

# Chapter 10

## Named Locations in Orvonton

The seventh and sixth heavens refer to the very distant locations of Paradise and Havona, respectively. The fifth heaven of Uversa is at the center of the superuniverse of Orvonton. The fourth through first heavens of Salvington, Edentia, Jerusem, and the Mansion Worlds are part of the major sector of Splandon.

Our superuniverse contains ten major sectors and a total of about 8 trillion observable stars. The Milky Way is the major sector of Splandon in Orvonton and is in revolution about Uversa some 225,000 ly away. The Milky Way contains a trillion stars and is 50,000 ly in radius and 1,000 ly in thickness. The center of the Milky Way is 26,000 ly away in the general direction of the Sagittarius constellation. There are 100 minor sectors within Splandon, each with about 10 billion stars. We are given sufficient information to identify the center of our minor sector of Ensa in the Sagittarius Star Cloud (M24). This star cloud is located in one of the two major spiral arms of the Milky Way, which was not known before the late 1950s. The Sagittarius Star Cloud is about 10,000 ly away.

Each minor sector is made up of 100 local universes, each of which contains about 100 million stars. Christ Michael, who bestowed himself as Jesus of Nazareth, is the sovereign Master Son of our local universe of Nebadon. Salvington is 1,400 ly away at the center of Nebadon and is next to the Orion Nebula (M42) in the Orion constellation. There is tentative confirmation of a clockwise rotation about Salvington of the numerous nebulae making up our local universe. Nebadon encompasses a significant portion of the Orion Spur, a minor arm-like structure in the Milky Way, and is roughly 5,200 ly in diameter and 1,100 ly in height.

There are 100 constellations in a local universe, and each constellation contains on average one million stars. Our constellation of Norlatiadek originated in the Andronover Nebula, from which a little more than a million suns emerged. The progeny of Andronover make up a portion of the Gould Belt. Edentia is 425 ly distant nearby the central core of Norlatiadek, which is the

Pleiades (M45). Our local system of Satania is out near the border of Norlatiadek, which places the border of our constellation roughly 600 ly from Edentia.

There are 100 local systems in a constellation, and Satania will eventually contain 1,000 inhabited planets, although there are currently 619 inhabited worlds. The direction to Jerusem and the Mansion Worlds is not ascertainable from revealed descriptions, but our local system is encompassed by a sphere with a radius of 80 ly, and Urantia is about 80 ly away from Jerusem and the Mansion Worlds.

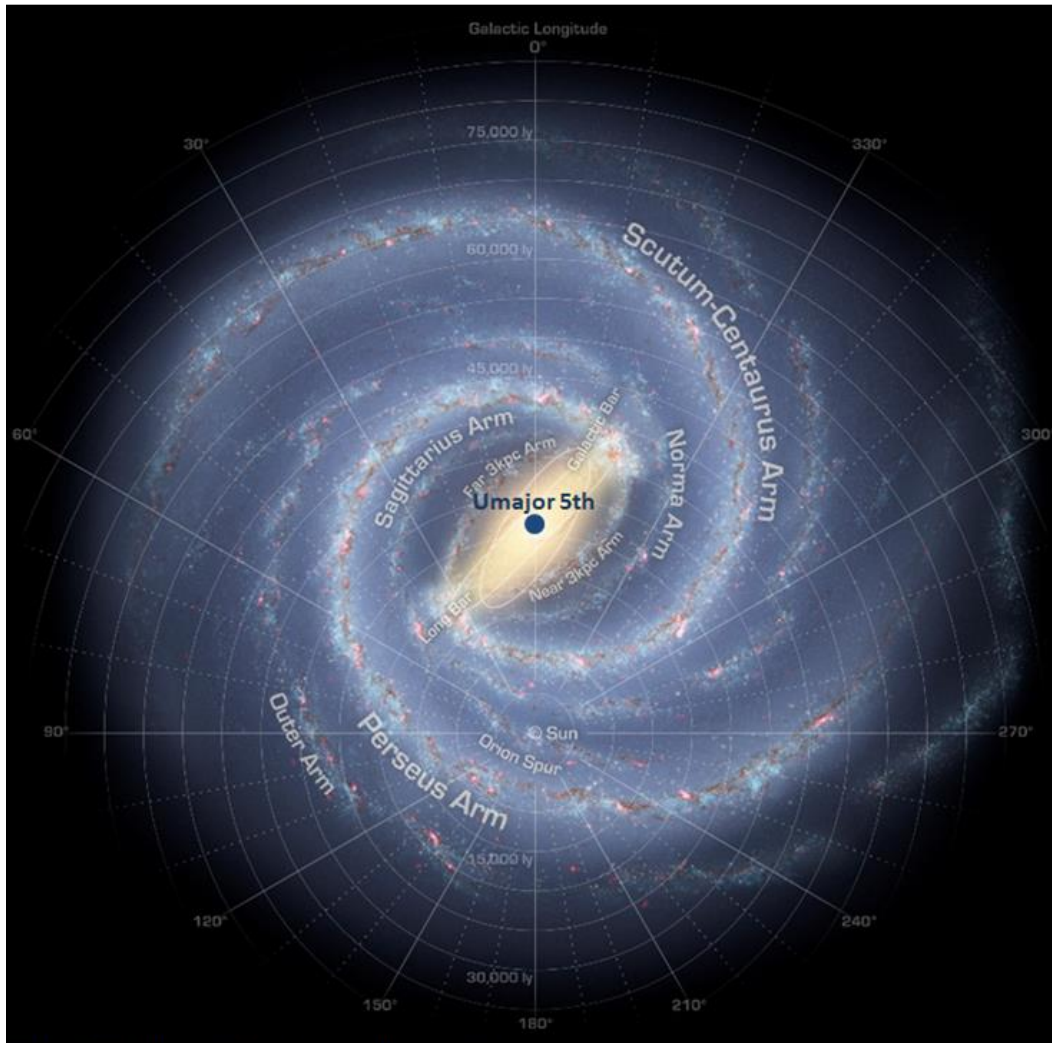
## **1. Major Sector of Splandon**

There are ten major sectors in the superuniverse of Orvonton. "Splandon .... is the fifth major sector of the superuniverse of Orvonton." <sup>15:14.7</sup> The capital of Splandon is the architectural sphere of Umajor the fifth, the residence of the three Perfections of Days, who are Supreme Trinity Personalities. Umajor the fifth is orbited by seventy satellites. "The work of the pilgrims of time on the worlds surrounding a major sector headquarters is chiefly of an intellectual nature in contrast with the more physical and material character of the training on the seven educational spheres of a minor sector and with the spiritual undertakings on the four hundred ninety university worlds of a superuniverse headquarters." <sup>18:4.8</sup>

The Milky Way galaxy is the major sector of Splandon and contains about one trillion suns. The Milky Way has a diameter of about 100,000 ly and an average thickness of 1,000 ly. The gravitational center of the Milky Way lies about 26,000 light-years away from us in the direction of constellation of Sagittarius. The center of the Milky Way is revolving about Uversa. "The whirl of the ten major sectors, the so-called star drifts, about the Uversa headquarters of Orvonton." <sup>15:3.13</sup> "The Sagittarius sector and all other sectors and divisions of Orvonton are in rotation around Uversa." <sup>15:3.7</sup> At the center of the Milky Way is an intense radio source, Sagittarius A\*, which is believed to mark a supermassive black hole with a mass equal to a few million suns. It seems doubtful that Umajor the fifth is located in or very near this black hole at the center of the Milky Way, but nothing more appears to be revealed about its actual location. It seems probable that

Umajor the fifth is at some significant distance from the gravitational center of mass for Splandon located at Sagittarius A\*.

