## Look up on a clear night how much of the universe can you see?

Genesis 1: Creation chronology: physical perspective Genesis 2: Creation chronology: spiritual perspective Genesis 3–5: Human sin and its damage Genesis 6–9: God's damage control Genesis 10–11: Global dispersion of humanity

Job 9: Creator's transcendent creation power Job 34–38: Physical creation's intricacy and complexity Job 39–42: Soulish creation's intricacy and complexity

Psalm 8 : Creation's appeal to humility Psalm 19: Creation's "speech" Psalm 33: God's control and sovereignty over nature Psalm 65: Creator's authority and optimal provision Psalm 104: Elaboration of physical creation events Psalm 139: Creation of individual humans Psalms 147–148: Testimony of the Creator's power, wisdom, and care in nature

Proverbs 8:Creator's existence before creation

Ecclesiastes 1–3: Constancy of physical laws Ecclesiastes 8–12: Limits to human control of nature Isaiah 40–51: Origin and development of the universe

Old Testament accounts, all before 3<sup>rd</sup> century B.C.

Romans 1–8: Purposes of the creation 1 Corinthians 15: Life after life 2 Corinthians 4: Creator's glory in and beyond creation **Colossians 1:** Creation's extent Hebrews 1: Cosmic creation's temporality; role of angels in creation Hebrews 4: Role of God's rest in creation. 2 Peter 3: Creation's end Revelation 20–22: The new creation

## Job 9 at the end of the chapter says of God

"He is not a mere mortal like me that I might answer him, that we might confront each other in court.

33 If only there were someone to mediate between us, someone to bring us together,

34 someone to remove God's rod from me, so that his terror would frighten me no more.

35 Then I would speak up without fear of him, but as it now stands with me, I cannot. Job is one of the oldest books in the bible

... yet Job is asking for Jesus to come

#### Job continues...34

It is unthinkable that God would do wrong, that the Almighty would pervert justice.

13 Who appointed him over the earth? Who put him in charge of the whole world?

14 If it were his intention and he withdrew his spirit and breath, Job points out we are utterly dependent on Jesus, ALL of us

15 all humanity would perish together and mankind would return to the dust.

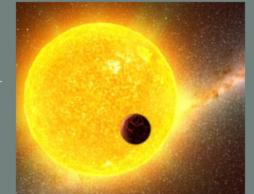
Brace yourself like a man; I will question you, and you shall answer me. 4 "Where were you when I laid the earth's foundation? Tell me, if you understand. 5 Who marked off its dimensions? Surely you know! Who stretched a measuring line across it? 6 On what were its footings set, God points or who laid its cornerstone out he 7 while the morning stars sang together and all the angels shouted for joy? created. 8 "Who shut up the sea behind doors when it burst forth from the womb, 9 when I made the clouds its garment and wrapped it in thick darkness, 10 when I fixed limits for it

#### Listen to the stars sing

Listening to stars sing doesn't have to mean listening to the latest talent show. The stars in the night sky sing too!

When you think of astronomy you probably think of the people looking into telescopes, beautiful images of distant crab nebula, or maybe the stunning pictures of Satum's rings taken by probes sent to explore them. Maybe if you are a real enthusiast you will have recently been up at dawn hoping for a break in the clouds to catch a glimpse of the transit of Venus. Astronomy isn't all about what we can see though. Surprisingly stars make a lot of noise, and the Kepler spacecraft has recorded the sounds from over 500 sun-like stars so far. Even more surprisingly perhaps, it turns out you can weigh stars based on the sounds they make!

The movement inside a star makes them vibrate like a musical instrument and so make sounds. As Bill Chaplin from the University of Birmingham's School of Physics and Astronomy, who leads the international collaboration doing the research explains: "If you measure the pitch of the notes produced by an instrument it can tell you how big the instrument is. The



bigger the instrument is, the lower the pitch and deeper the sound." A big double bass makes a deeper sound than a cello which in turn is deeper than the much smaller violin. Similarly a big star will make music with a deeper pitch than a small one.

As one of the scientists involved, Graham Verner of Queen Mary, University of London notes, being able to weigh stars by listening to their songs is exciting because it means we can create a much more accurate picture of the stars in our galaxy. If only they could sing in tune though!

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Video

http://www.cs4fn.org/astronomy/listeningtostars.php

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and you shall answer me.

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Tell me, if you understand.

- 5 Who marked off its dimensions? Surely you know! Who stretched a measuring line across it?
- 6 On what were its footings set, or who laid its cornerstone—
- 7 while the morning stars sang together and all the angels shouted for joy?
- 8 "Who shut up the sea behind doors when it burst forth from the womb,
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God points out he created.

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God points out he created. "...Earth formed around 4.54 billion (4.54×109) years ago by accretion from the solar nebula. Volcanic outgassing probably created the primordial atmosphere, but it contained almost no oxygen and would have been toxic to humans and most modern life." Wikipedia, History of the Earth 30-11-2014

Earth is often described as having had three atmospheres.

The **first atmosphere**, captured from the solar nebula, was composed of light (atmophile) elements from the solar nebula, mostly hydrogen and helium. A combination of the solar wind and Earth's heat would have driven off this atmosphere, as a result of which the atmosphere is now depleted of these elements compared to cosmic abundances.

