

# Original book cover in Indonesian Language # # I translate myself to English with google translate #

# FRONT COVER

**TATANG BARLIAN** 

# THE HOLOGRAPHIC UNIVERSE VS PREDESTINATION

# **BACK COVER**

# THE HOLOGRAPHIC UNIVERSE VS PREDESTINATION

An astrophysics theory "The Holographic Universe" has rocked the latest world of science. The originator is not an ordinary people. He won the Nobel Prize in Physics in 1999. The 3D Universe that we know, it turns out it is just a Giant Hologram from a 2D source "Black Hole" far away. It is difficult to understand, but what we can do about it. That is the conclusion of 21st century physicists' panel, which peppered with a debate between Stephen Hawking versus Leonard Susskind.

Suppose today you are sucked into a "Black Hole", then one day, when the Black Hole boiling (who knows how many million years), it will emit "Hawking radiation" of your hologram. You think you are living in Nature Real, even though you are just a mirage. It is hard to understand, isn't it?

Easily this: You got up in the morning, then prayed at dawn, then made a coffee and read this book. All of that is just a holographic projection that "driven" from a "Black Hole" far away. Is this what is meant that your destiny is already written in "Lauh Mahfuz" 50,000 years before the creation of heaven and earth as believed by muslims?

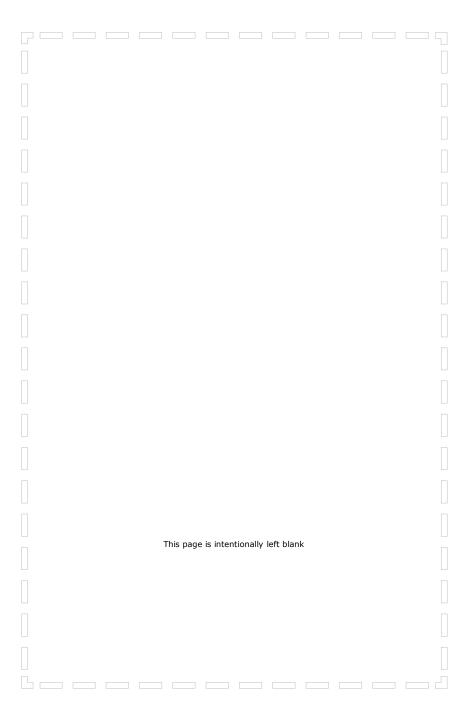
This book discusses various ideas of holographic universe from science of astronomy, thermodynamics, information technology, cosmology, quantum mechanics, etc. We realized that some people will be intimidated by technical terms and afraid they can not understand the concepts. But don't worry, the author has tried to make it simple.

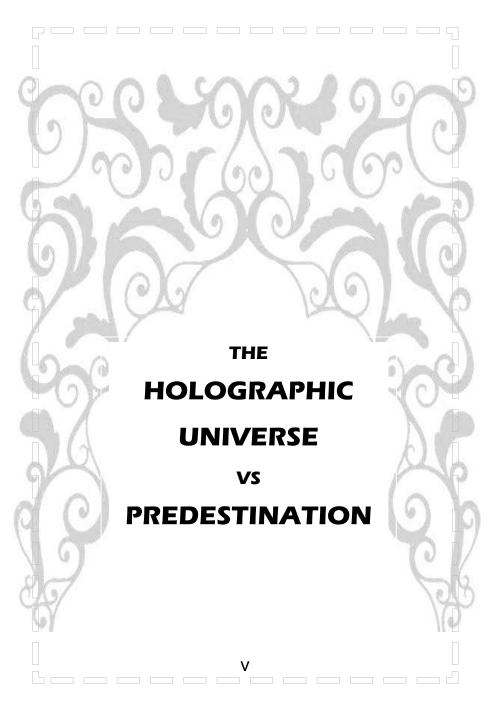
There are 128 images and 130 footnotes that will help to understand 350 pages of this book. You even do not need an engineering background. If you coincidental to meet an unknown scientific term, then all you need is open your mind.

Finally, this book attempts to examine and confront "The Holographic Universe" to Al-Qur'an verses, the glorious noble scriptures, which are guaranteed authentic until the end by Allah Himself. The results are astounding and amazing.



 $^{\star})$  bismillahirrahmanirrahim, in the name of allah, the compassionate, the merciful.



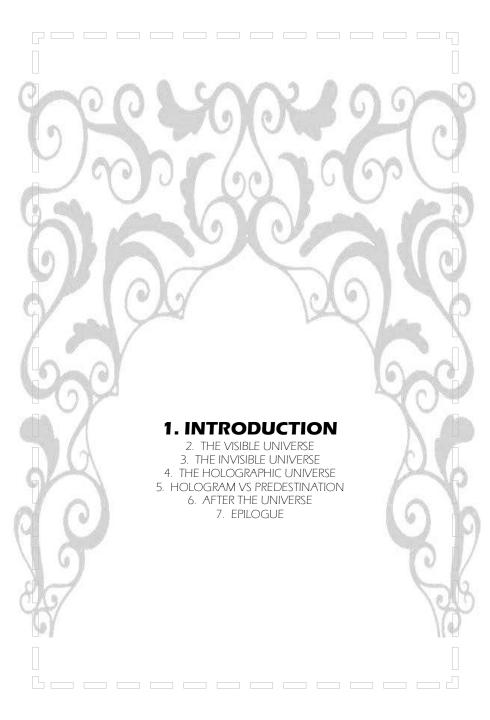


THE HOLOGRAPHIC UNIVERSE  VS PREDESTINATION				
V				
Copyright © 2019				
by Tatang Barlian				
All rights reserved. Printed in				
For information contact www. x x x x x .com				
Translated from the original book in Bahasa Indonesia				
ISBN: x x x x x x x				
First Edition: 2019 10 9 8 7 6 5 4 3 2 1				
Published by www. x x x x x .com				

# **CONTENTS**

_	eface v entents vii
1.	INTRODUCTION 1.1. Ice Breaking of Old Dogmas
2.	THE VISIBLE UNIVERSE         2.1. The Earth       34         2.2. The Sun       44         2.3. The Planets       51         2.4. The Moon       59         2.5. Comet       62         2.6. Star       68         2.7. Galaxy       73         2.8. The Misguided of the Sky Object's Worshippers       82
3.	THE INVISIBLE UNIVERSE         3.1. Dark Matter       89         3.2. Dark Energy       99         3.3. Neutron Star and Pulsar       103         3.4. Quasar       109         3.5. Black Hole       114         3.6. The Expanding Universe       124
4.	THE HOLOGRAPHIC UNIVERSE 4.1. The Black Hole's Thermodynamics 143 4.2. Black Hole: Information Storage Hardware of The Universe

	4.3. The Black Hole Information Paradox 174 4.4. Physical Evidences	
5.	HOLOGRAM VS PREDESTINATION  5.1. The Concept of Predestination 192  5.2. Lauh Mahfuz (Preserved Tablet) 194  5.3. Why Make Efforts if everything is already Destined?	
6.	AFTER THE UNIVERSE 6.1. Introduction	
7.	EPILOGUE	
Bib Ind Lis	of Al-Qur'an Verses in this book	



#### 1. INTRODUCTION

### 1.1. Ice Breaking of Old Dogmas

The author knows it is very difficult for us to understand the concept of The Holographic Universe. You wake up in the morning, and do morning prayer, then make a coffee and finally read this book. Those are all a mirage, holographic projections that "driven" from elsewhere.

Even the Universe as we know it allegedly -based on mathematically count- is just a giant 3-D holographic projection of 2-Dimensional sources far away. The universe what we are talking about is complete with the earth, the sun, the moon, stars, we humans and even a credit card in your pocket, including PIN number in it. Hard to make sense does it?

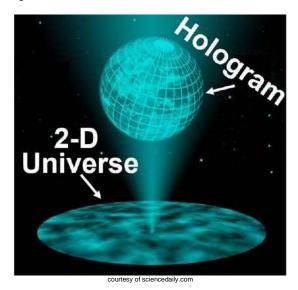


Figure 11A. All atoms making up the Earth and everything in it allegedly is a mirage of "source" 2-Dimensional "Black Hole" surface. The name "black hole" itself, showing an honest recognition of the scientists on their ignorance on the nature of the "Black Hole" itself.

It is difficult to understand, but what can we can do about it. That's the tentative conclusion of the 21st century's modern physicists' panel, spiced thought battle between Stephen Hawking against Leonard Susskind and colleagues.

Suppose today "You" are sucked into the Black Hole (Figure 11B left), then someday when the Black Hole boiling (how many million years upcoming), it will emit "Hawking Radiation" in the form of a hologram of "You?" (Figure 11B right). You think you live in the real live, it turns out you (You?) are just a mirage from a faraway source.

# 

**Figure 11B.** Illustration of the Hawking Radiation from a Black Hole.

Does this mean your destiny is already written in "Lauh Mahfuz" (the Preserved Tablet, coming soon in sub-chapter 5.2), 50,000 years before the creation of the heavens and the earth, like those believed by Muslims?

Each atom that make us, every human being on this earth, is a hologram of the Black Hole "source" faraway emitted in the form of Hawking radiation.

Even further, the stars and galaxies that fills the space of the Universe is a giant hologram of 2-Dimensional sources far away. Similar to movies we watch in the Cinema, the Universe as we see is a movie on the screen, the projection of the 2-Dimensional roll film played by Projector. Difficult to understand isn't it?

Let alone accept this extreme knowledge, to accept that the Earth move around the Sun (Heliocentric) and not vice versa (geocentric), required great efforts of more than 20 centuries, until finally gaining acceptance in the Middle Ages. Risk of burn alive penalties enacted for the "crazy and apostates" thinkers in order to maintain this geocentric dogma that popular at the time.



Figure 11C. Monument of Giordano Bruno (1548-1600) at Campo de Fiori in downtown of Rome, where he was executed burned alive by the Inquisition Court<sup>1</sup>, for his Heliocentric idea contrary to geocentric dogma widely accepted at the time.

In the 16-17th century, Copernicus and Kepler claimed the Sun as the center of the Universe (later revealed it was also wrong).

The Inquisition Court was established in 1588 in Italy. In 1616, the Inquisition rejected Copernicus idea that the sun is the center of the universe. This assessment led to Copernicus book "De Revolutionibus orbium coelestium" declared a forbidden book. In 1633, Galileo Galilee was charged with "misguided" and banned Galileo discussed the heliocentric idea to death under house arrest. The other famous subjects of Inquisition are Francis Patrick, Giordano Bruno, Tommaso Campanella, Girolamo Cardano, Cesare Cremonini, etc. Bruno was executed. Campanella was jailed for 27 years. Domenico Scandella also burned at the stake in 1599. Italian historian Andrea Del Col estimated 51.000 to 75.000 Inquisition cases with about 1,250 death penalties in Italy alone. (Excerpted from many sources)

The Earth turns around the sun. Geocentric dogma rooted in thousands of years suddenly shaky. This is the beginning of the feud between "religion" and "science" until this day. A feud that took thousands of lives. Miraculously, Al-Qur'an is not affected by the theories of the Universe which at the time of Al-Qur'an revealed is so popular and accepted by all humans. Geocentricism was known long before the time of Ptolemy (2nd century BC) and humans would persist until the 16th century at the time of Copernicus. For at least 20 centuries man believed the Earth as the center of the Universe. Geocentric concept that is widely accepted at the time of the Prophet Muhammad s.a.w.<sup>2</sup> in the 7th century, is not mentioned one single time in Al-Quran. There is no verse that says "asyamsu taduru haulal ardhi" or otherwise "al-ardhi taduru haulal Syamsu" or the same meaning with this. So different from another book, Al-Qur'an avoids sharp criticism due to both these misconceptions. Instead affected geocentric and heliocentric dogma, Al-Qur'an provides us information about the galaxy (al-buruuj) in many verses, including this verse: "Blessed be He who hath placed al-buruuj (cluster of the stars =

galaxy) in the heaven and hath placed therein (in the galaxy) a great lamp (the sun) and a moon giving light"

(QS 25 Al-Furgan 61)

Miraculously, 14 centuries ago, in the 7th century, Al-Qur'an has given us an important information that the sun and the moon is part of the galaxy (the cluster or stars). This concept is far more advanced, even though the time of Copernicus.

At the end of the 18th century, Immanuel Kant of Germany .(1724-1804) assumed all stars that appear visible by the naked eye in the sky (including the sun) is "a cluster of stars" that would

<sup>&</sup>lt;sup>2</sup> s.a.w stands for Shallā Allāhu alayhi Wasallam, which means peace be upon him.

later be named the Milky way galaxy. His junior William Herschel (1738-1822) makes systematic calculations to support this notion. Astronomers watch the galaxy after powerful telescopes developed in the 18th century. That means the stars cluster (galaxy) is known about 11 centuries after the revealed of Al-Qur'an.



Figure 11D. The spiral galaxy "Pinwheel", or NGC-5457 or M101. It is just watched with a powerful telescope. It is not appeared to the naked eye. That's why this galaxy has just discovered in 1781 by Pierre Mechain. What he thought a faint dot in the night sky, it is a group of 1,000 billion sun-class stars. This galaxy's distance from Earth is 'only' 20.87 million light-years<sup>3</sup> away, relatively close to making it a close neighbor of our Milky way galaxy.

#### Allah said:

"And verily in the heaven we have set al-buruuj (cluster of the stars = galaxy), and We have beautified it for beholders" (QS 15 Al-Hijr 16)

<sup>3</sup> Light year is a distance of the light travel -which speed of about 300,000 kilometers per second- within 1 (one) year.

Miraculously Al-Qur'an has told us the beauty of the Galaxy 11 centuries before the first galaxy seen by astronomers in 1781. There will be no denying the beauty of the Pinwheel<sup>4</sup> galaxy in Figure 11D above. Similarly, there will be no denying the beauty of the billions of other galaxies whose picture you can access in many internet sites, including some figured in this book.

Ptolemy, Aristotle, Kepler, Copernicus, Galileo, Newton, and all scientists before the 19th century do not know yet what the galaxy is. Even those top scientists have never imagined that there are celestial objects member of a galaxy that more massive than the Sun and the Earth, such as Black Hole (and Quasar) and Neutron Star (and Pulsar).

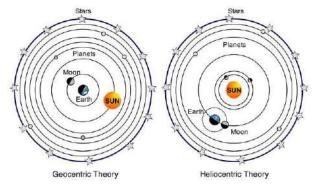
However miraculously, those exotic objects have actually been defined in Al-Qur'an 14 centuries ago. Even the admirable definition of Al-Qur'an is more accurate than the definition of scientists of the 21st century, as will be described in the next chapters of this book.

Elsewhere, -as if do not want to be stuck in the heliocentric vs geocentric debate- Al-Qur'an highlights the rotational motion of the earth on its axis in many verses, including:

"He (Allah) created the heavens and the earth in true (proportions): He makes the Night overlap the Day, and the Day overlap the Night: He has subjected the sun and the moon (to His law): each one follows a course for a time appointed. Is not He the Exalted in Power - He who forgives again and again?" (QS 39 Az-Zumar 5).

