

The Coming Scientific Validation of the Urantia Book

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1. Introduction

Although The Urantia Book was first published in 1955, already by 1942 it was “fixed” and by 1946 the final versions of the 1st edition plates were in the vault of printer RR Donnelley & Sons of Chicago, ready to produce 10,000 copies. [Mul00] Without fanfare the book was published and copies sent to prominent people of the time. The reaction was a resounding sound of one hand clapping. And so it has been pretty much ever since except for a few people here and there from all over the world who have found a real value, a great value, even an immense value in the pages of what we recognize to be the “Fifth Epochal Revelation” of scientific facts and spiritual truth to our world, Urantia.

Was The Urantia Book written by human beings? Imagine some people cooperating in the endeavor of quietly putting the Urantia Papers together.

That isn't a laptop computer they are bending over. It's a typewriter since there were no computers at that time. Their research team was charged to find the best human writers in astronomy, geology, paleontology, chemistry, physics, biology, botany, and other any other field you can think of, and then selectively use their ideas and sometimes even their phrasing but to avoid all of their blunders.



2. Evidence of Superhuman Authorship

How could anyone ever scientifically come to the conclusion that a book has superhuman authorship? There is a way. Many contemporary scientists have imagined that the first extra-terrestrial communication would come from some similar civilization in the universe. Therefore they imagined establishing communication, for example, using the ratio of the length of the circumference of any circle to its radius – the non-repeating, non-algebraic (transcendental) number π .

But another possibility has been overlooked, that we would be contacted by superhuman life, be reintroduced to communication with the universe after a long severing of communication due to a rebellion in this part of the local universe, yes the Lucifer Rebellion. That possibility seems to have completely eluded most human scientists. The Urantia Book is primary evidence that we have indeed been recently visited by superhumans, who must be responsible for the existence of the Urantia Book on the planet.

2.1 Potentially discrediting pitfall avoided. A good example of the Urantia Book's uncanny ability to avoid pitfalls is the Piltdown man double fossil hoax. As told by Wayne Jackson [Jac01]:

“In December of 1912, Charles Dawson, an amateur archaeologist, and Sir Arthur Smith

Woodward of the British Museum of Natural History, announced that they had discovered a man-like skull in a pit near Piltdown, England. Along with the skull was a jawbone that appeared to be very ape-like except for the teeth, which were more flattened, as would be expected in humans. ...”

When a second fossil Piltdown II later appeared in 1917 almost all scientists in the field were fooled including earlier skeptics Henry F. Osborn and William Gregory. According to master source-book sleuth and superhuman authorship skeptic Matthew Block [Blo05] it was Osborn who was the main source for the Urantia Book’s material on prehistoric man.

According to the University of California Museum of Paleontology “With few exceptions nobody suggested that the finds were a hoax until the very end.” [Har03] That didn’t come until 1953 at an international conference. Even as late as 1947 the fossils were still generally believed to be real. Over the years hundreds of scholarly articles were written about “Piltdown Man”.

“Eventually, it was discovered that the teeth had been ground down artificially to appear human and that it had been a sloppy job at that. Abrasion marks were still evident, the surfaces were flattened at different angles, etc. Moreover, as a result of chemical tests, it was determined that the jawbone had been stained chemically with potassium bichromate and iron salts for the purpose of making it appear ancient. ...” [Jac01]

Consider now that had the authors of the Urantia Book swallowed this fraudulent “Piltdown Man” - “Eanthropus dawsoni” - that one blunder would have completely discredited the Urantia Book as divine revelation. It would have been the proverbial “smoking gun” of evidence to conclude that the Urantia Book was itself a fraud, humanly written.

But instead, while acknowledging and describing Neanderthal, Cro-Magnon, Java and Heidelberg Man, and even while affirming evolutionary theory’s main lines of thought, The Urantia Book nevertheless flatly states that no such “missing link” fossil will be found because none exists. The reference follows:

“Although the evolution of vegetable life can be traced into animal life, and though there have been found graduated series of plants and animals which progressively lead up from the most simple to the most complex and advanced organisms, you will not be able to find such connecting links between the great divisions of the animal kingdom nor between the highest of the prehuman animal types and the dawn men of the human races. These so-called "missing links" will forever remain missing, for the simple reason that they never existed.” [Page-669 Line-24 Para-4]

Between 1917 and 1953 only a very few scientists (< 2%) still questioned the Piltdown “missing link” fossils and the most prominent of them swallowed the double hoax. But while affirming most other elements of evolution, the Urantia Book authors chose to positively deny the existence of the “missing link”, a very minority position at the time

rather than the majority opinion of their main source, Henry F. Osborn.

The Urantia Book might have conveniently ignored “Missing link man”, as many did, but virtually none who accepted evolution at the time flatly expressed what is in the Urantia Book already in 1946 and earlier, that there is no such missing link and that none will ever be found. The probability of randomly taking this position before 1946 is less than 1/50 to be generous about it.

2.2 Unpopular Positions and Scientific Predictions Confirmed. Many unpopular scientific positions including predictions that might have discredited the Urantia Book have already been corroborated by subsequent scientific progress.

a) Pangaea and Continental Drift. Pangaea (“all lands”) was Alfred Wegener’s 1920’s theory of a single continent that broke apart and whose pieces “drifted” apart to form the present continental arrangement. At the time the orthodox theory to explain similar rock deposits and species of life on opposite shores of continents was somehow with hypothetical land bridges that once connected far away continents.

As pointed out by T. Bishop [Bis82] “Reaction to Wegener's theory was almost uniformly hostile, and often exceptionally harsh and scathing”

The University of California Museum of Paleontology writes: “Alfred Wegener (1880-1930). In 1929, about the time Wegener's ideas began to be dismissed, Arthur Holmes elaborated on one of Wegener's many hypotheses; the idea that the mantle undergoes thermal convection.” “Not until the 1960's did Holmes' idea receive any attention.” [Wei05].

But already by 1946 and earlier, and by 1955 at the latest the Urantia Book was on record saying: “750,000,000 years ago the first breaks in the continental land mass began as the great north-and-south cracking, which later admitted the ocean waters and prepared the way for the west-ward drift of the continents of North and South America, including Greenland. The long east-and-west cleavage separated Africa from Europe and severed the land masses of Australia, the Pacific Islands, and Antarctica from the Asiatic continent.”
Page-663 Line-3 Para-1

Only a few geologists (< 5%) defended Wegener’s theory of continental drift until the 1960’s. It was largely rejected by 1929 due to Wegener’s offering too many implausible mechanisms to explain the “drift”. By the time he and Holmes suggested something like continents floating on liquid rock, they were ignored. Only later in the late 1950’s and 60’s was “continental drift” vindicated.

b) Plate Tectonics. Continents float on liquid rock; this allowed “continental drift”; collisions cause mountains; shifting now causes earthquakes – all these are now accepted facts but were just unpopular conjectures when the Urantia Book said:

“The outer crust was about forty miles thick. This outer shell was supported by, and

rested directly upon, a molten sea of basalt of varying thickness, a mobile layer of molten lava held under high pressure but always tending to flow hither and yon in equalization of shifting planetary pressures, thereby tending to stabilize the earth's crust. Even today the continents continue to float upon this non-crystallized cushiony sea of molten basalt. Were it not for this protective condition, the more severe earthquakes would literally shake the world to pieces. Earthquakes are caused by sliding and shifting of the solid outer crust and not by volcanoes.”
Page-668 Line-27 Para-6 & 7

Notice that this “shifting” suggests that the “solid outer crust” can rub up against itself, and shift, something we now know occurs on a moving fault line.

We recently learned something at most hinted at in The Urantia Book - a mid-Atlantic ridge from which over time the ocean floor slowly moves up and spreads out in both directions. This movement or flow appears to have been the specific cause of the westward drift of the American continents.

“The land was periodically going up and down due to the shifting sea level occasioned by activities on the ocean bottoms.”
Page-681 Line-28 Para-6

c) Mountain formation. Concerning the western American mountain ranges, the Urantia Book Says: “Near the close of the preceding geologic period much of the continental land was up above water, although as yet there were no mountain peaks. But as the continental land drift continued, it met with the first great obstruction on the deep floor of the Pacific. This contention of geologic forces gave impetus to the formation of the whole vast north and south mountain range extending from Alaska down through Mexico to Cape Horn.”
Page-689 Line-4 Para-1

Wegener had offered such a scenario to explain the western range of mountains in North and South America. This has now been substantiated and greatly elaborated with knowledge that the Urantia Book did not reveal at the time. One might say that the account could now benefit from revision in view of new scientific information learned since 1955.

Had the Urantia Book authors chosen a basically erroneous account, then that would have discredited it. The probability of randomly choosing Wegener’s position and randomly choosing the proper mechanism of continental drift is much less than 1/20. Lack of a detailed description here is not a disqualifier of super-human authorship.

So randomly choosing correctly in both “Pitdown” and “Wegener” is less than $(1/50)(1/20)=1/1000$. Factor in another 1/2 for mountain formation, and the probability is 1/2000. You see where this is leading. A sequence of likely pitfalls and unpopular positions and other positions can hardly ALL turn out well without superhuman authorship. Therefore the Urantia Book had superhuman authors. More support for this estimate follows.

d) Injury Repair Cell Proliferation. “Many features of human life afford abundant

evidence that the phenomenon of mortal existence was intelligently planned, that organic evolution is not a mere cosmic accident. When a living cell is injured, it possesses the ability to elaborate certain chemical substances which are empowered so to stimulate and activate the neighboring normal cells that they immediately begin the secretion of certain substances which facilitate healing processes in the wound; and at the same time these normal and uninjured cells begin to proliferate-- they actually start to work creating new cells to replace any fellow cells which may have been destroyed by the accident.

Page-735 Line-7 Para-2

In affirming that “creative design” did have a part in evolution, the Urantia Book offers as an example how an injury causes cells to secrete chemicals that cause nearby healthy cells to start proliferating to repair the injury. This mechanism is just now being described, but our scientists only suspect that the blood carries such repair chemicals. For instance in discussing repair of liver cells in 2001 Dr. Emilio Orfei [Orf01], Department of Pathology, Loyola University of Chicago writes

“Reaction to Injury: Repair. The hepatocyte has a florid regenerative potential. In experimental partial resection in the rat, the remaining liver tissue starts to regenerate within a few hours. In 14-15 hours DNA replication is seen. In 20-21 hours mitoses appear. In 32 hours mitoses are at the pick. In 2 weeks the remaining liver tissue has reached the weight that had before resection. Cell division takes place in the periportal zone. In pathological conditions, dead liver cells are replaced by proliferation of surviving liver cells. Hepatocytes, Kupffer cells, endothelium, bile ducts, vessels, all proliferate.”