After the impact, the molten Earth released volatile gases; and later more gases were released by volcanoes, completing a second atmosphere rich in greenhouse gases but poor in oxygen.

Finally, the **third atmosphere**, rich in oxygen, emerged when bacteria began to produce oxygen about 2.8 Ga (Ga is Gigayears ago...1 Ga=(1,000,000,000) years.)

http://www.cs4fn.org/astronomy/listeningtostars.php

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As the planet cooled, clouds formed. Rain created the oceans. Recent evidence suggests the oceans may have begun forming as early as 4.4 Ga.

By the start of the Archean eon **they already covered the Earth.** This early formation has been difficult to explain because of a problem known as the faint young Sun paradox. Stars are known to get brighter as they age, and at the time of its formation the **Sun would have been emitting only 70% of its current power.** Many models predict that the Earth would have been covered in ice. A likely solution is that there was **enough carbon dioxide and methane to produce a greenhouse effect.** The carbon dioxide would have been produced by volcanoes and the methane by early microbes. Another greenhouse gas, **ammonia, would have been ejected by volcanos** but quickly destroyed by ultraviolet radiation

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### Lets look at psalm 104

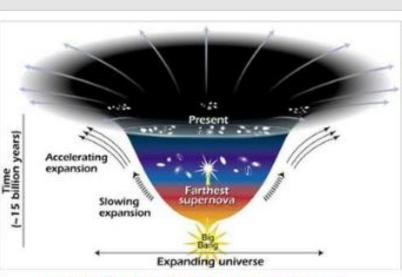
#### Psalm 104: Elaboration of physical creation events

This all has an amazing correlation with science known facts

## We think we know so much, yet what does <u>science</u> say we know?

#### WHAT IS DARK ENERGY?

More is unknown than is known. We know how much dark energy there is because we know how it affects the Universe's expansion. Other than that, it is a complete mystery. But it is an important mystery. It turns out that roughly 68% → of the Universe is dark energy. Dark matter makes up about 27%. The rest everything on Earth. everything ever observed with all of our instruments, all normal matter - adds up to less than 5% of the Universe. Come to think of it, maybe it shouldn't be called



#### Universe Dark Energy-1 Expanding Universe →

This diagram reveals changes in the rate of expansion since the universe's birth 15 billion years ago. The more shallow the curve, the faster the rate of expansion. The curve changes noticeably about 7.5 billion years ago, when objects in the universe began flying apart as a faster rate. Astronomers theorize that the faster expansion rate is due to a mysterious, dark force that is pulling galaxies apart.

NASA/STSci/Ann Feild

"normal" matter at all, since it is such a small fraction of the Universe.

http://science.nasa.go v/astrophysics/focusareas/what-is-darkenergy/

> NASA says we know 5% of what there is to know!

Dark energy	68%
Dark Matter	27%
Rest(we see)	5%

## Look up on a clear night how much of the universe can you see?

In the very darkest conditions, the human eye can see stars at magnitude 6.5 or greater. Which works about to about 9,000 individual stars.

Neseer

To answer "how many stars are there," we must limit the discussion to what we can observe. Astronomers estimate that the observable universe has more than 100 billion galaxies. Our own Milky Way is home to around 300 billion stars, but it's not representative of galaxies in general.

100 billion x 300 billion? Let's just think of 6 billion... if there are are 200,000 leaves on a average healthy maple tree, then on 30,000 maple trees there will be 6 billion leaves. Want to count them? We see almost NOTHING!

In 2005, there were about 400 billion trees on earth.

IF each leaf was a star, we would need about 12.5 earths of maple trees to represent the known stars.

### What does this mean...1 Corinthians 4

For God, who said, "Let light shine out of darkness," made his light shine in our hearts to give us the light of the knowledge of God's glory displayed in the face of Christ.

But we have this treasure in jars of clay to show that this all-surpassing power is from God and not from us. We are hard pressed on every side, but not crushed; perplexed, but not in despair; persecuted, but not abandoned; struck down, but not destroyed. We always carry around in our body the death of Jesus, so that the life of Jesus may also be revealed in our body. For we who are alive are always being given over to death for Jesus' sake, so that his life may also be revealed in our mortal body. So then, death is at work in us, but life is at work in you.

Therefore we do not lose heart. Though outwardly we are wasting away, yet inwardly we are being renewed day by day. For our light and momentary troubles are achieving for us an eternal glory that far outweighs them all.

So we fix our eyes not on what is seen, but on what is unseen, since what is seen is temporary, but what is unseen is eternal.

#### psalm 9

The law of the Lord is perfect, refreshing the soul. The statutes of the Lord are trustworthy, making wise the simple. 8 The precepts of the Lord are right, giving joy to the heart. The commands of the Lord are radiant, giving light to the eyes. 9 The fear of the Lord is pure, enduring forever.

That's the God who loves us! That's the God who created and sustains 100% of the universe. That's the one who gives us the brains and ability to see the 5% and understand there is more.

That's the God who came to Earth as Jesus and who has Holy Spirit guide us each day.

Praise that God!