



God's Grand Design

Exploring Origins in Science and Scripture

Part 7

**What about the
distant starlight
problem?**

Get on the class email list:

josh@trc.life

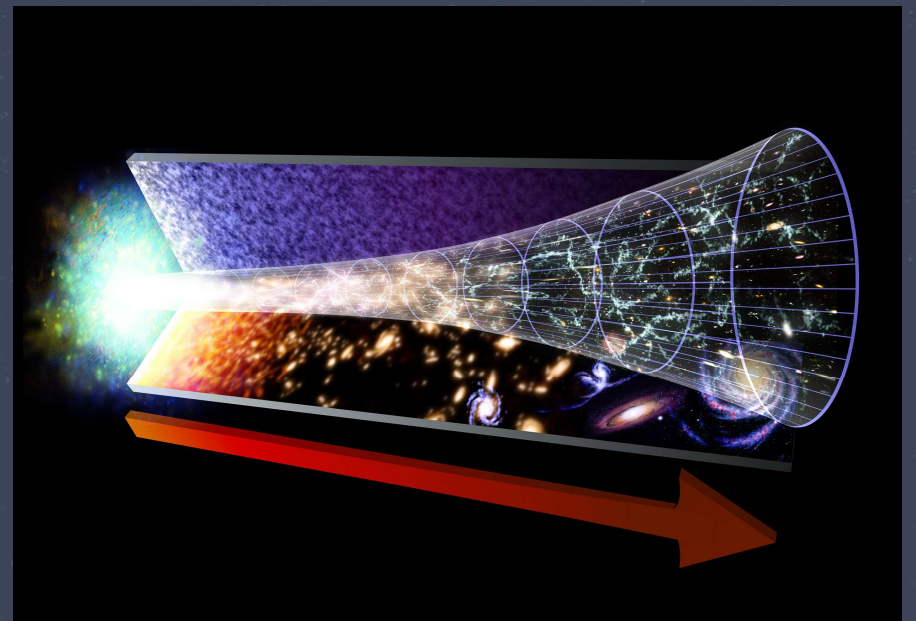
Two Theories of Origins

**View #1 – God created the heavens and the earth.
(in six days, thousands of years ago)**

**View #2 – The heavens and earth evolved without
God. (millions and billions of years ago)**

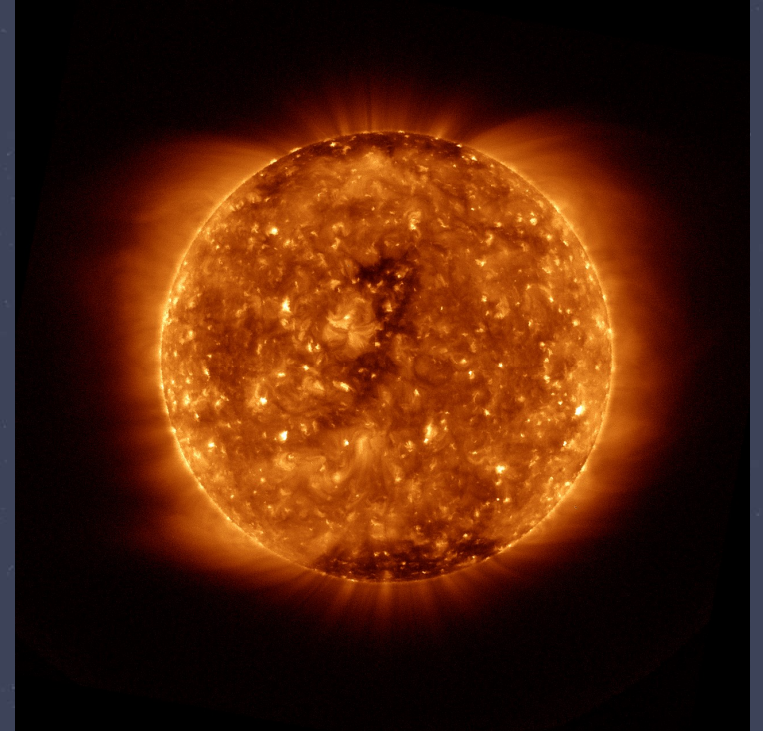
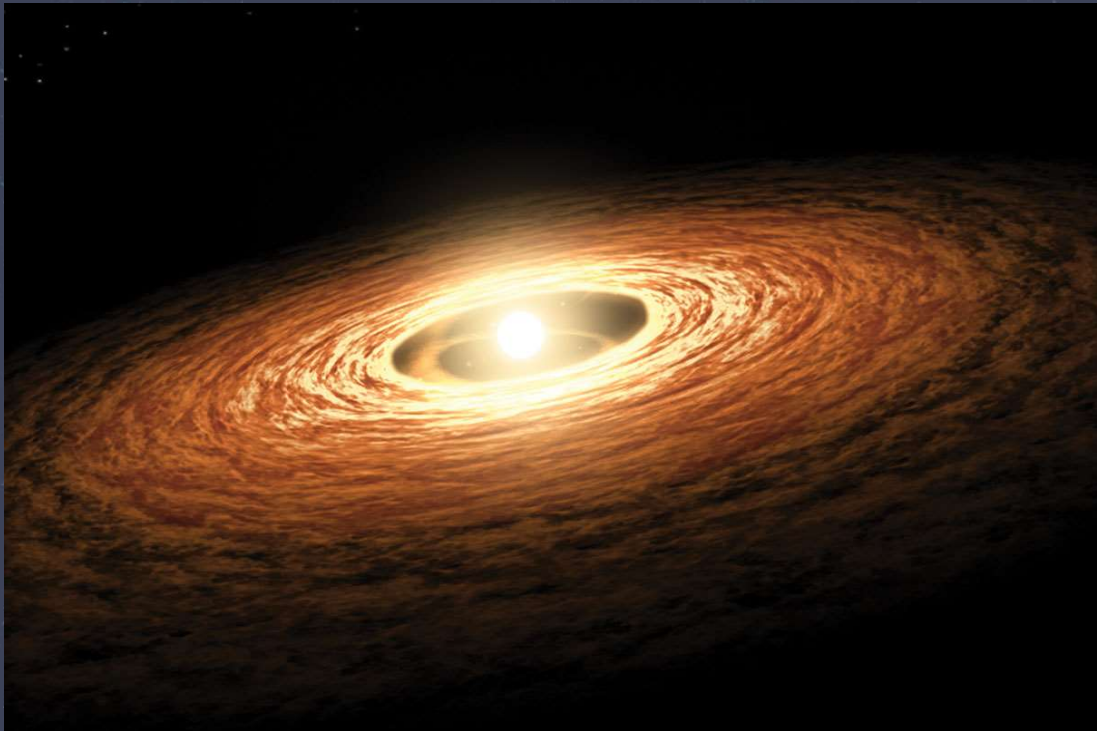
The Big Bang occurred 13.8 billion years ago.

