## Our Miraculous Moon



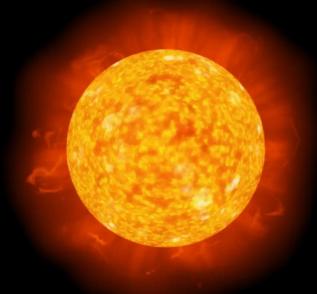
For advanced human life to exist



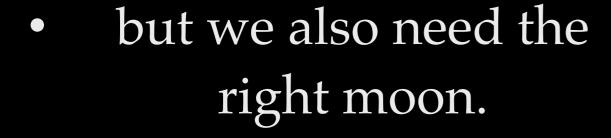
## We need:

• the right galaxy

• the right star



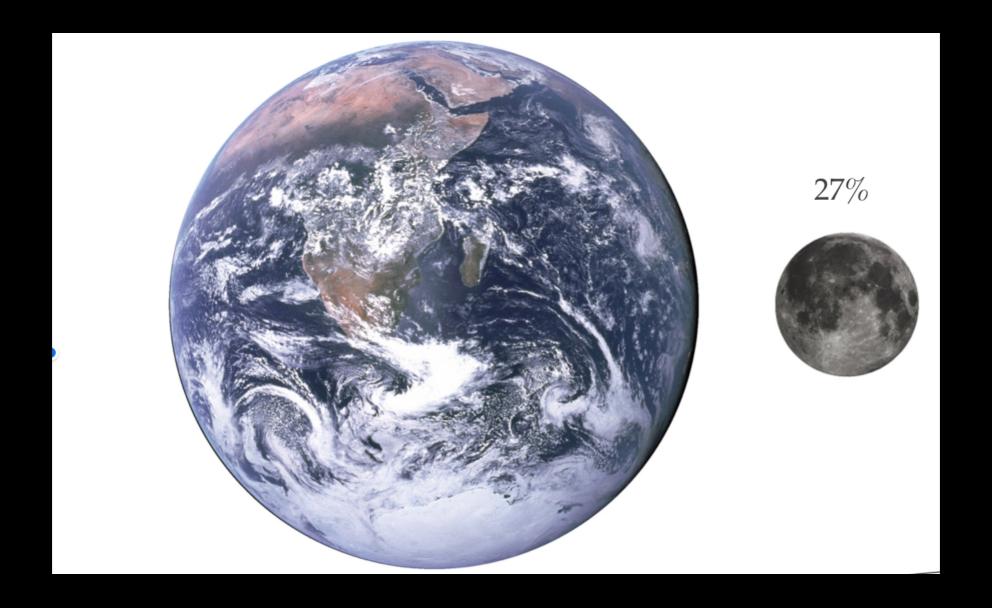
• the right planet







Our Moon is like no other moon that we know of. Relative to the mass of its host planet it is over 50 times larger than any other known moon.



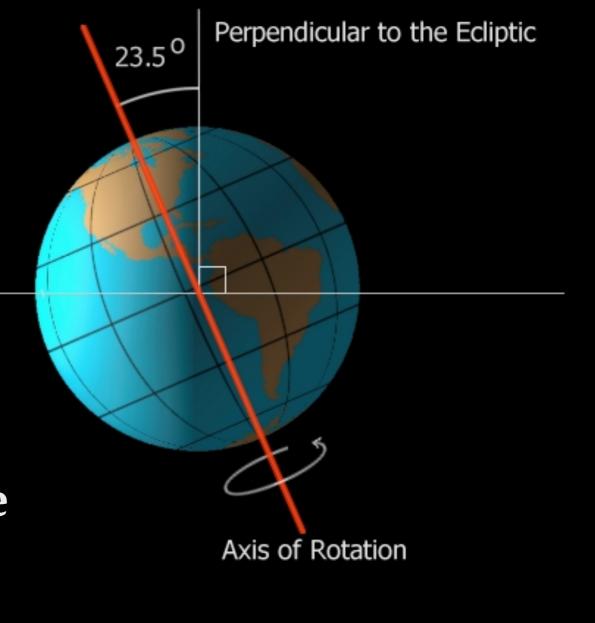
Here are just a few benefits of our Moon's unique size