“The factor(s) stimulating proliferation of remaining hepatocytes are not known. T[h]ey may be humoral. Indeed: 1) blood from a partially hepatectomized animal induces a proliferative response in the liver of a non-operated animal. ...”

The Urantia Book also mentions that these chemicals could be used to improve treatment for injuries and to control certain dangerous diseases - cancer. Only a few intrepid medical researchers are just now exploring such approaches to cancer treatment.

Do you think maybe that the medical profession could find “immense value” in the cosmic instructions and scientific assertions of the Urantia Book? What is the probability of some medical paper correctly describing this back 1955? Virtually zero has to be the answer because the inflammation reaction and injury repair mechanism was totally unknown back at that time. [Pri05] If we assign another 1/50 to the probability of there being some human description before 1955 chosen by the authors that was correct, that brings the probability we’ve been estimating to less than $(1/2000)(1/50) = 1/100000$, one out of a hundred thousand, and we’re just getting started. More evidence will be offered below but first let us consider the “limitations of revelation”. Are we expecting too much from the Urantia Book’s cosmology?

2.3 The Limitations of Revelation. Some readers, and even supposed believers, claim over and over again that most of the Urantia Book’s science is already outdated - merely

transient early 20th century cosmology. The numerous differences between contemporary science and the Urantia Book's cosmology they see as "errors on the face" of the Urantia Book evident after "a few short years". Since the cosmology of The Urantia Book is "not inspired", since the Revelators were not permitted to reveal "unearned" or pre-mature knowledge, how factual and how valuable are its cosmological discourses?

These questions are being asked over and over again by certain writers who then answer their own questions by quoting a few favorite paragraphs that seem to imply that the Revelators were not permitted to give us accurate far-reaching cosmic instruction. Nothing could be further from the truth. Consider this statement by the relevant Melchizedek, which should always be quoted in this context:

"Truth may be but relatively inspired, even though revelation is invariably a spiritual phenomenon. While statements with reference to cosmology are never inspired, such revelations are of immense value in that they at least transiently clarify knowledge by:

1. The reduction of confusion by the authoritative elimination of error.
2. The co-ordination of known or about-to-be-known facts and observations.
3. The restoration of important bits of lost knowledge concerning epochal transactions in the distant past.
4. The supplying of information which will fill in vital missing gaps in otherwise earned knowledge.
5. Presenting cosmic data in such a manner as to illuminate the spiritual teachings contained in the accompanying revelation."

Page-1109 Line-40 Para-7

Here the writer attempts to carefully qualify the previously described 'limitations of revelation' by allowing that the Urantia Book can nevertheless be of "immense value" by temporarily clarifying cosmic knowledge via the accomplishment of the five items above.

But these five immensely valuable items have just begun to occur. Presently very few scientists take the Urantia Book seriously, let alone authoritative, so scientific confusion has not yet been reduced by an authoritative elimination of errors; co-ordination of about to be known facts is just now happening and will continue; lost knowledge about past epochal events is just now being further demonstrated; missing gaps supplied by the Urantia Book are still to be considered by most scientists; and finally cosmic data has yet to be accepted by many scientists as a basis for the accompanying spiritual revelation. We are still quite early, but the times are upon us when many more of these things will be fulfilled.

"Mortal man is passing through a great age of expanding horizons and enlarging concepts on Urantia, and his cosmic philosophy must accelerate in evolution to keep pace with the expansion of the intellectual arena of human thought."

Page-1146 Line-22 Para-5

At this time our human cosmic philosophy needs some divine revelation to make adequate progress. This is when we need some help with our thinking about these matters, and the Urantia Book is the universe's response! It is the long sought

communication we've been hoping for, but it is much more than we have been hoping for. Yet, considering the plight of our world of wars and rumors of wars, surely if there is a Universe out there, they will send us a life-savior seeing how we are all in danger each day of drowning in a self-made morass of nuclear destruction and suicide bombing.

2.4 Astronomic Predictions Fulfilled (or Partially). Already much has been fulfilled. Many significant scientific predictions have already been confirmed.

a) “No less than 375 million new galaxies”. New cosmic maps of the whole universe are now confirming the bold cosmic predictions made by the Urantia Book before 1955:

Speaking about our astronomical observations, The Urantia Book says, “...with photographic technique the larger telescopes penetrate far beyond the borders of the grand universe into the domains of outer space, where untold universes are in process of organization. And there are yet other millions of universes beyond the range of your present instruments.” “In the not-distant future, new telescopes will reveal to the wondering gaze of Urantian astronomers no less than 375 million new galaxies in the remote stretches of outer space.”

Page-130, Para-5 & Para-6

About 1990 with the publication of early deep space photos our scientific estimates of the number of galaxies changed from “5 to 10 million” to “at least 50 to 100 million”. By 1997 World Book was saying "Studies of distant space with optical and radio telescopes indicate that there may be about 100 billion galaxies in the universe." [Wor97]

My how quickly scientific estimates change without hardly a look back or an admission of error in the enthusiasm of “new results”, which are just as proudly asserted with the same certainty as the previous beliefs. The Urantia Book has to live with what it said in 1955, and it beat the galactic science of 1986!



b) “Walls” of Galaxies Separated by “Voids”. Before 1986 almost all contemporary astronomers and cosmologists fully expected to see a random distribution of galaxies in the universe as a whole. That was the prediction of our best non-Urantia Book reading cosmologists, consistent with their so-called “big bang cosmology”. With 30 or 40 years of hindsight over the Urantia Book, they still were wrong and the Urantia Book is right. What does that say about whose cosmology is obsolete? Consider the following report in Science Frontiers:

“The discovery of the Great Wall of galaxies and the regular clumping of galactic matter has greatly surprised astronomers, who have been emphasizing how uniformly distributed galactic matter should [be] -- according to theory, at least. Now, D.C. Koo, at the University of California at Santa Cruz, says, "The regularity is just mind-boggling." M.

Davis, an astrophysicist at Berkeley, admits that if the distribution of galaxies is truly so regular, "...it is safe to say we understand less than zero about the early universe." (Wilford, John Noble; "Unexpected Order in Universe Confuses Scientists," Pittsburgh Post Gazette, May 28, 1990. Cr. E.D.Fegert)" [Sci90]

"And from the University of Tennessee we read: "The first maps, published in 1986, were a great surprise to the astrophysicists. They had expected to find relative uniformity above the scale of the already-familiar galaxy clusters. Instead, the first surveys showed--and subsequent surveys have confirmed--that great clusters of galaxies are arranged in thin sheets or long filaments. The longest sheet detected, called the "Great Wall," extends hundreds of millions of light years across the maps." [Nor05] These maps were first published by Margaret Geller and John Huchra [Huc01].

On the other hand, the 1955 Urantia Book authors predicted the future observation of a "vast procession of galaxies" bounded by relatively empty zones of space:

"You may visualize the first outer space level, where untold universes are now in process of formation, as a vast procession of galaxies swinging around Paradise, bounded above and below by the midspace zones of quiescence and bounded on the inner and outer margins by relatively quiet space zones." (Page-125 Para-1)

"The relatively quiet zones between the space levels, such as the one separating the seven superuniverses from the first outer space level, are enormous elliptical regions of quiescent space activities. These zones separate the vast galaxies which race around Paradise in orderly procession." (Page-125 Line-6)

"The Outer Space Levels. Far out in space, at an enormous distance from the seven inhabited superuniverses, there are assembling vast and unbelievably stupendous circuits of force and materializing energies. Between the energy circuits of the seven superuniverses and this gigantic outer belt of force activity, there is a space zone of comparative quiet, which varies in width but averages about four hundred thousand light-years. These space zones are free from star dust--cosmic fog." (Page-129 Line-45)

"... the vast universes of outer space in the realms next to the domains of the seven superuniverses seem to be revolving in a direction opposite to that of the grand universe. That is, these myriads of nebulae and their accompanying suns and spheres are at the present time revolving clockwise about the central creation. The seven superuniverses revolve about Paradise in a counterclockwise direction. It appears that the second outer universe of galaxies, like the seven superuniverses, revolves counter-clockwise about Paradise. And the astronomic observers of Uversa think they detect evidence of revolutionary movements in a third outer belt of far-distant space which are beginning to exhibit directional tendencies of a clockwise nature." Page-134 Line-28 Para-4

The Dept. Physics & Astronomy at University of Tennessee in its Stars, Galaxies, and Cosmology lecture notes in Astronomy writing a "The Great Wall" writes

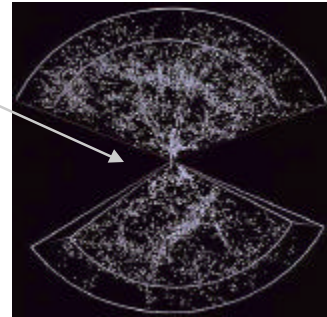
“Redshift surveys have revealed the largest structures yet observed in the Universe. The prominent concentration of galaxies running diagonally across the northern (that is, upper) portion of the adjacent image has been termed the Great Wall. It appears that

(Center of Galactic Ring)

* It covers at least 85 Mpc in declination and 215 Mpc in right ascension. It is likely to be even larger because it is obscured by dust in the plane of our galaxy on one end and hasn't yet been mapped on the other.

* It is less than 7 Mpc thick.

* There is a corresponding structure in the southern sky termed the Southern Wall. Because neither the Northern Wall nor the Southern Wall have been mapped fully, it is even possible that the two join each other in the parts of the sky that have not been examined yet and are part of one much larger structure.”



“Preliminary deep space redshift surveys along narrow pencils of direction indicate a periodic structure suggesting that there may be additional Great Wall type structures out there, but we have insufficient information at this point to map them extensively.” [Ten05]. One Mpc = 3.26 million light years. See [Gel93] for picture.

These are striking initial confirmations of the very kinds of large-scale galactic structures that the Urantia Book predicted before 1955. But our most prominent contemporary cosmologists prior to recent observations predicted random distributions of galaxies consistent with their “Big Bang” theory of an exploding universe, a theory upon which they have built their reputations and research programs.