American Museum of Natural History



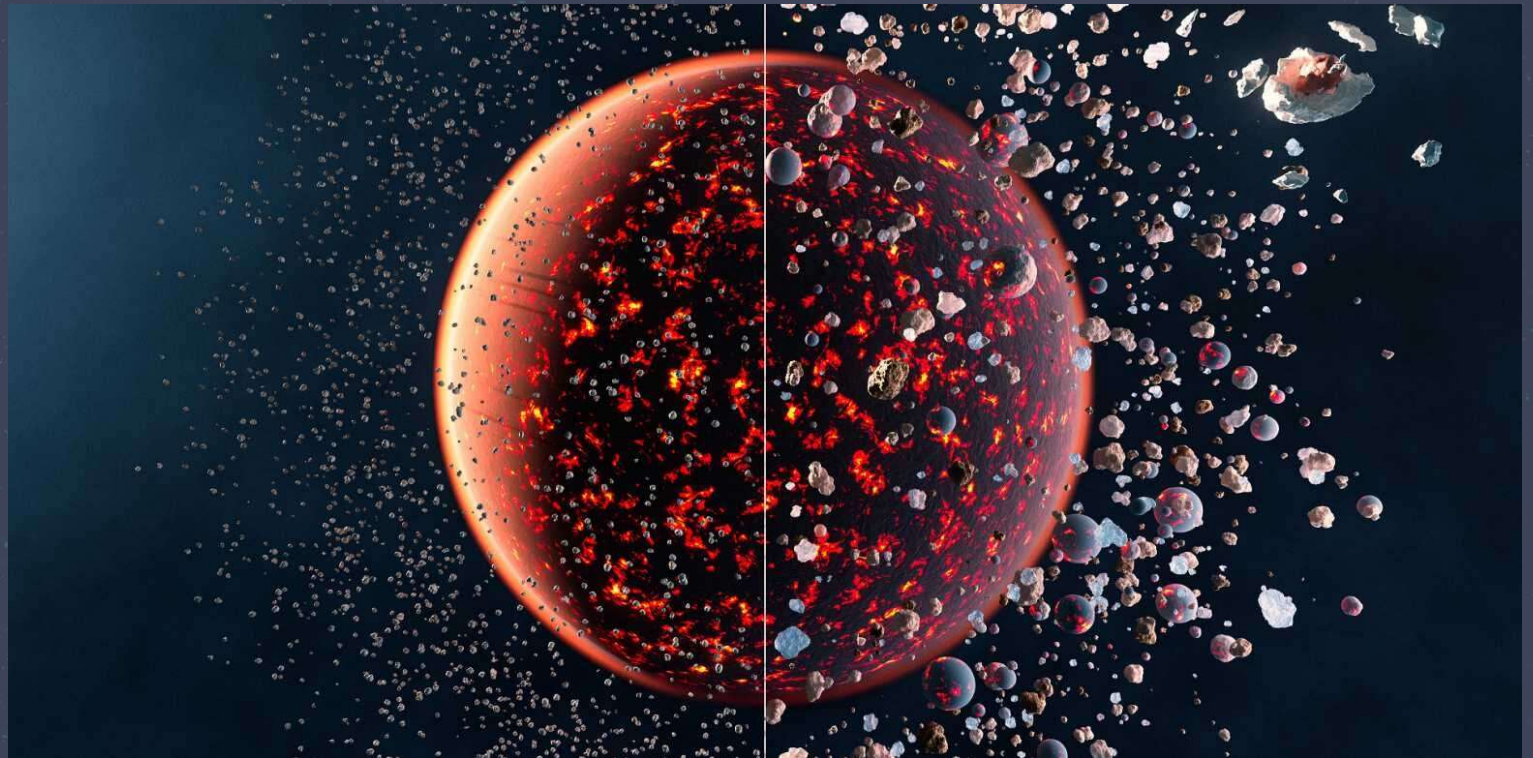
The Sun formed 4.6 billion years ago.

NASA



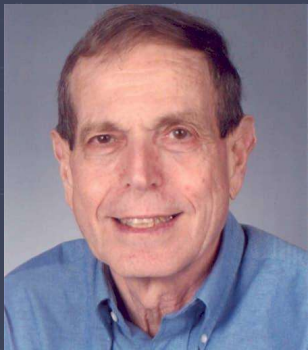
The Earth formed 4.5 billion years ago.

NASA



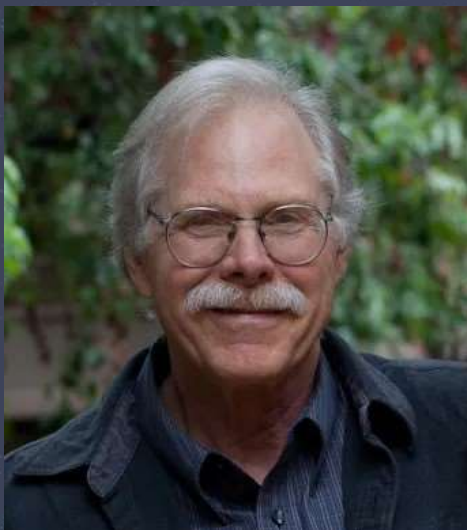
“Once these planetesimals [small planets] have been formed, further growth of planets may occur through their gravitational accretion [clumping] into large bodies. Just how that takes place is not understood.”

Martin Harwit



"How the first stage of this process, primary accretion [clumping] works is a fundamental unsolved problem of planetary science."

Jeff Cuzzi



The Moon formed 4.4 billion years ago.

NASA



“The collision has to be implausibly gentle. You practically need someone to hold a Mars-sized object just above Earth and drop it, to avoid messing up Earth's orbit.”

Peter Noerdlinger



“It's hard to imagine a scenario in which a giant impact melts, completely, the moon, and at the same time allows [the Earth] to hold onto its water. That's a really, really difficult knot to untie.”

Erik Hauri





Part 3

Is the Earth a miracle?

GENESIS 1:1-3

In the beginning, God created the heavens and the earth. 2 The earth was without form and void, and darkness was over the face of the deep... 3 And God said, "Let there be light," and there was light. 4 And God saw that the light was good. And God separated the light from the darkness. 5 God called the light Day, and the darkness he called Night. And there was evening and there was morning, the first day.

