

# Wonders Of God's Created Universe



Our subject for today is the study of the wonders of God's created universe. We think of the words of the psalmist: "When I consider thy heavens, the work of thy fingers, the moon and the stars, which thou hast ordained; What is man, that thou art mindful of him? and the son of man, that thou visitest him?" Psalm 8:3, 4.

The subject is truly the study of astronomy, or the laws of the heavens. God calls upon us to consider the heavens, when He says in Isaiah 40:26: "Lift up your eyes on high, and behold who hath created these things that bringeth out their host by number: he calleth them all by names by the greatness of his might, for that he is strong in power; not one faileth."

This text tells us that we ought to consider the universe, reverently, as the result of God's creative power. The psalmist also admonishes us to learn to know God better through the study of nature, when he said: "The heavens declare the glory of God; and the firmament showeth his handywork. Day unto day uttereth speech, and night unto night sheweth knowledge. There is no speech nor language, where their voice is not heard. Their line is gone out through all the earth and their words to the end of the world. In them hath he set a tabernacle for the sun, which is as a bridegroom coming out of his chamber, and rejoiceth as a strong man to run a race. His going forth is from the end of the heaven, and his circuit unto the ends of it: and there is nothing hid from the heat thereof. The law of the Lord is perfect, converting the soul." Psalm 19:1-7.

Let us notice briefly some scientific truths in this great passage of Scripture. First of all, notice what it says about the sun. It declares that the sun moves rapidly, for it speaks of it as a "strong man to run a race." It also indicates that the path of sun motion is circular, for it speaks of the sun's circuit. Now, modern scientific research can confirm that the sun moves very rapidly in a circular path, just as this text states.

Another interesting feature about this text is its statement that the law of the Lord is perfect. This not only refers to God's moral law, but to His physical law as well. Astronomers tell us that one of the marvelous things about the heavens is their perfect precision and observance of natural law. In the movements of the heavenly bodies, not so much variation of timing takes place as a 100,000th of a second in a thousand years. The moon travels on its circular path through the heavens around this earth every 27 days, 7 hours, 43 minutes, and 11 1/2 seconds. There is never any variation from this perfect time cycle. The earth travels around the sun every 365 days, 5 hours, 48 minutes, and 46 seconds. The earth rotates on its axis every 23 hours, 56 minutes, 4-91/1000 seconds. There is perfect precision to the laws of heavenly motion. "The law of the Lord is perfect."

There are many great truths expressed in the Bible that modern astronomy confirms. We think of the statement made about God in Isaiah 40:22: "It is he that sitteth upon the circle of the earth." Some versions say the sphere of the earth. When this prophecy was written, most of the world did not know that the earth was round. They thought the world was flat. When Columbus sailed west from Spain many people even then, in 1492, were terrified because they thought the earth was flat and that Columbus and his men would sail right over the edge of it and drop off. Today every schoolboy knows the earth is round, but hundreds of years before modern science found that out, the Bible stated it in unerring terms in Isaiah 40:22.

Let us also notice some remarkable scientific truths found in Job 26:7, 13, 14: "He stretcheth out the north over the empty place, and hangeth the earth upon nothing.

By his spirit he hath garnished the heavens; his hand hath formed the crooked serpent. Lo, these are parts of his ways: but how little a portion is heard of him? But the thunder of his power who can understand?"

We notice, first of all, the truth expressed that the earth hangs upon nothing. Job spoke of the earth as hurtling through space without any visible support. Many of the ancients believed the earth to be supported by a giant or by pillars, but Job expressed a great truth when he spoke of God hanging the earth upon nothing. It was only 150 years ago that Sir Isaac Newton announced the law of gravitation by which all heavenly bodies attract one another and hold each other in space by delicate gravitational balance. This is a truth that was thousands of years in advance of its time.

The last portion of the above passage speaks of this world as being only the parts or edges of God's ways and indicates that there is a great deal more to God's universe than we can understand. This, too, was far in advance of the notions of the ancients. Many ancient peoples believed the earth to be the center of the universe, but this statement says it is only a tiny edge-piece.

