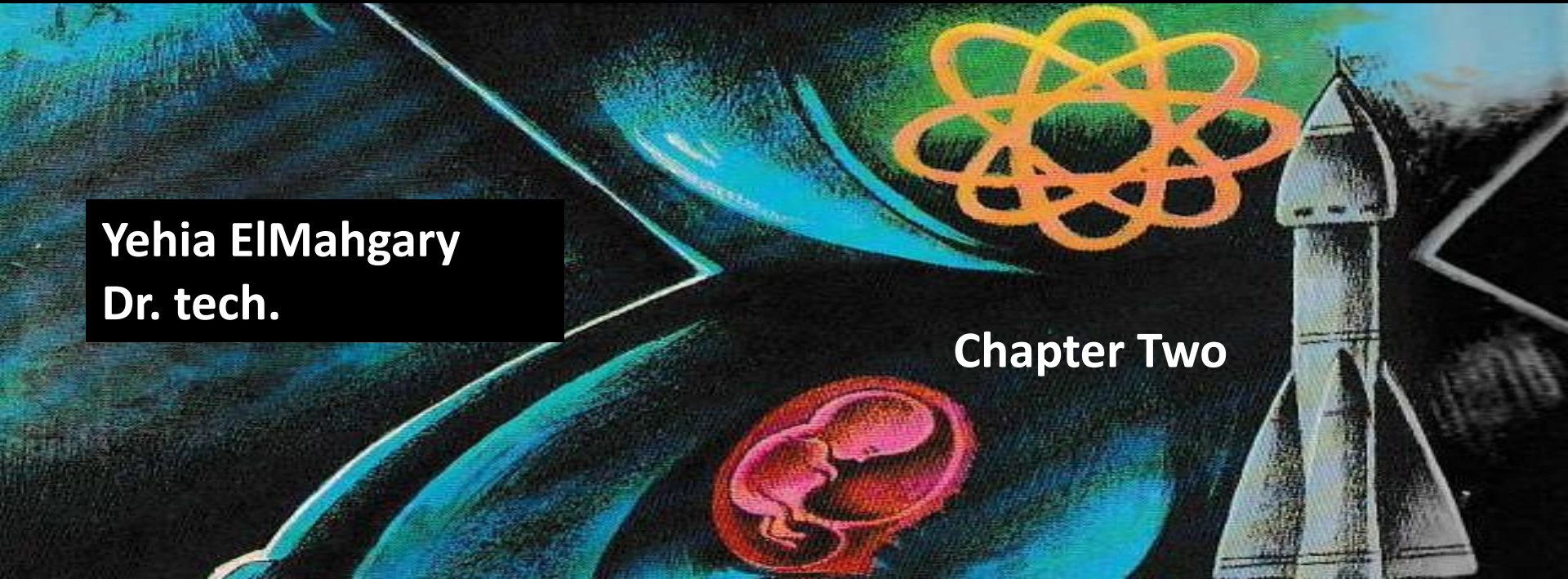


# VERSES OF QUR'AN IN THE NICHE OF SCIENCE

**Yehia ElMahgary**  
**Dr. tech.**

**Chapter Two**

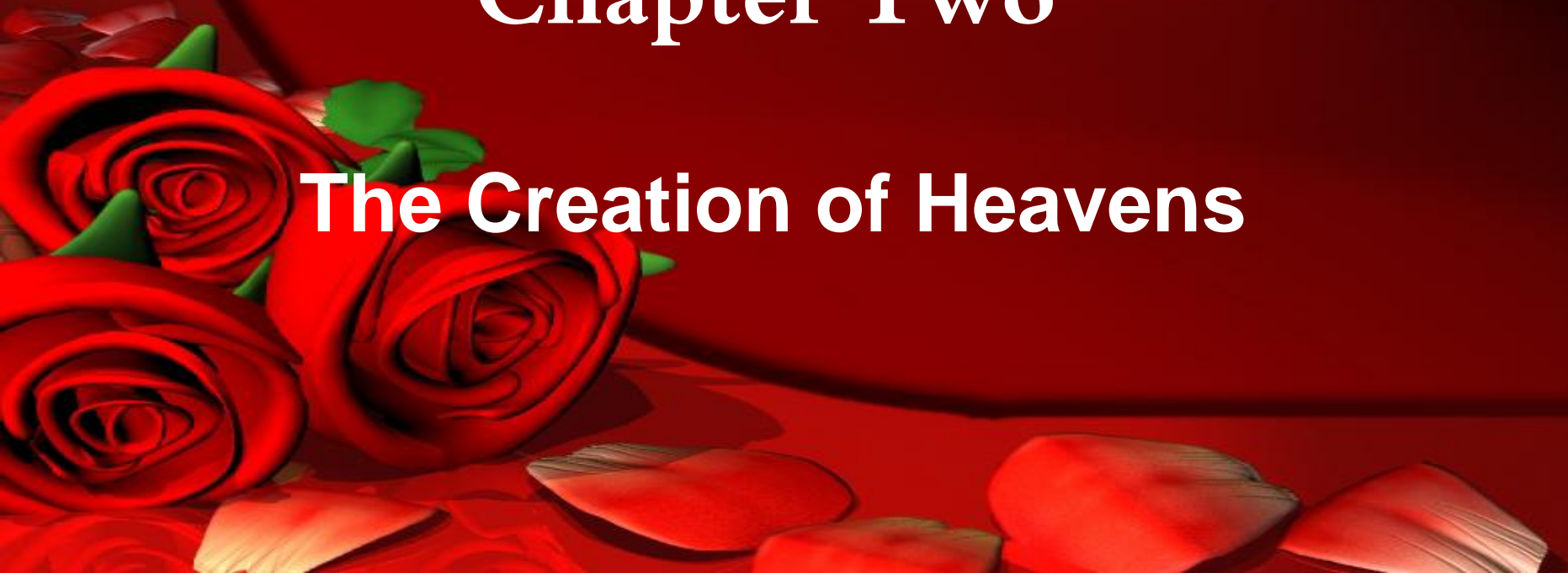


بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

IN THE NAME OF ALLAH THE MOST GRACIOUS THE MOST MERCIFUL

# Chapter Two

## The Creation of Heavens



# The Verses of Qur'an

• ثُمَّ اسْتَوَىٰ إِلَى السَّمَاءِ وَهِيَ دُخَانٌ فَقَالَ لَهَا وَلِلْأَرْضِ ائْتِيَا طَوْعًا أَوْ كَرْهًا قَالَتَا أَتَيْنَا طَائِعِينَ (فصلت 11)

• “Then He rose over towards the heaven when it was smoke, and said to it and to the earth: come both of you willingly or unwillingly. They both said: we come willingly”. (41/11)

• إِنَّا زَيَّنَّا السَّمَاءَ الدُّنْيَا بِزِينَةِ الْكَوَاكِبِ (الصفافات 6)

• “Verily We have adorned the near (lower) heaven with planets.” (37/6)

• الَّذِي خَلَقَ سَبْعَ سَمَاوَاتٍ طِبَاقًا ۗ مَا تَرَىٰ فِي خَلْقِ الرَّحْمَنِ مِن تَفَاوُتٍ ۗ فَارْجِعِ الْبَصَرَ هَلْ تَرَىٰ مِن فُطُورٍ (الملك 3)

• “Who has created the seven heavens one above the other; you can see no faults in the creation of the Most Gracious. Then look again: can you see any rifts?” (67/3)

