

2.1

THRESHOLD 1 THE BIG BANG

0:13–0:46 Our first threshold is the Big Bang, which happened about 13.7 billion years ago and led to the creation of the entire Universe. We don't know much about the ingredients and the Goldilocks Conditions that led to this first threshold because we just don't have much evidence.

A MYSTERY

For example, what made the Big Bang possible? We don't know.

Why did the Big Bang happen? We can only speculate.

Was there even space and time before the Big Bang? We don't know that either.

What we do know is that the Big Bang provided the raw materials for everything around us today. After the Big Bang there was space, which was rapidly expanding, and there was time.

0:46–1:51

NOTHING INTO SOMETHING

There was also matter and energy. At first, the Universe was so hot that you couldn't tell the difference between matter and energy, but within the first billionth of a second after the Big Bang, matter and energy separated.

Then energy took different forms, including gravity and electromagnetism. And matter appeared in the form of electrons and quarks. And quarks soon linked up to form protons and neutrons.

Why is this so important? Because nothing had turned into something, and that something contained everything needed to build an interesting Universe, one that could eventually include you and me. Now let's take a closer look at how our Universe began to build more complex things.