



Astronomical Validation of the 'Computational Unified Field Theory' (CUFT) "Critical Prediction" & Resolution of the "Universe's Accelerated Expansion Rate Enigma" (UAERE)

By Dr. Jehonathan Bentwich, Ph.D.

Abstract- Twenty-first Century Physics has reached a "pivotal point" calling for a "Paradigmatic Shift" from the Old "Material- Causal" Paradigm underlying Relativity Theory (RT) and Quantum Mechanics (QM) to the New "A-Causal Computation" (ACC) Paradigm of the "Computational Unified Field Theory" (CUFT), which was shown capable of resolving the theoretical inconsistency between RT & QM and discard "dark-matter" and "dark-energy" as "superfluous" (non-existent)! In order to satisfy Kuhn's well known criteria for such a 'Paradigmatic Shift' it is necessary to empirically validate at least one unique "critical prediction" of the CUFT which differentiates it from the predictions of both RT and QM: Initial empirical validation was given through the findings of the "Proton-Radius Puzzle" and two additional direct "critical-predictions" of the CUFT are outlined and called for empirical validation. Based on the New ACC Paradigm's discovered singular higher-ordered Universal Computational/Consciousness Principle's (UCP) "Collective Human Consciousness Focus" (CHCF) postulate a unique prediction regarding the "Collective Human Consciousness Focus Non-Continuous Universal Expansion Rate Hypothesis" (CHCF-NCUERH) at the Jewish "Rosh-Hashanna" (New Year) is called for. This new CHCF-NCUERH 'critical-prediction' also offers a possible resolution of the 'Universe's Accelerated Expansion Rate Enigma'. The far reaching theoretical implications which would ensue from an empirical validation of one of the CUFT's "critical predictions" is discussed which includes: a challenging of the 'Big-Bang' Model, negation of "dark-matter" and "dark-energy", revision of RT's and QM's basic "Material-Causal" assumption, full integration of the four basic physical features of 'space', 'energy', 'mass' and 'time' etc.

GJSFR-A Classification: FOR Code: 020199



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Abstract- Twenty-first Century Physics has reached a "pivotal point" calling for a "Paradigmatic Shift" from the Old "Material-Causal" Paradigm underlying Relativity Theory (RT) and Quantum Mechanics (QM) to the New "A-Causal Computation" (ACC) Paradigm of the "Computational Unified Field Theory" (CUFT), which was shown capable of resolving the theoretical inconsistency between RT & QM and discard "dark-matter" and "dark-energy" as "superfluous" (non-existent)! In order to satisfy Kuhn's well known criteria for such a 'Paradigmatic Shift' it is necessary to empirically validate at least one unique "critical prediction" of the CUFT which differentiates it from the predictions of both RT and QM: Initial empirical validation was given through the findings of the "Proton-Radius Puzzle" and two additional direct "critical-predictions" of the CUFT are outlined and called for empirical validation. Based on the New ACC Paradigm's discovered singular higher-ordered Universal Computational/Consciousness Principle's (UCP) "Collective Human Consciousness Focus" (CHCF) postulate a unique prediction regarding the "Collective Human Consciousness Focus Non-Continuous Universal Expansion Rate Hypothesis" (CHCF-NCUERH) at the Jewish "Rosh-Hashanna" (New Year) is called for. This new CHCF-NCUERH 'critical-prediction' also offers a possible resolution of the 'Universe's Accelerated Expansion Rate Enigma'. The far reaching theoretical implications which would ensue from an empirical validation of one of the CUFT's "critical predictions" is discussed which includes: a challenging of the 'Big-Bang' Model, negation of "dark-matter" and "dark-energy", revision of RT's and QM's basic "Material-Causal" assumption, full integration of the four basic physical features of 'space', 'energy', 'mass' and 'time' etc.

Note: due to the significant "time-sensitive" interval for empirical validation of the CUFT's "critical prediction" centered around the upcoming Jewish "Rosh Hashanna" time interval, Astronomers, Cosmologists, of other Accelerator or Experimental Physicists interested in communicating and transferring their data regarding the empirical testing of this very significant verification of the CUFT should communicate directly with Dr. Bentwich via e-mail"

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I. INTRODUCTION: THE NEED FOR A PARADIGMATIC SHIFT IN 21ST CENTURY PHYSICS

Perhaps the biggest unresolved enigma in Modern Physics is the accelerated expansion of the physical universe! This is because the current explanation of this accelerated expansion of the universe relies on the purely hypothetical "Dark-Matter" and "Dark Energy" theoretical concepts – which are supposed to account for up to 90% of all of the matter and energy existing within the universe, but which as of yet could not be detected experimentally!? It should be noted that this predicament of 21st century Theoretical Physics is very much similar to the state of Physics precisely 100 years ago, prior to Einstein's "Paradigmatic Shift" associated with Relativity Theory, wherein an equivalent "enigma" surrounded the (then postulated) "ether" concept!? Indeed, as the famous Philosopher of Science, Thomas Kuhn stated (1962) in his analysis of the evolutionary phases that any scientific discipline has to undergo in order to advance its understanding: Science alternates between phases which are termed: "Standard Science" in which a given scientific discipline is governed by a given Paradigm which possesses certain key theoretical assumptions and which directs the research (in that discipline based on these key assumptions etc.); and between phases of "Paradigmatic-Shifts", (e.g., alike Einstein's Relativity Theory, relative to Newton's Old 'Classical Mechanics' Paradigm) in which the Old 'Standard Paradigm' doesn't suffice (any longer) to explain most of the known scientific data (within that discipline) and there appears disturbing "theoretical inconsistencies" within the Old Paradigm, which calls for such "Paradigmatic Shift/s" towards the discovery of a "New Paradigm" (e.g., Einstein's Relativity Theory New Paradigm) which can explain in a satisfactory manner most of the known empirical data and also resolve those basic "theoretical inconsistencies" found to exist within the Old Paradigm (e.g., the incompatibility between Newtonian Mechanics and Maxwellian Electromagnetic Theory)... It is suggested that Kuhn's (historic) analysis of

Paradigmatic Shifts such as between 19th century's Newtonian Classical Mechanics and 20th century Physics New "Relativity Theory" Paradigm – may be quite useful for us to ascertain the state of Theoretical Physics characterizing 20th century Old "Material-Causal" Paradigm underlying both Relativity Theory and Quantum Mechanics, its intrinsic apparent "theoretical inconsistency", its inability to account for up to 90% of all "mass" and "energy" in the universe – which therefore calls for a "Paradigmatic-Shift" which can be satisfied by the "Computational Unified Field Theory's " (CUFT) New "A-Causal Computation" Paradigm (Bentwich: ?????)