• أَوَلَمْ يَتَفَكَّرُوا فِي أَنفُسِهِمْ ۗ مَا خَلَقَ اللَّهُ السَّمَاوَاتِ وَالْأَرْضَ وَمَا بَيْنَهُمَا إِلَّا بِالْحَقِّ وَأَجَلٍ مُّسَمًّى (الروم 8)

• “Don’t they not think deeply (in their own selves) about themselves (how Allah created them from nothing, and similarly He will resurrect them)? Allah has created not the heavens, the earth and all that is between them, except with truth and for an appointed term.” (30/8)

• وَلَقَدْ جَعَلْنَا فِي السَّمَاءِ بُرُوجًا وَزَيَّنَّاهَا لِلنَّاظِرِينَ (الحجر 16)

• “And indeed We have put constellations in the heaven and We beautified it for the beholders.”

• أَفَلَمْ يَنْظُرُوا إِلَى السَّمَاءِ فَوْقَهُمْ كَيْفَ بَنَيْنَاهَا وَزَيَّنَّاهَا وَمَا لَهَا مِن فُرُوجٍ (ق 6)

• “Have they not looked at the heaven above them, how We have made it and adorned it, and there are no rifts in it.” (50/6)



“ ثُمَّ اسْتَوَىٰ إِلَى السَّمَاءِ وَهِيَ دُخَانٌ فَقَالَ لَهَا وَلِلْأَرْضِ ائْتِيَا طَوْعًا أَوْ كَرْهًا قَالَتَا أَتَيْنَا طَائِعِينَ فَقَضَاهُنَّ سَبْعَ سَمَاوَاتٍ فِي يَوْمَيْنِ وَأَوْحَىٰ فِي كُلِّ سَمَاءٍ أَمْرَهَا وَزَيَّنَّا السَّمَاءَ الدُّنْيَا بِمَصَابِيحَ وَحِفْظًا ۗ ذَٰلِكَ تَقْدِيرُ الْعَزِيزِ الْعَلِيمِ ”

