



God's Grand Design

Exploring Origins in Science and Scripture

Part 3

Is the earth a miracle?

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)

Miracle: an extraordinary event demonstrating God's intervention in the natural world.

Dictionary



Carl Sagan's Two criteria for a planet to support life:

1. The right kind of star.
2. A planet the right distance from the star.



One	1	10^0
Thousand	1,000	10^3
Million	1,000,000	10^6
Billion	1,000,000,000	10^9
Trillion	1,000,000,000,000	10^{12}
Quadrillion	1,000,000,000,000,000	10^{15}
Quintillion	1,000,000,000,000,000,000	10^{18}
Sextillion	1,000,000,000,000,000,000,000	10^{21}
Septillion	1,000,000,000,000,000,000,000,000	10^{24}
Octillion	1,000,000,000,000,000,000,000,000,000	10^{27}
Nonillion	1,000,000,000,000,000,000,000,000,000,000	10^{30}
Decillion	1,000,000,000,000,000,000,000,000,000,000,000	10^{33}



RODIAN



SELKATH



SELONIAN



SITH



SNIVVIAN



SULLUSTAN



TALZ



TOGRUTA



TRANDOSHAN



TUSKEN RAIDER



TWI'LEK



UGNAUGHT



WEEQUAY



WHIPHID



WOOKIEE



ZABRAK

Search for extraterrestrial intelligence (S.E.T.I.)




**Radio was invented around 1901.
TV in 1927.**



Our Radio Signals Have Now Reached 75 Star Systems That Can See Us Too

We have been broadcasting for over 100 years. Now a new 3D map of the galaxy reveals the stars these signals have reached that can also see Earth.

 The Physics arXiv Blog | By The Physics arXiv Blog | Jul 30, 2021 11:12 AM



RELATED CONTENT



Are Metal-Rich Stars Less Suitable for Finding Alien Life on Other Planets?



Astronomers Unveil Technique For Finding Exoplanets And Any Signs Of Life On Them



Zero, Nada, Zilch



Fermi Paradox:

1. Our current observations/methods are incomplete, and we simply have not detected them yet.
2. It is the nature of intelligent life to destroy itself.
3. The initial assumption is incorrect and technologically advanced intelligent life is much rarer than we believe.

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Good in Genesis 1:1-2:3:

Genesis 1:4 And God saw that the light was good. And God separated the light from the darkness.

Genesis 1:10 God called the dry land Earth, and the waters that were gathered together he called Seas. And God saw that it was good.

Genesis 1:12 The earth brought forth vegetation, plants yielding seed according to their own kinds, and trees bearing fruit in which is their seed, each according to its kind. And God saw that it was good.

Genesis 1:17 And God set them in the expanse of the heavens to give light on the earth, to rule over the day and over the night, and to separate the light from the darkness. And God saw that it was good.

Genesis 1:21 So God created the great sea creatures and every living creature that moves, with which the waters swarm, according to their kinds, and every winged bird according to its kind. And God saw that it was good.

Genesis 1:25 And God made the beasts of the earth according to their kinds and the livestock according to their kinds, and everything that creeps on the ground according to its kind. And God saw that it was good.

Genesis 1:31 And God saw everything that he had made, and behold, it was very good. And there was evening and there was morning, the sixth day.

Key Hebrew words from Genesis 1:1-2:3

1. Good (Gen. 1:4, 1:10, 1:12, 1:18, 1:21, 1:25, 1:31)
(7 times)

Towb: beautiful, pleasant, agreeable, good.

ACTS 14:15-17

“Men, why are you doing these things? We also are men, of like nature with you, and we bring you good news, that you should turn from these vain things to a living God, who made the heaven and the earth and the sea and all that is in them.

16 In past generations he allowed all the nations to walk in their own ways. 17 Yet he did not leave himself without witness, for he did good by giving you rains from heaven and fruitful seasons, satisfying your hearts with food and gladness.”

How many criteria for a planet to support life:

1. The right kind of star.
2. A planet the right distance from this star.
3. ?

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1. The right kind of star.
2. A planet the right distance from this star.
3. ?
4. ?
5. ?

200+



In light of new findings and insights, we should quietly admit that the early estimates may no longer be tenable.

Peter Schenkel



My atheism was greatly
shaken by these developments.
Fred Hoyle



Everyone agrees that the universe looks as if it was designed for life.

