

CHAPTER 7

THE HOLY VERSES AND THE PRESENT DISCOVERIES

As was stated in the introduction, we are not trying here to prove the validity of the creation verses in the Holy Qur'an. On the contrary, the man developed theories are considered to be credible ONLY if they agree with the verses of the Holy Qur'an, because the verses of the Holy Qur'an are the words of The Creator Himself, ALLAH (SWT). In this chapter the latest theories and discoveries are presented and compared with the Holy verses. It will be shown that the Holy verses explain what the man made theories fail to explain. The Holy verses also solve some of the observed cosmic mysteries that could not be solved by the present scientific techniques.

THEORY OF THE CREATION OF THE UNIVERSE

The most recognized and accepted theory of the creation of the universe (the lowest heaven) is the "big bang theory". This theory is based on Einstein's general theory of relativity, which was deduced by elaborate mathematical analysis. It states that before the creation, the universe was a singularity (an infinitesimally small point of infinite mass),

called “*primordial nucleus*”. *Somehow*, a gigantic explosion occurred billions of years ago that caused this nucleus to expand at a speed equals or greater than the speed of light. Gas clouds and particles then formed, and over billions of years those clouds condensed into stars, galaxies and planets. The theory also states that before the gigantic explosion occurred, there was nothing, not even an empty space. The equations of Einstein’s general theory of relativity showed that the universe is expanding. Such phenomenon was observed years later by Hubble (an American astronomer). According to this theory, there are two possibilities for the future of the universe. *Possibility (i)*: if the density of matter in the universe is greater than a critical value of $(10)^{-29}$ gram per cubic centimeter, the expansion of the universe will stop at some time and then collapses on itself. *Possibility (ii)*: if the density of matter in the universe is below this critical value, the universe will continue to expand forever.

Einstein has formulated his theory based on the assumptions that *the universe is uniform, homogeneous and isotropic, and that it is symmetrical in all directions*. The elaborate mathematical analysis necessitated these assumptions. However, these assumptions do not reflect the real situation. Accordingly, there are several observations that the big bang theory fails to explain.

DISCREPANCIES IN THE BIG BANG THEORY

There are several phenomena that contradict the big bang theory. Those phenomena are:-

1. The Smoothness of the Horizon Phenomenon: The big bang theory fails to explain the transition from the supposedly extreme disorder resulting from the gigantic explosion to the extremely ordered universe (lowest heaven) that exists now.
2. The Flatness Phenomenon: The density of matter in the universe is almost constant and equals to its critical value [$(10)^{-29}$ grams per cubic centimeter]. The big bang theory fails to explain that.
3. The Dark Matter Phenomenon: The big bang theory can not explain the existence of the dark matter, which accounts for more than 90% of matter in the universe.
4. The Entropy Phenomenon: According to the second law of thermodynamics, the entropy of the universe must increase with time. For a universe that existed for about 15 billion years, the entropy is not as high as it should be. *This means that the universe began as an extremely ordered universe*, which contradicts the big bang theory.

MAJOR OBSERVATIONS

There are several major observations that are not explained by any man-made theory. Those observations are:-

OBSERVATION (A): The gases in the universe (the lowest heaven) consist of approximately 75% or more hydrogen, 25% or less helium and less than 1% other light gases.

OBSERVATION (B): Recent observations by Hubble Space Telescope indicated that the earth and the rest of the universe have the same age. This is contrary to what the astronomers believed before, that the universe is about 15 billion years old, while the earth is about 5 billion years old.

OBSERVATION (C): Farther and farther away into space, beyond most of the visible galaxies, there are quasars. A quasar is a gigantic star that produces energy hundreds of times more than a galaxy.

OBSERVATION (D): There are many huge chains of galaxies (superclusters) distributed at different directions in the universe and constitute intricate patterns.

OBSERVATION (E): Very far away in the universe, there are large scale structures consist of series of huge sheets of galaxies (called the great wall). One of those sheets was observed to be about 300 million light years from earth, 500 million light years long, 200 million light years wide, and 15 million light years thick.

OBSERVATION (F): More than 90% of matter in the universe is not visible (dark matter).

OBSERVATION (G): Far away at the end of the universe, there is a huge energy source that supplies energy to the universe.

THE HOLY VERSES EXPLAIN THE UNEXPLAINED

Man made theories regarding any physical process always start by observations, then assumptions, then the construction of a mathematical model that fits the observations as close as possible. The assumptions made for constructing the mathematical model play a dominant role in the validity of the theory. The assumptions are usually made to simplify the mathematical analysis. In general the assumptions are based on the known physical laws that control the process. If the laws of the physical process dealt with are not completely understood, the developed theory could not describe the complete spectrum of the physical process. It may agree with a very limited band of observations, due to the basic assumptions and to some mathematical fitting techniques, but it will never be able to provide complete information about the physical process as a whole.

The physical laws known to mankind today, and even in the future are nothing but a very tiny and insignificant portion of ALLAH's knowledge. So, in order to develop an adequate theory to explain the creation of the universe (the lowest heaven), we have to use the clues and the pointers that ALLAH (SWT) Gave in the Holy Qur'an as guidelines.

Now, we are going to show how the cited verses presented in this book explain the above listed major observations as well as the phenomena unexplained by the big bang theory. First, let's go through the above listed major observations.

OBSERVATION (A): From cited verse #(3-2), it is seen that water existed before the creation of the earth and the heavens. In cited verse #(3-1), both the water and the entity that was forcibly disintegrated to start the creation, were mentioned together. This suggests that water may have contributed to the disintegration of the massive entity. Water is composed of hydrogen and oxygen. The force that disintegrated the massive entity produced tremendous heat [cited verses #(3-5) "He then Proceeded to the heaven while it had been smoke"]. The extreme heat triggered the fusion process of the hydrogen atoms, and as a result helium is produced. Therefore, the existence of water when the creation began explains why hydrogen and helium are the dominant gases in the universe (the lowest heaven). Unfortunately, the astronomers and the astrophysicists have not realized that yet.

OBSERVATION (B): From cited verses #(3-5), we have learned that ALLAH (SWT) Has Created the earth, Made solid foundations on it, and Laid into it its resources in six days (six thousand lunar years). In the last two days (two thousand lunar years) of the creation of the earth, ALLAH (SWT), simultaneously Created the seven heavens. In Chapter 3, we have learned that the earth started to function in the way it is today, after the creation of the heavens (after the creation of our solar system, which is in the lowest

heaven) was completed. Therefore, the earth and the universe (the lowest heaven) have the same age. That is, the earth and all the celestial objects have the same age.

OBSERVATIONS ©, (D), (E), (F): The celestial objects that could be observed in the universe (the lowest heaven), are the illuminating objects (stars, galaxies, quasars), and the non-illuminating objects that are close to the illuminating objects (the planets and their moons). If the non-illuminating objects in the universe were concentrated or grouped between the earth and the illuminating objects, they would block our view and we would not be able to observe the illuminating objects (stars, galaxies, quasars). On the other hand, if the dark matter were concentrated into the voids (empty spaces) between the illuminating objects, at least part of them would be visible, which is not the case. Therefore, the concentration of the dark matter (non-illuminating objects) must be beyond the observed stars. From the cited verses in Chapter 3, Chapter 5 and Chapter 6, we have learned that the lowest heaven (the universe) has a solid ceiling. The ceiling is formed from dark matter. All the illuminating objects in the universe (the lowest heaven) are formed from gas (mainly, hydrogen and helium). The mass of the solid material that covers the surface area of an enclosure is much greater than the mass of the mostly gaseous objects within the enclosure. This explains the scientific finding that most of the matter in the universe (more than 90% of the total mass in the universe) is not observed.

