

The cosmic timeline continues with fairly well-established events leading to the present day.

Earliest Moments of the Big Bang

Formation of Atoms

Dark Ages

Modern Era

10^{-35} second
Cosmic inflation creates a large, smooth patch of space filled with lumpy quark soup

10^{-30} s
One potential type of dark matter (axions) is synthesized

10^{-11} s
Matter gains the upper hand over antimatter

10^{-10} s
A second potential type of dark matter (neutralinos) is synthesized

10^{-5} s
Protons and neutrons form from quarks

0.01–300 s
Helium, lithium, and heavy hydrogen nuclei form from protons and neutrons

380,000 years
Atoms form from nuclei and electrons, releasing the cosmic microwave background radiation

380,000–300 million yr
Gravity continues to amplify density differences in the gas that fills space

300 million yr
First stars and galaxies form

1 billion yr
Limit of current observations (highest-redshift objects)

3 billion yr
Clusters of galaxies form; star formation peaks

9 billion yr
Solar system forms

10 billion yr
Dark energy takes hold and expansion begins to accelerate

4.5 billion yr
Formation of Earth

3.5 billion yr
Life (anaerobes)

13.7 billion yr
Today