ASTROPHYSICS

Section 4. Satania and Montmatia

Point I. General Description of Satania

Point A. Satania consists of multiple astronomical systems
(41:2.2) Satania itself consists of more than seven thousand astronomical groups, or physical systems, of which very few have an origin similar to that of your solar system. The Astronomical Center of Satania is a gigantic black island of space, which-along with its contiguous spheres-is situated not far from the seat of the system's government.

Point B. Satania consists of 619 habitable worlds located in over five hundred systems
(32:2.10) Satania is not a uniform physical system, a single astronomical unit or organization. Its 619 habitable worlds are located in over five hundred different physical systems. Only five of these have more than two habitable worlds, and of these only one has four habitable planets, while forty-six have two habitable worlds each.

Point C. Satania has more than 2,000 suns. Energy Managers direct energy flows
(41:3.1) More than two thousand bright suns pour light and energy into Satania, and your own sun is a brilliant luminary of medium magnitude. Of the thirty closest suns, only three possess a greater luminous power. The controllers of the Universal Energy initiate special energy currents that flow between the individual stars and their corresponding star systems. For the energy centers and physical regulators these stellar furnaces, along with the black giants of space, serve as intermediate points for the effective concentration and direction of the energy flows of material creations.

Point II. Evolution of our solar system

Point A. Origin of Monmatia

Point 1. History of our sun and the gravitational influence of Angona.
(57:5.1) 5,000,000,000 years ago, your sun was a comparatively isolated glowing luminary, gathering around itself almost all the nearby spatial matter, remnants of the recent perturbations accompanying its own birth.
(57:5.2) Today your sun has acquired relative stability, but the eleven-and-a-half-year sunspot cycles testify that in its youth it was a variable star. In the initial period of your sun's existence, the continued contraction followed by a gradual increase in temperature led to powerful upheavals on its surface. The cycle of these giant disturbances lasted three and a half days and was accompanied by a change in brightness. This fluctuating state, the periodic pulsations, made your sun highly sensitive to certain external influences that it was about to experience.
(57:5.3) Thus the arena of local space was prepared for the unique birth of Monmatia - that is the name of the planetary family of your sun, the solar system to which your world belongs. Less than one percent of Orvonton's planetary systems have a similar origin.
(57:5.4) 4,500,000,000 years ago the vast Angona system began to approach this solitary sun. At the center of this massive system was a black space giant that was solid, had an enormous electrical charge, and possessed a colossal gravitational pull.

Point 2. First stages of planet formation.
(57:5.5) As Angona drew ever closer to the sun, at the times of its maximum expansion in the course of the solar pulsations, streams of gaseous material were ejected into space as giant solar tongues. At first these flaming tongues of fire inevitably fell back to the sun, but as Angona drew closer and closer, the giant alien's gravitational pull became so great that these tongues of gas in certain places began to break away, causing the roots to return to the sun. and the outer parts separated and formed independent material bodies - solar meteorites, which immediately began to rotate around the sun in their own elliptical orbits.

Point 3. Completion of the Solar System
(57:5.6) As Angona approached, the eruptions of the solar substance increased in scale; more and more matter was extracted from the sun, which became independent bodies rotating in the surrounding space. This situation developed for about five hundred thousand years, until Angona approached to a minimum distance, after which the sun, during one of its periodic internal cataclysms, suffered a partial destruction: from its opposite sides huge volumes of matter simultaneously erupted. From the side facing Angona was drawn a vast column of solar gases,

somewhat tapering at both ends, with a characteristic bulge in the center, which had completely broken free from the sun's direct gravitational control.
(57:5.7) Subsequently, this huge column of solar gases, thus separated from the sun, became the twelve planets of the solar system. As a result of the tidal reaction of the eruption of this giant progenitor of the solar system on the opposite side of the sun, there was an ejection of gas, which has since condensed into meteorites and cosmic dust of the solar system, although a huge, really huge part of this material was subsequently re-evolved. gripped by the sun's gravity after the Angona system disappeared into the depths of space.

Point 4. Although Angona extracted material that became the planets of the solar system, it could not retain any parts of solar matter.
(57:5.8) Although it fell to Angona to extract the material which became the planets of the solar system, just as the colossal volume of matter which became the meteorites and asteroids revolving around the sun, she could not secure for herself any and be part of the solar substance. The approaching system did not come close enough to actually take away some of the solar substance, but its approach was enough to drag all the material of the present solar system into the space separating it from the sun.

Point 5. Formation of 12 planets of the solar system.
(57:5.9) The five inner and five outer planets soon formed in miniature cooling and solidifying cores at the less massive and pointed ends of the giant gravitational bulge that Angona managed to extract from the sun, while Saturn and Jupiter formed from more the massive and prominent central parts. The powerful gravitational pull of Jupiter and Saturn quickly engulfed much of the material "stolen" from Angona, as evidenced by the reverse motion of some of their moons.

Point 6. Origin and evolution of Jupiter and Saturn.
(57:5.10) Jupiter and Saturn, formed from the very center of the colossal pillar of superheated solar gases, contained such a quantity of molten solar substance that they shone with a bright light and radiated an immense amount of heat; in fact, during the short time after their formation as separate spatial bodies, they constituted secondary suns. These two largest planets of the solar system remain largely gaseous and have not yet cooled to a state of complete condensation or solidification.

Point 7. Confirmation and evolution of the remaining 10 planets.
(57:5.11) The cores of the remaining ten planets, formed as a result of the condensation of gas, soon reached the stage of solidification and began to attract to themselves greater and greater quantities of meteoric matter revolving in the nearest lying space. In this way, the worlds of the solar system have a dual origin: cores of condensed gas, subsequently enlarged by the capture of a huge amount of meteorites. In fact, meteorite capture continues, albeit to a much lesser extent.