Let us notice how true this is. The universe is of vast size, scientists now know. Every star that we see in the sky is a mighty, blazing sun like the sun of the daytime, only so far away that they appear much dimmer than our sun. Our sun, with its nine planets revolving around it, is traveling on a circuitous path through the sky around the center of a great galaxy, of which it is a part. This galaxy is a gigantic group of stars in the shape of a stupendous wheel which is slowly turning in the heavens. There are millions of stars in our galaxy, or starry wheel, or island universe, as it is sometimes called. Our sun, with this earth, is just on the outer edge of this giant wheel. When you look up in the sky and see the Milky Way, you are looking edgewise into this great wheel; and the Milky Way itself is composed of millions of stars in the center and opposite edge of this galaxy from our earth.

Now notice this appalling truth: This giant galaxy, huge as it is, is only a tiny speck in God's universe, for there are thousands of other such galaxies, or island universes, each of

which contains countless millions of stars, and we are only on the outskirts of our own galaxy. Do you see how magnificently truthful are the words of Job when he said, "Lo, these are parts of his ways: but how little a portion is heard of him: but the thunder of his power who can understand?" The words truly take on new and greater meaning.

Jeremiah 33:22 states that the host of heaven cannot be numbered any more than the sand of the sea can be measured. Men used to think they could actually number the stars, but today men know that they are utterly innumerable. Each new telescope brings new stars into view that men did not know existed before. And with all the vast view we have of the heavens, it is probable that even now we are scarcely scratching the surface of knowledge concerning the size of the universe. Sir James Jeans, noted astronomer, made the statement, "There are probably as many stars in the sky as there are grains of sand on all the seashores all around the world."

Let us make a quick trip out through the heavens and view some of the wonders of God's universe. First of all, let us go to the sun. The sun is 93,000,000 miles from the earth. If we were to travel by automobile in the direction of the sun, it would take us 177 years, traveling day and night at 60 miles an hour. So we will have to abandon such slow methods of travel and imagine that we can travel on a beam of light. Light travels at the dizzy speed of 186,320 miles per second. so in just eight minutes we could reach the surface of the sun.

We would find that the sun is a gigantic ball of fire, 800,000 miles across. Great flames leap out from the surface of the sun, sometimes reaching out as far as 300,000 miles. These are called solar prominences. There are sometimes spots on the face of the sun that look dark in comparison with the rest of the surface. It is not known exactly what these spots are, but some think that they are storms on the sun's surface.

When these spots move across the face of the sun, they sometimes cause great displays of the northern lights here on earth and cause static on the radio. No one knows exactly why, but it is known that this does happen.

The sun is the giant heating plant for the solar system, with its nine planets and their satellites and also thousands of minor planets, called asteroids.

If you desire a view of other stars or giant suns in the sky we will have to abandon our light beam as transportation, because although it travels 186,320 miles per second, that is much too slow for a quick glimpse at the stars.

Perhaps if we could ride on angel wings, we could get around rapidly enough; because in the ninth chapter of Daniel, it tells of how Daniel prayed to God, and an angel came to touch him on the shoulder, saying he had begun his trip from heaven when Daniel started praying only a few minutes before. We don't know just where heaven is, but when we realize that the universe is made of multitudes of millions of stars gathered into enormous galaxies, and that heaven must be the great center of it all, heaven must be a stupendous distance away, some glorious, central planet upon which is God's throne. If an angel could traverse such vast distances in only a few minutes, that would be the only really efficient means of travel.

If we were to go to the very nearest star in the sky, we would find that it is over four light-years away. A light-year is the distance that light travels in a year at its tremendous speed of 186,320 miles per second, and the very nearest star is over four light-years away. That gives us just a bit of an idea of what breath-taking distances there are in the universe.

In Job 38:31, God challenged Job in the long ago with the words, "Canst thou bind the sweet influences of Pleiades, or loose the bands of Orion?" God indicated there that he had

bound up the Pleiades constellation into a group. If we were to travel through space to this group of stars, we would truly find that they are a group moving in the same direction, at the same speed, and composed of the same materials. Dr. Robert J. Trumpler, of the Lick Observatory in California said, "Over 25,000 individual measures of the Pleiades stars are now available and their study led to the important discovery that the whole cluster is moving in a southeasterly direction. The Pleiades stars may thus be compared to a swarm of birds flying together to a distant goal. This leaves no doubt that the Pleiades are not a temporary or accidental conglomeration of stars, but a system in which the stars are bound together by a close kinship." Isn't it marvelous that modern astronomy confirms what God declared so long ago in the book of Job.

In Job 38:32 God said, "Canst thou guide Arcturus with his sons?" The fact that God especially mentions guiding Arcturus indicates that it must be more difficult to guide than the average star.