The "Pinwheel" galaxy, or NGC-5457 or M101. Catalog of celestial objects have several versions. NGC is the New General Catalog, while M is the Messier Catalog, Initially scientists gave the name of their findings galaxies: Andromeda, Ursa Major, Triangulum, etc. But it turns out the number of galaxies in the Universe are billions so that they run out of names. It is more practical to give them numbers than give them the name. If in the galaxy NGC-5457 only there were 1000 billion sun-class stars, then the total stars in the Universe in minimal amount is about 10X (ten times) the number of grains of sand in all the deserts and beaches, all over the world.

The word chosen was "kawwara" is a verb that is used for the phrase "to roll turban". This word in Arabic is the most fitting for described motion of the earth's rotation on its axis <sup>5</sup>.



Ref: files.wordpress.com

Figure 11 E (Left) Geocentric concept that state that the Earth as the center of the Universe, was initiated by Ptolemy in the 2nd century BC. This concept lasted for 20 centuries. (Right) Heliocentric concept that state the Sun as the center of the Universe, was initiated by Copernicus in the 16th century. Both proved to be wrong, because the Sun and the Earth are only a small object orbiting the galactic center of the Milky way, which is a Black Hole Sgr\*A.

Wise He who has chosen the right words in His Revelation. Imagine if He chose the word "geocentric" or "heliocentric" in Al-Qur'an, then how many thousands more people will be killed? That's why scientist's execution never happened in the history of Islamic civilization. The development of science in the Islamic world was very advanced for nearly 1000 years.

In the case of heliocentric or geocentric, now it is clear that both are wrong. Both the Sun and the Earth is not the center of the

Maurice Bucaille, "The Bible, the Qur'an and Modern Science", translation by HM Rasjidi, Bulan Bintang Publisher, 2010

universe<sup>6</sup>. They are only celestial objects that little sheer. Wise He who has chosen every word in Al-Qur'an carefully, so that people didn't get caught in the war of ideas for centuries.

There is no conflict between religion and science in Islam. Then it is very surprising that in the past century, among Muslims bandwagon "hostile" Science. Islam is much stressed people for study Science. There are 800s kauniyah verses in Al-Qur'an that talk about Science.

Over the centuries, Muslims led the world in science. As evidence, some scientific terms still used to this day<sup>7</sup>, among them:

- alchemy / chemistry from the Arabic الكيمياء al-kīmiyā.
- alcohol (Sb<sub>2</sub>S<sub>3</sub>, PbS, etc) from the Arabic اكحل al-kohl.
- algebra from the Arabic الجبر al-jabr, abbreviated title of the book "al-mukhtasar fī hisāb al-jabr wa al-muqābala".
- The numbers used in the world of Science is the Arabic numerals (0,1,2,3,4,5,...) instead of Roman numerals (I,

<sup>&</sup>lt;sup>6</sup> There are some Islamic clerics who still argue that the sun moves around the earth. Breadth of their knowledge and depth in religious matters of these clerics, certainly not in doubt. But it does not mean they should always true in all opinion. Moreover, they said represents associated with a natural phenomenon that is conveyed through gesture in Al-Qur'an. Not through explicit statement.

In Al-Qur'an there is no verse that says explicitly states that the sun moved around the earth. There are only statements that the sun was outstanding, sunrise, sunset, leaning, going, coming and the like. No Muslim ever resists. Because the verses did say so.

All information related to the sun are associated with the subjective view of human beings. Where Allah is said to mankind. Then it is okay to mention that the sun was setting, of course, from a human standpoint. When in fact, the sun is never completely disappeared. It just disappeared from sight only.

Fiforts to de-Arabization of scientific arab-muslim terms massively done by western scientists to eliminate traces of the Arab-Muslim treasures has been intensively conducted for a long time, like changing algebra into mathematics, modified Arabic numerals from the original, etc.

II, III, IV, V,...) which did not even recognize the concept of 0 (zero).

I II III IV V VI VII VIII	1 2 3 4 5 6 7 8 9 10 11 12 13
MCMLXVIII divided by XXVIII	28 1,968
MMLXXII times XXVII	2.072 × 27

#### Figure 11F.

Multiplication and division in Arabic numerals are much simpler than in Roman numerals. It's an enormous contribution from the Arab-Muslim in Science.

courtesy of uoregon.edu

- algorithm from the Arabic الخوارزمي al-khwārizmī, taken from the name of Muhammad ibn Mūsā al-Khwārizmī (died in 850)
- admiral from the Arabic أمير amīr.
- alcove (cupola furnace "the vault") from the Arabic القبة al-qobba.
- alembic (distillation apparatus) from the Arabic الانبيق al-anbīq.
- alidade (instrument in astronomy) from the Arabic العضادة al- iḍāda (from 'iḍad, pivoting arm).
- alkaline from the Arabic القلى al-qalī <sup>8</sup>
- amber / ambergris (waxy material) from the Arabic عنبر anbar,
- anil, aniline, poly-aniline (plastic) from the Arabic النيل al-nīl

<sup>&</sup>lt;sup>8</sup> There is also science terms that is thought of Muslim scientists, but it is not, ie :

zircon, zirconium is thought from Arabic زرقون zarqūn, whereas the name is given by German scientists in 1800.

amalgam, amalgamate is thought from Arabic الملغم al-malgham whereas this is a Latin name. Are Latinos adopted this term from Arabs? Wallahua'lam.

<sup>-</sup> caliber, calipers is thought from Arabic قالب *qālib* = "mold" , but it is not.

- arsenal from the Arabic دار صناعة dār sinā 'a.
- assassin (criminology term) from the Arabic حشاشين hashāshīn.
- average (statistic term) from the Arabic عواري 'awār, and عواري 'awārī, and عوارية 'awārīa.
- azimuth (astronomy term) from the Arabic السموت assumūt
- azure, lazurite, lazulite (mineral) from the Arabic لازورد lāzward
- benzene from the Arabic جاوي لبان *lubānjāwī*.
- bezoars (calcium compounds) from the Arabic بازهر bāzahr (from Persian pâdzahr).
- borax, borate, boron from the Arabic بورق būraq.
- camphor from the Arabic كافور *kāfūr*.
- carat (gold purity) from the Arabic غيراط qīrāt.
- caravan (militery convoy) from the Arabic فيروان *qaīrawān*,
- caraway (seed term) from the Arabic كرويا karawiyā.
- coffee, café from the Arabic قَبُوهَ *qahwa*, adopted to Turkish language *kahve.*
- cotton from the Arabic قطن qutn.
- curcuma (plant genus), curcumin (yellow dye), curcuminoid (chemicals) from the Arabic کرکم *kurkum*.
- elixir (pulverized mineral agent) from the Arabic الإكسير al-iksīr.
- haboob (type of storm in climatology) from the Arabic بوب habūb.
- hashish from the Arabic مشيش hashīsh.
- hazard ("playing at dice") from the Arabic پس yasar

- Kermes (insects genus), kermes (dye), kermes oak, kermesite (mineral) from the Arabic قرمز qirmiz.
- kohl (cosmetics) from the Arabic کحل kohl.
- lacquer (the type of resin) from the Arabic <u>all lakk.</u>
- magazine from the Arabic مخازن makhāzin.
- monsoon (climatology term) from the Arabic موسم mawsim.
- typhoon (climatology term) from the Arabic طوفان tūfān.
- mummy from the Arabic موميا *mūmiyā*.
- natrium (Na) from the Arabic نطرون natrūn.
- ream (500 sheets of paper) from the Arabic رزمة rizma.
- safari from the Arabic سفر safar,
- sugar from the Arabic سکّر sukkar, sugar
- syrup from the Arabic شراب sharāb.
- soda (sodium) from the Arabic سويدة suwayda.
- talc from the Arabic طلق talq.
- tariff (the customs term) from the Arabic تعریف taʿrīf.
- zero from the Arabic صفر sifr.

There are many other terms and names from various fields of science that comes from medieval Muslim scientists, including Astronomy (the names of celestial objects), the field of Medical, Chemistry, Physics, Botany, Geography, Geology, Literature, Philosophy, Mathematics, Law, etc., which shows the dominance of Muslim scientists at a time when Europe was still in the dark ages.

The peak of Muslims dominance was evident in 1453 when they were -led by Sultan Muhammad II or known as Sultan Muhammad al-Fatih- conquered Constantinople of the Byzantine Roman capital. He changed her name to Islambul (Islamic cities) or Istanbul today. This was the heyday of Islam and the

deterioration of Europe's deepest valleys. Muslim soldiers look really dominance of they were in full uniform, against European soldiers without any uniform, like the paramilitary of guerrillas who lost everything.

The triumph of nations exchanged by Allah swt as His word:

"...And so are the days (good and not so good), We<sup>9</sup> give to men by turns, that Allâh may test those who believe, and that He may take martyrs from among you. And Allâh likes not the Zâlimûn (polytheists and wrongdoers)" (QS 3 Ali Imran 140)

The defeat in 1453 was glaring Europe. They were aware, if the continued dominance of religion, they would be soon perished. Islamic flag has been hoisted in Western Europe in Andalusia (now Spain) and in Eastern Europe in Constantinople (now Turkey). Only a matter of time before Muslim bulldoze exhausted throughout Europe. This awareness would be changing the face of Europe towards modernization.

Renaissance (Renaissance) began in Europe is a cultural movement that developed in the period roughly from the 15th century until the 17th century. Starting from Italy by people who were displaced from Constantinople and then spread throughout Europe.

European estrangement from religion causing emerge figures of the revival of art, science, explorers, politics, etc. Some of the figures born by the Renaissance, among others:

- Leonardo da Vinci (1452-1519) - Michelangelo (1475-1564)

The word "We" does not mean the plural. It is common, the word "We" is used with the aim of politeness value. The word "We" is sometimes also means that in doing these actions, God involves His creatures. For example, in the revelation of Al-Qur'an, Allah involving the angel Gabriel (ra), Prophet Muhammad (saw), the recorder / writer of revelation, the Huffadz (memorizer of Al-Qur'an), etc. But the word "we" had not been used for phrase servitude creatures to his Creator. That is used always "worship Me", and never "worship Us".

-	Christopher Columbus	(1451-1506)
-	Ferdinand Magellan	(1480-1521)
-	Johann Gutenberg	(1400-1468)
-	Nicolaus Copernicus	(1478-1543)
-	Galileo Galilee	(1546-1642)
_	Johannes Kepler	(1571-1642), etc.

Ironically when Europe dump religion and embrace science, on the other hand, the Muslims on the contrary began bandwagon hostile to science as Old Europe. However, even though Muslim to follow in the footsteps of Old Europe hostile to science, they never execute the scientists. They just no longer put scientists at the peak of respect as before.

This has caused Muslims abandon their leadership role in the field of Science. Europe move forward to fill the leadership vacuum. Religion and science are separated. Something previously unknown in the Islamic World. Even in its history, Muslim scientists such as Ibn Sina, Ibn Rusyid, etc., are both qualified scholars.

#### 1.2. Al-Qur'an and Modern Science

Pairing Al-Qur'an and Modern Science may seem strange to some readers. While some others might indifferently consider excessive. Perhaps they believe Al-Qur'an is nothing more than the dogmas of the work of a retarded Arab Bedouin.

But from the next chapters the reader is expected to increasingly understand that the Universe and Al-Qur'an are the two things come from one God (Al-Ahad). So, the fit between them is inevitable.

Unlike the other and previous holy books, Al-Qur'an is guaranteed authentic forever. This gives us an opportunity to examine the selection word by word in it and trying to understand it from the perspective of Modern Science. Instead we can look for answers to the science mysteries of the Universe from word for word choices in Al-Qur'an, the noble holy book guaranteed free from intervention of dirty human hands

Guarantee of authenticity that comes from the Creator himself in the passages below. This guarantee is not found in any other "holy" books.

> "Verily, We (Allah) revealed Al-Qur'an and indeed We actually maintain it" (QS 15 Al-Hijr 9)

If Allah himself that guarantees the authenticity of Al-Qur'an, guarantee who else do we need? Proven in 14 centuries since the revelation, Al-Qur'an does not fall apart into many versions. It has not changed one single alphabet. If the imam misread the verses of Al-Qur'an, many different congregations that will correct his reading. Suppose today all the manuscripts of Al-Qur'an destroyed, then tomorrow it could be made of new manuscripts, because there are many people who memorized Al-Qur'an.

"And the Word of your Lord has been fulfilled in truth and in justice. None can change His Words. And He is the All-Hearer, the All-Knower"

(QS 6 Al-An'am 115)

There are 800s "kauniyah" verses in Al-Qur'an discuss about science. The evolution theory answered QS 88:17 "how the camel was created?". The Big Bang theory answered QS 88:18 "how the heaven expanded?". Continent plates motion theory answered QS 88: 19-20 "how the mountains created?" and "how the earth is spread out".

Suitability Al-Quran and Modern Science has proven and astounding scientists. Selection verbatim in it so carefully, such as weighing a letter with a piece of hair. Very exactly as it appears in the Modern Science.

Some verses in accordance with the Big Bang Theory:

"Have not those who disbelieve known that the heavens and the earth were of ONE PIECE<sup>10</sup>, then We parted them, and we made every living thing of water. Will they not then believe?" (QS 21 Al-Anbiya 30)

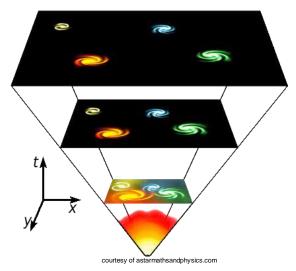


Figure 12A. The Big Bang happened 13,8 billion years ago

After the Big Bang 13.8 billion years ago, the universe continues to expand until this day, which we know as the Expanding Universe. This was revealed many times, scattered in many verses, among others, in QS 88:18, QS 91: 5, QS 55: 7 and QS 50: 6

"We constructed the heaven with power. Verily, We are able to extend the vastness of space thereof" (QS 51 Adz-Dzaariyat 47)

This verse contains a very important choice of word in the original language Arabic. The literally meaning of "ratk" in Arabic dictionaries is "a unity" means "mixed, united". The phrase "we parted" is translated from the Arabic verb "fatk" which implies that something happened with "ratk" apart or destroying the structure.

Miraculously 14 centuries ago Al-Qur'an clearly declared the Universe expansion in many verses consistently, scattered in many chapters. It is not influenced by static universe idea until 20th century. An idea which even made scientists of the caliber of Einstein stumbled by added cosmological constant. Later Einstein recognizes this constant is the biggest mistake in his career as a scientist.

Before the revelation of Al-Qur'an, the Arabs already knew that the young Muhammad (saw) is not good at reading and -what again- writing. Youth Muhammad (saw) have been well recognized by his people, the tribes in the Arabian Peninsula. He was 40 years of living in their midst before being appointed as the Apostle. Although illiterate, all Arabs recognize that Muhammad (saw) had a high moral character, a reliable and have never lied.

