### Cosmology of Uversa, Urantia and the Big Bang Myth - 2

This article contains confirmation of information presented in "THE URANTIA BOOK"; the author of the article gives precise coordinates of the God and the Paradise Isle, indicates exact sizes of super-universes and their co-location in the map, presents approximate sizes of the whole universe (the universe of universes) and explains cosmic microwave background radiation phenomenon (MBR).

### Foreword

More than a year passed since the first variant of the article was published. During this time a lot of positive feedbacks with the gratitude to the author and questions, connected with the size selection and location of superuniverses and the direction to the Paradise Isle were received. All there question were observed on Russians and English web-sites of "The Urantia Book", where all the reasons for the certain conclusions were clearly described. However, taking into the consideration the amount of readers and their questions, the decision on improving and adding information into the article was made.

### Introduction

The past 20th century was full of events that contributed to evolution of humans' concept of the universe. A new science – cosmology – showed an impetuous pace of development, there was formulated a Big Bang Theory, measuring techniques were improved and as a result a microwave background radiation was discovered, there was started a direct reclamation of outer space, and finally, the Hubble space telescope was put into operation that gave a great impact on our study of the outer world. Only one step seemed to be left to our understanding of a full-scale picture of origination and arrangement of the universe.

However, answers to the questions about origins and structure of the universe stay as vague and contradictory as before; there are many 'proved' models of the universe's structure, and every author of such proposed models considers his solution to be unique, true and unambiguous. A great number of theories (quite often contradictory ones) of beginnings and evolution of the universe and a lack of a common shared vision of the processes that took place at the moment of its beginning and in the course of its evolution are an evidence of unavailability of a really true and unambiguously admitted by all theory. Thus, an issue of appearance and evolution of the universe stays open.

At the same time, in early 20th century there appeared the first parts of "The Urantia Book" (hereinafter referred to as the Book), that told about the God, a structure of universe and about a recognition by a human being his mission as an intelligent creature. For the first time the Book was published in the English language under the international copyright in October 1955.

Currently, due to unfavorable comments made by some scientists, unfortunately some layers of society formed a prepossession towards the Book itself as well as to its contents. Critiques state that a matter of the Book corresponds to scientific views of the world of the last century, whereas a modern science has made a big step forward in studies of origin and structure of the universe. Authors of the critiques assure that information in the Book is out of date, it has no practical value, moreover, it is even harmful as it diverts readers' attention from a true knowledge of riddles of the universe. At the same time, strange as it may seem, comments of the authors about the information presented in the Book are exactly the opposite to the contents of the Book itself. It may be suggested that the Book is read inattentively or even disparagingly, which leads to improper conclusions that reach mass media and, regrettably, shape a 'public opinion'.

The author of this article tried to gain an insight into the contents of the Book, to compare the information with results of the latest cosmic researches and, if possible, to find confirmations of the information presented in the Book.

This article presents an analysis of selected parts of the Book, that describe a structure of the universe. The author presents results of his observations and assumptions and proofs of location of separate parts of grand universe (in conformity with terms used in the Book), namely the central

Paradise Isle, the central universe (Havona) and 7 super universes. It is made an assumption about location of 4 external levels of space and about the size of the universe as a whole. A hypothesis is proposed to explain cosmic microwave background radiation phenomenon (MBR) and it is analyzed a hierarchy of processes in which our planet and a local group of galaxies are involved.

## 1. A model of the universe assumed on the basis of descriptions in the Book

First of all, we will make small deviation and the explanatory why article is named "Cosmology of Uversa, Urantia and the Big Bang Myth". Urantia is the name for our planet, the Earth, the population of which was given some knowledge by a commission that arrived from Uversa, the capital of our superuniverse. The Book directly mentions: "Your world, Urantia, is one of many similar inhabited planets which comprise the local universe of Nebadon. This universe, together with similar creations, makes up the superuniverse of Orvonton, from whose capital, Uversa, our commission hails."[1 p. 1] Based on the above it is only fair to call the structure of the macrocosm 'Uversa's cosmology'. As to "a myth about a Big Bang" all article is anyhow devoted this question.

The Book says that in the middle of the universe there is an eternal and stationary Paradise Isle, that is surrounded by the central universe – Havona.

The Book says [1 p. 129]: "Proceeding outward from Paradise through the horizontal extension of pervaded space, the master universe is existent in six concentric ellipses, the space levels encircling the central Isle:

- 1. The Central Universe—Havona.
- 2. The Seven Superuniverses.
- 3. The First Outer Space Level.
- 4. The Second Outer Space Level.
- 5. The Third Outer Space Level.
- 6. The Fourth and Outermost Space Level."

Fig. 1 below shows a model of the master universe, the sketch was made based on a description provided in the Book.



Fig. 1. A model of the master universe

Numerals in the Fig. 1 stand for:

- 1. Eternal and stationary Paradise Isle
- 2. The Central Universe Havona
- 3-9. The Seven Superuniverses.
- 10. The First Outer Space Level.
- 11. The Second Outer Space Level.
- 12. The Third Outer Space Level.
- 13. The Fourth and Outermost Space Level.

Arrows in Fig. 1 show a direction to the North and rotation directions of the superuniverses and the outer space around the immobile Paradise "as direction is regarded in Urantia" [1p.165]. A structure of outer space levels is to some extent similar to the structure of superuniverses level (the formation of which is currently still in process), but for the simplicity sake they are shown as just lines. Owing to the unique structure of the eternal and stationary Paradise Isle it is possible to specify directions in the master universe.

The Book says: "In form Paradise differs from the inhabited space bodies: it is not spherical. It is definitely ellipsoid, being one-sixth longer in the north-south diameter than in the east-west diameter. The central Isle is essentially flat, and the distance from the upper surface to the nether surface is one tenth that of the east-west diameter.

These differences in dimensions, taken in connection with its stationary status and the greater out-pressure of force-energy at the north end of the Isle, make it possible to establish absolute direction in the master universe."[1 p. 119].

The following terms from the Book are used in the article:

- Paradise-Havona system the eternal core (inclusive of eternal Paradise Isle, its satellites, the central universe (Havona) and two belts of dark gravity bodies) around which expanded creations of material worlds of time and space rotate and exist;
- The central universe (Havona) the absolute and eternal celestial universe that comprises a billion of spheres and that is arranged based on specific principles of physical reality;
- The grand universe currently existing organized, inhabited and partially inhabited creation (inclusive of the central universe and the level of superuniverses);
- A superuniverse one seventh of the level of superuniverse, material worlds of time and space;
- A local universe a prime creative unit of material worlds of time and space and that is included geographically and administratively into superuniverse;
- Universe of the universes (macrocosm master universe) all organized, inhabited and partially inhabited (the grand universe) and not yet organized and not yet inhabited (external levels of space) creations.

