

Augmented Newtonian Dynamics (AND): on Science vs Dogma

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Abstract: *Science thrives on critical scrutiny, openness to objections, and the continual revision of models in response to new evidence. When scientific theories become impervious to reasonable criticism, they risk devolving into dogma—rigid, unquestioned beliefs that hinder progress. This paper explores the dynamic relationship between science, truth, and criticism, emphasizing that scientific models are provisional, approximating reality rather than providing absolute truths. The role of criticism in science is crucial, ensuring that knowledge evolves and remains grounded in evidence. However, when biases, cognitive dissonance, or institutional pressures influence the acceptance of theories despite a lack of empirical support, scientific integrity can be compromised. This paper examines how uncritical adherence to certain scientific dogmas, especially when supported by powerful institutions, can distort the scientific process and divert attention from more promising inquiries. Ultimately, the paper addresses the question of whether emotional attachment or cognitive bias, can justify the rejection of evidence and the stifling of constructive criticism in science. Augmented Newtonian Dynamics makes deep inroads into the esoteric consequences of the adoption of wave - particle duality by quantum mechanics. This is achieved through two well supported ideas, namely the attribution of electron stability to self - regulation via emission and absorption of virtual photons in a process of self - interaction and the revival of the aether theory.*

Keywords: Dogma, quantum mechanics, relativity, aether, photons, virtual photons, Dark matter, electrons

1. Introduction

The foundation of science lies not only in its methods and observations but also in its openness to reasonable objections and critical scrutiny. When a scientific model or theory becomes impervious to valid criticism or stops accommodating new evidence, it risks transforming from a rational inquiry into dogma. In science, "truth" is not an absolute concept but a provisional one. Observations, models, and theories are tools to describe and understand phenomena, but they are always subject to revision when new evidence or better explanations emerge. Science does not deal in absolute truths but in models that approximate reality. Each model has limitations: in science, criticism and reinterpretation are expected, not avoided. That said, biases or misinterpretations can occur, and sometimes people (scientists or otherwise) may hold onto their beliefs even when reasonable evidence contradicts them. When individuals or groups refuse to listen to reasonable arguments, it is often a sign of cognitive dissonance or defensive reasoning. It reflects a psychological mechanism of avoiding discomfort with contradicting beliefs. Over time, this could lead to the maintenance of a position that is increasingly disconnected from reality,

Criticism and science are closely intertwined, as criticism is an essential component of the scientific method. Constructive criticism ensures that scientific knowledge evolves, remains rigorous, and maintains credibility. Criticism in science involves the careful evaluation of theories, methods, and results. This process helps identify errors, refine ideas, and ensure that conclusions are robust. Peer review is a formalized form of criticism where other experts assess research before it is published. Criticism fosters skepticism, a hallmark of scientific inquiry. Scientists are encouraged to question assumptions, repeat experiments, and seek alternative explanations, ensuring that knowledge remains grounded in evidence rather than dogma. However, open criticism requires an environment where dissenting

views are welcomed and addressed respectfully. Suppressing criticism can hinder progress, as evidenced by historical examples where rigid adherence to prevailing theories delayed acceptance of revolutionary ideas.

If a scientific theory is not supported by empirical evidence, it risks being considered unscientific. Science is fundamentally based on observation, experimentation, and validation, and any theory that cannot be empirically tested may be seen as speculative or even pseudoscientific. When institutions or governments support a theory despite a lack of evidence, it can lead to confirmation bias, where the theory is promoted regardless of contradicting data, thus distorting the scientific process. When governments or powerful institutions control the funding for scientific research, they may channel resources toward theories that align with their own political or ideological interests, even if these theories lack robust empirical support. This can result in the diversion of funding away from more promising or evidence - based research. One extreme example of this kind of institutional bias can be seen in the historical treatment of key scientific theories such as relativity and quantum mechanics. For instance, Robert Millikan, despite his significant contributions to physics, openly disagreed with many aspects of Albert Einstein's theory of relativity. [1] ("The Life and Work of Robert A. Millikan" by R. H. D.1982.) Millikan's opposition to Einstein's ideas nearly jeopardized his nomination for the Nobel Prize. Similarly, physicist David Bohm, who proposed the pilot - wave theory to explain the results of the double - slit experiment, faced severe professional isolation. His theories, which diverged from the mainstream interpretation of quantum mechanics, led to his marginalization within the scientific community. [2] (*David Bohm: Physicist and Philosopher* by F. David Peat 2002). This ostracism was so intense that Bohm was forced to leave the United States for Brazil, where he continued his work. While some of Bohm's troubles were politically motivated during the McCarthy era, it is possible that political accusations were used as a pretext to remove