"Neither did you (O Muhammad) read any book before it (this Al-Qur'an), nor did you write any book (whatsoever) with your right hand. In that case, indeed, the followers of falsehood might have doubted. But it is clear revelations in the hearts of those who have been given knowledge, and none deny Our revelations save wrong-doers"

(QS 29 Al-Ankabut 48-49)

So how could an illiterate from the most backward civilization in the world -which even the two superpowers at that time, Roman and Persian are not interested in making Arabia as their colony- could write a book of Al-Qur'an which word by word in it according to Modern Science?

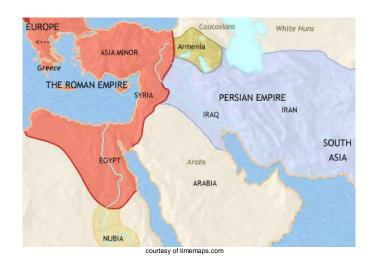


Figure 12B. In the 600s AD, the time of the Prophet Muhammad (saw) (570-632M), there are 2 (two) super-power in the world, the Byzantine Roman (left) and Persian (right). Both of them are not interested in expanding their colony to Arabia in the south because there was nothing there. The ground was barren no water, and inhabited by Bedouin tribes of nomadic barbarian war with each other fighting over very limited resources. A most primitive civilization in the world.

The conformity of celestial objects terms in Al-Qur'an with the definition of modern science is also very surprising. Primitive societies certainly know the sun, the moon and stars. But if they didn't know the celestial objects named Planet, Neutron Stars and Pulsars, Black Holes and Quasar and even galaxies.

In the 7th century, the terms of this last is not known. Only after humans have increasingly advanced telescope in the 18th century we came to know all of it. But surprisingly those exotic celestial objects are actually defined in Al-Qur'an even more precise than the term we know today.

For example, the term "Black Hole" which has used by modern scientists of the 20th century, long after Einstein's death. The connotation is "nothing" in there. In fact, we all know now there

is "something" there are very very masiv. Compare this with the definition in Al-Qur'an as following:

"So verily, I (Allah) swear by the hidden stars. (The stars) that move swiftly and sweep"

In this verse Allah (swt) swears by the star given three characters, namely khunnas, jawaar dan kunnas<sup>12</sup>.

(QS 81 At-Takwir 15-16)11

Khunnas (الْخُنُّةُّنِّةُ) literally meaning is "hidden" or "invisible". Khunnas is the plural form of khanish. In Surat an-Naas, devils called khanaas (الخناس) because they are not seen by humans. The translators usually translate this verse "the hidden star". This selection of word in Al-Qur'an is better than the word "Hole" used by this century's scientists. The word "hole" suggesting there was "nothing" there. In fact, there is "something" extraordinary masiv there.

Jawaar<sup>13</sup> (الْجَوَارِ) literally meaning is moving very fast. This is the second character of the Black Hole. This word choice is more perfect than the explanation of modern scientists "moves" which does not describe rapid movement. Just to illustrate, the farthest galaxy detected in this time is galaxy Abell 2744 Y1. It is located

Imam Ar-razi said, "Allah swears by the stars were hidden during the day, which eclipsed from the eye, but he remained in circulation place, and swept away or covered in the afternoon".

Modern commentators interpret "the stars that disappear or go back on its axis, and the crossed into circulation and then hide again." The interpretation of the scholars, either classic or modern, have one common thread. Namely, that there is a kind of star that his form was there but not visible to the eye

When interpreting this verse, classical commentators trying to figure out to explain the invisible star. Imam al Qurthubi interpret: "That stars are hidden during the day and washed away or covered in the afternoon".

<sup>&</sup>lt;sup>12</sup> Reference: Dr. Danial Zainal Abidin, E-book Qur'an Saintifik, Menerka Qur'an daripada Teropong Sains. (PTS Millennia Sdn Bhd.)

Jawar is the plural of jariyah, which means 'ship, the ark', and previously interpreted as 'walking, running', root of this verb is "jara", which means "to flow, run '. So here it means the stars that run or move quickly.

about 13.2 billion light years from Earth. It rapidly mave away from the Earth at nearly the speed of light, or around 300 000 km per second, to keep pace with Black Hole in its center.

Kunnas¹⁴ (الْكُنُّن) literally meaning is "sweep and swallow" any meets. This word is derived from a word "kanasa" means "draw

Kunnas¹⁴ (الْكُفُّين) literally meaning is "sweep and swallow" any meets. This word is derived from a word "kanasa" means "draw something near and gather to himself strongly". This is the "vacuum cleaner" character of a Black Hole that swallows anything that was nearby, even a lot of stars. This Al-Qur'an's selection of word is better than the word "Black" used by 21st century's scientists.

Behind the three words in two short verses above, which seems trivial, stored very deep meaning, which only understood by the astrophysicist of the 21st century. Even Albert Einstein himself until his death in 1955 never believed no such masiv thing that its gravity even sucks up light

The choice of words that appear simple, but the contained meaning much more accurate than the definition by scientists today. These three are the caracteristic of a Black Hole, aren't they?? Wallahua'lam.

When Allah swears, what would submit after that oath is very important. Let's say the author is correct, in Al-Qur'an 81: 15-16 above, Allah swears by a "Black Hole", then see what was conveyed afterwards:

"Verily this (Alquran) is no less than a Message to (all) the Worlds. For him among you who pleases to go straight. And you do not please EXCEPT that Allah please, the Lord of the worlds".

(QS 81 At-Takwir 27-29)

Subhanallah (all praise be to Allah) ..... it turns out what was delivered after that oath is DESTINY issue, that in the next

Kunnas is originated from word "kanasa" means sweep. Miknasah is a tool for sweep. Kunnas is plural of kaanis (rake). Kunnas is the highest plural (shigat muntaha jumuk) on a single form kaanis.

chapter we will know it recorded at the "event horizon" of a Black Hole !! "This Qur'an is not such as can be produced by other than Allah, on the contrary it is a confirmation of (revelations) that went before it, and a fuller explanation of the Book - wherein there is no doubt - from the Lord of the Worlds" (QS 10 Yunus 37) Anyone who opens his heart would certainly welcome the truth of Al-Qur'an from The Creator, as the Bedouin Arabs 14 centuries ago who accept Al-Qur'an as entranced by the beauty of the poetry of grammar in it. "Whoever turns away from it (Qur'an), verily, they will bear a heavy burden (of sins) on the Day of Resurrection" (QS 20 Thaha 100) In the next sub-chapter, it will seem how accurate Al-Qur'an definitions on other advanced celestial objects, such as the Pulsar aka the Neutron Star, the White Dwarf, until the Planet. Many verses in accordance with the theory of tectonic plates. "And after that, He spread out the earth" (QS 79 An-Naaziaat 30). Many other verses in accordance aligned with the concept of celestial objects orbits in modern Astronomy. "And He it is Who created the night and the day, and the sun and the moon. They float, each in an orbit" (QS 21 An-Anbiya' 33). Other verses in accordance with the concept of Time Dilation in Einstein's Theory of Relativity, for example: "He arranges (every) affair from the heavens to the earth, then it (affair) will go up to Him, in one Day, the space whereof is 1000 years of your reckoning" (QS 32 As-Sajadah 5) "... surely a day with your Lord is as 1000 years of what you number" (QS 22 Al-Haji 47)

#### "The angels and the Ruh (Gabriel) ascend to Him in a Day the measure whereof is 50.000 years" (QS 70 Al-Ma'arii 4)<sup>15</sup>

There is no doubt, this is suggested by Einstein in his Theory of Relativity in 1905 that shook the world of science at that time. It took many years for Einstein to convince his colleagues the fellow scientists. Whereas 13 centuries previously, Al-Qur'an has called this issue in many verses consistently.

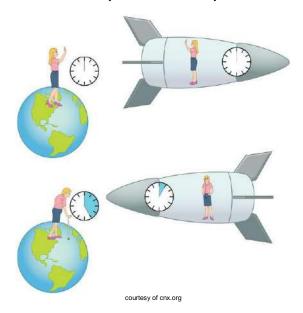


Figure 12C. (Above) Twin sisters A and B separated. A flying a plane at speed approaching the speed of light. B stays on Earth. (Bottom) When come home A and B differ much age. A feel to fly only a few days, while B live on the earth passing through decades.

There is no contradiction between 1,000 or 50,000 years, because the time can indeed elastic like rubber. It is depending on how fast you approach the speed of light. So depending on the speed used. Wise He was that use these two numbers to indicate the relativity of time.

Other verses in accordance with the reality that the atmosphere protects the earth from meteorites rain and cosmic radiation, for instance QS 2:22 "the sky as a roof." The other verse in accordance with the fact that the air thins at an altitude of fly ie QS 6: 125 "suffocated climb the sky".

It is increasingly strengthening the evidence that Al-Qur'an is not a literary work by retarded Bedouin Arabs in the 7th century AD. It is the revelation of Allah the Creator of the Universe itself.

"Or they say, "He (Muhammad) forged it (Al-Qur'an)". Say: "Bring you then 10 forged Surah (chapters) like unto it, and call whomsoever you can, other than Allah (to your help), if you speak the truth! But if they do not answer you, then know that it is revealed by Allah's knowledge and that there is no god but He; will you then submit?" (QS 11 Hud 13-14)

Miracles of 25 Messengers mentioned in Al-Qur'an, for example Abraham resistant to fire, so it does not work when he was burned by the king Nimrod. On the order of Allah, the fire was being cold. Miracle of Prophet David is he had a melodious voice. All creatures who hears will participate to exalt the glory of God. Moreover, the Prophet David was also able to soften the iron. Prophet Solomon is a wealthy prophet. Miracle given by Allah to Prophet Solomon was able to communicate and rule the animals, the wind and the jinn.

Prophet Joseph had an incredibly handsome face and given the ability by God for interpreting dreams. Miracle of Prophet Jonah was able to survive in the belly of the fish. Miracles of Prophet Moses was his stick that can be turned into a serpent, able to divide the sea, capable of emitting 12 springs and others. Miracles of Prophet Jesus was able to talk while still in his mother's arms. He made a bird out of clay, healed the blind, cure outbreak of leprosy and even raise the dead with God's permission.

Unlike the previous prophets who "armed" with a supernatural miracle, the last and the greatest Prophet Muhammad is armed with the miracle of Al-Qur'an, a human-readable up to the end times.

Narrated Abu Huraira (ra): The Prophet (saw) said, "Every Prophet was given miracles because of which people believed, but what I have been given, is Divine Inspiration which Allah has revealed to me. So, I hope that my followers will outnumber the followers of the other Prophets on the Day of Resurrection".

[Hadits Shahih Bukhâri 4981]<sup>16</sup>

Hundreds of theories about the universe have been made by scientists throughout history. Most of them turned out to be wrong. None approved by nature. Take for example the concept of "Terra Plana" the flat rectangular earth. If someone climbed to the top of a very tall tree that he could see the end of the world. Miraculously Al-Qur'an is not affected by this 'great' scientists' idea. Though for thousands of years this concept was widely believed, even recorded in the other "holy" books.

Say: "If the whole of mankind and Jinn were to gather together to produce the like of this Qur'an, they could not produce the like thereof, even if they backed up each other with help and support".

[QS 17 Al-Isrâ' 88]

At the most Nature said "probably true" to a theory and most theories immediately blamed by further researchers. For example, the Newton's Theory of Gravity is so honored for centuries. It turned out that this theory is only valid for our daily life at speeds far below the speed of light.

No doubt, the Newton's Theory worked well in our world. But once you approach the speed of light, its Classical Mechanics

24

<sup>16</sup> Hadith are the record of the words, actions, and the silent approval, of the prophet Muhammad (saw). Allah said, "Nor does he speak from [his own] inclination. It is not but a revelation revealed". (QS 53 An-Najm 3-4). Hadith is the second source of Islamic teachings after Al-Qur'an. Unlike Al-Qur'an which Allah himselves guarantees is authentic, the Hadith has no guarantee from Allah. Then the scholars like Bukhari, Muslim, Abi Dawud, Tirmidzi, Nasai, Ibnu Majah, etc, make a classification which one is authentic (shahih), good (hasan), weak (dhoif) and which one is false hadith (maudu').

will be fall apart. Einstein comes to rescue with a 4-Dimensional concept of space-time. Introduced more than 100 years ago for the first time, the concept of time dilation to explain the physics of extremely high speed. This concept is still hard to understand even for today's most people.

Now, with the Black Hole as an object, we can find a set of crazier ideas, including the concept of "the Holographic Universe" which we discuss in this book. It could be said that an extreme phenomenon needs an extreme explanation. Even Einstein himself -until his death in 1955- never believe there will be celestial objects with so masiv gravity, that even light can not escape from it. That's why around 20 years after Einstein's death, the term "Black hole" just started to be heard.

A half century ago, even Einstein had to correct his conviction that the Universe is static. Einstein's mathematical formula originally required the Universe expansion (Figure 12A previously). But he was not sure on the himself calculation. Then he added Cosmos Constants in order the Universe to remain static. Later, after Hubble discovery that the universe is expanding, Einstein regretted this constant as the worst mistake of his career as a scientist

When Newton's Classical Mechanics<sup>17</sup> confronted with Einstein's relativity, even scientist level thinkers are very difficult to understand. The theory of relativity has unified space and time in a four-dimensional world, the space-time (concatenated written as one word). This mathematically formulated squared spacetime = squared interval - squared distance. The minus sign is different from the ordinary notion of space and time (using the "and", space and time as separate things) who are familiar with

$$\mathbf{g} = G \int_{V} \frac{\mathbf{r} \rho \mathrm{d} V}{\left|\mathbf{r}\right|^{3}}$$

The formula for non uniform mass distribution (density ho, radius r dan volume V)

Newton's General Gravity Law, for the two point masses:

Pythagorean formula: squared distance = squared x axis + squared y axis.

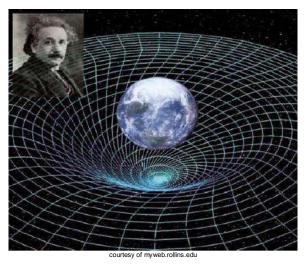
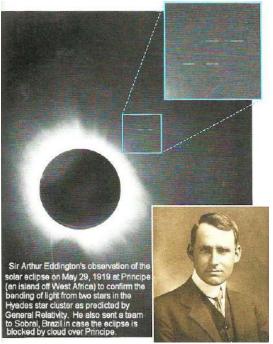


Figure 12D. Curved spacetime by mass of celestial objects, which was initiated by Einstein (insert) a century ago. The greater the mass of an object, the stronger the effect. Consequently, there will be a super-large mass with a giant gravity that even light cannot escape from it (a Black Hole).

In the world of space and time<sup>18</sup> (following Newton's law, nonrelativistic) we always walk to the future slowly at 24 hours each day. But we can also walk into the future with more quickly to a place very far away, for example by a spacecraft approaching the speed of light. This is the relativistic journey, follow the law of relativity.