# 2. Sizes and location of the superuniverses – separate components of macrocosm (master universe)

In the process of determination of the sizes and the location of the superuniverses, the distribution structure of galaxies and star clusters, in the closest surrounding and at relatively large distances, was analyzed. And nothing, which would somehow resemble the description in the Book was found. Such important parts of our macrocosm, as the central universe and dark gravity bodies were missing. It was also difficult to distinguish seven superuniverses and the outer level of space. In the same time the forum feedbacks and the published articles with the Book Comments were observed. The calculation results and the conclusions, that were made in the well-known article Frederik L. Beckner "Galaxies, Superuniverses, and The Urantia Book " [2] were also taken into the consideration. So the conclusion about size of our superuniverse, made by these authors, came down to the size of out galaxy or to the galaxy with closest surrounding.

It is also necessary to mention that, despite the complexity of perception, the detailed and accurate description of sizes, structure and location of the superuniverses was given in the book. But this information is shown in the separate parts. If the reader wants to get the full view of the subject, he needs to observe it altogether with paying attention to the details, and than he will see all the contradictions, stated on the forum discussions and the articles. So, let's mention all the contradictions:

From the Book:

- 1. " In the not-distant future, new telescopes will reveal to the wondering gaze of Urantian astronomers no less than 375 million new galaxies in the remote stretches of outer space. At the same time these more powerful telescopes will disclose that many island universes formerly believed to be in outer space are really a part of the galactic system of Orvonton. The seven superuniverses are still growing; the periphery of each is gradually expanding; new nebulae are constantly being stabilized and organized; and some of the nebulae which Urantian astronomers regard as extragalactic are actually on the fringe of Orvonton and are traveling along with us." [UB p. 130-131];
- 2. "There are not many sun-forming nebulae active in Orvonton at the present time, though Andromeda, which is outside the inhabited superuniverse, is very active." [UB p. 170]
- 3. "The vast star clouds of Orvonton should be regarded as individual aggregations of matter comparable to the separate nebulae observable in the space regions external to the Milky Way galaxy." [UB p. 170]
- 4. "Of the ten major divisions of Orvonton, eight have been roughly identified by Urantian astronomers. The other two are difficult of separate recognition because you are obliged to view these phenomena from the inside." [UB p. 167].
- 5. "The vast Milky Way starry system represents the central nucleus of Orvonton, being largely beyond the borders of your local universe." [UB p. 167].
- 6. "From the astronomical position of Urantia, as you look through the cross section of nearby systems to the great Milky Way, you observe that the spheres of Orvonton are traveling in a vast elongated plane, the breadth being far greater than the thickness and the length far greater than the breadth." [UB p. 167].
- 7. "If you imagine a finite, but inconceivably large, V-shaped plane situated at right angles to both the upper and lower surfaces of Paradise, with its point nearly tangent to peripheral Paradise, and then visualize this plane in elliptical revolution about Paradise, its revolution would roughly outline the volume of pervaded space." [UB p. crp 124].
- 8. "There is an upper and a lower limit to horizontal space with reference to any given location in the universes. If one could move far enough at right angles to the plane of Orvonton, either up or down, eventually the upper or lower limit of pervaded space would be encountered. "[UB p. 124-125].

The statements from first to fifth from the Book, mentioned above, indicate that the Milky Way galaxy can not be our entire superuniverse. The sense of these parts should be clear. The special explanation, probably, is required for the fourth fragment in which it is told about eight big sectors of Orvonton. These sectors are already known to astronomers of Urantia.

It is not a secret for anybody that the Solar system is a part of the Milky Way galaxy. That is why two sectors, which are mentioned in the Book, should include, at least, known for us part of the Milky Way.

On the other hand, such arrangement of the Solar system doesn't give possibility to observe visually other (much bigger) part of the Milky Way galaxy. Therefore we can draw conclusion that specified in the Book eight (or less) known big sectors of Orvonton shouldn't be a part the Milky Way only.

In other words, there should be additional huge structures in big sectors, besides unobservable parts of the Milky Way galaxy. These structures should be distinguishable even being a little in Milky Way galaxy shade.

The sixth statement shows, that our superuniverse Orvonton has flat structure and the seventh and eighth statements describe the structure of pervaded space and the position of superuniverse Orvonton plane in this space. The cross-sectional schematic structure of pervaded space and Paradise Isle and Orvonton relative position in this space, based on the Book information, is given on the Fig. 2.



Fig. 2. The cross-sectional view of pervaded space and Paradise Isle - Orvonton relative position in this space

Numerals in the Fig. 2 stand for:

- 1. Eternal and stationary Paradise Isle.
- 2. The Pervaded Space.
- 3. Superuniverse Orvonton.
- 4. The plane of Paradise Isle and central universe dislocation.
- 5. The Directions, located perpendicular to the Orvonton plane.

So we can definitely say, basing on the Book statements and Fig. 2 (made basing on these information), that superuniverse Orvonton should be situated in the plane of Paradise Isle and the Central Universe. And, perhaps, the same conclusion and stated part of the Book influenced the decision of article authors and forum members to choose the direction to Paradise Isle:

- "Observation of the so-called Milky Way discloses the **comparative increase** (hereinafter the parts from the Book are marked by the Author of the article) in Orvonton stellar density when the heavens are viewed in one direction, while **on either side the density diminishes**; the number of stars and other spheres decreases away from the **chief plane of our material superuniverse**. When the angle of observation is propitious, gazing through the main body of this realm of maximum density, you are looking toward the residential universe and the center of all things." [UB p. 167].
- "They emanate in the largest quantities from the densest plane of the superuniverse, the Milky Way, which is also the densest plane of the outer universes." [UB p. 475].

So for these authors it would seem logical to choose the central part of our Milky Way Galaxy as the area of maximum density. Probably, they used following logic chain:

- 1. The Milky Way is the main and the most dense part of our superuniverse;
- 2. The direction to Paradise Isle lies in the plane of Milky Way (if we assume that the superuniverse Orvontyon is the Milky Way galaxy and it's closest surrounding);
- 3. The direction to the Paradise Isle goes through the central (most dense) part of Milky Way ("... the main body of this realm of maximum density...").