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him from his academic position at the University of California, Berkeley, where his views were increasingly at odds with the dominant scientific establishment.

Supporting a theory without empirical backing can divert attention and resources from genuine scientific inquiry. Scientists are trained to question and test ideas, and when theories become entrenched without evidence, they can hinder the search for new knowledge. The key point to consider is that if this refusal to adjust comes from a place of cognitive bias or emotional attachment, is it justified or acceptable? The answer is of course that neither bias nor emotional attachment has anything to do with the practice of science. In the following paper, I am going to outline several key areas, where such a bias or refusal to recognize or respond to criticism founded in factual evidence is apparent:

Frequency of photons:

The first factual evidence I would like to bring to the attention of the reader, that has been ignored or overlooked by quantum mechanics, is that of the frequency of photons. According to Quantum Mechanics the frequency of a photon is an abstract property that enables physicists to determine the energy of the photon. According to QM photons do not possess frequency. [3] Leonard Susskind, "The Theoretical Minimum: Quantum Mechanics"

"A photon is an excitation of the electromagnetic field, and its energy is related to the frequency of the field's oscillation, $E=hf$. However, unlike a classical wave, the photon itself does not have a frequency in the conventional sense. Instead, we say that the frequency of the photon corresponds to the frequency of the electromagnetic wave it would form if viewed as a wave."

From this we see that it is believed that the photon does not possess a frequency. Against this is the fact that (a) new technology seems to indicate that photons do possess a frequency. For instance, 'smart phones' operate at rates of several Gigahertz, meaning that they input data, assess that data and store or output the result at phenomenal speeds. This being so it is only natural that electrons which are infinitesimal subatomic particles should be able to oscillate and emit and absorb photons at speeds of several hundreds of Terahertz. In fact, for the electron not to oscillate at such rates would be unnatural, given its small size. Recent developments in optical atomic clocks are proof of this statement. [4] (Judith Olson from Inflection, bears this out by stating that miniature optical clocks work, when atoms irradiated with lasers resonate at the irradiated frequency. <https://www.youtube.com/watch?v=HcLkMgCxtAg>) This is clear evidence that in optical clocks, electrons oscillate at the rate of hundreds of Terahertz. It is also indisputable proof of the rate of oscillation of receptive electrons with the concomitant emission and absorption of photons at that rate, when subject to radiation. This theory of photon emission and absorption at the rate of hundreds of terahertz is far removed from the present - day explanation of photon absorption and emission. Therefore, the working of optical atomic clocks is an example of an irrefutable proof that has been ignored or disregarded by quantum mechanics.

Dark Matter

The second instance of a factual evidence that has been disregarded is to do with Dark Matter. Many physicists have suggested that neutrinos make up Dark Matter: [5]. (" — J. Lesgourgues & S. Pastor, "Neutrinos and cosmology, " Physics Reports, 2012.)

"Neutrinos, because of their small mass and high velocity, are often considered as a candidate for hot dark matter, but they are ruled out as the dominant component of dark matter in the standard cosmological model due to the need for dark matter to be cold, or slow - moving, to account for the formation of structure in the Universe."