Studying ALLAH's creation, whether here on the earth or in the universe (the lowest heaven), reveals that the recycling concept and the reverse transformation dominate the physical processes. This could be clearly seen by the recycling of water on the earth. The water in the oceans is heated by the sun. Some evaporate and form clouds. Some of the clouds produce rain, which falls on the earth. The process is repeated again and again. This could also be seen in the recycling of vegetation on the earth. The soil contains the minerals. Seeds in the soil feed on those minerals and grow to become plants. The plants produce more seeds. Some of the seeds go back to the soil to grow new plants, and the cycle continues. As a simple example of a physical process and its reverse process, is the transformation of the kinetic energy (motion) to thermal energy (heat), and the reverse process of the transformation of thermal energy to kinetic energy. Similar recycling and reversible physical processes are continuously going on in the universe. All the stars, including our sun, are energy producers. They produce energy by transforming matter to energy. The reverse physical process is the transformation of energy to matter. This reverse process is not yet clearly understood or realized by mankind. Part of the huge energy produced by the energy producers [in particular the distant stars (quasars) and the distant galaxies] is continuously transformed to dark matter. The amount of the produced dark matter depends upon the amount of energy transformed. The distribution and the concentration of the dark matter are related to the distribution and the locations of the energy producers (all kinds of stars and galaxies). Most of the dark matter is attracted to the ceiling of the lowest heaven to cover its expanding surface. The structural integrity of the ceiling of the lowest heaven (the universe) is therefore directly related to the locations and the distribution of the energy producers. Such distribution becomes even more

critical, since the lowest heaven is continuously expanding [cited verse #(3-42)]. In cited verses #(3-40), ALLAH (SWT) Swears by the locations of the stars and Says “it is a mighty adjuration if you know”. This means that we humans will not understand the great significance of the locations of the stars, unless we have accumulated the proper scientific knowledge. Until recently, astronomers thought that the stars and the galaxies are randomly distributed. But with the advent of Hubble Space Telescope and new advanced technologies, intricate patterns of large scale structures and superclusters were discovered [Observations (D) and (F)]. The largest energy producers observed so far are the quasars. They are conveniently located far away beyond the galaxies [Observation ©]. This may be due to their dominant contribution to the production of dark matter through the process of converting energy to matter [cited verses #(3-40)].

The matter-energy-matter transformation cycle is not an exact reversible closed cycle. In the process of converting matter to energy, a small amount of matter is capable of releasing huge energy. On the other hand, in the reverse transformation much more energy is needed to produce an atom of matter. Due to this fact all the energy released from the stars may not be enough to produce the amount of dark matter needed to cover the expanded surface area of the lowest heaven. Much more energy is required for such purpose. The additional energy comes from the ultimate energy source, ALLAH (SWT). Without this additional energy the heavens would collapse [cited verse #(3-44)].

OBSERVATION (G): Recently astronomers and astrophysicist have discovered evidence of the existence of an unlimited energy source at the end of the universe. This energy source supplies the energy needed for maintaining the dynamics of the universe. Without this continuous supply of energy, the universe would not function, or even exists. In cited verse #(3-44), ALLAH (SWT) Says “It is ALLAH Who Holds the heavens and the earth lest they cease to exist, and if they did cease to exist, there is none who can hold them thereafter”. This is the most compelling and convincing proof that ALLAH (SWT) is The Creator, The Provider and The Protector.

Now, we turn our attention to the discrepancies in the big bang theory, and how the observed phenomena match what ALLAH (SWT) Says in the Holy Qur'an.

DISCREPANCY #1: The big bang theory is based upon the following assumptions:-

- ◆ After the gigantic explosion of the *primordial nucleus*, the universe (the lowest heaven) developed itself during the first billions of years of its existence.
- ◆ The physical laws that controlled the *self-development* of the universe are the present physical laws known to mankind.
- ◆ The expansion of the universe started at the onset of the explosion, that is the expansion is attributed to the explosion.

These assumptions are completely unrealistic. They were made to reduce the complexity of the mathematical analysis. They are not based on any reliable physical evidence. They leave so many unanswered questions. The most important one is, how could the products of a tremendous explosion develop into the highly ordered and the dynamically stable systems of its constituents by itself ?. There is not a single observation that supports this claim. The assumed *primordial nucleus* is just a given name for a singularity, which is a mathematical concept. The singularity assumption was needed to start the mathematical analysis.

In the Holy Qur'an ALLAH (SWT) Has not only Told how the creation of the heavens and the earth started but also Gave the sequence and the timeline for the creation [cited verses #(3-5)]. He also Told what was created and what was made [Chapter 6]. In the Holy Qur'an ALLAH (SWT) Has Given detailed information about the creation phases of the earth during the creation period and how it started to function [cited verse #(3-4), cited verses #(3-5), cited verse #(3-18), cited verses #(3-19) and cited verse #(3-20)]. He also Has Given information about the creation of the heavens and that the stars were created in the lowest heaven only, after He Has Constructed the seven heavens [cited verses #(3-5), cited verse #(3-6), cited verse #(3-7), cited verse #(3-31), cited verse #(3-32) and cited verse #(3-41)]. In addition, ALLAH (SWT) Said that He Has Created the earth's atmosphere during the creation of the heavens and the earth [Chapter 3].

All the creation information given in the Holy Qur'an [Chapter 3 and Chapter 6] shows that the heavens and the earth were created gradually and sequentially, so that all the elements needed for the orderly and precise performance of the heavens and the earth were functioning by the end of the creation period.

In all the creation verses in the Holy Qur'an, ALLAH (SWT) Has Referred to the creation of the heavens and the earth in the past tense. That is, the process of their creation has been completed in the creation period of six thousand lunar years. Whatever

events that occurred and still occurring after that period such as the birth of new stars and the death of others is evolution and not creation.

During the creation period new elements were continuously added. The integration of all the created elements was going through transition phase, which requires special physical laws. The physical laws controlling a dynamic system with continuously added new elements during its transitional phase are different from those controlling the fully developed system during its operational steady state phase. The following may be concluded:-

- ◆ THE PROCESS OF THE CREATION OF THE HEAVENS AND THE EARTH (DURING THE CREATION PERIOD) WAS NOT CONTROLLED BY THE PRESENT PHYSICAL LAWS.
- ◆ AFTER THE CREATION OF THE EARTH AND THE HEAVENS WAS COMPLETED, THEY STARTED TO FUNCTION ACCORDING TO THE PRESENT PHYSICAL LAWS.

In cited verse #(3-42), ALLAH (SWT) Says “And We Have Built (Constructed) the heaven with power, authority and skill, and We are to Continue expanding”. It is noticed here that the word “built” or “constructed” is given in the past tense, while the expansion is continuously going on. This is another indication that the creation of the heavens and the earth was completed by the end of the creation period. From this verse, the following may be concluded:-

- ◆ THE EXPANSION OF THE UNIVERSE (THE LOWEST HEAVEN) STARTED AFTER THE CREATION OF THE HEAVENS AND THE EARTH WAS COMPLETED, THEREFORE THE EXPANSION PROCESS IS CONTROLLED BY THE PRESENT PHYSICAL LAWS.

DISCREPANCIES #2, #3, AND #4: The flatness (constant density) phenomenon, the dark matter phenomenon and the entropy phenomenon are related. Grouping them together brings a clearer picture to the reader.

The density is defined as *mass per unit volume*. From cited verse #(3-42) we have learned that ALLAH (SWT) is continuously Expanding the lowest heaven (the universe). In Chapter 3 we have learned that the lowest heaven is a huge enclosure where all the celestial objects and the earth are contained within. If the enclosure is expanding (increasing volume) and there is no mass added, the density will drop. If mass proportional to the volume increase is added, the density will remain constant. Also in Chapter 3 we have learned that the boundary (the ceiling) of the lowest heaven is formed from solid dark matter. From Chapters 3, 5, 6 and the present chapter we have come to

the conclusion that the solidity and the structural integrity of the ceiling of the lowest heaven is maintained by the continuous addition of new dark matter. The matter produced from the energy producers (in particular the distant stars, galaxies and quasars) through the inverse process of transforming energy to matter is not enough to satisfy the stability criteria of the expanded heaven. Since the lowest heaven is a closed enclosure therefore additional energy from an external source is needed to produce the required amount of matter. That additional energy comes from the ultimate energy source, ALLAH (SWT) [cited verse #(3-44)]. ALLAH (SWT) Adjusts the amount of energy supplied by Him so that the ratio of the mass of matter (within the enclosure of the lowest heaven) to the volume (of the enclosure of the lowest heaven) remains constant, that is the density of matter in the lowest heaven (the universe) is kept constant. The ceiling of the lowest heaven would crack and collapse if the needed production level of the dark matter is not met. This could happen if ALLAH (SWT) Reduces the amount of energy that He Supplies. That is, ALLAH (SWT) is Holding the heaven from collapsing and falling by the energy which He Supplies [cited verse #(3-44)]. Such situation will materialize on judgment day [cited verses #(5-10) and cited verse #(6-11)].