At first glance this variant is logical and it corresponds to the Fig. 2. However, let's pay attention to the selected parts, where it is said about some plane, called "...chief plane of our **material superuniverse**", from both sides of which the density and the amount of stars decreases and corresponding to which the direction to Paradise Isle is situated at the certain angle. To understand this part of the Book, let us first of all try to analyze the structure of out galaxy, the schematic presentation of which is given on the Fig.3.

On the Fig. 3a, you can see three main parts of the galaxy, such as the nucleus, the arms and the halo. The nucleus (star bulge) is the thickening in the central part, looking like the ellipsoid of rotation (Fig. 3b).



Fig. 3. Milky Way Galaxy schematic picture (a); Ellipsoid of rotation (b)

Looking on the Fig. 3b, you can understand that the central part of our galaxy has nothing in common with the plane. In the same time it is widely known that the closer stars are situated to the galaxy plane, the more compact they are situated in the galaxy arms. (Fig. 4).



Fig. 4. The full photomap of the Milky Way Galaxy made in Lund Observatory (Sweden) [3]

Thus, in the structure of galaxy there is an element (galaxy arms) in which the stars denseness is maximum in the galaxy plane and decreases from the both sides in proportion to the distance from the plane increases, and this fully corresponds with the information from the Book. If this statement is true, in this case the direction to the Paradise Isle can be found at the certain angle to this plane.

There is one more reason not to consider the direction to the center of our galaxy as the direction to the Paradise Isle. Let us return to the Fig.1 (it is done in agreement with the information from the Book). On this figure our superuniverse is marked with number 9 and also the northern direction, absolute to entire macrocosm is shown. From the Book:

- "These differences in dimensions, taken in connection with its stationary status and the greater out-pressure of force-energy at the north end of the Isle, make it possible to establish absolute direction in the master universe." [UB p. 119].
- "In this age and as direction is regarded on Urantia, superuniverse number one swings almost due north, approximately opposite, in an easterly direction, to the Paradise residence of the Great Sources and Centers and the central universe of Havona." [UB p. 165].

Basing on these two statements we can make the most important conclusion: the absolute directions of the universe are shown to us, and they almost agree with the currently accepted directions.

So, according to that conclusion, the direction to the Paradise Isle should be somewhere near to the northern direction. ([1 p. 165], see Fig. 1). But the northern direction is located near to the area of Milky Way galaxy pole and is situated at a significant angle to the direction to it's center. In other words, the Milky Way plane should be situated almost perpendicularly to the direction to the Paradise Isle.

Let's assume that the Milky Way galaxy (or it's closest surrounding, i.e. galaxies of local group) is the superuniverse Orvonton. In this case we should agree that or the north is not in a direction to North star, or perpendiculars to a superuniverse plane (in this case to Milky Way

galaxy) should cross border of the pervaded space somehow. Both variants are absolutely impossible (fig. 5).



Fig. 5. Cross-section of the pervaded space and interposition of Paradise Isle and Milky Way galaxy

a) In this case the direction to North star as the standard true direction to the north is shown (the direction is shown regarding Milky Way galaxy plane). The false direction to the north corresponds to an approximate angle of observation between a direction to the north and a direction to Paradise Isle (fig. 1).

b) In this case the direction to the north is standard direction to North star.

Paradise Isle and directions to the north (true and false) are located in plane XOY of the right Cartesian coordinate system, cross-section of the pervaded space is located in plane YOZ, the origin of coordinates is the point of our site (supervision). It is necessary to understand that for these two cases different positions of Paradise Isle in space concerning Milky Way galaxy are assumed.

Numerals in the Fig. 5 stand for:

- 1. Eternal and stationary Paradise Isle.
- 2. The pervaded space.
- 3. The directions, located perpendicular to the "superuniverse" plane.
- 4. The surface of Paradise Isle and central universe dislocation.
- 5. Milky Way galaxy as the superuniverse Orvonton.

As we can see, we can't accept any of variants on Fig. 5 because of arising contradictions: with the standard directions on parts of the world in first case and with Book information in the second case (i.e. actually one error involves another one). It means that the variant with the Milky Way galaxy (and it's closest surrounding – galaxies of the local group) as the whole superuniverse Orvonton is not possible according to text of the Book.

The correctness of this conclusion is indirectly confirmed by other part of the Book (where it is said about the exclusive size of the central universe): "It is of enormous dimensions and almost unbelievable mass and consists of one billion spheres of unimagined beauty and superb grandeur, but the true magnitude of this vast creation is really beyond the understanding grasp of the human mind." [UB p. 152].

In our opinion, such a description of the central universe didn't corresponds to it's close location. Together with the inability to detach such a structure in the closest space, it was also impossible to define the clear boundaries of our and surrounding superuniverses in the limited area of the Milky Way galaxy and it's closest surrounding. Moreover, in such a case, the grand universe appeared to be small and disproportional to the known space of macrocosm.

Together with that, the vastness of the open space pushed the idea that it is necessary to consider the significantly larger structures. The truthfulness of this conclusion was confirmed by the following part of the Book: "The seven superuniverses are not primary physical organizations; **nowhere do their boundaries divide a nebular family, neither do they cross a local universe, a prime creative unit**. Each superuniverse is simply a geographic space clustering of approximately one seventh of the organized and partially inhabited post-Havona creation, and each is about equal in the number of local universes embraced and in the space encompassed." [UB p. 129].



Fig.6. Schematic illustration of the superuniverses possible borders

Let's pay attention to the selected part and according to that statement we can illustrate the possible borders of the superuniverses. (Fig.6). According to the description in the Book, variants "a" and "b" should be excluded. With regard to option "c", we need to define what is "nebula family" according to the Book terminology, and what scale should we use for this question. From the other side, we can definitely say that the superuniverse border has to pass through the area that is located far from the star clusters and galaxies. That means that the superuniverse border should pass through the "void space". At the same time, the following law is known for a long time: galaxies, clusters and groups gather together in the systems, which can be called superclusters. And the space between such superclusters is almost empty; there are no galaxies and clusters.

Basing on this statements and after the analysis of the macrocosm schematic structure (Fig. 1), taking into the consideration the radius of it's visible part, the preliminary conclusion was made: one superuniverse is not one galaxy (even such big as ours – the Milky Way) and not the group of galaxies, but the structure which is even larger.

