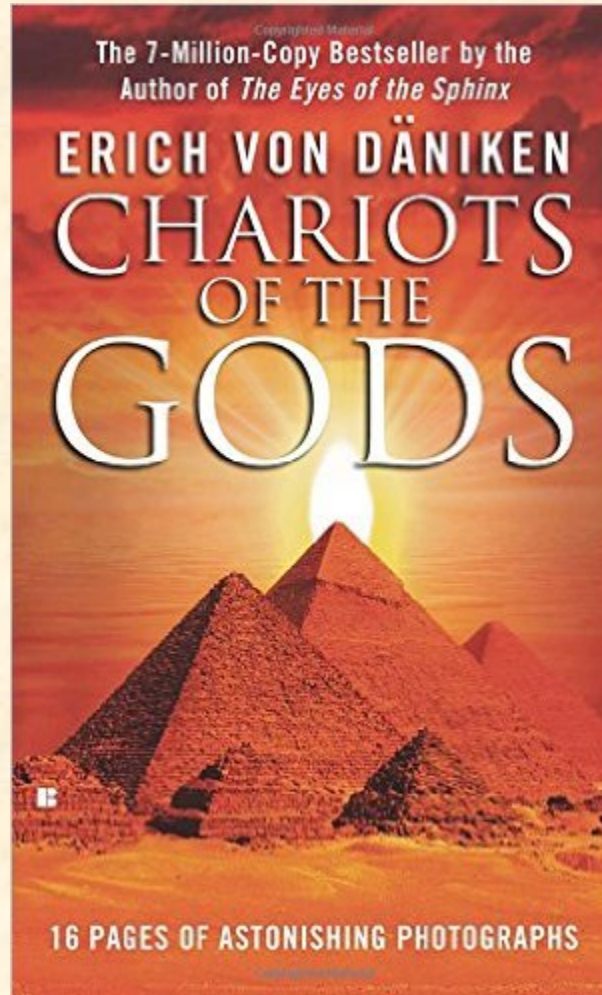


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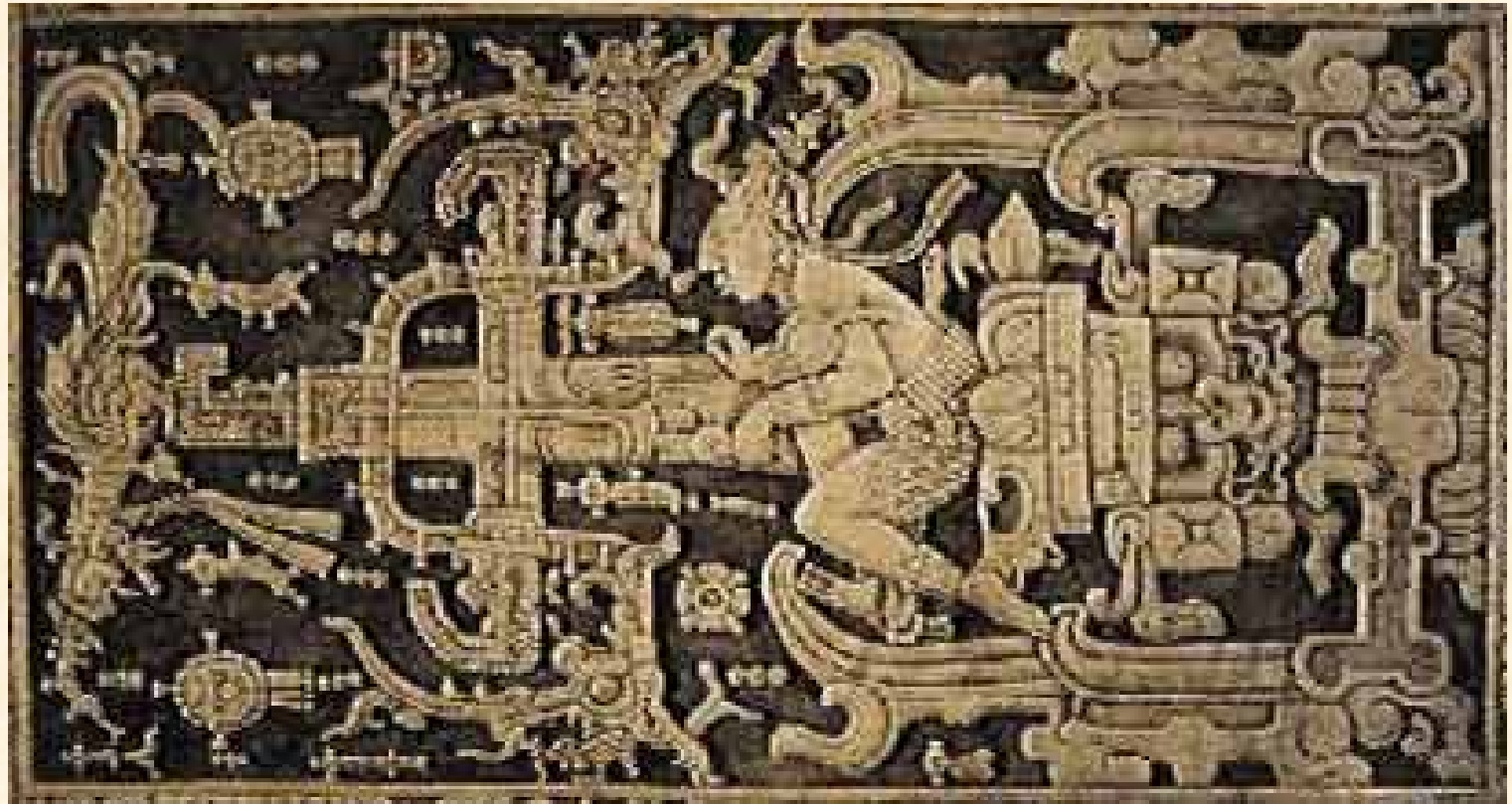
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**Psalm 19:1-4 (NIV)**

