ASTROPHYSICS

Section 1. General picture of the universe

Point I. Space

Point A. Description of the entire space

(11:7.4) **Point 1.** 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.

(11:7.2) **Point 2.** Heaven is in fact a still core, which is surrounded by the zones of relative tranquility lying between saturated and unsaturated space. Geographically these areas are a relative extension of Heaven, but perhaps there is some movement within them. We know too little about them, but we notice that these zones of weakened spatial motion separate the saturated and unsaturated spaces. Such zones once existed between the layers of saturated space, but now they are less peaceful.

(11:7.1) Space does not exist on any of the surfaces of Paradise. If, being on its upper surface, we "look" straight up, it will be impossible to "see" anything but incoming or outgoing unsaturated space, currently incoming. Space does not come into contact with Heaven; only the calm zones of the interspace come into contact with the central Island.

(11:7.3) **Point 3.** The vertical cross-section of all space somewhat resembles a Maltese cross, the horizontal extent of which corresponds to saturated [or universal] space, and the vertical to unsaturated [or reservoir] space. The four ends of this cross are somewhat separated, inasmuch as the zones of interstitial space separate saturated and unsaturated space. As one moves away from Heaven, the tranquil zones of the intervening space expand and eventually encompass the boundaries of all space, fully encompassing both the spatial reservoirs and the entire horizontal extent of saturated space.

(11:7.5) If you imagine a finite but unattainably vast wedge-shaped V-plane, situated at right angles to both the upper and lower surfaces of Paradise, and with its apex almost touching the peripheral Paradise, and if then imagine this plane in its elliptical rotation around Heaven, then the rotational motion of this plane would approximately outline the volume of saturated space.

Point B. The respiration of space

Point 1. The vertical extension of the unsaturated space shrinks and passes into a horizontal extension of the saturated space and vice versa.

(11:6.1) We do not know the true mechanism of space respiration; we only observe its periodic contractions and expansions. This respiration covers both the horizontal extent of saturated space and the vertical extent of unsaturated space existing in vast reservoirs above and below Paradise. The volumetric outlines of these spatial reservoirs resemble an hourglass.

(11:6.2) As the universes along the saturated space horizon expand, the reservoirs along the unsaturated space vertical contract and vice versa. Directly below the lower Paradise, a fusion of saturated and unsaturated space takes place. Both types of space flow through transforming regulatory channels where the changes necessary to transform saturated space into unsaturated and vice versa occur in the periodic contractions and expansions of space.

Point 2. Description of unsaturated space - space unsaturated with those forces, energies and presences that exist in saturated space.

(11:6.3) By "unsaturated" is meant space that is not saturated with those forces, energies, and presences that exist in saturated space. We do not know whether the vertical [reservoir] space must eternally serve as a counterweight to the horizontal [space of the universes]; we do not know whether there is a creative design regarding unsaturated space; indeed, we know too little about the reservoirs of space - only that they exist and apparently balance the cyclical expansions and contractions of the universe of universes.

(11:6.4) Each phase of cyclic space respiration lasts a little over one billion Urantia years. During one phase, universes expand, and during the next, they contract. At present saturated space is approaching the middle of the expansion phase, and at the same time unsaturated space is approaching the middle of the contraction phase, and to our knowledge the limits of the two stretches of space are, theoretically, equidistant from Heaven. Now the reservoirs of unsaturated space extend in a vertical direction above the upper and lower Paradise as far as the saturated space of the universes extends from the peripheral Paradise, reaching to the fourth outer level of the cosmos and even going beyond it.

Point 3. Duration of the space respiration cycle – approximately 2 billion years.
(11:6.4) Each phase of cyclic space respiration lasts a little over one billion Urantia years. During one phase, universes expand, and during the next, they contract. At present saturated space is approaching the middle of the expansion phase, and at the same time unsaturated space is approaching the middle of the contraction phase, and to our knowledge the limits of the two stretches of space are, theoretically, equidistant from Heaven. Now the reservoirs of unsaturated space extend in a vertical direction above the upper and lower Paradise as far as the saturated space of the universes extends from the peripheral Paradise, reaching to the fourth outer level of the cosmos and even going beyond it.
(11:6.5) In the course of one billion Urantia years the spatial reservoirs shrink as the universe and force activity of all horizontal space increases. Thus it takes just over two billion Urantia years to complete the full cycle of expansion and contraction.

Point 4. Errors in calculations, distortion in observations related to the respiration of space..
(12:4.12) Although the present relationship of your sun and its associated planets reveals many relative and absolute types of motion in space, the impression given to astronomers is your relative immobility, and your calculations, extending to ever new depths of space, speak of ever-accelerating outward motion of the ranks and clusters of stars surrounding you. But this is not so. You do not take into account the continuing uniform expansion of physical creations belonging to all saturated space. Your own local creation [Nebadon] takes part in this movement of universal expansion. All seven superuniverses participate in the two billion cycles of space respiration along with the outer regions of the main universe.

Errors related to the viewing angle and spatiotemporal distortions.

(12:4.14) While your spectroscopic calculations of astronomical velocities provide reliable enough results with respect to the star worlds belonging to your own and neighboring superuniverses, such an approach is completely unreliable with respect to the worlds of outer space. An approaching star causes the spectral lines to shift to the violet part of the spectrum, and vice versa - a receding star causes the lines to shift to the red part of the spectrum. Under the influence of many additional factors, it appears that the speed of the outer universes is increasing by more than a hundred and sixty kilometers per second for each new increase in distance of a million light years. With the advent of more powerful telescopes, such a method of reasoning will lead to the conclusion that these vastly distant systems are moving away from the given point in the universe at incredible speeds exceeding forty-eight thousand kilometers per second. But this apparent speed of departure is impossible; it is a consequence of numerous errors involving viewing angle and other spatio-temporal distortions.

(12:4.15) But the most significant of all distortions is explained by the fact that in the regions bordering the seven superuniverses, the giant universes of outer space apparently rotate opposite to the direction of rotation of the great universe. That is, billions of these nebulae, along with their accompanying suns and spheres, are currently rotating clockwise around the central creation. The seven superuniverses revolve around Heaven in a counterclockwise direction. Apparently, the second outer universe of galaxies, like the seven superuniverses, revolves around Heaven in a counter-clockwise direction. And astronomers believe they have detected signs of rotational motion in a third outer belt of far space beginning to show a clockwise tendency.

Point 5. The work of moving material-energy masses is spatial work, not energy-force work.
(12:4.13) As the universes expand and contract, the material masses of the space traversed make successive movements - opposite and directed to the gravitational pull of Heaven. The work of moving the material-energy mass of creation is spatial work, not force-energy work.