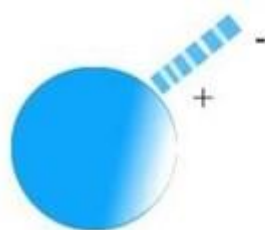
Yet these same physicists refuse to even consider that relic photons might make up dark matter, the reason for their refusal to consider relic photons as constituting dark matter, is that they had already established (presumed?) that relic radiation from the Big Bang is present in the form of the CMB (Cosmic Microwave Background radiation). Yet there are several adverse factors to consider in the discovery of a cosmic microwave background radiation by Penzias & Wilson. [6] (Penzias and Wilson "For their discovery of the cosmic microwave background radiation, a landmark in the study of cosmology and the origin of the universe. " – Nobel Prize in Physics, 1978.) The discovery of cosmic background radiation that was continuous and uniformly present, was a significant milestone in cosmology and won almost universal recognition. Granted that in the nineteen sixties when physicists were desperately searching for proofs of the Big Bang, the discovery of a continuous cosmic radiation in the 1mm wavelength, seemed to be a fortuitous indicator that this ceaseless noise that emanated from the Universe was a positive indication that the Big Bang must have taken place. But consider, much before Penzias and Wilson, and concurrent with the discovery of radio, was the widespread presence of white noise or 'static' as it was called. It was only after the specific wavelengths were identified that 'static disturbances' disappeared from modern TV's and radios. The problem with the assumption that the cosmic microwave background radiation discovered by Penzias & Wilson was relic radiation from the Big Bang, assumes, that because the radiation resembles black body radiation with a uniform temperature, it follows that it is red - shifted radiation from the time of the Big Bang. This assumption would mean that the Universe is absolutely quiescent in the present day, it makes no indication of its presence whatsoever, yet millimeter radiation itself can be relevant in the context of excited hydrogen molecules (H_2) in regions like molecular clouds. These molecules can emit or absorb radiation in the millimeter or submillimeter regions through different types of molecular transitions. For example, rotational transitions in hydrogen molecules (H_2) or hydrogenated species (like H_2O or CO) can result in emission at millimeter wavelengths. However, these are not direct transitions of the hydrogen atom itself, but rather molecular phenomena where hydrogen is involved. In the context of hydrogen clouds or molecular clouds where hydrogen is present, the emission of radiation through rotational and vibrational transitions (as seen in molecules like H_2 or other hydrogenated species) can produce radiation that resembles black body radiation under certain conditions. This is particularly true for rotational and vibrational

transitions in molecules like H₂ and CO (carbon monoxide), which are often abundant in molecular clouds. Rotational transitions in molecules like H₂ or CO occur at lower energies (in the microwave and millimeter range). In a dense molecular cloud, these transitions can be thermally populated at specific temperatures. If the density is high enough and the temperature is uniform, the radiation emitted can take on characteristics similar to black body radiation. The millimeter wavelength radiation categorized as relic radiation from the Big Bang can have multiple origins, it is not an acceptable theory and cannot be taken as proof of the Big Bang. More importantly it is a theory that is open to challenge. These are the self - same clouds which gave birth to whole constellations of galaxies, to imagine that they are absolutely quiescent in the present day is farcical in the extreme. If we are not able to detect the Universe we live in by its signature, how can we detect alien life forms?

Structure and origin of Photons:

The third instance of factual evidence that has been ignored is that of the structure and origin of photons. According to the Standard Model of quantum mechanics: Photons are quantized excitations or vibrations of the electromagnetic field, arising from the interaction of charged particles. They are the force carriers of the electromagnetic force, with their energy determined by the frequency of the oscillation in the field. As quantum entities, photons exhibit both particle - like and wave - like properties, consistent with the principles of quantum electrodynamics. This statement encapsulates the idea that photons are not separate entities but rather quantized manifestations of the underlying electromagnetic field. [7] (Peskin, Michael E., and Daniel V. Schroeder. "An Introduction to Quantum Field Theory." Addison - Wesley, 1995.) This reference provides a clear and detailed account of how photons emerge as quantized excitations of the electromagnetic field.