The final conclusion about the size of our superuniverse was made, basing on the following parts of the Book:

- "The superuniverse of Orvonton is illuminated and warmed by more than ten trillion blazing suns. These suns are the stars of your observable astronomic system. More than two trillion are too distant and too small **ever to be seen** from Urantia." [UB p. 172-173],
- "The power centers and physical controllers of the superuniverses assume direction and partial control of the thirty energy systems which comprise the gravita domain. The physical-energy circuits administered by the power centers of Uversa require a little over 968 million years to complete the encirclement of the superuniverse." [UB p. 175],

Let us observe these parts more detailed. According to modern and very rough estimates the number of stars in the Milky Way galaxy is from 200 to 400 billion. How accurate are these estimates? This number is received from the calculation of the amount of stars (equivalent to our

Sun) that would create the same gravitation effect, equal to the gravity effect of the Milky Way galaxy on the nearest structures.

The Book says on this matter:

- "The spiral and other nebulae, the mother wheels of the spheres of space, are initiated by Paradise force organizers; and following nebular evolution of gravity response, they are superseded in superuniverse function by the power centers and physical controllers, who thereupon assume full responsibility for directing the physical evolution of the ensuing generations of stellar and planetary offspring." [UB p. 455-456],
- "They are the living instigators of the energy cyclones of space and the early organizers and directionizers of these gigantic manifestations. These force organizers transmute *primordial force* (pre-energy not responsive to direct Paradise gravity) into primary or *puissant energy*, energy transmuting from the exclusive grasp of the Unqualified Absolute to the gravity grasp of the Isle of Paradise. They are thereupon succeeded by the associate force organizers, who continue the process of energy transmutation from the primary through the secondary or *gravity-energy* stage." [UB p. 329]
- "It is utterly beyond my ability to explain the manner in which these living beings encompass the manipulation and regulation of the master circuits of universe energy. To undertake to inform you further concerning the size and function of these gigantic and almost perfectly efficient power centers, would only add to your confusion and consternation. They are both living and "personal," but they are beyond your comprehension." [UB p. 323]

After these lines of the Book, can we be absolutely confident in the correctness of our estimates of the processes in our galaxy, our measurement methods and conclusions? According to the Author of this article – no. That means that the number of stars in the Milky Way galaxy should be adjusted taking into the consideration the Paradise Organizers forces and energy centers. But, even based on such inaccurate estimates, the superuniverse Orvonton must consist of 30-40 galaxies, like our (this result was received based on a ratio of the sum of ten trillion stars observable from our astronomic position and two trillion unobservable distant stars to an amount of stars in our Milky Way galaxy). When our galaxy is one of the biggest in our local supercluster then a number of smaller galaxies must be proportionally bigger. From the text of the Book we can see that almost the sixth part of Orvonton stars are situated beyond the visibility from Urantia. Taking into the consideration the fact, that the information from the Book is given to many generations to come (and the related technological development) we can say that the size of the Orvonton superuniverse is really enormous.

We do not know organization of the thirty power systems that form gravita area. However, if we suppose that the power systems are located along the perimeter and that physical energy spreads at light velocity (i.e. circumference of the superuniverse is 968 million light years), in this case a radius of our superuniverse is approximately 154 million light years, as was indicated in Frederick L. Beckner's article (as one of mentioned options).

Is this estimation accurate? Certainly not. However, the number of the required years for the physical energy to cover the entire superuniveise is significant. It is almost a billion of years (the half of the compression/expansion of pervaded space cycle). Is this time comparable to our galaxy and it's closes surrounding size? According to the Author of this article – absolutely not.

Thus, summarizing the conclusions made above, we can definitely say, that determining the size of our superuniverse, we should be guided by the assumption that there must be some kind of gigantic, geographically unified in one place and isolated from others, concentration of galaxies, with a gradually decreasing density toward the edges and satisfying the following conditions:

- 1. relative completeness and detachment of structure;
- 2. a size of the cluster is hundreds of million light years.
- 3. location of the cluster plane should correlate with the direction to the north (i.e. directing the eyes towards the north, we must look along the cluster plane.

The closest to us concentration of galaxies is a Local supercluster (a system of galaxies with its size of approx. 200 million light years, that comprises a Local group of galaxies, a cluster of galaxies in Virgo and several other clusters and groups of galaxies). Distribution of galaxies is shown on Fig. 7.



Fig. 7. A map of Local supercluster of galaxies; x-coordinate lays in super-cluster plane, z-coordinate is perpendicular to this plane; lines indicate areas with similar density of galaxies [4]

It may be seen on the map (Fig. 7) that a majority of galaxies (60%) is located in a narrow layer of approx. 10 million light years thick near the super-cluster plane. A big concentration of galaxies is in Virgo cluster. Only approx. 40% of galaxies are located outside the super-cluster plane. A red circle (a symbol of the Sun) at the origin of coordinates indicates a spot where our solar system is.

When we analyze a distribution of galaxies from the center of the super-cluster to its periphery we have an impression that we see a single huge structure with a super-cluster of Virgo galaxies in its center. In other words in our opinion Fig. 7 presents an image of nothing else but Orvonton, our (the seventh) superuniverse. Such a conclusion can seem controversial from the point of view, that in the Book, the center of our superuniverse (and the densest part of it) is considered to be the Milky Way. But it is necessary to mention that first of all we still do not know (with reasonable accuracy) the size of this star system (as we have to study it from inside). It can be proved by the following extract from the Book: "The Satania system of inhabited worlds is far removed from Uversa and that great sun cluster which functions as the physical or astronomic center of the seventh superuniverse. From Jerusem, the headquarters of Satania, it is over two hundred thousand light-years to the physical center of the superuniverse of Orvonton, far, far away in the dense diameter of the Milky Way. Satania is on the periphery of the local universe, and Nebadon is now well out towards the edge of Orvonton. From the outermost system of inhabited worlds to the center of the superuniverse is a trifle less than two hundred and fifty thousand lightyears." [ UB p. 359-360] Thus, the diameter of the Milky Way must be about 500,000 light years. For comparison: the modern estimation of it's diameter is only about 100,000 light years. Second: there is no universal and reliable method of space distances estimation (it can be clearly seen on the same example from the Book, where the distance to the center of our galaxy is mentioned, which is not consistent with the current data of 36 light years). And it directly relates to the remote systems linear size determination (this issue will be observed in details in the next part).

It may seem strange that we are talking about the size of our superuniverse as hundreds of million of light years, when in the Book it is said, that the radius of it's inhabited part is not more than 250 thousand of light years. Maybe there was a mistake in our conclusions? No, there was no mistake, because this part of the Book says only about the inhabitation level in our superuniverse, which is the youngest from all existing and it is quite natural that the inhabited part of it is not so big. At the same time the geographic sizes of all superuniverses are roughly equal: "Each superuniverse is simply a geographic space clustering of approximately one seventh of the

organized and partially inhabited post-Havona creation, and each is about equal in the number of local universes embraced and in the space encompassed." UB [p. 129].

