

Origin of the Earth: God's Gift or Magic of Science!

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Abstract: Many questions about the earth have always arisen in our brain. In those same questions, there is a question, how did the Earth originate? How was it constructed? We will try to know the answer to this question through this article, how astronomical phenomena would have happened in our universe due to which our beautiful planet Earth would have been created?

Key Words: Concept, Earth, Gaseous, Hypothesis, Nebula, Star, Sun.

1. INTRODUCTION:

Our Earth is the most interesting and mysterious planet in the Solar System. There are many mysterious and interesting facts about the Earth. Some of which have been made known through our scientific outreach. Like what is the shape of the earth? At what speed is the rotation and rotation of the earth? How is it happening day and night? How are Sun and Moon eclipses? What is its area, circumference, radius, diameter, etc.? But there are still many mysteries to be known. There is a question in them that how did the Earth originate?

2. ORIGIN OF THE EARTH:

From time to time various thinkers, philosophers, scientists have been giving their views or ideas, concepts, theories about the origin of the Earth. Some of them will briefly understand the important concepts and try to solve the question (how did the Earth originate?) Arise in our mind. Some of the principles and concepts related to the origin of the Earth are as follows:

1. Gaseous hypothesis
2. The nebula hypothesis
3. The planetary hypothesis
4. Tidal hypothesis
5. Duality hypothesis
6. Supernova hypothesis
7. Interchange Dust hypothesis
8. Interactive cloud hypothesis / electromagnetic hypothesis
9. Cruises and tidal hypothesis
10. Jupiter- Sun Duality hypothesis
11. Seafeed hypothesis
12. The nebula cloud hypothesis
13. Primitive Planets Hypothesis
14. Explosive Theory
15. Inflation Theory

All the above principles are divided into three classes.

3.1. Religious doctrine

3.2. Initial / Scientific Theory

A. Monotheism (monism)

B. dualism

3.3. Modern Theory:

3.1. Religious doctrine: Religious ideologies were spoken in ancient times. The thinkers of different religions according to themselves had their own views regarding the origin of the Earth. However, all religious thinkers agreed with a belief that God created the earth first. After that God created flora and fauna and finally God created man. These things are often heard in the stories of our grandmothers. However, it is not accepted in the present scientific age because religious ideologies are completely based on imagination, because these ideologies do not stand up to the current scientific facts or arguments. Therefore, these ideologies are rejected outright.

3.2. Initial Principles / Concepts / Ideologies: Principles related to the origin of the Earth In the early times, many philosophers and scientists have presented logical principles based on the laws of science. Therefore, the initial theory is also called scientific theory. The first logical concept in this regard was presented by "Caste da Buffon" in 1749 AD. After this, many scholars in this field gave their views but due to lack of uniformity in these ideas, these ideas were not affected for a long time.

However, it is common in almost all schools of thought that all bodies of the solar system have originated from the same process. Initial / scientific theory is divided into two classes based on the stars participating in the solar system.

A. Monotheistic concept: It is also called unitary principle. According to this theory, all the bodies of earth and solar system - planets, satellites, asteroids etc. have originated from a star (Sun). The solar system originated from the Sun. On the basis of this opinion, many scholars have given their views. The French scholar "Caste de Buffon" voted first among them. According to them "Earth has its origin in the collision of the broken sections of the Sun by the collision of a large body in the Sun".

Many scholars have presented their views after "Caste the Buffon" in support of the monotheistic doctrine. Out of which the views of Emanuel Kant, Laplace, Ross, Luckier had received the trust of the people for some time but were later rejected as well. Here the principles related to the earth given by "Kant" and "Laplace" are being summarized.

- **Kant's gaseous hypothesis:** The German philosopher, scholar Emmanuel Kant, introduced the theory of the Earth's origins in the Vedic Zodiac in 1755 AD. This principle is also called gaseous theory. This theory is based on Newton's theory of gravitation.