According to Augmented Newtonian Dynamics, photons are intrinsic to the electron. Photons are formed by the electron in accordance with its energy needs, if it possesses energy in excess to its base energy of 1.6×10^{-19} J it sheds the extra energy by emitting a photon if the electron's energy is below its energy level of 1.6×10^{-19} J it absorbs a photon. Simple enough. However, it is the manner in which the electron achieves this mediation of its energy at the base level that is important. The electron is a charged particle, what could be more natural than that it mediates its energy by emitting and absorbing pulses of electric energy. Look at Figure 1:



Pulses of electrical energy emitted from electron are polarised

Figure 1

In Figure 1 it can be clearly seen that when an electron possess excess energy, it sheds that energy through the emission of pulses of electric energy. The versatility of this

manner of energy resolution by the electron should be noted, it can effortlessly shed whatever amount of energy it needs to shed in very short periods of time (10^{-18} s). This makes it possible for the electron to emit an almost infinite variety of energy combinations. The emission of pulses of energy by the electron takes place with the stronger pulses of energy being emitted initially and subsequent pulses of energy being weaker. This results in a polarized dipole field forming around the emitted pulses of energy. See Figure 2.

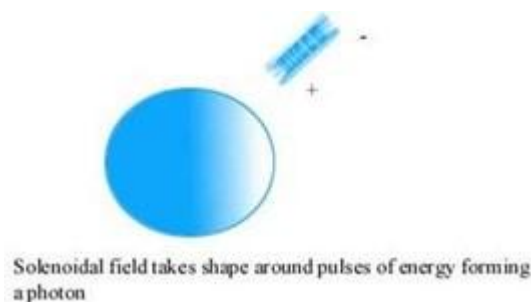


Figure 2

In figure 2 it is possible to see that a polarized electric field has formed around the pulses of electric energy emitted by the photon. The polarized electric field is in effect an electric dipole. This structure is what we know of as a photon, it is a stable structure, that has no mass and can preserve its energy indefinitely, due to the fact that the pulses of electric energy separated by a pure vacuum form a capacitor like structure that can conserve energy and form. It should be noted that this theory for the origin and structure of the photon as being something integral and internal to the electron enable the production and emission and absorption of photons at the rate of hundreds of trillion per second by the electron. Also note that such a photon structure is massless, it can preserve its energy almost indefinitely and for all purposes is electrically neutral. The dipole structure of such a photon enables it to join together with other similar photons and enable its dispersion according to the inverse square law and so on. Look at Figure 3.



Figure 3

Figure 3 (above) depicts what both a 'real' photon and a 'virtual' photon may look like. The pertinent facts to remember are the speed, facility, felicity and accuracy with which photons can be delivered by use of such a system. Such photons can be both absorbed and emitted in the hundred Terahertz range. Also note that the dimensions of the photon are important, the diameter of such photons would be in the region of 10^{-16} m., meaning that the electron would have no difficulty in either absorbing or emitting photons of such dimensions on a one on one basis even in the presence of neighbouring electrons as occurs in multiple electron atoms. While the diameter of the photon might be

approx. 10^{-16} m the length of the photon would depend on its energy content or composition.

This dipole structure of the photon explains every property of light that has ever been observed. At this point it is necessary to add that bound electrons produce only photons that are in the optical range. Any frequencies or wavelengths longer than the optical such as far infrared, millimeter and microwave are produced by a different process, and lack the energy to be directly emitted by the electron and escape the atom. While very high energy photons such as x - rays, are produced externally to the atom when free electrons are accelerated through air and suddenly braked. Gamma - rays, which are the highest energy photons, are produced at the time of the destruction of the nucleus. These photons also account for the rectilinear properties of light. This brings us to the question of how such photons travel at the speed of light [8] (See: Dilip D James, "On the Nature of Light According to Augmented Newtonian Dynamics", International Journal of Science and Research (IJSR), Volume 13 Issue 12, December 2024, pp.408 - 414, <https://www.ijsr.net/getabstract.php?paperid=SR241202170044>, DOI: <https://www.doi.org/10.21275/SR241202170044>). The explanation is that if Dark Matter is in fact the erstwhile aether, the speed of light would be governed by the medium it is travelling through. The speed of light would be governed by the aether or medium (Dark Matter) it is propagating in.