Fig 27: **Splandon is the Milky Way Galaxy**



NASA / JPL-Caltech / R. Hurt (SSC-Caltech) ssc2008-10b

<http://www.spitzer.caltech.edu/images/1925-ssc2008-10b-A-Roadmap-to-the-Milky-Way-Annotated->

Our galaxy is in clockwise rotation and has two major spiral arms: the Perseus Arm and the Scutum-Centarus Arm. These two major arms revolve in a clockwise direction about the center of our galaxy, which lies in the direction of Sagittarius. In the artistic rendering above, which is based upon actual observational data, the sun is located roughly halfway between the center and periphery of the Milky Way. Our sun is part of the Orion Spur, which is a minor arm of our galaxy that is about halfway between the major spiral arms of Perseus

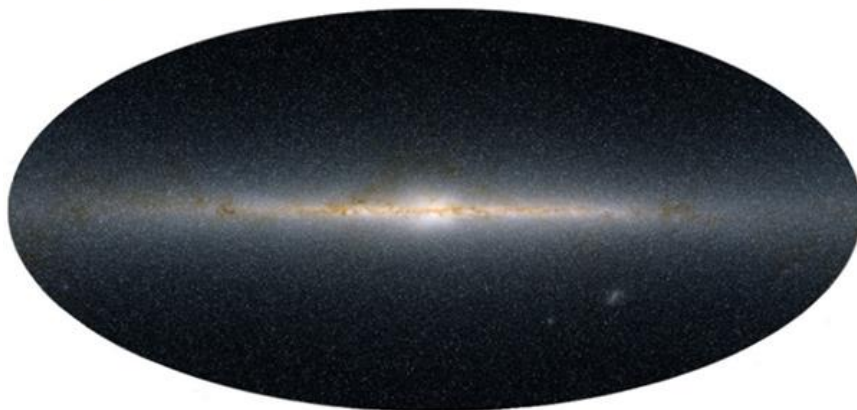
and Scutum-Centarus. The Orion Spur or arm is about 1,100 ly high, 3,500 ly across, and 10,000 ly in length. Galactic longitude lines are shown radiating from the sun with galactic north pointing toward the center of the Milky Way.

**Fig 28: Andromeda (M31) is Similar in Shape and Size to the Milky Way**



GALEX, JPL-Caltech, NASA  
<http://apod.nasa.gov/apod/ap120518.html>

**Fig 29: Plane of the Milky Way – Zone of Obscuration**



Credit: 2MASS/J. Carpenter, T. H. Jarrett, & R. Hurt  
[http://www.ipac.caltech.edu/2mass/gallery/showcase/allsky\\_stars/index.html](http://www.ipac.caltech.edu/2mass/gallery/showcase/allsky_stars/index.html)

Since we are inside the Milky Way, it completely surrounds us. The galactic plane forms a great circle on the celestial sphere, as in the above composite photograph. Interstellar dust and stars in the galactic plane of the Milky Way obscure about 20 percent of the sky. Objects beyond the Milky Way which are located within about 10 degrees above or below the plane of the Milky Way are difficult or impossible to observe. This belt is known as the zone of obscurity or zone of avoidance, because astronomers have tended to avoid looking for extragalactic objects in this belt.

## **2. Minor Sector of Ensa**

There are one hundred minor sectors in the major sector of Splandon, and Ensa is counted as the third minor sector. The capital of Ensa is the architectural sphere of Uminor the third, the residence of the three Recents of Days, who are Supreme Trinity Personalities. Uminor the third is orbited by seven satellites, which are "the entrance schools of the superuniverse and are the centers of training for physical and administrative knowledge concerning the universe of universes." <sup>15:13.5</sup> "On these worlds ascending mortals carry on studies and experiments having to do with an examination of the activities of the third order of the Supreme Power Centers and of all seven orders of the Master Physical Controllers." <sup>18:5.3</sup> In these entrance schools the associate power directors "serve as instructors of all who study the sciences of the techniques of intelligent energy control and transmutation." <sup>29:4.16</sup> We become first order spirits during our sojourn on Uminor the third.

Ensa is one of 100 minor sectors in the major sector of Splandon, the Milky Way. Uminor the third is at the rotational center of its one hundred associated local universes. "The swing of the local star cloud of Nebadon and its associated creations around the Sagittarius center of their minor sector." <sup>15:3.11</sup> Uminor the third is in the same general direction as the center of the Milky Way, but it lies at less than half the distance. "The rotational center of your minor sector is situated far away in the enormous and dense star cloud of Sagittarius, around which your local universe and its associated creations all move, and from opposite sides of the vast Sagittarius subgalactic system you may observe two great streams of star clouds emerging in stupendous stellar coils." <sup>15:3.5</sup>



The “two great streams of star clouds emerging” from the subgalactic system of the minor sector of Ensa has occasionally been interpreted as referring to the major spiral arms of the Milky Way. The phrase “Sagittarius subgalactic system” is not easily reconcilable with the Milky Way, which has always been referred to as a galaxy. Prior to about 1925 the Milky Way galaxy was universally believed to be the universe. The Milky Way also contains 100 times the ten billion suns found in an average minor sector. This subgalactic rotational center refers to a location in one of the two major spiral arms of the Milky Way, the Scutum-Centaurus Arm.

Fig 30: **Sagittarius Star Cloud (M24) in the Scutum-Centaurus Spiral Arm**

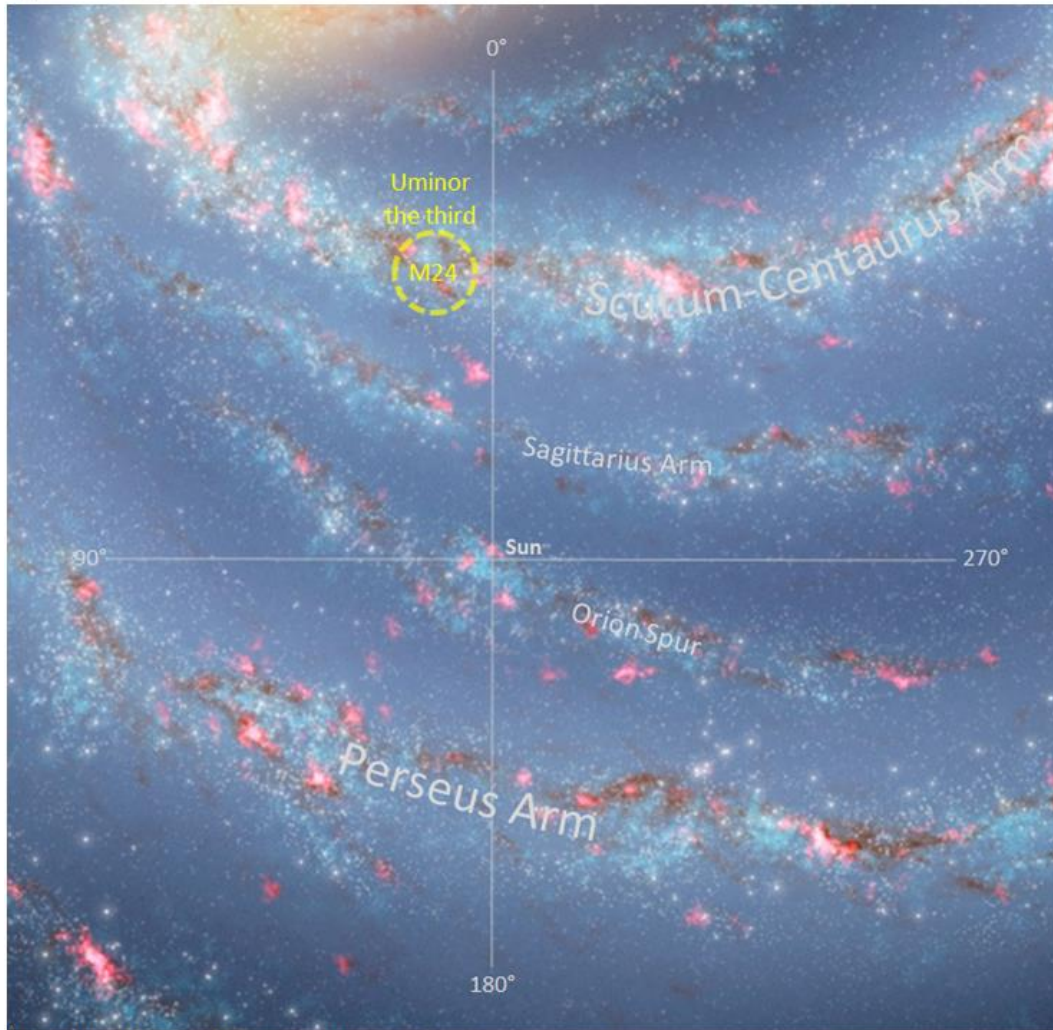


Credit: Tomas Mazon, public domain

The “enormous and dense star cloud of Sagittarius” is a specific astronomic reference to the Sagittarius Star Cloud (M24), first identified by Charles Messier in 1764. M24 consists of a dense cluster of thousands of stars and is about 10,000 ly distant. It is located at  $l = 12.60^\circ$ ,  $b = -1.04^\circ$  in galactic coordinates and is roughly 600 ly in diameter. This is 38 percent of the distance between us and the galactic center, which is 26,000 ly distant. Uminor the third is located in the Sagittarius Star Cloud, which is a portion of the Scutum-Centaurus Arm of the

Milky Way. The “stupendous stellar coils” of this arm can be observed emerging from opposite sides of M24 (figure 30).