In cited verse #(3-12), ALLAH (SWT) Says “And the heaven He Raised and Set the scale (the balance)”. This means that ALLAH (SWT) Has Set a stability criterion that keeps the heaven raised by maintaining the balanced dynamics that affects its structure during its expansion. In Chapters 5 and 6, it was deduced that the disperse motions of the galaxies towards the ceiling of the lowest heaven (the distances between the galaxies increase as they move towards the ceiling of the heaven) may be attributed to its overwhelming attraction (gravitational) force. The speed at which a galaxy is moving with is proportional to the difference between the local attraction (gravitational) force of the heaven’s ceiling and the gravitational force of the galaxy. Based on the universal law of gravity the local gravitational force is inversely proportional to the square of the distance from the center of the gravity source. That is as the distance between a galaxy and the ceiling of the lowest heaven increases the net force that propels it towards the ceiling decreases. The balanced dynamics of the expanded ceiling of the heaven and the motion of the galaxies are maintained if the relative distance of each galaxy from the ceiling of the heaven is kept constant. The attraction (gravitational) force of the expanding ceiling of the heaven is increasing due to the continuous increase in its mass. Accordingly the differential gravitational force that propels each galaxy increases thus increasing the speed at which the galaxy is moving towards the ceiling. That is the galaxies and in particular the distant ones are accelerating away from the earth.

VERY RECENTLY IT HAS BEEN OBSERVED THAT THE EXPANSION OF THE UNIVERSE IS ACCELERATING AND THE DISTANCES BETWEEN THE DISTANT GALAXIES MOVING AWAY FROM THE EARTH ARE INCREASING. ASTRONOMERS ATTRIBUTE THESE PHENOMENA TO MYSTERIOUS FORCES NOT YET KNOWN.

In cited verses #(6-13), ALLAH (SWT) Says “And We Have Built above you strong seven”, and in cited verse #(6-10), ALLAH (SWT) Says “And We Have Made the heaven a secured ceiling, ...”. These verses indicate that the ceilings of the heavens are very strong. The strength comes from two factors, the solidity of the construction material and the thickness of the structure. For the lowest heaven (the universe), the construction material is dark matter, which is solid. The thickness of the ceiling of the lowest heaven must be quite considerable. That is, the amount of the solid material (dark matter) forming the ceiling (the surface of the enclosure) is much greater than all the dark matter contained within.

One of the important physical parameters is given the name “*entropy*”. The entropy is a parametric quantity associated with energy conversion processes. If the process is reversible, that is if there is no loss of the useful energy during the conversion process, the entropy remains constant. For an irreversible process, that is a process during which part of the useful energy is lost (transformed to other form of energy), the entropy increases. The amount of entropy increase is a measure of the irreversibility of the process.

Measurements of the entropy of the universe showed that over the billions of years of its existence, the entropy is almost constant or has increased very slightly. That would not be the case if the universe started in complete disorder and then evolved over the billions of years by itself to become a highly ordered universe, as the big bang theory claims.

In cited verse #(3-17) ALLAH (SWT) Says that He Has Created the heavens and the earth in true proportions. In cited verse #(3-31) ALLAH (SWT) Says that He Has Built the heaven and adorned it and it has no flaws. In cited verse #(6-4) ALLAH (SWT) Says that He Has not Created the heavens and the earth and what in between them but in true perfection. These verses indicate that the creation of the heavens, the earth and what in between them was totally perfected by the end of the creation period and since then they are performing in a very orderly manner. Accordingly the entropy of the universe would remain almost constant during its life span.

The continuing expansion of the lowest heaven, which started after the completion of the creation is the orderly steady state phase. Such steady state condition will last till judgment day [Chapter 5]. The cyclic matter-energy-matter transformation together with the energy supplied by ALLAH (SWT) is associated with the expansion of the lowest heaven. All these physical processes are going on within the enclosure of the lowest heaven. The ceiling of the lowest heaven, which is formed from solid dark matter, isolates the domain of the lowest heaven from that of the heaven above it, Figure (3-2). Since there is no energy loss during these processes (no energy transfer from the lowest heaven domain outwards), therefore the overall dynamic system constitutes an isolated reversible process where the entropy remains constant.

THEORY OF THE EARTH'S STRUCTURE

The latest and the most accepted theory of the earth's structure is known as "*plate tectonics theory*". This theory has been supported by observations as well as mathematical computations. The theory states that the earth is formed of series of layers of different thickness, composition, density and solidity, Figure (7-1). The three layers,

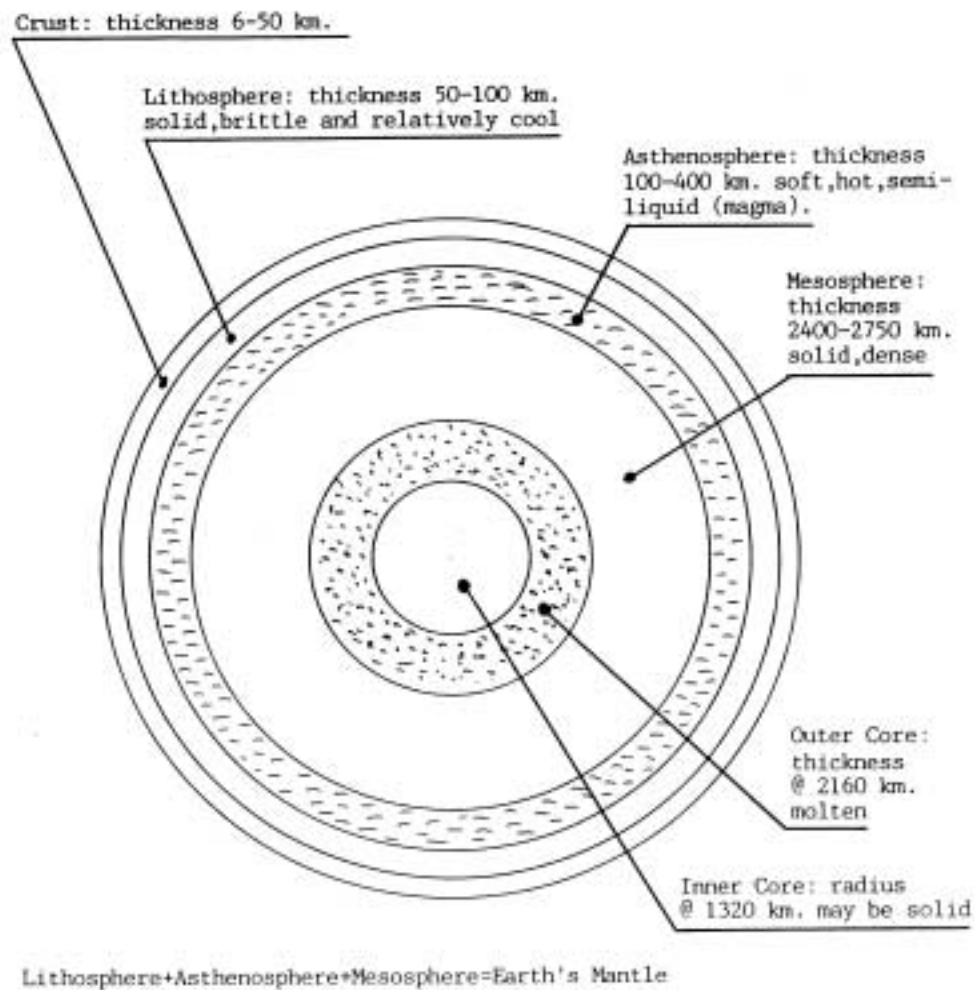


Figure (7-1) Illustration of the earth's structure (not to scale).

the *mesosphere*, the *asthenosphere*, and the *lithosphere* constitute the *mantle* of the earth. The core of the earth is formed of an *inner core* (probably solid) and an *outer core* (molten metal). The *crust* forms a very thin layer at the surface of the earth. The *crust* is differentiated from the solid brittle layer beneath it (the *lithosphere*) by a structural discontinuity called the *moho* (the first four letters of its discoverer's name). The *lithosphere* has more dense rocks, it contains less gas and liquid, and more concentrations of heavy elements. The *lithosphere* is divided into a number of great plates. The oceans, the mountains and the continents, that is all the surface features of the earth are contained within the *crust*. An illustration of the upper three layers, the *crust*, the *lithosphere* and the *asthenosphere* is shown in Figure (7-2).