Succinctly stated, the basic theoretical inconsistency between RT and QM arises from RT's strict "causal" Speed of Light Constraint set on the transference of any signal (or information) across space and time, as opposed to QM's "Quantum-Entanglement" phenomenon indication that it is possible for a measurement of one "entangled particle" to affect "instantaneously" the measured (complimentary) value of the other "entangled particle" which may be separated by physical distances that cannot be traversed "instantaneously" by any "light signal"! Secondly, as (mentioned above), the empirically observed accelerated expansion of the physical universe is assumed to be "caused" by the existence of "dark-matter" and "dark-energy" which are assumed to account for up to 90% of all of the matter and energy in the universe – but which nevertheless cannot be detected experimentally! So, in effect the Old Paradigm of Relativity Theory and Quantum Mechanics contains a serious theoretical inconsistency between its two pillars (RT & QM Models) and cannot account (in a satisfactory manner) where up to 90% of the matter and energy comprising the physical universe exist!? In contrast, the New 'A-Causal Computation' Paradigm of the CUFT was shown to be capable of resolving this key theoretical inconsistency between RT and QM and also discarded the (purely theoretical concepts of) "dark-matter" and "dark-energy" as "superfluous" (i.e., "non-existent", much like Einstein's discarding of the purely hypothetical "ether" concept!);

Briefly stated, the CUFT's New 'ACC' Paradigm discovered the existence of a singular higher-ordered Universal Computational/Consciousness Principle (UCP) which *simultaneously computes* every exhaustive spatial pixel/s comprising the physical universe for each consecutive "Universal Frame", e.g., at the incredible rate of "c²/h"= 1.36⁻⁵⁰ sec! In fact, according to this New ACC Paradigm this (singular higher-ordered) UCP simultaneously computes the four basic physical features of "space" and "energy", "mass" and "time" based on its three associated "Computational Dimensions" of "Framework" ("frame"/"object"), "Consistency" ("consistent"/"inconsistent") and "Locus" ("global"/"local") – i.e., so that the four possible combinations of two of these 'Computational

Dimensions' (e.g., 'Framework' and 'Consistency') yield those four above mentioned basic physical features: Thus, 'space' and 'energy' are computed by this (singular) UCP as computational measures of a given object (or phenomenon) in terms of its spatial "consistency" or "inconsistency" (respectively) relative to the coordinates of the entire "frame", across a given series of consecutive Universal Frames! Likewise the UCP simultaneously computes "mass" and "time" as computational measures pertaining to a given object (or phenomenon) relative to that object's (or phenomenon) intrinsic properties, e.g., as the degree of "consistency" or "inconsistency" in that object's spatial-pixels composition across a given number of Universal Frames. In fact, one of the surprising (and exciting) discoveries made by this CUFT's new 'ACC' Paradigm is that the UCP's simultaneous computation of these four basic physical features (of space' and 'energy' or 'mass' and 'time) for each exhaustive spatial pixel in the universe can be represented through a singular "Universal Computational Formula" (UCF) which fully integrates these four basic physical features!

Universal Computational Formula (UCF):

$$UF\{n...m...s\} \left\{ \frac{c^2}{h} \right\}_{Px\{1...n\}} = \frac{s}{t} \cdot \frac{e}{m}$$

In fact, this newly discovered UCF was also shown to fully integrate and embed some of the key components of both RT and QM (e.g., which this UCF nevertheless transcends), as can be seen from the two Relativistic Format and Quantum Format of this UCF:

- I) Relativistic Representation: $e \times \underline{s} = m \times \underline{c^2}$
- II) Quantum Representation: $\underline{t} \frac{m \underline{c^2}}{h} = s \times e$

Moreover, the CUFT's New 'A-Causal Computation' Paradigm was shown to resolve the principle (apparent) "theoretical inconsistency" that seems to exist between RT and QM based on its more "exhaustive" computational framework – i.e., consisting of a "single multi spatial-temporal" "particle" (or "relativistic object") computation – that relates to only one spatial pixel at each given time, a "multi spatial-temporal" "wave" computation- which comprises at least two (or more) spatial pixels at any given time (and which contains multiple "single-spatial" measures), or an "exhaustive" "Universal Frame" computational perspective which contains within it both the "single spatial-temporal" and "multi-spatial-temporal" computational measures; In this manner, it was shown that the CUFT's New 'A-Causal Computation' Paradigm is able to harmonize and resolve the apparent (abovementioned) "theoretical inconsistency" between RT and QM, simply based on the fact that the UCP's

simultaneous computation of all exhaustive spatial pixels in the universe (for each consecutive Universal Frame) embeds within it both the 'single spatial-temporal' "particle" and the "multi spatial-temporal computational measures; Coupled with an alternative new theoretical account for QM's Heisenberg's "Uncertainty Principle" complimentary values for the subatomic measurements of the two "complimentary-pairs", e.g., of 'space' and 'energy' or 'mass' and 'time' – as representing complimentary *exhaustive* computational measures of the UCP's "frame"- "consistent" vs. "inconsistent" and "object"- "consistent" vs. "inconsistent", or "object" – "consistent" or "inconsistent" Computational Dimensions' combinations, the CUFT's New 'A-Causal Computation' Paradigm offers a new compelling resolution of the apparent RT-QM theoretical inconsistency: It suggests that the two apparently "entangled-particles" in fact represent two "single spatial-temporal" computational measures that exist within the (broader) "multi spatial-temporal wave" computational measure – with both computational measures being embedded within the exhaustive Universal Frame/s computation of the singular (higher-ordered) UCP; Since this UCP simultaneously computes all of the "multi spatial-temporal wave" spatial pixels – which also include the two "single spatial-temporal" "entangled particles (representing equivalent points along the wave's specific characterizations; and based on the CUFT's New ACC Paradigm's theoretical explanation of Heisenberg's Uncertainty Principle's "complimentary pairs" – as complimentary exhaustive (frame- or object- consistent vs. inconsistent) computational measures, therefore the New ACC Paradigm resolves the apparent "inconsistency" between RT's apparently strict "Speed of Light causal" constraint and QM's "Quantum-Entanglement" phenomenon simply by realizing that both RT's "single spatial-temporal" object/particle ("Speed of Light causal" constraint) alongside QM's UCP's simultaneous computation of all exhaustive spatial pixels including the two equivalent "entangled-particles" "single-spatial-temporal" points embedded within the "multi spatial-temporal wave" computational measure (which are both embedded within the exhaustive Universal Frame/s)!

Further satisfaction of Kuhn's strict criteria for a "Paradigmatic-Shift" were demonstrated (previously) indicating that the CUFT's New 'A-Causal Computation' Paradigm replicates all major laws and phenomena associated with both Relativity Theory and Quantum Mechanics, including but not limited to: the abovementioned Universal Computational Formula (UCF) which embeds (yet transcends) RT's Energy-Mass Equivalence, Heisenberg's Uncertainty Principle; Indications that the UCP's computational definitions of the four basic physical features (of 'space' and 'energy', 'mass' and 'time') replicate RT's "time-dilation" associated

with relativistic velocities, or associated with massive objects, the (apparent) "curvature of space-time", an alternative theoretical account for QM's assumed "collapse" of the probability wave function (as "caused" by the direct physical interaction between the subatomic "probe" and "target" elements), etc.