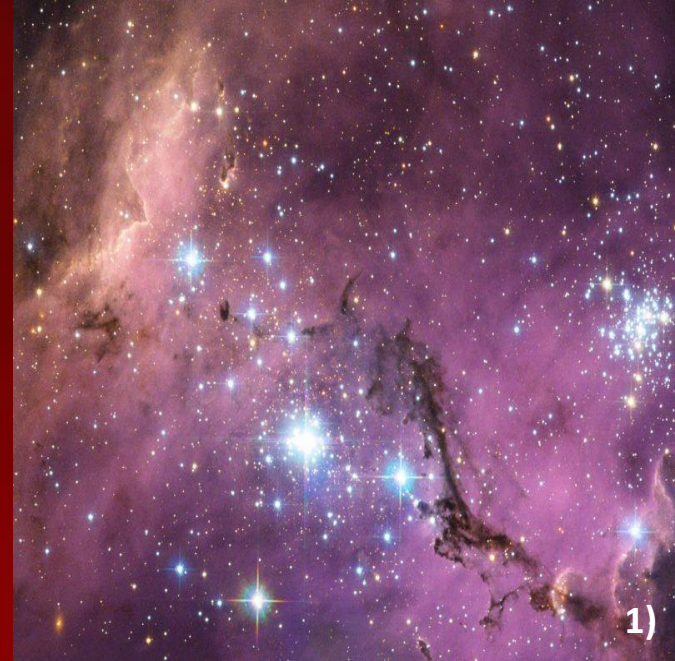
(فصلت 11-12)

“Then He rose over towards the heaven when it was smoke, and said to it and to the earth: come both of you willingly or unwillingly. They both said: we come willingly. Then He completed and finished from their creation as seven heavens in two days, and He made in each heaven its affairs. And We adorned the lowest one with lamps.” (41/11)

It is known from the history of the universe that gas clouds birthed the first galaxies and stars. The Creator reveals that He ordered the heavens, and any matter that existed at the time, to come to Him, and they obeyed. He created the seven heavens in two days and inspired in each heaven its affairs.

We may interpret the lowest heaven , which was

“adorned with lamps”, as the universe which we see filled with planets, stars and galaxies. This means that the other six heavens are outside our universe and we wouldn't reach them or see them. But perhaps there could be another interpretation. That is what we shall see from the next slides.



1)

إِنَّا زَيَّنَّا السَّمَاءَ الدُّنْيَا بِزِينَةِ الْكَوَاكِبِ (الصفّات 6)

**“Verily We have adorned the lower (near) heaven with planets” (37/6)**

❖ The Creator informed us in this verse that He has adorned the lower sky with planets. The planets we see are all in the solar system. The naked eye cannot see the two planets of Alfa Centaury, which is more than 4.3 light years from the earth (the light year is about 9.5 trillion km).

❖ Hence, we may consider the sky of the solar system as the “lower/first sky”, and to proceed to look for the “second sky”.



Seven planets in one sky

2)



The first heaven of the solar system

3)