Taking the above said into the consideration (if the assumption, that the Local galaxy supercluster is our superuniverse, is true) let's try to determine to what extend it is consistent to the conclusions, made above. First of all let's clarify the relative position of the Milky Way galaxy plane, Local galaxies supercluster and the direction to the Paradise Isle. (Fig.8)



Fig. 8. The 3-D view of the local universe [4] (a); the cross-sectional view of pervaded space and Paradise Isle - Orvonton relative position in this space (b)

On Fig. 8 are showh:

- a) Galactic plane the Milky Way galaxy plane and it's extension into intergalactic space.
  - Supergalactic plane Local galaxies supercluster plane.
- b) 1. Eternal and stationary Paradise Isle.
  - 2. The Pervaded Space.
  - 3. The direction to the north is standard direction to North star.
  - 4. The plane of Paradise Isle and central universe dislocation.
  - 5. Superuniverse Orvonton.

As seen on Fig.8a the Milky Way galaxy is located almost perpendicular to the galaxies supercluster plane (the plane of the Local supercluster). The mutual arrangement of the Milky Way and the Local supercluster planes towards the Paradise Isle plane corresponds to Fig. 2 (taking into the account the fact that the Local supercluster is the Orvonton superuniverse, and the Milky Way plane is located along the line under the number 5) and fully agrees with the northern direction.

Thus, the definition of the size of our superuniverse and direction to the Paradise Isle is not a question of the Milky Way size, but a question of the directions.

On the other hand the statement from the Book that the Milky Way plane is the main plane of our superuniverse does not mean that other galaxies should lay in the same plane (otherwise such arrangement would be very strange). The Milky Way is the core of our superuniverse and that is why it's plane is the main one.

About the border between our and neighboring superuniverses, it will go through the area of "void space", which divides the close to us superclusters (nebular families), which fully agrees with the text from the book.

Thus, after the full consideration of the variant of our superuniverse size, we can definitely say, that all necessary conditions are fulfilled and we can go further in studying the Book.

The Book contains a detailed description of a mutual alignment of 7 superuniverses and the Paradise: "In this age and as direction is regarded on Urantia, superuniverse number one swings almost due north, approximately opposite, in an easterly direction, to the Paradise residence of the

Great Sources and Centers and the central universe of Havona. This position, with the corresponding one to the west, represents the nearest physical approach of the spheres of time to the eternal Isle. Superuniverse number two is in the north, preparing for the westward swing, while number three now holds the northernmost segment of the great space path, having already turned into the bend leading to the southerly plunge. Number four is on the comparatively straightaway southerly flight, the advance regions now approaching opposition to the Great Centers. Number five has about left its position opposite the Center of Centers while continuing on the direct southerly course just preceding the eastward swing; number six occupies most of the southern curve, the segment from which your superuniverse has nearly passed." [1 p. 165].

"Your local universe of Nebadon belongs to Orvonton, the seventh superuniverse, which swings on between superuniverses one and six, having not long since (as we reckon time) turned the southeastern bend of the superuniverse space level. Today, the solar system to which Urantia belongs is a few billion years past the swing around the southern curvature so that you are just now advancing beyond the southeastern bend and are moving swiftly through the long and comparatively straightaway northern path. For untold ages Orvonton will pursue this almost direct northerly course." [1 p. 165].

On the basis of the above mentioned and after study of modern maps for clusters of galaxies (found in [4]) there was made an attempt to arrange the currently known super-clusters of galaxies in conformity with the description presented in the Book. A base point was a location of our Local super-cluster of galaxies (presumably it is our seventh superuniverse) and a Northward direction. In conformity with the description in the Book (and the Fig. 1 made after it) Northward from our supercluster there should be three superclusters (inclusive of our Local supercluster). Two more superclusters just opposite of them must be divided by an area of absolute void (where the central universe may locate). Correspondingly, in the very Northern and at the very Southern directions there must be one super-cluster each. As a result the super-clusters were arranged as shown in the Fig. 9 (for illustration purposes sketches of the Paradise Isle and the central universe were added).

It is told in the Book that the central universe is enormous in size and it is arranged in conformity with specific principles of physical reality that make it invisible for material worlds of time and space. Correspondingly, in the area of its prospective location there should be no foreign cosmic objects visible. This guess is confirmed by existence of a vast area of 'empty space' (Bootes Void) at about 100Mpc from the center of our Local super-cluster and by the properties of microwave background radiation (a phenomenon of MBR will be touched upon below).



Fig. 9. Mutual alignment of the Paradise Isle, the central universe and 7 superuniverses

Numerals on Fig. 9 stand for:

- 1. Eternal and statuary Paradise Isle.
- 2. Havona, the Central Universe.
- 3. The First superuniverse.
- 4. The Second superuniverse.
- 5. The Third superuniverse.
- 6. The Fouth superuniverse.
- 7. The Fifth superuniverse.
- 8. The Sixth superuniverse.
- 9. Orvonton, our, the Seventh, superuniverse.

The alignment of super-clusters in Fig. 9 completely (in terms of quantity, mutual location and orientation to the North) corresponds to the description of the 7 superuniverses in the Book. It also explains a seeming contradiction between the description "... number six occupies most of the southern curve, the segment from which your superuniverse has nearly passed." [1 p. 165] and "... the solar system to which Urantia belongs is a few billion years past the swing around the southern curvature ..." [1 p. 165], which is a result of a size of our super universe and a geographical location of the solar system (zero of coordinate system, Fig. 9).

There may be some doubts as for the areas indicated by points 5 and 7 in Fig. 9 (location of the Third and the Fifth superuniverses correspondingly). In our opinion it may be explained by insufficient study of these areas: "As Orvonton is unique in nature and individual in destiny, so also is each of its six associated superuniverses." [1 p. 182] Which implies, as we understand it, a unique (in physical and in organizational senses) structure of each superuniverse.

Let's try to do some conclusions and to estimate correctness of our assumptions. For this purpose let's compare fig. 1 and fig. 9. Fig. 1 completely corresponds to the text of the Book and is not adhered to any objects of a universe. Interposition of Paradise Isle, the central Universe and seven superuniverses based on an arrangement of supercluster of modern map is shown on fig. 10.



It is visible that both parts of fig. 10 completely correspond each other, and there are no contradictions. Thus, we can do the conclusion about correctness of our assumptions.

