

## The Spherical

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**Abstract:** "Everything in the cosmos can be created, remain stable, or be destroyed in a way that resembles spherical shape or/and spherical motion."

Everything is created and destroyed by the spherical shape, including the sun, moon, radio waves, sunlight, sound waves, pulsars, stars, black holes, and the universe. The spherical shape also led to the origin of all species on Earth. although stars, galaxies, planets, black holes, and other objects move in a round or spherical shape to provide stability to the planet. Everything that is destroyed in this universe does so in a spherical motion or/ in a spherical shape.

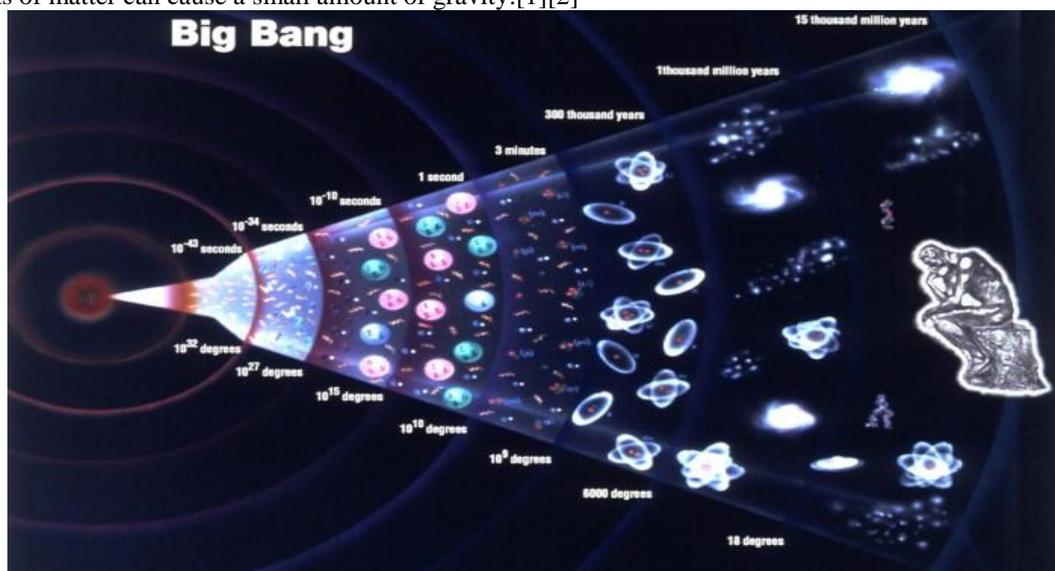
**Keywords:** Spherical shape, big bang, singularity, big crunch, planets, stars, solar nebula, Morula

### Introduction

Here is the explanation of how the spherical shape is the creative, stabilizing, and destructive shape of the universe. Spherical shape: - something like a sphere if it is round or more or less round in three dimensions.

