



Astronomy

By Michael Lane, September 2021



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on Unsplash

In this series on Science and the Bible we have been discovering that Science has at many times conflicted with what is written in the Bible, only to discover that Science was wrong and what the Bible contained was true. That is not unusual for Science because it tries to answer the questions of the cosmos and life without considering the possibility of an Almighty God. People are often of the opinion that Science can find the answer for everything in the cosmos. But there is a problem. Science cannot “scientifically prove” the existence of God. It is impossible for science to do an experiment and see God emerge from a beaker. This makes us arrogant in our knowledge, for most scientists refuse to even travel down the path that there might be a Creator God.

In this lesson we will explore what the Bible contains in the field of Astronomy; and as we will see, it again shows us that it is a source of truth, not myth. The Bible does contain much information on this branch of science, which dates back to the earliest time of human history.

How Big is the Universe

For a very long time in human history people believed that the universe was not large, but small in volume. Starting with the ancient Egyptians and then the Greeks, many thought it was a small sphere, limited in its size and contents.

Then, in the early 16th Century A.D., Nicolas Copernicus entered the scene and began to change the way we perceive the universe. He was a brilliant man who had close ties to the Catholic Church, and he had a strong understanding of Scripture as being true. Today, he is known primarily for his work in astronomy, but he also wrote and studied mathematics, medicine, and politics. He believed that God created the universe and he took the Bible very seriously. His contributions to the science of astronomy are well documented in books he authored.

Concerning the size of the universe, Copernicus knew from the Book of Jeremiah that science was wrong.

Jeremiah 31:37 (ESV)

Thus says the Lord: “If the heavens above can be measured, and the foundations of the earth below can be explored, then I will cast off all the offspring of Israel for all that they have done, declares the Lord.”

In this verse, God is declaring when He will discard Israel from being His people. He says that He will discard Israel when the heavens can be measured. He is in fact saying that He will never discard Israel. This is a promise from a Holy God who cannot break His promises, so this verse specifically states that the heavens cannot be measured.

At the time and for many centuries, man thought that the universe (the heavens) could be measured. So, we read of a distinct contradiction between science and the Bible. But which proves to be correct?

Today, especially with the Hubble Space Telescope, scientists no longer think that the Universe is a small sphere containing few objects in its contents. It is vast beyond measure! Our galaxy is but one of two trillion galaxies so far discovered out in the vast expanse. The Bible has always been correct; the heavens cannot be measured.

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Claudius Ptolemy



Ulugh Beg



Tycho Brahe



Johann Kepler

The Number of Stars

Science has always been interested in the stars that fill our night skies, and one question that has often puzzled mankind is how many stars are there?

Back in 125 BC, a Greek named Hipparchus of Rhodes, off the coast of present-day Turkey, was a noted mathematician, known today for being called the Father of Trigonometry. But he made major contributions in the field of astronomy. He is considered by many to be the earliest and possibly the greatest of ancient astronomers who set many ideas about the universe. He also made the first catalog of the stars, carefully mapping and categorizing stars in the heavens. This catalog was still in use in the early 1700s A.D. Edmond Halley made use of it with his work in astronomy. In this catalog, which he completed in 129 B.C., he identifies 850 stars in the universe.

Hipparchus's work was checked in 140 A.D. by Claudius Ptolemy, another famous astronomer and mathematician. He studied the night skies and determined that there were in fact 1056 stars in the universe. This number was considered scientific fact and taught as such for several centuries. His famous book *Syntaxis Mathematica* included a star catalog that was used by every student in all universities. In it, students were taught for the next 1,400 years that the universe held but 1056 stars.

In 1428, Ulugh Beg, a Muslim mathematician and astronomer, built an enormous observatory in Samarkand, (present day Uzbekistan). There he composed a star catalog consisting of 1018 stars, thinking that Ptolemy had double counted some stars.

In 1598, a Danish astronomer named Tycho Brahe also checked Ptolemy's catalog and too thought that he double counted some stars. Brahe counted 1004 stars in the universe.