# The Second Heaven: the Milky Way



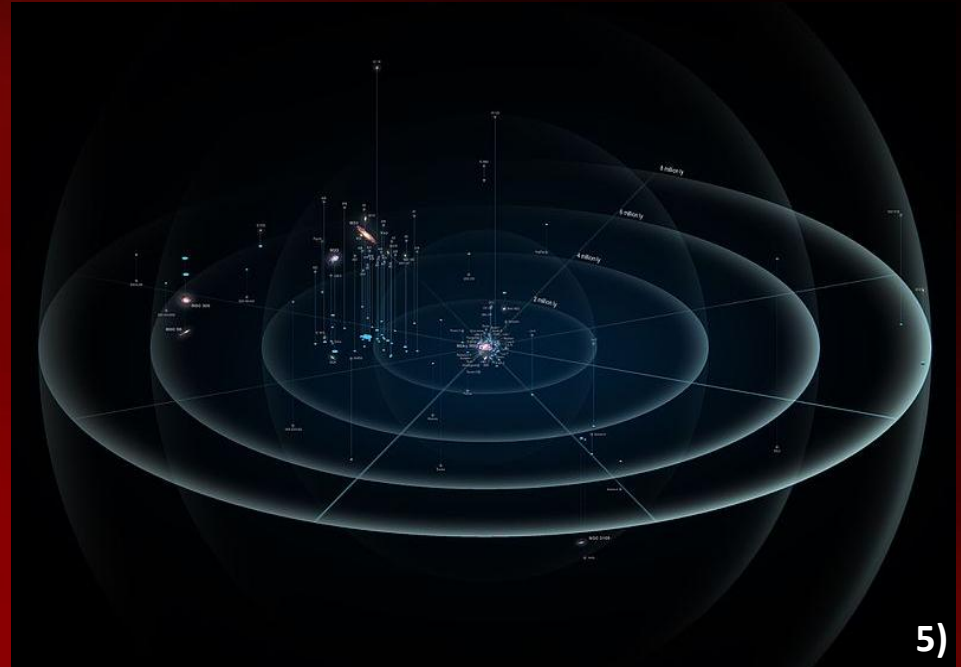
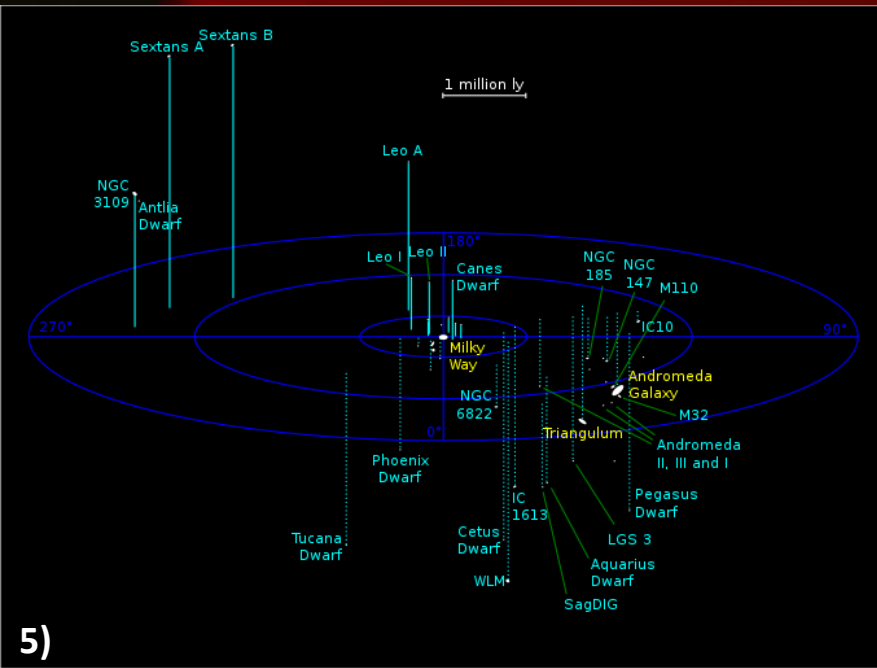
Approximate place of our solar system



4)

The Milky Way is the galaxy where our solar system is located. It is a spiral galaxy with a diameter of about 200,000 light years. Our solar system is on one of its arms called Orion, at a distance of about 26,000 light years from its centre. The number of the stars in the Milky Way are about 100 – 400 billion, and at least the same number of planets. It takes from the solar system  $\approx$  240 million years to complete one revolution around the galaxy's centre. Could the Milky Way be the "second heaven"?

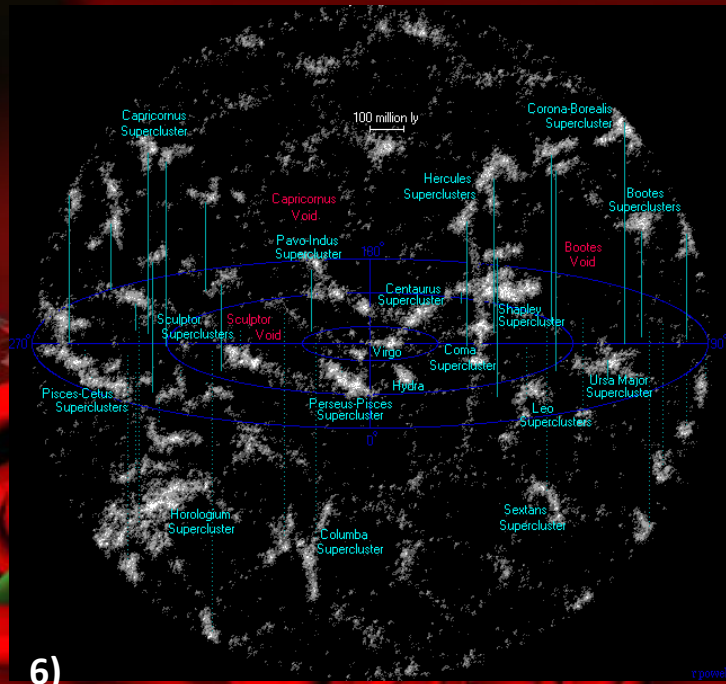
# The Third Heaven (the Local Group)



**The Milky Way is one of more than 54 galaxies known as the Local Group. The three largest members of the group are the Andromeda galaxy (M31), the Milky Way and the Triangulum Galaxy (M33). They are spread over a diameter of nearly 10 million light years, with the center of them being somewhere between the Milky Way and M31. Could the sky of the Local Group be the “Third Heaven”?**