Point 8. The planets revolve around the Sun at a significant angle to the solar equator.
(57:5.12) The planets do not revolve around the sun in the equatorial plane of their solar source, as would happen if they were thrown out by the rotation of the sun. Rather, they move in the plane of the solar mass outflow caused by the Angona convergence and which occurred at a significant angle to the solar equator.

Point 9. The new solar system captured 3 planets from Angona.
(57:5.13) Unlike Angona, which failed to capture any portion of the solar mass, your sun has added to its changing planetary family some portion of the circulating space material of the wandering system. Due to Angona's strong gravitational field, the orbits of its subordinate planets were at a considerable distance from the black giant; and soon after the extraction of the solar system's initial mass - while Angona was still near the sun - three of the large planets of this system passed at such a close distance from the massive progenitor of the solar system that its gravitational pull, enhanced by the gravity of the sun, proved sufficient to overcome the gravitational pull of Angona and the capture of the three subordinate planets by this celestial traveller.

Point 10. The retrograde motion of planets in the solar system is the result of capture of matter by Angona.
(57:5.14) All the material of the solar system, once separated from the sun, originally revolved in orbits in the same direction, and but for the intrusion of these foreign cosmic bodies, it would, as before, have preserved the original direction of the orbital rotation. In fact, the influence of the three planets subordinate to Angona brought new external guiding forces into the forming system, causing a reverse movement. Reverse motion in any astronomical system is always random and invariably results from the collisional impact of external spatial bodies. Such collisions may not lead to reverse motion, but reverse motion is possible only in such a system where the masses have different origins.

Point 11. Evolution of the Solar System.
(57:6.1) After the birth of the solar system there followed a period of gradual weakening of solar flares. For five hundred thousand years, the activity of the sun decreased and the volumes of matter ejected into space gradually decreased. But in this era of unstable orbits - in the periods of maximum convergence with the sun of the surrounding bodies, the solar parent was allowed to recover a significant part of the meteorite material.

Point 12. Influence of gravity and tidal friction on the axial rotation of the planets.
(57:6.2) The planets nearer than others to the sun are the first to slow their rotation under the action of tidal friction. Such gravitational influences help to stabilize planetary orbits, both putting a brake on the planet's rate of axial rotation and causing it to spin more and more slowly until it ceases to spin on its axis; as a result, one hemisphere of the planet is constantly turned towards the sun, or towards a larger body, which is evident in the example of the planet Mercury and the moon, which always faces Urantia with one side.

Point 13. The tidal friction of the Moon and the Earth and a possible explosion of the Moon in the future.
(57:6.3) When the tidal friction of the moon and the earth is balanced, the earth will always have one side turned toward the moon, and the day will become as the month is, forty-seven days long. After such orbital stability is achieved, tidal friction will begin to exert the opposite effect, no longer separating the Moon from the Earth, but gradually pulling the satellite towards the planet. And then, in that distant future, when the moon approaches approximately seventeen thousand seven hundred kilometers from the earth, the gravitational pull of the earth will cause the moon to break up, and this tidal-gravity explosion will break it into small pieces that they may gather around their world in the form of rings of matter similar to the rings of Saturn, or they will be gradually attracted to the earth as meteorites.

Point 14. Gravitational-tidal explosions of small bodies during convergence.
(57:6.4) If spatial bodies are of similar size and density, they may collide. When such bodies become about the same density and relatively unequal in size, and also if the smaller one continues to converge with the larger one, the decay of the smaller body will take place when the radius of the orbit of the smaller body becomes -small with two and a half times the radius of the large one. Collisions of space giants are rare indeed, but gravitational-tidal explosions of smaller bodies are common enough.

Point 15. Completing the systems of Jupiter and Saturn.
(57:6.6) 4,000,000,000 years ago, the Jupiter and Saturn systems were formed-generally as they are today, except for their moons, which continued to increase in size for several billion years. Virtually all the planets and moons of the solar system continue to increase in size due to the incessant capture of meteorites.

Point 16. Development and formation of the Solar System.
(57:6.7) 3,500,000,000 years ago the compacted cores of the remaining ten planets were well formed; intact were the cores of most moons, although several of the smaller moons later coalesced to form today's larger moons. This era can be called the era of planet formation.
(57:6.8) 3,000,000,000 years ago the solar system functioned much as it does today. Its members steadily increased in size as meteorites continued to fall upon them and their companions in vast quantities.
(57:6.9) About this time your solar system was entered into the physical register of Nebadon and named Monmatia.
(57:6.10) 2,500,000,000 years ago the planets greatly increased in size. Urantia was a well-developed sphere, the mass of which was approximately one-tenth of today's mass and continued to increase rapidly due to meteorite accretion.

Point 17. Astronomical position of Urantia in the deformed Andronover Nebula.
(15:3.6) The core of the physical system to which your sun and associated planets relate is the center of the former Andronover Nebula. This former spiral nebula was slightly deformed as a result of gravitational decay associated with phenomena that accompanied the birth of your solar system and were caused by the approach to the neighboring large nebula. This dangerous approach turned the Andronover Nebula into a sort of globular cluster of bodies, but did not completely disrupt the bilateral procession of the suns and their associated groups of celestial bodies. Your solar system is located in the central part of one of the arms of this warped spiral, located approximately midway between the center and the end of the stellar stream.

Point 18. Most solar systems have a different origin than ours.
(41:10.2) However, most solar systems had an entirely different origin than yours, and this is true even of those that were formed by the gravitational-tidal mechanism. But regardless of the method of formation of the world, gravity always leads to the appearance of a solar-type system - that is, a central sun or a black island with planets, moons, moons of moons and meteors.