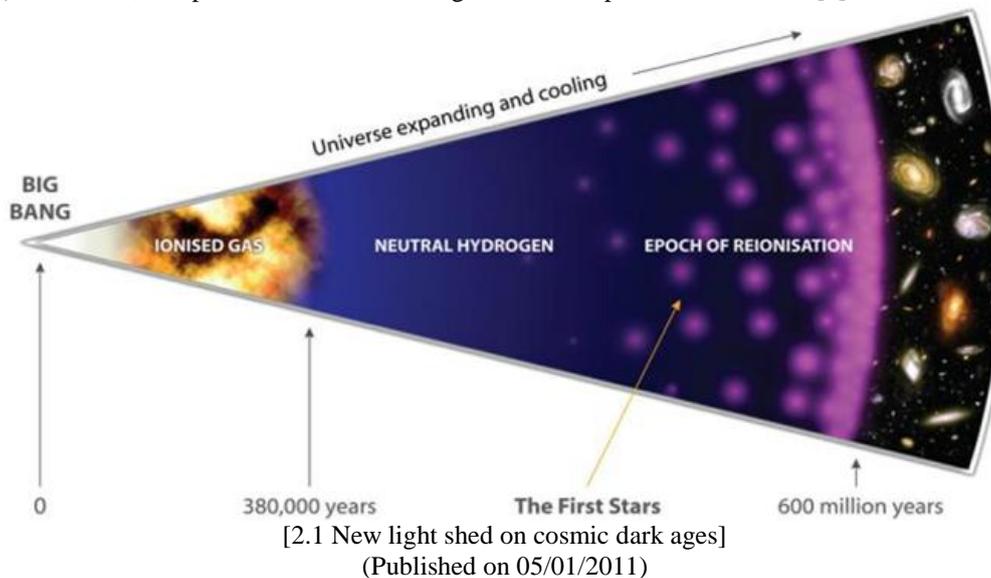
### Explanation

Let's begin with the starting of the universe, according to Georges Lemaitre's big bang theory. The big bang theory says that the universe comes from a single unimaginably hot and dense point (singularity) more than 13 billion years ago. Singularity a place where matter is compressed down to an infinitely tiny point and all conceptions of time and space completely break down. After the  $10^{-34}$  seconds of the big bang, the universe is in the shape of spherical shape because the explosion was spread in every direction equally. The size of the universe changes from an atom to a ping-pong ball after  $10^{-34}$  second. That's why the born of the universe is in the shape of spherical shape. The term "big bang" refers to the explosion of the universe. The big bang theory is one way to explain the origin of the universe. It describes how the universe evolved from a very dense and hot state to its current state of space, stars, and galaxies. This theory is supported by many different observations, including redshifts in light from distant objects, supernova explosions, and gravitational lenses. The big bang was proposed by Georges Lemaitre in 1927 as an explanation of what happened before the formation of our universe. He proposed that the universe expands from a very dense and hot state to its current state of space, stars and galaxies. He based this idea on his observation that distant galaxies have shifted light red, suggesting that they are moving away from us. He also used Einstein's theory of general relativity to explain how large amounts of matter can cause a small amount of gravity.[1][2]



[1.1. The big bang theory model]

The Big Bang is also supported by observations of supernova explosions, which can be used to determine when the Universe was young. These observations show that over time there were more supernovae closer together than far away. This suggests that he was younger near where we live than far away. Furthermore, the gravitational lens shows that the mass density near us must be less than that far away. This suggests it was less close to where we live. These data support Lemaître. The first known universe was the Big Bang, which is thought to have occurred about 13.7 billion years ago. The Big Bang represents the beginning of time and the starting point for all cosmological models. The Big Bang was the result of an extremely rapid expansion of space, separating many regions of space. As a result, matter and energy were able to travel freely through space, creating our current universe. This event marks the beginning of the universe as we know it today. Due to the extreme speed with which this happened, we don't yet know exactly how long the universe has been around [3] The first hundreds of thousands of years after the Big Bang are often called the "Cosmic Dark Ages". During this time, little or no structure existed in our universe. While some energy certainly existed in our early universe, there was no organization or mechanism by which that energy could be converted into matter and/or radiation (like light). Therefore, it is possible that no stars or galaxies were present at that time.[4]

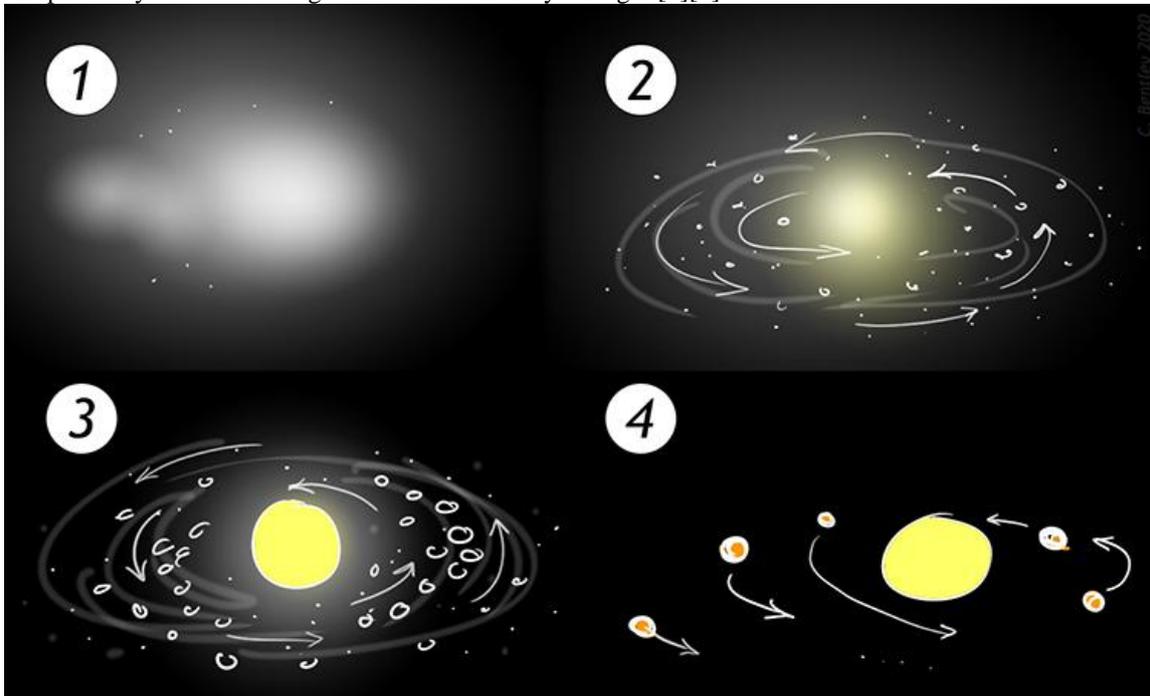


However, over time our universe began to form more complex structures such as stars and galaxies. Scientists believe these formations began shortly after the Big Bang itself and were formed by highly ordered regions of matter called "clusters." These lumps are believed to have been dislodged.