According to them, initially small and big substances, which were created in the universe, were scattered here and there, which they have called primordial matter. Due to the attraction power in these primordial materials, there was a collision, which caused heat and speed. Gradually its speed increased and over time all the primordial substances were converted into matter. Then, due to the attraction power of the nucleus of a large proto-substance, all these substances got together and converted into a hot body which they called nebula.

Later the speed of the nebula became so fast that due to the centrifugal force, the nebula began to rise on the upper surface of the nebula. And this bulge diverges from the nebula in the form of a ring due to the rapid movement of the nebula. And over a period of time, the nine rings of the nebula are alternately separated and away from the nebula.

Then later all the substances of these rings converge into cold and solid bodies and form the planet. The waste parts of the nebula belong to the sun. The remaining materials are converted into satellites and asteroids.

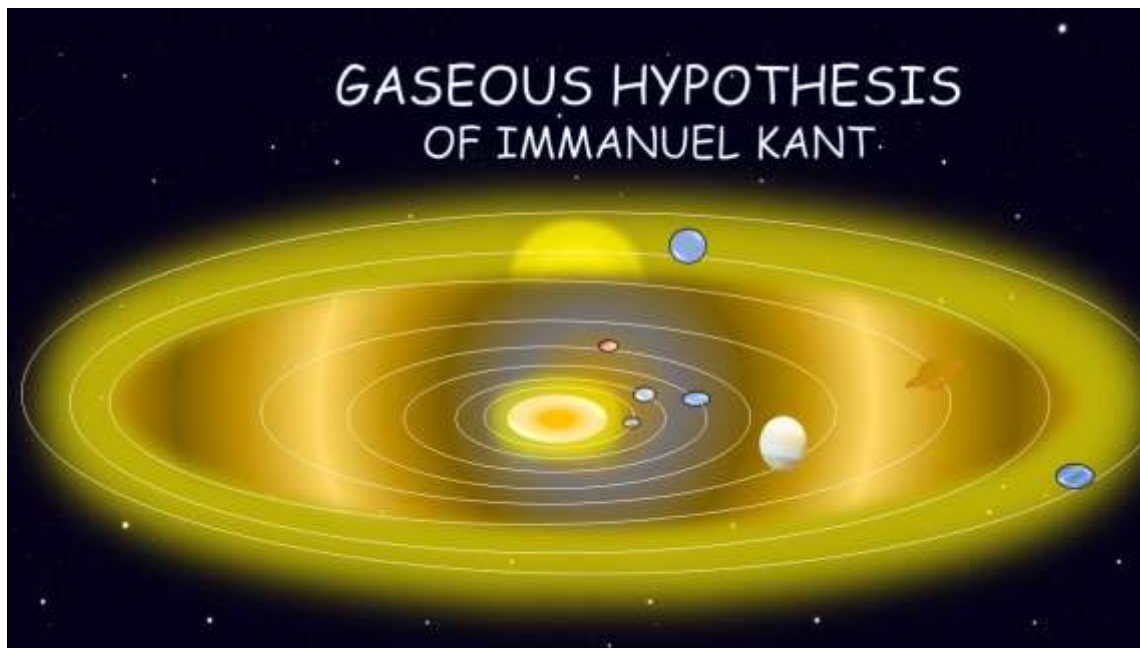


Figure 1: Gaseous Hypothesis of Kant

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- **Nebular hypothesis of Laplace:** According to Laplace, in the beginning there was a hot and moving gaseous body nebula in the universe. It was cooling as the temperature dropped over time. Due to which the upper part of the nebula started to cool and shrink while its inner part was hot. As the rotation speed of nebula increases, the centrifugal force increases. When the concentration of the centrifugal force exceeded the gravitational force, a ring was separated from the nebula and this ring was subsequently divided into nine rings. And all the matter of this ring gathered together and formed the planets. And the relic part of the nebula is in the form of the sun.