Paul Davies



It's shocking to find how many of the familiar constants of the universe lie within a very narrow band that makes life possible. If a single one of these accidents were altered, stars would never form, the universe would fly apart, DNA would not exist, life as we know it would be impossible, Earth would flip over or freeze, and so on.

Michio Kaku



Without question the fine-tuning argument was the most powerful argument of the other side.

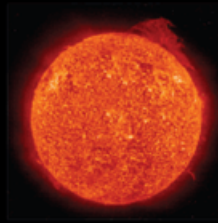
Christopher Hitchens

https://www.youtube.com/watch?v=YL3wwlh5KS0&ab_channel=GraspingTheNettle

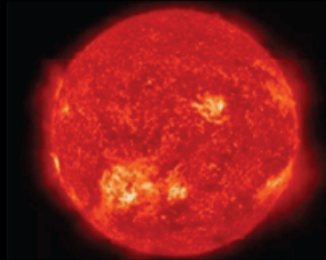
PLAY Christopher Hitchens video

200+ criteria for a planet to support life:

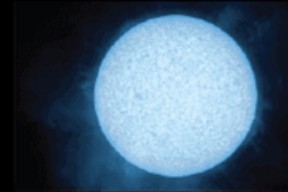
1. The right kind of sun/star.



Red giant



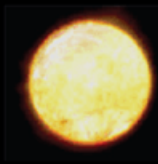
Red Supergiant



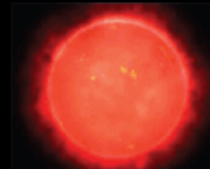
Blue Giant Star



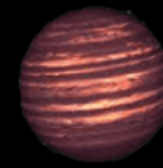