Fig 31: Rotational Center Uminor the third in M24 in the Scutum-Centaurus Arm



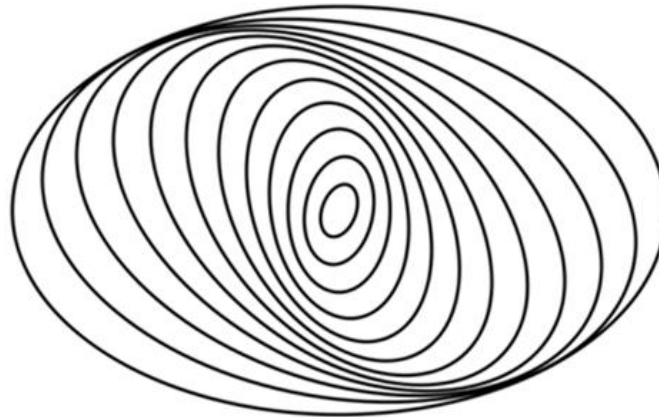
NASA/JPL-Caltech/R. Hurt (SSC-Caltech) (cropped and annotated)  
<http://www.spitzer.caltech.edu/images/1923-ssc2008-10a-A-Roadmap-to-the-Milky-Way>

It is not possible that this description of the “stellar coils” of the Scutum-Centaurus Arm extending from either side of M24 could have been written from humanly available knowledge at the time of publication in 1955. It was not known before the late 1950s that the Sagittarius Star Cloud is a portion of one of the major spiral arms of the Milky Way galaxy.

Hubble's work led most astronomers to assume that the Milky Way had spiral arms like Andromeda, but it was not until 1951 that Morgan, Sharpless, and Osterbrock of the Yerkes Observatory first tentatively identified some of the stars in some of its spiral arms. [44] Examining O and B type stars, they found evidence for what are now called the Orion Spur and the Perseus Arm. Although their finding was presented at a conference, it was never academically published. They also detected a few stars in the direction of what is now known to be the Scutum-Centaurus Arm, but the evidence was insufficient to identify the existence of this arm. A 1958 study J. H. Oort was the first to tentatively describe a possible spiral arm in the general region of the Scutum-Centaurus arm. It was not until 1970 that G. Courtes positively located and identified this major spiral arm of the Milky Way. [84]

The Universal Censor tells us that the 100 local universes in the minor sector of Ensa are in revolution about the Sagittarius Star Cloud. Nebadon is revolving about M24 10,000 ly away in some sort of elliptical orbit. Although M24 is in a location which is consistent with the revolution of Nebadon about it, this revolution within the confines of the Milky Way does not seem possible at first. The Scutum-Centaurus arm appears to be revolving as a whole structure about the galactic center. However, the arms of spiral galaxies revolve about their galactic centers at a different velocity than the stars found in them. The arms in spiral galaxies are not made up of the same stars over time. Stars move into and out of the arm regions as they revolve about the galactic center.

Fig 32: **Spiral Galaxy Density Waves**



The existence of spiral arms creates a so-called winding problem. If the arms were structures made up of the same revolving stars over time, these structure



would become completely dispersed after a single revolution. The stars nearer the center have a much shorter period of revolution than those farther out. This would result in inner orbits “winding up” faster than outer ones, like a spiral watch spring. This would cause the structure of the spiral arms to rapidly disappear. This does not happen, because the spiral arms revolve about their galactic centers with a different velocity than individual stars.

It was not until 1964 that C.C. Lin and Frank Shu proposed the density wave hypothesis which offered a possible explanation for why the arms in spiral galaxies persist over time. <sup>[82]</sup> The spiral arms are regions where the stellar density is higher by 10-20 percent. The increase in mass density forms as a density wave with a structure described by a logarithmic spiral. The density wave retains its form even though stars and clusters have angular velocities which are different from that of the spiral arms. As stars revolve about a galactic center and move into higher density regions, they are brought closer together, giving the appearance of an arm structure. After some time, stars leave the spiral arms and move into lower density regions where they move apart from one another. According to the general hypothesis, the variations in gravitational attraction between stars at different radii causes gravitational instability which results in these alternating regions of higher and lower stellar density.

The motion of the Milky Way’s spiral arms is referred to as the pattern speed. A 2010 study estimates the pattern speed at  $55 \pm 5 \text{ kms}^{-1}/\text{kpc}$ , based upon the rotation of our galaxy’s central bar. <sup>[80]</sup> At this pattern speed the radial distance of corotation occurs at about 13,000 ly, halfway between the sun and the center of the galaxy. At this distance both the spiral arms and the stars making them up at that point have the same orbital velocity and move together. The stars in a spiral arm at this distance corotate with the arm structure and form a relatively stable cluster of mass.

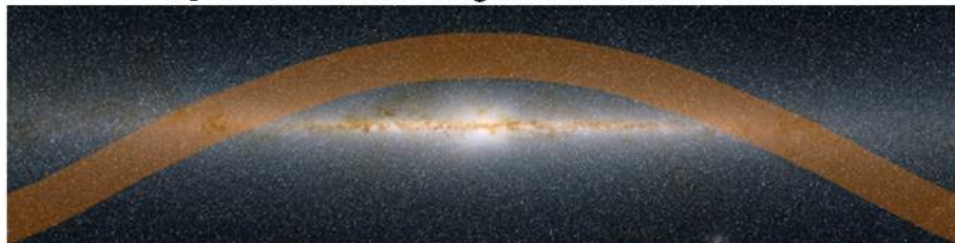
This approximate corotation distance of 13,000 ly away from us is not that much different from the distance of 10,000 ly to the Sagittarius Star Cloud, the center of minor sector revolution. Making the reasonable assumption that M24 is at the corotation distance, it then constitutes a relatively stable aggregation of many thousands of stars forming a center of mass about which the local universe of Nebadon could be held in gravitational revolution. Equally as important, the stability of the Sagittarius Star Cloud structure establishes a center of mass for Ensa so that the minor sector can be in revolution about Umajor the fifth at the center of Splandon. “The rotation of the one hundred minor sectors, including Sagittarius, about their major sector.” <sup>15:3.12</sup>

### 3. Local Universe of Nebadon

The local universe of Nebadon is the eighty-fourth out of one hundred local universes in the minor sector of Ensa. The capital of Nebadon is the architectural sphere of Salvington, the residence of Christ Michael, a Paradise Creator Son of the Universal Father and the Eternal Son, who came to Urantia as both the Son of God and the Son of Man in the person of Jesus of Nazareth. Salvington is orbited by ten satellites, which are each orbited by forty-eight lesser worlds. "Hereon is man spiritualized following his constellation socialization." 15:7.7 At the end of our time on Salvington, we become first stage spirits. "Mortals acquire real spirit identity just before they leave the local universe headquarters for the receiving worlds of the minor sectors of the superuniverse." 30:4.20 "On the Salvington spheres you will be evolving from a morontia being to the status of a true spirit; you will be more spiritual than material." 43:9.2 Up until this time, we are referred to as morontia progressors.

The local universe of Nebadon was formed from numerous nebulae. "One or more—even many—such nebulae may be encompassed within the domain of a single local universe even as Nebadon was physically assembled out of the stellar and planetary progeny of Andronover and other nebulae." 41:0.4 The Andronover nebula was apparently the first to be created in our local universe. About 400 billion years ago, "Michael of Nebadon, a Creator Son of Paradise, selected this disintegrating nebula as the site of his adventure in universe building." 57:3.8 The headquarters sphere of Salvington was built around this time. An Archangel refers to the group of nebulae subsequently forming our local universe as the star cloud of Nebadon. "Such is the constitution of the local star cloud of Nebadon, which today swings in an increasingly settled orbit about the Sagittarius center of that minor sector of Orvonton to which our local creation belongs." 41:0.3