**1 The heavens declare the glory of God;  
the skies proclaim the work of His  
hands.**

**2 Day after day they pour forth speech;  
night after night they reveal  
knowledge.**

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**3 They have no speech, they use no words;**

**no sound is heard from them.**

**4 Yet their voice goes out into all the earth,**

**their words to the ends of the world.**



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## HOW DID OUR UNIVERSE BEGIN?

Some 13.8 billion years ago, our entire visible universe was contained in an unimaginably hot, dense point, a billiard-ball size of a nuclear particle. Since then it has expanded—wallowing against gravity all the way.

**Inflation**  
In the first fraction of a second, a quantum energy field imbued space to double size and fill it with a soup of subatomic particles and forces.  
**Age:** 10<sup>-32</sup> milliseconds  
**Size:** Inflation to just feet

**Early building blocks**  
The universe expands, cools. Quarks clump into protons and neutrons, the building blocks of atomic nuclei. Perhaps stars form, too.  
**Age:** 10<sup>-1</sup> milliseconds  
**Size:** 0.1-billion present size

**First nuclei**  
As the universe continues to cool, the lightest nuclei of hydrogen and helium arise. A thick fog of particles blocks all light.  
**Age:** 0.1 to 200 seconds  
**Size:** 1-billion present size

**First atoms, first light**  
As electrons begin joining nuclei, creating atoms, the fog from our first moments is unveiled. This light is on its way to us.  
**Age:** 380,000 years  
**Size:** 380,000 to 200 million years  
.0009 to 0.1 present size

**The "dark ages"**  
For 200 million years this cosmic background radiation is the only light. Clumps of matter that will become galaxies glow dimly.  
**Age:** 380,000 to 300 million years  
**Size:** .0009 to 0.1 present size

**Gravity wins: first stars**  
Dense gas clouds collapse under their own gravity—and that of dark matter—to form stars, galaxies and stars. Nuclear fusion lights up the stars.  
**Age:** 300 million years  
**Size:** 0.1 present size

**Antigravity wins**  
After being slowed for billions of years by gravity, cosmic expansion accelerates again. This super-dark energy is driving, finally.  
**Age:** 10 billion years  
**Size:** 77 present size

**Today**  
The universe continues to expand, becoming ever larger. As a result, fewer new stars and galaxies are formed.  
**Age:** 13.8 billion years  
**Size:** Present size

## HOW WILL IT END?

Which will win in the end, gravity or antigravity? Is the density of matter enough for gravity to halt or even reverse cosmic expansion, leading to a big crunch? It seems unlikely—especially given the power of dark energy, a kind of antigravity. Perhaps the acceleration in expansion caused by dark energy will trigger a big rip that strays everything, from galaxies to atoms. If not, the universe may expand for hundreds of billions of years, long after all stars have died.



Galaxies ripped apart by rapid expansion

## COSMIC QUESTIONS

In the 20th century the universe became a story—a scientific one. It had always been seen as static and eternal. Then astronomers observed other galaxies flying away from ours, and Einstein's general relativity theory implied space itself was expanding—which meant the universe had once been denser. What had seemed eternal now had a beginning and an end. But what beginning? What end? Those questions are still open.

### WHAT IS OUR UNIVERSE MADE OF?

Stars, dust, and gas—the stuff we can discuss—make up less than 5 percent of the universe. Their gravity can't account for how galaxies hold together. Scientists figure about 24 percent of the universe is a mysterious dark matter—perhaps exotic particles formed right after inflation. The rest is dark energy, an unknown energy field or property of space that counteracts gravity, providing an accelerating for observations that the expansion of space is accelerating.