White dwarf Star



Yellow Dwarf star



Red Dwarf star

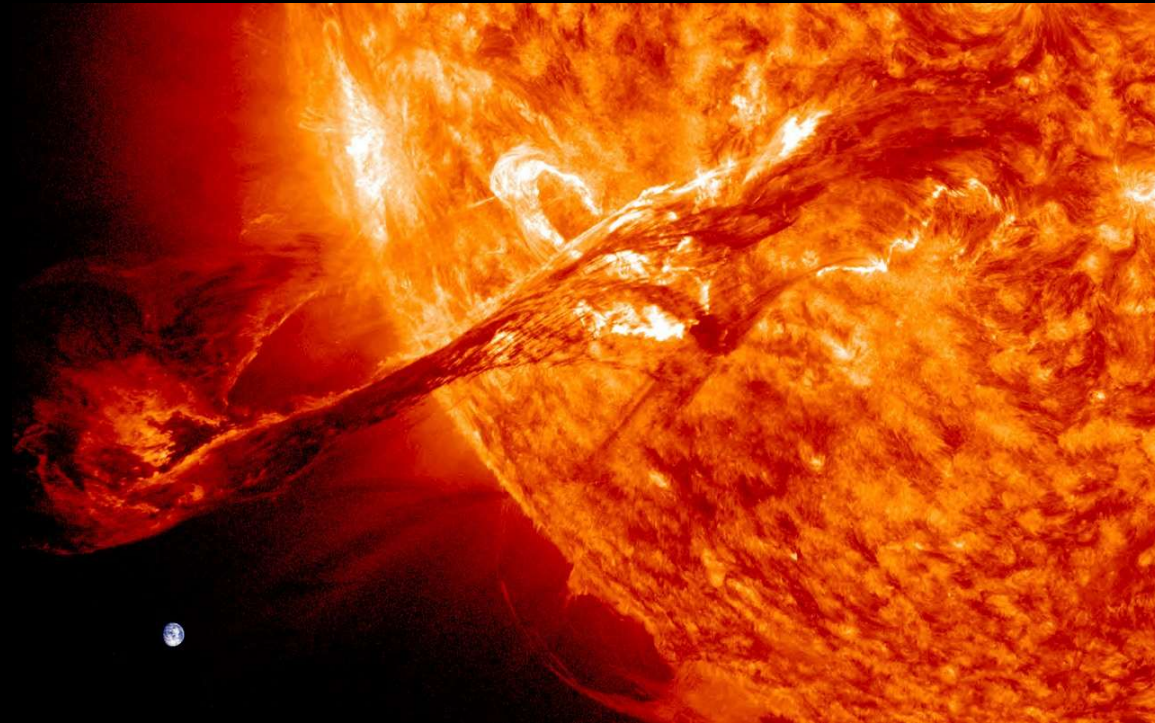


Brown Dwarf star

Types of Stars

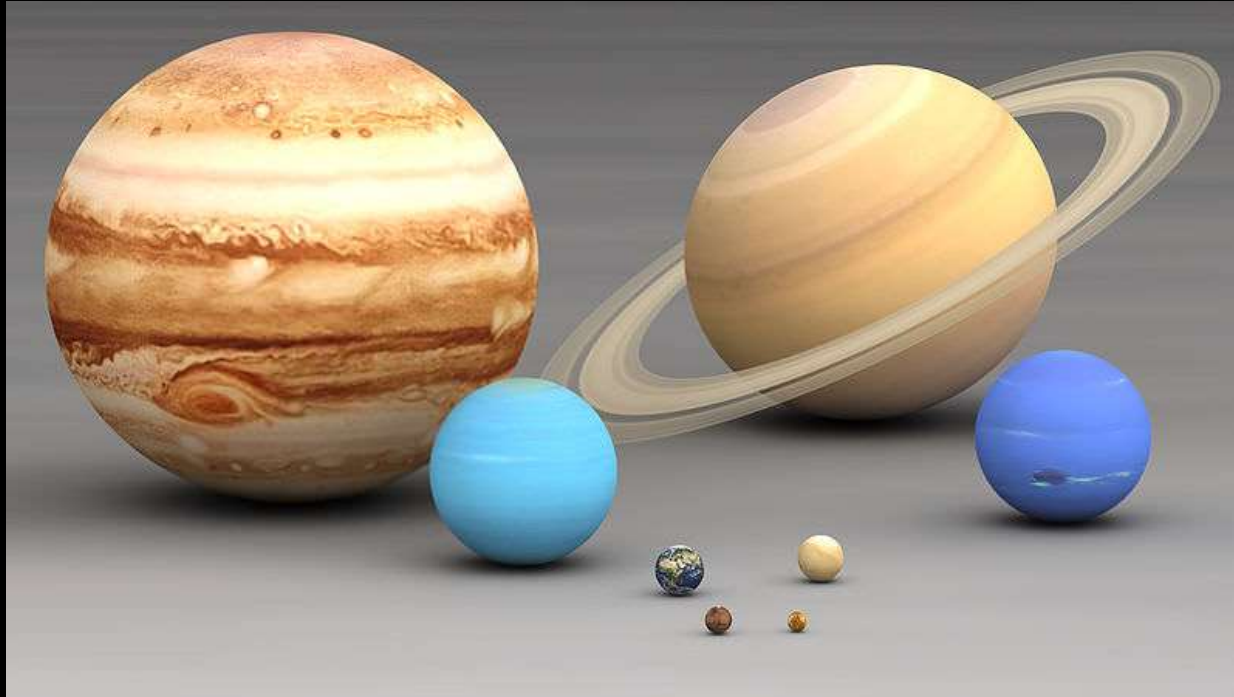
200+ criteria for a planet to support life:

2. The right distance from the sun.



200+ criteria for a planet to support life:

3. The size & gravity of the planet.



$$F = \frac{GMm}{r^2}$$

F = force of gravity

G = gravitational constant
(6.67×10^{-11})

M = mass of one object

m = mass of other object

r = distance between the
two objects

200+ criteria for a planet to support life:

4. The amount and properties of water.



Mercury
Messenger
2011



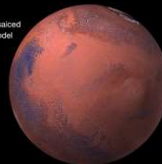
Venus
Magellan
1990-1992



Earth
S-NPP VIIRS
2015



Mars
Wing/Mars Mars Recon
Digital Image Mode
(MDIM)
1975/2014



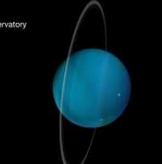
Jupiter
Hubble Space
Telescope
2015



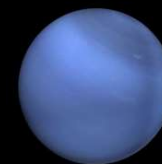
Saturn
Cassini/Huygen
2000 (planet)
2007 (rings)