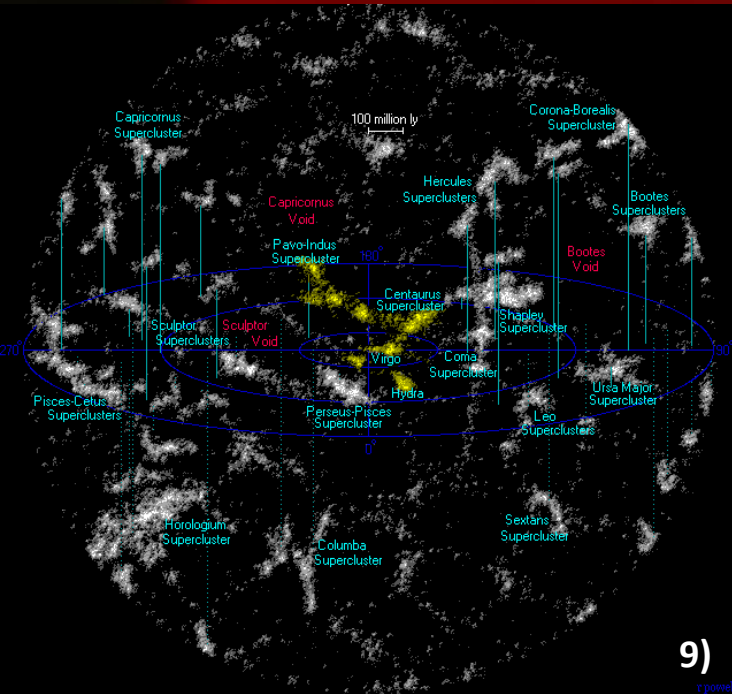
# The Forth Heaven (the Virgo SC/Local Super Cluster)



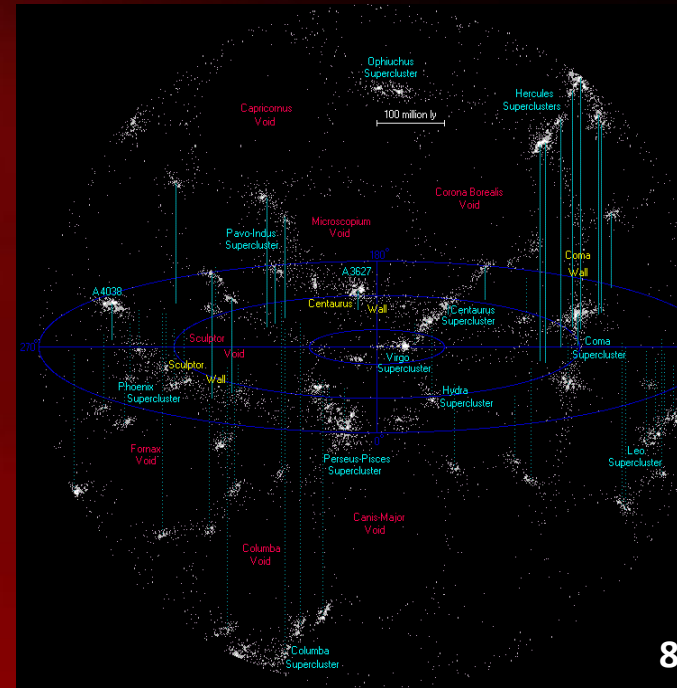
**The Local Supercluster (LSC or LS) or the Virgo Supercluster (Virgo SC) is a mass concentration of galaxies containing the Virgo Cluster and Local Group, which in turn contains the Milky Way and Andromeda galaxies. The Virgo SC is one of about 10 million superclusters in the observable universe and is in the Pisces–Cetus Supercluster Complex, a galaxy filament. Could this be the “Forth Heaven”?**