These folks will not easily give up their theory of an exploding universe, which is also how they conclude the age of the universe to be less than 15 billion years. They have and will continue to offer a sequence of possible defenses as new information continues to disagree with their theory. Already many claim that the background radiation *proves* the Big Bang explosion occurred, but there are other possible explanations for the background radiation, including perhaps diffuse matter throughout pervaded space equivalent to 1 electron per cubic inch.

An earlier example of this running adjustment of the Big Bang theory concerns hydrogen: “The relative amounts of hydrogen and helium (and much smaller amounts of deuterium and lithium) in the universe are not in good agreement with those predicted by the Standard Model, unless it is modified by an auxiliary hypothesis called “inflation”, which proposes that the universe expanded at a velocity beyond the speed of light for a short time. Alan Guth, a particle accelerator physicist at Stanford, proposed the inflation hypothesis in 1979.” See The American Physical Society [APS99], National Center for Supercomputing Applications [NCS95], for more information on these “walls”.

c) **Huge Redshifts.** Before they were observed the Urantia Book predicted huge redshifts equivalent to recessional speeds of “more than thirty thousand miles a second”,

but it also instructs that this does not mean the universe is flying apart.

“The present relationship of your sun and its associated planets, while disclosing many relative and absolute motions in space, tends to convey the impression to astronomic observers that you are comparatively stationary in space, and that the surrounding starry clusters and streams are engaged in outward flight at ever-increasing velocities as your calculations proceed outward in space. But such is not the case.” Page-134 Line-1 Para-1

“Although your spectroscopic estimations of astronomic velocities are fairly reliable when applied to the starry realms belonging to your superuniverse and its associate superuniverses, such reckonings with reference to the realms of outer space are wholly unreliable. Spectral lines are displaced from the normal towards the violet by an approaching star; likewise these lines are displaced towards the red by a receding star. Many influences interpose to make it appear that the recessional velocity of the external universes increases at the rate of more than one hundred miles a second for every million light-years increase in distance. By this method of reckoning, subsequent to the perfection of more powerful telescopes, it will appear that these far-distant systems are in flight from this part of the universe at the unbelievable rate of more than thirty thousand miles a second. But this apparent speed of recession is not real; it results from numerous factors of error embracing angles of observation and other time-space distortions.”

Page-134 Line-15 Para-3

Notice in the following table of data [Rot99] provided by Allan Sandage at Mt. Wilson and Las Campanas Observatories that the Hydra galaxy is now estimated to be receding from us at more than 30,000 miles/sec, just as the Urantia Book predicted such would be seen after larger telescopes were built. The recessional speed of Hydra is listed as 61,000 km/sec = (61,000 /1.609) miles/sec = 37,900 miles/sec, which is more than 1/5 the speed of light!

Galaxy	Distance from Earth (Millions of Light Years- MLY)	Speed (km/s)
Milky Way	0	0
Virgo	78	1200
Ursa Major	980	15000
Corona Borealis	1400	21600
Bootes	2500	39000
Hydra	4000	61000
Perseus	350	5400
Hercules	650	10000
Ursa Major II	2700	41000

d) Dark Matter Holds the Universe Together. That dark matter holds luminous bodies together was first noticed in 1970’s. Wikipedia [Wik05], the free encyclopedia tells us, “In the 1970s it was realized that the total visible mass of galaxies (from stars

and gas) does not properly account for the speed of the rotating gas, thus leading to the postulation of dark matter.” Similarly, Austerberry [Aus04] says, “The rotation of stars in our galaxy is inconsistent with the gravitational effects predicted for detectable masses in the galaxy. The same anomaly appears in galaxies other than our own. Where is the missing matter? ... ”

But already in 1955 The Urantia Book was saying to anyone willing to read it: “The Dark Islands of Space. These are the dead suns and other large aggregations of matter devoid of light and heat. The dark islands are sometimes enormous in mass and exert a powerful influence in universe equilibrium and energy manipulation. The density of some of these large masses is well-nigh unbelievable. And this great concentration of mass enables these dark islands to function as powerful balance wheels, holding large neighboring systems in effective leash. They hold the gravity balance of power in many constellations; many physical systems which would otherwise speedily dive to destruction in near-by suns are held securely in the gravity grasp of these guardian dark islands. It is because of this function that we can locate them accurately. We have measured the gravity pull of the luminous bodies, and we can therefore calculate the exact size and location of the dark islands of space which so effectively function to hold a given system steady in its course.”

Page-173 Line-3 Para-1

2.5 Neutrinos. There are many other examples of scientific statements in the Urantia Book that exhibit superhuman knowledge, too numerous to list. Another example is the existence and character of tiny charge-less particles – the so-called neutrinos.

While W. Pauli predicted neutrinos in 1931 and E. Fermi incorporated them into his 1934 theory of atomic decay, they were not actually observed until 1959. [Bar98]

The Urantia Book boldly affirms their existence as “certain small uncharged particles” and their role: “The integrity of the nucleus is maintained by the reciprocal cohering function of the mesotron, which is able to hold charged and uncharged particles together because of superior force-mass power and by the further function of causing protons and neutrons constantly to change places.”

Page-479 Line-9 Para-2

“The presence and function of the mesotron also explains another atomic riddle. When atoms perform radioactively, they emit far more energy than would be expected. This excess of radiation is derived from the breaking up of the mesotron “energy carrier,” which thereby becomes a mere electron. The mesotronic disintegration is also accompanied by the emission of certain small uncharged particles.” (Mesotrons are now called mesons.)

Page-479 Line-21 Para-3

The Urantia Book said in 1955 that neutrinos are held by the “superior force-mass power” of the mesotron and that all energy particles have mass and proceed in straight processional lines. “Energy, whether as light or in other forms, in its flight through space moves straight forward. The actual particles of material existence traverse

space like a fusillade. They go in a straight and unbroken line or procession except as they are acted on by superior forces, and except as they ever obey the linear-gravity pull inherent in material mass and the circular-gravity presence of the Isle of Paradise.”

Page-461 Line-9 Para-2

But only in 1998 did our scientists discover that neutrinos have mass, and it has upset their “Standard theory”. “A Weighty Discovery in Particle Physics. In June 1998, an international team of Japanese and U.S. physicists unveiled strong evidence that elusive subatomic particles known as neutrinos have mass (or weight). These findings run counter to the standard model of particle physics—the basic theory about the structure of matter—which holds that these electrically neutral, weakly interacting particles have no mass. The discovery means that existing theoretical models of matter must now be revised to include neutrinos with mass.” [Inf05]

2.6 Probability of Human Authorship. While taking all of these unpopular or completely prophetic scientific positions with still no clearly obvious scientific blunders (unlike old science texts and human authors), what is the probability of such a sequence due to correct guesses? What is the probability of a human astronomer in 1955 predicting “no less than 375 million galaxies” in the far reaches of outer space when at the time a few hundred were known and as late as 1985 the estimate was 5 to 10 million? Let’s say 1/100 to be generous. Factor in the probability of predicting the large-scale structures now being seen - the “walls” separated by great “voids” - which until 1987 our scientists expected to be distributed randomly and sparsely. That’s another very low probability event, another 1/100 at best. Then there are the predictions of the huge redshifts now seen and the prediction of dark matter being a balance wheel for luminous bodies, which has now been observed as well. Each of those two have perhaps 1/5 probability to be generous, or 1/25 together. So all four together have probability less than $(1/100)(1/100)(1/25) = 1/250,000$. Successfully guessing these four and the earlier four with 1/100000 probability yields 1/25,000,000,000 or less than 1 chance in 25 billion.

Some of these may be larger and some smaller than estimated, but they each contribute more or less to make a very small probability of occurrence *given The Urantia Book was written by humans*. Therefore on statistical grounds I infer that super-humans must have written the Urantia Book and none of these predictions were random or lucky guesses.

These predictions have not been “cherry-picked” while other misses ignored. They have been chosen because they have been subsequently established by human science. Examples that are still open to question due to unreliable data have been left for a later date of evaluation. Some of them such as the time of light travel from Andromeda will come up as part of cosmic instruction from superhumans.

2.7 Scientific Credibility. If The Urantia Book is what it purports to be then the present lack of contemporary scientific interest will not always be the case. What would make scientists sit up and take notice of this “communication from outer space”, this revelatory gift from higher universe life? Only scientific evidence in a book of philosophy can

impress a real scientist of the book's worth when discussing the scientific aspects of the cosmos, not some re-warmed 20th century science ill-suited for the presentation of the spiritual truths of the next 1000 years. No, The Urantia Book must present truly impressive, albeit transient, science alongside of ageless spiritual truth.

The Urantia Book does make many such predictions and when they are scientifically observed they will be a mighty powerful attraction to scientists and others to take The Urantia Book seriously. So far that hasn't happened, but even now events are gathering for such a spectacular corroboration in the recent explorations in the eastern Mediterranean for Plato's Atlantis, which due to Robert Sarmast, we now know was also the Garden of Eden. (I know of one famous scientist and there are probably many other "closet UB readers" among professional scientists, who read and utilize the book, but who for obvious reasons prefer to keep that their secret.) But what will happen if Robert's next expedition brings up sensational evidence just where The Urantia Book says it is? Will most scientists ignore that too? We may soon see. When will prominent scientists publicly give The Urantia Book credit for its scientific predictions?

My own personal favorite in this category is the sensational prediction that there is a non-breathing form of life on a sphere in *close proximity* to our world. As such we might be looking for the wrong kind of life in our solar system, entertaining too narrow a concept of life. If The Urantia Book is what it says it is, then there must be such a world in close proximity. Some readers think that implies the world must be in our solar system, but I suppose being within easy communication range, like a few light years away, might also be in close proximity in astronomical terms because we could become aware of each other by interstellar communication. Even that would be exciting. More on this later.

Why believe The Urantia Book's science? Certainly it is not only because The Urantia Book states many spiritual truths. Rather, The Urantia Book's science must stand on its own as well, at least for a while, during these times when it has yet to be taken seriously by most of the world. The real reason that I believe in the science of The Urantia Book and the authenticity of The Urantia Book as divine revelation to our world is because of its humanly improbable avoidance of error and the meandering convergence over the years of contemporary science to positions taken by the Urantia Book authors.

Summary of Evidence of Superhuman Knowledge. a) Not referencing paleontology fossils later found to be frauds while mentioning most others and asserting that no "missing link" fossil (nickname for the fraudulent fossil) would be found, b). Describing Pangaea, continental drift on molten basalt, and formation of mountains, c) Describing the injury repair chemistry, d) Predicting the existence and large-scale ring shapes of hundreds of millions of star systems, then unknown and unexpected before 1987, e). Predicting the extent of the "Big Bang" cosmic redshifts observed by contemporary science, even while saying that the supposed rapid expansion is due to many factors of error, f) Even before the problem of rapidly spinning galaxies was noticed predicting that dark matter keeps the rapidly spinning galaxies from flying apart and prevents many bodies from plunging into nearby stars, and g) Affirming the existence (before actual discovery) of Neutrinos, including that they have mass.