An area outside the grand universe (Fig. 9) belongs to outer levels of universe. "The Uversa star students observe that the grand universe is surrounded by the ancestors of a series of starry and planetary clusters which completely encircle the present inhabited creation as concentric rings of outer universes upon universes." [1 p. 131]

If it is granted that big clusters of galaxies in Perseus-Pegasus-Cetus, Cetus-Pisces and Sculptor are the parts of the 1st, 2nd and the 3rd belts of outer space correspondingly, then, based on this it is possible to assume approximate sizes of master universe. In case at the bottom of Fig. 9 we see a part of the area belonging to the 4th outer level then a shape of the master universe should be an ellipse with its center where the Paradise Isle is and the border running at the bottom of Fig. 9. The major and the minor axises of the ellipse must coincide with corresponding axises of the central universe and the Paradise Isle. An approximate size of the master universe is shown in Fig. 10.



Fig. 11. Approximate size of master universe (arrows point directions of rotations about the Paradise Isle)

The numbers in the Fig. 10 stand for:

- 1. The First Outer Space Level.
- 2. The Second Outer Space Level.
- 3. The Third Outer Space Level.
- 4. The Fourth and Outermost Space Level.

The above assumption may seem disputable if looked upon from the point of view of the present knowledge when a 'visible' part of the master universe is thought to be approx. 14 billion light years. However, it is obvious that definition of a precise length scale for macrocosm is one of fundamental issues of modern science.

## 3. Distance to Space objects measurement questions

As of today in astronomy there is no universal method of finding distances to heavenly bodies. While passing from close to more distant objects one distance measurement method is replaced by another, and usually a preceding method serves as a basis for a subsequent one. [5].

All known methods of measuring distances to space objects may be divided into two main types: by Hubble constant (red shift of spectral lines) and by luminosity function.

Hubble's law (a recession of galaxies law) is a physical cosmology rule that says that a red shift of remote objects is pro rata to their distance to the observer. Thus, the more is a distance from us to a space object (and the more is its red shift) the faster the object is receding from us.

All the reasoning and conclusions in relation to the Hubble's law are based on the so called Big Bang theory, in conformity with which different particles (fragments) of matter were given different velocity. The Big Bang theory also implies a space extension that continues till now (a theory of expanding universe) and which, based on the theory, contributes the most to the red shift value.

Since the inventing of the law the Hubble's constant have been corrected several times, from the initial 500km/sec per 1 mega parsec to current 70-80 km/sec per 1 mega parsec. Thus, in

compliance with the Big Bang theory and the Hubble's law, if an object is approx. 400 mega parsec away from us, than its apparent receding velocity is approx. 30,000km/sec.

Comments on the distance measurement method based on the red shift and on the method accuracy were made in the Book around the same time when the Hubble's law was discovered.

"Although your spectroscopic estimations of astronomic velocities are fairly reliable when applied to the starry realms belonging to your superuniverse and its associate superuniverses, such reckonings with reference to the realms of outer space are wholly unreliable. Spectral lines are displaced from the normal towards the violet by an approaching star; likewise these lines are displaced towards the red by a receding star. Many influences interpose to make it appear that the recessional velocity of the external universes increases at the rate of more than one hundred miles a second for every million light-years increase in distance. By this method of reckoning, subsequent to the perfection of more powerful telescopes, it will appear that these far-distant systems are in flight from this part of the universe at the unbelievable rate of more than thirty thousand miles a second. But this apparent speed of recession is not real; it results from numerous factors of error embracing angles of observation and other time-space distortions." [1 p. 134].

According to official data the Hubble's law works poorly or does not work at all for objects that are located closer than 10-15 million light years, i.e. just for the galaxies the distances to which can be reliably determined without the red shift. Besides, the Hubble's law does not work well for very far-distant (billions of light years) galaxies. Distances to objects with this big red shift lose their univocacy as they depend on the accepted model of the universe and on the moment of time they are related to. Usually red shift is used as a distance measure in this case.

Now enough of critiques concerning Hubble's law and the Big Bang theory is published (written by known scientists and winners of Nobel Prizes), giving an occasion to doubt their fidelity.

The fragment of one of them characterizes a question condition with sufficient accuracy: "Some words about "Theory". First, in numerous editions it is very difficult (or impossible) to find the word combination "the Big Bang hypothesis". But there is only the "Theory". The most leading (supervising) scientists of the world develop the Theory. The Theory has administrative support, check of its forecasts is included in the program of tests on Big hadronic collider. The theory can't be criticized since its model includes the so-called inflationary period. During this period the authors cancelled all disturbing laws of the existing world and nonexistent laws are entered. Each of authors-participants of development of the Theory enters the duration of the inflationary period on their discretion "[7].

"The locomotive had accelerated", the considerable money resources are put in development of this theory (Big hadronic collider is one of examples), it is required to discover even more "laws" for the economic justification of these expenditures. This situation can't suddenly stop. Some time should pass before the big scientists realize that the quantity of contradictions and unreasonable assumptions should be less for a rank of "Theory".

On the other hand, at all lacks of the Big Bang theory, the common sense should be present at the majority of her supporters.

What is the reason of such strange situation? There are some reasons. We'll find the answer to one of these on p. 123-124 Books, there it is told about the spaces respiration: "We do not know the actual mechanism of space respiration; we merely observe that all space alternately contracts and expands. ... The cycles of space respiration extend in each phase for a little more than one billion Urantia years. During one phase the universes expand; during the next they contract. " [1 p. 123-124].

According to the information from the Book, now the pervaded space in which there is a universe, extends. In our opinion, this fact (because of essential development of technics and measurement methods), is one of the reasons indirectly supporting Big Bang theory.

The measurement method of distance on red shift basis isn't applicable in this case, because of is mutual-return rotation of levels of external space. Thus, if the rule is true only in the limited area and doesn't true for all universe, it can't apply for the "Law" status in any way.

The next "proof" of correctness of the Big Bang theory is such postulate: space systems, farout from us, we should see at earlier stage of development. This relationships is real, it is described in the Book in detail. There are four external levels of the space (for our epoch). Their formation occurred serially: the first level, then the second and so on to the fourth (its formation occurs now). Thus, the most distant from us, fourth level, is "youngest", but the nearest first level is oldest. Really, the effect of "rejuvenation" of systems should be observed with distance increase, but it hasn't nothing in common with the Big Bang theory since the mechanism of its formation has absolutely other nature. In addition to what has been said, this effect will be observed only in one direction of external levels of space.