Perhaps a brief overview description of the gist difference between the Old "Material-Causal" Paradigm (of RT and QM) and the New 'A-Causal Computation' of the CUFT may be useful at this point: Essentially, the principle difference between RT's & QM's Old 'Material-Causal' Paradigm and the CUFT's New 'A-Causal Computation' Paradigm stems from their different basic assumptions regarding the physical universe: according to the Old 'Material-Causal' Paradigm the determination of any relativistic (space-time or energy-mass) phenomenon or of any subatomic (complimentary space-energy or mass-time) target value is "caused" (or measured through) its direct physical interaction with another relativistic observer or subatomic 'probe' element; In contrast, according to the CUFT's New 'A-Causal Computation' Paradigm there cannot exist any such "direct physical interaction" (much less so any "material-causal" relationships) between any two (or more) exhaustive spatial pixels existing either in the same- or different- Universal Frames!? This is because according to the New CUFT's 'ACC' Paradigm, the UCP's simultaneous computation of all exhaustive spatial pixels comprising each consecutive 'Universal Frame' does not allow for any such direct physical interactions between any two (or more) exhaustive spatial (relativistic or subatomic) pixels existing either in the same- or different- (consecutive) Universal Frames! (It should be noted that according to this New CUFT's 'ACC' Paradigm, all exhaustive spatial pixels comprising each Universal Frame/s "dissolve" back into the singular higher-ordered UCP "in-between" any two consecutive Frames which also doesn't allow for any "physical interactions" between any two or more exhaustive spatial pixels across different Universal Frames!)

So, Twenty-first century Theoretical Physics seems to have reached a "pivotal point" at which the Old "Material-Causal" Paradigm of 20th century Physics underlying both RT & QM seems to "fail" to account for up to 90% of all mass and energy in the universe and appears to suffer from an intrinsic "theoretical inconsistency" (e.g., between its two primary Relativistic and Quantum "pillars") – whereas the CUFT's New 'A-Causal Computation' Paradigm seems to offer a satisfactory alternative explanation for the accelerated expansion of the universe (as will be delineated below), as well as resolves the apparent 'theoretical inconsistency between RT & QM (and replicates all major Relativistic and Quantum laws and phenomena).

II. THEORETICAL IMPLICATIONS OF THE CUFT

The theoretical implications of adopting the New 'A-Causal Computation' (ACC) Paradigm (for 21st century Physics) are quite far reaching: First, due to the basic assumption of this New ACC Paradigm which postulates that the singular higher-ordered UCP *simultaneously computes* every exhaustive spatial pixel in the physical universe (for each consecutive Universal Frame/s) – there cannot exist any "material-causal" physical relationship/s between any two (or more) exhaustive spatial pixel/s existing in either the same- or different- Universal Frame/s! As stated above, this principle negation of the existence of any (direct) physical relationship/s between any two (or more) exhaustive spatial pixels (existing in the same- or different- Universal Frames) is made even stronger through the ACC New Paradigm's assertion that "in-between" any two consecutive Universal Frames the whole physical universe (with all of its exhaustive spatial pixels) "dissolving" back into the singularity of the UCP! This is because if each and every exhaustive spatial pixel throughout the entire physical universe "dissolves" back into the singular (higher-ordered) UCP "in-between" any two consecutive Universal Frames, then this implies that there cannot exist any such "material-causal" (direct) physical relationships – not only between any two (or more) exhaustive spatial pixels existing in the same Universal Frame – but also between any two (or more) exhaustive spatial pixels existing in two consecutive Universal Frames (e.g., since there cannot be any "transference" of any material entity or physical interaction/s between any two such exhaustive spatial pixels across any two consecutive frames – as they all "dissolve" back into the singularity of the UCP)!

But, if indeed, there cannot exist any such "material-causal" direct physical relationship/s between any two (or more) exhaustive spatial pixels existing in the same- or different- Universal Frames, then this New 'A-Causal Computation' Paradigm challenges and negates some of the most basic theoretical assumptions characterizing the Old (20th century) "Material-Causal" Paradigm, i.e., including: Relativity's "Big-Bang" Model, the existence of the (purely hypothetical) "dark-matter" or "dark-energy" (as well as General Relativity's Einstein's Equations' "material-causal" assumption and other associated assumptions)!? This is because if there cannot exist any such "material-causal" physical relationships between any two (or more) exhaustive spatial pixels existing either in the same- or different- Universal Frames then, for instance, the "Big-Bang" Model must be negated, because there could not have existed any "cause and effect" physical relationships between the nuclear explosion that may have taken place in the "first" Universal Frame and the (assumed) creation of "matter",

"galaxies", "space" and "time" etc. in any of the subsequent Universal Frames!? This is because (as stated above) all of the exhaustive spatial pixels existing in that "first" Universal Frame must have "dissolved" back into the singularity of the UCP, thereby negating the possibility of them "interacting" or "transferring" any "physical effect" to any subsequent consecutive Universal Frame/s!? So, the "Big-Bang" Model's basic "material-causal" assumption wherein the entire physical universe was created by this initial "nuclear explosion" (and which gave the "impetus" for the further "cascade of events" leading to the expansion of the universe and the further creation of suns, stars, planets, and all of the "mass" and "energy" throughout the physical universe) must be negated! Instead, the new emerging "picture" of the origination- sustenance- "dissolution"- and evolution- of each and every exhaustive spatial pixel throughout the entire physical universe, e.g., for each consecutive Universal Frame (occurring at the "unfathomable" rate of " $c^2/h = 1.36^{-50}$ sec!") is that it is being continuously "created", "dissolved", "re-created" and "evolved" by this singular higher-ordered Universal Computational/ Consciousness Principle (UCP)!? Likewise the purely hypothetical theoretical concepts of "dark-matter" and "dark-energy" are strictly negated because they also rely on the same basic "material-causal" assumption wherein this (hypothetical) "dark-matter" or "dark-energy" entity is assumed to interact with- and "cause"- the propulsion of the universe's galaxies, stars, etc., e.g., "causing" the physical universe to continuously expand (at an accelerated rate!) This is (once again) due to the CUFT's New 'A-Causal Computation' (ACC) Paradigm's principle negation of the possibility of the existence of any such "material-causal" physical relationships between any two (or more) exhaustive spatial pixels in the same- or different- Universal Frames (due to the UCP's simultaneous computation of all exhaustive spatial pixels throughout the entire physical universe for each consecutive Universal Frame/s)! Indeed, this new ("radical") CUFT's 'A-Causal Computation' Paradigm was also shown to question (and negate) General Relativity's Einstein's Equations' "material-causal" basic (implicit) assumption which assumes that it is the existence of certain "massive objects" which "causes" the "curvature of 'space-time'" and conversely that it is this "curved space-time" which "causes" or determines the "travelling pathways" of these "massive objects" (as well as other "non-massive" objects); This is once again negated by the New ACC Paradigm's undermining of the possibility of the existence of any "material-causal" physical relationships existing between any two (or more) exhaustive spatial pixels in the same- or different- Universal Frames!

Instead, the new emerging "picture" of the physical universe is one in which the origination- sustenance- "dissolution"- re-creation- and evolution- of each and every exhaustive spatial pixel in the physical

universe (as well as of the whole physical universe) can only be explained based on the continuous operation of this singular higher-ordered Universal Computational/Consciousness Principle (UCP)! Indeed, according to this New ACC Paradigm the accelerated expansion of the physical universe is not the result of any (purely hypothetical) "dark-matter" or "dark-energy" concepts but is rather created by the continuous operation of the UCP which adds an accelerated number of exhaustive spatial pixels for each consecutive Universal Frame that it computes! So, we see that the acceptance of the CUFT's New 'ACC' Paradigm brings with it an entirely new theoretical explanation for the empirically observed accelerated expansion of the physical universe – i.e., as brought about by the singular higher-ordered UCP's addition of an accelerated number of exhaustive spatial pixels for each consecutive Universal Frame (which it computes at the incredible rate of " $c^2/h = 1.36^{-50}$ sec"), rather than as being "caused" by any (non-existent) "dark-matter" or "dark-energy"!