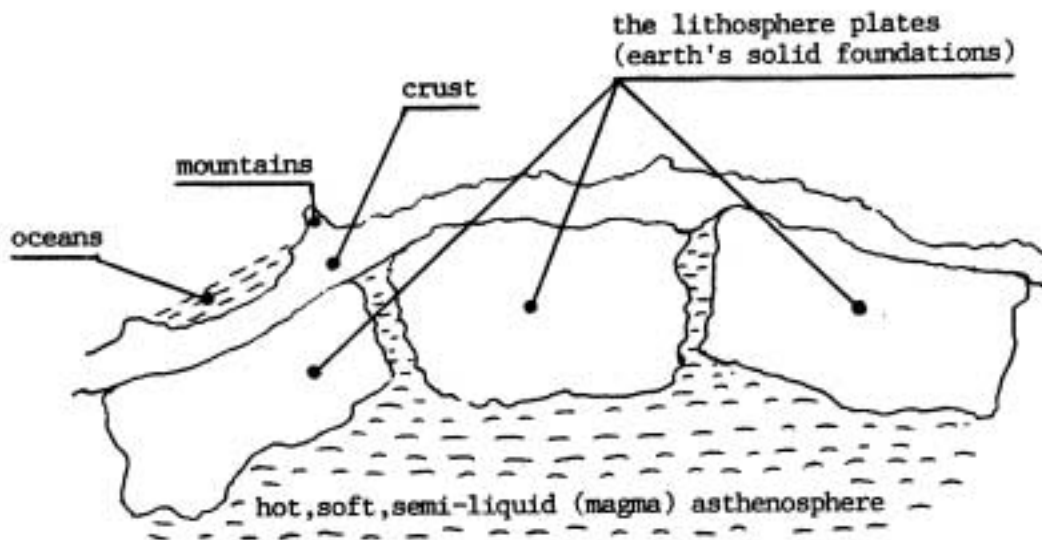


Figure (7-2) Illustration of the three upper layers of the earth (Not To Scale)

As seen from Figure (7-2), the plates of the *lithosphere* are floating over the hot, soft and semi-liquid layer, the *asthenosphere*. Earthquakes occur due to slight movements of the plates of the *lithosphere* over the *asthenosphere* layer.

In Chapter 3, we have learned from the Holy Qur'an how the mountains were formed. Later on in this chapter we will learn what ALLAH (SWT) Says about the role of the mountains.

THE HOLY VERSES AND THE STRUCTURE OF THE EARTH

MAJOR PARTS OF THE EARTH

In cited verses #(3-5), ALLAH (SWT) Says “ ... Who Created the earth in two days and you make equals to Him, He is The LORD of all worlds. And He Made solid foundations on top of it, and Bestowed blessings on it and established in it all its resources in four days in accordance with the needs of those who seek sustenance”. From these verses we learn that ALLAH (SWT) Has Created the inner part of the earth in the first two days of creation, then He Made solid foundations on top of it and the crust layer on top of the solid foundations [cited verses #(7-4)]. That is, the solid foundations and the crust layer are not an integral part of the earth. This indicates that the earth is formed from two major parts, an inner part (the earth) and solid foundations and a crust layer on top of it. This also indicates that each of the two major parts must have different characteristics and different constituents. From these verses, we notice that all the resources of the earth were laid into it after the creation of its inner part was completed and during the making of the solid foundations on top of it. The following therefore may be concluded:-

ALL THE RESOURCES OF THE EARTH ARE LOCATED WITHIN THE LAYERS ABOVE THE INNER PART (THE SOLID FOUNDATIONS AND THE CRUST).

Such allocation of the resources is made so that they could be easily accessible to mankind. Even the most advanced technology has its limitations. Accordingly, the resources must be close enough to the earth's surface, so that man-made machinery can extract and use part of these resources. This leads to the following :-

THE THICKNESS OF THE SOLID FOUNDATIONS AND THE CRUST MUST BE MUCH SMALLER THAN THE THICKNESS OF THE PART BENEATH THEM.

In cited verses #(7-1), ALLAH (SWT) Says “And He Set foundations in the earth to hold it from collapsing under you, and rivers and trails that you may guide yourselves”. That is without the solid foundations, the earth could not support the weight of its inhabitants. This means that the layer beneath the solid foundations is formed of either liquid or semi-liquid substance.

In cited verses #(3-5) and #(7-1), as well as in all the verses in the Holy Qur'an which mention the solid foundations, they are always mentioned as *plural*. That is, they are more than two solid foundations (in the Arabic language, there is a specific linguistic form when referring to “two” things). Now we come to the logical question, if the earth

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
 وَالْقَى فِي الْأَرْضِ رَوَاسِيَ أَنْ تَمِيدَ بِكُمْ وَأَنْهَارًا وَسُبُلًا
 لَعَلَّكُمْ تَهْتَدُونَ ﴿١٥﴾ وَعَلَّمَتِ بِالنَّجْمِ هُمْ يَهْتَدُونَ ﴿١٦﴾
 الجزء الرابع عشر سورة النحل

Cited Verses #(7-1)

In The Name of ALLAH, Most Gracious, Most Merciful

And He Set foundations in the earth to hold it from collapsing under you, and rivers and trails that you may guide yourselves. And signs and by the star they (the people) guide themselves.

(part 14, Surat Al Nahl “The Bees”)

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
 وَالسَّمَاءِ ذَاتِ الرَّجْعِ ﴿١١﴾ وَالْأَرْضِ ذَاتِ
 الصَّدْعِ ﴿١٢﴾ إِنَّهُ لَقَوْلٌ فَصْلٌ ﴿١٣﴾ وَمَا هُوَ إِلَّا هَزْلٌ ﴿١٤﴾
 الجزء الثلاثون سورة الطارق

Cited Verses #(7-2)

In The Name of ALLAH, Most Gracious, Most Merciful

By the heaven which returns the sight without seeing its end. By the earth which has gaps. It is a decisive saying. And it is not a thing for amusement.

(part 30, Surat Al Tareck “The Piercing Star”)

beneath the solid foundations could not support the weight of its inhabitants, then how could it support the weights of the solid foundations ?. The answer to this question is as follows:-

- ◆ EACH SOLID FOUNDATION MUST HAVE A LARGE SURFACE AREA SO IT CAN FLOAT OVER THE LIQUID OR SEMI-LIQUID SUBSTANCE BENEATH IT.
- ◆ AS THE NAME INDICATES, THE SOLID FOUNDATIONS ARE SOLID. THEY DO NOT HAVE THE BOUYANCY OF THE SHIPS. THEREFORE, THE SUBSTANCE BENEATH THEM MUST BE HEAVIER THAN LIQUID, IT MUST BE SEMI-LIQUID (SOME FORM OF PLASTIC-LIKE SUBSTANCE).

In cited verses #(7-2), ALLAH (SWT) Is Swearing by two of His creations. He is swearing by the heaven (the lowest heaven) whose end could not be seen or observed. The sight of the observer returns back without seeing its end. Also, ALLAH (SWT) Is Swearing by the earth which has gaps. Let's take a closer look at the gaps of the earth. A gap is an opening between two solid surfaces. It was established above that the layer beneath the solid foundations is formed of semi-liquid substance. Gaps could not exist in a semi-liquid substance. Also, it was established above that there are more than two solid foundations floating over the semi-liquid layer. Therefore, the following may be concluded:-

THERE ARE GAPS BETWEEN THE SOLID FOUNDATIONS.

THE UPPER LAYERS OF THE EARTH

In the third verse of cited verses #(7-3), ALLAH (SWT) Says “And We Have Made in it (the earth) lofty foundations, ...”. The foundations in this verse are the solid foundations mentioned in the previous cited verses. Lofty foundations means that they are huge in size and rugged. Since they are rugged (have rough surfaces), it will be impossible for most of the earth's inhabitants, and in particular the humans to move around on them. In the second verse of cited verses #(7-4), ALLAH (SWT) Says “And the earth We Have Covered, how great We Are in Making it possible to move around easily”. This verse tells that ALLAH (SWT) Has covered the solid foundations with a relatively smooth layer, to make it easy for us humans to move around. In the first verse of cited verses #(7-1), ALLAH (SWT) Says “ ... and rivers and trails so you may guide yourselves”. The rivers and the trails are on the surface of the earth. Therefore, the relatively smooth layer on top of the solid foundations is the one containing the rivers and the trails. If the surface of the earth were completely flat (smooth), everywhere would be the same. There would be no signs to identify the different locations. The different topographies of the earth's surface are made to be identifying signs for the different locations on the earth. The following may be concluded:-

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
 أَلَمْ يَجْعَلِ الْأَرْضَ كِفَاتًا ﴿٢٥﴾
 أَحْيَاءَ وَآمُوتًا ﴿٢٦﴾ وَجَعَلْنَا فِيهَا رِوْاسِيَ شَامِخَاتٍ وَأَسْقَيْنَكُم
 مَاءً فُرَاتًا ﴿٢٧﴾
 الجزء التاسع والعشرون سورة المرسلات

Cited Verses # (7-3)

In The Name of ALLAH, Most Gracious, Most Merciful

Have not We Made the earth to draw together. The living and the dead. And We Have Made in it lofty foundations, and We Provided for you Wholesome tasty water.