This is an interesting star which is easy to locate in the sky. The handle of the Big Dipper points directly at the star Arcturus. Now, is this star a hard star to guide? Notice what Charles Burckhalter of Chabot Observatory has to say: "This high velocity places Arcturus in that very small class of stars that are apparently a law unto themselves. He is an outsider, a visitor, a stranger within the gates; to speak plainly, Arcturus is a runaway. Newton gives the velocity of a star under control as not more than 25 miles a second, and Arcturus is going 257 miles a second. Therefore, the combined attraction of all the stars we know cannot stop him or even turn him in his path."

Long ago God solemnly stated through the statements He made to Job that Arcturus was a star which especially needed His guidance. Arcturus is a great star which is forty light-years away. The light which we see from this star actually starts toward this earth forty years away and has been

traveling 186,320 miles per second night and day for forty years to get here. In 1933 the light from this star was used to react on a photoelectric cell and turn the switch that lit up the Chicago World's Fair. Forty years before, the World's Fair had been held in Chicago in 1893. For sentimental reasons it was announced that the light which would pull the switch for the World's Fair of 1933 was the same light which had left Arcturus on its hurtling ride through space at the time of the 1893 fair.

Traveling through the heavens, we would find giant stars such as Antares and Betelgeuse, which are several hundred times as large as the diameter of our sun. Antares is so huge that it would take approximately five hundred of our suns laid edge to edge just to reach across the face of that mighty star which is 400 million miles in diameter. How marvelous are God's ways and His creation.

Returning to this earth, we decide to make a hurried visit to the solar system and its various planets or worlds. These worlds were created by Christ, as were the stars. We notice in Hebrews 1:1-3: "God, who at sundry times and in diverse manners spake in times past unto the fathers by the prophets, Hath in these last days spoken unto us by his Son, whom he hath appointed heir of all things, by whom also he made the worlds." Jesus Christ is said to have made the worlds. The planets are His handiwork.

Nearest to the sun is the smallest of the planets, Mercury, which revolves around the sun every 88 days and perpetually turns the same side towards the sun. Mercury is 38 million miles from the sun.

Farther out is the planet Venus which, next to the moon, is the brightest thing in the sky when it is visible. It is 67 million miles from the sun and seems to have a heavy atmosphere around it that astronomers have observed in their telescopes.

Our earth is next, 93 million miles from the sun.

Still farther out, 145 million miles away from the sun, is the planet Mars. It is much smaller than the earth. Astronomers have observed portions of this planet changing colors with the season, which leads them to believe from their observation, that there must be some form of vegetation life on that planet.

Still farther out, some 660 million miles from the sun, is Jupiter, the largest of the planets. All of the other planets put together would not make as big a planet.

Still farther out is Saturn, 887 million miles from the sun. Saturn, as viewed through powerful telescopes, has beautiful rings around it which may be made up of millions of tiny moonlets, very close together. Saturn is a very large planet.

Beyond Saturn in the distant outposts of the solar system is Uranus, which for many centuries was believed to be the last planet of the solar system. This planet is 1,750,000,000 miles from the sun, a planet much larger than the earth, but less than a fourth the size of Jupiter.

A number of years ago when Sir Isaac Newton announced that the heavenly bodies all have an attraction for one another which is called gravitation, men were eagerly testing Newton's laws. At one time, about one hundred years ago, scientists discovered that the planet Uranus was not traveling quite as it was predicted to travel. They began to reason that perhaps there was a planet farther out in space that was having an attraction on Uranus. Two astronomers calculated the movements of Uranus and figured out where this other planet might be. One of them wrote to a friend who lived hundreds of miles away and told him to train his telescope on a certain spot in the sky on a certain night, and he would find a new planet. Thus the planet Neptune was discovered, which is 2,800,000,000 miles from the sun. Neptune was discovered

in 1846 and is about the size of Uranus. It is now known that Neptune has two moons revolving around it. The discovery of these moons was a tremendous astronomical triumph, for it was as if a man in Boston saw a tennis ball in Philadelphia, as far as telescopic magnification is concerned.