So, it seems that 21st century Theoretical Physics has reached a "pivotal turning point" along its development in which the need for a "Paradigmatic-Shift" from the Old "Material-Causal" Paradigm (of RT and QM) to the New "A-Causal Computation" Paradigm of the CUFT has to be empirically validated: Indeed, as in the case of Einstein's famous 1919 Solar-Eclipse measurement (precisely 100 years ago!) in which his New Relativity Theory Paradigm predicted significantly different values for Mercury's perihelion curvature (e.g., approximately double of Newton's Classical Mechanics predicted value) – the determining "benchmark" for deciding which of these two competing Paradigms is more successful in explaining the corpus of known data in Physics was ultimately determined based on the empirical verification of their "differential predictions" (e.g., pertaining to Mercury's measured perihelion value)! In other words, in addition to the fact that the CUFT's New ACC Paradigm was shown capable of resolving the basic theoretical inconsistency between RT & QM, replicate all major Relativistic and Quantum laws and phenomena, and also offer an alternative theoretical explanation for the accelerated expansion of the physical universe – the critical determining factor whether the New ACC Paradigm can be chosen as the appropriate New Paradigm for 21st century Physics is whether a specific "critical prediction" can be experimentally tested which could clearly differentiate between the predictions of the CUFT's ACC Paradigm and those of the Old 'Material-Causal' Paradigm (of RT & QM):

Indeed, three such "critical-predictions" have been identified by the CUFT New ACC Paradigm – one of which has already received initial (indirect) empirical validation, namely: the "Proton Radius Puzzle" (Bernauer & Pohl 2014): Succinctly stated, this 'Proton-Radius Puzzle' findings indicated that when we measure the

radius of a Hydrogen Proton – in its "standard" structure, e.g., as surrounded by an electron as opposed to when this electron is replaced by a (similarly negatively charged) Muon particle (which is approximately 100 times more massive than the electron); we obtain a "bizarre" shrinkage of the Hydrogen's Proton (to which the Muon particle "sinks") which is then measured as 100 times smaller and more accurate than its equivalent ("standard") Hydrogen Proton radius (which is surrounded by the electron particle)! Surprisingly, these empirical findings closely correlate with one of the "critical predictions" of the CUFT regarding the greater "spatial-consistency" of relatively "more massive" particle (such as the Muon) than the "less massive" electron particle – which stem from the CUFT's New ACC Paradigm's new computational definition of "mass", as the number of object-consistent spatial presentations! Indeed, according to the CUFT's ACC new computational definition of "mass" the mass of any given particle is computed by the UCP as the number of times that this particle appears "spatially-consistent" across a given series of Universal Frames; it therefore follows that the (100 times) more massive Muon particle (conjoined with the Hydrogen Proton) would be measured as (100 times) smaller and more accurate than its corresponding electron circled Hydrogen Proton, which is essentially the empirical findings that Bernauer and Pohl obtained, e.g., thereby providing an indirect empirical validation of one of the CUFT's "differential-predictions"!

III. THE CUFT's ACC "CRITICAL PREDICTION": "COLLECTIVE HUMAN CONSCIOUSNESS FOCUS NON-CONTINUOUS UNIVERSAL EXPANSION RATE HYPOTHESIS (CHCF-NCUERH) AT JEWISH "ROSH- HASHANNA" (NEW YEAR)

A more direct experimental validation of a "critical predictions" of the CUFT New ACC Paradigm can be tested through an Astronomical testing of the CUFT's "Collective Human Consciousness Focus Non-Continuous Universal Expansion Rate Hypothesis" at the Jewish "Rosh Hashanna" New Year interval! This is because according to the New CUFT's ACC Paradigm, the Universal Computational/Consciousness Principle's accelerated addition of the number of exhaustive spatial pixels for each consecutive Universal Frame – can be affected by a "Collective Human Consciousness Focus" (CUCF), e.g., intervals in which a significant conjoined collection of Human Consciousness (individuals) all focus on this singular Universal Consciousness Principle (UCP), such as in the case of the Jewish Rosh Hashanna (New Year), a two day intense period of prayer by the entire Jewish People (all praying and focusing on this singular Universal Consciousness

Reality!); Since according to the New CUFT's ACC Paradigm there cannot exist any direct "material-causal" physical relationships between any two (or more) exhaustive spatial pixels in the universe (e.g., as shown above and previously negating the existence of any hypothetical "dark-matter" or "dark-energy"), the only theoretical explanation for this singular universal Consciousness Principle's accelerated expansion of the physical universe – must be centered around its own "intrinsic properties" (e.g., "Ten Laws of Hierarchical Manifestation" detailed previously); Indeed, one of these 'Ten Hierarchical Laws of Manifestation' is the Universal Consciousness Principle (or Universal Consciousness Reality's) intrinsic "All-Goodness" characterization, which is closely tied with the above mentioned "Collective Human Consciousness Focus" postulate, which hypothesizes that such a concerted focus of a group of human individuals (multiple Human Consciousness) which are in a prayer to- and gratitude towards- this singular higher-ordered Universal Consciousness Reality can affect its basic "All-Goodness" characterization leading to a "non-continuous leap" in its accelerated addition of the number of exhaustive spatial pixels (for each consecutive Universal Frame)! Therefore, a unique direct "critical prediction" of the CUFT's New 'A-Causal Computation' Paradigm is that during each consecutive Jewish "Rosh Hashanna" (New Year) there occurs a "Non-Continuous Accelerated Expansion Rate" leap in the UCP's expansion rate of the physical universe! In other words, if we are to measure the physical universe's expansion rate before the given Jewish New Year (Rosh Hashanna) two days interval and compare it to the rate of acceleration after (or even partially during Rosh Hashanna), it is predicted by the CUFT that there would be a significant increase in the universe's post-Rosh Hashanna expansion rate relative to the measured universe's expansion rate before "Rosh Hashanna"! During this upcoming Rosh Hashanna it is predicted that if Astronomers or Cosmologists would measure the accelerated expansion rate of the physical universe from 18th of September till the 29th of September (pre-'Rosh Hashanna' interval) and compare it to the universe's "post-Rosh Hashanna" time interval, i.e., from the 2nd of October till the 13th of October they are predicted to find that the "post-Rosh Hashanna" time interval would indicate an increased "non-continuous" leap in the rate of the universe's expansion rate relative to the 'pre-Rosh Hashanna' interval (with the two days of Rosh Hashanna expected to reflect the post-Rosh Hashanna increased acceleration rate of expansion and the "transition" between the pre- and post- Rosh Hashanna intervals different acceleration rates representing a "non-continuous leap")!