According to Friedmann's model, the universe is not infinite in space, but neither does space have boundaries. Gravity is so strong that space is folded in on itself, making it more like the earth's surface. If you continue to travel in a certain direction on the Earth's surface, you never encounter an impenetrable barrier or fall over the edge, but eventually, you return to your starting point. Space, in Friedmann's first model, is exactly like that. but with three dimensions instead of two for the earth's surface. The fourth dimension, time, is also of finite magnitude, but it is like a line with two ends or boundaries, a beginning, and an end. We will see later that when you combine general relativity with the uncertainty principle of quantum mechanics, it is possible that both space and time are finite without borders or boundaries. The idea that you could spin the universe and end up where you started is good science fiction, but it doesn't make much practical sense because it can be shown that the universe would collapse back to zero before you can get around it. You would have to travel faster than light to get to where you started before the universe ended, and you shouldn't. At the time you are reading this article, the shape of the universe is spherical because after the explosion all matter is distributed equally in all directions in space, today's universe is just like a spherical balloon.[5]

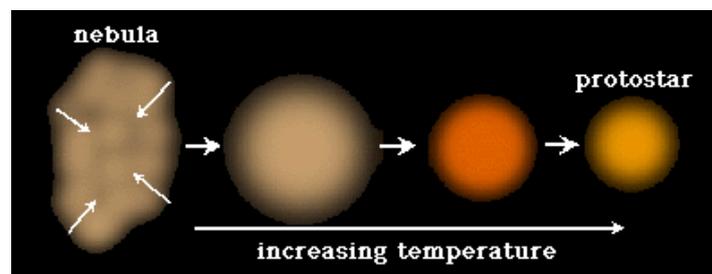
Formation of galaxies, planets, galaxies, black holes, everything in the universe will form and destroy in the form of spherical and/or spherical or circular motion. According to Dorothy and Lewis B Cullman Hell of the Universe, the sun and planets formed together 4.6 billion years ago from a cloud of gas and dust called the solar nebula. A shock wave from the Near Supernova Expansion likely caused the solar nebula to collapse. The sun is formed in the center and the planets are formed in this disk that rotates around it with spherical to circular motion. The earth and other planets are formed from gas clouds due to circular or spherical motion and collapse in the center forming the sun and planets. A solar nebula is a cloud of gas and dust that surrounds a star and is

created by the birth of the star. The star creates a magnetic field, which acts like a bubble and pushes the surrounding material away. As the material moves away, it cools and condenses, forming fog. The solar nebula can be seen with the naked eye in large areas around many stars. When a star is born, it has a rotating disk of gas and dust around it. This disk is called the protoplanetary disk, or protoplanetary nebulae for short. Protoplanetary nebulae are usually not visible because they are too far from the star, but they can be seen with a telescope if they are close enough to be illuminated by starlight.[6][7]



[3.1 A cartoon model showing the evolution of our solar system from a pre- solar nebula]

As stars form, their disks spin faster than before, creating a strong magnetic field around them. This causes charged particles to fly off the disk into space. The further these charged particles move away from the disc, the faster they move due to their high speed. This causes them to move away from the protoplanetary disk, more slowly than before, allowing them to cool and condense into objects known as solar nebula.[8]When a star is born, it has a rotating disk of gas and dust around it. This disk is called the protoplanetary disk, or protoplanetary nebulae for short. Protoplanetary nebulae are usually not visible because they are too far away from the star, but they can be seen with a telescope if they are close enough to be lit up by the star's light.



[3.2 star formation]

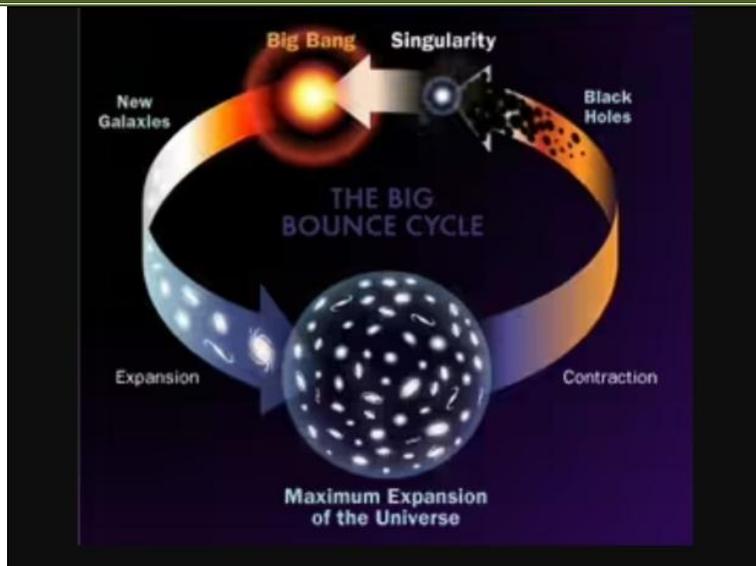


[3.3 the evolution of our solar system from a pre-solar nebula]