<sup>&</sup>quot;Lo! your Lord is Allah Who created the heavens and the earth in six Days, then mounted He the Throne." (QS 7 Al-A'raf 54). In many verses there are often the phrase "heaven and earth" (= the space) paired with "six days" (= the time). Is it signaled the dimensions of the space-time that is later initiated by Einstein? Wallahua'lam.

On the relativistic travel, the running time is relatively more slowly than the time in a state of abides did not participate in travel. It is already proven in high-energy particles. Half life (turned into other particles) Muon particles are actually in a state of abides only millionths of a second. But on the relativistic travel at speed approaching the speed of light, muon's half life observed by the detectors that can reach 50 times.



courtesy of universe-review.ca

Figure 12E. Sir Arthur Eddington proved the theory of General Relativity that initiated by Einstein in 1905. At a total solar eclipse at Principe Island, offshore of West Africa on May 29, 1919, two stars in the Hyades cluster was behind the sun, so both should not visible from Earth. However, because the space-time is bent by the great mass of the Sun, both are become visible from Earth (insert).

100 years after Einstein formulated the Theory of Relativity, instead of slowing down the development of the physical sciences, but even more rapidly with the development of supercomputers that can help scientists to resolve their calculus formulas

In this book, many non-Muslim expert opinions are used as references by the author. Therefore, before going too far and avoid misunderstanding, the author needs to explain the reasoning by which on permission to refers to non-Muslim expert opinion. In the following hadith, the Prophet received the truth even though it comes from a Jewish.

It was narrated from 'Abdullah bin Yasar (ra), from Qutailah (ra), a woman from Juhainah, that a Jew came to the Prophet (saw) and said: "You are setting up rivals (to Allah) and associating others (with Him). You say: 'Whatever Allah wills and you will,' and you say: 'By the Ka'bah'. So, the Prophet commanded them, if they wanted to swear an oath, to say: "By the Lord of the Ka'bah;" and to say: "Whatever Allah wills, then what you will" (Hadits Shahih Sunan An-Nasa'i 3773)

Just as Einstein predicted the formula E=mc² from mathematical calculation instead of laboratory tests, the physicists also offered the theory of "holographic universe" from a stack of mathematical calculation.

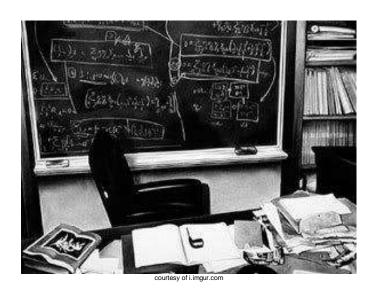
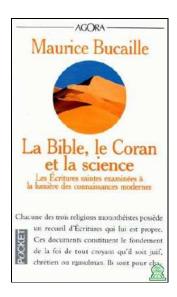


Figure 12F. Einstein's work room when he died in 1955. There is no chemical lab test, pipettes and microscope there. There is only a stack of theoretical mathematical calculations, with the confidence that there is physical reality in every mathematical equation.

The author is grateful to Dr. Maurice Bucaille for his book "La Bible Le Coran et La Science" which give a lot of inspirations for this book. One valuable lesson from Dr. Bucaille is the words in Al-Qur'an which discuss about Science -and especially about the Universe- often use the literal meaning.



#### Figure 12G

30 years ago, the author read this book translation and commends Dr. Maurice Bucaille analysis.

However, the latest scientific developments, especially about the Universe, many of which have not been included in this legendary book.

Meanwhile Al-Qur'an remains actual according to the times. Now and 30 years ago is the same, it remains amazed the author in every word by word in it.

Literature of Al-Qur'an enchanting tribes of nomadic Bedouin Arabs 14 centuries ago. While its eminent are also accepted by modern scientists

He (Allah) did not messing around with the creation of the Universe, so we must also be careful in defining<sup>19</sup> each word in verses about the Universe.

"We created not the heavens and the earth and all that is between them for a (mere) play" (QS 21 Al-Anbiyaa 16)

The word "no messing around" appears again in this verse.

<sup>&</sup>lt;sup>19</sup> Translation of a word in Al-Qur'an can take the literal meaning as in the verses about the Universe that we discuss in this book. But it can also use the figurative meaning, as the word "touch" in the story of Mary of the following:

<sup>&</sup>quot;He (Gabriel) said: "I am only a Messenger from your Lord, (to announce) to you the gift of a righteous son (Jesus)". She (Mary) said: "When shall I have a boy and no mortal has yet touched me, nor have I been unchaste?" (QS 19 Maryam 19-20)

The clerics interpret 'touch' is clocked by a man through marriage. Interpreted as such because "al-massu" is an allegory of a legal relationship.

#### "And We created not the heavens and the earth, and all that is between them, for mere play" (QS 44 Ad-Dhukhan 38)

What is meant "mere play" in these verses is to interpret it by literal words in the discussion of the Universe? Wallahua'lam (Allah knows the best).

Back to the Holographic Universe, the Holographic Principle states that the 3-Dimensional Universe that we know -Complete with the Earth, the Sun, the Moon and the stars- is a mirage or a hologram or information projection emitted from the surface of the 2-Dimensional far away.

The question is where the 2-D surface that is "write" our universe? In what form the hologram itself? Which version of the universe that is more "real", the 2-D or 3-D? Whatever the answer, clearly, if the holographic principle is correct, we may have to face the fact that our universe is just a mirage universe, the cosmic phantom.

The Black Hole<sup>20</sup> is considered as the darkest place in the universe because even though a light beam cannot get out of it. The reason is the extreme gravitational pull. To overcome the Earth's gravitational grip, you have to ride a rocket speed of 11 km per second and humans has made this rocket since 1959. But the speed of light that 300,000 km per second is not even enough to overcome the gravitational pull of the Black Hole. Therefore, we cannot peek inside the Black Hole

The Separator line between the inside and the outside of a black hole is called the event horizon. Initially, scientists suspected all

The word "Black Hole" shows an honest scientists recognition on their ignorance about what it is. As you sit on the soft sofa, then of course you make a basin butt on it. Imagine an invisible giant is sitting on it. We will see a very deep basin on the sofa as an indication there is a "big man" sit there, even though he is invisible. But we do not know what it'll look like. So we used many terms: Black Holes, Dark Matter, Dark Energy, etc., to show our ignorance. Name "Black Hole" was first used in 1967, when the American physicist John Wheeler spoke at Columbia University in New York.

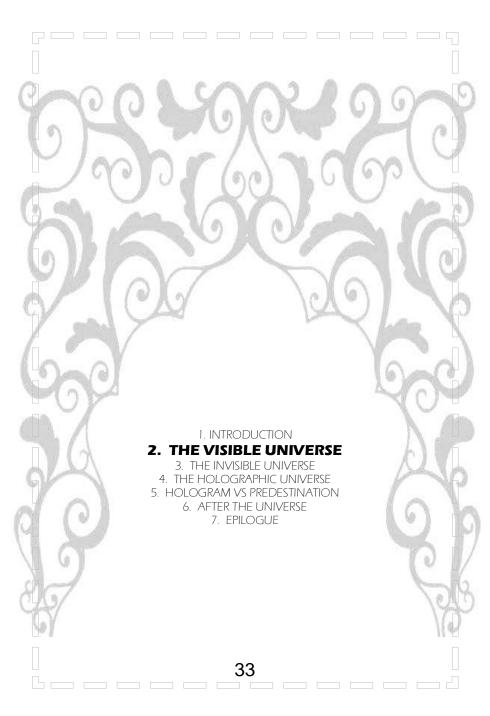
things crossing that limit will be sucked and lost forever. But later mathematical calculations suggests otherwise. Suppose your wallet is sucked into a Black Hole, even your ATM-card data including its PIN number remain intact.



Figure 12H. The holographic Principle states that every atom in the 3-D Universe is only a "hologram" of a 2-D sources far away. Including the atoms making up the human body is simply "apparent shadows" from more real "2-D source" faraway

Before going into the topic of the Holographic Universe, we will gradually discuss briefly about the Visible Universe (chapter 2) and the Invisible Universe (chapter 3). "So I (Allah) swear by whatsoever you see. And by whatsoever you see not" (QS 69 Al-Haqqah 38-39).

Afterward we go into a discussion of the Holographic Universe in chapter 4 and the connection between the Hologram in Science and the concept of Destiny in Islam in Chapter 5. Finally we complete this discussion with the "hologram" after the Universe in chapter 6.



### 2. THE VISIBLE UNIVERSE

The visible universe is important to be discussed before entering into the topic of holographic universe. From this chapter the reader is expected to further understand how the perspective of Al-Qur'an and modern science about the universe.

### 2.1. The Earth

The English word "Earth" is adopted from Arabic "ardh". This vocabulary shows (again) the influence of the Arab-Muslim in the Modern Science. Readers are expected to understand. Europe at that time still embrace the concept of "Terra Plana" where the earth is flat like a coin or a piece of paper. Western people are not familiar with the concept of the Earth that we know today as a planet.



Figure 21A. Picture of Earth from an altitude of 700 km above sea level captured by NASA MODIS satellite. At the left side there is the Arabian Peninsula was cloudless, while the Indian Ocean was a little cloudy on the lower side.

The concept of flat earth "Terra Plana" was embraced by people for dozens of centuries. If we sailed too far, then we will get to the waterfall on the edge of the earth and will fall into the abyss. This concept is wrong, but is very popular for long time. Miraculously, this popular concept is never mentioned in Al-Qur'an, make it avoided from criticism from modern scientists.

## Concepção da Terra plana



- Influência da tradição da Igreja Católica Romana.
- Obra do frade Cosmas Indicopleustes (535 d.C.):

nega a existência de antípodas; nega a ideia da esfericidade da Terra.

courtesy of bp.blogspot.com



Figure 21B. The concept of "Terra Plana" since the age of Aristotle, Plato, Archimedes to Columbus in the 15th century. The earth has the edge, so if the ship sailed too far, she will fall into the abyss. That's why when Columbus sailed too far to the west in 1492, the crew are so frightened to enter the waterfall and want to get back home.

The earth is the most celestial object known to us, because we are among 7 billion people who currently live on it. And up to now the Earth is still considered the only object in the sky that can be occupied by living organisms.

The earth<sup>21</sup> is special because it has a protective shield in the form of atmospheric air that we breathe everyday. This protection has been described 14 centuries ago in the choice of the word "bina'a" (roof) QS 2:22 and QS 21:32 uses the word "saqfa" (roof).

"Who hath appointed the earth a resting-place for you, and the sky a canopy; and causeth water to pour down from the sky, thereby producing fruits as food for you. And do not set up rivals to Allah when ye know better" (QS 2 Al-Bagarah 22)

"And We have made the heavens as a canopy well guarded: yet do they turn away from the Signs which these things (point to)!" (QS 21 Al-Anbiya' 32)

Are there both 2 words that means "roof" above describe the protection of the earth of meteor rocks "rain" and "blistering" solar radiation, which is shown in Figure 2 below? *Wallahua'lam*.



Figure 21C. The atmosphere that protects the Earth from meteor rocks "rain"

The diameter of the Earth 6,371 km. Age of the earth is 4.54 billion years. The distance between the earth and the sun is 149.6 million kilometers. Earth weight is 5.97 X 10<sup>21</sup> metric tons

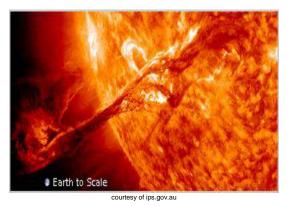
In recent years, we still hear mockery of the phrase "the sky as a roof." The scoffers with impassioned equate "roof" as a canopy on earth. Whereas the "roof" of a house we understand it means literally is the protector from the rain and the sun.

"And when he learns something of Our Signs, he takes them in jest: for such there will be a humiliating Chastisement" (QS 45 Al-Jatsiyah 9)

This word is the most fitted to describe protection of the earth from the meteor "rain" and cosmic ray radiation "blistering", including harmful radiation resulting from magnetic storms on the sun's surface.

A recent example is a raging giant fire storm on the sun's surface captured by NASA satellite SDO (Solar Dynamics Observatory) in Figure 21D below.

This incident generates magnetic storms that affect the entire planets in our Solar System. Without the protection of the atmosphere, our earth has dried up long time ago as happened on the Moon, Mercury, Mars and Venus



**Figure 21D**. A raging giant fire storm on the surface of the Sun on August 31, 2012, captured by NASA's SDO satellite. Note: small white circle on the lower left is the size of the earth as a comparison

Most Wise He who uses the word "roof" to the nature of his compassion (Ar-Rahman and Ar-Raheem) to the creatures on Earth from meteor rock "rain" and harmful cosmic rays "blistering".

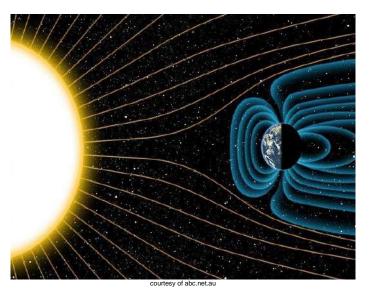


Figure 21E. The atmosphere that protects the Earth (right) of the Solar Magnetic Storm (left) and other dangerous cosmic radiation, such as X-ray, gamma-ray, etc. Protection of this atmosphere is known as Van Allen Belts, whereas 14 centuries previously Al-Qur'an consistently mentioned this "protection" in many verses

Under the the crust of the earth, material become blurred due to endogenous heating, among others appear as the lava of the volcano. Basalt rocks become ocean floor and granite rock that become a major in the land is the result of the freezing of the molten material.

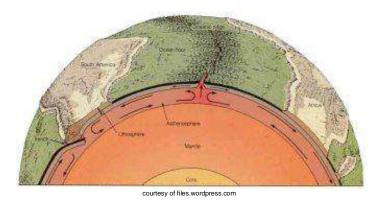


Figure 21F. Continental plates are very thin, outspread floats above the ball of lava

Solidification of the earth's crust on which the bottom of the ocean and the land, become continental plates that float above the lava. The movement of the plates that were seemingly meant spread of the earth.

"And after that He spread the earth" (QS 79 An-Nazi'at 30)

The movement of continental plates create the folds of the mountains, such as the Andes Mountains along the west coast of Latin America continent, the Bukit Barisan mountains along the west side of the island of Sumatra, etc.

The relationship between the continental plate's movement with the formation of the mountains has been mentioned repeatedly in Al-Qur'an

"And He it is Who spread out the earth and placed therein firm hills and flowing streams, ..." (QS 13 Ar-Ra'd 3)



Figure 21G. Continental plates are like thin rugs floats overlaid above the ball of lava

"And the earth We spread out, and placed therein firm mountains, and caused to grow therein all kinds of things in due proportion" (QS 15 Al-Hijr 19)

"And the earth! We have spread it out, and set thereon mountains standing firm, and have produced therein every kind of lovely growth (plants)"

(QS 50 Qaf 7)

The movement of continental plates also moves mountains, such as the Andes Mountains pushed into the Pacific Ocean along the west coast of Latin American continent, etc.