# The Fifth Heaven (Laniakea Super Cluster)



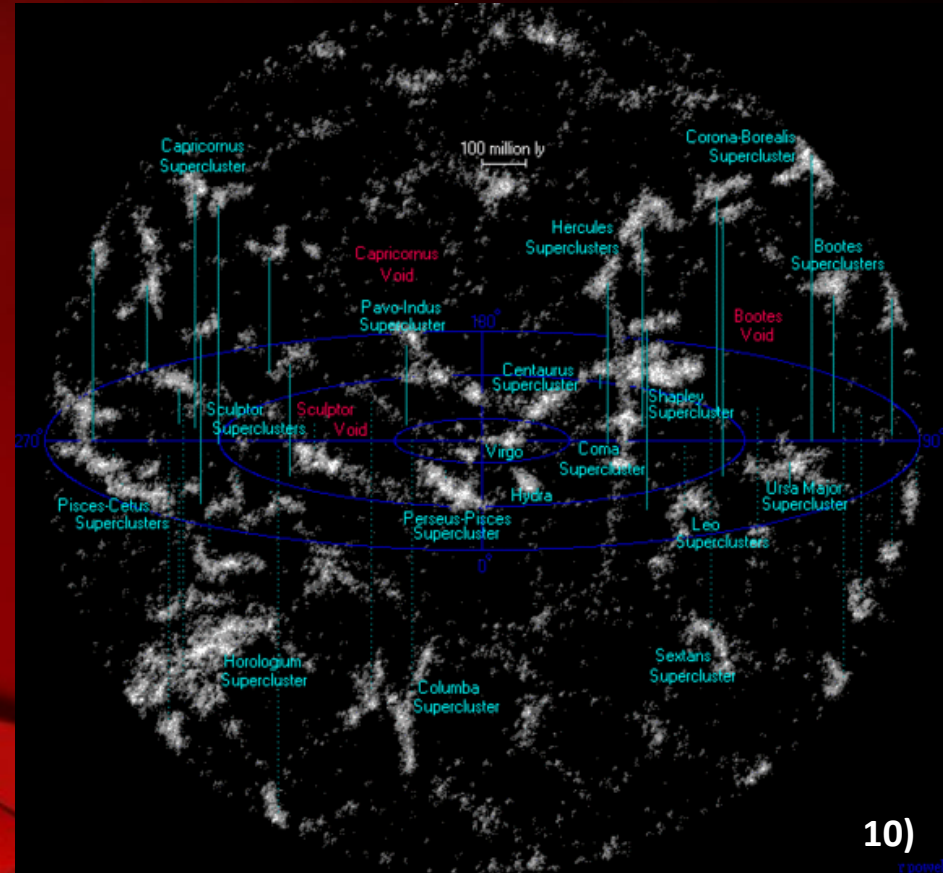
The Laniakea Supercluster encompasses approximately 100,000 galaxies stretched out over 520 million light-years. It has the mass of about  $10^{17}$  solar masses, i.e. a hundred thousand times that of our galaxy. The Laniakea SC is shown in the RHS picture.



In the LHS picture, the same supercluster is shown in yellow within the nearby universe. The Laniakea SC is composed of four subparts: Virgo SC, Hydra-Centaurus SC, Pavo-Indus SC and Southern SC. The entire Laniakea supercluster consists of approximately 300 to 500 known galaxy clusters and groups.

# The Sixth Heaven: Pisces–Cetus SC Complex

The Pisces–Cetus Supercluster Complex is a galaxy filament. It includes the Virgo Supercluster, which in turn contains the Local Group, i.e. the galaxy cluster that includes the Milky Way. This filament is adjacent to the Perseus–Pegasus Filament. The Pisces–Cetus Supercluster Complex is estimated to be about 1.0 billion light-years (Gly) long and 150 million light years (Mly) wide. It is one of the largest structures known in the observable universe. Perhaps it is the “Sixth Heaven”.