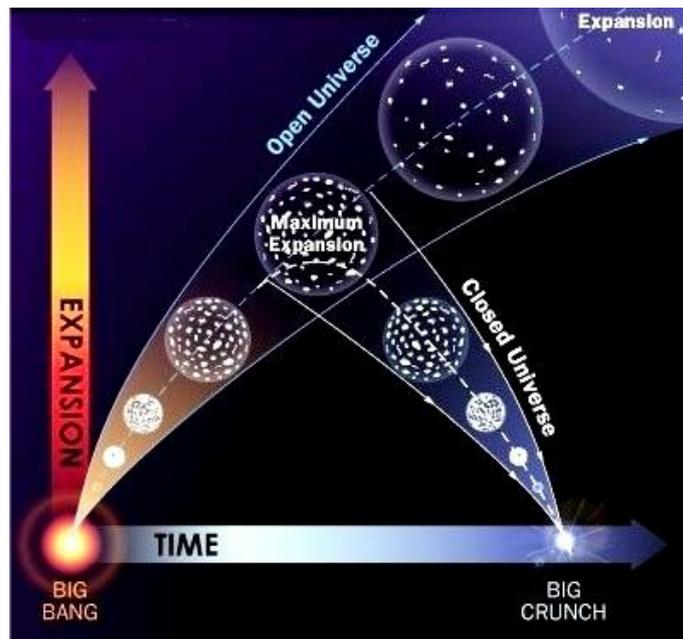
If any planets stop revolving around its star, it would either fly out of its orbit and into outer space or it would fall into the star. If any celestial body stops spherical movement it must be destroyed. In the case of Galaxies must be orbiting around something in the center of the universe. If Galaxies stop moving they will also destroy because the gravitational force between two galaxies pulls them toward them and they destroy each other.

According to the Big Crunch Theory, The Universe will end 20 billion years from now this would show the Rate of expansion of this Universe and then put it into reverse causing space and time to collapse to a point in a big crunch scenario hypothesized that the density of matter throughout the universe is sufficiently high that gravitational Alteration will overcome the expansion. This begins with the big bang. At the end of the universe, the shape of the universe will be in the shape of spherical. The 'big crunch' theory hypothesizes that the universe will eventually collapse in a 'big crunch'. The theory was first proposed by astronomer Fred Hoyle in the early 1960s and is based on the idea that an expanding universe runs out of space to expand into. If this happens, the universe will start to contract, which is known as a 'big crunch'. This would result in the universe being squeezed into a smaller and smaller size until it reaches a point where it can no longer be expanded any further and ends with a 'big bang'.

There are many different versions of the big crunch theory, and it has been the subject of much debate among scientists for many years. One of the main criticisms of the theory is that there is no evidence to back it up. A second issue is that it predicts that everything we know about physics will cease to exist once the universe collapses. If this were to happen, then our entire understanding of physics would have to be rewritten. There are also other problems with this theory, including how the universe could continue to expand even if it were contracting. Scientists are still trying to work out how exactly these ideas could fit together.[9][10]