Uranus
W.M. Keck Observatory
2004



Neptune
Voyager
1989



Pluto
New Horizons
2015



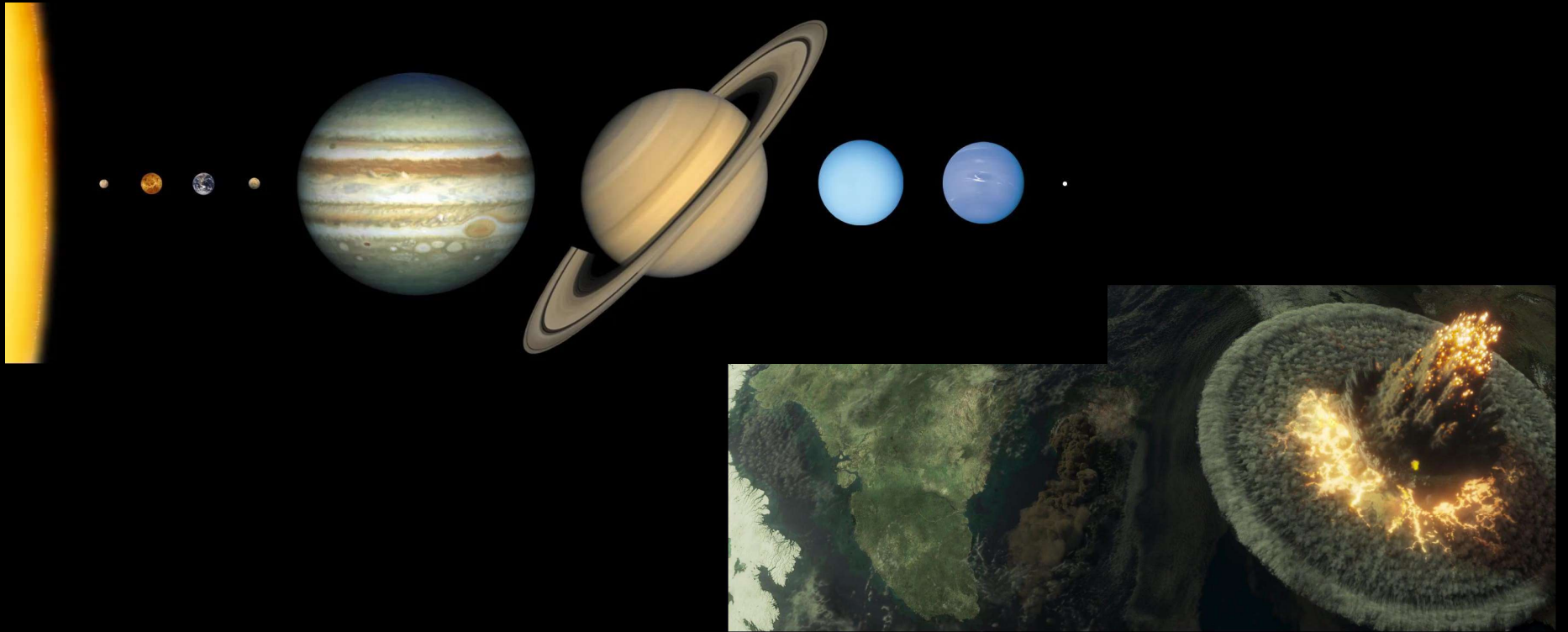
200+ criteria for a planet to support life:

5. The rotation of the earth.



200+ criteria for a planet to support life:

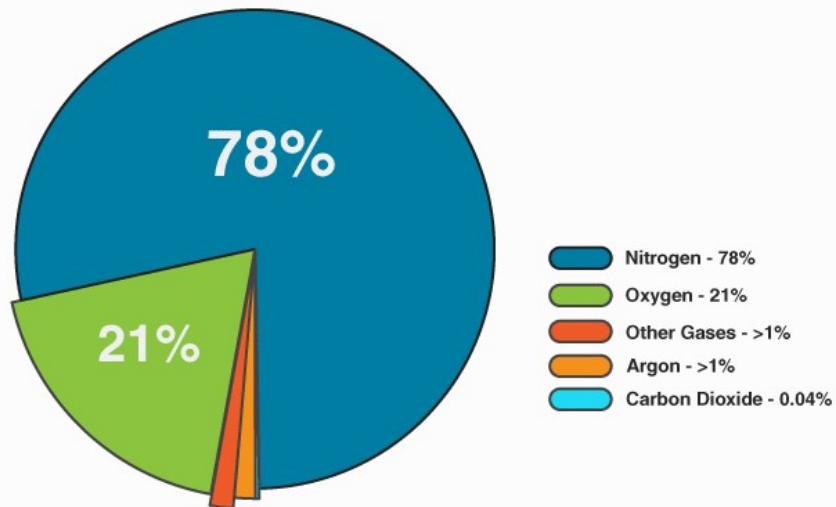
6. The presence of large planets in outer orbits.