The "Collective Human Consciousness Focus Non-Continuous Universal Expansion Rate Hypothesis (CHCF-NCUERH) at Jewish "Rosh-Hashanna" (New Year) of the CUFT prediction possesses two possible

empirical outcomes (which would nevertheless validate this unique "critical-prediction" of the CUFT's ACC Paradigm!): It is hypothesized that the Astronomical Measurement of the Universe's Expansion Rate would indicate that the Universe's Expansion Rate (UER) increases "non-continuously" – at each Jewish "Rosh-Hashanna", i.e., by either a fixed "constant" (e.g., "x") value (such that for a given "Rosh-Hashanna" Jewish New Year [RH-1] say the Universe's Expansion Rate was say "x", then for the subsequent Jewish "Rosh-Hashanna" [RH-2] the Universe's Expansion Rate would be "2x"... and in the subsequent year [RH-3] the Universe's Expansion Rate would be "3x" etc.; Or, It could however be the case in which the Universe's Expansion Rate "non-continuous" growth (e.g., specifically at the Jewish "Rosh Hashanna" New Year would not grow in a "linear" manner but rather based on a "non-linear" expansion rate such that the UCP's production of the ("non-continuous") Universe's Expansion Rate at each subsequent "Rosh Hashanna" could be represented in this manner: {[RH-1: "x"]; [RH-2: "x+i"]; [RH-3: "x+i+j"];...}. Such a hypothetical "non-continuous", "non-linear" characterization of the Universe's Expansion Rate would align with the CUFT's unique theoretical postulate of the UCP's "Free-Will Hypothesis" (UCP-FWH) which states that since entire physical universe is being continuously computed- "dissolved"- re-computed and evolved- a billion, billion, billion, etc.' times per second (e.g., " $c^2/h = 1.36^{50}$ sec") solely based on the operation of this singular higher-ordered Universal Computational/Consciousness Principle (UCP), therefore this UCP is "not constrained" or "bound" by any "material-causal" or any "physical" or even "mathematical" laws, i.e., it is "free" to create, "dissolve", sustain and re-create and evolve the entire physical universe as it "wishes"! (The only "characteristics" or "features" that we can relate to this singular higher-ordered UCP's operation are its Ten Laws of Manifestations – one of which is this UCP-Free-Will Hypothesis, and two others being: its "Good-Will" ("All-Goodness") wish to continuously evolve the universe towards its "Perfected" state of manifestation of ever more expansive forms of its basic "Universal Consciousness" nature, which was previously postulated to lead the UCP to form ever more conscious forms: i.e., from "inanimate" through "animate": plants, animals, humans – ultimately leading to the Individual Human Consciousness Expansive state of Universal Consciousness! In this sense it may be further pointed out that the Jewish Rosh Hashanna's "Collective Human Consciousness Focus" which acknowledges and "adores", "reveres" and "prays" to this singular higher-ordered "Universal Consciousness Reality" is equivalent to the Individual Human Consciousness Universal Consciousness' state, thereby evolving towards the UCP's "Perfected" Universe state (or "Goal", e.g., see also the "Universal Consciousness Reality's Reversed

Time Goal Hypothesis!") Given the CUFT's pointing out of the possibility of these two different potential UCP's Universe's Expansion Rate values, e.g., "non-continuous": "linear" or "non-linear" characterizations – a Call for All Cosmologists and Astronomers is being made to test these unique "Critical Prediction": "Collective Human Consciousness Focus Non-Continuous Universal Expansion Rate Hypothesis (CHCF-NCUERH) at Jewish "Rosh-Hashanna" (New Year) before- during- and after- this upcoming Jewish "Rosh-Hashanna" (e.g., see above mentioned time schedule*), which could fully validate and substantiate the CUFT as the New 'A-Causal Computation' (ACC) Paradigm for 21st century Theoretical Physics – as more valid (and in fact embedding and transcending) the Old (20th century) 'Material-Causal' Paradigm of RT and QM!

To the extent that this unique "critical prediction" of the CUFT's New A-Causal Computation' Paradigm would be validated experimentally by the Astronomical Measurements, e.g., indicating a "non-continuous" increase in the Universe's Expansion Rate, i.e., Hubbles Constant H_0 value – around the Jewish New Year "Rosh-Hashanna" (as explained above) either "linearly" or "non-linearly" this would unequivocally validate the CUFT as a more valid New Paradigm (for 21st century Physics) than the Old "Material-Causal" Paradigm underlying both Relativity Theory and Quantum Mechanics (of the previous century)! This is simply because in contrast to the Old 'Material-Causal' Paradigm of RT and QM which explains the accelerated expansion of the physical universe as "caused" by the existence of the (purely hypothetical) "dark-matter" or "dark-energy" – which nevertheless that could not be detected empirically (!) the empirical validation of the "non-continuous" accelerated expansion of the physical universe centered around the Jewish "Rosh-Hashanna" "Collective Human Consciousness Focus" (CHCF) time interval can only be explained (and predicted) based on the CUFT's New 'A-Causal Computation' Paradigm's discovery of the singularity of the Universal Computational/Consciousness Principle (UCP) and its possible connection to such CHCF. Once again, not only would it support the New ACC Paradigm's hypothesis regarding the singular higher-ordered Universal Consciousness Principle's simultaneous computation of each and every exhaustive spatial pixel in the universe; and its close connection with a "Collective Human Consciousness Focus" (e.g., such as the Jewish 'Rosh Hashanna' time-interval), which could account for the "non-continuous" increase in the universe's accelerated expansion rate, i.e., even at the farthest points of the universe! It would equally negate the possibility of the Old Material-Causal Paradigm being able to account for such "instantaneous effect" of this singular Universal Consciousness Reality (and its close connection with the "Collective Human Consciousness Focus" hypothesis) – affecting the farthest regions of the universe (thereby clearly violating

Relativity Theory's strict Speed of Light constraint upon the transmission of any light signal or any information).

IV. RESOLVING THE "UNIVERSE'S ACCELERATED EXPANSION RATE ENIGMA" (UAER)

Significantly, the CUFT's New 'ACC Paradigm's (unique) "critical prediction" involving the "Non-Continuous "Collective Human Consciousness Focus Non-Continuous Universal Expansion Rate Hypothesis" (CHCF-NCUERH) at Jewish "Rosh-Hashanna" (New Year) may also resolve the recent ("heated") debate regarding the "Universe's Expansion Rate Enigma" (UERE); This 'UERE' arose due to the apparent "empirical inconsistency" that seems to exist between different methodologies relating to the measurement of the Universe's Expansion Rate, represented by "Hubble's Constant" (H_0) – i.e., as estimated by "Cosmological" measures of the furthest expanding regions of the physical universe or by "Astronomical" measures of various indications of the Universe's Expansion Rate. Indeed, the recent article published in Science (Faucher-Giguère, Lidz & Hernquist, 2019) states that there exists an unexplained "gap" between these two different measures of the Universe's Expansion Rate (UER) – i.e., measured as: 67 by the Cosmological Measures, as opposed to the Astronomical Measures of $H_0 = 74$; The new light that the CUFT's New 'ACC' Paradigm may shed to resolve this apparent (inexplicable) "gap" between the Cosmological and Astronomical Measurements of the Universe's Expansion Rate is associated with the CUFT's unique "critical prediction" relating to the universe's "Non-Continuous Expansion Rate" which is predicted to occur around the Jewish "Rosh-Hashanna" (New Year) time-interval! This is because, if indeed the accelerated expansion of the physical universe cannot be accounted for by any ("non-existent") "dark-matter" or "dark-energy" concepts (e.g., due to the CUFT's New 'ACC' Paradigm's discovery of the singular higher-ordered UCP's simultaneous computation of all exhaustive spatial pixels in the universe for each consecutive Universal Frame – which principally negates the possibility of any such direct physical interaction/s between any two or more exhaustive spatial pixels!); But rather, only based on this singular Universal Computational/Consciousness Principle (UCP) intrinsic properties – one of which was hypothesized to be its "All-Goodness" characteristic, which is connected with the CUFT's additional "Collective Human Consciousness Focus" theoretical postulate that predicts that during the Jewish "Rosh-Hashanna" (e.g., concerted focus of Millions of Jews all around the world in prayer and focusing on this singular "Universal Consciousness Reality") there would occur such a "Non-Continuous Universe's Expansion Rate"!; therefore, the CUFT's unique "Critical Prediction" regarding the "Collective Human Consciousness Focus