Dark Matter as relic radiation from the Big Bang:

The fourth instance where possible avenues of scientific exploration have been ignored by main - stream science relates to Dark Matter as relic radiation from the Big Bang. In the section on the frequency of photons, it was noted that new evidence with regard to optical atomic clocks demonstrates irrefutably that bound electrons emit and absorb photons at the rate of hundreds of terahertz [4]. The quantum mechanics explanation for the absorption and emission of photons by bound atoms is incapable of assimilating or explaining this new information. However, given the fact that electrons do indeed, absorb and emit photons at rates in the hundreds of Terahertz range, it follows that at the time of the Big Bang in the era when matter was coming into being, photons must have been produced at the incredibly high rates of hundreds of trillions per second for every regular particle that was created; although these photons might not have been able to propagate because of the plasma like conditions and the high prevailing temperatures. Since this process went on for hundreds of thousands or even millions of years, the number of photons produced during this time must have been unimaginably large. The question is what happened to these early photons, they could not have crossed the edge of the Universe since by definition such a concept does not exist. Since they could not have passed over the edge of the Universe, these early photons must have accumulated within the Universe, eventually permeating every part of it and forming a linked network or background fabric to the Universe, a formation made possible by the dipole structure of the photons which enabled them to link together. As the Universe continued to expand this linked network of photons kept pace with the expansion. As the expansion of the Universe continued, the linked network of photons that

formed the background fabric of the Universe lost energy eventually reaching an individual energy of approx. 10^{-51} J. The original photons from the Big Bang had transitioned from being real photons to 'virtual' photons that permeated all of the Universe, including all of matter and all of space. These photons were fixed in place but possessed 360 degrees of freedom of rotation. When a real photon is emitted by a bound electron, the virtual photons constituting Dark Matter which still retained their dipole structure, align themselves in the direction of propagation of the emitted photon and the energy of the real photon flows along this line of aligned virtual photons (Dark Matter). Since identical photons are released in the hundreds of trillions per second, and follow the same path, they form rays of light. This accounts for the rectilinear nature of light, similarly the dipole formation of the photon travelling through a sea of similar dipole 'virtual' photons accounts for light following the inverse square law. The fact that light was travelling through a medium. (the virtual photon medium or dark matter) accounted for the fact that its speed was always c.

The Lamb Shift:

The fifth and perhaps most important instance of QM ignoring important discoveries is that of the Lamb Shift experiment. In 1947 Willis Lamb and his partner John Retherford discovered self - interactions by bound electrons in the Hydrogen atom. It was later ascertained that these interactions were 'virtual' i. e., had energies and times scales that could not be measured on the macro scale but whose presence was inferred from side - effects, in this instance small shifts in the hyperfine structure of the atom. This was the first time that the concept of virtual particles was introduced into science. However, because the discovery of virtual particles was made only a year after the successful deployment of the atom bomb, the discovery of virtual particles was kept under tight security and did not result in wide - spread publicity or discussion.