**Figure 21H**. The Eurasian plate is moving south, while the Indian Plate is moving north. Both plates collision form the Himalayas mountain every year climbed 6.1 centimeters high.

Every mountain on earth moves a few centimeters every year. It has been hinted 14 centuries ago.

"Thou seest the mountains and thinkest them firmly fixed: but they shall pass away as the clouds pass away: (such is) the artistry of Allah, who disposes of all things in perfect order: for He is well acquainted with all that ye do" (QS 27 An-Naml 88)

"Have We not made the earth as a wide expanse. And the mountains as pegs?" (QS 78 An-Naba 6-7)

The word "autad" is the plural of "watad", are pegs for tents above ground.<sup>22</sup>

<sup>&</sup>lt;sup>22</sup> Maurice Bucaille, "La Bible, Le Koran et La Science", printed 16, translate by HM Rasjidi, Bulan Bintang Publisher, 2010.

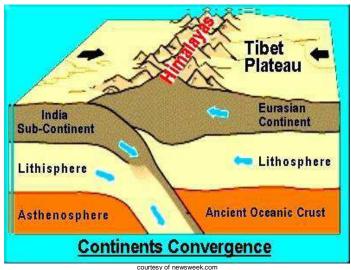


Figure 211. Both plates collision forms the Himalaya Mountains every year climbed 6.1 centimeters high. The Eurasian plate moving south, while the Indian Plate moving north. It looks like pegs for tents.

"And We have made great mountains in the earth lest it might be convulsed with them, and We have made in it wide ways that they may follow a right direction" (QS 21 Al-Anbiyaa' 31)

"... He set on the earth mountains standing firm, lest it should shake with you; and He scattered through it beasts of all kinds. We send down rain from the sky, and produce on the earth every kind of noble creature, in pairs" (QS 31 Lugman 10)

"If We had caused this Qur'an to descend upon a mountain, thou (O Muhammad) verily hadst seen it humbled, rent asunder by the fear of Allah. Such similitudes coin We for mankind that haply they may reflect" (QS 59 Al-Hasyr 21)

Today we read Al-Qur'an about the water cycle on earth, then we consider these verses show the obvious we know. But for 24 centuries since the 7th century BC to the 17th century AD, it did not like our knowledge of the water cycle today. <sup>23</sup>

Plato said that the river flows into the sea, then enter "tartarus" a huge chasm around the "terra plana" earth in Figure 21B before. Thales and Millet argued sea water then go to the continent to fill many lakes. This opinion is further supported Descartes and Aristotle and survive for 20s centuries. In 1580 Bernard Palissy proposed the concept that the ground water comes from rain water infiltration. This was later confirmed by E. Mariotte and P. Perrault in 17th century. This can be read on Encyclopedia Universalis on articles Hydrogeologi

Mirraculaously, Al-Qur'an is not affected that old hydrology concept that persists for more than 20 centuries and supported by top names on above. Al-Qur'an in many verses consistently stated the concept of modern hydrology, where the ground water comes from rain water, instead of seawater infiltration

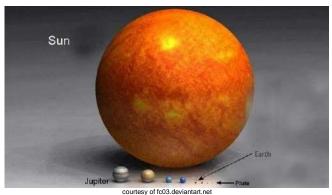
"And We send the winds fertilizing (to fill heavily the clouds with water), then caused the water (rain) to descend from the sky, and We gave it to you to drink, and it is not you who are the owners of its stores"

(QS 15 Al-Hijr 22)

That is the earth though not as big as any other celestial objects, but it guaranteed by Allah is spacious enough to support billions of human beings.

In Al-Qur'an, the word "Bahr" (land) appears 13 times and the word "Bahr" (sea) appears 32 times, giving a total of 45. If we percentage "land" to in 28.89% number rounded off 29 %. While the word "sea" is 71.11% rounded off 71%. Miraculously these numbers represent the exact proportions of land and sea on Earth today is 29% versus 71%. Wallahua'lam (Courtesy of Tarig Al Swaidan)

### 2.2. The Sun



\*

Figure 22A. The Earth is very small compared to the Sun.

The sun is the brightest celestial objects and the biggest influence on the civilizations on earth. Throughout the human history, the sun deified<sup>24</sup> by many civilizations until today. That's

The gods of the sun on various civilizations, among others: Greece: Apollo (god of the sun & olympia). Helios (titan of the sun). Hyperion (titan of light). Alectrona (morning sun goddess), Eos (Dawn titan). Hindu: Surya (god of the sun), Savitri (deity of sunrise and sunset), Agni (fire god associated to the sun), and Aryaman, Mitra, Saranyu. Ancient Egypt: Ra (god of the sun), Sopdu (god of the summer sun), Aten, Bast, Horus, Amun, Atum, Khepri, Nefertem, Sekhmet, Ptah. Japan: Amaterasu (god of the sun), Marishi-Ten (goddess of the sun, heaven and light). Persian: Nahundi (god of the sun and the law). Africa: Anyanwu (Igbo Tribe's god of the sun), Magec (Tenerife Tribe), Mawu (Dahomey Tribe) and Ngai (god of the sun of the tribes Kamba, Kikuyu and Maasai). Mesopotamia: Shamash (Akkadian god of the sun), Utu (Sumerian god of the sun). Polynesia: Atarapa (goddess of dawn), Atanua (goddess of dawn on the Marquesa Islands). Aborigine: Wala (goddess of the sun), Gnowee & Wuri Aprilia (goddess of the torch of the sun), Yhi (Karraur tribe's goddess of the sun). Maori: Tamanuitera (god of the sun), Ao (god during the day). Ainu: Chup Kamui (goddess of the sun). Lakota (United States): Wi (god of the sun). Aztec: Nanauatzin (god of the sun), as well as the associated the sun gods of Huitzilopochtli, Teoyaomicqui, Tonatiuh, Xiuhtecuhtli. Baltic: Saule (goddess of the sun and fertility). Basque: Ekhi (goddess of the sun as protector of man). Turkey: Koyash (god of the sun). Kanaan: Shapash (goddess of the sun). Celtic: Etain (goddess of the sun in Irish mythology), Aine (Ireland), Belenos & Alaunus (Gaul), Grannus, Mug Ruith, Lugh (Irish sun god). Etruscan: Albina (goddess of dawn), Thesan (goddess of dawn). Hittites: Arinna (goddess of the sun), Istanu (god of the sun), Maya: Kinich Ahau.

why the weekly red date on the Roman calendar is Sun-day (day of the sun). Only one civilization, who firmly refused to deify the sun, that is Islam.

"And from among His Signs are the night and the day, and the sun and the moon. Prostrate not to the sun nor to the moon, but prostrate to Allâh Who created them, if you (really) worship Him" (QS 41 Fusshilat 37)

Our star, The Sun get huge energy by "burn" four hydrogen atoms into one helium atom in a nuclear fusion reaction. Once the hydrogen runs out, energy will be exhausted too. So that the Sun has a limited life span. It is not shine forever.

A Germany astrophysicist, Hermann von Helmholtz, in 1825 observed the development of the sun. He concluded that the diameter of the sun shrinks by 85 meters each year. Approximately within 7.5 billion years the Sun will run out of nuclear fuel and become dimmer.

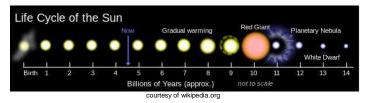


Figure 22B. Life Cycle of our sun. It was born 4.5 billion years ago and continues to 'burn' Hydrogen in its core. It will run out of Hydrogen fuel and stopped shining within 7.5 billion years. Insyaallah<sup>25</sup>.

Ah Kin (god of the sun), Hunahpu (twin heroes turned into the sun), Tohil (god of thunder, lightning, and sunrise). Inka: Inti (god of the sun). Inuit Alaska: Akycha (god of the sun), Norse: Baldr, Dagr (god of daytime), Freyr (god of the sun light). Greenland Inuit: Malina (goddess of the sun). Lusitania: Neto (god of the sun and war), endovelicus (god of health, safety, and the sun). Sami: Beiwe (goddess of spring, fertility and the sun). Slavia: Belobog, Dažbog, Hors (god of the sun), Zorya (two daughter of Dažbog), Radegast (god associated with war and the sun), Zorya utrennyaya (star of dawn to the train the sun departed), Zorya Vechernyaya (evening star to the train the sun return), (--Adapted from various sources--).

Insyaallah is a muslim utterance in Arabic for things in the future, which means "if Allah wills". Commands of Allah: "And do not say of anything: Surely I will do it

Little stars including the Sun, if its fuel is exhausted, then its mass is not sufficient to suck up its surrounding objects and will not become a "Black hole". Those stars will just become a "white dwarf" dead star.

The sun's nuclear reaction is due to pressure in its core by its huge gravitational. The Sun will burn its last hydrogen and die within 7.5 billion years. The outer layer will drift away, and its core would be solidified and is known as the "white-dwarf", an Earth sized cosmos coals.



Figure 22C. Supernova "Cassiopea A", the youngest in our galaxy "Milkyway", captured by the X-Ray Telescope "Candra".

The stars of magnitude 10 times of the Sun, its death would be more dramatic. Outer layers explode into space, that is we know as Supernova<sup>26</sup>, one of the brightest objects in the night sky. The

tomorrow, except (with the saying), "Insyaallah" (If Allâh will)" (QS 18 Al-Kahfi 23). Besides being used for a statement on the future, the word "Insyaallah" shows a Muslim subjection to the will of God. Success is not personal achieved because his efforts, but rather the blessing of Allah.

Supernova is the explosion of a dead star with 8-20 times the mass of the sun. The star has run out its nuclear fuel, so it could not longer withstand collapse because of its giant gravitational. Iron core collapses quickly and becomes denser. When the density is very high, the protons and electrons combine neutron and neutrino:  $p + e \rightarrow n + nu$ . This reaction is called inverse beta decay. Neutrinos

oldest Supernova written by Chinese scientists in 185 AD or 18 centuries ago. The star's core will collapse by its huge gravity into a Neutron Star, with diameter only dozens of kilometers. One teaspoonful of Neutron Star's sand weighing billions of tons.

Is this what in Al-Qur'an meant the stars will be eliminated? Wallahua'lam (Allah knows the best).

"Then when the stars become eliminated" (QS 77 Al-Mursalat 8)



Figure 22D. Supernova "1E 0102.2-7219" at about 190,000 light-years from Earth in Small Megallanic Cloud

Giant stars with size up to 100 times of the Sun, collapse even more devastating. The star will collapse unstoppable to its core by its giant gravity. Atoms become incompressible so that iron as big as Mount Everest solidified instantly become as big as a

come off easily because they do not interact with matter and carry away energy. Neutrons collapse until almost incompressible and become a neutron star.

The outer layer is still collapse inward at this moment and this collapsed layer collides with the hard surface of the newly formed neutron star. This collision causes the rebound and shock waves out, colliding with the star's outer layers. This extends waves carry energy in enormous quantities.

This energy can provide the fuel that allows the endothermic fusion reaction to make a very high mass elements such as Uranium. Supernova is responsible for all elements with a mass greater than the iron found on Earth.

grain of sand. Atoms disintegrate into an electron, proton, neutron, then melt into quarks, leptons, gluons and so on.

Getting smaller, tiny, more compact, denser, until nobody knows. Two main theories that govern the workings of the universe that is of general relativity and quantum mechanics are no longer applied. The star has become a Black Hole.



Figure 22E. (Above) Star B3I before collapse (Below) In 1987 the B3I collapsed to form "Supernova 1987a" which only happens once every 50 years in our Galaxy. This great explosion threw solid material elements of heavy metals such as iron and silica as the main material forming terrestrial planets like Earth. The gas elements are also tinge thrown such as C, H, O, etc. These elements forming more complex compounds such as H<sub>2</sub>O, CO<sub>2</sub>, etc.

The sun at the end of its life will lose its light. Nuclear process that involve exchange of hydrogen into helium in the interior of the sun (core). This process finally stopped when the sun runs out of hydrogen. This situation causes the core become furl (contracts) with produce a high temperature.

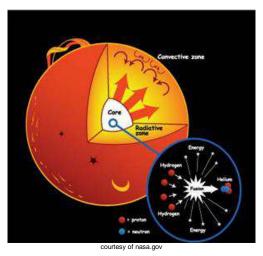


Figure 22F. Nuclear fusion reactions in the star core, including the Sun, in which four hydrogen atoms fuse into one helium atom, to generate energy equivalent to Nuclear Bombs.

The sun will run out of nuclear fuel and become dimmer approximately 7.5 billion years from now. But it will not become a black hole because its mass is not big enough. It just frowns become a white dwarf, as implied by Al-Qur'an:

# "When the sun is overthrown/furl" (QS 81 At-Takwir 1)

The word 'kuwwirat' means literally in the dictionary is "one part rolled up into other sections". So, it was not destroyed, but dim. Some translators interpret as 'eclipsed'. After time passed, the temperature on the outside of the sun decreases and with it the light faded. This situation is in line with the interpretation of the

word 'kuwwirat' in the above verse. This is the end of life of the sun. Wallahua'lam. The suitability of word 'kuwwirat' which selected is very astounding precisely with what is described by Modern Science. Whereas before Einstein formulated the mass-energy equivalence  $E = mc^2$  at the the early 20th century, scientists for thousands of years surmise a stack of wood was burning in our Sun.<sup>27</sup>

Shapley findings in 1917 showed that the Sun orbits the center of the Milky Way Galaxy within 10 kiloparsec or 2x10<sup>17</sup> km, in 250 million years, with a speed of 250 km per second. So recently in last century we just know the orbit of the sun. While the moon's orbit around the earth in an average distance of 384,000 km, within 23 hours 10 minutes.

"It is He Who created the night and the day, and the sun and the moon: all (the celestial bodies) swim along, each in its rounded course"

(QS 21 Al-Anbiyaa' 33)

"It is not for the sun to overtake the moon, nor does the night outstrip the day. They all float, each in an orbit" (QS 36 Yaasiin 40)

The word 'yahsabuna' in 2 verses above, rooted from the word 'sabaha', an Arabic vocabulary that shows the movement with its own power (self propelled motion).<sup>28</sup>

The word 'falak' in both verses above is now easyly for us today to mean as an orbit. But several centuries ago interpreters difficult to translate it. For example, Sheikh Abubakar Hamza

In the coming chapters we will be more amazed by the accurate definition in Al-Qur'an on exotic celestial objects such as galaxies, black-holes, pulsars, planets and the others.

Maurice Bucaille, "The Bible, the Qur'an and Modern Science", translation by HM Rasjidi, Bulan Bintang Publisher, 2010.

from Morocco defined it as "a kind of axis, like rods of iron and a propeller around the vicinity, the celestial orbit, orbit, zodiac address, speed, wave". The more advanced the technology, the easier it is to understand how high the meanings of the language used in Al-Qur'an.