Non-Continuous Universal Expansion Rate Hypothesis" (CHCF-NCUERH) at the Jewish "Rosh-Hashanna" (New Year) predicts that in fact the Expansion Rate of the Universe increases ("non-continuously") with every consecutive "Rosh-Hashanna"!

This "critical-prediction" of the CUFT therefore "opens the door" for accounting also for the apparent "Cosmological-Astronomical Gap"- i.e., based on this new CHCF-NCUERH "critical-prediction" of the CUFT's New 'A-Causal Computation' Paradigm: Since this new CHCF-NCUERH 'critical-prediction' explains the "Non-Continuous Universe's Expansion Rate" based on the "Collective Human Consciousness Focus" occurring at (or around) the Jewish New Year "Rosh-Hashanna" time-interval, therefore cumulatively, with the progression of "time" (e.g., multiple "Rosh Hashanna" consecutive time-intervals occurring even New Jewish Year) there should be an accumulation of an increase in the Universe's Expansion Rate! But, such a "cumulative – non-continuous" increase in the Universe's Expansion Rate would be expected to be detected based on more "recent" measures of the Universe's Expansion Rate, (e.g., "Astronomical Measures"), then by very "early" measures of the physical universe's initial stages (e.g., "Cosmological Measures")! Therefore, it may be the case that the current 'heated debate' associated with the "Cosmological-Astronomical Gap" may be explicable based on the CUFT's ACC New Paradigm's CHCF-NCUERH "critical-prediction" hypothesizing that the "Non-Continuous Universe's Expansion Rate" occurs due to the "Collective Human Consciousness" at each consecutive New Jewish Year's "Rosh Hashanna", which could be detected through the "more recent" Astronomical Measures, but not through the Cosmological Measures of the initial stages of the Universe's evolution!

In order to better understand (perhaps) this new theoretical explanation of the Universe's Expansion Rate it may be helpful (at this point) to look at the example of the "natural growth" of a "biological tree", e.g., like the extremely tall "Sequoia Tree" – who's seems to grow continuously for decades without an "end"! When we look at the growth of such a timber tall "Sequoia Tree" we may find that even though it continues to grow (impressively) over a relatively long (biological) time-frame, the "rate" at which this 'Sequoia Tree' grows may vary at different times along its evolution – which can be measured through looking at its internal "rings" (if we were to "cut" its bark horizontally); Using this 'Sequoia Tree Metaphor', it may be the case that certain "early-stage" phases of this 'Sequoia Tree' evolution yielded a "lower" Growth Rate – as compared to this "Sequoia Tree" (relatively) "later stages", which can be measured based on looking at its "internal-rings", thereby gauging the rate of its growth at different time-intervals etc.; If we are to "adapt" this "Sequoia Tree Metaphor" to our current "Universe's Expansion Rate Enigma" we may find

out that the "Cosmological Measures" which are geared towards the "early-stages" of the universe's development (beginning from the Assumed "Big-Bang" nuclear explosion and onwards) could be "analogous" to the early "internal-rings" of the Sequoia, whereas the "Astronomical Measurements" could be equated to the "later-stages" of the Universe's expansion history analogous to the more "outer-rings" of the evolving Sequoia Tree... If we consider the CUFT's New 'ACC' Paradigm's unique "critical-prediction" whereby there exists a "non-continuous" (e.g., "linear" or "non-linear") increase in the Universe's Expansion Rate associated with the "Collective Human Consciousness Focus" of the Jewish "Rosh-Hashanna" time-interval, then we would expect that a cumulative addition of a number of years at which this Jewish New Year's ("Rosh-Hashanna") could have produced a "non-continuous" increase in the universe's expansion rate (Hubble's Constant H_0) – in the later stages of the universe's expansion history (gauged by the "Astronomical Measures"); then such a new CHCF-NCUERH theoretical explanation would indeed predict a "greater" value than the "Cosmological Measures" associated with the early stages of the universe's evolution (around the hypothesized "Big-Bang" nuclear explosion – which is nevertheless negated by the CUFT's New 'ACC' Paradigm, as discussed above and previously); Hence, such a new CHCF-NCUERH theoretical explanation could possibly resolve the Universe Expansion Rate Enigma arising from the "Cosmological-Astronomical Gap"! Therefore, it is hereby suggested that perhaps the recently detected "gap" between the Cosmological and Astronomical Measures of the Universe's Expansion Rate may stem from their different measurements of the relatively "early" vs. "late" stages of the physical universe's evolution – much like looking at the Sequoia Tree's "external" vs. "internal" rings characteristics (e.g., including its "rate of growth" at each of these different evolutionary stages!) Another "daring" (possible) prediction associated with this new CHCF-NCUERH is that to the extent that it may be possible to gauge or measure the precise "time-gradient" of (say) the past 2000 years of the Universe's Expansion Rate, then according to this new CHCF-NCUERH prediction we would expect two features of this hypothesized CHCF-NCUERH to be revealed: a) We would expect to find an (equivalent) "non-continuous" – "linear" or "non-linear" Universe's Accelerated Expansion Rate" centered around the Jewish "Rosh Hashanna" time-intervals! And b) we would expect to find out that the Universe's Expansion Rate indeed accumulates along this "corpus" of 2000 years Universe's Expansion Rate measurements (e.g., which would further support perhaps the new CHCF-NCUERH theoretical account for the Cosmological-Astronomical Gap", mentioned above).