(part 29, Surat Al Mursalaat “Those Sent Forth”)

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
 وَالسَّمَاءَ بَنَيْنَاهَا
 بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ ﴿٢٧﴾ وَالْأَرْضَ فَرَشْنَاهَا فَنِعْمَ الْمُهَيِّدُونَ ﴿٢٨﴾
 الجزء السابع والعشرون سورة الذاريات

Cited Verses # (7-4)

In The Name of ALLAH, Most Gracious, Most Merciful

And the heaven We Have Built with power, authority and skill, and we are expanding. And the earth We Have covered it, how great We Are in Making it possible to move around easily.

(part 27, Surat Al Thaariyaat “Winds That Scatter”)

THERE IS A RELATIVELY SMOOTH LAYER ABOVE THE SOLID FOUNDATIONS. THIS LAYER (THE CRUST) CONTAINS THE RIVERS AND ALL THE FEATURES (TOPOGRAPHY) OF THE SURFACE OF THE EARTH.

From cited verses #(3-5), it is noticed that ALLAH (SWT) Has Defined the earth as that part below the solid foundations. This leads to the logical question, would the earth as Defined by ALLAH (SWT) in cited verses #(3-5) with the solid foundations on top of it, and the crust layer on top of the solid foundations, would all of this still be called the earth?. The answer is YES. In cited verse #(7-5), ALLAH (SWT) Says “And it is He Who Extended the earth, and Made in it solid foundations and rivers, ...”. From this verse we learn that ALLAH (SWT) Has Extended the inner part of the earth (the part below the solid foundations) by Adding to it the solid foundations and the cover over the solid foundations (the crust layer), which contains the rivers. The extended earth is still called the earth.

The distinction between the solid foundations and the part below them, indicates that they have different formations and different characteristics. Furthermore, the second verse of cited verses #(7-4) indicates that the *cover* (the crust layer) above the solid foundations is also different from the solid foundations. This information leads to the following conclusion:-

- ◆ THE CONSTITUENTS OF THE CRUST LAYER, THE SOLID FOUNDATIONS, AND THE LAYER BELOW THE SOLID FOUNDATIONS ARE DIFFERENT FROM EACH OTHER.
- ◆ THERE IS A DISCONTINUITY BETWEEN THE CRUST LAYER AND THE SOLID FOUNDATIONS. ALSO, THERE IS A DISCONTINUITY BETWEEN THE SOLID FOUNDATIONS AND THE LAYER BENEATH THEM.

ROLE OF THE MOUNTAINS

The earth's *crust* is on top of the solid foundations. The solid foundations are several huge *plates* floating over the semi-liquid layer beneath them. Due to the earth's gravitational force, the mass of the crust as well as the masses of the solid foundations are carried by the semi-liquid layer beneath them. These weights exert tremendous pressure on the semi-liquid layer thus heating it up. The pressure build up within the semi-liquid layer pushes some of its constituents with great force through the gaps between the solid foundations, Figure (7-2). At the locations of the gaps, the earth's crust is directly subjected to the powerful upward force of the hot semi-liquid material (magma). The crust by itself could not withstand such powerful force. If the crust is not strengthened somehow, it would crack along the gaps between the solid foundations, and the hot semi-liquid substance (magma) would flow from all these cracks. If that would happen, it will be almost impossible to move from one location to another on the earth. In cited verses

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَهُوَ الَّذِي مَدَّ الْأَرْضَ وَجَعَلَ فِيهَا رَواسِيَ وَأَنْهَارًا
وَمِنْ كُلِّ الشَّجَرَاتِ جَعَلَ فِيهَا زَوْجَيْنِ اثْنَيْنِ يُغْشَى اللَّيْلَ النَّهَارَ إِنَّ
فِي ذَلِكَ لَآيَاتٍ لِقَوْمٍ يَتَفَكَّرُونَ ﴿٥﴾

الجزء الثالث عشر
سورة الرعد

Cited Verse #(7-5)

In The Name of ALLAH, Most Gracious, Most Merciful

And it is He Who Extended the earth, and Made in it solid foundations and rivers, and He Made pairs from all the fruits, He Draws the night as a veil over the day, Behold! Verily, in these things there are signs for those who think.
(part 13, Surat Al Ra'ad "The Thunder")

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

اللَّهُ الَّذِي
خَلَقَ سَبْعَ سَمَاوَاتٍ وَمِنَ الْأَرْضِ مِثْلَهُنَّ يَتَنَزَّلُ الْأَمْرُ بَيْنَهُنَّ لِتَعْلَمُوا
أَنَّ اللَّهَ عَلَى كُلِّ شَيْءٍ قَدِيرٌ وَأَنَّ اللَّهَ قَدْ أَحَاطَ بِكُلِّ شَيْءٍ عِلْمًا ﴿٦﴾

الجزء الثامن والعشرون
سورة الطلاق

Cited Verse #(7-6)

In The Name of ALLAH, Most Gracious, Most Merciful

ALLAH is He Who Created seven heavens and of the earth similar to them, between them descends His command, that you may know that ALLAH Has power over all things and that ALLAH Has absolute knowledge of everything.
(part 28, Surat Al Talaq "The Divorce")

#(7-4), ALLAH (SWT) Says that He Has Made the earth easy to move around. Therefore, ALLAH (SWT) must Have Created something to prevent this hostile situation from happening.

In the first two verses of cited verses #(6-4), ALLAH (SWT) Says “Have not We Made the earth easy to walk on. And the mountains pegs”. In these two verses, ALLAH (SWT) Has Connected between Making the earth easy to walk on and that the mountains act as pegs. The pegs hold whatever is attached to them firmly in place. For instance, the pegs hold the tent in place.

After the second world war the science and technology of deep ocean exploration has advanced dramatically. Geophysicists discovered mid-oceanic ridges. There is a ridge in the middle of the floor of all major oceans. Hot magma from beneath the solid foundations (the tectonic plates) is pushed through the middle of the oceans' floors. It piles up and as it cools down it forms a ridge which widens all the time. Those underwater ridges are marine mountains. They are huge and their sizes surpass that of the Himalayas. The continents drift apart due to the continuous formation of those marine mountains. Similar to land mountains they act as pegs to strengthen the oceans' floors.

From these verses the role of the mountains may be identified as follows:-

THE MOUNTAINS WHETHER LAND OR MARINE ARE MADE TO STRENGTHEN THE EARTH'S CRUST. SO IT CAN WITHSTAND THE TREMENDOUS INSIDE PRESSURE OF THE HOT SEMI-LIQUID MATERIAL (MAGMA) PUSHED THROUGH THE GAPS BETWEEN THE SOLID FOUNDATIONS.

THE EARTH'S GRAVITY

From cited verses #(3-5), we have learned that ALLAH (SWT) Has Created the “inner part of the earth” in the first two days (two thousand lunar years) of creation. He then Made the solid foundations on top of it. The solid foundations are kept on top of the inner part of the earth by the earth's gravitational force (their weights). Therefore, the gravitational force of the earth was created with the creation of the inner part of the earth. This leads to the following important conclusion:-

THE EARTH'S GRAVITATIONAL FORCE IS A PROPERTY OF THE INNER PART OF THE EARTH (THE PART BELOW THE SOLID FOUNDATIONS). THAT IS, THE FORMATION AND THE CONSTITUENTS OF THE INNER PART GENERATE THE EARTH'S GRAVITATIONAL FORCE.