### 2.3. The Planets

The Sun (Asy-Syams) is the center of the solar system. It is the most dominant with 99.85% of the total mass of the total mass of the solar system. While the total mass of nine planets (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto) is only 0.15%. <sup>29</sup>

The Earth and other terrestrial planets (Mercury, Venus, and Mars) is formed from solid condensed materials, mainly of iron and silicate compounds. Whereas Jupiter and other giant planets formed from large planetesimals, among other things as a result of condensed water ice, so it captures gases, mainly hydrogen and helium. Small planetesimals which do not form planets or broke as a remaining result of the collision one another as comets, asteroids, and meteoroids.

The third Kepler's law state that square of orbital period of time T is proportional to the cube of the semi-major axis a:

 $T^2 = rac{4\pi^2}{G(m+M)}a^3$  where M is cellestial objects mass, like stars, etc.



courtesy of solarsystem.nasa.gov

Figure 23A. The Solar System with the Sun as the center and nine planets. The nearest is Mercury, then Venus, The Earth, Mars, Jupiter, Saturn, Uranus and Neptune. One more is Pluto which has been kicked out of the list because it was considered too small Planet. Between Mars and Jupiter there is a broken planet called Asteroid and occasionally fall to Earth as meteorites. Then there are many Comets with a little different track

The 9 planets and 56 satellites surrounding them, and tens of thousands of asteroids (broken planet), meteoroids (interplanetary rocks) and inter-planetary dust (micro meteoroids), all of them revolves around the Sun -our star- in elliptical orbits, not rounded <sup>30</sup>.

"Lo! We have adorned the lowest heaven with an ornament, the planets (kawaakib)"

(QS 37 As-Shaffat 6)

Generally, the translation of "kawakib" are the stars. Yet for stars there is usually used the word "Najm". If the meant of "near sky" is included the solar system, then the meant of "kawakiib" may

$$r = rac{\iota}{1 + e\cos heta}$$
 where  $e = \sqrt{1 - (b/a)^2}$  and

a = semi-major axis: b = semi-minor axis: l = the semi-latus rectum.

The first Kepler's law: Planet move around a star in an elliptical orbit, with a radius (r) follows the formula:

be the planet. The safest way to translate a word in Al-Qur'an is by the same word in Al-Qur'an anyway. If there is nothing like that, we can try to find in Hadith. The word "kawakiib" appears five times in Al-Qur'an, including:

# "When the planets (kawaakib) are dispersed" (QS 82 Infithar 2)

This is God's illustration what happen in the Judgment Day. At that time the planets will be out of their orbit and hit the Earth. Miraculously Al-Qur'an do not use the word "star", because the star's mass is much much bigger than the Earth, so the Earth is supposed be sucked by a star.

If a planet crashed into earth, it is easier to understand. But if the fall is a star, the mass of earth is much smaller than a star makes it impossible. Supposed the earth sucked falling by the star gravity. Wallahua'lam (Allah knows the best).

In Arabic, planet called "kaukab" or its plural "kawakib". These words often translated as "star". Though clearly in Al-Qur'an for "star" it use the word "najm" or plural "nujum". Almost all translators did not know the differences between "star" and "planet", but not with Al-Qur'an.

Here are many verses of Al-Qur'an with the word "kaukab" (a planet) or "kawakib" (planets).

"When the night was dark, he (Abraham) saw a planet (Venus). said he: Is this my Lord? So, when it set, he said: I do not love the setting ones. (QS 6 Al An'am 76).

This is the story of Prophet Abraham. He saw a very bright object in the sky. Miraculously Al-Qur'an does not use the word "najm" (star). There is no doubt it is Venus the second brightest object after the moon. It is actually not a star.

In another verse:

"When Joseph said to his father (Jacob): 'O my father! I dreamed I saw 11 planets, sun and moon; I saw all of them bowed down to me" (QS 12 Yusuf 4).

Is this story of Joseph show there are 11 planets in our solar system? Wallahua'lam (Allah knows the best).

Among 9 planets in the Solar System, the Earth is bigger than Venus, Mars, Mercury and Pluto. These five smallest planets are called the terrestrial planets because its composition is similar to Earth, composed mainly of silicate rocks and metals.

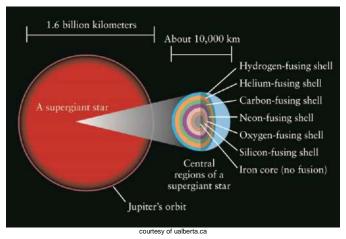


Figure 23B. Heavy elements making up the Earth are from supernova super heavy star explosions, with more than 8x mass of our Sun. First, the fusion of hydrogen form helium element. Then helium form carbon, neon, oxygen, silicon and iron at last. Iron is the most stable element of the final outcome of Nuclear Reactions in the star's core

The Earth is made up of elements of Silica and Iron as outcomes of the supernova explosion and begin to warm with warming sunshine and heating from the inside (endogenous) from the decay of radioactive elements beneath the Earth's crust.

Miraculously, Al-Qur'an 14 centuries ago has explained the origin of the emergence of the elements Fe (iron) on earth is "descended from the sky" and not "created on earth". Notice the verse word by word.

"Indeed, We have sent Our Messengers with clear proofs, and revealed with them the Scripture and the Balance (justice) that mankind may keep up justice. And We brought forth iron wherein is mighty power (in matters of war), as well as many benefits for mankind, that Allâh may test who it is that will help Him (His religion), and His Messengers in the unseen. Verily, Allâh is All-Strong, All-Mighty"

(QS 57 Al-Hadiit 25)

The word "anzalnaa" (We sent down) in the above verse appears twice. The first is for the "Book" and the second is for "Iron". For the "send down the Book" the translators did not hesitate to interpret descend from the sky.

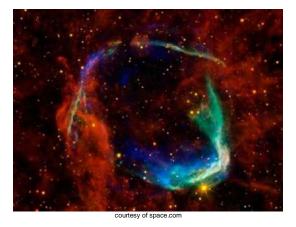


Figure 23C. The remnants of a supernova explosion recorded 18 centuries ago by Chinese astronomers in the 185 AD. This photo was captured by NASA's Splitzer Space Telescope. Heavy elements like carbon, oxygen, silicon, up to iron, are the raw materials forming terrestrial planets like Earth

But for the word "Iron", most translators hesitate to use the literal meaning "We sent down iron". The translators preferring the translation "We created iron". It's hard for them to imagine a hunk of iron fell from the sky

Whereas now it is clear, that the element iron (Fe) and Silica (Si) is the results of supernova explosions of super heavy stars.

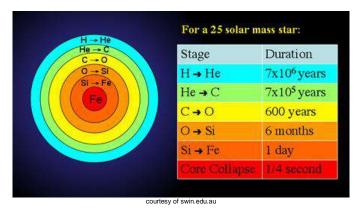


Figure 23D. The speed of nuclear fusion reactions till the occurrence of Supernovae, exploding star weighing 25 times of the Sun, that became the forerunner of the rise of heavy elements in the Universe, as raw material for the terrestrial planets like Earth.

All the atoms on Earth, and even all the atoms in our bodies are the rest of the debris of stars that died billions of years ago. These elements are actually descended from the sky, showering the earth for millions of years.

Clearly be seen, Al-Qur'an's conformity with the modern science. Even though it uses a word that seems paltry like "anzalnaa", but it is free from criticism from the modern science.

"Will they not then ponder on the Qur'an? If it had been from other than Allah they would have found therein much incongruity" (QS 4 An-Nisaa 82)

The Noble Al-Qur'an was sent down for about 23 years, which is 13 years in Mecca and 10 years in Medina. It revealed in the middle of the most barbaric civilization at that time. It revealed to Prophet Muhammad -saw- in varied conditions. It sends down in an atmosphere of peace and war, in conditions of wide and cramped, in a state of joy and sadness. If Al-Qur'an is results of human minds, it will naturally be found many disputes, from the content, from legal standpoint, the beauty of poetry disclosures, etc. This is one of the miracles of Al-Qur'an that remains relevant, actual and reliable of all time

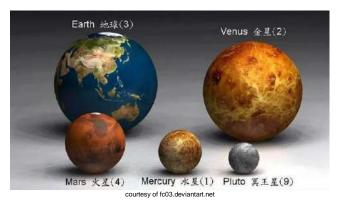
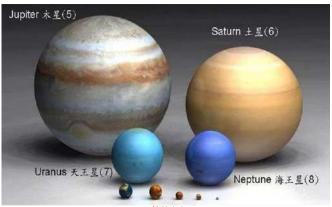


Figure 23E. Compare the Earth with 4 Smallest Planet in the Solar System.

Compared with 4 other planets, Jupiter, Saturn, Uranus and Neptune, it turns out the Earth is just a small planet. The composition of all four giant planets are primarily light elements (Hydrogen, Helium, Argon, Carbon, Oxygen and Nitrogen) gaseous or liquid.



courtesy of fc03.deviantart.net

Figure 23F. Now compare the Earth with 4 Largest Planets of the Solar System.

The Earth is situated +/- 150 million km from the sun. This is called 1 Astronomical Unit (AU). Whereas the outermost planet, Pluto, is +/- 40 SA. Suppose that the sun amounted a ping-pong ball at the corner of a football field, then the earth sized a nut is located 1 meter from it. Whereas Pluto at the other corner.

In 1930 an astronomer found "mini planet" Pluto. In line with the strengthening acuity of modern telescopes, discovered more and more mini planet as big as Pluto. The number is estimated thousands in the region behind Neptune known as the Kuiper Belt. That's why Pluto is kicked out from the planet list today. It was be included in the list of "mini planet" with a chunk of ice and other frozen methane.

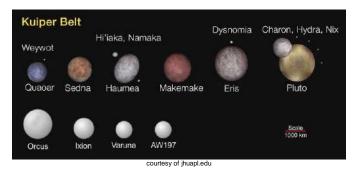


Figure 23G. Mini planets in Kuiper Belt, which are removed by experts from the list of planets. There are thousands of these objects in the Kuiper Belt but has not been detected because very small and lusterless.

### 2.4. The Moon

The Earth has the Moon as the only its natural satellite. The moon is the fifth largest satellite in the Solar System. The Moon is also the largest satellite compared to its planet's size. It diameter is 27%, it density is 60%, and it mass is 1.23% of the Earth. Among other satellite, the Moon is the second densest satellite after Io, a satellite of Jupiter.



Figure 24A. Photograph of Earth (left) and Moon (right) captured by NASA's space explorers "Voyager".

According to astronomical analysis, at the early days of the life of the solar system, there was many-many agglomerates. It was the rest of the solar system that was not become a planet and still very much scattered. One giant blob, approximatelly 1/9 the mass of earth, rammed earth causes hurl material which has become the moon now.

As results of its collision, the rotation axis of the earth becomes tilted 23.5 degrees and the Earth's atmosphere disappeared. The atmosphere existing now mostly produced by processes in the earth itself, while others come from broken comet or asteroid striking the earth.



Figure 24B. Neill Armstrong of USA became the first man landed on the Moon on July 20, 1969.

"O assembly of jinn and men! If you have power to pass beyond the zones of the heavens and the earth, then pass (them)! But you will never be able to pass them, except with authority (from Allah)!"

(QS 55 Ar-Rahmaan 33)

No doubt, this verse shows the opportunities that people will be traveling in space in the future. It proved by outer space travel in the 20th century by the first astronaut Juri Gagarin of Russia in 1961 and the first human landing on the Moon in 1969 by Neil Armstrong of the USA.

Long before Gagarin and Armstrong, there is one great person to travel to heaven. He is the Prophet Muhammad. In fact he has been through the 7<sup>th</sup> heaven in the event of Isra 'Mi'raj dated 27 Rajab 10th year of his prophethood.

The Mystery of the canal that circle the moon as captured by Apollo 10 in Figure 24B below. Some NASA experts speculate it is former lava flow. But they were still in doubt, because it is almost impossible, considering there are no volcanoes on the moon.



Figure 24C. The canal circles the moon as captured by Apollo 10 module

Perhaps the explanation of the Prophet's companions Abdullah bin Mas'ud and Anas bin Malik may answer NASA researcher's confusion, as follows.

This hadith has been transmitted on the authority of Abdullah ibn Mas'ud (ra) (who said): We were along with Allah's Messenger (saw) at Mina, that moon was split up into two. One of its parts was behind the mountain and the other one was on this side of the mountain. Allah's Messenger (saw) said to us: Bear witness to this.

(Hadits Shahih Muslim 2800)

In another authentic hadith:

Anas reported that the people of Mecca demanded from Allah's Messenger (saw) that he should show them (some) signs (miracles) and he showed twice the splitting of the moon. This hadlth has been narrated on the authority of Anas through another chain of transmitters.

(Hadits Shahih Muslim 2802)

Does above figure canal is the traces referred to the splitting of the moon in QS Al-Qomar 1-2 ? Wallahua'lam (Allah knows the best)..

"The Hour (of Judgment) is nigh, and the moon was cleft asunder. And if they see a sign, they turn away, and say: "This is continuous magic". And they call (it) a lie, and follow their low desires; and every affair has its appointed term" (QS 54 Al-Qomar 1-3)

### 2.5. Comet

The longest distance which still influenced by the sun's gravitational force is about 20 trillion km or 120,000 AU where AU is a distance between earth-sun. Outside the orbit of Pluto, there is a "warehouse" of trillions of comet candidates. The closest comets warehouse is called the Kuiper Belt at a distance of about 50 SA and the farthest known as the Oort Cloud comet at a distance of about 50,000 AU.

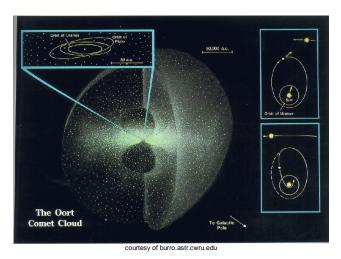


Figure 25A. The Oort Cloud is outer limits of the gravitational influence of the Sun, contains billions of chunks of ice that we know as Comet. Millions of years ago, millions of comets rained down the earth became the origin of the rise of water (H<sub>2</sub>O) in our oceans. Is the throne of Allah on the water (Al-Qur'an 11: 7) means above the Oort comet cloud?? Wallahua'lam (Allah knows the best).

The comet warehouse is thought to be remnants material forming the solar system. Disruption of the comet warehouse will cause some comet nucleus out of the warehouse and pulled by the sun's gravity. As a result, the comet will be moved around the sun. Comets are composed of frozen gases, ice, and dust. When it approaches the sun, it will evaporate and release the dust along its trajectory. That's what we often call a shooting star.

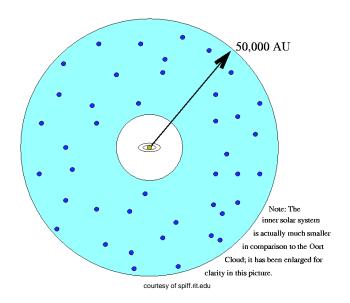


Figure 25B. Position of Comet in the Oort Cloud up to 50,000 AU, where AU is the Astronomy Unit, 1 AU = distance of the Sun to the Earth. If 1 light year = 63 240 AU, then the sunlight takes 0.79 years, or 9.5 months or 285 days to reach the end of the gravitational influence of the sun.