200+ criteria for a planet to support life:

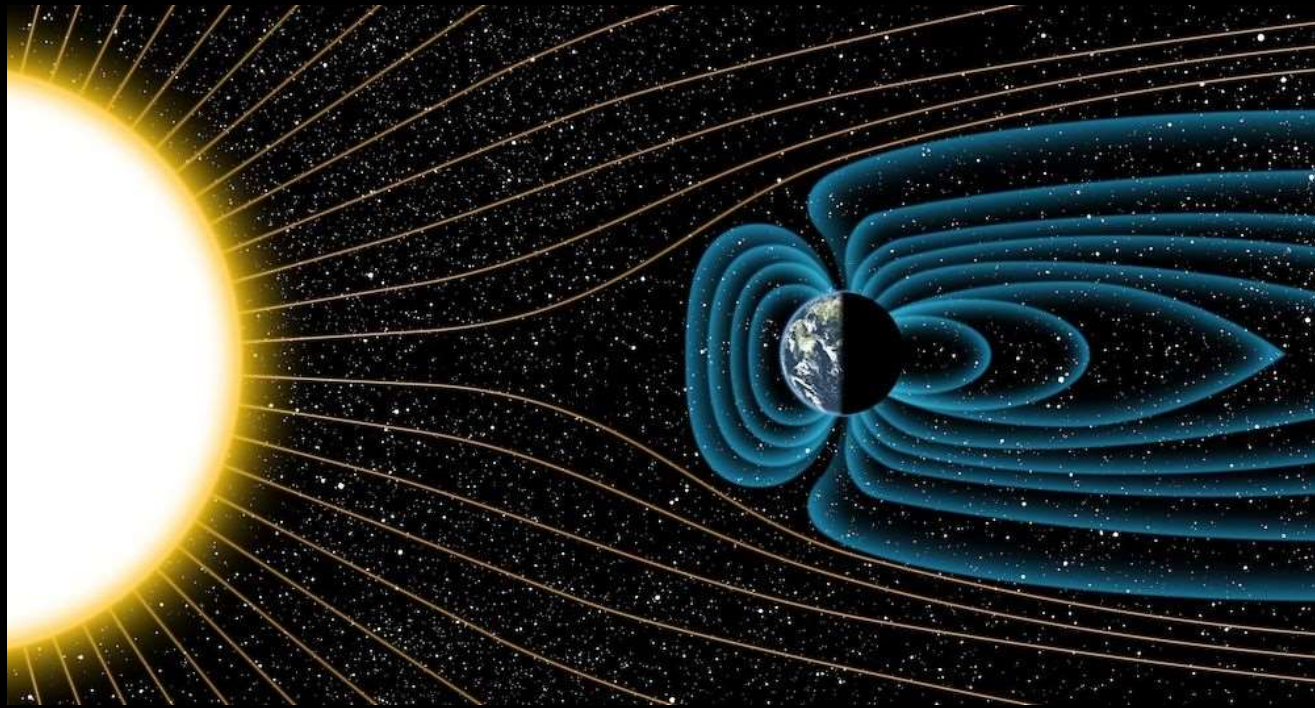
7. The earth's atmosphere.