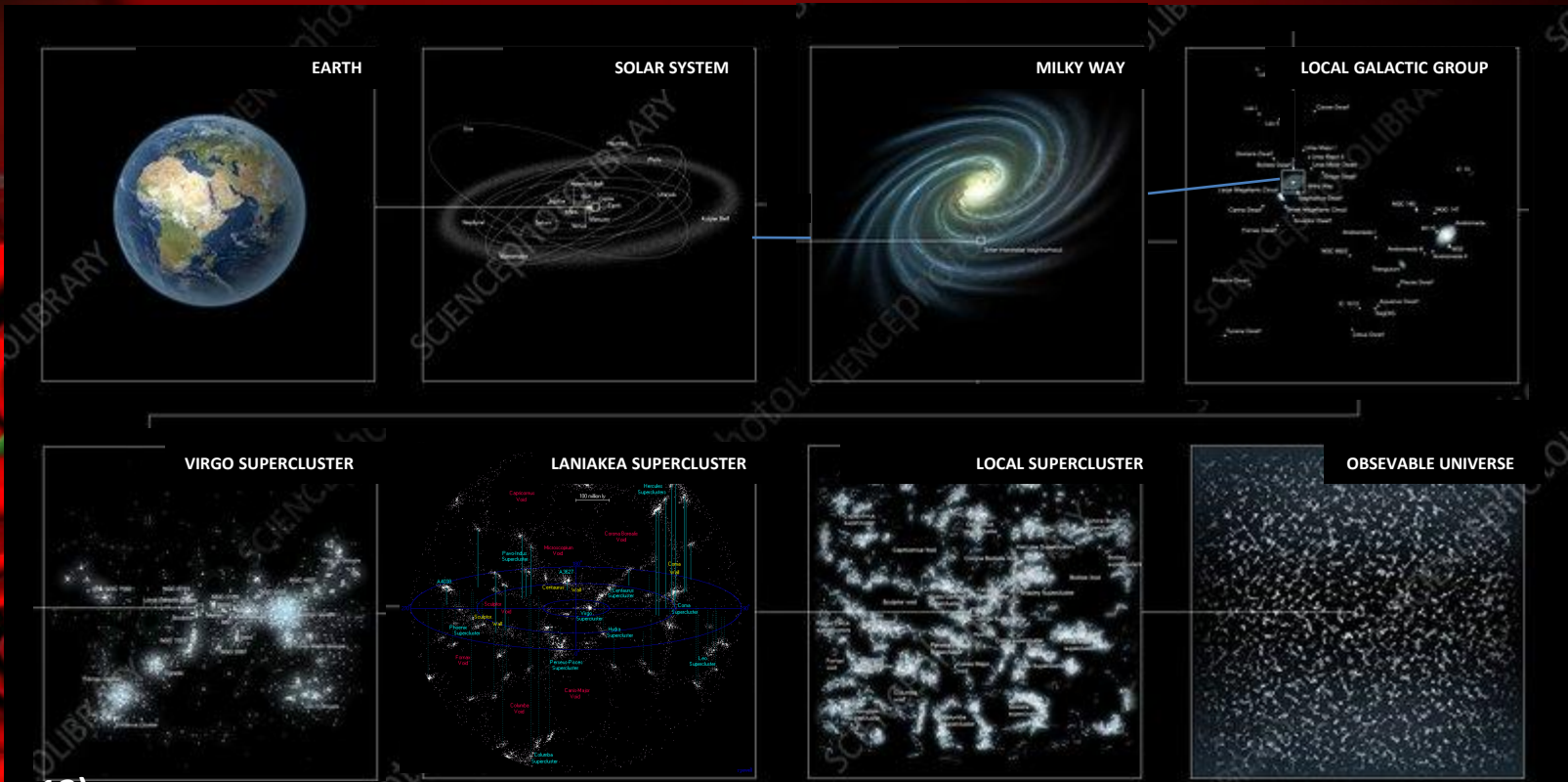






الَّذِي خَلَقَ سَبْعَ سَمَاوَاتٍ طِبَاقًا مَّا تَرَىٰ فِي خَلْقِ الرَّحْمَنِ مِن تَفَاوُتٍ فَارْجِعِ الْبَصَرَ هَلْ تَرَىٰ مِن فُطُورٍ (الملك 3)

**“Who has created the seven heavens one above the other; you can see no faults in the creation of the Most Gracious. Then look again: “Can you see any rifts?” (67/3)**





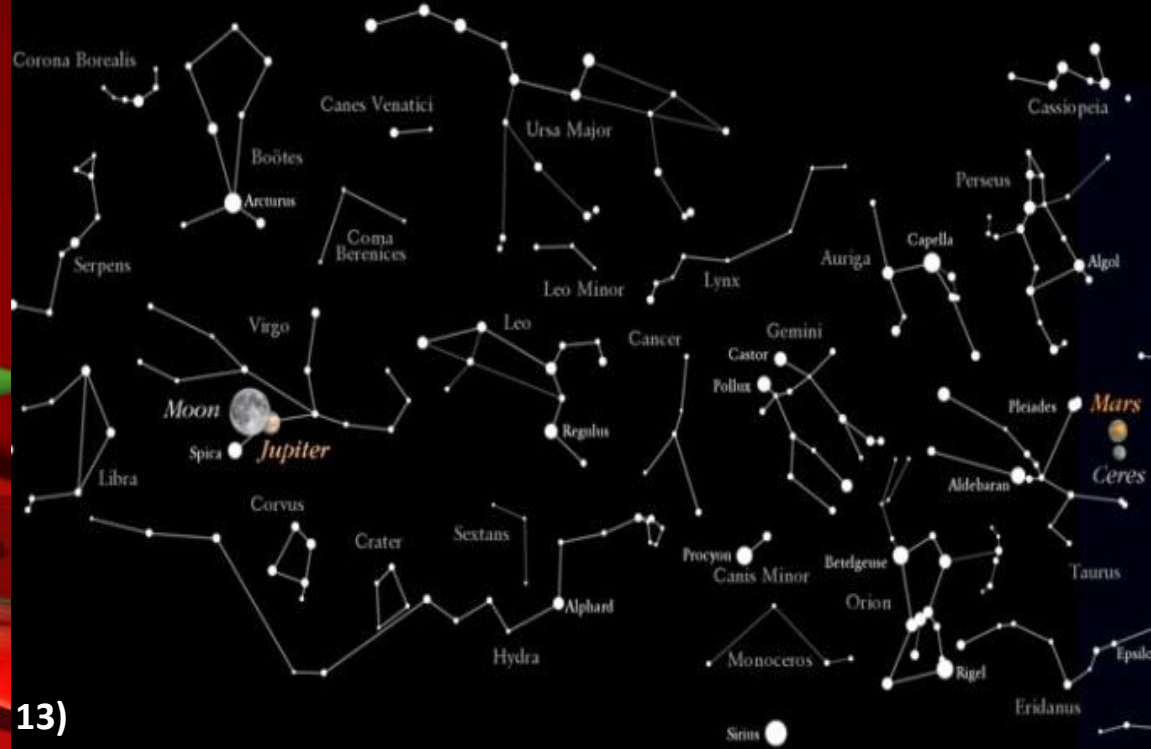
وَلَقَدْ جَعَلْنَا فِي السَّمَاءِ بُرُوجًا وَزَيَّنَّاهَا لِلنَّاظِرِينَ (الحجر 16) تَبَارَكَ الَّذِي جَعَلَ فِي السَّمَاءِ بُرُوجًا وَجَعَلَ فِيهَا سِرَاجًا وَقَمَرًا مُنِيرًا (الفرقان 61)