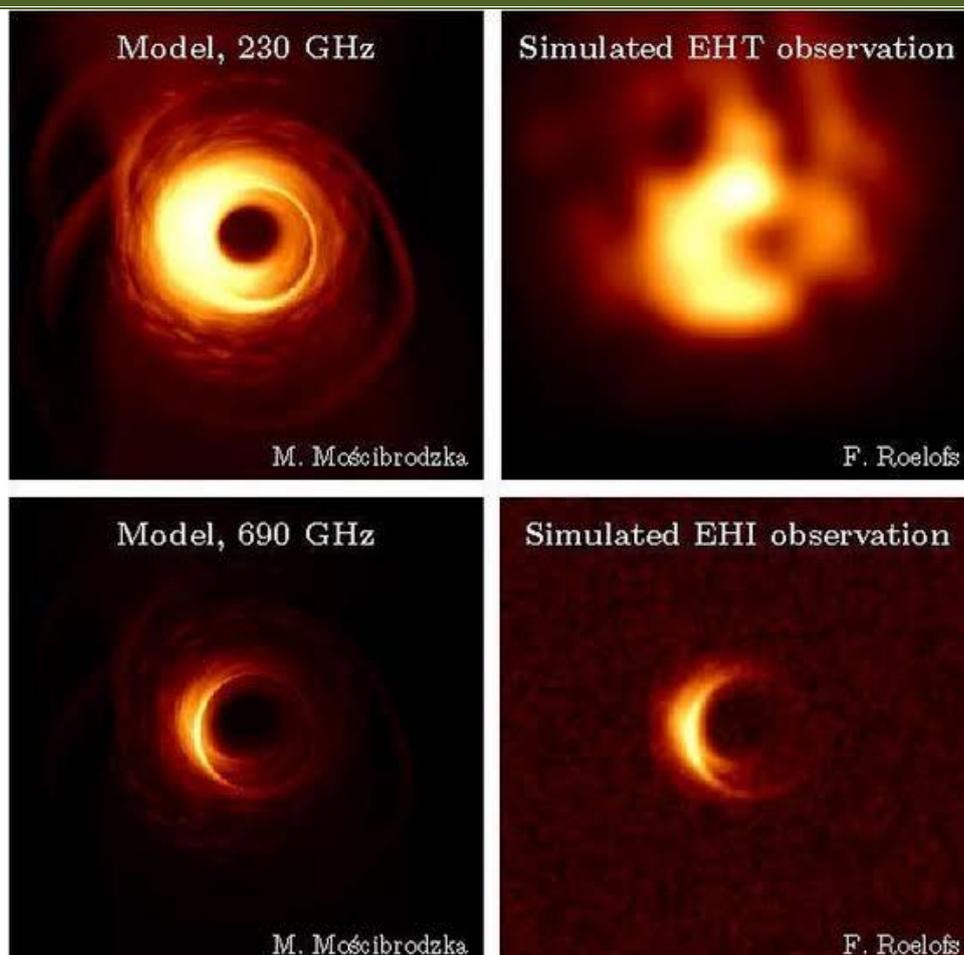
[4.1 big bang and big crunch cycle]



[4.2 Big bang and big crunch model]

A black hole is a region of spacetime that possesses an extremely strong gravitational field, and thus extreme density. The event horizon—the point of no return—is the boundary that defines the diameter of a black hole. Once objects venture too close to this point, they are subject to extreme gravitational forces and unable to escape. In theory, it is possible for black holes to form through the collapse of a giant star, but this happens very rarely in reality. Instead, most black holes are formed when a large section of space-time is warped by the gravity of a nearby star.[11]

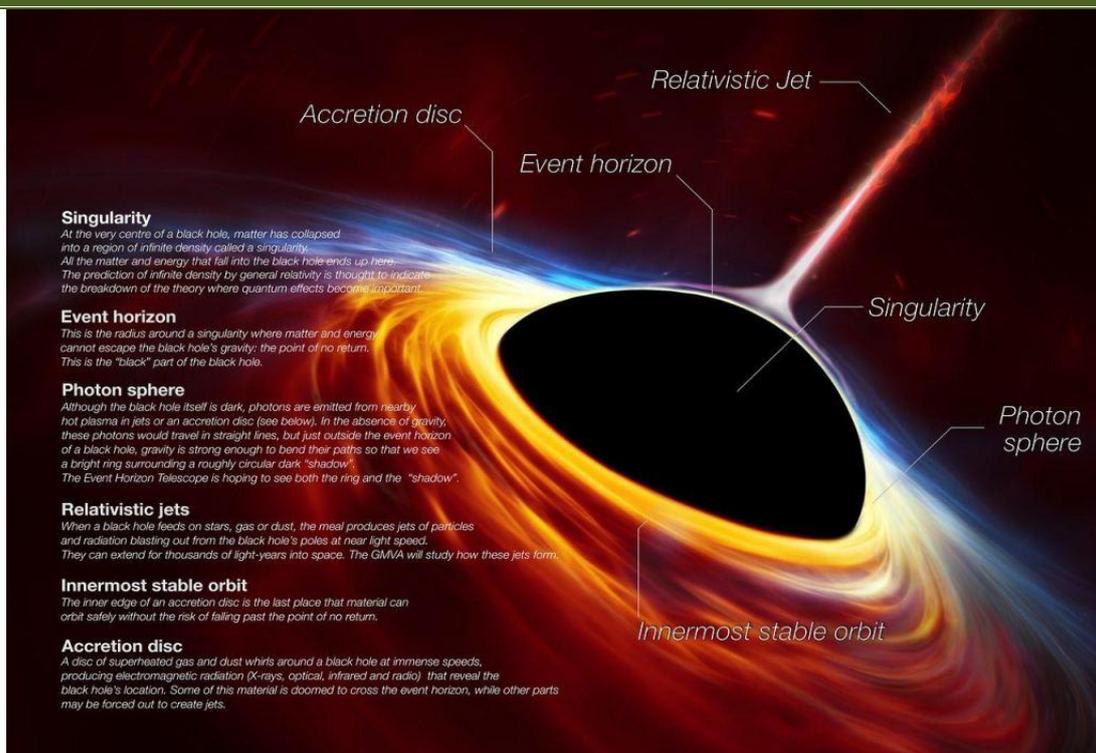
As matter falls into the black hole, it forms an accretion disk (a rotating ring of gas and dust) around it. This accretion disk exerts an enormous amount of gravitational force on any matter that comes too close. The accretion disk eventually heats up and becomes a plasma (a highly ionized gas). Inside the plasma, the matter is heated to extremely high temperatures because it is being dragged closer and closer to the center of the black hole. The heat from this inferno causes the surrounding area to glow brightly due to friction with the surrounding environment. Eventually, all matter is pulled into the singularity at the center of the black hole, where time stands still. The Schwarzschild radius describes how close you have to approach a black hole before you will be pulled in. It's named after Karl.[12]



