

Big bang

The big bang theory

The most popular theory to how the universe began is the big bang theory.

It explains that a supercompressed ball of matter so concentrated exploded. It was the beginning of everything: of matter, space and time. The ball of matter was smaller than a atom. It occurred 13 billion years ago, in one trillionth of a second of explosion, matter was created.

The inflation of the universe

The big bang explosion sent vast amounts of powerful energy and started inflating the empty space.

The inflation grew at a extremely fast rate within a couple of seconds.

Within a fraction of a second the universe grows from smaller than a atom to larger than a galaxy.

The fundamental forces

The four fundamental forces control the universe. These forces are gravity, strong nuclear force, weak nuclear force and electromagnetic force. These four forces were within the supercompressed ball of matter. In the exploding moment of the big bang gravity split off from the others.

When the strong nuclear force splits off then the vast amount of energy fueled the inflation.

The first three minutes

In the first three minutes of the big bang, the universe was extremely hot and dense.

The forces of matter and antimatter created battled each other. Most of the particles were wiped out but matter ended up in triumphed. The universe continued to cool and expand and construction began.

By the end of the third minute the universe had created the building blocks of all the matter around us.

The creation of proteins and neutrons in the big bang were mostly wiped out, there were no free neutrons left after the third minute.

Echoes of the big bang

The echoes of the big bang are detected by radio waves, x-rays and heat radiation.

This is proof of the big bang theory, at first it remained undiscovered by scientists