Then in 1630, Johann Kepler, a Christian and literal Bible believing scientist who studied in seminary only to feel the Lord leading him to the field of astronomy recounted the stars and determined that there were only 1005 stars visible in the night skies.

Upon this general number of there being only about 1000 or so stars, science taught this in all major universities for a couple of hundred years. But almost all studies came from just studying the stars in the northern hemisphere, completely ignoring the southern hemisphere. If one were to go out in the night sky, to the dark side of our planet and count the stars in both hemispheres, one might see up to 9,000 visible stars with the naked eye.

Then in the 1990s the Hubble Space Telescope was launched in orbit around the Earth. Using this device, scientist know now that it is impossible to count the number of stars in the universe.

What does the Bible have to say about the number of stars in the universe? To find the answer, we must examine a verse in Jeremiah.



Hubble Space Telescope
by NASA

Jeremiah 33:22 (NASB)

As the heavenly lights cannot be counted, and the sand of the sea cannot be measured, so I will multiply the descendants of My servant David and the Levites who serve Me.

This is a verse in a paragraph about God's promise to fulfill the Davidic Covenant which is recorded in 2 Samuel 7 and His Priestly Covenant recorded in Numbers 25. God is stating that there are not exceptions to these covenants, and He will fulfill His part of them as certain as the stars in the heavens cannot be counted. Thus, God is telling us that the stars in the universe cannot be counted. This verse, which dates back 2,400 years, was contrary to what science taught as fact for a millennium, and at the end, the Bible was proved right!

Different Types of Stars

Until recently, scientists and academia taught that there are no variations in stars and that all stars are alike. There were various theories for the differing brightness and colors, but they stated that stars were basically the same and similar in composition. This began with Aristotle around 350 B.C. stating that stars are unchanging and all the same.

But in the 1500s Nicholas Copernicus, Tycho Brahe, and Johann Kepler began to change that with various theories.

Sir William Huggins 1824-1910. A Christian who discovered stars are composed of various elements.

William Herschel 1738-1822. A Christian who discovered different types of stars called binary stars.

John Herschel 1792-1871. A Christian and son of William Herschel published a catalog of various star clusters and nebulae.

Cecilia Helena Payne 1900-1979. She discovered and proved that stars are indeed composed of helium and hydrogen. She also helped catalog stars by their composition.

Today we know that there are many types of stars and that they vary in many ways, such as size, composition, brightness, and distance. But what does the Bible state about this?

The apostle Paul, under the influence of the Holy Spirit, wrote about stars to the Corinthian church.

I Corinthians 15:41 (ESV)

There is one glory of the sun, and another glory of the moon, and another glory of the stars; for star differs from star in glory.

The Bible, which is often attacked by liberal modern scientists, had it right all along from the 1st Century A.D.