At last, the most essential and widely advertized reason supporting Big Bang theory is presence so-called "relic" ("microwave" is more correct) background radiation. The one section of article will be devoted discussion of this phenomenon.

So, these are some conclusions:

- 1. Respiration of spaces really occurs, but its reason isn't the Big Bang.
- 2. The measurement method of distance by red shift operates (with some reservations) in the limited area, but isn't applicable to all universe.
- 3. Dependence of distribution of space systems on a stage of their development in process of removal from our location (observision) is available only in one direction.
  - The nature of her origin is distinct from the Big Bang theory.

A method of distance determination by a luminosity function also depends on the adopted model of universe's structure. "A postulate that a spread of luminances of super-new Ia has a very low dispersion of ~0.2 stellar magnitude and, moreover, does not depend on red shift, is a keystone of a geometric test. The point of it is as follows: when a 'standard candlepower' recedes from the observer, its brightness changes differently in different cosmology models (Fig. 11). At short distances curves discrepancies are not too big, but if a source of light is far enough then it is possible to perform an observational selection of various cosmological models." [8].



Fig. 12. Dependence of super-new luminances on cosmological models [6]

A fault of the method of distances determination by a luminosity function (one of its varieties) may be illustrated by an example of Andromeda galaxy. According to up-to-date official data a distance to it is 2.3-2.5 million light years. At the same time, the Book says it is approximately 1 million light years. [1 p.170]. Thus a fault of this method exceeds 100% (paradoxically early in 20th century the distance was measured practically precisely, namely: 900 000 light years). This error in distance definition implies that linear dimensions of Andromeda galaxy are approximately 2.3-2.5 times smaller than it is admitted now (which also means a proportional decrease of its mass and a number of stars that comprise it). In case this or similar discrepancy in distances is true in terms of other galaxies in our surroundings, in our Local super cluster (our super universe Orvonton), then a mass and a number of their comprising stars should be corrected correspondingly and proportionally.

Based on the Book it is possible to state that a method of cosmic distances determination by red shift value is not applicable for outer levels of the universe and far-distant superuniverses. Thus, in case of inconsistency of the Big Bang theory this method of measurement loses its significance and all distances measured on its bases need to be revised.

Further developments in this area, apparently, lie in more fine calibration of all 'standard candlepowers' (based on the accurate distance to Andromeda galaxy mentioned in the Book) and in

study of new effects and in search of new dependencies, which will become a foundation for development of new methods of measuring distances to space objects.

# 4. Cosmic microwave background radiation phenomenon (MBR)

One more proof of correct location of separate elements of the grand universe (the central Paradise Isle, the central universe and 7 superuniverses) is the cosmic microwave background radiation phenomenon (MBR). MBR is a cosmic radiation with a spectrum typical for an absolutely blackbody at a temperature approximately 3K, that was discovered in 60-es (20th century). Brightness distribution of the microwave background radiation in the celestial sphere is shown in Fig. 13.

Below please find a list of MBR properties:

- 1. MBR spectrum with a high precision corresponds to a radiation of an absolutely blackbody with T = 2,73 K [7]
- 2. Neither stars and radiogalaxies, nor hot intergalactic gas, nor over-radiation of visible light of ISD (interstellar dust) can produce radiation with properties similar to those of MBR's: combined power of this radiation is too big, and its spectrum is unlike stars spectrum, and unlike a spectrum of a radio source.[8].
- 3. MBR is isotropic only in the coordinates system which relates to 'receding galaxies', in the so called co-moving system of reference (this system expands together with the universe). In any other system of coordinates an intensity of radiation depends on a direction. [9].
- 4. Intensity fluctuations are absent almost totally over the celestial sphere (small-scale angular fluctuations). [8].
- 5. There is a dipole component in MBR distribution towards Leo constellation: a temperature of this radiation is 3.5mK higher than average, and in the opposite direction (Aquarius) it is by the same amount lower than average.



Fig. 13. Brightness distribution of microwave background radiation in the celestial sphere. Figures in the picture indicate deviations from the average all over the sphere temperature of microwave background (mK) [11]

Thus, we may say that MBR is a unique unparalleled phenomenon in the whole master universe. Based on a brightness distribution over the celestial sphere and a dipole anisotropy of this radiation and after data comparison with the Book it is only reasonable to assume that MBR is a radiation that reaches us from Paradise-Havona system. If it is so, it is necessary to determine which of the system's elements can produce this radiation.

The Book describes: "If you imagine a finite, but inconceivably large, V-shaped plane situated at right angles to both the upper and lower surfaces of Paradise, with its point nearly tangent to peripheral Paradise, and then visualize this plane in elliptical revolution about Paradise, its revolution would roughly outline the volume of pervaded space."[1 p.124].

Then it is said in the Book: "On the outskirts of this vast central universe, far out beyond the seventh belt of Havona worlds, there swirl an unbelievable number of enormous dark gravity bodies. These multitudinous dark masses are quite unlike other space bodies in many particulars; even in form they are very different. These dark gravity bodies neither reflect nor absorb light; they are nonreactive to physical-energy light, and they so completely encircle and enshroud Havona as to hide it from the view of even near-by inhabited universes of time and space.

The great belt of dark gravity bodies is divided into two equal elliptical circuits by a unique space intrusion. The inner belt revolves counterclockwise; the outer revolves clockwise. These alternate directions of motion, coupled with the extraordinary mass of the dark bodies, so effectively equalize the lines of Havona gravity as to render the central universe a physically balanced and perfectly stabilized creation.

The inner procession of dark gravity bodies is tubular in arrangement, consisting of three circular groupings. A cross section of this circuit would exhibit three concentric circles of about equal density. The outer circuit of dark gravitybodies is arranged perpendicularly, being ten thousand times higher than the inner circuit. The up-and-down diameter of the outer circuit is fifty thousand times that of the transverse diameter.

The intervening space which exists between these two circuits of gravity bodies is unique in that nothing like it is to be found elsewhere in all the wide universe. This zone is characterized by enormous wave movements of an up-and-down nature and is permeated by tremendous energy activities of an unknown order.

In our opinion, nothing like the dark gravity bodies of the central universe will characterize the future evolution of the outer space levels; we regard these alternate processions of stupendous gravity-balancing bodies as unique in the master universe."[1 p. 153-154].

Fig. 13 and 14 below represent an outline (based on descriptions in the Book) of the cross section of the Paradise-Havona system, and co-locations of the Paradise Isle, belts of dark gravity bodies and superuniverses. A source and a direction of MBR are indicated as may be supposed (the Book does not contain this description). MBR spreads evenly from its source into the surrounding space environment; however for the sake of simplicity Fig. 14 show just directions towards material worlds of time and space.