GENESIS 1:14-16

And God said, "Let there be lights in the expanse of the heavens to separate the day from the night. And let them be for signs and for seasons, and for days and years, 15 and let them be lights in the expanse of the heavens to give light upon the earth." And it was so. 16 And God made the two great lights—the greater light to rule the day and the lesser light to rule the night—and the stars.

GENESIS 1:17-19

And God set them in the expanse of the heavens to give light on the earth, 18 to rule over the day and over the night, and to separate the light from the darkness. And God saw that it was good. 19 And there was evening and there was morning, the fourth day.

Creation Sequence	Evolution Sequence
Earth	Big Bang
Light	Stars/Sun
Sun	Light
Moon	Earth
Stars	Moon

REVELATION 22:5

And night will be no more. They will need no light of lamp or sun, for the Lord God will be their light, and they will reign forever and ever.

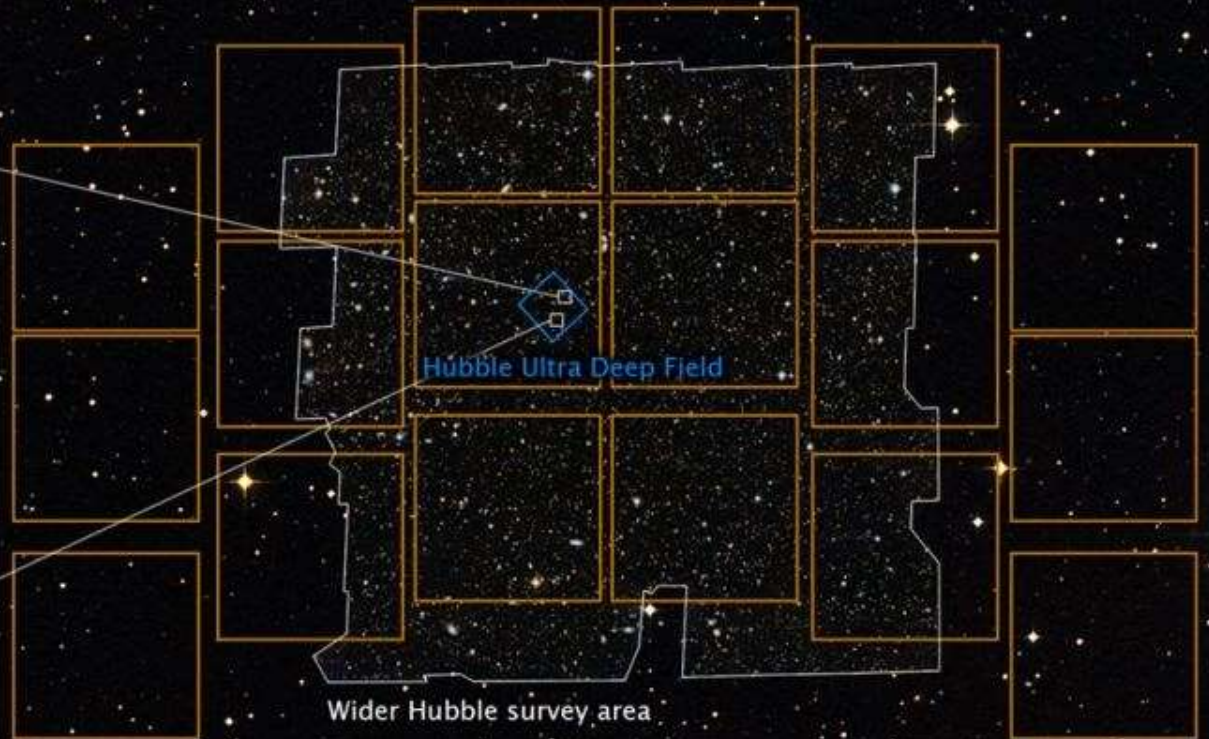
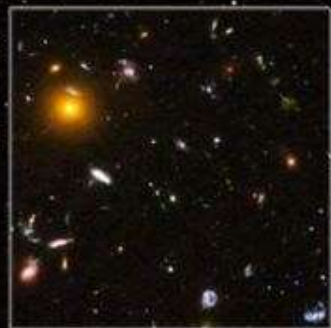
PSALM 115:3

Our God is in heaven; he does whatever pleases him.

GENESIS 1:16

And God made ... the stars.

HOW MANY STARS DID GOD MAKE?