Nicholas Copernicus



Sir William Huggins



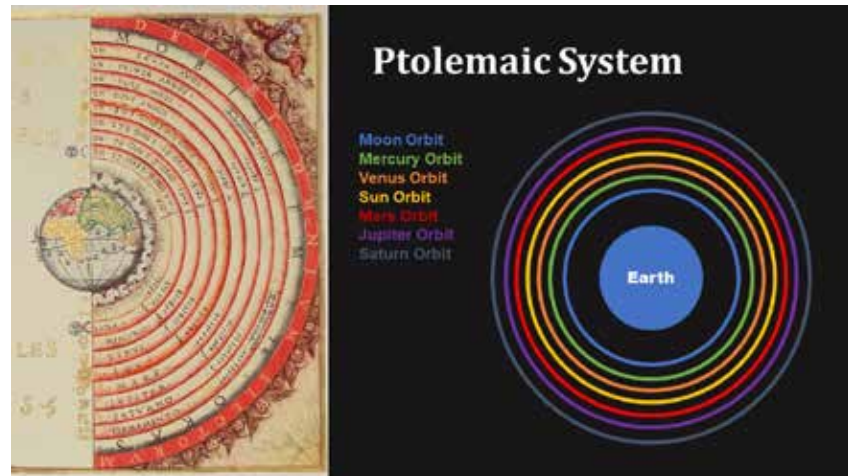
John Herschel



Cecilia Helena Payne

The Sun is the Center of Our Solar System

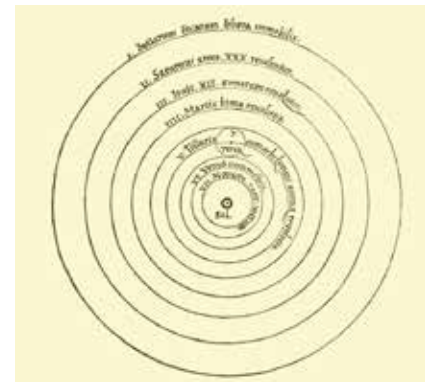
For centuries science argued on the position of the sun and the planets in our solar system. The first major scientific approach was called the geocentric model, in which the Earth is the center of the solar system and the center of the universe. In fact, some parts of this idea can be traced back into ancient times and even in non-Scriptural writings of the Jews (the Talmud), that the Temple Mount was the center of the Universe. But this is not truly biblical.



The Solar System according to Ptolemy

The first major scientists to lay forth this idea that the Earth was the center of the universe and that the sun and planets rotated around it was none other than Claudius Ptolemy around 140 A.D. Because of this, it is sometimes called the Ptolemaic System. He did correctly state that each planet had its own orbit called an epicycle.

In 1543, Nicholas Copernicus proposed a sun-centered solar system called the Heliocentric Theory. But there were still problems with his theory because he thought that the planets all moved in perfect circles.



Heliocentric model drawn by Copernicus from his book "On the Revolutions of Spheres"

Finally, in early 1600s Johannes Kepler, drawing upon work by Galileo and Tycho Brahe, refined the heliocentric model so that the planets moved around the Sun in ellipses and not in circles. Kepler's ideas matched what we observe perfectly. He wrote that he was merely "thinking God's thoughts after Him." This Bible-believing Christian also wrote, "Since we astronomers are priests of the highest God in regard to the book of nature, it befits us to be thoughtful, not of the glory of our minds, but rather, above all else, of the glory of God." (Men of Science Men of God by Henry M. Morris, 1982)

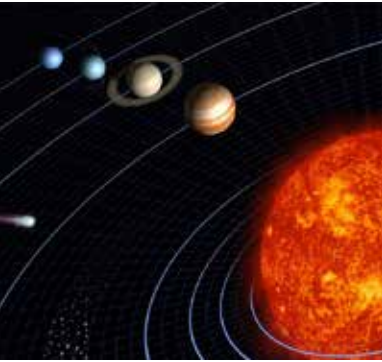
What does the Bible actually say about this idea of the earth being the center of the universe, for many people have told me that the Bible is wrong in that it teaches a geocentric theory.

Some years ago, I was involved in a discussion with some learned men who tried to tell me that the Bible teaches the geocentric theory. I asked them where it appears in the Bible, and they responded in the Book of Joshua.

Joshua 10:12-14 (ESV)

At that time Joshua spoke to the Lord in the day when the Lord gave the Amorites over to the sons of Israel, and he said in the sight of Israel, "Sun, stand still at Gibeon, and moon, in the Valley of Aijalon." And the sun stood still, and the moon stopped, until the nation took vengeance on their enemies. Is this not written in the Book of Jashar? The sun stopped in the midst of heaven and did not hurry to set for about a whole day. There has been no day like it before or since, when the Lord heeded the voice of a man, for the Lord fought for Israel.

I refuted that argument. For one, this is a miracle and cannot be scientifically explained. As to the idea of the sun in motion, I explained that this was true. Our sun is in motion. In fact, I explained that our entire



Graphic by Harman Smith & Laura Generosa (NASA)



Photos by Neven Krcmarek on Unsplash

solar system is in motion, rotating at 72,000 mph, and that astronomers calculate that it will take 2 million centuries for it to make one complete revolution. Thus, God and His Word are correct when He states that the sun is in a circuit, going from one side to another!