Fig. 14. A cross-section and top plan view sketch of Paradise-Havone system

Fig. 14a-b shows:

- 1. Eternal and stationary Paradise Isle
- 2. Three circles of Paradise's satellites and seven Havona circles
- 3. Three circles of inner belt of dark gravity bodies
- 4. A circle of outer belt of dark gravity bodies
- 5. A source and direction of MBR
- 6. A pervaded zone
- 7. Superuniverses
- 8. The Central Unverse Havona.

A belt of dark gravity bodies was taken as a source of MBR in the Fig. 14. This choice was made based on an exclusion principle. In the Paradise-Havona system there may be marked out three groups of objects that can produce this radiation: the Paradise Isle itself, its satellites (inclusive of billion spheres of the central universe) and a belt of dark gravity bodies. In our opinion, obviously neither the Paradise Isle nor its satellites can be associated with a source of radiation typical for an absolutely dark body. At the same time, based on descriptions in the Book, we can assume that a belt of dark gravity bodies, that in its turn consists of outer and inner circuits, matches the criteria the best. Thus, in MBR power spectrum there must be two obvious peaks; one of the peaks (relating to the outer circuit) should be much higher than the second one (relating to the inner circuit). According to the Book the inner circuit comprises three groups of concentric circles. Correspondingly, sufficiently precise measurements would make it possible to single out two additional smaller peaks in MBR spectrum. Small-scale 'ripples' in the angular distribution of the microvawe background radiation temperature and even smaller-scale fluctuations of the MBR are caused by observed separate dark gravity bodies.

A spectrum power of angular distributions of MBR fluctuations by WMAP («Wilkinson Microwave Anisotropy Probe») and by some other experiment results are shown in Fig. 15.



Fig. 15. Power spectrum of angular distributions of MBR fluctuations by WMAP («Wilkinson Microwave Anisotropy Probe») and by some other experiment results. Down: Fluctuations amplitude, Across: Modes numbers (starting from l=2) or angular scales. Black dots relate to observed data, a red line shows projections of theoretical model for flat universe, a gray stripe indicates an admissible error of the theoretical projections [12]

Now it is time to make one remark about a discordance of the Big Bang theory projections and results of MBR evaluations (Fig. 15), that shows that existing problems in the Big Bang theory stay unexplained. "One of the problems is very low amplitudes of two MBR subordinate multipoles (spherical harmonics), namely a quadrupole and an octopole. It appeared that the observed amplitude of the quadrupole reaches only 1/7th of the level predicted by the theory, and the octopole's amplitude is 72% (Fig. 9). This deviation is too big and it can hardly be explained by random fluctuations of the observed microwave cosmic background. The problem is not new, but only very precise WMAP data highlighted it in full. As yet nobody suggested any physical mechanism that could cause decrease of these two subordinate harmonics." [9]

Fig. 16 presents a sketch of the Paradise-Havona system disposition, MBR direction and direction of our superuniverse's movement (it is shown in conformity with the Book's descriptions and it is proved by a dipole anisotropy of MBR in the direction of Leo constellation).



Fig. 16. A sketch of Paradise-Havona system and our superuniverse mutual disposition and MBR directions

Numerals on Fig. 16 stand for:

- 1. Eternal and stationary Paradise Isle;
- 2. Central universe (Havona) surrounded by a belt of dark gravity bodies;
- 3. MBR direction;
- 4. Movement direction of our , the 7th, superuniverse (Orvonton).

Based on Fig. 16 the following conclusion can be made: an assumption of a certain "grand attractor" about and towards which all the local group of galaxies is moving is erroneous. A large-scale dipole anisotropy of MBR is attributable to our observations position towards the MBR source. Fig. 16 shows that this condition (a dipole) will be observed in any point between the external belt of dark gravity bodies and the external border of the master universe.

# **Conclusions:**

Obtained results show that there are many differences in the concepts of modern science and of Uversa's astronomes about the outer space. Reasons for the discrepancies may be found in the Book. On the one hand they may be explained by purely technical difficulties: "The Sagittarius sector and all other sectors and divisions of Orvonton are in rotation around Uversa, and some of the confusion of Urantian star observers arises out of the illusions and relative distortions produced by the following multiple revolutionary movements:

- 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.
- 6. The whirl of the ten major sectors, the so-called star drifts, about the Uversa headquarters of Orvonton.
- 7. The movement of Orvonton and six associated superuniverses around Paradise and Havona, the counterclockwise processional of the superuniverse space level." [1 p. 168].

On the other hand, the major reason for our misbelieves is indicated in the Book: " If mind cannot fathom conclusions, if it cannot penetrate to true origins, then will such mind unfailingly postulate conclusions and invent origins that it may have a means of logical thought within the frame of these mind-created postulates." [1 p. 1260].

The author of this article thinks that truthfulness of the information presented in the Book does not admit of doubt, and the author thinks it possible to come to following conclusions:

- 1. There exists the God who stays within an eternal Paradise Isle.
- 2. The eternal Paradise Isle is located in the direction of the Bootes constellation (a centre of the 'Bootes Void' area in Fig. 9) at about 150Mpc (it is relevant mapwide of Fig. 9) from the center of our Local super-cluster. \*)
- 3. Based on our concept of time, the master universe exists infinitely long: "The trillions upon trillions of years that an ordinary sun will continue to give out heat and light well illustrates the vast store of energy which each unit of matter contains."[1 p. 172] The appearance of the master universe has nothing to do with the Big Bang.
- 4. The master universe does not expand in that sense that is flies apart after the Big Bang (no Big Bang ever happened). The master universe is an evolving creation that goes through recurrent compressions and expansions (without deterioration of the existing structure) with a cycle of 2 billion years. [1p. 124].
- 5. On a huge scale the maser universe is heterogeneous, anisotropic and restricted.
- 6. Movements of celestial bodies and systems (on a universal scale) are not chaotic, but they go along orbits set about a stationary eternal Paradise Isle.
- 7. The MBR phenomenon is not a consequence of the Big Bang; this radiation approaches us from a belt of dark gravity bodies in the Paradise-Havona system.

\*) This is a rough distance and it is up to the center of the Bootes Void area (Fig.9), as the Eternal Paradise Isle is beyond time and space. Besides, we do not think it correct to talk about distances referring to the Central universe (Bootes Void area on Fig.9) which is based on specific principles of physical reality.

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