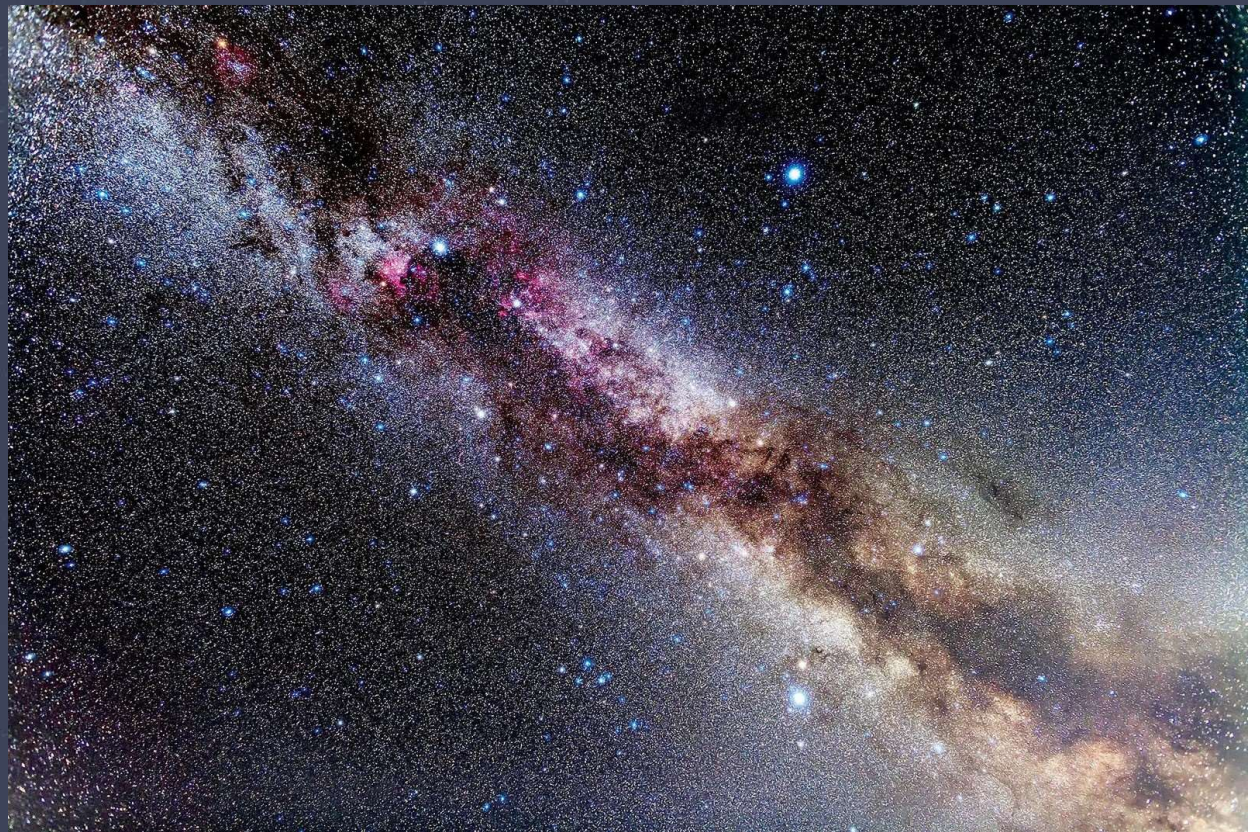
Roman field of view

Wider Hubble survey area

Hubble Ultra Deep Field

The universe could contain up to one septillion
or 1,000,000,000,000,000,000,000,000,000
stars. (10^{24})

NASA





PSALM 147:4-5

He determines the number of the stars; he gives to all of them their names. 5 Great is our Lord, and abundant in power; his understanding is beyond measure.

Part 2

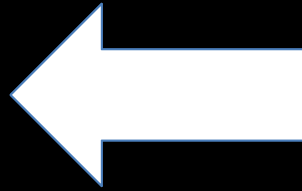
Where did life come from?

Part 5

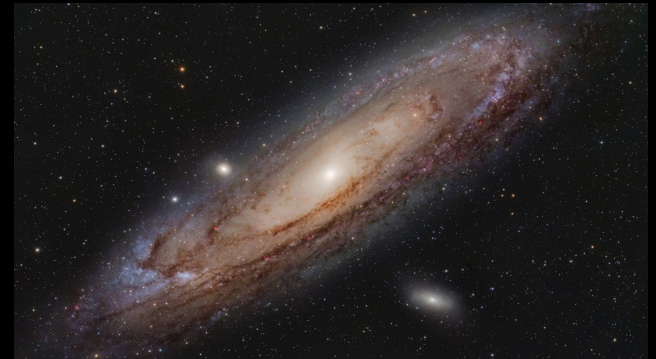
How old is the earth?



Earth
~6,000 years old



Speed of Light



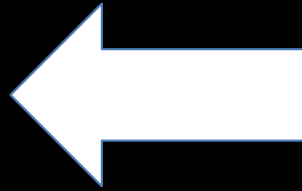
Andromeda Galaxy
2.5 million light-
years away

Part 7

**What about the distant starlight
problem?**



Earth
~6,000 years old



Speed of Light



Andromeda Galaxy
2.5 million light-
years away

- 1. How do we know the speed of light?**
- 2. How do we know this galaxy is that far away?**
- 3. What is a light year?**

The speed of light (c):

299,792,458 meters per seconds

671,000,000 miles per hour



Why Astronauts left a reflector on the Moon! (ft. MinutePhysics) - Smarter Every Day 73



SmarterEveryDay ✓
11.4M subscribers

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41K Comment Share Clip Save ...

2.7M views 11 years ago

2:36 – 4:28

https://www.youtube.com/watch?v=dsRsap2_RAc&ab_channel=SmarterEveryDay








299,792,458 m/s



Why No One Has Measured The Speed Of Light

 Veritasium 
14.6M subscribers

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 580K   Share  Thanks  Clip  Save 

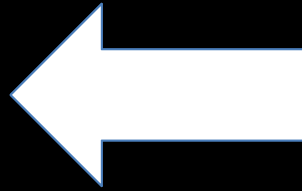
20M views 3 years ago

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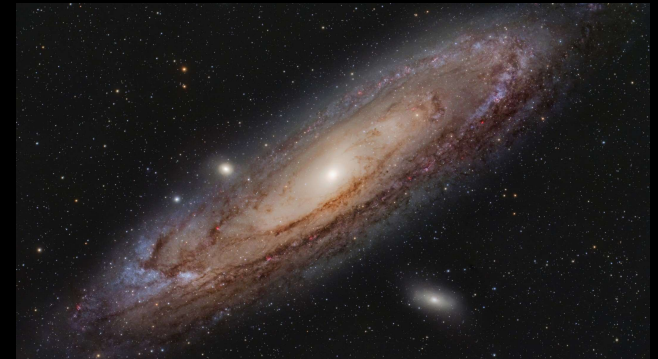
https://www.youtube.com/watch?v=pTn6Ewhb27k&t=2s&ab_channel=Veritasium



Earth
~6,000 years old



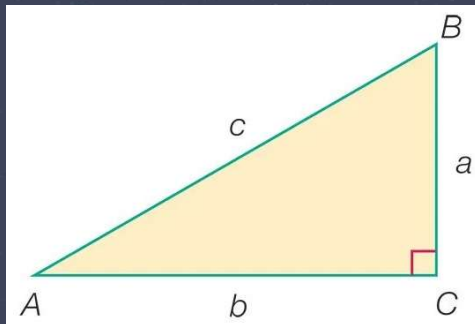
Speed of Light



Andromeda Galaxy
2.5 million light-
years away

- 1. How do we know the speed of light?**
- 2. How do we know this galaxy is that far away?**
- 3. What is a light year?**