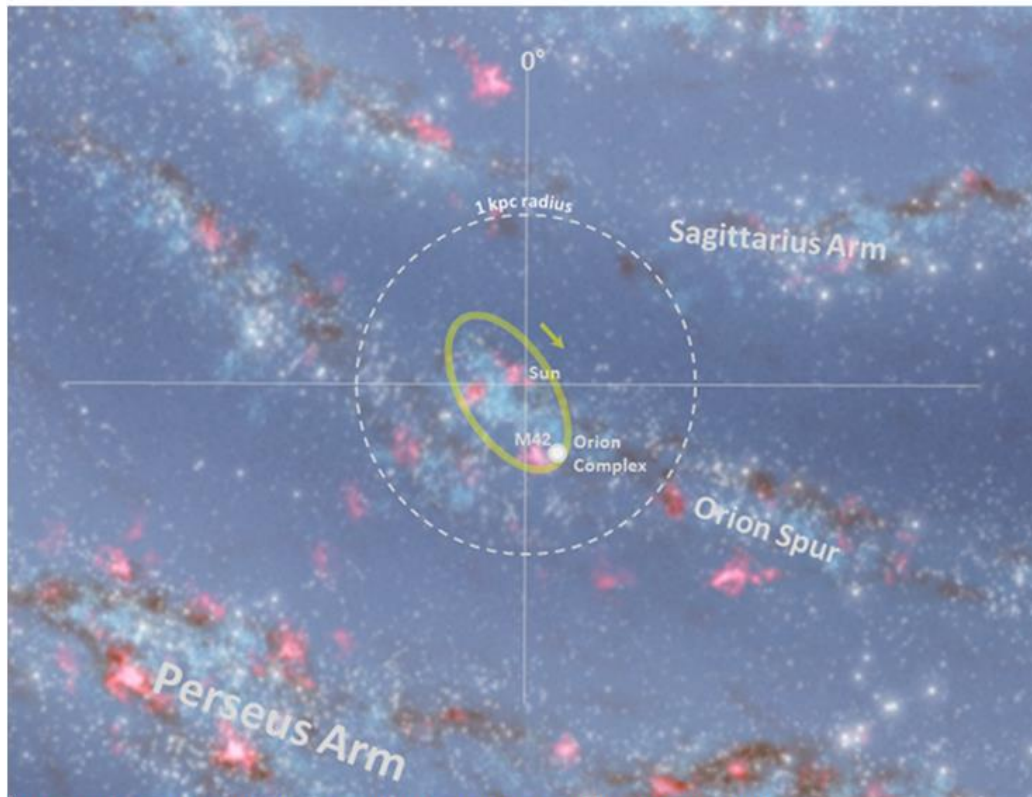
Fig 33: The Gould Belt against the Galactic Plane



Credit: 2MASS/J. Carpenter, T. H. Jaret & R. Hurt  
<http://www.cfa.harvard.edu/gouldbelt/gouldsbelt.html>

The star cloud of Nebadon includes what is known as the Gould Belt. This band of stars and nebulae was first identified by Benjamin Gould in 1879. Our sun is located in this belt, which completely surrounds us, forming a great circle on the celestial sphere. It stands out from the rest of the Orion Spur (Local Arm), the minor galaxy arm in which we are located, and the plane of the galaxy because its members form a roughly disk-like structure which is tilted approximately 20 degrees to the galactic plane. Being located inside this disk makes it difficult to determine its exact dimensions. Current estimates describe an ellipse roughly 100 parsecs thick (1 pc = 3.26 ly), 1,000 pc long (3,262 ly), and 600 pc wide (1,957 ly). All of these estimates have significant uncertainties. Mass estimates for the Gould Belt vary widely but tend to be in the range of roughly two million solar masses. [86]

Fig 34: Gould Belt and Orion Complex 1,400 ly away in the Orion Spur



NASA / JPL-Caltech / R. Hurt (SSC-Caltech) ssc2008-10a (cropped and annotated)  
<http://www.spitzer.caltech.edu/images/1923-ssc2008-10a-A-Roadmap-to-the-Milky-Way>

The disk-like structure and tilt of the Gould Belt has prompted the idea that it may be in revolution. Among several others, a 2004 paper, confirming conclusions first published several years earlier, finds that Gould Belt objects are in clockwise rotation at a velocity of  $\sim 6$  km/s about a center about 490 ly (150 pc)

away in the direction  $l = 128^\circ$ ,  $b = -20^\circ$  in galactic coordinates. <sup>[45]</sup> This is the same direction of rotation as the Milky Way. Placing the Gould Belt on the galaxy map shows it extending about halfway into the Orion Spur, which is roughly one kiloparsec wide (3,262 ly).

Fig 35: Orion Nebula



Credit: ESO and Igor Chekalin, Jan 2011  
<http://www.eso.org/public/images/eso1103a>

Along the border of the Gould belt about 1,400 ly distant is the Orion Complex centered on the Orion Nebula (M42, figure 35). <sup>[93]</sup> This grouping includes De Mairan's Nebula (M43), the Horsehead Nebula (IC 434), Barnard's Loop (Sh 2-276), Messier 78 (NGC 2068), the Flame Nebula (NGC 2024), and Orion Molecular Clouds A and B. According to a 2005 study, the molecular clouds in the immediate region of the Orion nebula are hundreds of light-years in diameter and contain the equivalent of about 230,000 solar masses ( $M_\odot$ ). <sup>[46]</sup> The Orion Molecular Clouds are the most massive within 2,300 ly of us. <sup>[87]</sup> The open cluster of stars around the Orion Nebula contains a known population of at



least 2,200 stars, and the solar mass within a radius of 7 ly of M42 is estimated at  $4,500 M_{\odot}$ .<sup>[85]</sup>

The Institute for Astronomy at the University of Vienna maintains a comprehensive list of about 2100 galactic open clusters in its WEBDA database. A total of 345 of these clusters are within one kiloparsec (1 kpc = 3,262 ly) of the sun ([univie.ac.at/webda/dist\\_list.html](http://univie.ac.at/webda/dist_list.html)). Since this list was last updated in 2007, eleven of these open clusters have been identified as asterisms, and no data on the membership of nine potential clusters is yet available in the literature. Out of the remaining 325 valid open clusters, the Orion Nebula Cluster has the largest number of known stars and the greatest mass within one kiloparsec. The next largest cluster is NGC 2323 (M50) at one kiloparsec, which has about 2,100 stars and an estimated mass of  $1,600 M_{\odot}$ .<sup>[90]</sup>

Fig 36: **Salvington is Next to M42 in the Orion Constellation**

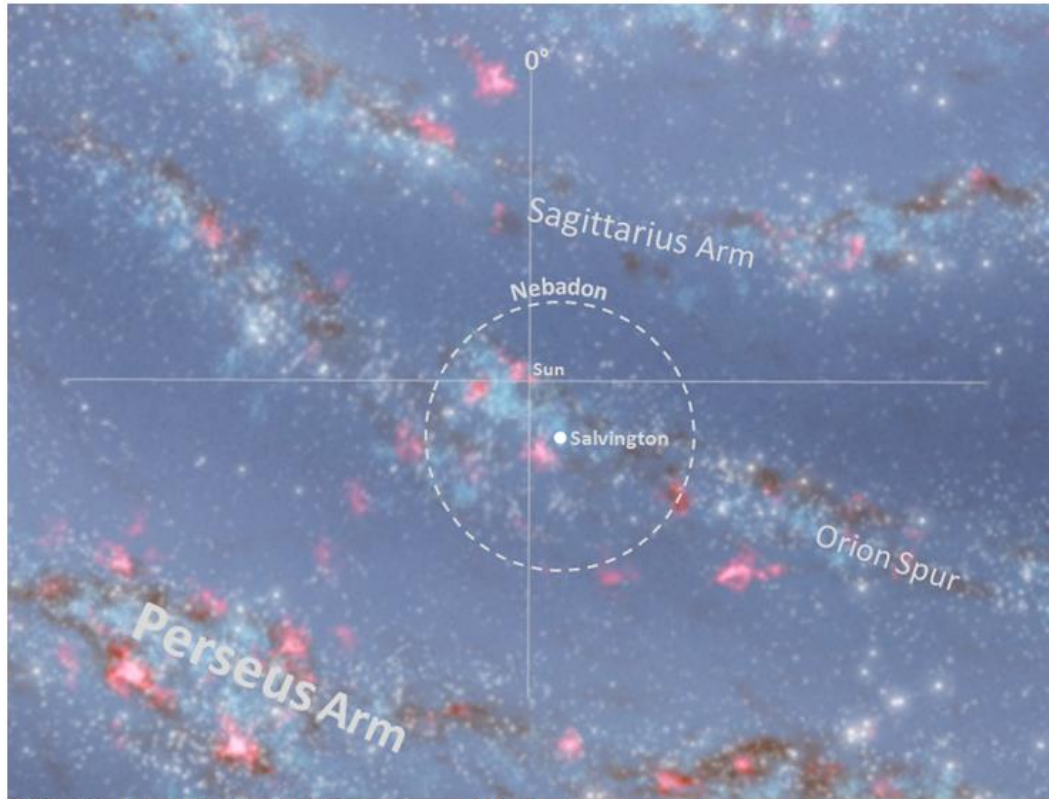


Credit: NASA, ESA, AURA/Caltech, Palomar Observatory  
<http://hubblesite.org/newscenter/archive/releases/2001/12/image/b/>

“Salvington, the headquarters of Nebadon, is situated at the exact energy-mass center of the local universe.”<sup>32:2.4</sup> Since linear gravity holds the constellations in revolution about Salvington, Nebadon’s center of mass must be co-located with the highest concentration of mass within its borders. The Orion Molecular Clouds are the most massive within 2,300 ly. The Orion Nebula Cluster is the most massive within 3,300 ly. The immediate region around the Orion Nebula clearly marks the gravitational center of energy-mass for the

Nebadon Star Cloud. Salvington is located here and has the approximate galactic coordinates of the Orion Nebula (M42) at  $l = 209^\circ$ ,  $b = -19^\circ$ .

