PHYSICS AND CHEMISTRY

Section 1. Origin and Cosmic Management of Force and Energy

Point I. Philosophical basis for spatio-temporal creatures

Point A. Mechanism of the universe
Point 1. Time and space form the single mechanism by which finite creatures exist in space with the Infinite.
(118:9.1) Time and space form the unified mechanism of the universe. They are the devices by which finite creatures are enabled to co-exist in space with the Infinite. Ultimate creatures are effectively isolated from the absolute levels of time and space. But this isolating environment, without which mortal existence would be impossible, immediately narrows the radius of ultimate action. Without her presence, no creature could act, but she definitely limits the actions of every creature.

Point 2. Mechanisms created by higher types of intelligence limit the activity of all subordinate intelligent beings. Man's sphere of choice is limited.
(118:9.2) Mechanisms created by higher intelligence types therefore function to release their creative sources, but to a certain extent they invariably limit the activity of all subordinate intelligent beings. To universal creatures this limitation becomes as obvious as the arrangement of the universes. Man has no unfettered free will; the sphere of his choice is limited, but within that sphere his will is relatively sovereign.

Point 3. Man cannot control the mortal body until he merges with the Adjuster.
(118:9.3) The life mechanism of the mortal personality, the human body, is the product of the super-mortal design; therefore, such a mechanism will never be able to be perfectly controlled by man himself. Only when the ascendant, merging with the Adjuster, has already created the mechanism for the expression of his personality himself, will he achieve perfect control over it.

Point 4. The great universe is both a mechanism and an organism, set in motion by the Supreme Mind in agreement with the Supreme Spirit.
(118:9.4) The great universe is both mechanism and organism, mechanical and living-a living mechanism set in motion by the Supreme Mind, aligned with the Supreme Spirit, and expressing itself at the maximum levels of union of energy and personality in the image of the Supreme Being. But to deny the mechanism of ultimate creation is to deny the fact and ignore the reality.

Point 5. Mechanisms are products of creative intelligence, and their purpose is determined by their origin, not their function.
(118:9.5) Mechanisms are the products of mind-the creative mind operating with and influencing cosmic potentials. Mechanisms are fixed crystallizations of the Creator's thoughts, and they eternally operate in accord with the volitional design that produced them. But the purposefulness of any mechanism is determined by its origin, not its function.

Point 6. The mechanisms of the universe do not limit the action of the Deity. The cosmic mechanisms emerged in response to the absolute will of the First Source and Center.
(118:9.6) These mechanisms should not be considered to limit the action of the Deity. Rather, the truth is that it is in these mechanical forms that the Deity attained one aspect of eternal expression. The basic universal mechanisms came into being in response to the absolute will of the First Source and Center, and therefore they will continue to operate eternally in perfect harmony with the plan of the Infinite; they are indeed the unwitting standards of this plan.

Point 7. (118:9.7) In some measure we understand how the mechanism of Heaven relates to the personality of the Eternal Son-that is the function of the Co-Executive. We have our own assumptions about the effects of the Universal Absolute on the theoretical mechanisms of the Unconditioned and the potential face of the Deity-Absolute. But in the evolving Supreme and Ultimate Deities we notice that certain impersonal aspects actually unite with their volitional opposites; thus a new relationship arises between the standard and the individual.

Point II. Source and control of universal power and energy

Point A. The First Source and Center

(0:3.9) **1.** As First Source and Center, God is primary with respect to all-encompassing reality - this primaryness is unconditional.
(0:3.13) Influence of the First Source and Center: The gravitational forces of the material universes gather in the gravitational center of the lower Paradise.
(1:2.10) **2.** As the physical ruler in the material universe of universes, the First Source and Center functions in the standards of the eternal Isle of Paradise, and by means of this absolute gravitational center the eternal God carries out the cosmic super-governance on the physical level as in the central universe, so also in all the space of the universe of universes.
(3:2.3) **3.** As a non-spiritual phenomenon, God is energy. The proclamation of this physical fact is based on the unattainable truth that the First Source and Center is the first cause of all phenomena in all space. From this divine activity originate all kinds of physical energy and other manifestations of matter.
(3:2.4) **4.** God controls all energy; he has defined the "path of lightning"; he has predetermined all energy circles. He has predetermined the time and manner of manifestation of all types of energy-matter. And all this rests unceasingly in his eternal power - in the gravitational control, whose center is in the lower Paradise. Thus the light and energy of the eternal God continue their endless rotation in his majestic circle, the endless but orderly procession of the star worlds that make up the universe of universes. All creation revolves eternally around the Paradise Personality - the center of all things and beings.