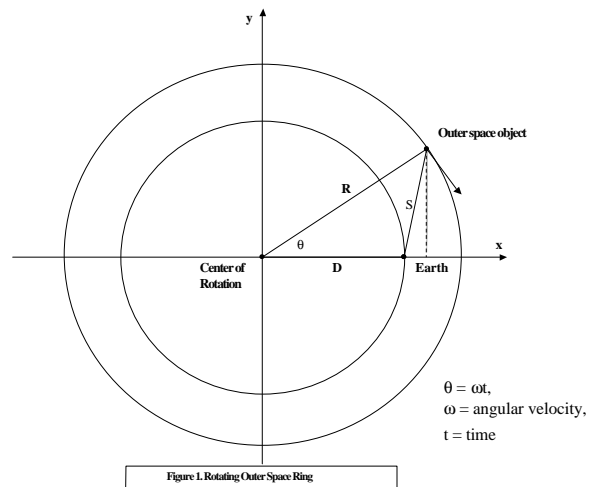
3. Instruction in Science and Cosmology Still to be Received by Urantia Scientists

Given that super-humans wrote the Urantia Book, what were they trying to accomplish? As listed before the authors of the Urantia Book provided “instruction in cosmology” in order to facilitate the human understanding of the accompanying spiritual revelation. The authors were also permitted to reveal some information not otherwise mandated.

3.1 Huge Spectrographic Redshifts Due to “Numerous Factors of Error”.

a) Greatest Spectrographic Distortion. “But the greatest of all such distortions arises because the vast universes of outer space in the realms next to the domains of the seven superuniverses seem to be revolving in a direction opposite to that of the grand universe. That is, these myriads of nebulae and their accompanying suns and spheres are at the present time revolving clockwise about the central creation. The seven superuniverses revolve about Paradise in a counterclockwise direction.” Page-134 Para-4

Being a mathematician, I decided to investigate this possibility analytically. I was able to prove an interesting result. Apparently, such a situation as The Urantia Book describes with galaxies proceeding in orderly fashion in the first outer space zone adds up to a *constant* red (or blue) shift (depending on the angle of observation) to any object whose distance from the postulated center of rotation is greater than earth’s distance to that center of rotation. (That constant



turns out to be the distance from earth to the center of rotation times the difference between the angular velocities of the Earth versus the first outer space object. See [Cal05A] for details.

$$\text{Max } dS/dt = \pm \left\{ \begin{array}{l} \omega R, R \dot{S} D, \\ \omega D, R \cdot D \end{array} \right\}$$

Looking in directions relatively close to the plane of the Milky Way but far away from its center, no matter how far into an almost uniformly spinning ring of galaxies in the first outer space zone, the maximum redshift on one side would be larger by a constant while on the other side the maximum blue shift would be larger by the same amount. Other angles of observation have intermediate red or blue shifts. A test of this conjecture would involve observing this difference in the frequency shifts in the distant galaxies in the direction of Galactic latitudes on opposite edges of the Milky Way.

“From the outermost system of inhabited worlds to the center of the superuniverse is a trifle less than two hundred and fifty thousand light-years.” (32:2.11)

Page-168 Line-6 Para-2

b) Galaxies Not Really Flying Apart - No Big Bang. While predicting the huge redshifts the Urantia Book also instructs: “But this apparent speed of recession is not real; it results from numerous factors of error embracing angles of observation and other time-space distortions.”

Page-134 Para-3

Since the redshift is linear with distance, the huge redshifts might be due to the existence of some “reddening influence” in the intervening space. This is the “tired light” theory of redshift, but the light from distant galaxies looks just as clear as that from nearby ones, which presumably would not be the case were the light being changed. Therefore this possibility is downgraded. [Bal] “Time-space distortions” could easily include “tired light”, but it also allows for other distortions like unknown rotational motions and angles of observation.

Only a very few poorly-funded and mostly ignored astronomers are courageous enough (and independent enough) to dispute the receding motion interpretation of the huge redshifts of the external galaxies - those beyond the so-called local group of galaxies, which The Urantia Book calls the seven superuniverses. One such astronomer is Halton Arp, who was Hubble’s assistant. Apparently Arp has evidence of gravitationally connected objects in close proximity but with very different redshifts. [Sco05]

Charles Austerberry [Aus04], Creighton University, outlines the history of the universe according to the Standard Model, Big Bang theory as follows:

“t = 0 a singularity 15 b. yrs. Ago - Universe began from a "singularity"

The 4 (or 3) basic forces emerge.

Before a millionth of a second, fundamental particles emerge & stabilize. Radiation (light and radio waves, and so forth) cannot move far. The universe is quite foggy (opaque) mostly due to the free electrons.

Before a thousandth of a second, protons and neutrons form.

In a few minutes, primal nuclei form.

It takes almost a million years (at least 300,000)for the universe to cool to 3,000 degrees Kelvin, enough for atoms to form (mostly hydrogen and helium). The universe's opacity dropped abruptly.

10-14 b. yrs. ago - primal stars emerge; giant galaxies evolve; heavier elements are formed in stars, and in supernova explosions.

4.5 b. yrs ago - our sun, planets, & earth are born

4 b. yrs ago - the first prokaryotic cells emerge

2 b. yrs ago - the first eukaryotic cells emerge

5 m. yrs ago - hominids evolve

200,000 yrs ago - archaic Homo sapiens

40,000 yrs ago - modern Homo sapiens” [Aus04]

Hubble's constant H_0 is estimated to be 72 km/s for each Mpc distance from earth. 1 Mpc = 3.086×10^{19} km, and 1 yr = 3.16×10^7 seconds. Therefore the age of the universe = $1/H_0 = 13.6$ billion years. [Dod05]

As a scientist and a religionist I can only say that I find this story even harder to believe than the creation story in the Book of Genesis.

c) Galactic Rotations Imparted by Living Force Organizers. The Urantia Book instructs that nebular revolutions are added by living force organizers not simply the result of evolution. This answers the nagging question in cosmology and physics of where all the spin in the universe came from. Here the nebular mother of our sun is described:

“875,000,000,000 years ago the enormous Andronover nebula number 876,926 was duly initiated. Only the presence of the force organizer and the liaison staff was required to inaugurate the energy whirl which eventually grew into this vast cyclone of space. Subsequent to the initiation of such nebular revolutions, the living force organizers simply withdraw at right angles to the plane of the revolutionary disk, and from that time forward, the inherent qualities of energy insure the progressive and orderly evolution of such a new physical system.”
Page-652 Line-9 Para-2

3.2 Motion of Space Versus Motion of Matter in Space. The Big Bang idea forced contemporary scientists to imagine how the distant galaxies could so quickly start sending light toward us almost 15 billion years ago from a place in space so far away from the “singularity” in space. Their answer is that at first the space itself was quickly moving out there, and that could happen effectively at apparently faster than light speed, almost instantaneously. One might respond ‘in what reference frame does the space move, compared to what? It’s as though all space just blinks into existence in one instant. But The Urantia Book is way ahead of our scientists on this idea of space motion:

“Space is, from the human viewpoint, nothing--negative; it exists only as related to something positive and nonspatial. Space is, however, real. It contains and conditions motion. It even moves. Space motions may be roughly classified as follows:

1. Primary motion--space respiration, the motion of space itself.
2. Secondary motion--the alternate directional swings of the successive space levels.
3. Relative motions--relative in the sense that they are not evaluated with Paradise as a base point. Primary and secondary motions are absolute, motion in relation to unmoving Paradise.
4. Compensatory or correlating movement designed to co-ordinate all other motions.”

Page-133 Line-33 Para-7

“When the universes expand and contract, the material masses in pervaded space alternately move against and with the pull of Paradise gravity. The work that is done in moving the material energy mass of creation is space work but not power-energy work.”

Page-134 Line-11 Para-2

By contrast contemporary cosmology measures motion in terms of the average redshift of intergalactic hydrogen. “We now use 21 cm emission from neutral atomic Hydrogen to map the motion of the disk.” [Str05]

3.3 The Existence and Universe Location of a Focal Singularity in the Topology of Space - Paradise. Not only does The Urantia Book describe space motion it also defines a non-moving reference frame in terms of which space motion can be measured, something that contemporary cosmologists can hardly do because they admit no such fixed reference frame to measure the motion of space as a whole. According to The Urantia Book this fixed reference frame is the center of rotation of the whole universe, a place called Paradise:

“Paradise is the actually motionless nucleus of the relatively quiescent zones existing between pervaded and unpervaded space. Geographically these zones appear to be a relative extension of Paradise, but there probably is some motion in them. We know very little about them, but we observe that these zones of lessened space motion separate pervaded and unpervaded space. Similar zones once existed between the levels of pervaded space, but these are now less quiescent.” Page-124 Line-19 Para-4

“Space does not exist on any of the surfaces of Paradise. ... Space does not touch Paradise; only the quiescent midspace zones come in contact with the central Isle.” [Page-124 Para-3] This fixed reference frame has a “universe location but no position in space.” [Page-7 Para-4] These quiescent zones of space exist both within each ultimate unit of matter (quantum) and also macroscopically between the moving galactic space zones. “The ultimatons, the first measurable form of energy, has Paradise as its nucleus.” Page-467 Para-5. These ultimatons also swing around Paradise macroscopically. Paradise is the “the most gigantic organized body of cosmic reality in all the master universe”. Page-118 Line-3 Para-1

3.4 Local and Paradise Gravity. Ultimate units have a common nucleus – Paradise. “The ultimatons are not subject to local gravity, the interplay of material attraction, but they are fully obedient to absolute or Paradise gravity, to the trend, the swing, of the universal and eternal circle of the universe of universes. Ultimatonic energy does not obey the linear or direct gravity attraction of near-by or remote material masses, but it does ever swing true to the circuit of the great ellipse of the far-flung creation.” Page-465 Para-2

“Universal Gravity. All forms of force-energy--material, mindal, or spiritual--are alike subject to those grasps, those universal presences, which we call gravity.” Page-131 Line-34 Para-5

“These four circuits are not related to the nether Paradise force center; they are neither force, energy, nor power circuits. They are absolute presence circuits and like God are independent of time and space.” Page-131 Line-44 Para-6

3.5 The Maturation of Space Potency into Matter. “It is indeed difficult to find suitable words in the English language whereby to designate and wherewith to describe the various levels of force and energy--physical, mindal, or spiritual. These narratives cannot altogether follow your accepted definitions of force, energy, and power. There is such paucity of language that we must use these terms in multiple meanings. In this paper, for example, the word energy is used to denote all phases and forms of phenomenal motion, action, and potential, while force is applied to the pregravity, and power to the postgravity, stages of energy.” Page-469 Line-3 Para-1

a) Ultimatons. “The force organizers initiate those changes and institute those modifications of space-force which eventuate in energy; the power directors transmute energy into matter; thus the material worlds are born.” Page-468 Para-2

Not only does The Urantia Book describe the initiation of nebular rotations, it explicitly rejects contemporary definitions of force, energy and power declaring that we need more language. The Urantia Book describes the maturation of the *space potency* of the Unqualified Absolute (pervading all space) by two orders of living “force organizers” through stages from primordial force, through emergent energy, and finally to the assembly of ultimate material units and atomic systems. All of this is still to be discovered. Skeptics may hold that these are unproved, or that “there is no evidence” of them but not that they are re-warmed 20th century cosmology.