### WHAT IS THE SHAPE OF OUR UNIVERSE?

Einstein discovered that a star's gravity curves space around it. But is the whole universe curved? Might space close up on itself like a sphere or curve the other way, coming out like a saddle? By studying cosmic background radiation, scientists have found that the universe is poised between the two: just dense enough with just enough gravity to be almost perfectly flat, at least the part we can see. What lies beyond we can't know.

### The Unknown Beyond

What we can't see. The possible shapes are:



### DO WE LIVE IN A MULTIVERSE?

What came before the big bang? Maybe other big bangs. The uncertainty principle holds that even the vacuum of space has quantum energy fluctuations. Inflation theory says our universe exploded from such a fluctuation—a random event that, odds are, had happened many times before. Our cosmos may be one in a sea of others. Just like ours—or nothing like ours. These other cosmos will very likely remain forever inaccessible to observation, their possibilities limited only by our imagination.

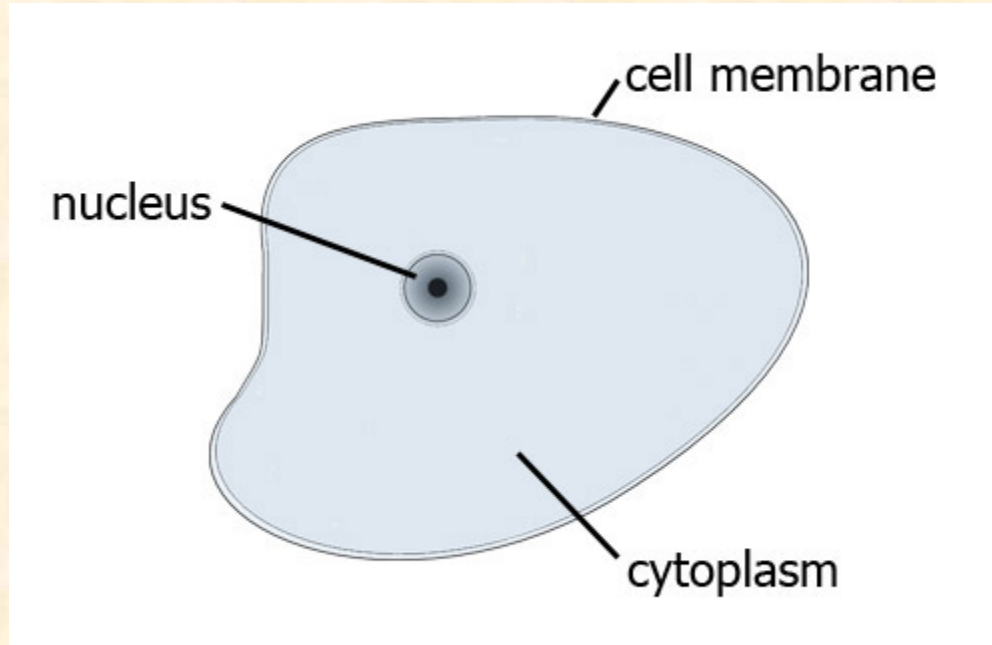


Learn more about God's creation of the universe in our special edition. [Click here to learn more.](#)

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**For life to happen in a single cell:**

- **At least 239 protein molecules**
- **Each protein molecule contains 445 amino acids**

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**Romans 1:20 (NIV)**

**20 For since the creation of the world God's invisible qualities—His eternal power and divine nature—have been clearly seen, being understood from what has been made, so that people are without excuse.**

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**Psalm 14:1 (NIV)**

**The fool says in his heart,  
“There is no God.”**

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**Hebrews 11:1 (NIV)**

**Now faith is confidence in what we hope for and assurance about what we do not see.**

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**Hebrews 11:6 (NIV)**

**And without faith it is impossible to please God, because anyone who comes to Him must believe that He exists and that He rewards those who earnestly seek Him.**



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**John 20:29 (NIV)**

**Then Jesus told him, “Because you have seen Me, you have believed; blessed are those who have not seen and yet have believed.”**

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**Jeremiah 29:13 (NIV)**

**You will seek Me and find Me when  
you seek Me with all your heart.**

# explore God

**Hebrews 11:6 (NIV)**

**And without faith it is impossible to please God, because anyone who comes to Him must believe that He exists and that He rewards those who earnestly seek Him.**

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**Romans 12:1-2 (NIV)**

**Therefore, I urge you, brothers and sisters, in view of God's mercy, to offer your bodies as a living sacrifice, holy and pleasing to God—this is your true and proper worship.**

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**2 Do not conform to the pattern of this world, but be transformed by the renewing of your mind. Then you will be able to test and approve what God's will is—His good, pleasing and perfect will.**

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