Fig 37: **Salvington/M42 at the Center of Nebadon**  
Nebadon Diameter of 5,200 ly and height of 1,120 ly contains  $10^8$  Solar Masses



NASA / JPL-Caltech / R. Hurt (SSC-Caltech) ssc2008-10a (cropped and annotated)  
<http://www.spitzer.caltech.edu/images/1923-ssc2008-10a-A-Roadmap-to-the-Milky-Way>

Nebadon is formed from multiple nebulae which revolve about Salvington. “The rotation of the Andronover stellar family and the associated clusters about the composite rotation-gravity center of the star cloud of Nebadon.” <sup>15:3.10</sup> Salvington is next to the Orion Nebula (M42), which is part of the well known constellation of Orion (figure 36). This places it near the center of the Orion Spur, a minor arm of the Milky Way, where stellar density is highest. Looking down on the plane of the Milky Way, the general region of Nebadon is centered on Salvington out to a radius of about 2,600 ly and a height of about 560 ly above and below the galactic plane. (This disregards its probable elliptical form.)

A 2001 study gives an average stellar density of about  $0.0063 M_{\odot}$  per cubic light-year within one kiloparsec of the sun. <sup>[88]</sup> At this stellar density, a spherical

volume  $V$  of  $1.58 \times 10^{10} \text{ ly}^3$  contains 100 million solar masses. The galactic disk extends about 560 ly above and below the galactic plane at our location. This can be taken as the height  $b$  of an oblate spheroid. The radius  $r$  of this spheroid can be calculated from its volume  $V$  and height  $b$ .

$$V = \frac{4}{3}\pi r^2 b \rightarrow r = \sqrt{\frac{3 \cdot 1.58 \times 10^{10} \text{ ly}^3}{4\pi \cdot 560 \text{ ly}}} = 2,593 \text{ ly}$$

Nebadon is a portion of the Orion Spur, encompassing an (assumed) oblate spheroid with a radius of 2,600 ly and a height of 560 ly. The border of Nebadon is roughly apparent as we look in a galactic southerly direction, where it is constrained by the width of the Orion Spur. Nebadon's border cuts through this spur in two places. Nebadon is not "a single astronomic system." <sup>32:2.4</sup> There are clear-cut physical boundaries between Havona and the superuniverses, but "no such clear lines of physical demarcation set off the local creations ... their physical components, the spheres of space—suns, dark islands, planets, etc.—take origin primarily from nebulae .... Nebadon was physically assembled out of the stellar and planetary progeny of Andronover and other nebulae .... they all had a certain minimum commonness of space motion which was so adjusted by the intelligent efforts of the power directors as to produce our present aggregation of space bodies, which travel along together as a contiguous unit." <sup>41:0.2-3</sup>

The size of Nebadon cannot be used to estimate the size of other local universes. "The local universes are all approximately of the same energy potential, though they differ greatly in physical dimensions and may vary in visible-matter content from time to time." <sup>32:1.3</sup> The size of the minor sector of Ensa cannot be estimated as 100 times the size of Nebadon.

## 4. Constellation of Norlatiadek

Norlatiadek is number seventy in the local universe of Nebadon out of one hundred constellations in Nebadon. The capital of Norlatiadek is the architectural sphere of Edentia, the seat of the Most Highs, three Vorondadek Sons of our Creator Son Michael and our Universe Mother Spirit. "The seventy

major spheres surrounding Edentia are about ten times the size of Urantia, while the ten satellites which revolve around each of these seventy worlds are about the size of Urantia.” <sup>43:0.2</sup> “Your sojourn on Edentia and its associated spheres will be chiefly occupied with the mastery of group ethics, the secret of pleasant and profitable interrelationship between the various universe and superuniverse orders of intelligent personalities .... on the constellation training worlds you are to achieve the real socialization of your evolving morontia personality.” <sup>43:8.3-4</sup> During our time on the 771 architectural worlds of Edentia, we are morontia progressors. “From the mansion worlds on up through the spheres of the system, constellation, and the universe, mortals are classed as morontia progressors” <sup>30:4.18</sup>

Our constellation will eventually have about 100,000 inhabited planets. <sup>15:2.20</sup> There will be one trillion inhabited worlds in Orvonton, which contains about ten trillion suns. Using the ratio of ten-to-one for the number of stars to the number of inhabited planets, Norlatiadek should have about one million suns. Our sun was the fifty-sixth from the last of 1,013,628 suns emerging from the Andronover nebula and was thrown off 6 billion years ago. <sup>57:4.8</sup> The constellation of Norlatiadek is the physical system which formed from the million suns thrown off by Andronover.

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. <sup>15:3.6</sup>

There are ten Supreme Power Centers serving Norlatiadek, and they are located “at the center of the enormous stellar system which constitutes the physical core of the constellation.” <sup>41:1.4</sup> This stellar system at the nucleus of Norlatiadek is the center of revolution for our constellation. “The circuit of your solar system about the nucleus of the former Andronover nebula.” <sup>15:3.9</sup> Edentia is near-by this star cluster at the physical core of Norlatiadek. “On Edentia there are ten associated mechanical controllers and ten frandalanks who are in perfect and constant liaison with the near-by power centers.” <sup>41:1.4</sup>

The physical center of revolution for the former Andronover nebula is the Pleiades (M45). With about 1,200 stars and 800  $M_{\odot}$ , the Pleiades is the most massive star cluster within 1,000 ly of our location. <sup>[89]</sup> This cluster is  $425 \pm 14$  ly away at galactic coordinates  $l = 166.67^{\circ}$ ,  $b = -23.46^{\circ}$ . <sup>[91]</sup> The second most



massive cluster within 1,000 ly is the Beehive Cluster (Praesepe, M44), which has about  $550 M_{\odot}$  and is at a distance of 580 ly. <sup>[92]</sup> However, Praesepe is too high above the galactic plane at 328 ly to be a dynamic part of the Gould Belt, which extends about 163 ly (50 pc) above and below its plane. The Pleiades lies on the plane of the Gould Belt, which it should if it is revolving about the Orion Nebula. These facts firmly establish the Pleiades as “the enormous stellar system which constitutes the physical core of the constellation.” <sup>41:1.4</sup> Edentia is nearby the Pleiades, the gravitational center of rotation for Norlatiadek.

**Fig 38: Edentia/The Pleiades is the Physical Core of Norlatiadek/Andronover**  
The Pleiades (M45) is about 425 ly distant



NASA, ESA, AURA/Caltech, Palomar Observatory  
<http://hubblesite.org/newscenter/archive/releases/2004/20/image/a/>

The plane of the Gould Belt can be defined with the three locations of the sun, the Pleiades (Edentia), and the Orion Nebula (Salvington). Placing the sun at the origin of this plane, the equation describing it is found by converting the galactic longitudes, latitudes, and distances for M45 and M42 into three-dimensional Cartesian coordinates ( $x$ ,  $y$ ,  $z$ ) and then solving two plane equations of the form  $ax + by + cz = 0$  simultaneously to find the coefficients  $a$ ,  $b$ , and  $c$ .

$$-0.434x + 0.057y + 1.00z = 0$$

The apex of this plane relative to the galactic plane occurs at a galactic longitude of  $l = 353^\circ$  (ascending node of  $l = 263^\circ$ ). This is only a few degrees from the center of the Milky Way, which is in reasonable agreement with observation (figure 33). The tilt of the plane at this longitude is  $b = 22^\circ$ , which is in good agreement with observation which shows a tilt of  $20 \pm 2^\circ$  to the galactic plane. The sun, the Pleiades (Edentia), and the Orion Nebula (Salvington) essentially define the plane of the Gould Belt. This is also very probably the plane of the Norlatiadek, since the sun revolves about the Pleiades, according to revelation, and the Pleiades and Orion have a relative rotational velocity in the Gould plane.