“Primary Master Force Organizers are the manipulators of the primordial or basic space-forces of the Unqualified Absolute; they are nebulae creators. They are the living instigators of the energy cyclones of space and the early organizers and directionizers of these gigantic manifestations. These force organizers transmute primordial force (pre-energy not responsive to direct Paradise gravity) into primary or puissant energy, energy transmuting from the exclusive grasp of the Unqualified Absolute to the gravity grasp of the Isle of Paradise. They are thereupon succeeded by the associate force organizers, who continue the process of energy transmutation from the primary through the secondary or gravity-energy stage. Page-329 Line-19 Para-3

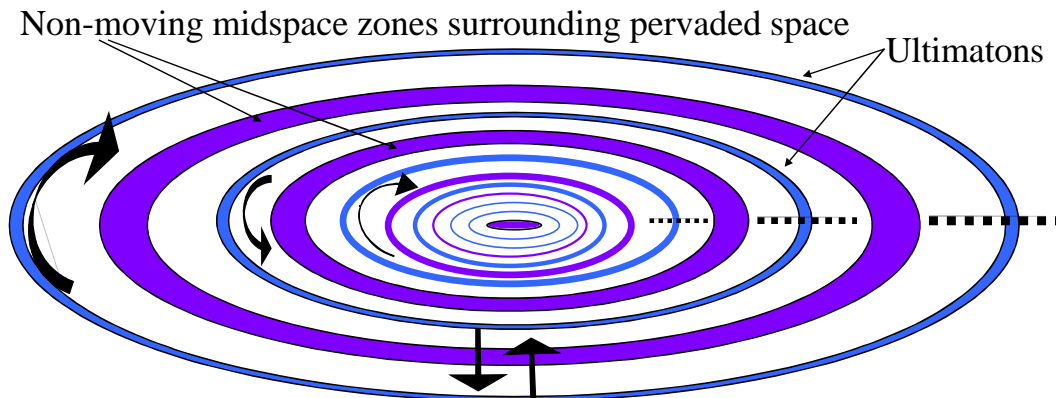
b) Constructing Electrons from Ultimatons. In an early paper presented in 1973 I offered an idea of what an ultimatum looks like, how 100 concentrically arranged ultimatons make up an electron as I had gleaned from my reading of the Urantia Book. Since then Stefan Tallqvist [Tal02] has offered an alternative concept for how 100 ultimatons might aggregate into an electron as a compact stacked arrangement.

However, “The ultimatons are not subject to local gravity, the interplay of material attraction, but they are fully obedient to absolute or Paradise gravity, to the trend, the swing, of the universal and eternal circle of the universe of universes. Ultimatonic energy does not obey the linear or direct gravity attraction of near-by or remote material masses, but it does ever swing true to the circuit of the great ellipse of the far-flung creation. Page-465 Line-11 Para-2

“Ultimatons do not describe orbits or whirl about in circuits within the electrons, but they

do spread or cluster in accordance with their axial revolutionary velocities, thus determining the differential electronic dimensions. This same ultimatic velocity of axial revolution also determines the negative or positive reactions of the several types of electronic units. The entire segregation and grouping of electronic matter, together with the electric differentiation of negative and positive bodies of energy-matter, result from these various functions of the component ultimatic interassociation.” Page-476 Line-42

100 Ultimats = 1 Electron



- 100 ultimats (blue) generate 100 octaves of wavelike energy.
- Each blue diameter is 1/2 that of the next larger diameter.
- 3 primary and 7 mixed intermediate diameters exist within each octave allowing for intermediate energy levels - colors or tones.
- White Background is a Force blanket of energy, capable of very quick (faster than light) quantum wavelike reactions.

Since ultimats do not describe orbits and are not attracted by near-by matter but respond only to Paradise “circular” gravity, I conceived the 100 ultimats of an electron arranged concentrically, with Paradise as their common nucleus. This still seems to me to be the right way. However, it may be easier to think of the 100 concentric spheres as 100 concentric donut-shaped rings of rotating space around a common Paradise center of gravity. The rings can slip past each other in 3 dimensions without collision, and by flipping motions can also be a sphere of rotating space. It also seems right to alternate the direction of rotations so that the energy is more balanced and can potentially be explosive.

While commenting on the waves always associated with the individuation of an ultimaton The Urantia Book makes it clear that an ultimaton is a “minute sphere”, not a wave: “The assembly of energy into the minute spheres of the ultimats occasions vibrations in the content of space which are discernible and measurable. And long before physicists ever discover the ultimaton, they will undoubtedly detect the phenomena of these rays as they shower in upon Urantia. These short and powerful rays represent the initial activity of the ultimats as they are slowed down to that point where they veer towards the electronic organization of matter.”

Paper-42 Section-5 Para-2

“In the superuniverse of Orvonton there are one hundred octaves of wave energy. Of these one hundred groups of energy manifestations, sixty-four are wholly or partially recognized on Urantia. The sun's rays constitute four octaves in the superuniverse scale, the visible rays embracing a single octave, number forty-six in this series. The ultraviolet group comes next, while ten octaves up are the X rays, followed by the gamma rays of radium. Thirty-two octaves above the visible light of the sun are the outer-space energy rays so frequently commingled with their associated highly energized minute particles of matter. Next downward from visible sunlight appear the infrared rays, and thirty octaves below are the radio transmission group.”

Page-474 Line-25 Para-6

Since there are 100 octaves of wave energy in the superuniverse and 100 ultimatons in an electron and ultimaton motions result in waves of different length, but always 860 times the diameter of the particle, I imagine that the 100 concentric ultimatons give rise to 100 octaves of wave energy, and that the ultimatons can attain discrete energy levels between those octaves to expand or contract into, thus giving rise to waves of intermediate length and energy within the octave.

“Matter--energy--for they are but diverse manifestations of the same cosmic reality, as a universe phenomenon is inherent in the Universal Father. "In him all things consist." Matter may appear to manifest inherent energy and to exhibit self-contained powers, but the lines of gravity involved in the energies concerned in all these physical phenomena are derived from, and are dependent on, Paradise. The ultimaton, the first measurable form of energy, has Paradise as its nucleus.”

Page-467 Line-26 Para-5

3.6 Wavelike Manifestations. Another area of confusion for Urantia scientists is the issue in quantum mechanics of “wave-particle duality”. In the late 1800’s Clark Maxwell unified electrodynamics with his famous equations that implied that light was always measured to have the same speed in a vacuum no matter the motions of the light emitting objects. Then Max Plank found the need to postulate a quantum for a property called “action”. Albert Einstein used this idea to show that light behaved like quanta in the photoelectric affect. Since then there has been almost continuous controversy about whether light is one or the other, or both a particle and a wave – a “wavicle”.

Later in the 20th century John Bell [Bel1964] proved that experiments already done proved that a measurement of either particle of a pair of widely separated but somehow “entangled particles” affects the state of the other particle at faster than light speeds. This is the “spooky action at a distance” that Einstein railed against to no avail.

The interpretation of these phenomena is still an active controversy in quantum mechanics to this day. It is often confused with the indeterminacy principle of quantum mechanics, which is that any measurement of the position of a particle changes its velocity and vice versa; therefore the position and velocity cannot be directly measured beyond a certain precision. This principle is affirmed by The Urantia Book: “It is impossible accurately to determine, simultaneously, the exact location and the velocity of a moving object; any attempt at measurement of either inevitably involves change in the

other.” (Page-737 Line-2 Para-1.) However, this is a problem having to do with the *conditions* for measurement of position versus velocity, which partially conflict. This indeterminacy can be incorporated into quantum logic by using Boolean fractions to represent conditional quantum measurements and events. [Cal05]

The Urantia Book also throws light onto the “entangled particles”, “wave-particle duality” phenomena of quantum mechanics: “Primordial-force behavior does give rise to phenomena which are in many ways analogous to your postulated ether. Space is not empty; the spheres of all space whirl and plunge on through a vast ocean of outspread force-energy; neither is the space content of an atom empty. Nevertheless there is no ether, and the very absence of this hypothetical ether enables the inhabited planet to escape falling into the sun and the encircling electron to resist falling into the nucleus.” Page-476 Line-7 Para-2

“The excitation of the content of space produces a wavelike reaction to the passage of rapidly moving particles of matter, just as the passage of a ship through water initiates waves of varying amplitude and interval.” Page-476 Line-4 Para-1

The interelectronic space of an atom is not empty. Throughout an atom this interelectronic space is activated by wavelike manifestations which are perfectly synchronized with electronic velocity and ultimatonic revolutions. This force is not wholly dominated by your recognized laws of positive and negative attraction; its behavior is therefore sometimes unpredictable. This unnamed influence seems to be a space-force reaction of the Unqualified Absolute. Page-478 Line-46 Para-7

“The quantity of energy taken in or given out when electronic or other positions are shifted is always a “quantum” or some multiple thereof, but the vibratory or wavelike behavior of such units of energy is wholly determined by the dimensions of the material structures concerned. Such wavelike energy ripples are 860 times the diameters of the ultimatons, electrons, atoms, or other units thus performing.” Page-474 Line-15 Para-4

“The so-called ether is merely a collective name to designate a group of force and energy activities occurring in space. Ultimatons, electrons, and other mass aggregations of energy are uniform particles of matter, and in their transit through space they really proceed in direct lines. Light and all other forms of recognizable energy manifestations consist of a succession of definite energy particles which proceed in direct lines except as modified by gravity and other intervening forces. That these processions of energy due to the resistance of the undifferentiated force blanket of all space, the hypothetical ether, and to the intergravity tension of the associated aggregations of matter. The spacing of the particle-intervals of matter, together with the initial velocity of the energy beams, establishes the undulatory appearance of many forms of energy-matter.”