In the early period in the history of quantum mechanics when it was still a young science, a key question was that of how the electron, a charged particle, maintained its stability around the nucleus without falling into it. Observation and experiment had demonstrated that an electron in a charged state always radiated energy. Since the bound electron in the Bohr model of the atom was always in a charged state should in theory have radiated away all of its energy and spiraled into the nucleus. Calculations done by the Irish physicist Joseph Larmor showed that the electron should have radiated away its energy in 10 pico seconds (Ten trillionths of a second) and fallen into the nucleus. This meant that neither the earth, the solar system nor the Universe should exist. The fact that it did exist had to be urgently solved. This was an exciting time for science, the Double slit experiment conducted by Thomas Young in 1800 had proved conclusively, or so scientists thought, that light was a wave, yet in 1905 Albert Einstein had proven equally conclusively that light must be a particle by the effects it demonstrated in the photo - electric experiment. Things remained in a somewhat amorphous state until in 1923, a young French scientist by the name of Prince Louis De Broglie, suggested that a duality must exist between matter and waves, based on the idea that light and all other electromagnetic radiation may be considered a particle or a

wave. De Broglie suggested that the same kind of duality must apply to matter, this was the birth of wave particle duality. Why is the concept of wave - particle duality so important? Wave - particle duality is so important because it explained why the electron did not lose energy and spiral into the nucleus. A wave being spread out cannot radiate energy. A cynic might ask at this stage, if a wave cannot radiate, how does it emit photons?

Unfortunately, while wave - particle duality is a cornerstone of quantum mechanics, there is little direct empirical evidence that fully supports the concept, at least in the way it is often portrayed in popular physics. Many might feel strongly that the experimental data, such as the double - slit experiment and phenomena like electron diffraction, provide sufficient evidence for wave - particle duality. However, these observations are often interpreted in ways that align with the mathematical formalism of quantum mechanics rather than directly confirming the dual nature of particles. The concept remains largely theoretical, with interpretations based on the successful predictions quantum mechanics makes, rather than on clear, unambiguous evidence of wave - particle duality in the strict sense. AND suggests that the electron self - stabilises its energy by constantly emitting and immediately re - absorbing 'virtual' photons in a process of self - interaction. This is a much more logical view of atomic structure than that described by wave - particle duality.

Virtual particles:

Augmented Newtonian Dynamics (AND) puts forward a far more intuitive theory for atomic stability than the wave - particle duality suggested by Quantum mechanics. AND contests the chaotic version of virtual particles that make up the vacuum suggested by quantum mechanics. The concept that the universe is filled with virtual particles comes from quantum mechanics (QM) and quantum field theory (QFT). Virtual particles are temporary fluctuations in quantum fields that exist due to the uncertainty principle. They represent short - lived fluctuations in energy within the quantum vacuum—the lowest energy state of a quantum field. The vacuum is not empty but filled with dynamic activity, including the spontaneous creation and annihilation of virtual particle pairs, such as electron - positron pairs. The existence of virtual particles is often attributed to Heisenberg's uncertainty principle, which states that the more precisely we know the energy of a system, the less precisely we know the time over which that energy exists. This allows for temporary violations of energy conservation, enabling virtual particles to appear and disappear within extremely short time scales. The creation and annihilation of virtual particle pairs do not violate energy conservation because these virtual particles exist only for very short times, in accordance with the Heisenberg uncertainty principle. The uncertainty principle, specifically the time - energy uncertainty relation, allows for short - lived violations of energy conservation, but only for times that are sufficiently brief. The relation is given by:

$$\Delta E \cdot \Delta t \sim \hbar$$

Here, ΔE is the uncertainty in energy, Δt is the uncertainty in time, and \hbar is the reduced Planck constant. This equation shows that the greater the energy fluctuation (ΔE), the shorter the time (Δt) the fluctuation can last and vice - versa.

For virtual particles, this means that while energy fluctuations may occur, they are only allowed to last for very brief moments, preventing a net energy imbalance over time. [9] Peskin, M. E., & Schroeder, D. V. (1995). *An Introduction to Quantum Field Theory*. Addison - Wesley.