COMPOSITION OF INHALED AIR



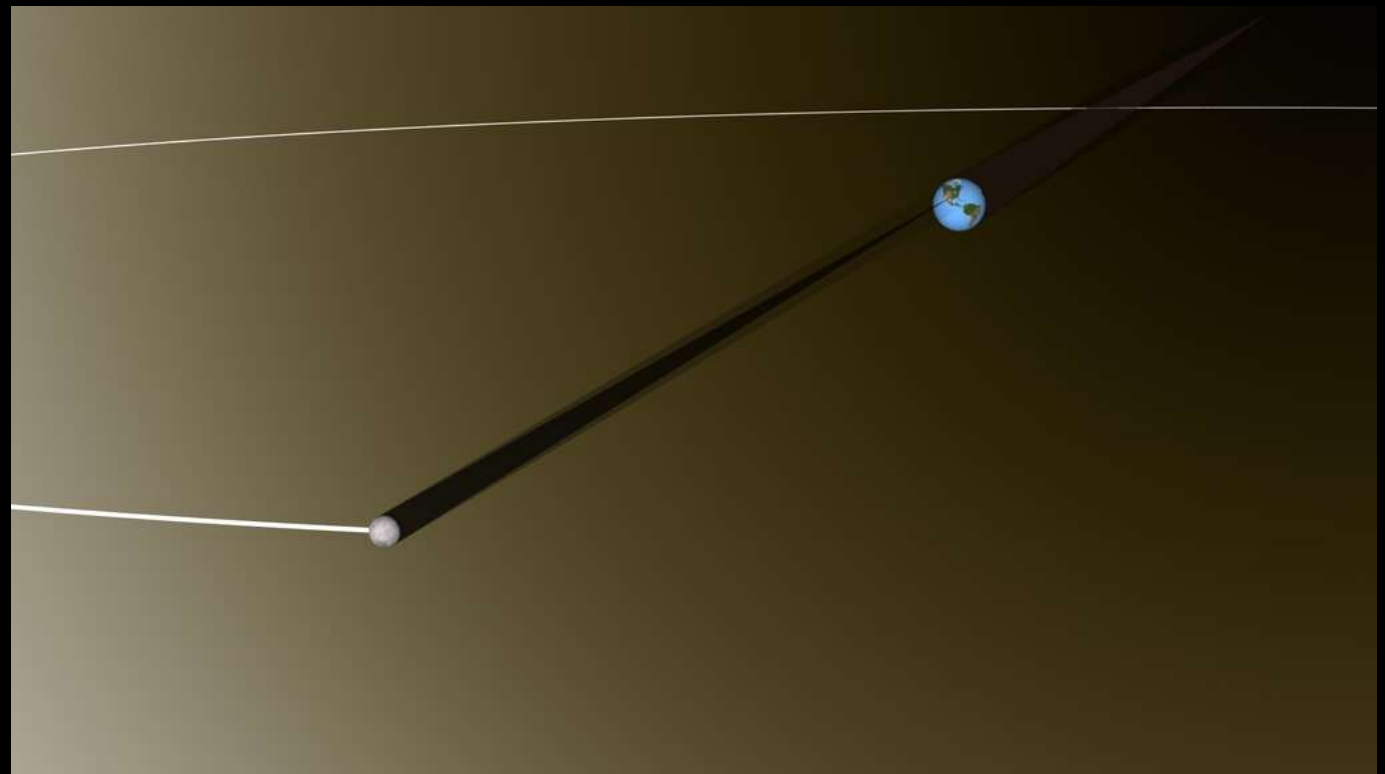
200+ criteria for a planet to support life:

8. The earth's magnetic field.



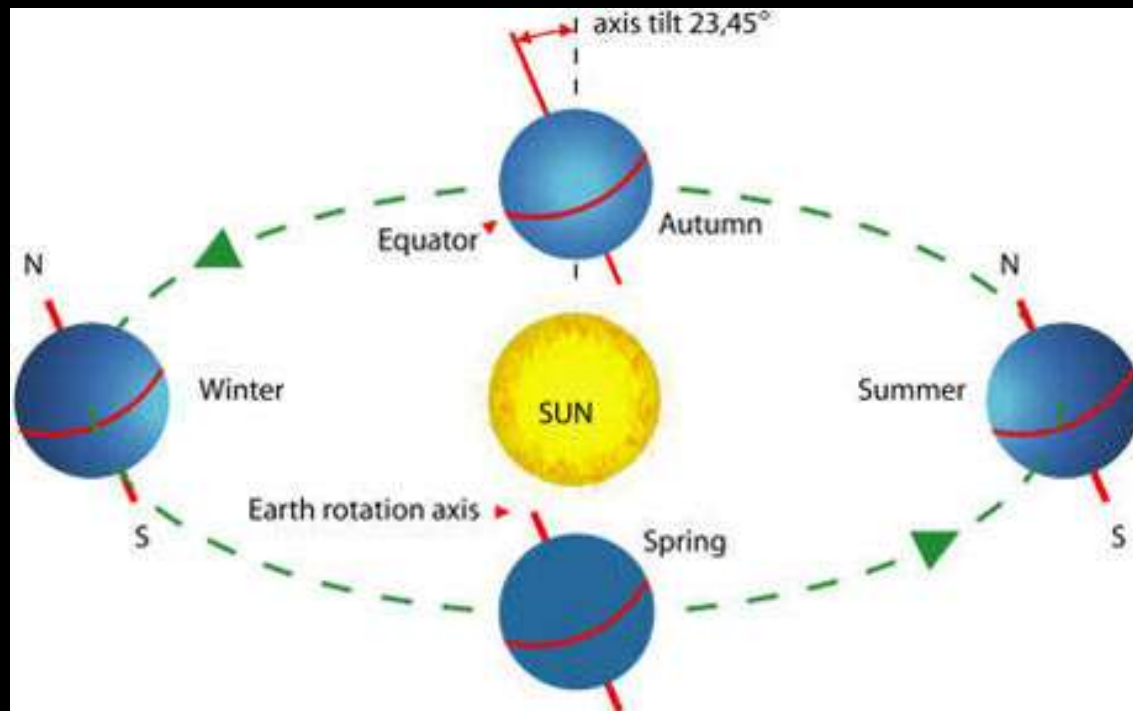
200+ criteria for a planet to support life:

9. The moon.



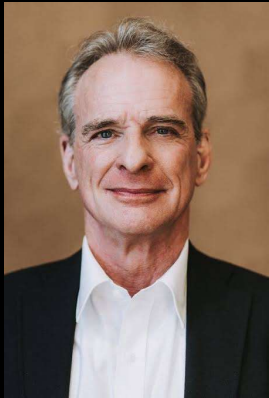
200+ criteria for a planet to support life:

10. The tilt of the earth.



Universal Factors:

The fundamental forces, gravity, electromagnetic, strong nuclear, weak nuclear, position in the universe, mass density of universe, cosmological constant, distance between stars, etc.



William Lane Craig

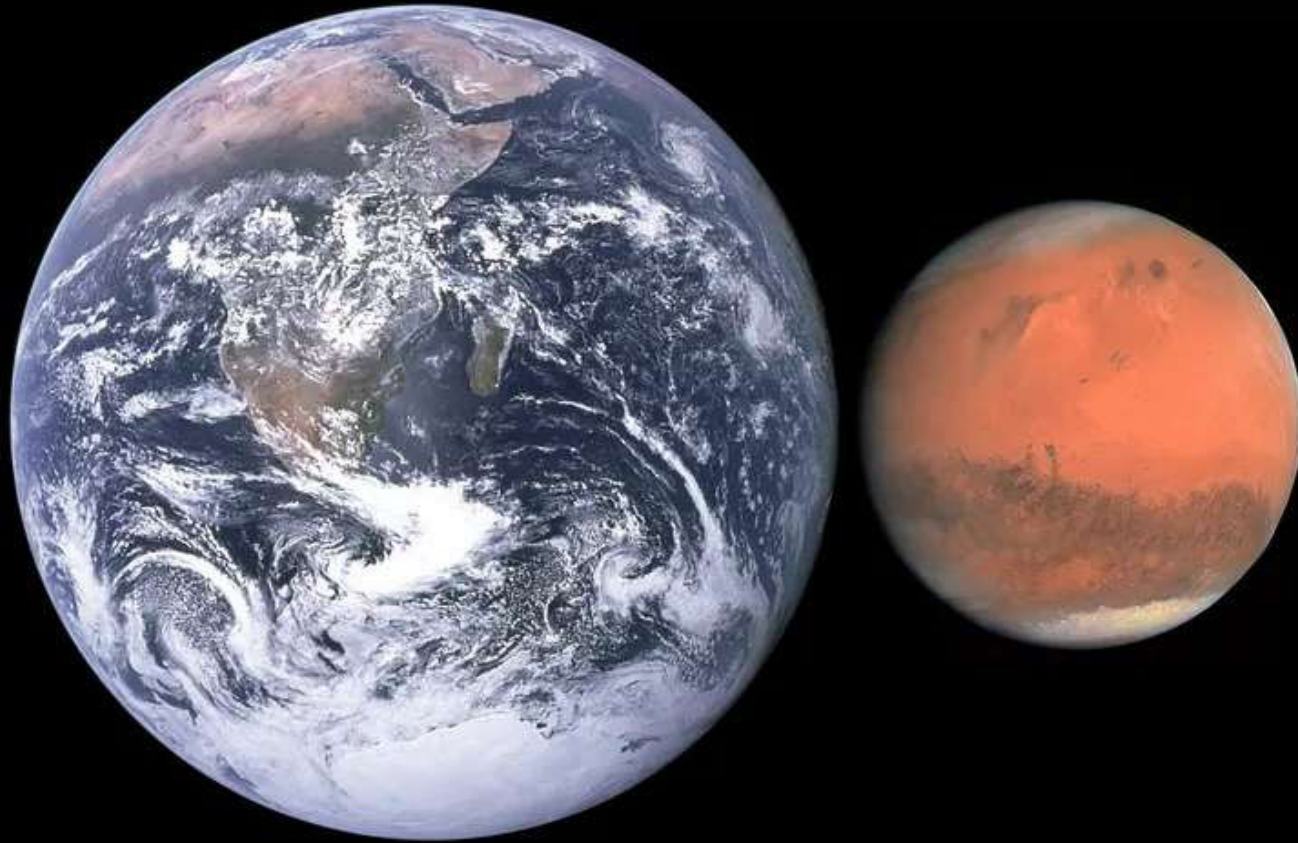
Play craig video

https://www.youtube.com/watch?v=EE76nwimuT0&ab_channel=drCraigVideos

Earth and Mars:



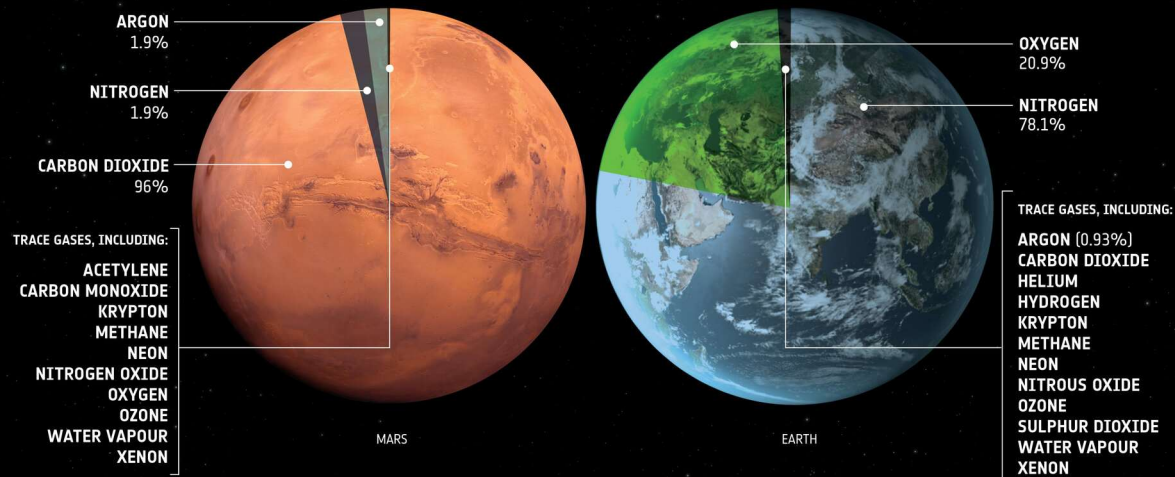
Earth and Mars:



Earth and Mars:



→ COMPARING THE ATMOSPHERES OF MARS AND EARTH



Atmospheric composition by volume | Planets not to scale | Atmosphere of Mars is less than 1% of Earth's | Trace gases listed alphabetically

200+ criteria for a planet to support life:

1. PASS Right kind of sun.
2. FAIL Not close enough to the sun.
3. FAIL Smaller than earth, so weaker gravity.
4. D- Little water, frozen in polar caps.
5. PASS Similar rotation.
6. PASS Larger outer planets to protect it.
7. FAIL Bad atmosphere.
8. FAIL No magnetic field.
9. C- Two small moons.
10. PASS. Similar tilt to earth.

Multiverse:



Multiverse: a hypothetical collection of potential universes, that would collectively have everything that is theoretically possible.



© D. van Rossum

ROMANS 1:19-23

For what can be known about God is plain to them, because God has shown it to them. 20 For his invisible attributes, namely, his eternal power and divine nature, have been clearly perceived, ever since the creation of the world, in the things that have been made. So they are without excuse. 21 For although they knew God, they did not honor him as God or give thanks to him, but they became futile in their thinking, and their foolish hearts were darkened. 22 Claiming to be wise, they became fools, 23 and exchanged the glory of the immortal God for images resembling mortal man and birds and animals and creeping things.

Is the earth a miracle?



Discussion Questions:

1. Did you enjoy math growing up? Why not?
2. What did you learn tonight?
3. What is your favorite miracle in the Bible besides creation and the resurrection?
4. What stood out to you from Genesis, Romans or Acts?
5. Which of the fine tuning arguments was the most compelling for you?
6. Why do you think people would prefer to believe in a multiverse rather than a Creator?
7. Have a few people pray.



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