NUMBER OF THE EARTH'S LAYERS

From the cited verses, we have learned so far that there are three upper layers. The *crust*, is the layer on top, beneath it are the *solid foundations*, and beneath them is *hot semi-liquid (magma)*. In cited verse #(7-6), ALLAH (SWT) Says “ALLAH Is He Who Created seven heavens and of the earth similar to them, ...”. This verse may be wrongly interpreted as, there are seven “earths” as there are seven heavens. THIS COULD NOT BE. From cited verses #(3-5), we have learned that ALLAH (SWT) Has Completed the creation of the earth in six days (two days for the creation of the inner part and four days for making the solid foundations on top of it and for laying down all its resources). If there were another “earths”, each would have taken additional six days to create and they would be located within the heavens. Also, from cited verses #(3-5), we have learned that ALLAH (SWT) Has Created all the seven heavens in just two days. Therefore, the existence of another “earth” or “earths” other than ours is not realistic and is impossible. [this should not be confused with the existence of many extraterrestrial solar systems and planets, none is identical to the earth (CH. 3)]. In all the Holy Qur’an ALLAH (SWT) Has Referred to the earth in a singular definitive form “*The Earth*”, an indication that our earth is the only one. Accordingly, cited verse #(7-6) must have a different interpretation.

In Chapter 3, we have learned that ALLAH (SWT) Has Created the seven heavens in layers, one above the other. Also, we have learned that the seven heavens are enclosures, each one surrounds the ones beneath it. Therefore, the similarity given in cited verse #(7-6) indicates the following:-

THE EARTH HAS SEVEN LAYERS.

From the verses cited in this Chapter, we have learned about the upper three layers, the *crust*, the *solid foundations* beneath the crust, and the *hot semi-liquid* layer beneath the solid foundations. There must be another four layers beneath the *hot semi-liquid* layer. Table (7-1) shows the layers of the earth as defined by the Holy verses and those defined by the latest theories.

THE UNDERGROUND WATER

From cited verses #(3-5), we have learned that all the earth’s resources are located within the upper two layers (the crust and the solid foundations). The most important resource of all is water. Other than the waters in the oceans and in the rivers, there is underground water. In Chapter 3, we have learned that Noah’s deluge was caused by very heavy rain and huge quantity of water gushing out from beneath the earth’s surface [cited verses #(3-22) and #(3-23)]. This indicates that there are huge underground reservoirs

Table (7-1) Layers of the Earth

THE HOLY VERSES	LATEST THEORIES
The Cover	The Crust
The Solid Foundations (more than two plates)	The Lithosphere (Plates)
Hot Semi-Liquid	Asthenosphere [Hot Semi-Liquid (Magma)]
Layer # 4	Mesosphere (Solid, Dense)
Layer # 3	Unidentified
Layer # 2	Outer Core (may be Molten Metal)
Layer # 1 (The Core)	Inner Core (may be Solid)

containing these waters. If these huge reservoirs were located within the solid foundations, there would be a lot of cavities within them. The definition of the solid foundations is that they are rugged, solid and condensed. Therefore, the only viable alternative is that the underground reservoirs of water are contained within the crust layer.

PARTITIONING OF DIFFERENT BODIES OF WATERS

In the first of cited verses #(7-7), ALLAH (SWT) Says “He Has let the two seas meet freely”. The words “*two seas*” in this verse define two conditions. First, the two bodies of waters have different characteristics and qualities. Second, they meet at a “*restricted*” rather than a widely open location, so the domains of the two bodies are well defined. This situation is seen clearly at the strait of Gibraltar, where the Mediterranean sea meets with the Atlantic ocean, and at the strait of Aden, where the Red sea meets with the Arabian sea. For an observer at these locations, the two bodies of waters meet freely and seamlessly.

In the second verse of cited verses #(7-7), ALLAH (SWT) Says “Between them there is a transition zone so they do not transgress one on the other”. In this verse the Arabic word “*barzakh*” is mistakenly translated as a “barrier”. Its correct translation is a “transition zone”. In Cited verse #(7-8) the Arabic word “*hajez*” is the barrier. Unfortunately even the Arabic speaking scholars do not differentiate between the two words. Such misunderstanding of the proper meanings of the two words leads to the inaccuracy of the information provided by these Holy verses.

The second verse of cited verses #(7-7) quoted above means that at the place where the two seas meet, a limited transition zone is formed between them so that the qualities and

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

مرج

الْبَحْرَيْنِ يَلْتَقِيَانِ ﴿١٩﴾ بَيْنَهُمَا بَرْزَخٌ لَا يَبْغِيَانِ ﴿٢٠﴾ فَبِأَيِّ آيَاتِ رَبِّكُمَا
تُكذَّبَانِ ﴿٢١﴾ يُخْرَجُ مِنْهُمَا اللُّؤْلُؤُ وَالْمَرْجَانُ ﴿٢٢﴾ فَبِأَيِّ آيَاتِ رَبِّكُمَا
تُكذَّبَانِ ﴿٢٣﴾

سورة الرحمن

الجزء السابع والعشرون

Cited Verses # (7-7)

In The Name of ALLAH, Most Gracious, Most Merciful

He Has let the two seas meet freely. Between them there is a transition zone so they do not transgress one on the other. So which of the favors of your LORD you deny. Out of them come pearls and coral. So which of the favors of your LORD you deny.

(part 27, Surat Al Rahman “The Most Gracious”)

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

أَمْ مَنْ جَعَلَ الْأَرْضَ قَرَارًا وَجَعَلَ خِلَالَهَا أَنْهَارًا وَجَعَلَ لَهَا رَوَاسِي
وَجَعَلَ بَيْنَ الْبَحْرَيْنِ حَاجِزًا ۗ أَلَمْ يَكُنْ مَعَ اللَّهِ بَلْ أَكْثَرُهُمْ لَا يَعْلَمُونَ ﴿١١﴾

سورة النمل

الجزء العشرون

Cited Verse # (7-8)

In The Name of ALLAH, Most Gracious, Most Merciful

Or Who Has Made the earth a place to reside on, and Made through it rivers, and Made for it solid foundations, and Made a barrier between the two seas, Is there a God with ALLAH?, Nay most of them know nothing.

(part 20, Surat Al Naml “The Ants”)

the characteristics of each body of water are preserved. This phenomenon has been discovered in modern oceanography. The major factor that differentiates between the characteristics of the waters in different seas is the salinity of their waters. When the waters of two seas meet two layers of waters form with that of the higher salinity beneath that of the lower salinity. The two layers gradually mix up. The zone where the mixing up takes place is the transition zone the “*barzakh*”.

In cited Verse #(7-8) the word barrier “*hajez*” rather than the word transition zone “*barzakh*” is mentioned. Looking closely at the wording in cited verses #(7-7) and cited verse #(7-8). In cited verses #(7-7) the statement of the meeting of the two bodies of water is general, that is wherever two bodies of waters meet there is a transition zone between them which preserves the individual qualities of each body of water. On the other hand in cited verse #(7-8) ALLAH (SWT) Says that He Made a barrier between the two seas. This means that ALLAH (SWT) Has Created a phenomenon that formed the barrier between the two seas. The statement in this verse is not general, in the sense that it does not apply to the meeting of any two bodies of water. Therefore the barrier “*hajez*” mentioned in cited verse #(7-8) is different from the transition zone “*barzakh*” mentioned in cited verses #(7-7). Moreover the barrier “*hajez*” is much more robust in its construction than the formation of a transition zone “*barzakh*”. Accordingly the phenomenon that formed the barrier “*hajez*” between the two seas must be of large scale. Recently modern oceanography has discovered huge underwater currents moving through all the oceans known as “the oceanic conveyor belt”. An illustration of this oceanic conveyor belt is shown in Fig. (7-3).