However, a serious drawback to the quantum mechanics theory of 'virtual particles' is that there exists no temporal or historical basis for how this virtual particle field was established. Augmented Newtonian Dynamics on the other hand takes a completely different approach by stating that Dark Matter which according to some sources accounts for >85% of all matter in the Universe is the medium through which both light and gravity propagate. Further although the Hubble shift shows that the Universe was expanding in the past, with a speed that was reciprocal to age, the younger the age the faster the speed of expansion, there is no evidence that the Universe is expanding at those rates in the present age

For a galaxy like the Milky Way, Rubin's observations suggested that dark matter could account for roughly 80 - 90% of the total mass of the galaxy, with visible stars and gas making up the remaining 10% - 20%. This was a groundbreaking finding, as it showed that most of the mass in galaxies was invisible and did not interact with light. [10] (Rubin, V. C., & Ford, W. K. (1978). *Rotation of the Andromeda Nebula from a Spectroscopic Survey of Emission Regions*. *Astrophysical Journal*, 159, 379-403.) These calculations are based on empirical observations as the evidence for Dark Energy and cosmic expansion is not. The only accurate measurements using type 1a supernovae are in the region of 100 million light years distant and not billions of light years distant as is claimed.

Augmented Newtonian Dynamics and atomic stability:

According to Augmented Newtonian Dynamics (AND) electrons are not half wave and half particle as the need arises. Electrons, as sub - atomic particles with measurable mass, are always particles, and never waves, they are like little ball bearings that orbit the nucleus. How is this achieved? Stability of the atom without recourse to wave - particle duality is achieved through the electron constantly emitting and absorbing 'virtual' photons in a process of self - interaction which results in their self - stabilising their orbits around the nucleus. (See section on Virtual Particles above) in an interaction that is borne out by empirical experiment, namely: The Lamb Shift.). This means that wave - particle duality is no longer necessary. Along with the concept of wave - particle duality go all of the attendant quantum mechanics theories such as wave - functions, quantum entanglement, superposition, Hilbert spaces and so on. Instead, what is left is an incredibly streamlined theory of atomic structure, where quantum jumps are completely eliminated. Incoming photons are absorbed on a one to one interaction between photon and electron, made possible by the tiny size of the photon diameter at 10^{-16} m. The electron on absorption of the extra energy imparted by the absorbed photon, follows classical physics as it travels to the nucleus recoils off it and re - emits the absorbed photon at the correct energy level, retraces its step to cope with recoil, absorbs another photon and the process repeats at the incredible rate of hundreds of trillions of emissions per second. This

accounts for two properties of light, (1) it is rectilinear (i. e., emerges as rays of light (b) it is incoherent (i. e., multiple electron atoms are able to deal with several frequencies of incoming photons simultaneously), with multiple electrons within the atom, simultaneously absorbing and emitting photons as rays of light all in different directions. The AND theory of atomic structure has the capability of achieving all of the claims of quantum mechanics on atomic spectra while offering vastly superior capabilities as far as photon absorption and emission are concerned.

Light travels through Dark Matter:

The assumption that Dark Matter consists of relic photons from the Big Bang with a very low energy (10^{-51} m), means that light once again is conceived of as travelling through a medium with a uniform speed c (in a vacuum) of travelling rectilinearly, of being without mass, of following the inverse square law. This means that the esoteric theories of relativity of time dilation and length contraction are no longer relevant. Both 'real' photons and 'virtual' photons possessing the same electric dipole structure, mean that when an electron emits a real photon, the virtual photons of the universal virtual photon field (Dark Matter) form into a line whose ends rest on the shoulder of infinity and the energy of the real photon travels along this line of aligned virtual photons.

2. Conclusion

In conclusion, the reimagined concept of Dark Matter as relic photons from the Big Bang introduces a fresh perspective on the nature of light and the cosmos. These photons, with extremely low energy, suggest a shift away from traditional notions of time dilation and length contraction as defined by relativity. Instead, light is once again viewed as traveling through a medium of aligned virtual photons, fundamentally altering our understanding of how real photons move through space. The same medium (Dark Matter is also postulated as the medium through which gravity acts. This new approach challenges established theories and calls for a reconsideration of the atomic and cosmic structure, offering a more unified view of the universe where both real and virtual photons play a central role in shaping the behavior of matter and energy.

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