Fig 39: **Norlatiadek and Gould Belt Members within 1,000 ly of the Pleiades**  
Looking down on the galactic plane with M45 at the center

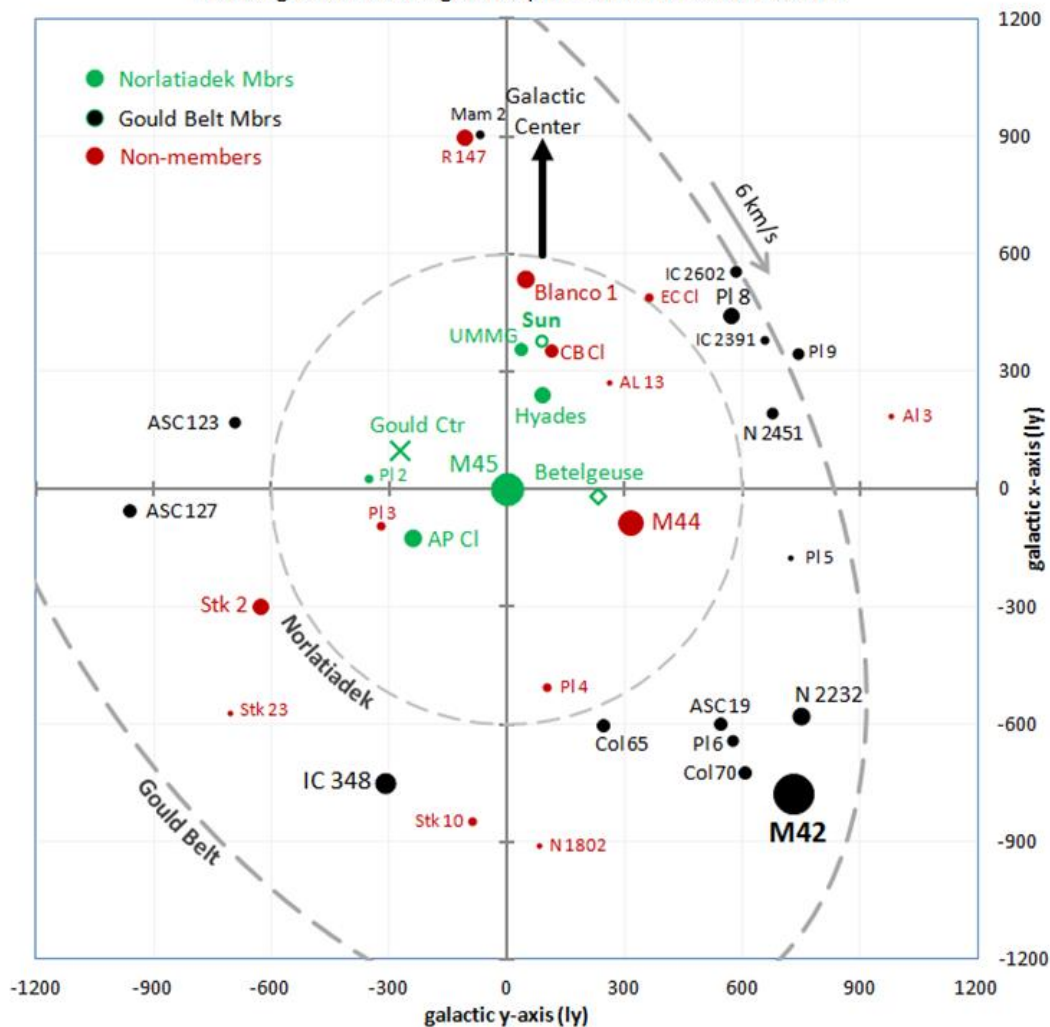
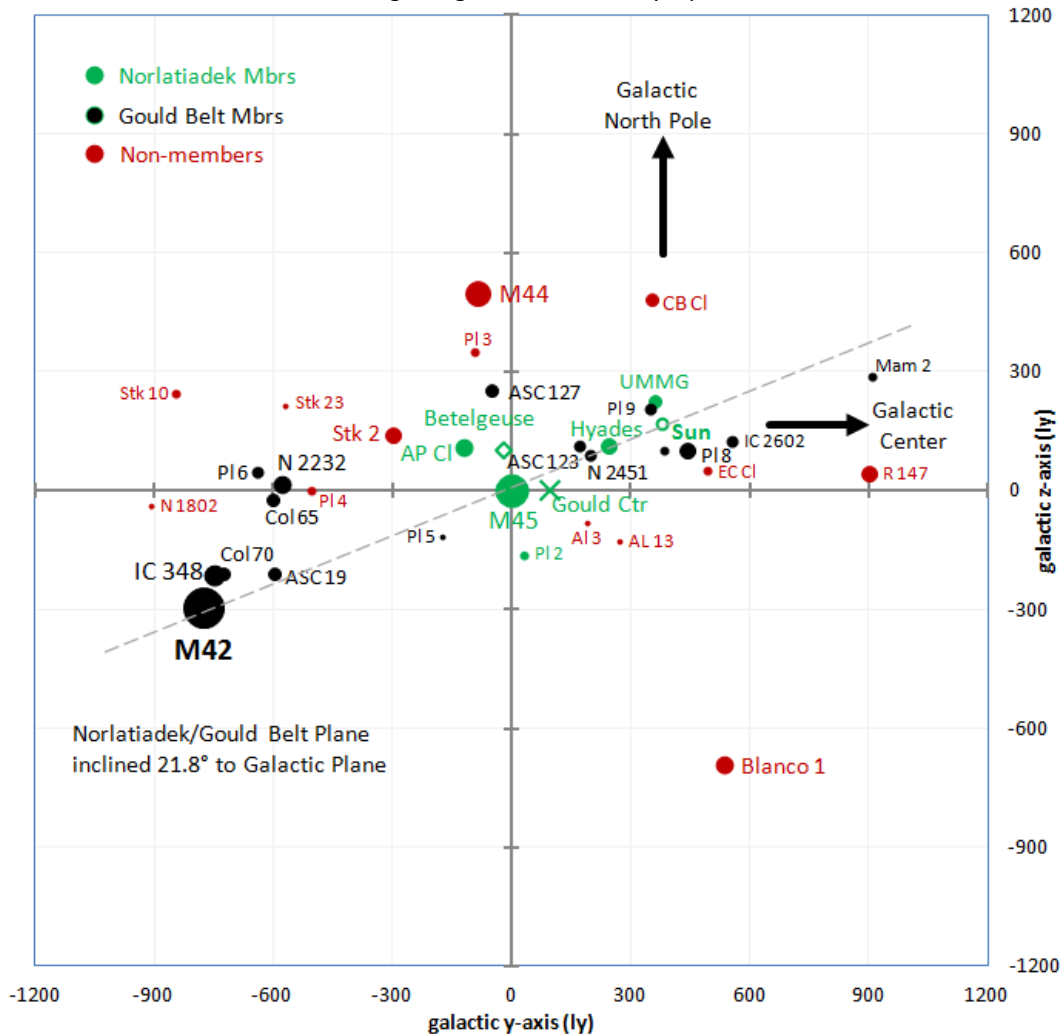


Table 8: **33 Open Clusters within 1,000 ly of the Pleiades**  
Sorted by their distance from M45

<i>Cluster Name</i>	<i>l</i>	<i>b</i>	<i>D<sub>SUN</sub></i> (ly)	<i>D<sub>M45</sub></i> (ly)	<i>⊥D ± PLANE</i> (ly)	<i># stars</i>
Pleiades (M45)	166.57	-23.52	425	0	0	1200
Hyades Cluster	180.06	-22.34	147	283	+2	134
Alpha Persei Cluster	146.57	-5.86	603	290	+159	155
Platais 2	128.23	-30.57	656	390	-144	11
Alessi 13	237.65	-55.71	359	397	-238	7
Sun	-	-	0	425	0	1
Ursa Major Moving Group	109.87	44.68	82	427	+62	54
Platais 3	138.74	15.98	652	485	+373	18
Platais 4	180.65	-10.90	900	515	+194	21
Beehive Cluster (M44)	205.92	32.48	610	595	+471	442
Coma Berenices Cluster	221.35	84.03	313	608	+293	61
Eta Chamaeleontis Cluster	292.48	-21.65	316	613	-167	15
Collinder 65	188.86	-10.86	1011	650	+207	73
NGC 2451A	252.58	-7.30	617	708	-30	39
Stock 2	133.33	-1.69	988	710	+279	135
ASCC 123	104.74	-4.00	816	726	+70	24
Platais 8	277.54	-7.79	489	730	-112	86
Platais 5	228.80	-18.76	887	752	-75	6
IC 2391	270.36	-6.84	571	767	-94	19
IC 2602	289.60	-4.91	525	815	-138	44
ASCC 19	204.88	-19.47	1142	835	+15	75
IC 348	160.49	-17.80	1256	837	+116	288
Platais 9	267.21	3.15	652	844	+11	32
Platais 6	205.30	-6.19	1135	861	+267	40
Blanco 1	15.57	-79.26	877	877	-851	165
Stock 10	171.62	3.55	1240	885	+565	9
Ruprecht 147	20.99	-12.81	571	906	-313	108
NGC 1802	179.64	-9.24	1305	913	-319	7
Stock 23	140.08	2.09	1240	932	+460	4
NGC 2232	214.43	-7.54	1171	945	+205	209
Mamajek 2	17.04	12.32	564	954	-92	9
Collinder 70	205.03	-17.35	1275	967	+62	70
ASCC 127	112.26	4.13	1142	997	+301	81
Alessi 3	257.84	-15.37	939	997	-199	7
Betelgeuse	199.80	-9.00	427	256	+88	1
Gould Center	128.00	-20.00	489	288	-23	-
Orion Nebula (M42)	209.01	-19.39	1400	1106	0	2200

