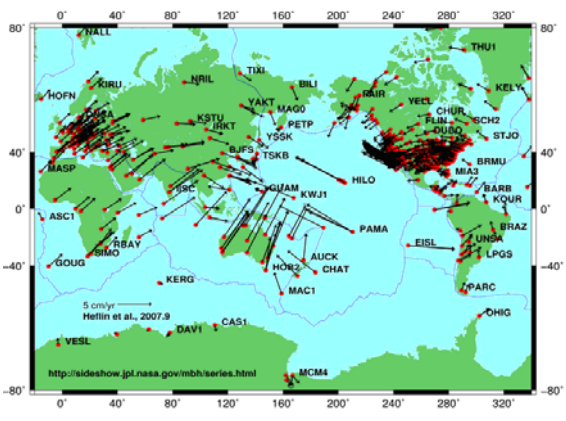

Figure 8. Continental Drifting Trend

Eventually, the continents will shift to the north and south poles as in the image below:

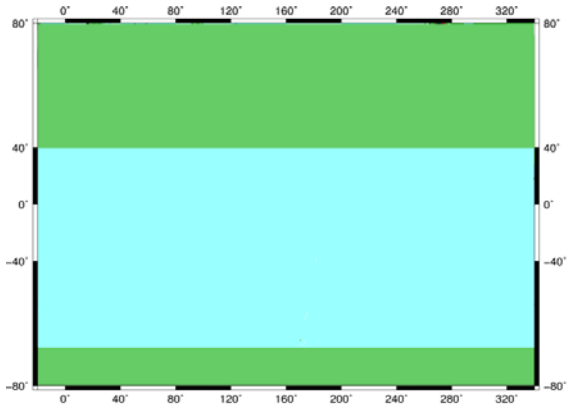

Figure 9. Final Continental Configuration

9. Conclusion

The universe is the unification of Space, Time, Energy and Force. The Torque model successfully derives each physics equations. Four fundamental forces can be modeled and calculated.

The mass of a particle can be expressed in a wave formula that can be used to predict the properties of the particle. The predicted octahedron proton provided the insight of nuclear topologies.

The universe is composed of hierarchical Torque Grids, meaning that the universe has always existed and will continue to exist indefinitely.

The main force behind continental drift is the gravity of the Moon. The continents will shift towards the north and south poles.

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[10] In fact, there are mathematical issues regarding quantum field theories still under debate (see e.g. Landau pole), but the predictions extracted from the Standard Model by current methods applicable to current experiments are all self-consistent. For a further discussion see e.g. Chapter 25 of R. Mann (2010). An Introduction to Particle Physics and the Standard Model. CRC Press.

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