Needless to say that such an empirical validation of the CUFT's unique "critical-prediction"

regarding the "non-continuous" ("linear" or "non-linear") expansion of the physical universe at- or around- the specific time-interval of the Jewish New Year "Rosh-Hashanna" would unequivocally validate the CUFT's New 'A-Causal Computation' Paradigm as being more valid than the Old "Material-Causal" Paradigm underlying both RT and QM; This is because the validation of the CUFT's New ACC Paradigm's unique CHCF-NCUERH would indicate that the computation- sustenance- "dissolution"- and evolution- of every exhaustive spatial pixel in the physical universe is solely produced by the singular higher-ordered Universal Computation/Consciousness Principle (UCP), which can be affected by a "Collective Human Consciousness Focus" (such as in the Jewish Rosh Hashanna concerted focus of millions of Jews all around the world praying to this singular higher-ordered "Universal Computational/Consciousness Principle"). Thus, the CUFT's New 'A-Causal Computation' Paradigm offers a possible resolution of the "Universe's Expansion Rate Enigma", e.g., including the "unexplained-gap" that seems to exist between the Cosmologists H0 value of 69 as contrasted with the Astronomers H0 value of 74, through its postulate of a "non-continuous" ("linear" or "non-linear") expansion rate of the physical universe that is being produced solely through the operation of the singular higher-ordered Universal Computational/Consciousness Principle (UCP) – as connected to the "Collective Human Consciousness Focus" (e.g., at such special time-frames as the Jewish Rosh Hashanna New Year time-intervals).

V. THE NEW TWENTY-FIRST CENTURY 'ACC' PARADIGM'S UNIVERSE

The theoretical implications that would arise as a result of an empirical validation of the CUFT's unique "critical prediction" relating to the "non-continuous" ("linear" or "non-linear") expansion of the physical universe at or around the Jewish New Year "Rosh-Hashanna" time-interval are quite significant: As we've pointed out (in the beginning of this article and previously), Twenty-first century Physics has reached a "pivotal turning point" calling for a "Paradigmatic-Shift" from the Old "Material-Causal" Paradigm of underlying both RT and QM towards the CUFT's New "A-Causal Computation" Paradigm! As stated, this is due to the principle (apparent) "theoretical-inconsistency" that seems to exist between RT and QM as well as their inability to account for up to 95% of all of the "mass" and "energy" in the universe (e.g., which they assume comprises "dark-matter" and "dark-energy" which cannot be detected empirically!) Based on Kuhn's fine analysis of the evolutionary stages through which Science undergoes, e.g., alternating between phase of "Standard Science" and "Paradigmatic Shifts") it is clear that 21st century Physics finds itself in a state calling for a

"Paradigmatic Shift" – i.e., an empirical validation of a New Paradigm which could resolve this apparent theoretical inconsistency between RT & QM as well as provide an alternative (successful) explanation for the accelerated expansion of the universe (which does not rely on the "superfluous", non-existent "dark-matter" and "dark-energy" purely theoretical concepts); Indeed, the discovery of the CUFT's New "A-Causal Computation" (ACC) Paradigm was shown to provide precisely such a resolution of the apparent "theoretical inconsistency" between RT & QM – e.g., embedding both Models within a singular higher-ordered exhaustive new theoretical framework centered around the discovery of the singular higher-ordered Universal Computational/Consciousness Principle (UCP); In fact, a new "Universal Computational Formula" (UCF) was discovered which fully integrates- embeds- and transcends- all known relativistic and quantum phenomena and laws, and also fully integrates the four basic physical features of "space" and "energy", "mass" and "time" as four possible combinations of this singular (higher-ordered) UCP's two Computational Dimensions of "Framework" (frame/object) and "Consistency" (consistent/inconsistent)!

The key point is that since 21st century Theoretical Physics has reached such a "pivotal point" along its evolutionary development which seems to call for a new "Paradigmatic-Shift" – from the Old "Material-Causal" Paradigm underlying both RT & QM to the New CUFT's "A-Causal Computation" (ACC) Paradigm, the empirical validation of at least one unique "critical-prediction" of the CUFT would unequivocally support this new ACC Paradigm as being more valid and appropriate to serve as the New Paradigm for 21st century Physics; as mentioned above (and previously), such an initial empirical validation of one of the CUFT's "critical-predictions" was given (indirectly) based on the associated findings of the "Proton-Radius Puzzle" (Bernauer& Pohl, 2014) a subatomic measurement of approximately 100 times more "spatially consistent" smaller- and more accurate- measurement of the associated Hydrogen Proton, relative to the same Hydrogen Proton encircled by the 100 times lighter 'electron' particle! These "unexplained" empirical findings were shown to precisely conform with the CUFT's New ACC Paradigm's computational definitions of the "mass" of any given particle as computed by the singular higher-ordered Universal Computational/Consciousness Principle (UCP) – as the number of "spatially-consistent" presentations of that particle across a series of Universal Frames; i.e., predicting precisely that a relatively "more massive" particle would be measured across a greater number of Universal Frames than a less massive particle. A more direct empirical validation of two additional (unique) "critical predictions" of the CUFT's New 'ACC' Paradigm consist of an Astronomical Measure of the "Non-Continuous Universe's Accelerated

Expansion Rate" associated with a "Collective Human Consciousness Focus" CHCF-NCUERH at the Jewish Rosh Hashanna, which critically differs from the predictions of both RT and QM – and is called for time-sensitive measurements before- during- and after the upcoming "Rosh-Hashanna" time interval (as outlined above). Another unique "critical-prediction" of this New CUFT's 'ACC' Paradigm which was called for (in a previous article) involves the usage of subatomic Accelerators measuring and comparing the appearance of relatively "more massive" particles (such as the Muon) as opposed to relatively "less-massive" particles (such as the electron): It was predicted that to the extent that indeed the 'more massive' Muon particle would be measured across a greater number of Universal Frames than the 'less massive' electron particle, then this would (once again) unequivocally support the critical prediction of the CUFT's New 'ACC Paradigm as being more valid than the predictions of the Old 'Material-Causal' Model of both RT & QM! This is because only according to the New 'A-Causal Computation' Paradigm of the CUFT there exists a difference between the "existence" (or computation) of any given "more massive" relative to "less-massive" particle based on the singular higher-ordered Universal Computational Principle (UCP) computation of the number of Universal Frames in which such a particle appears in (and is computed as the "object-consistent" computation of its varying "mass" value).

To the extent that any of these (Astronomers' or Experimental Physicists' called for) unique "critical-predictions" of the CUFT's New 'ACC' Paradigm would be validated empirically, then this would justify the acceptance of the CUFT's New ACC Paradigm as the appropriate New Paradigm for 21st century Physics; As stated above, the theoretical implications of this New 'ACC' Paradigm are quite far-reaching: according to this New ACC Paradigm, the physical universe was not "created" by a "Big-Bang" nuclear explosion – since this would imply that there existed a "cause" and "effect" direct physical interaction between such an initial "nuclear explosion" and the creation of "mass", "energy", "suns", "galaxies" etc. (either in the "first", "second", "third" Universal Frame/s), which is negated by the ACC's New Paradigm asserting that the singular higher-ordered Universal Computational/Consciousness Principle (UCP) simultaneously computes all exhaustive spatial pixels comprising the entire physical universe (for each minimal-time consecutive Universal Frame)! Moreover, since according to the New 'ACC' Paradigm the whole entire universe "dissolves" "in-between" any two consecutive Universal Frames so that there cannot be any transference of any "material entity" or any "material-effect/s" (such as the assumed Big Bang's nuclear explosion which is assumed to create all "mass", "energy", galaxies, suns, planets, etc.). For the same precise reason, the New ACC Paradigm negates the

possibility of the existence of any "dark-matter" or "dark-energy" since those (purely hypothetical) concepts also rely upon the same basic "material-causal" assumption, which assumes that these (hypothetical) "dark-matter" and "dark-energy" entities "cause" a propulsion of certain galaxies, and the expansion of the universe, which is negated by the ACC's insistence upon the simultaneity of the UCP's computation of all exhaustive spatial pixels in the universe (for each consecutive Universal Frame/s) which does not allow for any such "material-causal" direct physical interactions! In much the same manner, this New ACC Paradigm challenged and negated Einstein's Equations of General Relativity which also assume that it is the direct physical interaction between certain "massive" objects and "Space-Time" which "causes" the "curvature" of this "Space-Time" (which conversely "causes" or "determines" the travelling pathways of these and other "massive objects")! This is because given the simultaneity of the UCP's computation of all exhaustive spatial pixels in the universe (for each consecutive Universal Frame/s) there cannot exist any such "material-causal" direct physical interaction/s between any two (or more) exhaustive spatial pixels (e.g., existing either in the same- or different- Universal Frames), thereby challenging and negating Einstein's Equations' "material-causal" assumption!