Point B. Lower Paradise

Point 1. Persons do not dwell in the lower Paradise. All circuits of physical energy and cosmic force originate here. It consists of three concentric zones.
(11:5.1) Of the lower Paradise we know only what we have been told; individuals do not live there. He has nothing to do with the affairs of spiritual rational beings, nor does the Deity-Absolute act here. We are taught that all contours of physical energy and cosmic force have their origin in the lower Paradise, which has the following structure:
(11:5.2) **1.** Directly below the place where the Trinity is located, in the central part of the lower Paradise, is the unknown and undiscovered Zone of Infinity.
(11:5.3) **2.** Immediately surrounding this Zone lies an unnamed region.
(11:5.4) **3.** The outer limits of the lower surface occupy a region controlling spatial potential and force-energy. The action of this vast elliptical force center does not correspond to any of the known functions of any trinity, but in this area the original force charge of space is clearly concentrated. This center consists of three concentric elliptical zones: the inner one is the center of the power and energy processes of Paradise itself, and the outer one is perhaps related to the functions of the Unconditioned Absolute, but as to the spatial functions of the middle zone we cannot say anything definite.

Point 2. Force-energy enters the south and flows out to the north.
(11:5.5) The inner zone of this force center acts apparently like a giant heart, whose contractions send streams of energy even to the farthest limits of physical space. It directs and modifies force-energies, but hardly sets them in motion. The tension-presence present in reality and created by this primordial force manifests itself much more clearly in the northern end of the Paradise Center than in the southern regions; this difference is permanent. The primordial force of space appears to flow southward and flow northward as a result of the action of an unknown circulation system performing a function in connection with the propagation of this basic type of force-energy. From time to time, noticeable fluctuations also occur in the tension in the east-west direction. The forces emanating from this zone do not respond to the effects of observable physical gravity, but always obey the gravity of Heaven.
(11:5.6) The middle zone of the power center immediately surrounds the inner zone. The middle zone is clearly static if we ignore its expansion and contraction in three cycles of activity. The weakest of these pulsations occurs in an east-west direction, the next in strength in a north-south direction, while at the same time the most powerful general expansion and contraction takes place in all directions. The function of this middle zone has never been defined, but it probably has something to do with the mutual coordination of the inner and outer zones of the power center. Many believe that the middle zone is a mechanism for managing the interstitial space or zones of rest that separate successive spatial levels of the universe; but there is neither testimony nor revelation to confirm this. Our assumption is based on the knowledge that this middle zone has something to do with the workings of the unsaturated space mechanism of the universe.

Point 3. The function of the tricyclic pulsatile activities of the middle zone is unknown. The middle zone is believed to be a mechanism for managing the in-between space or rest zone of the universe.

Point 4. The capital outer zone - the center where all radiating contours are located.

(11:5.7) The outer zone is the largest and most active of the three concentric elliptical belts of non-identical cosmic potential. This region is the arena of unimaginable activity - the center where all radiating contours gather, rushing into space in all directions to the outer limits of the seven super-universes and going even further, traversing the colossal and unattainable spaces of the outer cosmos. A given cosmic presence is perfectly impersonal, notwithstanding that in some undisclosed way it apparently submits indirectly to the will and disposition of the infinite Deities acting as the Trinity. It is believed to be the central point of concentration, the Paradise Center of the cosmic presence of the Unconditioned Absolute.

Point 5. The Outer Zone pulsates in gigantic cycles lasting billions of Urantia years-a manifestation of spatial forces spanning all available saturated space.
(11:5.8) Apparently all varieties of power and all phases of energy are closed; they circulate in the universes and return along certain routes. But it turns out that the emanations of the activated zone of the Unconditioned Absolute can either go out into space or go back, but never both at the same time. This outer zone pulsates in gigantic cycles lasting an eternity. In the course of a little more than one billion Urantian years there is an outflow of the spatial force of this center, which is replaced by a return movement of the same duration. And the manifestations of the spatial power of this center are universal: they cover all the space available for saturation.

Point 6. All force-energy emanates from the lower Heaven, but many forms of energy have their origin in space.
(11:5.9) All types of physical force, energy, and matter are one. All force-energy originates in the lower Heaven, where it is about to return after completing its circuit in space. But not all the energy and material formations of the universe of universes in their present state have their origin in the lower Paradise; space is the womb of many types of matter and pre-matter.