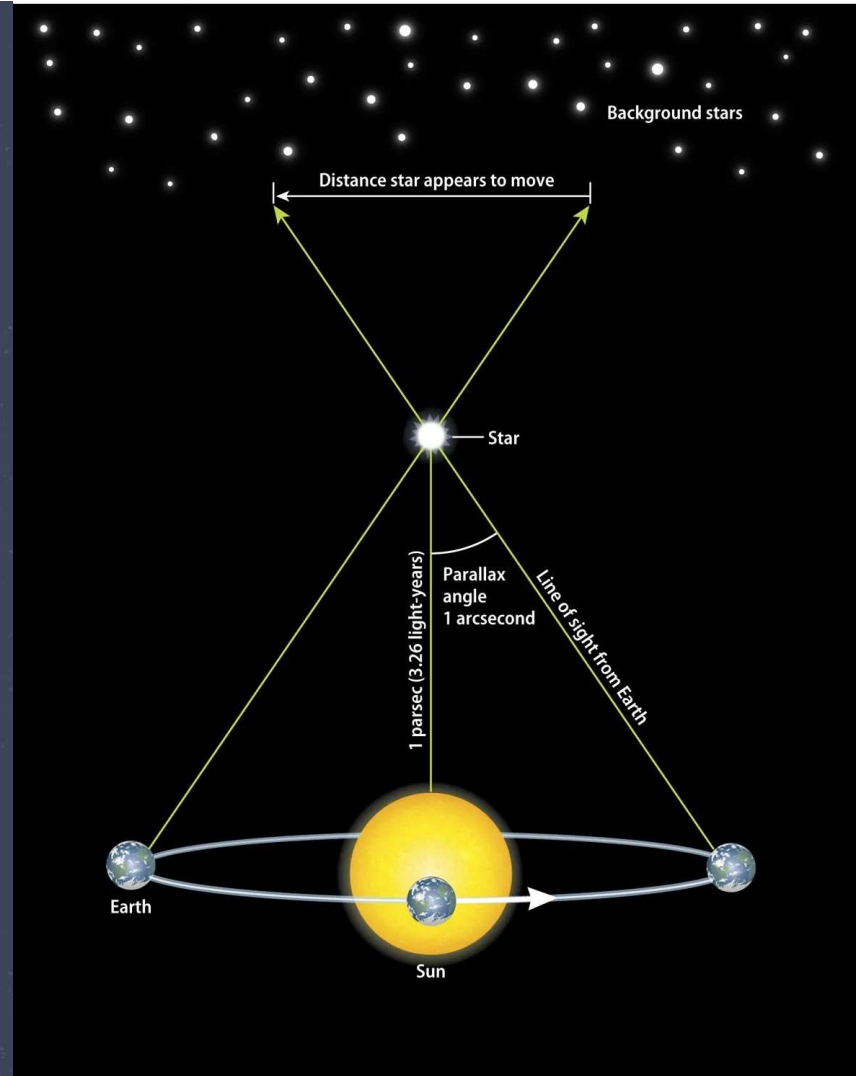
1. Parallax Angle

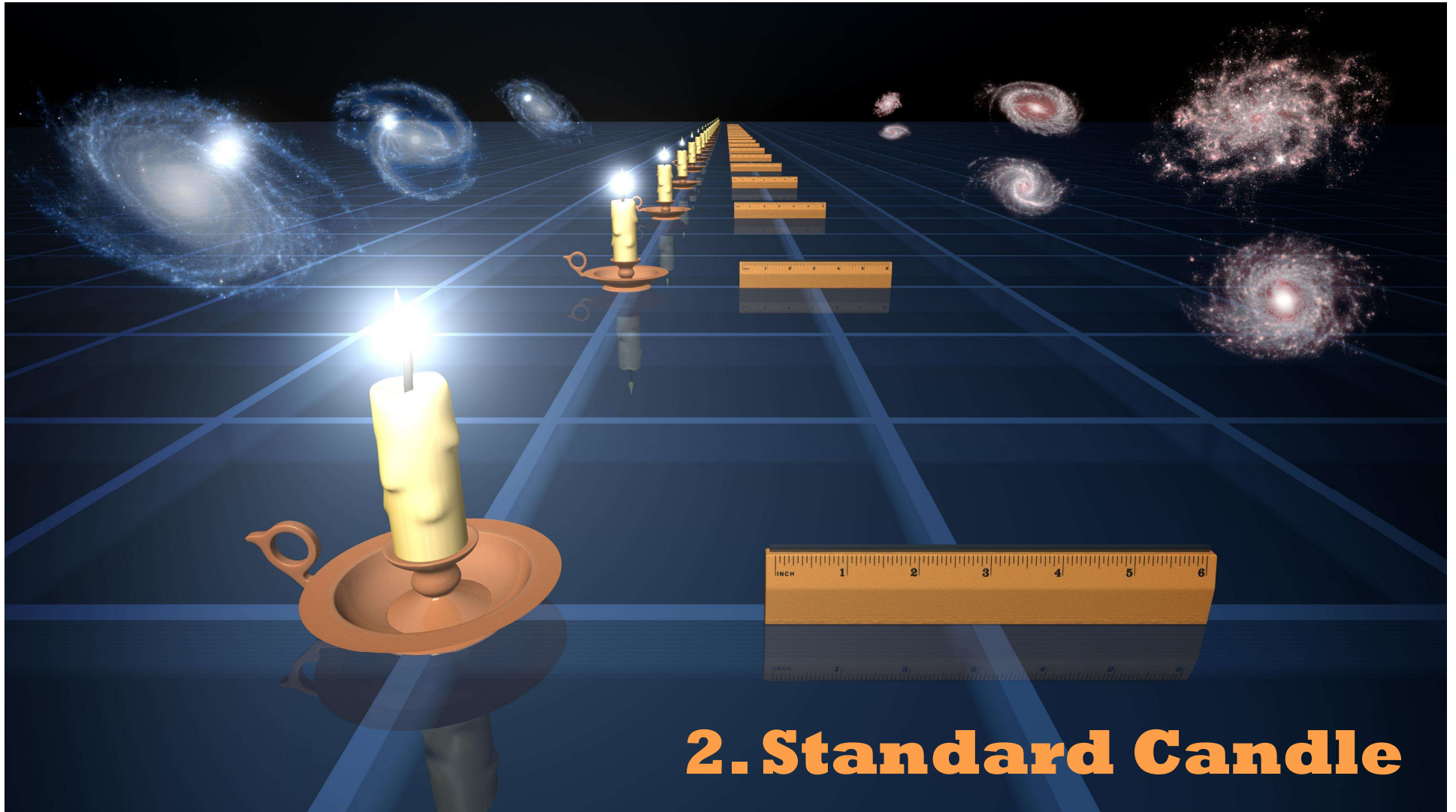


$$\sin A = \frac{a}{c} = \frac{\text{side opposite}}{\text{hypotenuse}}$$

$$\cos A = \frac{b}{c} = \frac{\text{side adjacent}}{\text{hypotenuse}}$$

$$\tan A = \frac{a}{b} = \frac{\text{side opposite}}{\text{side adjacent}}$$

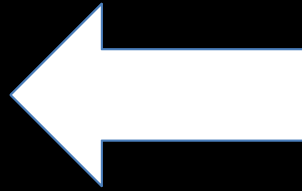




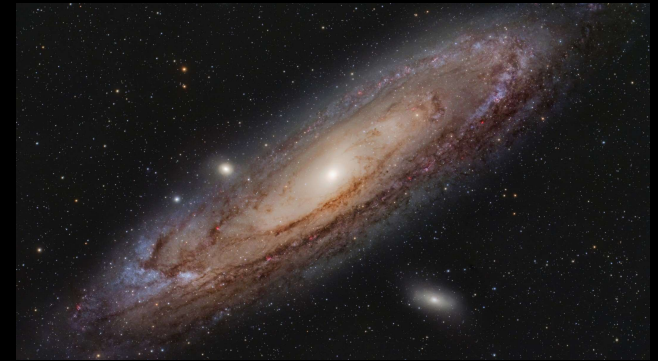
2. Standard Candle



Earth
~6,000 years old



Speed of Light



Andromeda Galaxy
2.5 million light-
years away

- 1. How do we know the speed of light?**
- 2. How do we know this galaxy is that far away?**
- 3. What is a light year?**

What is a light year?

It is how far light travels in one year.

671 million miles per hour.

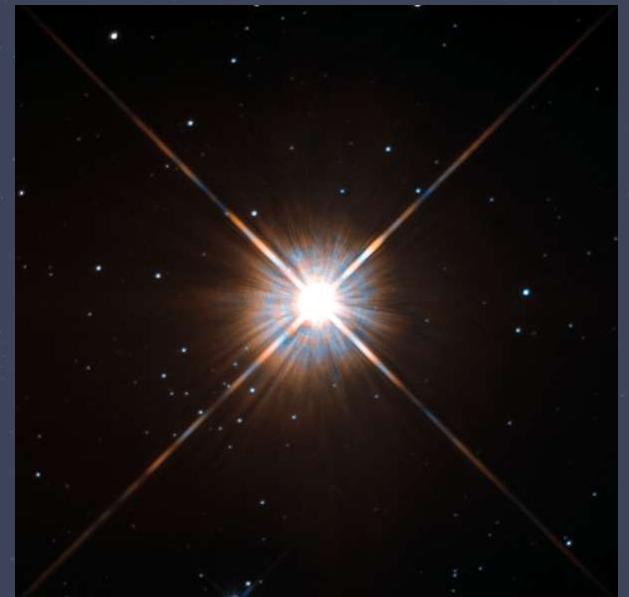