# Stabilizes the earths axial tilt

• The Moon is massive enough to stabilize the Earth's tilt

Plane of the Ecliptic

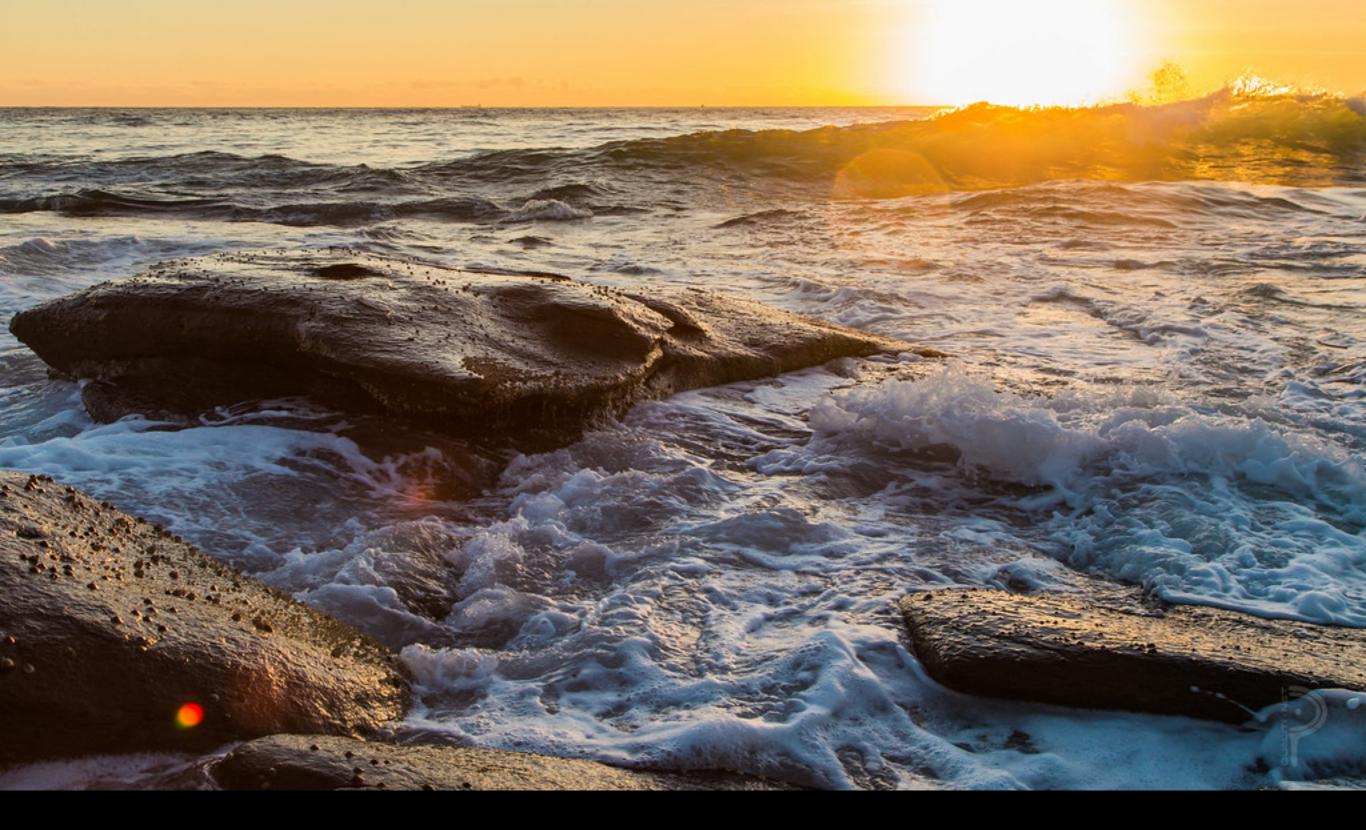
• A mass higher than 2% of the Moon's would actually destabilize the tilt of the Earth's rotation axis



#### If the axial tilt varried more than it does

 climate changes would be too extreme; surface temperature differences would be too extreme.

## The moon controls our tides



If the moon were smaller = movement of life and nutrients from the oceans to land and vice versa would not be adequate



If the moon were larger = ocean tides would be too strong causing too much erosion and disturbance with the continental shelf life; the Earth's rotation rate would slow down so fast and not allow advanced life.

### Controlling Earth's Spin

If the moon were less massive it would not have been able to slow down the Earths rotation



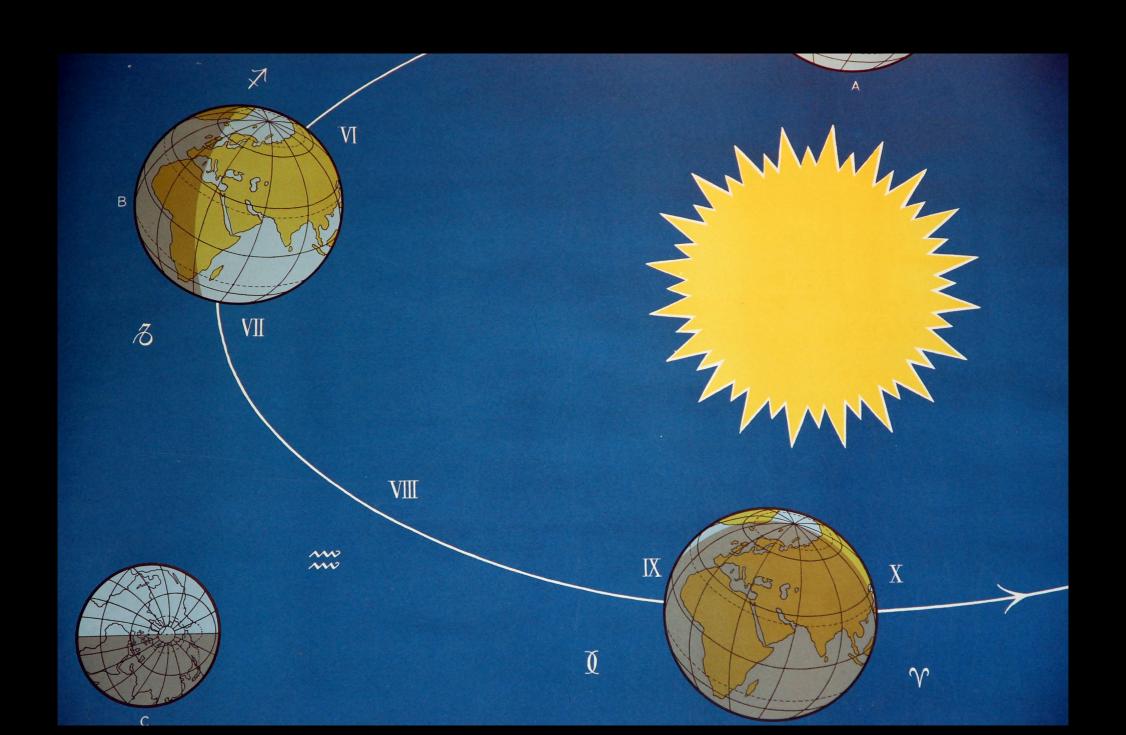
Earth rotation is fast enough to stabilize the rotation axis tilt (think of top spinning)