Then the men quoted another verse from the Book of Psalm speaking on the sun.

Psalm 19:6 (ESV)

*Its rising is from the end of the heavens,
and its circuit to the end of them,
and there is nothing hidden from its heat.*

Again, I pointed out that the sun is indeed in motion and not a stationary object. But as to the saying of it rising is a figure of speech even used by almost everyone today. I asked them if they ever heard a weather forecaster give the time of the rising or setting of the sun in their nightly forecast. Of course, they do. I asked them if they think that the weather forecaster believes in the geocentric theory because he said that the sun rises. Of course not, because it is a figure of speech. Think about how many times a day we refer to sunset and sunrise. This in no way aligns us with the geocentric theory. This verse is describing what people normally see, not the science behind it.

The Moon Light

Back in ancient Greece, Aristotle taught that the moon and the planets emitted their own light. For hundreds of years, it was thought that the moon was a luminous object in the night sky. But Leonardo da Vinci, who lived in 1452-1519 and was a devote believer in Jesus Christ and in the Bible, disagreed with this scientific belief. According to Fritjof Capra in his book *The Science of Leonardo: Inside the Mind of the Great Genius of the Renaissance*, Capra quotes da Vinci writing, "The Moon has no light of itself, but so much of it as the Sun sees, it illuminates. Of that luminosity, we see as much as faces us."

Kepler in 1630 actually disproved this with his astronomical studies. But Kepler, an earnest and devoted Christian, also studied his Bible carefully. In the Book of Job a verse appears that is dealing with God's heavens and His dominion. In this short chapter we can read:

Job 25:5 (NASB)

If even the moon has no brightness.

Here we see that the moon is not being called a luminous object in the night sky. Today, we all know that the moon is simply reflecting the sun's lights and its changing shape is due to the orbit it maintains around the Earth, blocking out some of the sun's light.

The Constellations

We often associate constellations with the ancient Greeks and their mythology. Names of northern constellations such as Cassiopeia, Pegasus, Gemini, Andromeda, Cepheus, Pleiades, and more revolve around Greek mythology. Claudius Ptolemy in the 2nd Century A.D. even used these Greek names and documented them in his star catalog he named *Almagest*.



Photos by Vedrana Filipović
on Unsplash

Later during the age of Discovery, as other constellations were being discovered to the south and invisible to the Greeks, other nations gave us names of these new constellations. For instance, when the Dutch began sailing below the equator in the 1500s, they discovered new constellations and gave them names such as Apas, Grus, and Dorado. In the next century, a Polish astronomer named 10 more constellations giving them Latin names such as Scutum and Lynx. In the 1700s, a French astronomer names even more constellations giving them names like Microscopium and Telescopium.

Those familiar with the northern night skies often assume that it was the Greeks who first named the constellations. But is that true? Is it possible that they just borrowed the names from another culture? What does the Bible contain concerning the names of constellations? After all, the Hebrew nation existed long before the Greeks.

History dictates that it was during the dark ages of ancient Greece, a period between 1,200 – 800 B.C., that their mythical gods were developed. If so, it can easily be construed that the names of their gods were developed before or at least at the same time as these constellations would be named. But long before 1,200 B.C., the Book of Job, considered the oldest book and the events dating to a period before Abraham (2,000 B.C.) mentions three constellations by name.

Job 9:9 (NASB)

*Who makes the Bear, Orion, and the Pleiades,
And the constellations of the south.*

And two are again mentioned in Job 38.

Job 38:31 (ESV)

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

Notice three names: the Bear, Orion, and the Pleiades. The same names we use for these constellations today and seemingly are based upon Greek mythology.

Now if the Greeks invented the names of the constellations based upon their religion, how is it possible that the Hebrew people had the same names centuries before?

This is not the only book of the Bible that mentions constellations by name. The prophet Amos who lived around 760 B.C. also records the names of two constellations.

Amos 5:8 (ESV)

He who made the Pleiades and Orion...