Page-475 Line-38 Para-2

So the Urantia Book says that matter is composed of particles, not waves, but that waves are always generated in the unrecognized force content of space, apparently at faster than light speed. “Human beings are only just beginning to realize that the reactions of

3.7 Gödel’s “Rotating Universe” Solutions to Einstein’s Field Equations. In the early 20th century scientists were trying hard to interpret the famous Mickleon-Morley interferometer light experiments [Nav04], which looked for evidence of a medium in which light vibrated using the Earth’s motion around the sun. Unlike sound waves, light did not appear to be carried by some medium, some “ether” that did the vibrating and which would serve a fixed reference frame. In 1905 Albert Einstein published his first paper on “special relativity “, which started from scratch concerning the measurement of time and space in relatively moving reference frames.

Einstein based his theory on just two principles: “1) The laws by which the states of physical systems undergo change are not affected, whether these changes of state be referred to the one or the other of two systems of coordinates in uniform translatory (sic) motion. 2) Any ray of light moves in the ‘stationary’ system of co-ordinates with the determined velocity c , whether the ray be emitted by a stationary or a moving body.” [Ein05]

The first law implies that there is no preferred reference frame because they all give the same physical laws. There is no way to say that one object is really at rest and other moving. It could be the other way. Or they are both moving with respect to some other reference frame.

The second law was the experimentally verified fact that speed of light will be the same value when measured in either of two reference frames that are moving with constant velocity with respect to one another.

The Urantia Book seems to affirm the second law but definitely not the first. The Urantia Book affirms the famous equation $E = mc^2$ proved by Einstein in a second short paper in 1905: “The increase of mass in matter is equal to the increase of energy divided by the square of the velocity of light.” [Page-474 Line-1] But it does not follow Einstein’s “principle of relativity”, which holds that there is no fixed reference frame. Instead, The Urantia Book affirms that there is such a fixed reference frame. The Urantia Book points to a “focus of space” that is not *in* space but *located at* the limiting surface of the relatively non-moving midspace zones existing between the zones of matter-pervaded space. These midspace zones converge on a non-moving non-spatial location, which can be taken as the fixed frame of reference for the universe. Even the motion of space can be measured relative to this fixed reference frame.

Einstein knew that there were other solutions to his equations that had a center, but he specifically discarded them on the grounds of aesthetics. However another scientist, a mathematical one, the great logician Kurt Gödel, as part of a tribute to his friend Einstein, produced a paper [Göd49] showing that there was a class of “rotating universe” solutions to Einstein’s general field equations for his “relativity theory”.

These rotating universe solutions to Einstein’s equations have a peculiar characteristic,

everything rotates, and because of the insistence that all positions are equivalent to each other as reference frames, the universe rotates about every position! [Svi96]

Now this sounds suspiciously like The Urantia Book's claim that everything rotates around Paradise, not just macroscopically, but microscopically as well. By identifying all of the positions around which the universe rotates as being a single fixed place, Paradise becomes the "most gigantic organized body of cosmic reality in all the master universe". [Page-118 Para-1] If everything rotates around the "focus of space" then Einstein's equations can be satisfied with a Center. And if light is emitted from this non-moving focus within matter then it will not be affected by the motion of the emitting body.

3.8 Solar System Origin. The contemporary theory of the solar system's birth starts with a rotating gaseous nebula, which then contracted by gravity, increased its spin, and evolved into the sun and planets. While allowing for this type of solar system birth, the Urantia Book makes a strong case for an alternate but now mostly discarded theory:

"Gravity-explosion Planets. When a sun is born of a spiral or of a barred nebula, not infrequently it is thrown out a considerable distance. Such a sun is highly gaseous, and subsequently, after it has somewhat cooled and condensed, it may chance to swing near some enormous mass of matter, a gigantic sun or a dark island of space. Such an approach may not be near enough to result in collision but still near enough to allow the gravity pull of the greater body to start tidal convulsions in the lesser, thus initiating a series of tidal upheavals which occur simultaneously on opposite sides of the convulsed sun. At their height these explosive eruptions produce a series of varying-sized aggregations of matter which may be projected beyond the gravity-reclamation zone of the erupting sun, thus becoming stabilized in orbits of their own around one of the two bodies concerned in this episode. Later on the larger collections of matter unite and gradually draw the smaller bodies to themselves. In this way many of the solid planets of the lesser systems are brought into existence. Your own solar system had just such an origin."

Page-170 Line-29 Para-6

Scientists are presently reluctant to accept such an origin because 99% of the angular momentum calculated for our solar system seems to reside in the spinning planets rather than in the sun, and that fact is taken as counter to the "passing star" theory, as it is called. They also dispute the possibility of drawing off sufficient matter from the sun by a near pass. This assertion seems unfounded because a tidal disruption of the sun could have fragmented it completely; therefore a partial disruption could have separated a lesser amount from the main solar body.

On the other hand, the Urantia Book states that *retrograde motion* as observed (and confirmed) in our solar system in some of the moons of Saturn and Jupiter never occurs unless foreign bodies have been introduced into the system. That appears to be a mathematically verifiable assertion, but I have not found mention of it anywhere else. Other evidence cited is that the average plane of orbits of the planets is more than 5% off the plane of our sun's equator. Instead it is in the plane defined by the line of Angona's approach.

The extremely elongated orbit of the new planetoid, Sedna, corroborates such a passing heavy object theory. (“a passing star” is now being offered by contemporary scientists to explain how Sedna got such an elongated orbit!) The Urantia Book also says there were three outer planets of Angona captured by our sun with the help of the sun’s nebular mother. Existence of such “foreign matter” has still to be determined, but there is such variation in the character of the solar system bodies that it is not hard to believe. Yet I never read this idea anywhere other than in the Urantia Book.

“Today, your sun has achieved relative stability, but its eleven and one-half year sunspot cycles betray that it was a variable star in its youth. In the early days of your sun the continued contraction and consequent gradual increase of temperature initiated tremendous convulsions on its surface. These titanic heaves required three and one-half days to complete a cycle of varying brightness. This variable state, this periodic pulsation, rendered your sun highly responsive to certain outside influences which were to be shortly encountered.”

Page-655 Line-32 Para-8

The scientific jury is still out on the solar system origin, but the Urantia Book poses a scenario that deserves further examination. The Urantia Book asserts that our sun was then a variable star with a 3.5-day period and that the 11.5-year sun spot cycle is a remnant of that state. Variable stars are known to expand and contract periodically making them brighter or less bright accordingly. Add a passing dark gravity body that caused a “partial disruption”, that is, pulled the sun apart by tidal-gravity action.

Page-656 Line-10 Para-2

During the maximum expansion period our then variable sun disgorged a huge column of mass on the near side and equal amounts of material on the other side thereby perhaps ridding itself of the angular momentum found now in the large planets and thereby avoiding complete fragmentation. In effect, by stretching out planetary arms the sun was able to reduce its angular momentum like a ballet dancer slows her spinning by stretching out her arms. The sun was thus able to avoid complete disruption, and the “arms” could immediately start circling the sun. The result is a more stable star with much less angular momentum than before, which is now represented in the swing of the planets around the sun and in their orbital spins. This scenario still fits the evidence.

“As the Angona system drew nearer, the solar extrusions grew larger and larger; more and more matter was drawn from the sun to become independent circulating bodies in surrounding space. This situation developed for about five hundred thousand years until Angona made its closest approach to the sun; whereupon the sun, in conjunction with one of its periodic internal convulsions, experienced a partial disruption; from opposite sides and simultaneously, enormous volumes of matter were disgorged. From the Angona side there was drawn out a vast column of solar gases, rather pointed at both ends and markedly bulging at the center, which became permanently detached from the immediate gravity control of the sun.”

Page-656 Line-10 Para-2

“The nucleus of the physical system to which your sun and its associated planets belong

is the center of the onetime Andronover nebula. This former spiral nebula was slightly distorted by the gravity disruptions associated with the events which were attendant upon the birth of your solar system, and which were occasioned by the near approach of a large neighboring nebula. This near collision changed Andronover into a somewhat globular aggregation but did not wholly destroy the two-way procession of the suns and their associated physical groups. Your solar system now occupies a fairly central position in one of the arms of this distorted spiral, situated about halfway from the center out towards the edge of the star stream.”
Page-168 Line-6 Para-2

3.9 Solar Internal Temperature and Energy Sources. The Urantia Book states that the internal temperature of the sun is much higher than is presently thought and indicates that we are missing the most important energy source of the sun. (That might explain why our scientists have been observing only 1/3 as many neutrinos as they expect to account for the sun’s energy expenditures. However in 2002 additional experiments have shone that electron neutrinos change into another type of neutrino en route from the sun and that total is consistent with theory.)

“The internal temperature of many of the suns, even your own, is much higher than is commonly believed.” [Page-463 Para-1] “The surface temperature of your sun is almost 6,000 degrees, but it rapidly increases as the interior is penetrated until it attains the unbelievable height of about 35,000,000 degrees in the central regions. (All of these temperatures refer to your Fahrenheit scale.) “ [Page-463 Para-2] “... the sources of solar energy, named in the order of their importance, are: 1. Annihilation of atoms and, eventually, of electrons, ...” Only second does The Urantia Book list “Transmutation of elements, including the radioactive group of energies thus liberated.”
Page-463 Para-3

“You might try to visualize 35,000,000 degrees of heat, in association with certain gravity pressures, as the electronic boiling point. Under such pressure and at such temperature all atoms are degraded and broken up into their electronic and other ancestral components; even the electrons and other associations of ultimatons may be broken up, but the suns are not able to degrade the ultimatons.”
Page-463 Line-32 Para-5

3.10 Physics and Chemistry Alone Cannot Evolve into Life. “Physics and chemistry alone cannot explain how a human being evolved out of the primeval protoplasm of the early seas. The ability to learn, memory and differential response to environment, is the endowment of mind. The laws of physics are not responsive to training; they are immutable and unchanging. The reactions of chemistry are not modified by education; they are uniform and dependable. Aside from the presence of the Unqualified Absolute, electrical and chemical reactions are predictable. But mind can profit from experience, can learn from reactive habits of behavior in response to repetition of stimuli.
Page-738 Line-1 Para-1

This cosmic instruction should not really be necessary, but we are bombarded by mechanists who use their minds to deny that mind and life is anything more than matter

and energy. They seek to teach computers how to learn like humans and even attain consciousness; they fail to notice that teachable mind is more than physics and chemistry.

