Constructing the Physical Universe from Non-Material Cause

David W. Thomson III
Quantum AetherDynamics Institute
518 Illinois St.
Alma, IL 62807
cufteapm@volantis.org

Jim D. Bourassa
254 Gregory M. Sears Drive
Gilberts, IL 60136
quantumaetherdynamics@gmail.com

Abstract

Our previous papers induce the Aether Physics Model from empirical constants, quantifiably unify the fundamental forces, and present electron binding energy equations for all 1s ground state "orbitals" in atoms. This paper constructs the physical Universe from previously induced primary states of Gforce, dark matter, and singularity, and then reveals some implications for the macro physical Universe along with certain qualities experienced as mind.

Introduction

The Aether Physics Model (APM) quantifies quantum and pre-quantum structures, based upon a fresh perspective of the quantum constants. Unlike classical and Relativistic physics, all charge in the Aether Physics Model expresses in distributed dimensions (coulomb squared as opposed to single dimension coulomb). Every dimension and unit has a reciprocal, which relates to its counterpart. The Aether Physics Model helps clarify the various orders of existence, beginning with non-material reality.

When describing space-time and the matter within it, the mass/energy paradigm of the Standard Model (SM) replaces with an Aether/angular momentum paradigm. The SM explains quantum existence in terms of a four dimensional space-time (three dimensions of length, one dimension of time); whereas the Aether Physics Model explains quantum existence in terms of five-dimensional space-resonance (three dimensions of length, two dimensions of frequency).

We derive new and useful physical constants from the established physical constants. We propose the conductance constant of the Aether belongs with the speed of light, permeability constant, and permittivity constant as qualities of the "vacuum." We further propose the conductance constant is essential to understanding how the feelings of the mind interact with matter. In addition, the Gforce and Aether unit are among new constants, which are useful for comprehending non-material existence.

The derivation of these new constants induces in our previous paper, A New Foundation for Physics[1] (ANFP). We elaborate the Unified Force Theory in our Calculations of the Unified Force Theory in the Aether Physics Model[2] paper, and our Electron Binding Energies in the Aether Physics Model[3] paper presents the electron binding energy equations. Our book, Secrets of the Aether[4] explains further aspects of the Aether Physics Model such as Aether fabric structures, a new system of quantum measurements units, and our work on the nuclear binding energy equation. Due to space limitations and

publication rules, we ask readers to familiarize themselves with the quantification and induction of the Aether Physics Model through our other publications before proceeding further.

Primary Existence

The Aether Physics Model induces that the physical Universe derives from three primary causes; a non-material Gforce, a singularity, and strings of mass (dark matter). Since physics is the quantification and understanding of physical observations, and the three causes induce as non-material entities, we can identify these non-material causes, but we cannot further physically observe and understand them. Therefore, we must accept the three primary causes simply by the fact that they induce from the physical observations.

The Gforce has a value of 1.21×10^{44} *newton*. The physical forces are gravity, electrostatic force, and electromagnetic (strong) force (see ANFP[1]). Just as frequency is cycles per time, reciprocal force is cycles per force. The Gforce is a reciprocal force, which oscillates between a push and pull mode within a quantum moment. Thus, the Gforce is dynamic, and since the net force is always zero, the Gforce is non-material, yet real.

The singularity has a value of 1. The singularity describes a concept known primarily to mystics and ignored by physicists. The singularity is the Oneness, or Wholeness, from which divisions evolve and dissolve. From our perspective within split reality, it is difficult to comprehend Oneness, yet it easily induces as a real beginning for the origin of physical existence.

String theory already proposes primary existence as vibrating strings. The Standard Model quantifies a "substance," called dark matter[5]. In the Aether Physics Model, dark matter quantifies as a circular string of mass, called the Ligamen Circulatus (LC). The quantity of the LC is not determined until it is

absorbed into an Aether unit and becomes visible matter. The vast sea of dark matter existing outside of the Aether is like "primordial clay" out of which visible matter constructs.

Constructing Quantum Existence

The Gforce, itself, is equal to the mass associated with the Aether times the quantum length times the quantum frequency squared:

$$Gforce = m_a \cdot \lambda_C \cdot F_q^{\,2} \tag{1.1}$$

where the mass associated with the Aether is 3.268×10^{15} kg, λ_C is the quantum length of 2.426×10^{-12} m (Compton wavelength), and F_q is the quantum frequency (1.236×10^{20} Hz).