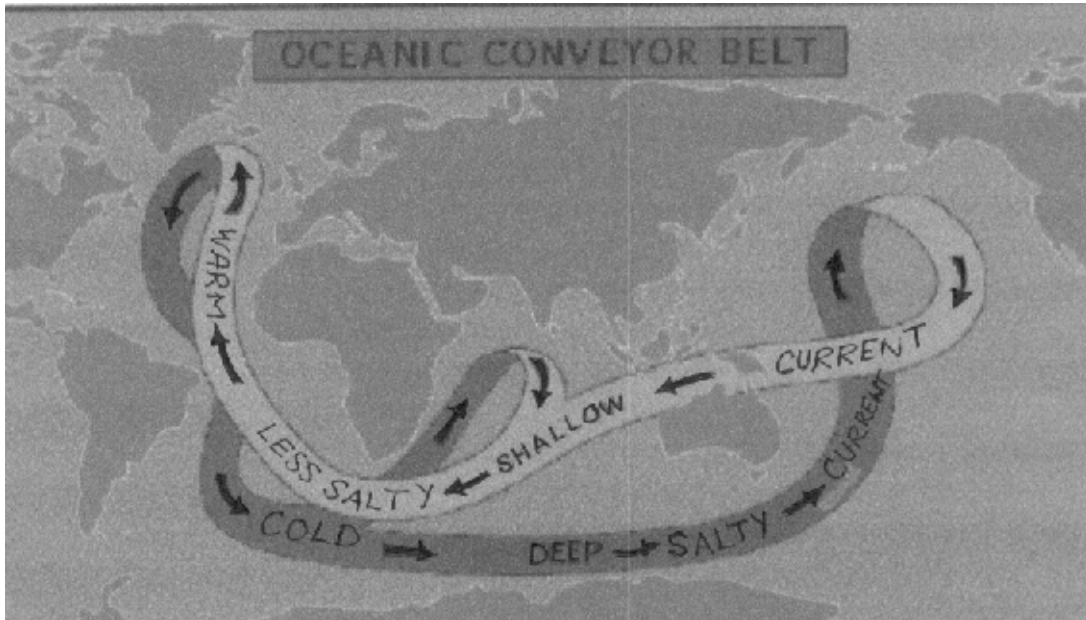


Figure (7-3) an illustration of the Oceanic Conveyor Belt

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

* وَهُوَ الَّذِي مَرَجَ الْبَحْرَيْنِ هَذَا عَذْبٌ فُرَاتٌ وَهَذَا مِلْحٌ أُجَاجٌ وَجَعَلَ
بَيْنَهُمَا بَرْزَخًا وَحِجْرًا مَحْجُورًا ﴿٥٣﴾

سورة الفرقان الجزء التاسع عشر

Cited Verse # (7-9)

In The Name of ALLAH, Most Gracious, Most Merciful

It is He Who Has Let the two seas meet freely, one is palatable and sweet and the other is salty and bitter, and Made between them a transition zone and a partition that could not be passed.

(part 19, Surat Al Furqan “The Criterion”)

The warm water in the tropics flows northward, warming the North Atlantic Ocean causing part of the glaciers and icebergs there to melt thus diluting the salinity of the surface water. The heavier saltier water sinks deep into the ocean and flows southward. This cycle continues, forming the conveyor belt. The flowing of the shallow water northward and the deep water southward form very strong currents. These strong currents are the barrier that prevents the mixing of the bodies of waters east and west of it. As shown in Fig. (7-3) this barrier exists between the waters in the Mediterranean sea and the Atlantic ocean.

The Arabic word “*barzakh*” (transition zone) is mentioned in the second verse of cited verses #(7-7) as well as in cited verse #(7-9). However, the same word in the two verses points to different situations. In the second verse of cited verses #(7-7), ALLAH (SWT) Says “between them there is a transition zone “*barzakh*” and in the fourth verse of the same cited verses ALLAH (SWT) Says “out of them come pearls and coral”. The pearls and the coral come from salty waters. Therefore the “*barzakh*” (transition zone) mentioned in cited verses #(7-7) is between two similar bodies of water (both are salty waters). This indicates that the “*barzakh*” in this case is formed according to the natural laws [which is created by ALLAH (SWT)] due to the variation in the salinity of the two bodies of waters, which change the density of the water.

In cited verse #(7-9) ALLAH (SWT) Says that He Has Made a transition zone “*barzakh*” and a partition that could not be passed between the sweet water and the salty water. Most of the sweet waters are in rivers. Generally, the rivers start to form in the mountains (at higher elevations) and the water flow to lower elevation due to the gravitational effect. The rivers end up at a body of salty waters (sea, ocean or gulf). The density of the salty water is higher than that of the sweet water. When the two bodies of waters meet, the salty water (the more dense) pushes the sweet water backwards starting with the deepest layer. The backward push decreases for shallower layers. The salty and the sweet waters mix in these layers. The salinity of the deepest layer is the highest and that of the shallowest layer is the lowest. This mixing region is the transition zone “*barzakh*”. The two opposing forces, the pushing force by the more dense salty water from one side and the current of the sweet water due to the slope in the river’s bed from the other side limits the transition zone. The two opposing forces form a partition. Such partition prevents the salty water from going further into the sweet water region.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
 وَالنَّجْمِ إِذَا هَوَىٰ ① مَا ضَلَّ صَاحِبُكُمْ وَمَا غَوَىٰ ② وَمَا يَنْطِقُ
 عَنِ الْهَوَىٰ ③ إِنْ هُوَ إِلَّا وَحْيٌ يُوحَىٰ ④ عِلْمُهُ شَدِيدُ الْقُوَىٰ ⑤
 الجزء السابع والعشرون سورة النجم

Cited Verses #(7-10)

In The Name of ALLAH, Most Gracious, Most Merciful

By the star when it falls down. Your companion (Mohammad) is neither astray nor being misled. And he does not speak of his own desire. It is but inspiration inspired to him. The One Mighty in Power Has Taught him.

(part 27, Surat Al Najm “The Star”)

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
 وَالسَّمَاءِ وَالطَّارِقِ ① وَمَا أَدْرَاكَ مَا الطَّارِقُ ② النَّجْمُ
 الثَّاقِبُ ③ إِنْ كُلُّ نَفْسٍ لَّمَّا عَلَيْهَا حَافِظٌ ④
 الجزء الثلاثون سورة الطارق

Cited Verses #(7-11)

In The Name of ALLAH, Most Gracious, Most Merciful

By the heaven and the night visitant. And what do you know about the night visitant. The piercing star. There is no soul but has a protector over it.

(part 30, Surat Al Tareq “The Night Visitant”)

ORBIT OF THE SUN

From cited verses #(3-16), we have learned three facts. (i) The sun is running (moving with great speed) to a certain point where it will settle down. (ii) The moon moves along an orbit with repetitive stages. That is, the moon is moving along a closed orbit around the earth, where in each cycle along its orbit, it reaches the same precise locations relative to the earth. (iii) The sun is also moving along an orbit.

Based on the laws of motion [which are created by ALLAH (SWT)] and the effect of the gravitational force, every orbit must be related to a central object. The moon moves in an orbit around the earth. The earth is the central object for the moon's orbital motion. The earth moves in an orbit around the sun. The sun is the central object for the earth's orbital motion. Similarly, the sun moves along an orbit, therefore there must be a central object for the sun's orbital motion. In cited verses #(3-16), there is no mentioning of repetitive motion of the sun along its orbit. This may be attributed to the fact that the sun's orbit is so huge that the earth's orbit around the sun is negligible compared to it. That is, the earth solar year (one revolution of the earth around the sun) is negligible compared to the sun's year (one complete revolution of the sun around its orbit's central object). Along the sun's orbit there is a point where the sun will settle down. That is there is a point along the sun's orbit where it will cease to function in its usual way. This specific location is reached by the sun only when it settles down. Based on that, there are only two alternatives.

Alternative 1: The orbit of the sun is a closed orbit (forms a closed contour), but it is so huge such that the sun will never complete one revolution during its life time (from the beginning of the creation till judgment day). That is, the sun will settle down before completing the first revolution along its orbit. In this case, the sun's year would be longer than the age of the heavens and the earth, which is estimated to be about 12 to 15 billion light years.

Alternative 2: The sun's orbit is of the open type (the form of a spiral). The sun may have traveled several times around the central object, but each time it does not move along the same trajectory. Therefore, it will reach the specific point along its trajectory where it will settle down, only once. In this case, the sun's year (the time for completing one revolution along its orbit) would be much less than the age of the heavens and the earth.

Recent measurements obtained by radio astronomers, indicate that the sun is orbiting the center of our galaxy (the Milky Way). The duration of one complete orbital revolution (the sun's year) is estimated to be about 220 million earth years. The type of the sun's orbit has not been discovered yet.

THE FALLING STAR

In several verses in the Holy Qur'an, when ALLAH (SWT) Wants to emphasize certain events or conditions, He Swears either by Himself or by some powerful phenomena of His creation. In cited verses #(3-40), ALLAH (SWT) Swears by the locations of the stars. In Chapters 3, 5 and 6, we have learned that the locations of the stars have the most dominant effect on the stability of the lowest heaven (the universe). So far, the man-made theories have not come up with any explanation for the intricate patterns orderly distributed all over the universe (the lowest heaven).