[5.1 The black holes]

Destruction of every matter or light or wave is in spherical movement or in a spherical shape. For example, a black hole is the most powerful destroyer of all matters, light, waves, etc. If matter or light or anything in this universe comes close to the black hole it doesn't go directly into the black hole, the matter or light follows the rule it will go into while orbiting the black hole in spherical movement and after that matter goes into a black hole. Because of the matter or light orbiting the black holes accretion disk (A disk flow of gas, plasma, dust, or particles around any astronomical object that loses energy and angular momentum as it slowly spirals inward.) this part is glow a little bit. A matter orbiting a black hole is with a speed up to 90% of the speed of light.[13][14]

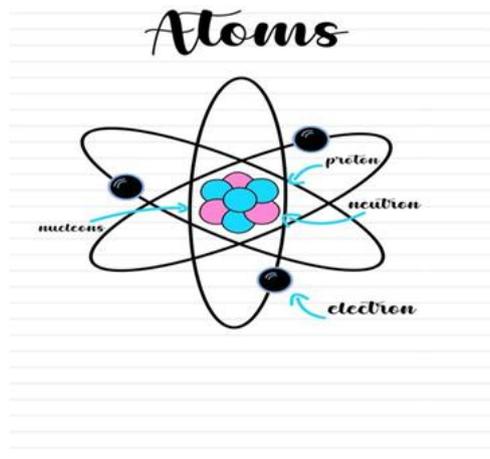
In the early universe, the matter was not evenly distributed. In some regions, the density was extremely high, so even light could not escape. These regions of extreme density are known as "infant universes" because they represent the earliest stage of the universe. The result of high density is that gravity becomes very strong: if you were to drop a stone into one of these infant universes, it would never be able to escape again. Gravity would pull it in and squash it. In fact, if you were to drop a neutron star into one of these infant universes, it would never be able to leave again either – the gravitational forces would crush it completely![15][16]



[5.2 The black hole]

Eventually, gravity wins out and the density decreases. This means that lighter particles can escape and spread out more widely than before. As time passes, these infant universes become less dense and begin to expand into larger regions of space. Eventually, even light can escape from these regions and travel further than before. In other words, gravity eventually wins out over expansion and the entire universe becomes homogeneous – with equal densities throughout all regions. These regions are known as "adult universes".[17] In theory, this process should continue forever; however, there are currently no known processes that will prevent gravitational collapse after a certain point. In other words, eventually a "black hole" will form in every region of space.

Let's point out the tiniest thing within the universe of atoms. Atoms are spherical in form. Atoms square measure the structural and purposeful units of something during this universe. If no atoms within the universe there's nothing within the universe. In atoms, there square measure three main particles square measure their nucleon, electron, and neutrons. The term atom refers to the tiniest unit of the part. It consists of a nucleus encircled by electrons. The nucleus contains protons and neutrons, whereas the electrons carry charge in pairs. Thus, an associate atom could be a charged object that owes its elemental nature to its total variety of protons and neutrons.[18]