Point 7. Space does not arise in the lower Heaven. Thus, the respiration of space does not explain the pulsations of these zones.
(11:5.9) Although the outer zone of the power center of Heaven is the source of spatial energies, space itself does not originate here. Space is not force, energy or pre-matter. The respiration of space is not explained by the pulsations of these zones, and the alternating phases of energy outflow and inflow in this zone are synchronized with the two billion cycles of expansion and contraction of space.

Point C. Space

Point 1. Space is a gift from Heaven. It is imbued with the primordial spatial potential of the Unconditioned Absolute.
(11:7.4) Space is neither a sub-absolute condition within the Unconditioned Absolute, nor its presence, any more than it is a function of the Ultimate. Space is the gift of Heaven, and it is believed that the space of the great universe and all outer realms is actually saturated with the primordial spatial potential of the Unconditioned Absolute. From the point where it approaches the peripheral Paradise, this saturated space extends outward, crosses the fourth cosmic level, and goes beyond the limits of creation, but how far we do not know.

Point 2. The space level forms an elliptical space path with reduced movement resistance.
(11:7.8) Thus the plane of space functions as an elliptical region of motion surrounded on all sides by relative immobility. Such ratios of motion and rest form warped spatial paths of reduced resistance to motion, behind which cosmic force and emergent energy always follow in their eternal rotation around the Isle of Paradise.

Point 3. Everything in the cosmos is in motion except the eternal Paradise Island.
(12:4.1) All units of cosmic energy are involved in a primary cycle and fulfill their purpose as they revolve in a universal orbit. The universes of space and their constituent systems and worlds are revolving spheres, all their constituent systems and worlds are also revolving spheres, making endless revolutions in the spatial levels of the main universe. There is nothing absolutely stationary in the entire main universe except the very center of Havona, the eternal Isle of Paradise, the center of gravity.

Point 4. The Unconditioned Absolute is functionally limited by space.
(12:4.2) The Unconditioned Absolute is functionally limited by space, but we can say nothing definite about its relation to motion. Does it have motion? We don't know. We know that motion is not inherent in space; even the movement of space itself does not derive from its essence. But we have no definite views about the relation of the Unconditioned Absolute to motion. Who or what is the driving force behind these gigantic force-energy transformations taking place beyond the confines of the present seven super-universes?

Point 5. There are three theories of the origin of motion in space.

As to the origin of the movement, we hold the following views:
(12:4.3) **1.** We assume that the Joint Doer initiates movement in space.
(12:4.4) **2.** If the Co-Actioner produces the motion of space itself, we are unable to prove it.
(12:4.5) **3.** The Universal Absolute does not produce the original motion, but compensates and controls all motion-induced tensions.

Point 6. Influence of the organizers of the power of the creation of nebulae.
(12:4.6) It is evident that the creation of these giant discs of the outer space universes which are now in the process of star formation are the function of the power organizers, but their ability to perform such functions was most likely provided by a certain modification of the spatial presence of the Unconditioned Absolute.

Point 7. Space is real and there are four types of space motion.
(12:4.7) From man's point of view, space is nothing - something negative; it exists only in relation to something positive and extra-spatial. Yet space is real. It contains and conditions movement. It even moves. In general, the movements of space can be classified as follows:
(12:4.8) **1.** Primary motion: respiration of space, the movement of space itself.
(12:4.9) **2.** Secondary motion: counter-directed rotation of successive levels of space.
(12:4.10) **3.** Relative motions: relative in that they relate to Heaven as a fulcrum. The primary and secondary types of motion are absolute-they are motions relative to the immovable Heaven.
(12:4.11) **4.** Compensatory or correlating movement: designed to coordinate all other types of movement.

Point 8. Space is not infinite and not absolute.
(12:5.2) Space is not infinite, though it has its origin in Heaven; it is not absolute, as it is saturated with the Unconditioned Absolute. We do not know the absolute limits of space, but we know that the absolute of time is infinity.

Point 9. Space is absolutely finite. Space is a property of all material bodies.
(118:3.5) Of all the non-absolute, space is obviously the nearest of all to the absolute. Apparently, space is absolutely limitless. The actual difficulty in understanding space on a material level is explained by the fact that while material bodies exist in space, space also exists in these same material bodies. Although there is much that is absolute about space, this does not mean that space is absolute.
(118:3.6) Spatial relations can be better understood if we imagine that, relatively speaking, space is ultimately a property of all material bodies. Therefore, when a body moves in space, it carries within itself the properties of space - precisely this space, which is locked in such a moving body, is a part of it.