The non-material Gforce acts upon the singularity, causing it to split. When the singularity splits, it produces two types of charges, electrostatic charge, and electromagnetic charge:

$$1 = \frac{e^2}{8\pi\alpha_A \cdot e_a^{\,2}} \tag{1.2}$$

where *e* is the elementary charge, α_A is the Aether fine structure (2.034×10^{-48}), and $e_a^{\,2}$ is the strong charge associated with the Aether (5.021×10^{8} coul^2).

The Gforce acting on the quantum length squared per Aether strong charge produces an Aether unit:

$$Gforce \cdot \frac{\lambda_C^{\,2}}{e_a^{\,2}} = A_u \tag{1.3}$$

An Aether unit is then the oscillating push-pull, non-material reciprocal force keeping the strong charge separate from the electrostatic charge. The Gforce acting upon the split in the singularity produces an

Aether unit, which also views as a quantum unit of rotating magnetic field. The Aether unit is the source of spin, subatomic particle strong charge, and space-resonance in which all subatomic particles reside.

The electrostatic charge arising from the split in the singularity produces both a positive and negative spherical charge; the push-pull of the Gforce scans a double tubular loxodrome figure away from, yet surrounding electrostatic charges. The push-pull of the Gforce manifests as the forward/backward-time frequency and the right/left spin direction.

Aether units generate according to the mechanics of the Casimir effect. As two subatomic particles of equal magnitude approach each other, and remain one quantum length apart, they cause an oscillation, which generates a new Aether unit and absorbs an amount of dark matter equal to the single mass of the subatomic particles involved (see ANFP sec 8.b.). The absorbed dark matter (LC) thus takes form as a photon, before converting to a subatomic particle via the photoelectric effect, in atoms.

When electron-sized photons convert to subatomic particles they become electrons or positrons, and proton-sized photons become either protons or antiprotons. The LC may only move in the forward time direction (according to the human view of the Universe) and either in the right or left spin direction. Thus, in forward time there are four possible spin positions for stable subatomic particles. The Aether unit with its four possible spin positions for subatomic particles illustrates as in figure 1.

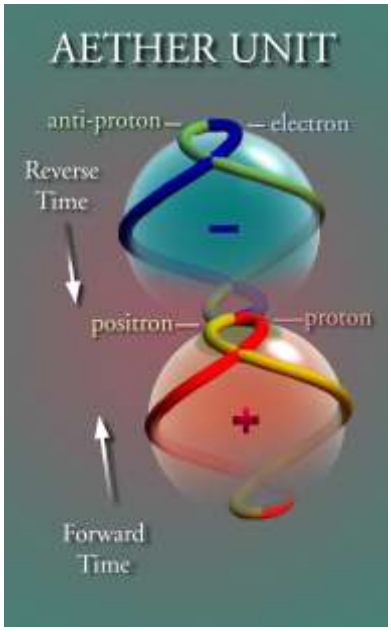

Figure 1 – Aether Unit - The quantum Aether unit depicts as a double tubular loxodrome structure.

Because the LC only moves in the forward time direction within its spin position, it only sees half the forward/backward-time cycle. This is why subatomic matter appears to have half-spin. Further, since the LC only moves in forward time, matter has the appearance of existing only in forward linear time. The LC actually exists in pulsed, forward time and acts like a time diode. Thus, linear time is strictly an artifact of physical existence.

In reality, the quantum realm exists in five dimensions. The four-dimensional space-time view of reality only applies to macro structures. This is why modern physics theories exist within porous boundaries and appear to have hidden variables[6]. The Heisenberg uncertainty principle[7] views subatomic existence in four dimensions, when it should view it in five. The cloud-like appearance of subatomic particles is due to the LC scanning an area (tube-shape in figure 1) in a quantum moment.

Wave-particle duality[8] similarly arises from a four-dimensional view of a five dimensional structure. In the Aether Physics Model, the subatomic particles are composed of what we can call Primary Angular

Momentum. The angular momentum arises from the flow within the Aether unit (which drives by the Gforce acting on strong charge), which carries the LC. Neither the LC nor the apparent electron structure possesses angular momentum, but it is the environment (Aether) in which the LC resides. If we focus on the moving LC, the subatomic particle would look like a wave. If we focus on the total scanned area of the subatomic particle spin position within the Aether unit, the subatomic particle appears as a particle. However, the electron ***is*** its angular momentum and is neither the LC nor the area scanned by the LC.