The emergence of water (H<sub>2</sub>O) on earth certainly came from comets<sup>31</sup>. This has been confirmed by Module "Rosseta" of ESA (European Space Agency) which landed on the comet 67P Churyumov-Gerasimenko on November 12, 2014 and revealed the main element content of a comet. Miraculously This is in line

<sup>&</sup>lt;sup>31</sup> Comets with the largest water-ice composition (20% of its mass) is strongly suspected as the source of water on earth, because the ratio of Deutorium / Hydrogen (D/H ratio) in the comet is almost equal to the D/H ratio in earth's water, which is around 0.0002. Just to illustrate, this is a rough calculation of the comets quantity, that might have been rained the earth and donated water: A 10 km comet has a total mass of about 500 billion tons, imply it contains about one 100 billion tons of water. Whereas the total of the oceans are currently about 1.3 billion-billion tons. It is roughly equivalent to 13 million comets hit the earth in a long time ago.

with many verses in Al-Qur'an which was revealed 14 centuries ago, QS 2:22, 6:99, 22:63, 23:18, 25:48, 27:60, 29:63, and many more



**Figure 25C.** Module "Rosetta" by ESA (European Space Agency) was being landed on comet 67P Churyumov-Gerasimenko on November 12, 2014, where for the first time a man-made spacecraft to land on a comet.



Figure 25D. Comet 67P looks elegant on the horizon at dusk. Millions of comets of this class rained down on Earth billions of years ago, as sources of water (H<sub>2</sub>O) for our oceans.

"He it is Who sendeth down water from the sky, and therewith We bring forth buds of every kind; ..." (QS 6 Al-An'am 99)

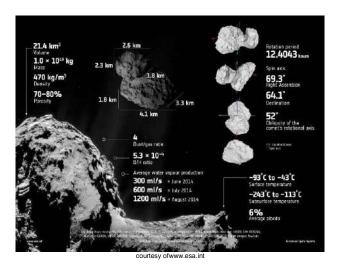


Figure 25E. "Rosetta" initial studies prove a high content of water (H<sub>2</sub>O) in a comet. This strengthen the notion that comets are the source of water (H2O) forming Earth's oceans. Getting closer to the Sun, it vaporize more and more water (water vapor) of 300 ml/sec in June 2014, 600 in July and 1200 in August.

Selected Arabic word for water is "maa'an" and commonly translated as "rain". But for rain itself is use the word "wadqa" QS 30:48 and "ghoits" QS 31:34, 42:28. The past translators may not have been familiar with comets as frozen water carrier from the sky.



courtesy of twitter.com/quark1972

Figure 25F. Comet 67P magnitude compared to the city of Los Angeles. Millions of this size comet is thought rained down the earth for millions of years. Comet ice melting to form oceans on Earth.

That is the origin of water (read: sea water) on Earth, which proved to be a match between Al-Qur'an and Modern Science.

"And He it is Who created the heavens and the earth in six days - and His Throne was upon the water - that He might try you, which of you is best in conduct..." (QS 11 Hud 7)<sup>32</sup>

<sup>32</sup> NASA's astronomer team, --lead by Matt Bradford, a scientist at NASA's Jet Propulsion Laboratory in Pasadena, California-- has discovered the largest and farthest ever detected water "huge" reservoir in the Universe. When we say "huge" we are not talking water in the Pacific Ocean. We're talking about water that is equivalent to 140 trillion times all the water in the world, or 100,000 times the sun. As much water as it can irrigate 34 billion of Planet Earths. This water clouds surrounding the Black Hole type of quasar called APM 08279+5255, is over 12 billion light years from Earth. These findings throw away the notion that the earth is the only planet that has water. Until now, scientists still can not reveal the origin of the formation of vapor water clouds there. That Quasar has a supermassive Blackhole with size of 20 billion times of the sun. NASA conducted a study of this cloud since 2008, they used a 10-meter diameter telescope at the peak of Mauna Kea, Hawaii (Adapted from Astrophysical Journal Letters).

The above verse and the hadith below are just the news about the beginning of creation, and that the Throne of Allah is above the water before the creation of the heavens and the earth. It does not mean denying the existence of the Throne of Allah is still remain above the water.

The meaning of the word 'was' (غ) in the above verse is to inform about the past before the creation of the heavens and Earth. Whereas the hadith of the Prophet in the hadith below, His Throne is on the water that it was still in that situation.

Waki' bin Hudus (ra) narrated that his paternal uncle Abu Razin (ra) said: "I said: 'O Messenger of Allah, where was our Lord before He created His creation?' He said: "He was above the clouds, below which was air, and above which was air and water.

Then He created His Throne above the water" (Hadits hasan Sunan Ibn Majjah 187).

Is the phrase "the Throne of Allah on the water" means above the Oort comet cloud ?? Wallahua'lam (Allah knows the best).

Is "Water above the Air" means the Oort comet cloud is above the Earth's atmosphere ?? Wallahua'lam (Allah knows the best).

### 2.6. Star

Thousands of Stars (An-Najm) that we could see in the sky with the naked eye and millions else that we could see with a telescope. But did you know how many stars (the sun class sized) actually?

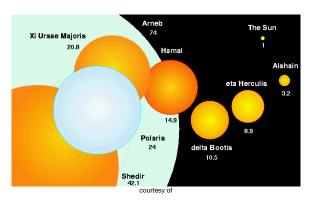


Figure 26A. It turned out that many Stars is greater than The Sun only in our Milky Way galaxy alone. The numbers show the comparison diameter to the diameter of the sun which is 1 (one). Polaris star's diameter is 24 times of the sun, so its volume is 24 rank 3 or 13824 times the volume of the sun! Try to count yourself Arneb star volume, that its diameter is 74 times of the sun.

It turned out that amount is very much at all. In the Milkyway galaxy alone, there are between 200-400 billion stars, including our sun. Whereas there are billions of galaxies. So how about the quantity of the sun class stars in the Universe? A minimal estimation indicates the quantity of stars in the sky is exceed 70 sextilion: number 7 followed by 22 digit 0. (Ref: CNN.com edition July 2003). This amount is calculated in case the grains of sand on all the beaches and deserts in the world, the quantity of stars in the universe is 10 times as much as that.

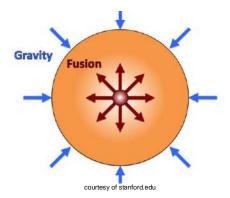
The word "Najm" (Star) is called in Al-Qur'an 13 times. The sun itself is only a small star in our galaxy. Outside our solar system are interstellar space. There are many giant stars in size of hundreds of times larger than our sun. All are members of our galaxy, the Milky Way, among the hundreds of billions of stars.

The biggest star that appears is Betelgeuse. The star's gravity is so big, until it almost collapsed in its core. But soon detained by the pressure in its core due to a series of fusion nuclear bomb blasts. That is why it is always pulsating star.



Figure 26B. The magnitude of Betelgeuse star compared to the Sun. The inner circle (smallest) indicates the smallest size when it contracted by its massive gravitational clutches. The outer circle is the size of the biggest when nuclear fusion 'bomb' in its core act against the gravity.

Named Betelgeuse (Yad-al-Jauza) by Arab astronomers that means the hand of the Orion constellation. The distance is about 640 light-years away. It weighs about 14 times the sun. Its diameter is about 1100 times the diameter of the Sun



**Figure 26C.** Competition between Giant Gravity and Nuclear Fusion Bomb in the core of a star cause Betelgeus constantly pulsate.

Betelgeuse is always pulsating due to the tough competition between the "Gravity" and " Nuclear Fusion Bomb " at its core. Someday, Betelgeuse large gravity will "drown" and "silencing" its giant nuclear bombs in its core, when the nuclear fuel is thinning. But it will happen how many million years who knows.

At the end Gravity will win and Betelgeuse will collapse to the point in part of a second. It will great explode as Nova, Super-Nova or Hyper-Nova, throwing heavy elements: iron (Fe), silicon (Si), oxygen (O), until Helium (He) and hydrogen (H), as a raw material for the formation of new stars and new planets.



Figure 26D. The sky night in a place free from city lights, appeared billions of sun class stars in our galaxy only. All the visible stars is less than 1% of the number of stars in the Milky Way that is on the small white circle marked "Sun" in Figure 27B below.

The only star name mentioned in Al-Qur'an (besides the sun) is the Sirius (Syi'ra) is widely worshiped by the Arabs before Islam. It is called in the verse: "... and He is the Lord (who has) Sirius Star" (Surah 53 An-Najm 49). Sirius is the brightest star in the night sky. The scientists found that this is a pair of double stars

Miraculously Al-Qur'an is not deceived mention the brightest "star" Venus (that is actually not a star) as "Najm" (a star). Venus is the second brightest object after the moon.

Sirius is actually a set of two stars, known as Sirius A and Sirius B. The larger one is Sirius A, which is also closer to the Earth and the brightest star that can be seen with the naked eye. Whereas Sirus B can not be seen without telescope. Sirius double stars orbit in ellipses circle one another. Circulation periods of Sirius A & B at their common center of gravity is 49.9 years.



Figure 26E. A pair of double stars, Sirius-A dan Sirius-B.

All the stars you can see with the naked eye at night, included in Figure 26A, 26B and 26E, together with 200-400 billion other stars are members of our Milkyway galaxy. Increasingly hot star core will ignite nuclear fusion reactions. Stars activities that emit radiation and stellar particles wind begins. A gust of star wind will gradually get rid the blanket of dust and gas around the star. At first bursts from the two poles of the star and emitted stellar winds will gradually get rid the dust and gas surrounding it.

The remaining are pieces of dust and gas in the disc around star's equator. A disk of dust and gas around the star was believed to be the forerunner of the planet. With the opening of the blanket of dust, their cores begin to seem visually, although still very dimmed and can only be observed with a big telescope. Now known many stars that still has a disk of dust and gas are

still a few million years old. Our Sun classified as a "youth" star with only 4.5 billion years old.

Nuclear fusion reactions are energy sources of a star - including our sun - to shine. The stellar wind and radiation pressure will also eventually get rid dusts in the disc. If the disk that formed the planets, all that remains are the planets and little material of interplanetary rocks.

The result of nuclear fusion reactions at the core of a star is heavier elements. When nuclear fuel at its core runs out, it ultimately will die. End of life depends on the mass and physical state of a star. There are stars ended his life by expanding and then finally releasing the materials into space and eventually become white dwarfs. The Sun classified as a star that will end his life in that way. There are also exploding star called supernova. Materials are released into the sky that would later become the basic material for the next new star formation.

## 2.7. Galaxy

Our galaxy "Milkyway" is classified as a spiral galaxy, it shaped like a letter "S" with a single or plural arm. No picture of our galaxy, because we have not been out of our galaxy and out of the solar system yet. The Voyager's farthest reaches Pluto as far as 40 SA, whereas the boundary of our Solar System is 120,000 SA. But don't worry, we have many pictures of the neighboring galaxy similar to our galaxy.

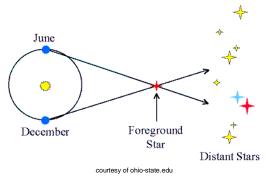


Figure 27A. Parallax to measure the distance of stars, galaxies and other celestial objects accurately

If the stars seem in Figure 26D above mapped based on their respective positions, then we got the graphic picture of our "Milkyway" galaxy as the following Figure 27B.

The diameter of our "Milkyway" is about 100,000 light years. It means to across our galaxy from end to end, by the light with speed of 300,000 km/sec, in about 100,000 years. Our solar system is about 25,000-30,000 light-years from galaxy's center and orbits around it with a speed of about 200-300 km/sec, 1 circle in 200 million years.

Probably there are many stars among the hundreds of billions of stars member of the Milkyway, are stars that have planetary system. But due to its huge distance, it's hard to find its planets. With a large telescope a star is only appears as a dot of light, let alone a lusterless planet.

Galaxies were not recognized as a cellestial object until the end of the 19th century, when the spiral Andromeda (M31) shows a continuous spectrum. Although the obvious naked eye object, M31 once appears in the picture of pre-telescopic era, in the description of Al-Sufi in the 10th century. Different structures reported by William Parsons shows spiral features are evident in some of the bright nebula like M33, M51 and M101.

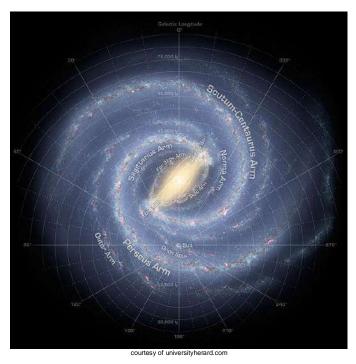


Figure 27B. A graphic picture shows the shape of our "Milkyway" galaxy based on a mapping of all stars its compiler. Small white circle inscribed with "Sun" shows the location of all the stars looked by the naked eye from Earth.

Initially spectroscopy (visual) shows the spectrum they do not have emission lines, because it must be continuously and gave the name "white nebula". Speculation centered on the possibility that this is an independent system of stars or their planetary system in formation as in Laplace ideas. With hindsight, the initial study they described as a choice between these two possibilities. in 1885 supernova in the Andromeda added confusion to astronomers, because it was too bright for the distances between galaxies



**Figure 27C.** The ritual of Tawaf around the Kaaba, reminding us of the orbit of the celestial bodies. The Moon tawaf around the Earth. The Earth tawaf around the sun. The Sun tawaf around the galaxy Milkyway's center.

In September 1912, VM Slipher from Lowell acquire spectra of some galaxies that show large radial velocity even the biggest of which is already known. In the Shapley-Curtis debate in 1920, HD Curtis argued (for some things there are incorrect) that the spiral dot in the distance was none other than the "universe island" like our Milkyway galaxy.



**Figure 27D.** The Ursa Major galaxy, a similar galaxy like ours, but smaler in size.

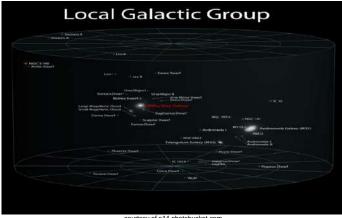
If we penetrate the depth of the sky still further, we will find billions (not millions) of other galaxies. In figure 27G below, a small area (area of a stamp from 30 meters) of the night sky, which was thought empty, it contains no less than 5000 dimmed distant galaxies.

The galaxies are like far-flung islands inhabited billions of stars anyway. Some galaxies form a cluster of galaxies. Then the clusters and more independent galaxies to form a larger cluster called a super cluster.

Meanwhile, studies of the Magellanic Clouds by Henrietta Leavitt and Annie Cannon laid the basis for measuring the distances of galaxies, through the period-luminosity relationship or the law Leavitt's pulsating cepheid variable. Using a reflector 100 at Mount Wilson, Edwin Hubble found cepheids in what is now known as a local group of galaxies, M31, M33, IC 1613.