Point D. Gravity
(3:1.7) The Universal Master is potentially present in the gravitation circles of the Isle of Paradise in all parts of the universe, at all times and in equal measure-according to the mass, according to the physical needs of his presence, and considering the properties inherent in all creation, which cause all things to aspire to him and to be enclosed in him. Thus the First Source and Center is potentially present in the Unconditioned Absolute, the receptacle of the uncreated universes of the infinite future. Thus God potentially fills with himself the physical universes of the past, present, and future. It is the primordial foundation of the unification of the so-called material creation. This non-spiritual potential of the Deity is periodically realized on the plane of physical existence by the inexplicable intervention of one of its special performers on the stage of cosmic action.
(0:4.12) Paradise Island - Paradise, not otherwise defined, is the Absolute of the material gravity management of the First Source and Center. Heaven is at rest and is the only stationary object in the universe of universes. Paradise Island has a place in the universe, but no position in space. This eternal Island is the immediate source of the physical universes - past, present and future. The core of the universes, the Isle of Light is a derivative of Deity, but it is hardly Deity; so are material creations - they are not a part of the Godhead, but one of the consequences.

Point 1. Gravity - this is the almighty embrace of the physical presence of Heaven.
(11:8.1) The inescapable gravitational pull effectively covers all worlds in all universes throughout space. Gravity, it is the all-powerful embrace of Heaven's physical presence. Gravitation is the all-powerful thread upon which are strung the twinkling stars, the shining suns, and the revolving spheres that make up the all-encompassing physical ornament of the eternal God, Who is all, Who fills all, and in Whom all is contained.

Point 2. All energy and mass respond infallibly to Heaven's gravity.
(11:8.2) The center and epicenter of absolute material gravity is Paradise Island, supplemented by the surrounding Havona black gravity bodies and balanced by the upper and lower reservoirs of space. All the known emanations of the lower Paradise invariably and unerringly respond to the influence of the central gravitation by which the

innumerable circles of the elliptical spatial levels of the universe are encompassed. Every known type of cosmic reality describes a centuries-old arc, tending to a circular motion, to a rotation on the vast ellipse.

Point 3. Relationship of space with gravity.
(11:8.3) Space does not react to gravity, but serves as a counterweight to it. Without the cushioning ability of space, the explosions occurring in it would cause a shock in the surrounding space bodies. Saturated space also exerts such an anti-gravity effect on physical or linear gravity; space is indeed capable of neutralizing such action of gravity, though incapable of retarding it. Absolute gravity is the gravity of Heaven. Local - or linear - gravity refers to the electrical stage of energy or matter; it operates within the limits of the central, super- and outer universes in each corresponding materialization.

Point 4. Energy and matter reveal three stages of response to Heaven's gravity.
(11:8.4) The many types of cosmic force, physical energy, universal energy, and also the various materializations reveal three general, though not strictly differentiated, stages of reaction to the gravity of Heaven:
(11:8.5) **1.** Pregravitational stages [or Force]. This is the first step in the process of the individuation of spatial potential into pre-energetic types of cosmic force. This stage corresponds to the concept of the initial force charge of space, sometimes called pure energy or segregata.
(11:8.6) **2.** Gravitational Stages [or Energy]. This modification of the space force charge is created by the Heavenly Force Organizers. It testifies to the emergence of energy systems responding to the influence of Heaven's gravity. This emerging energy is initially neutral, but undergoing a series of transformations, it begins to exhibit so-called negative and positive properties. We call these stages the ultima.
(11:8.7) **3.** Post-Gravitational Stages [or Universe Energy]. At these stages, energy-matter begins to obey linear gravity. In the central universe, such physical systems are the ternary organizations known as triads - superpower systems that are the source of space-time creations. The physical systems of the superuniverses are formed by the Universal Energy Controllers and their partners. These material organizations are distinct from dual construction and are known as gravitas. The black gravitational bodies surrounding Havona are neither triats nor gravitas, and the strength of their attraction reveals both types of physical gravity, linear and absolute.

Point 5. The spatial potential does not interact with any kind of gravity. He is the spatiality of the Unconditioned Absolute.
(11:8.8) Spatial potential does not interact with any kind of gravity. This original gift of Heaven is not an actual level of reality; it precedes all relative functional non-spiritual realities - all manifestations of force-energy and also the formations of energy and matter. Spatial potential is a term that is difficult to define. It does not mean something prior to space; its meaning should convey the idea of ??the potential possibilities existing in the space itself. Broadly speaking, it may be understood as including all those absolute influences and potentialities which emanate from Heaven and constitute the spatial presence of the Unconditioned Absolute.