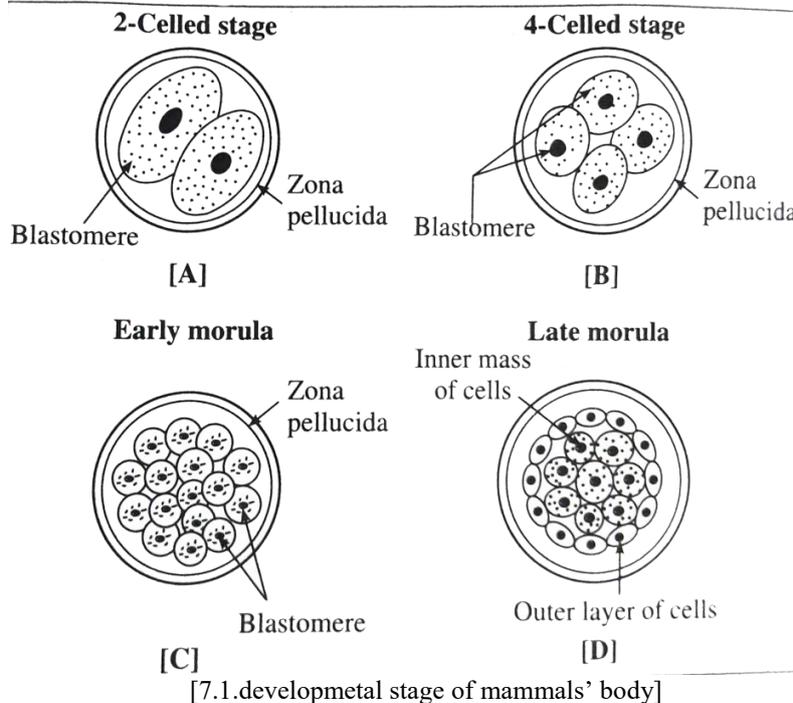
[ 6.1 structure of atom]

The term atom refers to the tiniest unit of the part. It consists of a nucleus encircled by electrons. The nucleus contains protons and neutrons, whereas the electrons carry charge in pairs. Thus, an associate atom could be a charged object that owes its elemental nature to its total variety of protons and neutrons.

In general, atoms square measure little objects with no volume or form of their own. However, their square measure exceptions to the present rule: some atoms have a far larger size than different ones because of the presence of other particles like neutrons or molecules. withal, all atoms share bound properties that build them unique: they accommodate 3 completely different components, the square measure created up completely of 1 form of part, and have an oversized charge gift within the nucleus. Protons and neutrons square measure set at the middle of the atoms and electrons square measure orbiting them. If electrons stop orbiting there's the tip of the atom. each matter destroys within a seconds.[19]

In the case of waves either light waves, sound waves, or any kind of wave their origin in the shape spherical. To prove that take a bowl filled with water and throw a small stone into it, when a collision between the stone and water surface it produces sound, and at that point sounds produce its shape spherical and travel to the surrounding in the water and on the surface of the water it will travels slow as compeer to the air that's why on the surface we can see the waves instead of sound Same condition for the light or any waves. [20]

According to the biological development of every mammal, the body starts developing from the stage called MORULA. The pre-morula stage begins when an egg is released from its mother's ovary. It will travel down a fallopian tube, and then it enters the uterus. After it has matured, it will attach itself to a wall of the uterus. The pre-morula stage ends when the egg sheds and the zygote attaches itself to the wall of the uterus[21].



1st life form on earth is the ancestor of modern bacteria. That was about 4 billion years ago. The shape of the ancestors of modern bacteria is spherical.

According to this, we say that life formation on earth starts from the spherical shape. Many scientists believe that RNA, or one thing almost like RNA, was the primary molecule on Earth to self-replicate and start the method of evolution that crystal rectifier to additional advanced sorts of life, together with groups of people. Earth is the sole planet acknowledged to support life. Life has been found on Earth in many forms: bacteria, algae, protozoa, fungi, plants, and animals. The diversity of life on earth is the result of a combination of factors including geography, climate, chemistry, and biology. [22][23][24]

3.7 billion species that have ever lived on Earth, and over 99 percent are estimated to be extinct today. Humans are the only extant species that can be classified as "extant". all the species that have ever lived on Earth, about 1.4 million species are estimated to be living today. these extant species, around 95 percent are insects, arachnids, and other invertebrates; 1 percent are vertebrates (fish, amphibians, reptiles, and mammals); and less than 0 percent are plants. Over 100 years ago there were fewer than 10,000 different types of organisms living on the planet; today there are over 7 million different types of organisms living here.[25]



[8.1 Ancestors of modern bacteria]

Earth is one in all solely some places within the universe wherever life has developed and survived. whereas it's still unknown what conditions were necessary always to develop there, it seems that they will be kind of like those found on Earth: liquid water and an environment with the correct mixture of gases and energy sources for chemical reactions to require place. The age of the planet is regarding four.54 billion years. proof suggests that life on Earth has existed for a minimum of three.5 billion years, with the oldest physical traces of life chemical analysis back three.7 billion years; but, some theories, like the Late significant Bombardment theory, recommend that life on Earth might have started even earlier, as early as four.1–4.4 billion years ago, and therefore the chemistry resulting in life might have begun shortly when the massive Bang, 13.8 billion years ago, throughout the associate degree epoch once the universe was solely 10–17 million years recent.