8,760 hours per year.

**5.88 trillion miles
= 1 light year.**

Proxima Centauri

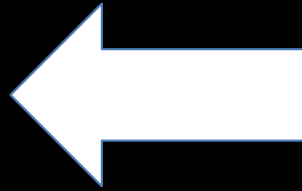
24,974,912,556,000 miles

4.246 light years





Earth
~6,000 years old



Speed of Light

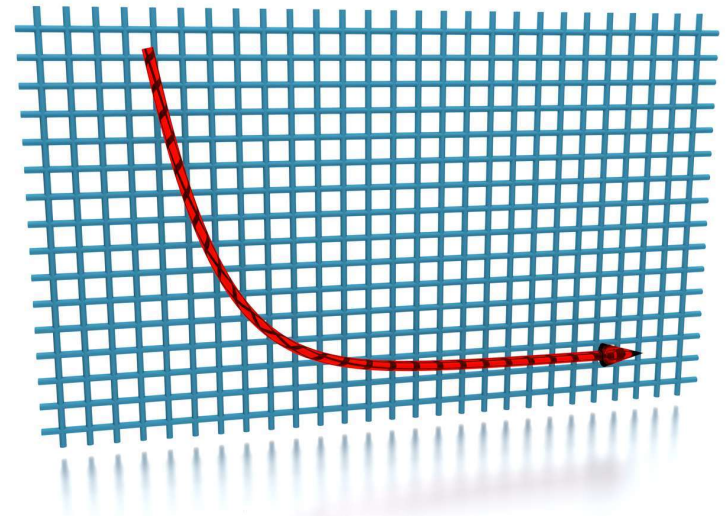


Andromeda Galaxy
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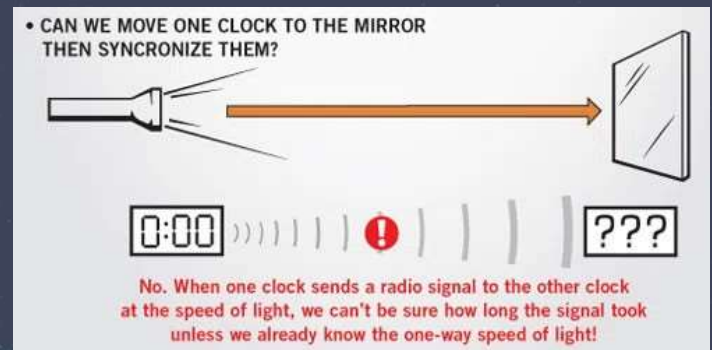
What about the distant starlight problem?

1. The speed of light was faster in the past.



What about the distant starlight problem?

2. Anisotropic synchrony convention (1-way versus 2-way speed of light).



What about the distant starlight problem?

3. Time dilation



What about the distant starlight problem?

4. Mature creation



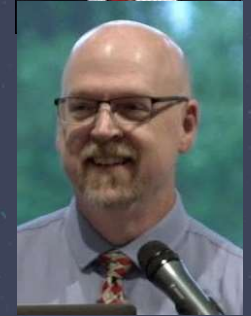
For further study:

Dr. Danny Faulkner

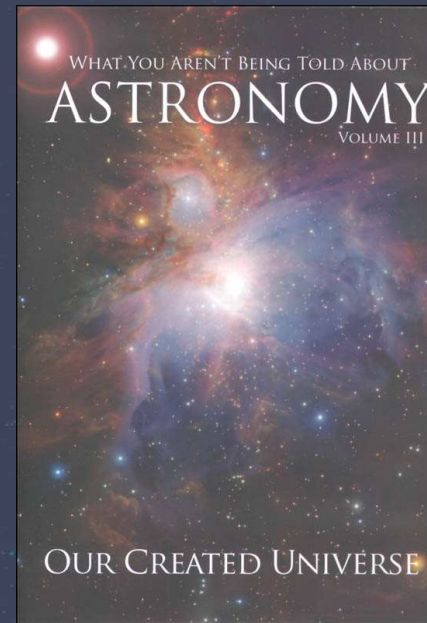
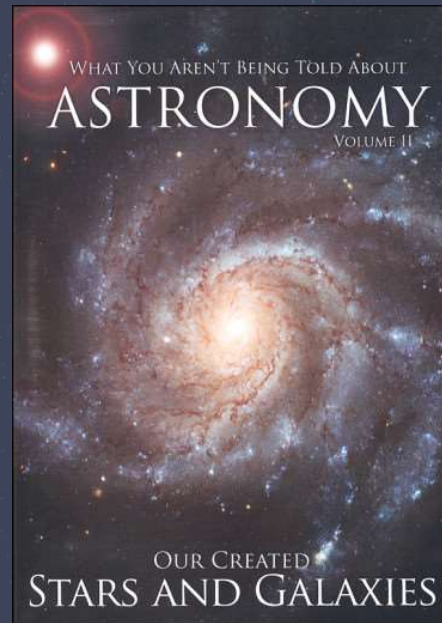
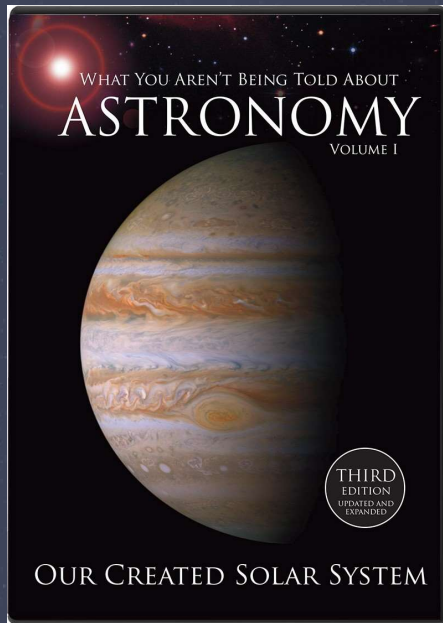
Dr. Jason Lisle

Dr. Russell Humpreys

Spike Psarris

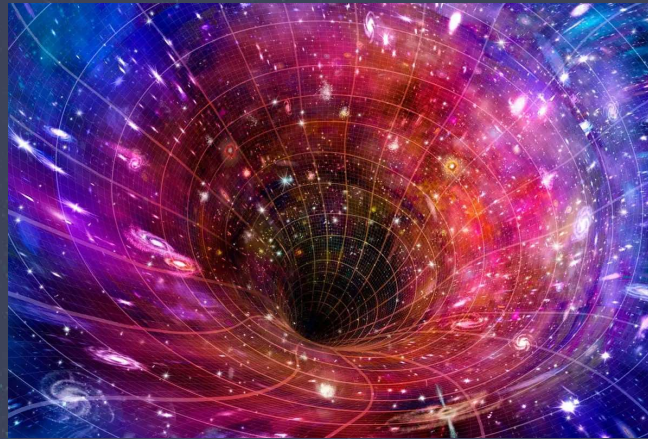
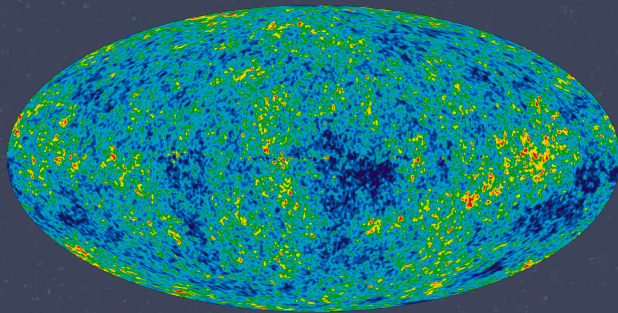


For further study: Spike Psarris

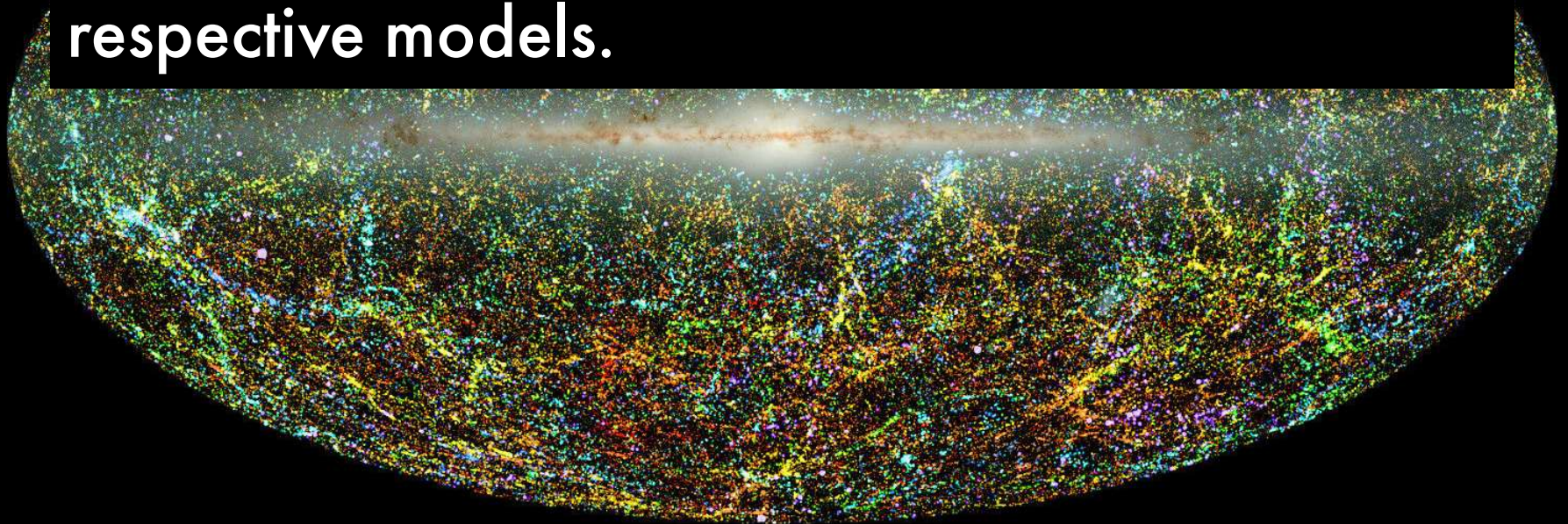


Problems with the evolutionary model of the universe

- 1. Cosmic microwave background.**
- 2. The universe is expanding faster and faster.**
- 3. The galaxies shouldn't hold together.**



Both biblical creationists and big bang supporters have proposed a variety of possible solutions to light-travel time difficulties in their respective models.