Implications of the Aether Physics Model

The Aether Physics Model began as a model of quantum *structure*, as opposed to a model of quantum *mechanics*. Because of the simple, Newtonian type math used to structure quantum and sub-quantum existence, equally simple Newtonian type equations allow for quantifying the structure of atoms. Our electron binding energy equations[3] predict the 1s orbital binding energies for all atoms. The yet imperfect electron binding energy equation already produces results from .03% to -.22% accuracy for the full range of atoms. This near-success is evidence enough to substantiate the model of quantum structure as proposed in the Aether Physics Model. Further research by the broader scientific community should quickly result in the perfect quantification for all sub-quantum, quantum, atomic, and molecular structures.

With the proper quantification of the structures, the proper quantum mechanics should easily be resolved. For example, in the present mass/energy paradigm, the photon imagines as an energy packet[9], rather than a true quantum photon. In the Aether Physics Model, the electron-sized photon quantifies as a true quantum, which is equal to the angular momentum (Planck's constant) of the electron times the speed of light. In the mass/energy paradigm, light views philosophically as frequencies of electromagnetic radiation, yet light has no physical unit. In the Aether Physics Model, light is a physical

unit equal to the photon times frequency. Consequently, the dynamics for understanding light involve units based upon angular momentum, rather than energy packets and vague references to frequencies.

Because the Aether Physics Model precisely models quantum structure and reveals the precise geometries related to the substantial dimensions of mass, electrostatic charge, and strong charge, it also produces a mathematically correct, Newtonian type Unified Force Theory[2]. The Gforce acting upon the substantial dimensions, quantifies as the cause of the fundamental physical forces.

Cosmological Implications

The physical structure of existence as proposed by the Aether Physics Model has ramifications for cosmology, too. Since space-time constantly generates, as quantified through the Casimir effect, there must also be a mechanism for space-time to dissolve. The APM views black holes not as physical objects, but rather as implosion events where space-time and matter dissolve. After the strong force binds matter to a certain density, the Aether associated with the densely bound matter would rip apart from the surrounding Aether fabric and "unravel." All the encapsulated ligamen circulatuses return to the sea of dark matter outside of the Aether units. The implosion process creates an outward explosion of dark matter (neutrinos, for example) and the inward rush of surrounding Aether units creates waves within the Aether fabric itself (gravitational and magnetic waves).

The constant implosion of matter and space-time draws surrounding matter toward the imploded region. In a galaxy, the black hole acts like a drain in a bathtub, where matter and space-time dissolve from existence, while the Casimir effect in the surrounding regions acts like a faucet, where new physical existence comes into being. Nebulae and stellar coronas would be examples where newly generated matter and space-time are occurring. The cycle of generation and dissolution of physical existence thus

causes matter to migrate toward the center of the galaxy, while motion and the magnetic structure of the Aether fabric creates and maintains the galaxy's rotation (Plasma Universe theory[10]).

Further, because the Universe constantly renews, its apparent age would be the time it takes for new matter to migrate toward an implosion event. Thus, the Universe may appear "older" in some of its regions and "younger" in others. However, regardless of whether the Universe seems to be 10 billion years old or 18 billion years old in a given region, it will always appear to have the same age range, that is, the Universe will always appear to be the same age even if it has eternal existence.

Quantifying Mind

Viewing all charge in distributed dimensions, and understanding the Gforce provides a possible quantification for certain aspects of mind. In the neurosciences, the unit of conductance often measures emotions. However, modern science uses rational logic to attempt to understand emotions, rather than examining them from within their own domain[11]. If we assume conductance is both emotion and the medium of emotions (no dichotomy of existence), we might make progress understanding the feeling aspect of mind.

The Aether unit also quantifies as:

$$A_u = 16\pi^2 \cdot c \cdot Cd \frac{\mu_0}{\varepsilon_0} \tag{1.4}$$

Here we see the Aether constructs from double loxodrome geometry ($16\pi^2$), motion (speed of light), conductance, permeability, and permittivity. Not only do all physical objects possess the property of conductance, but also so does all Aether. This provides a quantified basis for investigating paranormal phenomena. If emotions (or feelings) equate to conductance, then the physics appears to show conductance is both the signal and the carrier of emotions. Thus, it may be true that humans can transfer

emotion to physical objects and spaces, which are then in turn "read" by others (clairvoyants). It may also be true that humans can communicate across both space and time with other humans via conductance.

In the Aether Physics Model, due to the distributed charge dimensions, conductance is not the reciprocal of resistance, but rather magnetic flux is. Physical evidence supports this revelation[12] [13]. Therefore, to measure the conductance of an object, it is necessary to measure the magnetic flux and take its reciprocal, rather than measure the resistance and take its reciprocal. This error in unit alignments may explain why discrete progress has not been possible in the study of paranormal phenomena, to date.