More principally, the empirical validation of (even one abovementioned) CUFT's "critical-prediction" would bring about a "Paradigmatic-Shift" from the basic tenets of 20th century Physics' "Material-Causal" Paradigm (of RT & QM) to the New "A-Causal Computation" (ACC) Paradigm based on the singularity of the Universal Computational/Consciousness Principle (UCP), which simultaneously produces- "dissolves"- re-produces- and evolves- every exhaustive spatial pixel in the universe at the incredible rate of " c^2/h " = 1.36^{50} sec!⁵⁰ This implies that this New 'A-Causal Computation' (ACC) Paradigm completely revises the basic "material-causal" assumption at the basis of both RT and QM and integrates their key components within its singular UCP based "Universal Computational Formula"! Succinctly stated, the New ACC Paradigm negates and revises both Relativity's assumed determination of the origination, sustenance and evolution of the (macroscopic) physical universe as "caused" by a direct (dynamic) physical interaction between massive objects and space-time (or as stated above also negating the origination of the entire physical universe as "caused" by a direct physical interaction between an initial "nuclear explosion" and all of the mass and energy, galaxies, suns, etc.); Instead, it postulates that the entire physical universe is being created- "dissolved"- re-created- and evolved- many billions of times per second (e.g., " c^2/h " = 1.36^{50} sec!) by this singular higher-ordered UCP which computes every exhaustive spatial pixel in terms of its four basic constituting physical features of "space",

"energy", "mass" and "time" (e.g., representing the four possible combinations of two of the UCP's Computational Dimensions of "Framework [frame/object]" and "Consistency" ['consistent/'inconsistent']! Likewise, this New 'ACC' Paradigm challenges and revises the basic "material-causal" assumption underlying Quantum Mechanics, i.e., assuming that the measurement of any given subatomic "target" particle is mediated through a direct physical interaction between the "target's" probability wave-function" and another subatomic "probe" element which "causes" the "collapse" of this 'probability wave function'; As stated above such a 'material-causal' assumption is strictly negated based on the CUFT's New 'A-Causal Computation' Paradigm due to the simultaneity of the UCP's computation of every exhaustive spatial pixel, instead giving rise to a singular higher-ordered UCP computation of the entire physical universe as being continuously computed- dissolved- re-created and evolved so many billions of times per second! Indeed, the new theoretical framework of this singular higher-ordered UCP computation was discovered through the (novel) "Universal Computation Formula" which was also shown to completely integrate the four basic physical features of 'space', 'energy', 'mass' and 'time' (e.g., as the four possible combinations of the UCP's two Computational Dimensions of 'Framework' and 'Consistency'), as well as all of the major Relativistic and Quantum relationships and laws (e.g., which were nevertheless shown to be embedded and transcended by this singular UCP's Universal Computational Formula).

Philosophically, the empirical validation of the CUFT's "critical-prediction/s" brings about a profound change in our basic understanding (and appreciation) of the physical reality (and physical universe) – not as existing "independently" but rather as merely representing a "transient-phenomenal" manifestation of the singular higher-ordered Universal Computational/Consciousness Principle! Indeed, based on the CUFT's additional "Computational Invariance Principle" and associated "Universal Consciousness Reality" (UCR) theoretical postulates we realize that since the only "constant" (e.g., "computationally-invariant") element which exists both "during" its simultaneous computation of each exhaustive spatial pixel in the physical universe comprising the extremely rapid series of Universal Frames, as well as existing solely without the presence of any physical universe "in-between" any two consecutive Universal Frames – is this singular higher-ordered UCP; whereas the entire physical universe which exists only "during" the UCP's sole production of each consecutive Universal Frame, but ceases to exist and is in fact "dissolved" back into the singularity of the UCP "in-between" any two consecutive Universal Frames; therefore there only truly exist one singular (constant) "Universal Computational/Consciousness

Reality" which exists both "during" its singular computation of each consecutive Universal Frame – which manifests as the entire physical universe, and also (solely) exists "in-between" any two consecutive Universal Frames! Viewed from that singular higher-ordered Universal Consciousness Reality (UCR) perspective, the origination- sustenance- and evolution- of the entire physical universe is seen merely as a "transient-phenomenal" manifestation of this singular UCR! We therefore reach a "New Physics" (based on the CUFT's New ACC Paradigm for 21st century Theoretical Physics) in which the existence of the entire physical universe is not dictated by any given "material-causal" physical relationships, but is rather only a manifestation of the this singular higher-ordered Universal Computational/Consciousness Principle (or Reality)... Indeed, as shown previously, this New 'ACC' Paradigm was also shown to challenge and revise some of the most basic assumptions of Modern Physics (specifically) and Science (more generally) including: the Second Law of Thermodynamics, the "Arrow of Time" assumption, Darwin's "Natural Selection Principle" etc. – all based on the UCP's ACC negation of the basic "material-causal" assumption. Finally, to the extent that one of the ACC "critical predictions" will be validated empirically, this would open a "new era" for the further development and evolution of 21st century Physics (and Science) pointing at the need to further investigate and understand the unique "Characteristics" of this singular higher-ordered Universal Computational/Consciousness Reality which is not "bound" or "constrained" by any physical laws, but rather manifests through the Ten Hierarchical Laws of Manifestation" (outlined previously) – amongst others, its "All-Goodness" intrinsic feature which therefore creates- sustains and evolves this (beautiful and "Moral") physical universe so many billions of times per second...

Dedication: This article is dedicated to my beloved Father, Prof. Zvi Bentwich for his personal example to me of being an earnest good Scientist and Doctor, and my beloved Mother (may she rest in Peace in Paradise!), Dr. Tirza Bentwich for her modest, pure, good example and her never-ending giving, to my beloved wife, Shulamit Bentwich for her beautiful sacred friendship and to my two beloved sons, Shoham and Netanel and my beloved daughter Neomi Tirza Shulamit who are all very dear to me. This article is also dedicated to my dear friend, Motti Ben Mordechai whose friendship supported me through trying times... This article is also dedicated to the truly great Scientist, Albert Einstein for his unceasing earnest quest for a complete Unifying Field Theory which served as a great inspiration for my lifelong search and discovery of the Computational Unified Field Theory.

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