Point 6. Relation of the Unconditioned Absolute to Heaven. Why does gravity always act in a plane perpendicular to the mass.
(11:8.9) Heaven is the absolute source and eternal center of all energy and all matter in the universe of universes. The unconditioned Absolute reveals, regulates and embraces all that of which Paradise is the source and first cause. The universal presence of the Unconditioned Absolute represents an equivalent concept of the potential infinity of the gravitational range - an elastic tension of the presence of Heaven. This notion helps us realize the fact that everything is drawn to the center, to Heaven. The example given is approximate, but useful. It also explains why gravity always acts primarily in a plane perpendicular to the mass - this testifies to the differences in the dimensions of Heaven and its surrounding creations.

Point 7. The Universal Father manifests himself through four contours of absolute gravity of the universe.
(12:3.1) All forms of force-energy without exception, material, mental, or spiritual, are subject to this scope, to these universal presences which we call gravity. The personality also obeys the gravity - the special circle of the Father; but regardless of the specific belonging of this circle to the Father, it is not excluded from the other circles; The Universal Father is infinite and manifests through all four circles of absolute gravity in the master universe:
(12:3.2) **1.** The Gravity of the Personality of the Universal Father.
(12:3.3) **2.** The Gravity of the Spirit of the Eternal Son.
(12:3.4) **3.** The Gravity of the Mind of the Joint Doer.
(12:3.5) **4.** The Cosmic Gravity of Paradise Island.

Point 8. At the present time the organized universes use less than 5% of the active action of the absolute gravitational range of Heaven.

(12:3.8) Estimating the total physical gravity potential of the entire grand universe, the group members carefully compare their results to the total magnitude of the active presence of absolute gravity. These calculations show that the total gravitational influence in the larger universe is a very small fraction of the assumed gravitational influence of Heaven, calculated on the basis of the response to gravity of the basic physical units of universal matter. The researchers make the startling conclusion that the central universe and its surrounding seven superuniverses currently use less than 5% of the active action of Heaven's absolute gravitational range. In other words, at the present time about ninety-five percent of the active influence of cosmic gravity on Paradise Island, calculated on the basis of this totality theory, controls the material systems beyond the limits of the presently existing organized universes. All these calculations refer to absolute gravity; linear gravity is manifested by interaction, and its calculation requires knowledge of the actual magnitude of Heaven's gravity.

Point 9. Nature and Function of Gravity Ambassadors.
(31:2.2) The home of the Gravity Ambassadors is the Sphere of Divinity, and they themselves are altered and personalized Adjusters. But none of the members of our assurance group would undertake to explain the nature of any of these ambassadors. We know that they are highly personal beings, that they are divine, intelligent, and touchingly responsive, but we do not understand their way of traversing space without wasting time. Apparently they are capable of using all kinds of energies, circles and even gravity. Graduates of the mortal corps cannot ignore time and space, but they are surrounded and subjugated by virtually infinite spiritual personalities to whom time and space are subject. Although we call Gravity Ambassadors personalities, in reality they are super-spiritual beings, limitless and vast personalities. Compared to the Single Ambassadors, this is a completely different category of person.
(31:2.3) Gravitational Ambassadors may be attached to the graduate corps in unlimited numbers, but only one ambassador, at the head of his comrades, is accepted into the Mortal Graduate Corps. Nevertheless, 999 ambassadors are subordinate to him and, in case of need, he can summon any number of reserve contingents of his category.

Point 10. Definition of linear gravity.
(42:11.5) The reaction of linear gravity is a quantitative measure of non-spiritual energy. The whole mass, the organized energy, submits to this power, except for the influence which motion and reason exert upon it. Linear gravitation is the short-range binding force of the macrocosm, just as intra-atomic bond forces are the short-range binding forces of the microcosm. Materialized physical energy, organized in the form of so-called matter, cannot traverse space without affecting the reaction of linear gravity. Although such a reaction is directly proportional to the mass, it is so altered by the influence of space that the expression of the final result as the inverse of the square of the distance is no more than an approximation. Ultimately, space conquers linear gravity due to the presence in it of anti-gravitational influences of numerous super-material forces, neutralizing the gravitational influence and all reactions to it.