Aside from the emotional or feeling aspect of mind, there is the will of mind, which may relate to the Gforce. Like the Gforce, the mind is non-material, yet real. The mind possesses net zero mass and is dynamic. The mind appears to experience a non-material dichotomy in terms of "like" and "dislike," or "desire" and "aversion," which may be the basis for rational thinking. Also like the Gforce, the mind does not directly interact with matter, yet through our feelings, we cause physical changes within our body. (The Gforce similarly interacts with visible matter via the non-material Aether.) By analyzing the Aether Physics Model and the empirical data relating to emotions, it may be possible to merge philosophy (including certain aspects of religions) with the physical sciences. However, the analysis of the philosophical implications of the Aether Physics Model will require much more study and debate before reaching conclusions.

Conclusion

This correspondence paper presents a mere introduction to the core of the Aether Physics Model. The proper understanding of the Aether Physics Model will only come with careful study and analysis, as is the case for understanding the Standard Model of particle physics.

We provide here the basic math revealing how physical existence arises from non-material existence (which some may interpret as mind, consciousness, or God). Among other accomplishments, the Aether Physics Model also reveals the geometry and full quantification of the Aether, the origin of time, the unification of the fundamental forces, and the structures of subatomic particles and atoms.

It is true the Aether Physics Model provides a different interpretation of quantum reality than provided by the Standard Model and its mass/energy paradigm, however the APM bases upon the same data. The choice between the Aether Physics Model and Standard Model is therefore not about which model is correct, but which model best describes existence and makes the most sense.

The Aether Physics Model at present does not quantify every aspect of the physical Universe; it is merely the beginning of such an accomplishment. It is up to the scientific establishments to investigate and further develop the Aether Physics Model, just as numerous scientists through extensive research have developed the Standard Model over the past century.

Acknowledgement

We thank Nancy Kolenda for inviting this paper on the Aether Physics Model for peer review.

References

---

[1] Thomson, David W. and Bourassa, Jim D., 2006, *A New Foundation for Physics*, Hadronic Press: Hadronic Journal Supplement (issue to be announced), also 2006, A New Foundation for Physics, Infinite Energy Magazine (vol 12, issue 69) pp 34-46, also http://www.16pi2.com/files/NewFoundationPhysics.pdf

[2] Thomson, David W. and Bourassa, Jim D., 2006, *Calculations of the Unified Force Theory in the Aether Physics Model*, Hadronic Press: Hadronic Journal Supplement (paper being considered), also http://www.16pi2.com/files/Calculations_UFT.pdf

[3] Thomson, David W. and Bourassa, Jim D., 2006, *Electron Binding Energies in the Aether Physics Model*, Hadronic Press: Hadronic Journal Supplement (paper being considered), also http://www.16pi2.com/files/Electron_binding_energy_equation.pdf

[4] Thomson, David W. and Bourassa, Jim D., 2004, *Secrets of the Aether*, Alma, IL, Aenor Trust.

[5] 2006, *The Columbia Encyclopedia* 6th ed., s.v. "Dark Matter"

[6] Mukhopadhyay, A.K., 2006, *Some Reflections on "Quo vadis Quantum Mechanics?": Extending Science Further! Let Us See Where?*, Frontier Perspectives (vol 15, no 1) p 12

[7] 2006, *The Columbia Encyclopedia* 6th ed., s.v. "Uncertainty Principle"

[8] Plotnitsky, Arkady, 1994, *Complementarity: Anti-Epistemology after Bohr and Derrida*, Durham, NC: Duke University Press, p 6

[9] Pais, Abraham, 1983, *Subtle Is the Lord: The Science and the Life of Albert Einstein*, Oxford: Oxford University Press, p 24

[10] Alfvén, Hannes O. G., February 1990, *Cosmology in the Plasma Universe: An Introductory Exposition*, IEEE Trans. Plasma Sci.

[11] Smith, Quentin, 1986, *The Felt Meanings of the World: A Metaphysics of Feeling*, West Lafayette, Indiana, Purdue University Press

[12] Schmidt, Stefan and Walach, Harald, 2000, *Electrodermal Activity (Eda) -- State-of-the-Art Measurement and Techniques for Parapsychological Purposes*, The Journal of Parapsychology (64.2) p 139

[13] Fowler, C.M., 1988 Jun 01, *Losses in magnetic flux compression generators: Part 2, Radiation losses*, Los Alamos National Lab., NM, (Report number LA-9956-MS-Pt.2)