‘In the later evolution of mortal creatures the Life Carrier Sons provide the physical body, fabricated out of the existing organized material of the realm, while the Universe Spirit contributes the "breath of life.” ’

Page-376 Para-2

4. Soon-Coming Scientific Validation of the Urantia Book’s Cosmology. If The Urantia Book is what it purports to be then the present lack of contemporary scientific interest will not always be the case. What would make scientists sit up and take notice of this “communication from outer space”, this revelatory gift from higher universe life? Only scientific evidence in a book of philosophy can impress a real scientist of the book’s worth when discussing the scientific aspects of the cosmos, not some re-warmed 20th century science ill-suited for the presentation of the spiritual truths of the next 1000 years. No, The Urantia Book must present truly impressive, albeit transient, science alongside of ageless truth.

The Urantia Book has made many predictions and when they are scientifically observed that will be a mighty powerful attraction to scientists and others to take The Urantia Book seriously, and not just scientifically.

However without a very spectacular prediction most scientists will never entertain the possibility of an actual communication from higher order beings via a published book. Scientists respect confirmed predictions. But typically they wouldn’t take a serious look at a “book of revelation” without some very dramatic fulfilled prediction.

So far that hasn’t happened, but even now events are gathering for such a spectacular corroboration. I refer to the recent explorations in the eastern Mediterranean for Plato’s Atlantis, which due to research scientist Robert Sarmast, we now know was also the first Garden of Eden! That is quite a nice “co-ordination of known or about-to-be-known facts and observations”. What will happen if Robert’s next expedition brings up sensational evidence just where The Urantia Book says it is? Will scientists ignore that too? We may soon see. (I know of one, and there may be many other “closet UB readers” among professional scientists, who read and utilize the book, but who for obvious reasons prefer to keep that their secret.)

My own personal candidate in this category is the Urantia Book’s prediction that there is a rare type of non-breathing humanoid life on a sphere in *close proximity* to our world. [As such we might be looking for the wrong kind of life in our solar system, entertaining too narrow a concept of life. If The Urantia Book is what it says it is, then there must be such a world in close proximity. Some people think that implies the world must be in our solar system, but I suppose being within easy communication range, like a few light years away, might also be in close proximity in astronomical terms because we could become aware of each other by interstellar communication. Even that would be exciting.

Why believe The Urantia Book’s science? Certainly it is not only because The Urantia

Book states many spiritual truths. Rather, The Urantia Book's science must stand on its own as well, at least for a while, during these times when it has yet to be taken seriously by most of the world. The real reason that I believe in the science of The Urantia Book and the authenticity of The Urantia Book as divine revelation to our world is because of its humanly improbable avoidance of error and the meandering convergence over the years of contemporary science to positions taken by the Urantia Book authors.

4.1 Discovery of Atlantis - the First Garden of Eden. Already Robert Sarmast [Sar03] has made on-site discoveries a mile under water near Cyprus. Expect more headlines at any time.

4.2 The Andromeda Galaxy is "Closer than Scientists Thought". The Andromeda galaxy being visible with the naked eye was designated M31 by Edwin Hubble. Unlike so many other galaxies found by Hubble, it is blue shifted.

a) Distance Measurements. Many people, especially skeptics, but some believers as well, have pointed to The Urantia Book's statement about the time of light travel from Andromeda being "almost one million years" [Page-170 Para-1] as an error on the face of the cosmology. They assume that the current distance estimate of 2.7 light years is accurate and reliable enough to base further conclusions on it even conclusions about the motivation of the superhuman authors for putting into the Urantia Book what they supposedly knew to be inaccurate! Skeptics have pointed to it as strong evidence of human authorship.

However, the accuracy of distance measurements to celestial objects is still a controversial topic in the scientific community. "While it is well established that M31 is about 15-16 times further away than the Large Magellanic Cloud (LMC), the absolute value of this measure is still uncertain, and in current sources, usually given between 2.4 and 2.9 million light-years - a consequence of the uncertainty in the LMC distance and thus the overall intergalactic distance scale. E.g., the semi-recent correction from data by ESA's astrometrical satellite Hipparcos has pushed this value up by more than 10 percent, from about 2.4-2.5 to the about 2.9 million light-years we use here." [SED98]

One of the most dependable methods to estimate relative distance utilizes so-called variable stars. These stars expand and contract in regular periods. The longer the period and expansion the brighter the star becomes. Shorter period variable stars are dimmer in all phases than longer period ones. For instance, stars in the LMG are all about the same distance from us and those with equal periods are observed to have equal luminosity. Therefore by determining the period of such a variable star its relative distance can be estimated using the inverse square law. If a star with the same period as another star is 4 times dimmer, then it must be twice as far away as the brighter star.

Although this is an accurate measure of relative distances, the accuracy of the calibration of this technique is still uncertain and unreliable. That is, we have an accurate measuring stick with the Cepheid variable stars but we still don't know with much reliability the length of the distance unit on our measuring stick. Consequently we know more

accurately that the Andromeda galaxy is about 15 to 16 times as far away as the LMG than we know the actual distance to LMG.

The reason for this is that there are no variable stars close enough on which we can do some relatively accurate and independent parallax distance measurements. If we could independently and reliably measure the distance to even one of these variable stars then we would have a reliable estimate of the actual distance associated with that period and so all periods. But the LMC is too far away to measure distances by the parallax method.

In the parallax method the earth's orbit around our sun functions as the base of a narrow triangle with the target star at the far away vertex. Seeing the shift of the target against the background stars allows an estimate of the angle between the viewpoints. Unfortunately other methods must be used to estimate the distance to LMG but they too have reliability problems.

In "Astronomy and the Superuniverse", Troy Bishop [Bis82], documents with references that astronomy has calculated the distance to Andromeda, in 1907 at 19 light years, by stellar parallax in 1911 at over 1600 light years, by observation of novae in the mid-1920's at 800,000 light years, by Cepheid variables in the mid-1950's at 2.7 million light years. See Isaac Asimov's *The Universe From Flat Earth to Black Holes--and Beyond*, Walker and Company, New York, 1980, for an account of the early evolution of our Andromeda distance measurements.

Recently the distance estimate to Andromeda was changed upward again by 10% due to slight refinements in another distance measuring method used to calibrate the measuring stick. The bottom line is that as scientists we still do not know for sure what unit of distance is on our variable star measuring stick. In this context adjusting by a factor of 3 would not be shocking. There is always a ready explanation making everything reasonable!

But considering such variability even in recent measurements, the actual light from Andromeda still might take "almost 1 million years" to reach Urantia as The Urantia Book says, not from 2.4 to 2.9 million years as presently estimated by our science. Our scientists are still learning about large-scale motions that will change subsequent estimates. The Urantia Book is attempting to provide some cosmic instruction, but most of our scientists don't yet think it is worth reading. Extra-terrestrial, super-human instruction on science and cosmology by way of The Urantia Book is not yet on the agenda of our scientists.

b) News on Size of Andromeda. On Monday, May 30 2005, while I was preparing this paper, Reuters released the news from astronomers that the Andromeda galaxy "just got bigger -- three times bigger". A sprinkle of stars once thought to be part of the central halo were measured to be moving in a way only consistent with their being part of the main arms of the circling star cloud. That means the diameter of the disk is 3 times what was thought last year.

"This giant disk discovery will be very hard to reconcile with computer simulations of forming galaxies. You just don't get giant rotating disks from the accretion of small galaxy fragments," Rodrigo Iбата [Rod05] said in a statement. No, you get them from the initiating actions of living force organizers as detailed earlier.

"The seven superuniverses are still growing; the periphery of each is gradually expanding; new nebulae are constantly being stabilized and organized; and some of the nebulae which Urantian astronomers regard as extragalactic are actually on the fringe of Orvonton and are traveling along with us. Page-130 Para-6

If in 2005 the estimated size of Andromeda can be discovered to be in error by a factor of three, is it hard to believe that there can be a similar error in the estimates of the distance to Andromeda? In deed, if Andromeda is actually 3 times closer than thought, that would mean it is 3 times smaller in each dimension than was thought, which would make the size estimate back shift again. But that is the nature of science, to correct its previous errors with the scientific method – the technique of experiment. A mathematical scientist conducts his experiments purely in the mind.

4.3 The Fourth and Last Outer Space Zone. Expect to hear about four distinct rings, "walls" or concentric rings of galaxies separated by relative empty space. These huge rings of billions of galaxies will also be found to be rotating in alternating directions. The center of these common rotations will be found to be the same center around which travel the "local group", the 7 great super-galactic elongated elliptical arms of the grand universe circling the same macroscopic Center.

"The Quartan Space Level. This, the final and largest corps, consists of 24,010 Master Architects, and if our former conjectures are valid, it must be related to the fourth and last of the ever-increasing-sized universes of outer space." Page-351 Line-17 Para-4

These Master Architects are eternal beings working on the ultimate (transcendental) level of reality, prior to all finite beginnings and after all finite endings, thereby joining the finite realms with the eternal realms of eternal Havona. Unifying all of this finite reality with eternal reality is the transcendental job of the Supreme Being and numerous Associates. These outer space universes were begun prior to the present "Local Group" (Grand Universe) of galaxies, not in a Big Bang explosion.

4.4 Spectrographic reinterpretation of the distance & redshift linear relationship.

Numerous "factors of error" in present day spectrographic interpretations will be identified. Look for errors due to: Earth's angles of observation, Newly recognized rotations within our local group of galaxies (and associated Doppler shift corrections), alternating rotation of the local group (grand universe) and the first outer space zone of galaxies (the largest distortion), and still other space influences that shift light toward the red. The overall picture of the Master Universe of Central Paradise, Surrounding eternal Havona, 7 finite time-space Superuniverses (the local group), and four outer space zones full of billions of galaxies.

Beyond matter there is midspace, and beyond midspace there is the concept periphery of the mind, and beyond mind we are face to face with the Spirit of the Persons of the Eternal Son and our Paradise Father.