Our local system of Satania “is next to the outermost system of Norlatiadek.”  
 41:10.5 We are 425 ly away from the Pleiades in a local system that is next to the last before the border of the constellation. We are also informed, “Your solar system now occupies a fairly central position in one of the arms of this distorted spiral [i.e. of Andronover], situated about halfway from the center out towards the edge of the star stream.” 15:3.6 A distorted spiral arm implies that its shape is described by a logarithmic spiral but not that accurately. We are centrally located along the length of one of these spiral arms. From this position we are about halfway between the center of the arm and its outer edge. If we are two-thirds of the distance to the border of Norlatiadek, its radius would be about 600 ly.

Fig 40: **Norlatiadek and Gould Belt Members within 1,000 ly of the Pleiades**  
 Looking along the x-axis at the y-z plane





Out of the 325 open clusters within one kiloparsec in the WEBDA list, there are 33 open clusters within 1,000 ly of the Pleiades (table 8). The perpendicular distance ( $\perp D \pm \text{PLANE}$  column) of each cluster relative to the Norlatiadek/Gould plane is found using the coefficients of the plane equation. Clusters within  $\pm 163$  ly (50 pc) of the plane are members of the Gould Belt. Using a radius of 600 ly for Norlatiadek, Gould Belt members that are also part of Norlatiadek can be identified. The membership of these clusters is plotted in figure 39. The 22 degree tilt of the Gould plane can be seen in the side view of these clusters (figure 40).

Betelgeuse (Alpha Orionis) is the nuclear remnant left over from the Andronover nebula. "The final nuclear remnant of this magnificent nebula still burns with a reddish glow and continues to give forth moderate light and heat to its remnant planetary family of one hundred and sixty-five worlds." <sup>57:4,9</sup> Betelgeuse is the only red giant that is close enough to be this remnant. Its galactic coordinates are  $l = 199.8^\circ$ ,  $b = -9^\circ$ . The 1997 *Hipparcos Catalogue* gives a parallax distance for Betelgeuse of  $437 \pm 100$  ly. Betelgeuse is only 88 ly above Norlatiadek's plane, part of the Gould Belt, and about 256 ly from the Pleiades. Betelgeuse is the only candidate which might be the "final nuclear remnant" of the onetime Andronover nebula.

The only other nearby red giant is Antares about 600 ly away in almost the opposite direction of  $l = 351.95^\circ$ ,  $b = 15.06^\circ$ . Although it is 75 ly below the Gould plane and part of the Gould Belt, there are no star clusters within 25 degrees of Antares which might be the physical core of Norlatiadek. Antares is, however, a member of our local universe of Nebadon. "The largest star in the universe, the stellar cloud Antares, is four hundred and fifty times the diameter of your sun and is sixty million times its volume." <sup>41:3,2</sup> At about 800 ly away from the Pleiades, it is about 200 ly inside the border of the Gould Belt and about 200 ly outside the expected border of Norlatiadek.

## 5. Local System of Satania

The local system of Satania is number twenty-four in the constellation of Norlatiadek. Its capital is the architectural sphere of Jerusem, the seat of the System Sovereign. Normally, this is a primary Lanonandek Son of our Creator

Son Michael and our Universe Mother Spirit. Since the start of the Lucifer rebellion, "the Edentia Fathers have exercised a special care over Urantia and the other isolated worlds of Satania." <sup>43:5.16</sup> Our current system sovereign is Lanaforge. "When serving as an assistant System Sovereign, Lanaforge was faithful to Michael in an earlier upheaval in the universe of Nebadon. This mighty and brilliant Lord of Satania is a tried and tested administrator." <sup>45:2.3</sup>

"The administrative center of Satania consists of a cluster of architectural spheres, fifty-seven in number—Jerusem itself, the seven major satellites, and the forty-nine subsatellites. Jerusem, the system capital, is almost one hundred times the size of Urantia, although its gravity is a trifle less. Jerusem's major satellites are the seven transition worlds, each of which is about ten times as large as Urantia, while the seven subsatellites of these transition spheres are just about the size of Urantia." <sup>45:0.1</sup> "The seven satellites of world number one are more specifically known as the mansion worlds." <sup>47:0.1</sup> "As the term heaven has been used on Urantia, it has sometimes meant these seven mansion worlds, the first mansion world being denominated the first heaven, and so on to the seventh." <sup>15:7.5</sup> During our time here, the educational regime is primarily concerned with "personality mobilization, unification, and realization." <sup>15:7.6</sup>

Unlike the stars grouped together on higher levels of organization, our local system is not a single gravitationally bound structure which revolves about its own center of gravity. "Satania is not a uniform physical system, a single astronomic unit or organization." <sup>32:2.10</sup> There is, however, a massive dark island of space at its center that is near Jerusem. "The astronomic center of Satania is an enormous dark island of space which, with its attendant spheres, is situated not far from the headquarters of the system government." <sup>41:2.2</sup>

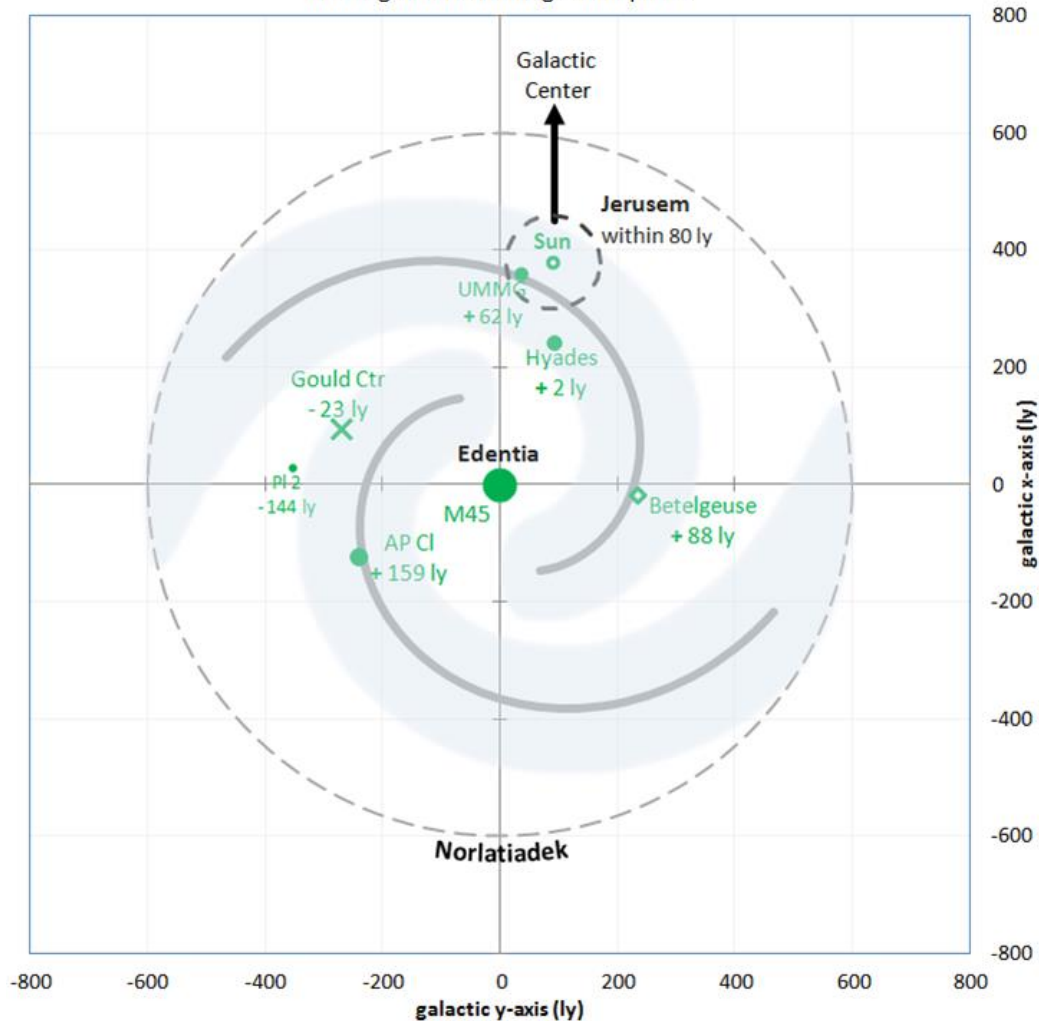
There are 619 inhabited planets in Satania, and "Satania itself is composed of over seven thousand astronomical groups, or physical systems, few of which had an origin similar to that of your solar system." <sup>41:2.2</sup> This seems to imply there are this many suns in Satania. But we are also told that "There are upward of two thousand brilliant suns pouring forth light and energy in Satania, and your own sun is an average blazing orb." <sup>41:3.1</sup> From this further qualification it can be inferred that only about 2,000 of the suns in Satania are as luminous and observable as our sun. Roughly two-thirds of the 7,000 astronomic systems contain suns are difficult to observe because they are too small and faint or they do not emit strongly in the spectrum of visible light.