In cited verses #(7-10), ALLAH (SWT) Swears by yet another of His creation. He Swears by the star when it falls. Such adjuration is an indication that the falling of a star is a very powerful phenomenon. Here on the earth, anything held above the surface of the earth could fall on the earth's surface due to the earth's gravity. The direction of fall is along the direction of the earth's gravitational force, that is towards the center of the earth. In outer space, away from any celestial objects, the gravitational force is almost zero. In this situation, an object does not fall. If an object in space comes close enough to a celestial object, under certain conditions, it could be attracted by the gravitational force of the celestial object, and then falls down on the surface of that celestial object. The stars are huge volumes of gas. In general, their gravitational forces are much greater than those of any non-illuminating objects. Therefore, it is more likely for a non-illuminating object to be captured by the gravitational force of a near by star, and may fall down inside the star. Accordingly, it is impossible for a star to fall down on a non-illuminating celestial object. Astronomers and astrophysicists have observed mergers and collisions of stars. A smaller star may be captured by the gravitational field of a bigger star and they may merge together to form a bigger star or they may collide and they both explode and disintegrate. In either case, this situation could not be classified as a falling of a star. Therefore, a star falls only, if it is attracted by something huge with tremendous gravitational force (100's or 1000's of times or even more than the stars gravitational force). The size of this huge thing must be much larger than the size of the falling star. This huge thing must be in the form of a cavity or a hole so that the star could fall into it. The following may be concluded:-

WITHIN THE LOWEST HEAVEN (THE UNIVERSE) THERE ARE HUGE CAVITIES OR HOLES WITH TREMENDOUS GRAVITATIONAL FORCES. A NEAR BY STAR COULD BE CAPTURED BY THE POWERFUL GRAVITATIONAL FORCE OF SUCH CAVITY OR HOLE AND FALLS INTO IT.

The latest cosmic discovery is what is termed by the astronomers and the astrophysicists as "THE BLACK HOLES". Those black holes have tremendous gravitational fields, so that they attract and swallow all the nearby matter. Even light can

not escape their powerful gravitational force. Those black holes are the most unexplained phenomena in the fields of modern astronomy and astrophysics.

THOSE BLACK HOLES MAY BE THE MEDIUM WHERE THE INVERSE PROCESSES OF TRANSFORMATION OF ENERGY TO MATTER TAKE PLACE

THE PIERCING STAR

In cited verses #(7-11) ALLAH (SWT) Says “By the heaven and the night visitant. And what do you know about the night visitant. The piercing star. There is no soul but has a protector over it”. In the first of these verses ALLAH (SWT) Swears by two of His creation, the heaven and the night visitant. The wording in the second verse implies that the night visitant is a great creation. In the third verse ALLAH (SWT) Reveals that this great creation is the piercing star. Among all other stars (trillions and trillions of stars in the lowest heaven) ALLAH (SWT) Has Singled out this particular star to be a great creation. Therefore the piercing star must have distinguished qualities not shared by the other stars.

In order to be able to get some idea about the piercing star, we have to understand what is exactly meant by the word “piercing”, in Arabic “*Al Thaqeb*”. In the last verse of cited verses #(3-35), ALLAH (SWT) Says “Except that who (the obstinate devil) he snatches something is then followed by a piercing (Thaqeb) meteoroid”. ALLAH (SWT) Has Secured the heaven (the lowest heaven) by not Allowing any obstinate devil to eavesdrop to the exalted assembly and whoever try to do so will be followed by (shot at by) a piercing meteoroid. From this verse we come to the conclusion that the Arabic word “*Al Thaqeb*” has the obvious meaning “piercing”.

Based on the above definition, the piercing star must have one or more of three qualities. It either has tremendous brightness or has very powerful coherent light (laser like) or it may be moving with ultrahigh speed that enables it to penetrate through any medium.

In 1996 an ultra bright star in our galaxy (the Milky Way) has been discovered from images obtained by Hubble Space Telescope. This superstar named “Eta Carinae” is several million times brighter than our sun and one hundred times as massive. Its active domain (size) is 10 billion miles (about the diameter of our solar system) and is located 8000 light years away. It was found that very powerful laser is beamed from this star. Some astronomers classify this superstar as a “quasar”, but such classification is still controversial. We are not claiming that this particular superstar is the “piercing star”

mentioned in the Holy Qur'an [it may or may not be, only ALLAH (SWT) Knows]. This discovery is just brought up here to show that there are an infinite variety of stars with characteristics beyond the comprehension of the human mind.

SUMMARY AND CONCLUSIONS

The findings in Chapter 7 may be summarized as follows:-

- ◆ Water existed before the creation of the heavens and the earth. During the creation process some of the water broke down to its elements (hydrogen and oxygen). The extreme heat that resulted from the forcible disintegration of the massive entity triggered the fusion process of the hydrogen atoms. Such process transforms the hydrogen to helium and releases tremendous energy in the form of heat and light. This explains why hydrogen is the most dominant gas in the universe, followed by helium.
- ◆ The earth and all the celestial objects have the same age and the same origin.
- ◆ The cyclic conversion processes matter–energy–matter are continuously going on in the lowest heaven (the universe). The conversion of matter to energy occurs inside the stars producing heat and emitting light. Part of the energy produced by the stars is converted to matter.
- ◆ The dark matter is concentrated at the boundary of the lowest heaven (the universe). The intricate patterns, the orderly distribution, and the locations of the stars, galaxies and quasars play an essential role in the production of the dark matter. The structural integrity of the ceiling of the lowest heaven depends on the distribution and the rate of production of the dark matter, that is depends on the locations of the stars.
- ◆ A continuous supply of energy is needed to maintain the functioning and the stable dynamics of the universe. This energy is supplied by ALLAH (SWT). Without His energy, all the heavens and the earth cease to exist.
- ◆ The creation of the heavens and the earth (during the creation period) was not controlled by the present physical laws.
- ◆ After the creation of the earth and the heavens was completed, they started to function in the extremely orderly manner as they are today and according to the present physical laws.
- ◆ The expansion of the universe (the lowest heaven) is NOT a result of the forcible disintegration of the massive entity. The expansion of the universe started after the

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- ◆ creation of the earth and the heavens was completed (in six thousand lunar years) and started to function in their orderly manner. The expansion of the universe is controlled by the present physical laws.
 - ◆ The earth was created in two stages. First, the inner part [whose top layer is the asthenosphere (hot semi-liquid)] was created in the first two thousand lunar years. The second stage was the making of the solid foundations (the lithosphere plates) on top of the inner part and the cover (the crust), and the laying down of all its resources, in the next four thousand lunar years.
 - ◆ The earth's solid foundations (the lithosphere) are formed of more than two plates. There are gaps between the solid foundations.
 - ◆ All the earth's resources are contained within the upper two layers only, the crust and the lithosphere plates (the solid foundations).
 - ◆ The three upper layers of the earth, the crust, the lithosphere and the asthenosphere possess different constituents and have different formations.
 - ◆ There is a discontinuity between the cover (the crust) and the solid foundations (the lithosphere) beneath it. Also there is another discontinuity between the lithosphere and the layer beneath it (the asthenosphere).
 - ◆ The earth is formed of SEVEN layers, not six layers as the present theories claim.
 - ◆ There are huge water reservoirs contained within the crust layer.
 - ◆ The mountains are made to strengthen the earth's crust, so it can withstand the tremendous internal pressure of the hot semi-liquid material (magma) pushed through the gaps between the solid foundations (the lithosphere plates).
 - ◆ The earth's gravity is a property of its inner part (the asthenosphere layer and below). The formations and the constituents of the layers of the inner part generate the earth's gravitational force.
 - ◆ The sun moves with a great speed along an orbit. This orbit is probably of the spiral type. It will reach a point along its orbit where it will settle down. That is, where it will cease to function.
 - ◆ Within the universe (the lowest heaven) there are cavities or holes with tremendous gravitational forces. The near by stars may be attracted by these holes and fall into them.
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- Although all the oceans and the open seas on the surface of the earth are connected, each body of water maintains its qualities (which are different from each other). A transition zone exists between each two bodies of water and in some cases a barrier (of strong underwater currents) also exists.
- In the lowest heaven (the universe) there is a super star (there may be one or many of the same quality). The super star is defined in The Holy Qur'an as "the piercing star). This star has distinguished qualities not shared by the other stars. It may have tremendous brightness (several million times brighter than our sun), it may have a huge size (may be the size of our entire solar system or even larger), or it may be moving with ultrahigh speed that allows it to penetrate through any medium.