The Milkyway is a member of a galaxies cluster called the Local Galactic Group which has around twenty galaxies and a diameter of about 3 million light years. Outside this Local Group which are separated by tens or hundreds of millions of light years

we also found many super clusters consisting of hundreds or thousands of galaxies.



courtesy of s14.photobucket.com

Figure 27E. Our Neighbors Galaxies Local Group is Andromeda, Ursa Major, Triangulum, Etc.

So, the concept of "star cluster" or "galaxy" is known by astronomers not long time ago, which is not yet one century ago. The existence of galaxies became known only after the human has a sharp telescope. However, it is a miracle that 14 centuries ago the idea of these star clusters repeatedly referred consistently in Al-Qur'an, i.e. the following verses:

"And verily in the heaven we have set cluster of the stars (al buruuj = galaxy), and We have beautified it for beholders" (QS 15 Al-Hijr 16)<sup>33</sup>

"By the heaven, holding cluster of the stars (al buruuj = galaxy)" (QS 85 Al-Buruui 1)

Miraculously, Al-Qur'an has to inform the beauty of the galaxies you can see photographs in many websites. Whereas the existence of the galaxy itself was discovered more than 1000 years after the revelation of Al-Qur'an, after human made telescope.

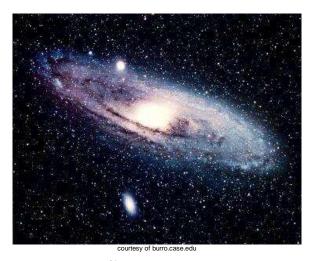


Figure 27F. Andromeda<sup>34</sup> Galaxy is like our Galaxy but bigger in size

Perhaps the critics could argue that the Bedouin Arab's definition of "stars cluster" is the constellations in the sky. But even more miraculous is the statement in Al-Qur'an which states the sun and the moon are parts of a star's cluster or a galaxy, 14 centuries ago, when debate of "geocentric and heliocentric" still confusing astronomers.

"Blessed be He Who hath placed in the heaven cluster of the stars (al buruuj = galaxy), and hath placed therein (in that galaxy) a great lamp (the sun) and a moon giving light" (QS 25 Al-Furqan 61)

The Andromeda Galaxy is the closest neighbor of our Milkyway galaxy. It is about two million light years from Earth. This galaxy was first observed by Persian-Muslim astronomer Al-Sufi Abdul Rahman in 964 AD and published in his book "Kitab al-Kawatib al-Thabit al-Musawwar". In Europe this book called "The Book of Fixed Stars". Today there are about 10 billion galaxies that can be observed.

There is no point in the universe which could be considered as the center of the explosion. In other words, a massive explosion of the universe is not like a bomb exploded from a single point to all directions. This is because essentially the whole universe participated in the blast. More precisely, the whole universe expands suddenly and simultaneously. That is the start point of the formed materials, space, and time.

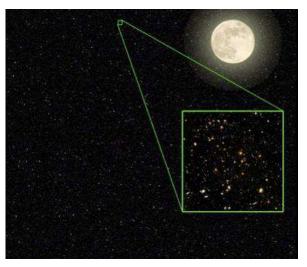


Figure 27G. With a powerful telescope, then a small area (area of a stamp from 30 meters) of the night sky, which was thought empty, it contains no less than 5000 dimmed distant galaxies. Each galaxy contains hundreds of billions of our sun-class stars. Allahuakbar.

"No doubt! Verily, to Allâh belongs whosoever is in the heavens and whosoever is in the earth. And those who worship and invoke others besides Allâh, in fact they follow not the (Allâh's so-called) partners, they follow only a conjecture and they only invent lies" (QS 10 Yunus 66)



Figure 27H. The collision of 2 galaxies namely UGC 1810 (top) and UGC 1813 (bottom) captured by the Hubble Telescope. The beauty of these galaxies is already mentioned in QS 15:16 which has revealed more than 1,000 years before the first galaxy seen by Pierre Mechain through a powerful telescope in 1781.

The first formed material of the universe is Hydrogen that forms the basis of the first generation of stars and galaxies. From nuclear fusion reactions inside the star forming heavier elements such as carbon, oxygen, nitrogen, up to iron. The content of heavy elements in a star is the "birth certificate" of a star.

A star that contain many heavy elements means that star was "a younger generation star" which used the materials debris from the explosion of old stars. The material forming the earth is also believed as originated from interstellar dust and gas that come from exploding stars in the past. So, the whole Universe is indeed derived from the 'singularity' that exploded in the Big Bang. Wallahua'lam.



Figure 27I. NASA's scientists combined data from Spitzer and Hubble Space Telescope, discovered the most distant galaxy known up to now. It named Abell 2744 Y1 galaxy, formed about 13.2 billion years ago when the universe was very young.

# 2.8. The Misguided of the Sky Object's Worshippers

Fortuneteller thrive in a society that likes to daydreaming. These communities are usually lacking of confidence, so rely on the forecasters who take advantage of this situation. Whereas the forecasters did not know the unseen matter, other than to obey its allegation. Allah said:

"And with Him are the keys of the unseen treasures-- none knows them but He; and He knows what is in the land and the sea, and there falls not a leaf but He knows it, nor a grain in the darkness of the earth, nor anything green nor dry but (it is all) in a clear book"

(QS 6 Al-An'aam 59)

The omniscience of Allah about the supernatural repeated many times in Al-Qur'an. In addition to the above verse we can read it in QS Al-Maidah (5):109, Al-An'am (6):73, At-Taubah (9):78, Yunus (10):20, Yusuf (12): 102, Ar-Ra'd (13):9, Al-Mukminun (23):92 and the others.

"Say (O Muhammad): None in the heavens and the earth knoweth the Unseen save Allah; and they know not when they will be raised (again)" (QS 27 An-Naml 65)

Predictions by a shaman, an astrologer, a soothsayer and the like, are misguided. They devote themselves to the jinn and satan to "peek" sky secret. Whereas jinn and satan do not know and they only speculate what would happen.

One popular divination among young people is the horoscope or the zodiac. Zodiac comes from the Greek word meaning Zoodiacos Cyclos or the Animal Cycle. This is clearly misguided and polytheism, because it considers celestial objects or stars have influence on our fate, fortune and mate.

Zodiac itself is twelve (today agreed to became thirteen) constellations -which is in fact five of them not the animals-, namely the stars of Capricornus (sea goat), Aquarius (water bearer), Pisces (fishes), Aries (sheep), Taurus (bull), Gemini (twins), Cancer (crab), Leo (lion), Virgo (virgin), Libra (scales), Scorpio (scorpion), Ophiucus (snake charmer) and Sagittarius (archer).

In the imaginary celestial globes there is a field called the ecliptic plane. If observed from the earth, all the objects of the solar system (planets, the moon and the sun) circulating the sky in the plane of the ecliptic.

The special of twelve zodiacs than other constellations are all located in the region of sky that cuts the ecliptic plane. So we can conclude the zodiac are all the constellations that are in the plane of the ecliptic.

For example Pisces Constellation in Figure below.

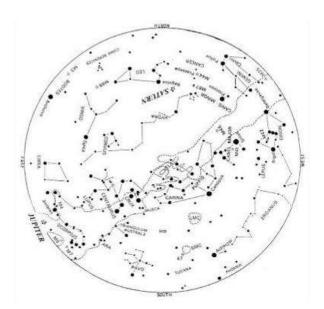


Figure 28A: This is the Constellations of Pisces. Somehow the astrologers get a picture of fish here. They really had high imagination. But when they assume that these stars affect human destiny, their imagination is really gone too far.

The Astrologers (distinguished with astronomer) and Clairvoyant attempt to connect the movement of celestial objects (stars, planets, moon and sun) with human destiny. Because of all planets, the sun and the moon are on the ecliptic plane, they all also automatically circulate among the zodiac. Astrological prophecy is based on the position of celestial objects mentioned in the zodiac.

Someone referred to classified in zodiac based on the position of the sun in the zodiac on the date of his birth. For example, people born in the beginning of April will be a Pisces, because on that date the Sun is in the Pisces constellation (see Figure above). How misguided worshipers of this celestial objects, including believers of horoscopes. Please know that the Sun itself is just a small star among 200 billion stars in the Milkyway Galaxy. Figure 26A and 26B have shown us that the Sun is not a special thing in this universe. It is astray people who worship the sun and any kind celestial objects. Let them be aware of the greatness of Allah who has created this universe with one word only: "Kun". The same consciousness has found by Prophet Abraham which is enshrined in Al-Qur'an. (76) So, when the night over-shadowed him, he (Abraham) saw a planet (Venus)<sup>35</sup>; said he: Is this my Lord? So, when it set, he said: I do not love the setting ones. (77) When he saw the moon rising up, he said: "This is my lord." But when it set, he said: "Unless my Lord guides me, I shall surely be among the erring people. (78) When he saw the sun rising in splendor, he said: "This is my Lord; this is the greatest (of all)." But when the sun set, he said: "O my people! I am indeed free from your (guilt) of giving partners to Allah (79) Lo! I have turned my face toward Him Who created the heavens and the earth, as one by nature upright, and I am not of the idolaters. (80) His people argued with him. He said: Dispute ye with me concerning Allah when He hath guided me? I fear not at all that which ye set up beside Him unless my Lord willeth aught. My Lord includeth all things in His knowledge. Will ye not then remember? (QS 6 Al-An'am 76-80)

<sup>35</sup> From sub-chapter 2.3 we know kaukab means a planet. In this case -no doubt-Abraham saw Venus. Venus is the second-brightest natural object in the night sky after the Moon. It reaching an apparent magnitude of -4.6, bright enough to cast shadows. Venus is always brighter than all other planets or even stars as seen from Earth.

Miraculously Al-Qur'an is not deceived using the word "Najm" (star). What Abraham saw is not a star, it is a planet. (Note: "kaukab" is a planet, "kawakib" are some planets). Al-Qur'an is not affected by all experts who consider Venus as 2 stars: morning star and evening star, Lucifer and Vesper (Roman), Tai-bai and Changgeng (China), Fosfor dan Hesperus (Greece).



Figure 28B. The observer connect the stars with imaginary lines to map the night sky.

From the long and detail verses above, it is clear that Allah is concerned about it, then you must not underestimate. Remember, if you believe in horoscopes, zodiac or whatever the name, it means you are part of the worshipers of the sun and stars.

A Bedouin Arab's intelligent questions about the creator of heaven and earth is enshrined in this authentic hadith.

It is reported on the authority of Anas ibn Malik that he said: We were forbidden that we should ask anything (without the genuine need) from the Holy Prophet (saw). It, therefore, pleased us that an intelligent person from the dwellers of the desert should come and asked him (the Holy Prophet) and we should listen to it. A man from the dwellers of the desert came (to the Holy Prophet) and said: Muhammad, your messenger came to us and told us your assertion that verily Allah had sent you (as a prophet). He (the Holy Prophet) remarked: He told the truth.

He (the bedouin) said: Who created the heaven? He (the Holy Prophet) replied: Allah. He (the bedouin again) said: Who

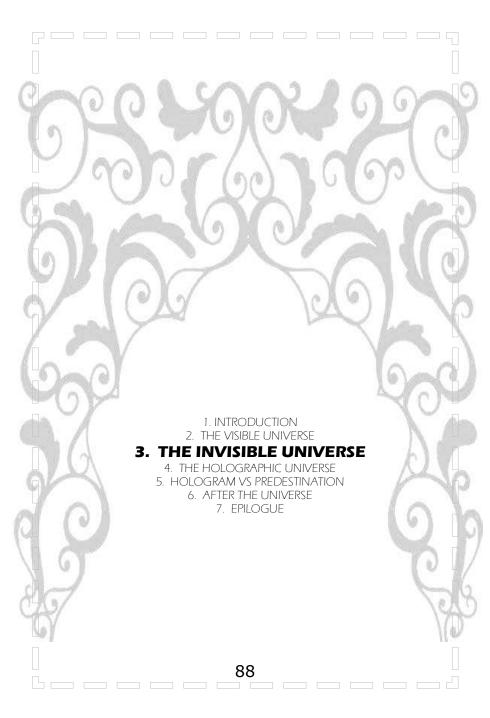
created the earth? He (the Holy Prophet) replied: Allah. He (the bedouin again) said: Who raised these mountains and who created in them whatever is created there? He (the Holy Prophet) replied: Allah. Upon this he (the bedouin) remarked: By Him Who created the heaven and created the earth and raised mountains thereupon, has Allah (in fact) sent you? He (the Holy Prophet) said: Yes.

He (the bedouin) said: Your messenger also told us that five prayers (had been made) obligatory for us during the day and the night. He (the Holy Prophet) remarked: He told you the truth. He (the bedouin) said: By Him Who sent you, is it Allah Who ordered you about this (i. e. prayers)? He (the Holy Prophet) said: Yes. He (the bedouin) said: Your messenger told us that Zakat had been made obligatory in our riches. He (the Holy Prophet) said: He has told the truth. He (the bedouin) said: By Him Who sent you (as a prophet), is it Allah Who ordered you about it (Zakat)? He (the Holy Prophet) said: Yes. He (the bedouin) said: Your messenger told us that it had been made obligatory for us to fast every year during the month of Ramadan. He (the Holy Prophet) said: He has told the truth. He (the bedouin) said: By Him Who sent you (as a prophet), is it Allah Who ordered you about it (the fasts of Ramadan)? He (the Holy Prophet) said: Yes. He (the bedouin) said: Your messenger also told us that pilgrimage (Haji) to the House (of Ka'bah) had been made obligatory for him who is able to undertake the journey to it. He (the Holy Prophet) said: Yes.

The narrator said that he (the bedouin) set off (at the conclusion of this answer, but at the time of his departure) remarked: 'By Him Who sent you with the Truth, I would neither make any addition to them nor would I diminish anything out of them. Upon this the Prophet (saw) remarked: "If he were true (to what he said) he must enter Paradise".

(Hadits Shahih Muslim 12)

-000-



### 3. THE INVISIBLE UNIVERSE

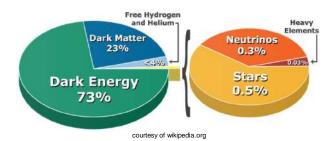
The invisible universe is obviously more difficult to understand than the visible universe in the last chapter. Understanding the invisible universe will bring us one step closer to a comprehensive understanding about the holographic universe.

#### 3.1. Dark Matter

The development of the telescope in the 17th century until the early 20th century grows rapidly. Astronomers even easier to see and identify celestial objects. They begin to see the impact craters on the moon and see the detail rings of Saturn. Their hearts flowery feel it is near the time to know everything about the Universe.

Astronomers are optimistic, only a matter of time humans will know everything about the sky with its entire object. Sharpening the telescope lens, and all the secrets of the heavens will be revealed.

But the Universe is not that simple. The more human know, the more human understand that they do not know anything. Visible objects discussed in many books, internet sites, magazines, etc., included in Chapter 2 of this book, is covers only 0.5% (half percent) of the total mass-energy in the Universe.



**Figure 31A**. The composition of the universe where stars which constitute the majority of the mass of the visible celestial objects is only 0.5% of the total of matter-energy in the universe.