The Hipparcos satellite was launched by the European Space Agency in 1989 and operated until 1993. The satellite observed with an 11 inch Schmidt telescope

in the ultraviolet through visible light spectrum (UBV photometric system) and was sensitive down to 11<sup>th</sup> magnitude. This level of sensitivity to visible light is about 100 times greater than that of the human eye, but it is not powerful enough to see Pluto. By comparison, the 7.9 foot aperture of the Hubble Space Telescope is sensitive in the visible light spectrum down to the 32<sup>nd</sup> magnitude, which is 25 billion times greater than that of the human eye. The Hipparcos Catalogue was published in 1997 and contains high-precision measurements for more than 118,200 stars. The catalogue is accessible in the SIMBAD database operated by CDS in Strasbourg, France (<http://simbad.u-strasbg.fr/simbad/>).

Fig 41: **Jerusem within 80 ly of Sun in one of Norlatiadek's Spiral Arms**

Looking down on the galactic plane



A query of the SIMBAD database (Aug. 2013) identifies 2,077 stars within 80 ly (24.5 pc). These stars are distributed more or less uniformly throughout this volume centered on our location. This equals a stellar density within 80 ly of  $0.001 M_{\odot}$  per cubic light-year. The general density of the Orion Spur is six times greater at  $0.006 M_{\odot}/\text{ly}^3$ , apparently because we are located near the northern border of the Local Arm. A disk with a radius of 600 ly and a height of 326 ly has 172 times the volume of a sphere with a radius of 80 ly. There is room within Norlatiadek for 100 local systems, assuming a plane thickness of 100 pc.

The sun is 425 ly away from the Pleiades/Edentia at the center of Norlatiadek. The approximate radius of 600 ly for our constellation is based upon the statement: "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." <sup>15:3.6</sup> We are centrally located along the length of a spiral arm revolving about the Pleiades. From this position we are halfway between its central core and its outer edge. The shape of this spiral arm was distorted by the passing of the Angona system 4.5 billion years ago. "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." <sup>15:3.6</sup> Before this event, the Andronover nebula had two well-formed spiral arms.

About the time of the attainment of the maximum of mass, the gravity control of the gaseous content commenced to weaken, and there ensued the stage of gas escapement, the gas streaming forth as two gigantic and distinct arms, which took origin on opposite sides of the mother mass. The rapid revolutions of this enormous central core soon imparted a spiral appearance to these two projecting gas streams. <sup>57:3.3</sup>

These two distorted spiral arms are still revolving about the Pleiades in a clockwise direction. The two nearest clusters are the Ursa Major Moving Group at 82 ly (54 stars) and the Hyades Cluster at 147 ly (134 stars). Given the scale, both must be part of the spiral arm in which the sun is found. If the Hyades is near the inner edge of this arm and the sun is halfway between its center and its outer edge, we are about 50 ly from the center and the width of the arm is about 200 ly. This places the central core of the arm between the sun and the Pleiades at about 375 ly. A hypothetical spiral with a width of 200 ly and a distance of 375 ly to its center at the position of the sun is shown in figure 41. There is room for two of these spirals within the region of Norlatiadek. The Hyades is near the inner edge of the arm and the sun is about halfway between its central core and outer edge, as described. The Alpha Persei Cluster is the largest in Norlatiadek with 155 stars and lies on the central core of the other spiral arm. The spirals begin at a



radius of 150 ly and have a pitch angle of 16.5 degrees. At a lesser pitch angle of 14.5 degrees the outer edge of one spiral begins to overlap the inner edge of the other, because each spiral is 200 ly across.

There are 619 inhabited worlds in Satania “located in over five hundred different physical systems.” <sup>32:2.10</sup> “Urantia is comparatively isolated on the outskirts of Satania, your solar system, with one exception, being the farthest removed from Jerusem...” <sup>41:10.5</sup> A sphere with a radius of 80 ly contains upward of two thousand suns, so this appears to be the approximate radius of Satania. Our solar system is next to the farthest of more than 500 inhabited ones from Jerusem, which implies that we are no more than 80 ly from Jerusem.

## **6. Internal Dynamics of Splandon**

Orvonton is the Local Group based upon the empirical confirmation of revealed information about its total mass and gravitationally bound structure. From this base point the total mass for the physical subdivisions within Orvonton can be determined. Our major sector of Splandon is the Milky Way, contains a trillion suns within a radius of 50,000 ly and has a center 26,000 ly distant. Our minor sector of Ensa contains about 10 billion stars, and its center of revolution can be identified 10,000 ly away in the Sagittarius Star Cloud (M24). Our local universe of Nebadon contains 100 million stars within a radius 2,600 ly and revolves about the Orion Nebula (M42) 1,400 ly distant. Our constellation of Norlatiadek contains a million stars within a radius of 600 ly and revolves around the Pleiades (M45) 425 ly away. Our local system of Satania contains over 2,000 brilliant suns within a radius of 80 ly and is located somewhere within this distance.

The revealed internal structure of Splandon conforms to structures found within the Milky Way. The Universal Censor describes five levels of nested gravitational revolution occurring within Splandon.

1. The revolution of Urantia around its sun.
2. The circuit of your solar system about the nucleus of the former Andronover nebula.

3. The rotation of the Andronover stellar family and the associated clusters about the composite rotation-gravity center of the star cloud of Nebadon.
4. The swing of the local star cloud of Nebadon and its associated creations around the Sagittarius center of their minor sector.
5. The rotation of the one hundred minor sectors, including Sagittarius, about their major sector. <sup>15:3.8-12</sup>

The second level of revolution about “the nucleus of the former Andronover nebula” has been tentatively detected in the clockwise motion of our solar system within the Gould Belt at about 6 km/s. The Gould Belt is an aggregation of millions of stars tilted at 20 degrees to the galactic plane and includes Norlatiadek while also encompassing a portion of Nebadon. It seems probable that this detected rotation is a resultant of the clockwise revolutions of Norlatiadek about its central core of the Pleiades and of Nebadon about the Orion Nebula, “the composite rotation-gravity center of the star cloud of Nebadon.” Although this detection of the second and third levels of motion is not yet fully confirmed by the data, the revolution of the solar system with respect to Gould Belt objects confirms the existence of a gravitationally bound structure with a disk-like shape.

The fourth level of revolution about the Sagittarius Star Cloud (M24) was not suspected in the 1950s. Neither was it realized that M24 is part of a major spiral arm of the Milky Way. It was not known before 1964 that the aggregation of stars and clusters in M24 is at a galactic distance where they have the same orbital velocity about the galactic center as the spiral arms do, constituting a relatively stable concentration of mass. The revolution of local universes about the Sagittarius Star Cloud has not been detected yet. However, M24 is now known to be a more or less stable structure revolving about the galactic center, which is consistent with the fifth level of revolution of our minor sector about the center of the major sector of Splandon. Since the stars inside and outside of M24’s corotating radius have different periods of revolution about the galactic center and they must be gravitationally influenced by the concentrated mass at M24, they could revolve in some as yet undetermined manner about M24.