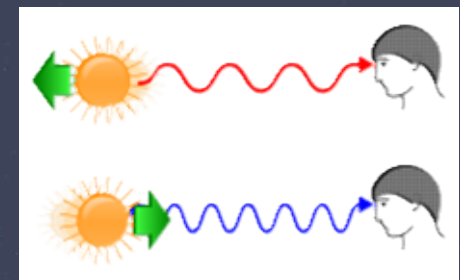
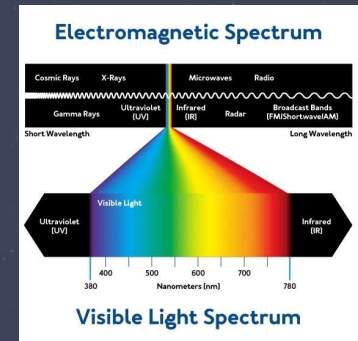


THINGS THE ANCIENTS SHOULDN'T HAVE KNOWN.

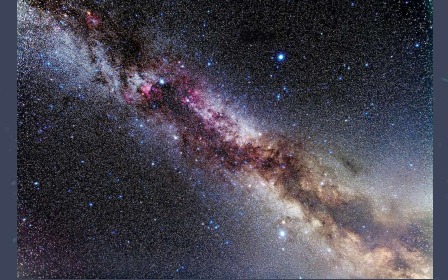
ISAIAH 40:22 (700 BC)

It is he who sits above the circle of the earth, and its inhabitants are like grasshoppers; who stretches out the heavens like a curtain, and spreads them like a tent to dwell in.

1. God stretches out the heavens.



THINGS THE ANCIENTS SHOULDN'T HAVE KNOWN.

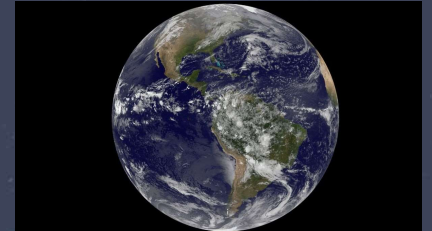


JEREMIAH 33:22 (600 BC)

As the host of heaven cannot be numbered and the sands of the sea cannot be measured, so I will multiply the offspring of David my servant, and the Levitical priests who minister to me.”

2. The stars are uncountable.

THINGS THE ANCIENTS SHOULDN'T HAVE KNOWN.



JOB 26:7 (2,000 BC)

He stretches out the north over the void and hangs the earth on nothing.

3. The earth is suspended in space.

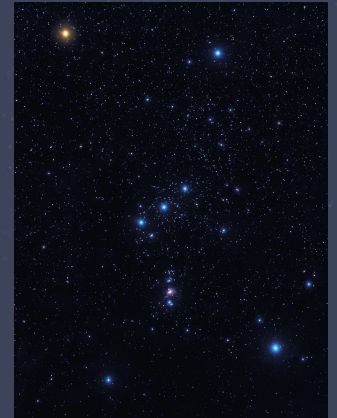
THINGS THE ANCIENTS SHOULDN'T HAVE KNOWN.



JOB 38:31 (2,000 BC)

"Can you bind the chains of the Pleiades or loose the cords of Orion?"

4. Constellation details.



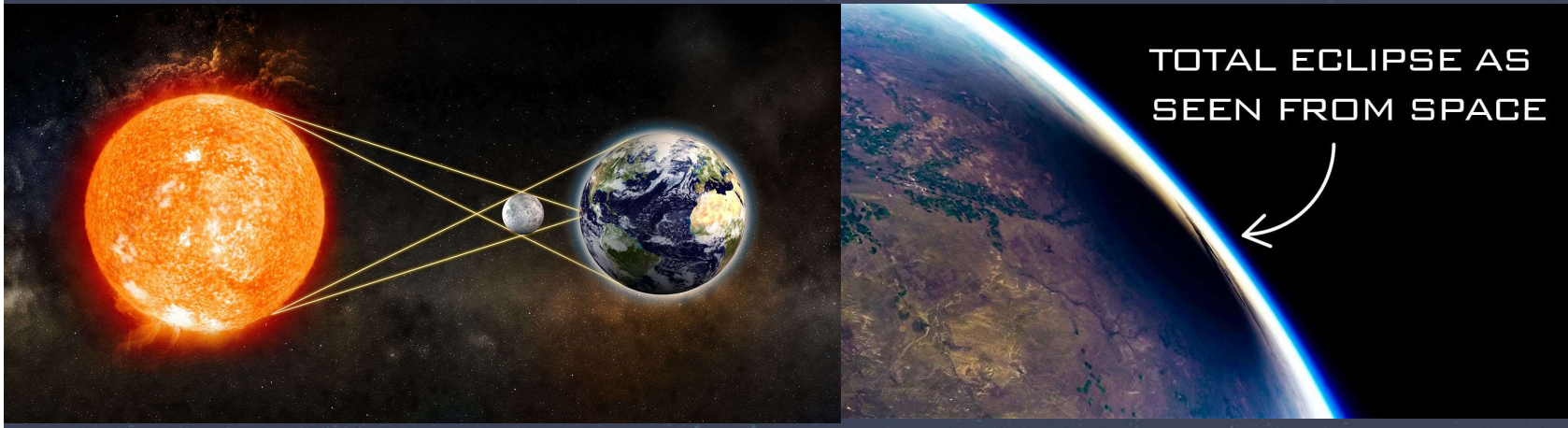
Total Solar Eclipse:

Diameter of the sun: 865,370 miles. (400x)

Diameter of the moon: 2,159 miles.

Distance from sun to earth: 91,424,000 miles.


**Distance from moon to earth: 228,560 miles
(400x)**



"It's a beautiful coincidence – life has been on Earth for about 400 million years, and we're living in this little window of time where this is happening, which is pretty amazing."

MARK GALLAWAY





A psalm of David.

0:09 / 3:15



The heavens declare the glory of God Psalm 19 1080p

0:00-3:15

https://www.youtube.com/watch?v=155tATAZZFY&ab_channel=RCMH



PSALM 19:1

The heavens declare the glory of God, and the sky above proclaims his handiwork.

Two Options:

The universe was created by God.

The universe created itself from nothing.

Discussion Questions:

1. Would you go to outer space, if you had the opportunity?
2. What did you learn tonight? Any observations on the ideas and thoughts presented?
3. Comment on the order of the astronomical creation in Genesis 1 as compared to the evolutionary model?
4. Which possible explanation for the distant starlight problem makes the most sense to you?
5. Which of the “Things The Ancients Shouldn’t Have Known” was most compelling to you?
6. Have a few people pray.



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