**For better understanding, we go through the little experiment,**

Take 100 ml water and put it at the zero gravity area. Any kind of force outer force is not allowed in this experiment. Look at the shape of spherical the water it's absolutely in the shape of spherical because the spherical shape is the universal shape.

**Concussion**

Origin of Anything in the universe, destruction of anything, for the stability of any celestial bodies in the shape of spherical and /or in spherical movement. The spherical shape is the creator and destroyer of everything just like the sun, moon, radio waves, sunlight sound waves, pulsars, stars, the black hole, the universe, etc. everything formed by the spherical shape even the origin of every single species on this earth is origin from the spherical shape .even though, for the stability of the planet, stars, galaxies, planets, black holes, etc are moving in round/spherical shape. Destruction of anything in this universe is also in the shape of a spherical shape or in spherical movement.

**References**

- [1]. Holder, Rodney D., and Simon Mitton, eds. *Georges Lemaître: Life, science and legacy*. Vol. 395. Springer Science & Business Media, 2013.
- [2]. Lambert, Dominique. "Georges Lemaître: the priest who invented the Big Bang." *Georges Lemaître: Life, Science and Legacy*. Springer, Berlin, Heidelberg, 2012. 9-21.
- [3]. Lemaître, Georges. *Learning the Physics of Einstein with Georges Lemaître: Before the Big Bang Theory*. Springer Nature, 2019.
- [4]. Loeb, Abraham. "The dark ages of the Universe." *Scientific American* 295.5 (2006): 46-53.
- [5]. Grøn, Øyvind, and Øystein Elgarøy. "Is space expanding in the Friedmann universe models?." *American Journal of Physics* 75.2 (2007): 151-157.

- [6]. Glazebrook, Karl, et al. "A high abundance of massive galaxies 3–6 billion years after the Big Bang." *Nature* 430.6996 (2004): 181-184.
- [7]. Hoyle, Fred. "The origin of the solar nebula." *Quarterly Journal of the Royal Astronomical Society* 1 (1960): 28.
- [8]. Weidenschilling, S. J. (1977). The distribution of mass in the planetary system and solar nebula. *Astrophysics and Space Science*, 51(1), 153-158.
- [9]. Erol, Osman K., and Ibrahim Eksin. "A new optimization method: big bang–big crunch." *Advances in Engineering Software* 37.2 (2006): 106-111.
- [10]. Khoury, Justin, et al. "From big crunch to big bang." *Physical Review D* 65.8 (2002): 086007.
- [11]. Ruffini, Remo, and John A. Wheeler. "Introducing the Black Hole." *Physics today* (1971).
- [12]. Abramowicz, Marek A., and P. Chris Fragile. "Foundations of black hole accretion disk theory." *Living Reviews in Relativity* 16.1 (2013): 1-88.
- [13]. Page, Don N., and Kip S. Thorne. "Disk-accretion onto a black hole. Time-averaged structure of accretion disk." *The Astrophysical Journal* 191 (1974): 499-506.
- [14]. Hōshi, Reiu. "Basic properties of a stationary accretion disk surrounding a black hole." *Progress of Theoretical Physics* 58.4 (1977): 1191-1204.
- [15]. Kolb, Edward W., and Michael S. Turner. *The early universe*. CRC press, 2018.
- [16]. Brandenberger, Robert, and Cumrun Vafa. "Superstrings in the early universe." *Nuclear Physics B* 316.2 (1989): 391-410.
- [17]. Zhang, Tianxi. "Anisotropic expansion of the black hole universe." *American Astronomical Society Meeting Abstracts# 213*. Vol. 213. 2009.
- [18]. Weissbluth, Mitchel. *Atoms and molecules*. Elsevier, 2012.
- [19]. Bader, Richard FW. "Atoms in molecules." *Accounts of Chemical Research* 18.1 (1985): 9-15.
- [20]. Katz, Jonathan Elliott, et al. "The basic physics of waves, soundwaves, and shockwaves for erectile dysfunction." *Sexual medicine reviews* 8.1 (2020): 100-105.
- [21]. Strelchenko, Nick, et al. "Morula-derived human embryonic stem cells." *Reproductive biomedicine online* 9.6 (2004): 623-629.
- [22]. Benner, Steven A., et al. "When did life likely emerge on Earth in an RNA-first process?." *ChemSystemsChem* 2.2 (2020): e1900035.
- [23]. Ricardo, Alonso, and Jack W. Szostak. "Origin of life on earth." *Scientific American* 301.3 (2009): 54-61.
- [24]. Kauffman, Stuart A. "Approaches to the origin of life on earth." *Life* 1.1 (2011): 34-48.
- [25]. Boenigk, Jens, Sabina Wodniok, and Edvard Glücksman. *Biodiversity and earth history*. Springer, 2015.