**“And indeed We have put constellations in the heaven and We beautified it for the beholders.” (15/16) “Blessed He who has placed in the heaven constellations and has placed therein great lamp (sun) and a moon giving light.” (25/61)**

❖ The history of constellations is more than 4000 years old. Drawings for constellations like Taurus and Scorpio were found in Ancient Egypt.

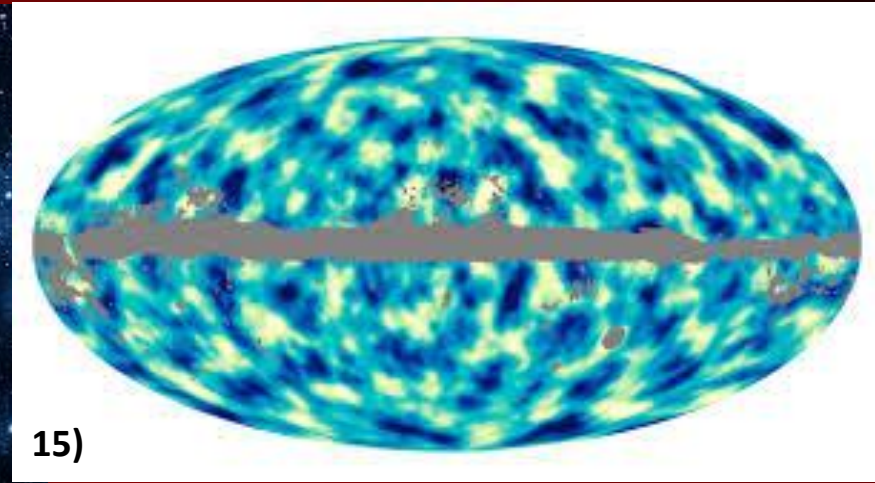
❖ *Almagest*, written by Ptolemy in Alexandria, Egypt, remained the main source of constellations for many years, as it contained 48 constellations with 1022 stars.

❖ Apart from the constellations, the Creator has placed the sun and the moon in the heavens.



أَفَلَمْ يَنْظُرُوا إِلَى السَّمَاءِ فَوْقَهُمْ كَيْفَ بَنَيْنَاهَا وَزَيَّنَّاهَا وَمَا لَهَا مِنْ فُرُوجٍ (ق6)

Among the miraculous language of the Qur'an is the verse, which could be understood in Arabic in a negation form (A): **“Have they not looked at the heaven above them, how We have made it and adorned it, and there are no rifts in it.”** Or in a confirmation form (B): **“Have they not looked at the heaven above them, how We have made it, adorned it and made in it rifts.”** (50/6)



A. Throughout history people have admired the sky and enjoyed watching the beautiful moon and stars decorating it without any noticeable rifts.

B. When powerful telescopes were invented, black matter and black holes were noticed, and the sky looked as if it is full of rifts and cavities.



# Summary of Chapter 2

❖ God Almighty informed us that He has created seven heavens one above the other. We offered two interpretations:

1. The lower, or the first, heaven is the universe we live in, and the other six are outside it, unobservable even with the most powerful telescopes.

2. The first heaven is the solar system, which the Creator has adorned with planets, the second is the Milky Way, then the heaven of the Local Group, then that of the Virgo (SC), followed by the Laniakea Supercluster, then the sixth one of Pisces–Cetus SC Complex and finally, the seventh one: the entire Universe.

❖ “The sky constellations decorating the sky”, were known since Ancient Egyptians and used in making star maps.

❖ The Qur’an verse mentioning “the sky rifts”, could be understood in Arabic in two ways: the sky with no rifts (when we look at it with naked eye), or the sky with rifts and cavities (when we look at it at night with our powerful telescopes).

**This is an example of the miraculous language of the Qur’an. The same verse could be understood according to the time epoch and the reader’s level of knowledge.**

# Reviewers

Mohammad Mansour, Prof. Dr. Sc., Switzerland

Ibrahim El-Nashar, Dr. Sc., Switzerland

Raouf Sallam, Prof. MD, FRCS, Azhar Univ., Egypt

Salah Bedair, Prof., Ph.D., North Carolina Univ. USA

Mohammad Shama, Prof., Ph.D. Alex. Univ., Egypt

Mohammad Sami Hossny El-Mahgary, M.Sc. Canada

Inari Muurinen, M.Sc., Finland



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