slow enough to minimize pole-to-equator temperature differences

#### **Rotation Period = 24hrs**

If longer = night and day temperature differences would be too great

If shorter = atmospheric wind speeds would be too great





## One of the most spectacular things about our moon in my mind is this

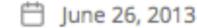


[20] For since the creation of the world His invisible attributes, His eternal power and divine nature, have been clearly seen, being understood through what has been made, so that they are without excuse.

## Coincidence that sun and moon seem

same size?

Posted by Editors of EarthSky | June 26, 2013





At this particular moment in Earth's history – although the sun's diameter is about 400 times larger than that of the moon – the sun is also about 400 times farther away. So the sun and moon appear nearly the same size as seen from Earth. And that's why we on Earth can sometimes witness that most amazing of spectacles, a total eclipse of the sun.

#### When is the next solar eclipse?

No one knows the odds, because no one knows how many planets and moons there are in space. Astronomers have discovered 893 planets in distant solar systems so far (as of June 21, 2013), and we don't know much about their moons.

# Why is the Moon exactly the same apparent size from Earth as the Sun? Surely this cannot be just coincidence; the odds against such a perfect match are enormous.

Malcolm Smith, Hertfordshire, England

Published: Sunday, October 1, 2000

#### October 2000

Believe it or not, it actually is just a coincidence — and a happy one at that. The Moon and Sun have virtually the same angular size in our sky because the Sun is about 400 times wider than the Moon, but it's also about 400 times farther away. This allows us to see spectacular coronal displays and prominences during total solar eclipses. Interestingly, this hasn't always been the case. Tidal interactions cause the Moon to spiral



Mhy

#### The 4th Day

Genesis 1:14 - Then God said, "Let there be lights s 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;

Month ——> Moon

## Have you ever thought about how Study Bibles date the rule of Solomon from 970 B.C. to 930 B.C.?

#### Or how they give the dates for other biblical kings?

https://holylandphotos.wordpress.com/2017/08/17/a-solar-eclipse-and-old-testament-chronology/



The Bible itself does not give exact dates. We usually find "relative" dates such as:

1 Kings **6: 1** In the four hundred and eightieth year after the Israelites came out of Egypt, in the fourth year of Solomon's reign over Israel, in the month of Ziv, the second month, he began to build the temple of the Lord.

Some scholars have suggested 966 B.C. But how do they know that?

## Scholars have been able to tie the relative dates given in the Bible to known dates from Assyrian records.



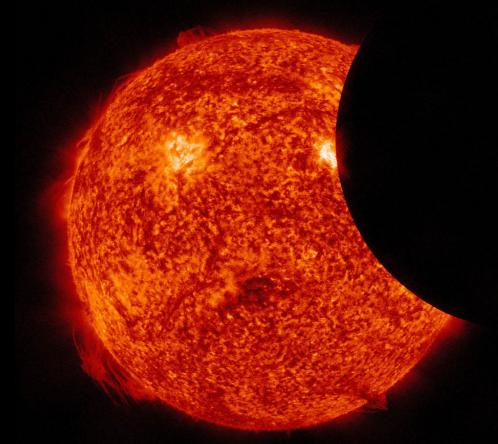
https://d3vjn2zm46gms2.cloudfront.net/blogs/2019/09/11145156/371841EX1\_13001.jpg

But how do we know the dates of Assyrian rulers and events?

Because the Assyrians named their years after various officials, including the king.

The Assyrians would then date events in other documents. Events such as an invasion, a battle, the building of a temple, etc... AND

some astronomical phenomena



There is a solar eclipse that occurred on June 15 763BC that the Assyrians wrote about along with other events happening on that day.



Using these writings we can calibrate an Assyrian Calendar and use it to date events and kings of the Old Testament just from this one recorded solar eclipse