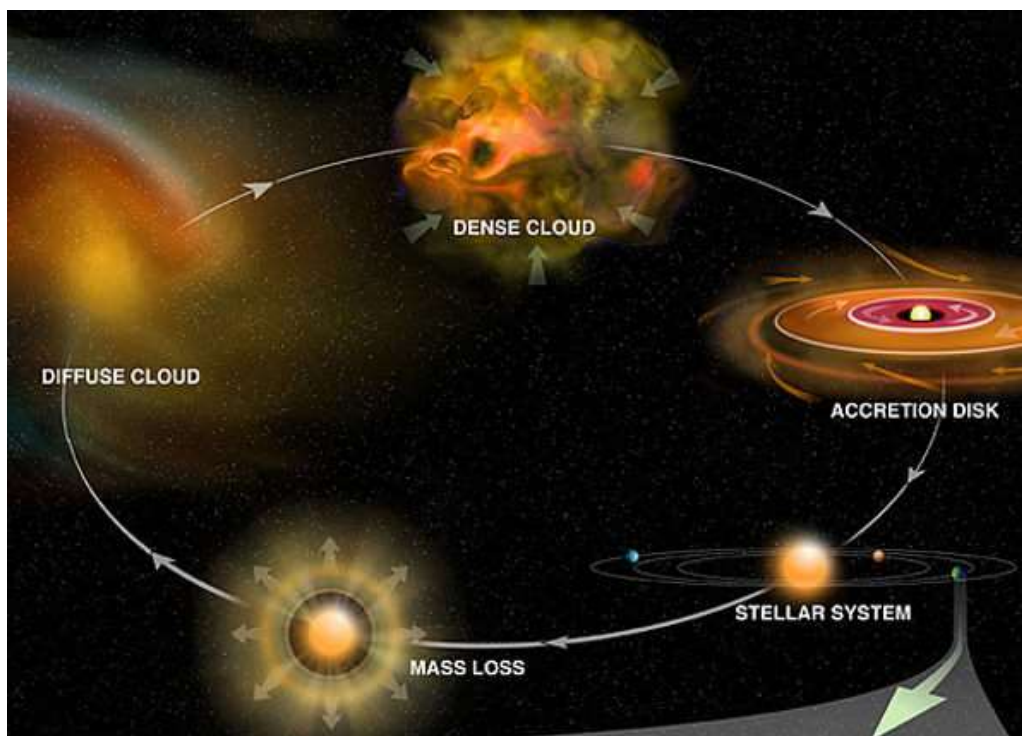


Figure 2 : Nebular hypothesis of Laplace

Source Link: <https://www.everythingselectric.com/wp-content/uploads/planet-formation-theory-debunked-nebular-hypothesis.jpg>

B. Dualistic concept: This dualistic ideology is also called dual star theory. According to this ideology, along with the Earth, other planets and satellites were formed with the cooperation of one or more stars along with the Sun. Many scholars based on this concept have given their views related to the earth. Chamberlin and Molton's planetary hypothesis, James Jeans and Jefferies' tidal hypothesis, H.N. Russell and Littleton's dualistic hypothesis, etc., are prominent.

- **Planetesimal hypothesis of Chamberlin and Moltan:** This hypothesis was presented in 1904 AD by Chamberlin and Moltan. According to him, the Earth and other planets have originated in association with the Sun as well as another giant star.

According to these concepts, before the formation of planets, the Sun was a circular and cold star made of solid particles. Over time, a giant star passed from near the Sun, causing many small particles to separate out from the Sun's surface. Which Chamberlain has called Grahau. This is due to the tidal attraction power of the giant star. Later, the giant star overtook him at a high speed. And the particles that came out of the sun started circling the sun. The planets and satellites have formed after mixing these particles together.