4.5 Overthrow of the big bang cosmology. Along with the overthrow of the Big Bang we will hear that the universe is ‘smaller than we thought’, and what seemed like rapid expansion now looks like orderly rotation, not explosive expansion.

“The successive space levels of the master universe constitute the major divisions of pervaded space--total creation, organized and partially inhabited or yet to be organized and inhabited. If the master universe were not a series of elliptical space levels of lessened resistance to motion, alternating with zones of relative quiescence, we conceive that some of the cosmic energies would be observed to shoot off on an infinite range, off on a straight-line path into trackless space; but we never find force, energy, or matter thus behaving; ever they whirl, always swinging onward in the tracks of the great space circuits.”

Page-128 Line-34 Para-6

4.6 Discovery of non-breathing, electrically powered humanoids “in close proximity” to Earth

The Urantia Book predicts a non-breathing, intelligent race of people on a sphere close to Earth. Judging by characteristics of such worlds, Ganymede, Jupiter’s largest satellite in the solar system, is a candidate to be the world of the non-breathers. It is also possible that our moon harbors such a race still unnoticed by our still cursory exploration, but this seems less likely than Ganymede.

“Life on the worlds of the nonbreathers is radically different from what it is on Urantia. The nonbreathers do not eat food or drink water as do the Urantia races. The reactions of the nervous system, the heat-regulating mechanism, and the metabolism of these specialized peoples are radically different from such functions of Urantia mortals. Almost every act of living, aside from reproduction, differs, and even the methods of procreation are somewhat different.”

Page-563 Line-43 Para-7

“You would be more than interested in the planetary conduct of this type of mortal because such a race of beings inhabits a sphere in close proximity to Urantia.”

Page-564 Line-10 Para-2

Ganymede is a moon of Jupiter, the largest moon in our solar system with a diameter of 5,262 km (3,280 miles). It has no known atmosphere.

“The Galileo orbiter's first flyby of Ganymede discovered that Ganymede has its own magnetosphere field embedded inside Jupiter's huge one. This is probably generated in a similar fashion to the Earth's: as a result of motion of conducting material in the interior. It is thought that this conductive material may be a layer of liquid water with a high salt concentration, or it may originate in Ganymede's

metallic core. Ganymede is the only moon known to have a magnetosphere.”
[WikJ05]

It seems likely that energy intake for non-breathers is similar to the electrical energy intake of the humanoid midwayers elsewhere described. In 1990 Joe Pope [Pop90] published evidence of Ganymede being the likely sphere of the non-breathers.

4.7 Summary. So the soon-coming scientific verifications are:

- a) Discovery of Atlantis- the First Garden of Eden (<2 years)
- b) The Andromeda galaxy is closer than once thought and light from there requires “almost one million years”, not almost 3 million years as is presently believed (<10 years)
- c) Forth and last outer space zone (<10 years)
- d) Spectrographic reinterpretation of the distance-redshift linear relationship (<10 yrs)
- e) Overthrow of “big bang” cosmology; universe is ‘smaller than we thought’ (<15 years)
- f) Discovery of non-breathing, electrically powered humanoids “in close proximity” to Earth – Ganymede, Jupiter’s satellite largest in the solar system, is candidate (Anytime we look for them, the sooner the better.)

5. The Future. The Urantia Book has much to say about the far distant future, not only the immediate future. Some revelatory information was mandated, and some lost knowledge is resurrected.

Scientists must reminded that not only religion has unproved assumptions: “All divisions of human thought are predicated on certain assumptions which are accepted, though unproved, by the constitutive reality sensitivity of the mind endowment of man. Science starts out on its vaunted career of reasoning by assuming the reality of three things: matter, motion, and life. Religion starts out with the assumption of the validity of three things: mind, spirit, and the universe—the Supreme Being.” Page-1139 Para-3

5.1 Time and Space. “It is helpful to man's cosmic orientation to attain all possible comprehension of Deity's relation to the cosmos. While absolute Deity is eternal in nature, the Gods are related to time as an experience in eternity. In the evolutionary universes eternity is temporal everlastingness--the everlasting now.”

Page-1295 Line-2 Para-1

Time is the “moving image of eternity” and space is the “reflected shadow” (projection) of Paradise realities. “Mankind is slow to perceive that, in all that is personal, matter is the skeleton of morontia, and that both are the reflected shadow of enduring spirit reality. How long before you will regard time as the moving image of eternity and space as the fleeting shadow of Paradise realities?” Page-2021 Para-2

“Throughout the first centuries of the Christian propaganda, the idea of the kingdom of heaven was tremendously influenced by the then rapidly spreading notions of Greek

idealism, the idea of the natural as the shadow of the spiritual--the temporal as the time shadow of the eternal.”

Page-1864 Line-8 Para-2

“Human personality is the time-space image-shadow cast by the divine Creator personality. And no actuality can ever be adequately comprehended by an examination of its shadow. Shadows should be interpreted in terms of the true substance.”

Page-29 Line-44 Para-8

“The brighter the shining of the spiritualized personality (the Father in the universe, the fragment of potential spirit personality in the individual creature), the greater the shadow cast by the intervening mind upon its material investment. In time, man's body is just as real as mind or spirit, but in death, both mind (identity) and spirit survive while the body does not. A cosmic reality can be nonexistent in personality experience. And so your Greek figure of speech-- the material as the shadow of the more real spirit substance-- does have a philosophic significance.”

Page-141 Line-4 Para-1

If the universe is circular, ever moving around motionless Paradise at the focus of space, ever moving around Paradise in microscopic and macroscopic ways, then the motions we see may just be reflected images of time-less sequentiality on the space-less surfaces of Paradise.

The topology of matter and space is such that there is a (potentially dense) set of foci at the limit of the midspace zones existing within, between, and completely enveloping all moving matter. All of these midspace zones converge on a timeless, spaceless realm – Paradise, at the center of Infinity.

Although the midspace zones are potentially infinite, beyond the boundaries of matter-pervaded space they too end. But like Paradise the Unqualified Absolute and Universal Absolute have no limits.

5.2 Circular Simultaneity. An experience of circular simultaneity will replace the one-time linear “flow of events”. We all recognize that time is more than a moving point; our experience of time always includes an interval of it, a fragment of the never-beginning, never-ending eternal “now”.

“Time, space, and experience constitute barriers to creature concept; and yet, without time, apart from space, and except for experience, no creature could achieve even a limited comprehension of universe reality. Without time sensitivity, no evolutionary creature could possibly perceive the relations of sequence. Without space perception, no creature could fathom the relations of simultaneity. Without experience, no evolutionary creature could even exist; only the Seven Absolutes of Infinity really transcend experience, and even these may be experiential in certain phases. Page-1173 Line-30 Para-4

From Jesus in the Urantia Book, we read, “Animals do not sense time as does man, and even to man, because of his sectional and circumscribed view, time appears as a

succession of events; but as man ascends, as he progresses inward, the enlarging view of this event procession is such that it is discerned more and more in its wholeness. That which formerly appeared as a succession of events then will be viewed as a whole and perfectly related cycle; in this way will circular simultaneity increasingly displace the onetime consciousness of the linear sequence of events.” Page-1439 Line-19 Para-3

How you may ask can we ever imagine that time is not linear? Is it not true that the past is different from the future? Yes, it is different. For instance, we can change the future but not the past by deciding to act in the present. But every “moment” is already a time interval of longer or shorter duration. The theoretically infinitesimal instant has zero duration and the union of all such zero duration instants still has zero duration. There must be something more to a “time line” than points with no length.

Time always comes in intervals that include “now”, the eternally present. Without fragmentation, a time interval includes both the infinite past and also the infinite future. These time intervals also convey logical sequentiality, something that can also be conveyed by “circular simultaneity”.

“Time comes by virtue of motion.” Motion is more basic than time; all measurements of time are done by counting relative motions. One day is one *revolution* (motion) of the earth on its axis. Time is therefore the experience of periodic motion, and motion appears to be the change of an object from one of position in space to another. Motion in space has logical meaning, but that meaning can be gleaned without the necessity of linear motion.

The Absolutes of Infinity. “The seven prime relationships within the I AM eternalize as the Seven Absolutes of Infinity. But though we may portray reality origins and infinity differentiation by a sequential narrative, in fact all seven Absolutes are unqualifiedly and co-ordinately eternal. It may be necessary for mortal minds to conceive of their beginnings, but always should this conception be overshadowed by the realization that the seven Absolutes had no beginning; they are eternal and as such have always been. The seven Absolutes are the premise of reality.” Page-1155 Line-26 Para-1

Time gives us the intricacies of sequentiality and space gives us the relationships of simultaneity, but they are inseparable in wholeness of human experience.

5.3 The Bestowal of Life. “The force organizers initiate those changes and institute those modifications of space-force which eventuate in energy; the power directors transmute energy into matter; thus the material worlds are born. The Life Carriers initiate those processes in dead matter which we call life, material life. The Morontia Power Supervisors likewise perform throughout the transition realms between the material and the spiritual worlds. The higher spirit Creators inaugurate similar processes in divine forms of energy, and there ensue the higher spirit forms of intelligent life.

Page-468 Line-11 Para-2

5.4 The Seven Master Spirits and their Seven Different Superuniverses. “Early in the projection of the superuniverse scheme of creation, the Master Spirits joined with the ancestral Trinity in the cocreation of the forty-nine Reflective Spirits, and concomitantly the Supreme Being functioned creatively as the culminator of the conjoined acts of the Paradise Trinity and the creative children of Paradise Deity. Majeston appeared and ever since has focalized the cosmic presence of the Supreme Mind, while the Master Spirits continue as source-centers for the far-flung ministry of the cosmic mind.”

Page-1272 Line-11 Para-2

Each Master spirit has his own superuniverse. We belong to the 7th Superuniverse, Orvonton, while the whole 5th superuniverse among the seven is devoted to the power control beings. “Master Spirit Number Five. This divine personality who exquisitely blends the character of the Universal Father and the Infinite Spirit is the adviser of that enormous group of beings known as the power directors, power centers, and physical controllers. This Spirit also fosters all personalities taking origin in the Father and the Conjoint Actor. In the councils of the Seven Master Spirits, when the Father-Spirit attitude is in question, it is always Master Spirit Number Five who speaks.

Page-187 Line-32 Para-4

5.5 The Spirit Nucleus. “Mortal man has a spirit nucleus. The mind is a personal-energy system existing around a divine spirit nucleus and functioning in a material environment. Such a living relationship of personal mind and spirit constitutes the universe potential of eternal personality.”

Page-142 Line-1 Para-1

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