

# The Fermi Paradox

The Fermi Paradox asks a simple but profound question: *If the universe is so large and old, filled with billions of galaxies and planets, where is everybody?*

## What Is the Paradox?

Given the vast number of stars and potentially habitable planets, it seems statistically likely that intelligent life should have emerged elsewhere. Yet, we observe no clear evidence of extraterrestrial civilizations.

## Popular Explanations

- The Great Filter: Civilizations fail to survive long enough to spread across the galaxy.
- Rare Earth Hypothesis: Complex life is extremely uncommon.
- Technological Limits: Advanced civilizations may not use detectable technologies.
- Self-Destruction: Intelligent species often destroy themselves.
- Zoo Hypothesis: Advanced beings deliberately avoid contact.

## Why It Matters

Understanding the Fermi Paradox helps humanity reflect on its future, the fragility of civilization, and our place in the cosmos.