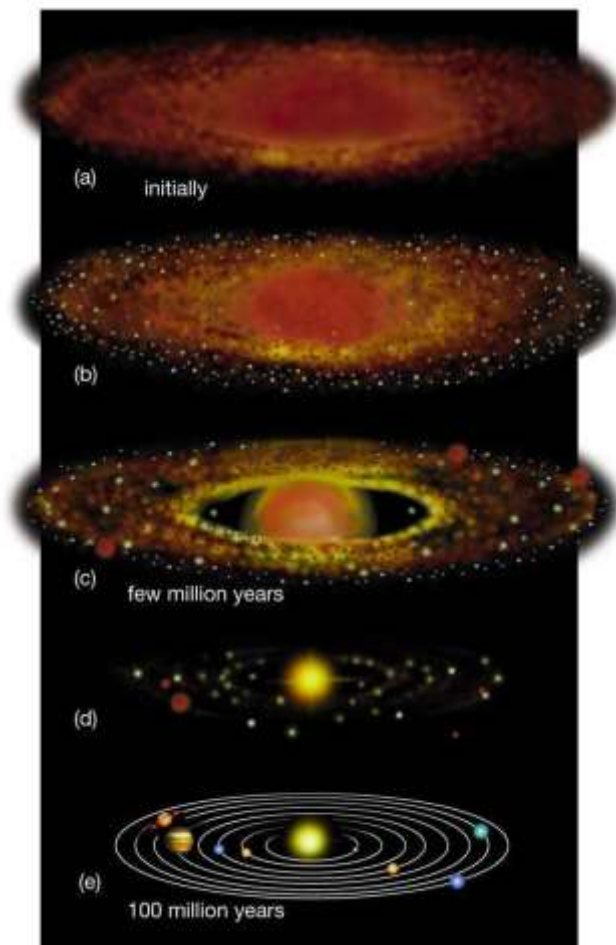


Figure 3: Planetesimal hypothesis of Chamberlin and Moltan.

Source link:

<https://formationofsolarsystem.files.wordpress.com/2017/09/picture3.jpg?w=1040>

- **Tidal hypothesis of Jems Jeans and Jeffreys:** This concept was formulated by the English scholar Sir James Jeans in 1919 AD. Which was later revised and presented in 1929 by Jefferies. By this time, all the theories of the origin of the Earth were presented, it was the most valid. This determination is based on some assumptions. like-

According to this hypothesis, as the companion star was getting closer to the Sun, the tide arose like a giant tongue in the Sun. This happened due to the huge tidal power of the companion star. Consequently, a cigar-shaped tide thousands of kilometers in length from the sun rose from the outer part of the sun, which is called the "filament".

According to Jeans, the path of the approaching star was not on the Sun. So, instead of hitting the sun, it went forward. Which created a tide in the sun. In this way, the filament could not go with the star as the giant star went away. This filament later disintegrated into planets. Therefore, according to the size of the filament, the middle planets are large and the side planets are of small size.

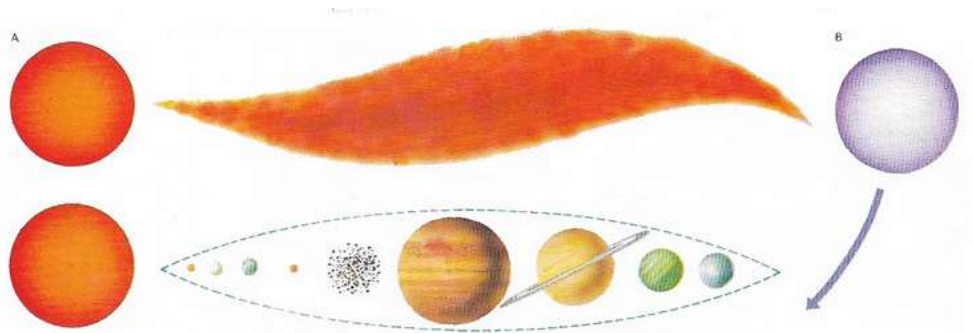


Figure 4: Tidal hypothesis of Jemes Jeans and Jeffreys
Source link: https://www.daviddarling.info/images4/Jeans_tidal_hypothesis.jpg