This is just very close to the time the Greeks are still developing their religion.

What do Job and Amos indicate? First, the origin of the constellations was not Greek, but an earlier civilization – possibly before the Hebrews or even the Egyptians!

Second, since the names of three constellations are mentioned in Job, a book written much earlier than the Greek religion, it must be assumed that the names did not originate with Greeks.

Third, there are possible links to these constellations in Hebrew teachings that used the constellations in foretelling of the coming Messiah.



Tower Of Babel

By Pieter Bruegel the Elder

Fourth, many cultures all over the ancient world had similar names of the constellations prior to the Greeks. This makes it appear that at one time many cultures called these constellations the same name. This gives evidence that the world at one time spoke a common language. This is reported in the Bible also in Genesis and the Tower of Babel. Many scholars believe that the constellation stories originated before the Tower of Babel, when all people spoke one common language. According to the biblical timeline outlined in Scripture, the Tower of Babel incidence occurred maybe as early as 4,000 B.C. According to the Bible, as the people were scattered, the different nations carried the names with them to their new geographic locations.

Genesis 11:1-9 (ESV)

Now the whole earth had one language and the same words...“Come, let us go down and there confuse their language, so that they may not understand one another’s speech.” So the Lord dispersed them from there over the face of all the earth, and they left off building the city. Therefore its name was called Babel, because there the Lord confused the language of all the earth. And from there the Lord dispersed them over the face of all the earth.



Photo of Orion by

Mouser on wikimedia

Amazingly, each major civilization on the planet calls most of the constellations a similar name. But did these names have special meaning to the ancient Hebrews?

In the 19th Century there was a movement started by Christian ministers who put forth the theory that before the Bible was written down, God placed the Constellations in the night sky to prophesize the coming Messiah. Many books were published on this view, such as The Gospel in the Stars by Joseph A. Seiss or The Witness of the Stars by E.W. Bullinger. There are many today that still hold to this line of thinking.

According to this theory, Orion, the “Hunter” to the Greeks, but to the Jews represents the Messiah. The Pleiades, who to the Greeks are the “Groups of the Seven Sisters” is a constellation inside of Taurus the Bull who represents God as a judge to the Jews and shows that the Messiah will judge mankind. The seven stars of the Pleiades represent a group of those who are saved and not judged. They are immortal and represent those who are redeemed.

Ursa Major, or the Great Bear, contains a cluster of stars we called the Big Dipper, but in ancient cultures was called the Sheepfold and a place that protects lambs from predators like a bear. The tail or handle is the gate that keeps the lambs inside, thus, to the Jews it was the resting place of the flock of God.

On an interesting note, this constellation was used in ancient times as an eye-test. The second to the last star in the handle is actually composed of two stars, Mizar and Al Cor. Mizar means guarded or enclosed place and Al Cor means the lamb. One last item of Ursa Major is that the last two stars of the handle make a straight line to another constellation called Bootes, which is the Shepherd, the Messiah.



Drawing of Orion

by Sanu N on wikimedia

Most Christian astronomers dismiss this notation of the stars foretelling Messianic prophecies as a more modern evangelism method. Even so, one can make a story



Photo of the Pleiades by
Bryan Goff on Unsplash

line for Jesus as the Messiah by using this method as a means of evangelizing people on a night outing.

As we conclude this study on the Bible and Astronomy, we again see no true contradictions. Certainly, in the past, the science of astronomy did not always agree with the biblical writings; but as science improved, it joined equally with what the Bible has maintained since its origin. Astronomy is not in conflict with the Bible.

Discussion Questions

1. What impressed you the most in this lesson and why?
2. Why do you think that many astronomers were believers in the Bible?
3. Science has often neglected the Bible facts we have examined concerning astronomy. Why do you think this is so?
4. How did the section on the names of constellations impact you? Did you know that certain constellations are named in the Bible?
5. Out of all of the astronomers mentioned in this lesson, which one specifically would you love to be able to sit down to dinner with and talk to? Why that person?