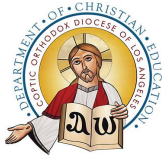


# The Big Bang (Apologetics)

Department of Christian Education



# Objective

- The “Big Bang” as origin of the universe - did it happen by itself?
- Entities that led to its occurrence
- Can these entities come from nothing?
- Who brought these entities to existence?
- Laws of Physics that have to exist before event of Big Bang

# Overview

3 things to keep in mind  
before discussing  
scientific, apologetic  
topics:

1.
  - Apologetics = Greek word for “defense” or “answer.”
  - Goal is to **DEFEND** the faith, not to **OFFEND** others.
  - Must discuss topics of scientific apologetics in a Christian, Christ-like atmosphere
  - To defend the faith with preparation, wisdom, and **Christian love**
  - To not prove a point, but to discuss the topics **rationally** and **gently** in Christian fellowship.

“Even if you should suffer for righteousness’ sake, you are blessed. “And do not be afraid of their threats, nor be troubled.” But sanctify the Lord God in your hearts, and always be ready to give a defense to everyone who asks you a reason for the hope that is in you, with meekness and fear” (1 Peter 3:14-15).

# Overview

3 things to keep in mind  
before discussing  
scientific, apologetic  
topics:

2.

- When discussing any controversial, scientific topic, **we are not proving whether it coincides or contradicts our faith.**
- Scripture and science come from the same Author, God Himself!
- Scripture = Word of God, science = process in how God created all things during the creation account in Genesis.
- Therefore, Scripture and science **have always gone hand in hand.**
- The false appearance that they can't coexist came from:
  - The misinterpretation of the Bible (Galileo Affair; Galileo & the Catholic Church)
  - Bad science (Spontaneous Generation; life comes from nonlife).

# Overview

3 things to keep in mind  
before discussing  
scientific, apologetic  
topics:

3.

Remember that God's intent of Scripture is primarily for our salvation, not science!

*"Thus, taking terms too literally may convey more than, or even the opposite of, what the author intended" (John A. Bloom).*

# Introduction

The Big Bang theory: claims to be “origin,” of the universe

- Problem with this claim:
  - Not that it is the “origin,” rather that this occurred “by itself”
  - Implies that no one caused it to happen > Universe as “self-nucleated”
  - The universe came out of nothing, and therefore supposed that there is no God

# Answering from Science, Not From the Bible

## Scientific Method:

- “Conclusion” based on Observation
- Observation > Hypothesis > Experimentation > Conclusion

## How to make a scientific answer or response:

- Understand the data (Observational data)
- Understand the Hypothesis made from these data.
- Understand the experimentation and the Conclusions drawn from such experimentation.
- See if the drawn conclusions are correct, or there could be another hypothesis and conclusions.
- If there are other Conclusion(s), do they support or contradict the first Conclusion(s)?

# Answering from Science, Not From the Bible

Application to the Big Bang Theory

**Observation:** Telescope of Edwin Hubble

**Hypothesis:** Galaxies moving “apart” from one another as time moves forward.

Therefore, in the past, the galaxies were closer to one another. Going much further in the past means that we will reach a point where these galaxies were very, very close together.

**Conclusion:** The Universe started by an explosion from one point, and this explosion is called the Big Bang.



# Expanding Universe

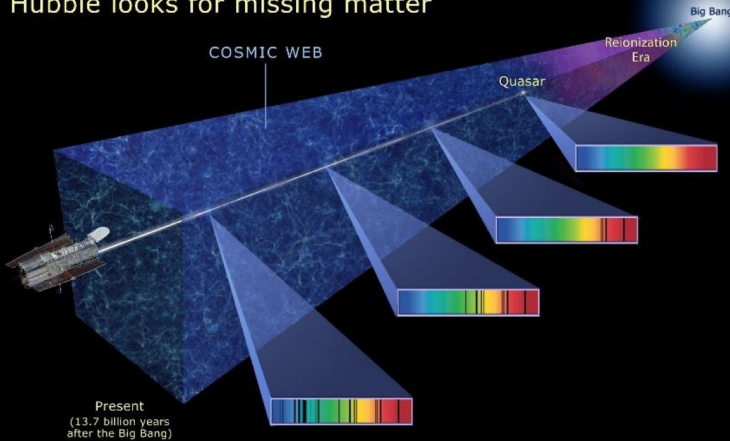


- It is observed that the Universe is in continuous “expansion.”
  - Galaxies are moving further and further from one another over time.
  - Example: Dots drawn on a balloon moving further apart as you blow the balloon
- The fact that our Universe is expanding implies that in the past, the Universe must have started with the galaxies being closer and closer to one another.
- Therefore, there should be an instance where all these galaxies were together in one small space
- The Big Bang event: A strong force that pushed these galaxies all out.

# Experimentally proving the Big Bang: Edwin Hubble



Hubble looks for missing matter



- Hubble established that our galaxy is one of billions of galaxies
- He observed that these galaxies have “Red Shift”

Explaining Red Shift:

- When you have an object that is lit moving closer and closer to a person, the light coming from it will appear more and more blue.
- When it is moving further it will appear more and more Red.
- Hubble observed that far galaxies appeared more and more red as he observed them from time to time.
- He concluded that they are moving away from us.

This Experimentation of Hubble led to the conclusion that the Universe is Expanding.

- He came up with what he called as the Hubble Constant:
- $Velocity = \text{Hubble Constant} \times \text{Distance}$
- Can compute how far away a galaxy is by measuring the velocity with which it moves

The Hubble constant would be able tell us how to calculate how long ago in the past the Big Bang happened > an estimate of the age of the Universe.

# Conclusions

- **Main question**: Where do the laws needed for the Big Bang to happen come from?
- the proponents of The Big Bang by itself can be explained with physics, but the question remains: Where did the Laws come from?
- Laws are **discovered** not **created** by humans, they **pre-exist** on their own.
- The Only answer to this dilemma is that someone created the Laws
  - That is whom we call **God**
- Factors that show the universe was designed, not spontaneously occurring:
  - How Earth is finely tuned for humans to live on, Comparisons to other planets
  - Ex. The Oxygen content, temperature, water temperature,, the magnetic field, etc.
- The Bible does not oppose the Big Bang Theory
  - Genesis 1:1 “In the beginning God created the heavens and the earth.”
  - “Beginning” means that very initial point where “time” was created.
  - **And that is the instance of the Big Bang. God caused the Big Bang. God created the Laws needed for it to happen**

# Concluding Quotes

- *“Thus says God the Lord, Who created the heavens and **stretched them out**, Who **spread forth** the earth and that which comes from it, Who gives **breath** to the people on it, And **spirit** to those who walk on it” (Isaiah 42:5)*
- *“Thus says the Lord, your **Redeemer**, And He who **formed you from the womb**: I am the Lord, who **makes all things**, Who **stretches out the heavens all alone**, Who **spreads abroad the earth by Myself**” (Isaiah 44:24).*
- *“I have **made the earth** and **created man** on it. I—My hands—**stretched out the heavens**, And **all their hosts** I have **commanded**” (Isaiah 45:12).*