- **Binary star hypothesis of Russell:** According to Russell, there were not one but two stars near the sun in the past. A companion star was orbiting the Sun from the beginning and later another star passed near it. Since the visitor Tara was at a considerable distance from the Sun. Therefore, its gravitational effect was not on him, but on the star orbiting the sun. Due to which the tide originated in this star and this visitor started moving in the direction of the star. Later, planets were formed from these tidal materials.
- **Supernova hypothesis of Hoyle and Lytleton:** This theory was presented by Hoyle and Lytleton in 1939 AD. According to them, there were not three stars in space but three stars - the Sun, its companion star and another star approaching. The companion star was farther and more massive than the Sun. Due to the explosion in the companion star, a large amount of dust and gaseous substances spread. At the same time, the nucleus of the companion star was pushed out of the gravitational field of the Sun and the remnants of gas and dust were left with this explosion. This led to the formation of circular motion plates that circled the Sun. Later, due to the condensation of these substances, the Earth and other planets originated.
- **Interstellar Dust hypothesis of Otto Schimidt:** Russian scientist Otto Schimidt presented his theory related to the solar system in 1943 AD. According to them, the planets have originated from gas and dust particles. In the early period there was an immense amount of gases and dust particles in the universe. Initially, when the Sun was passing close to the Milky Way, it attracted gas, clouds and dust particles by its attraction which began to revolve around the Sun. Later on, the dust particles got organized and condensed into a flat plate and then the planets were formed.

3.3. Modern theory: All the concepts and theories related to the origin of the Earth after World War II are placed in the category of modern theory. This includes the big-bang theory (1950–60s) of George Lemmenter of Belgium, Alphon Guth's Spiti theory (1980), E.M. The Jupiter-Sun Duality Concept (1974) etc. of Drobishvarasaki are prominent.

"Big-bang theory / big explosive theory"

This theory is the most accepted theory related to the origin of the Earth. The big-bang theory was developed by George Lemmenter of Germany in the 1950–1960s. And this principle was verified in 1972. It is also called the Extended Universe hypothesis and the Great Explosive Theory. This theory describes the origin of the entire universe.

Creation and expansion of the Universe

- Initially all the matter of the universe which created the universe was located in one place in the form of a very small sphere. Whose volume was very fine and the temperature and density were infinite.
- 13.7 billion years ago there was a great explosion in this small ball, which expanded the universe, this expansion continues till now. After the explosion, there was a huge expansion in a short span of seconds, after which its speed slowed down.
- Due to the expansion of the universe, some energy was converted into matter and the first atom was formed within the first three minutes.
- During the 3 million years after the Great Explosion, the temperature dropped to 4500 degree Kelvin and atomic material was formed. Which made the universe transparent.

Galaxy formation

The disparity in the distribution of energy and matter in the universe and the variation of gravitational forces led to the gathering of matter and formed the basis for the evolution of galaxies. A galaxy consists of a group of innumerable stars formed by the accumulation of a huge cloud of hydrogen gas, called a nebula.

Formation of Stars

In this growing nebula, flocks of gas evolved, these gaseous flocks became increasingly dense gaseous bodies, which began to form stars. The stars were built 5-6 billion years ago.

Planetary formation

A. Inside the nebula there are many lumps of gases. These bent masses have gravitational force, which leads to the formation of a gaseous core. A rotating plate of dust and particles develops around this gaseous core.

B. Thereafter condensation of gaseous and dust-particle cloud begins. Substances around the core develop into spherical granules. And these are joined together due to the action of gravitational condensation and the force of gravity.

C. After this, many larger bodies are collected due to formation of some big bodies ie planets. The Earth has also originated by this process.

D. The formation of eclipses dates from 5 to 5.6 billion years ago. And, planets formed about 4.6 billion years ago.

3. THE CONCLUSION:

Apart from the above concepts related to the origin of the Earth, many other ideas and theories have been presented. However, no one irrefutable theory has been formulated as to how the Earth was born? However, these theories have special significance in the context that the debate that has been started by these scholars on this subject, this debate will prove to be effective in solving the origin of the Earth in the future.

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