For several decades it was thought that Neptune was definitely the farthest outpost of the solar system and that no more planets would be discovered. But early in the twentieth century some doubts arose as to whether this was the case. Finally, as the result of years of search and study, the planet Pluto was discovered at Lowell Observatory in Flagstaff, Arizona by Clyde Tombaugh in 1930. He discovered this planet through the comparison of telescopic photographic plates. This planet is about 3,600,000,000 miles from the sun. It is about one-half the size of our earth, and it takes it 248 of our years to travel around the sun. That would mean that if it has seasons such as ours, based on its orbit, each season would be nearly 75 years long.

What of these other worlds? Is there life on other worlds in God's universe?

Was it a dream that in those bright dominions

Are other worlds that sing, with lives like mine

Lives that with beating hearts, and broken pinions

Aspire and fall, half mortal, half divine.

A grain of dust among those glittering legions

Am I, I only, touched with joy and tears?

O silver sisters, from your azure regions,

Breathe, once again, your music of the spheres.

-Alfred Noyes-

Let us notice that God's Word teaches in this respect. We read in Isaiah 45:18: "For thus saith the Lord that created the heavens; God himself that formed the earth and made it; he hath established it, he created it not in vain, he formed it to be inhabited: I am the Lord; and there is none else."

God is represented in this passage as forming the earth specifically to be inhabited. It is also strongly implied that it would have been in vain had the earth not been inhabited. God does not do vain things. When we consider the vastness of God's great universe and the fact that God's purpose in forming this world was that it might be inhabited, it is utterly inconceivable to believe that there would not be other worlds inhabited also.

There are other passages which teach it in an even stronger way. Let us notice Isaiah 40:15. Listen to God's words: "Behold, the nations are as a drop of a bucket, and are counted as the small dust of the balance: behold He taketh up the isles as a very little thing." All the nations of this world, as big as it seems to us, are only a drop of the bucket to God. That is surely a strong indication that there are other worlds, multitudes of them that are inhabited.

Reading further on we notice Isaiah 40:17: "All nations before him are as nothing; and they are counted to him less than nothing, and vanity." God's universe is so full of interest and life that in size, this world of ours is considered nothing and less than nothing.

Still further in this same chapter, in Isaiah 40:21, 22, we read: "Have ye not known? have ye not heard? hath it not been told you from the beginning? Have ye not understood from the foundations of the earth? It is he that sitteth upon the circle of the earth, and the inhabitants thereof are as grasshoppers; that stretcheth out the heavens as a curtain, and spreadeth them

out as a tent to dwell in." This text tells us plainly that the very heavens are spread out as a tent to dwell in, or as a place of life.

A thrilling description of the creation of this world is given in Job 38:4-7, by God Himself: "Where wast thou when I laid the foundations of the earth? declare, if thou hast understanding. Who hath laid the measures thereof, if thou knowest? or who hath stretched the line upon it? Whereupon are the foundations thereof fastened? or who laid the corner stone thereof; When the morning stars sang together, and all the sons of God shouted for joy?" Here it says there was great rejoicing when this world was created. These morning stars referred to are the angels of God, for we see them so referred to in Revelation 1:20. But who are the sons of God, these beings who shouted for joy when this world came into being? In Luke 3:38 when the ancestry of Christ is traced back to creation, it refers to Adam as the son of God. In other words, Adam could look to no other being than God as his Father. Using this same reasoning, these various sons of God referred to in Job 38 must be the first created beings of the many other inhabited worlds in God's universe.

In the first chapter of Genesis, we read that when God created Adam, He gave to Adam the dominion over this world as the son of God for this particular world. But Romans 6:16 tells us that to whom we yield ourselves to obey, his servants we are. Therefore, when Adam and Eve sinned and obeyed Satan, this world fell into the hands of Satan and became his possession. It was forfeited. Jesus called Satan the prince of this world, in John 14:30.

In Job 1:6, 7 the story is told of how there was a great meeting of the sons of God in heaven, and Satan came also. When God asked why he was there, he said he came from the earth. God challenged his right to represent the earth, for God declared there were still some loyal people upon the earth, and Job was named as one. The whole book of Job is the

story of how God demonstrated to Satan how great Job's loyalty was to Him.

Isn't it a tragedy to think that Adam, the true, original representative from this world, could not be there when the representatives of the worlds in God's universe came to present themselves before the Lord. He had sinned and had died. He had forfeited this world to Satan, God's enemy. That was the marring discord in that mighty conclave representing all the realms of God. Satan represented this world.

However, God was not content to let Satan continue to be the prince of this world. Although in size this world of ours is only a drop in the bucket, only a tiny spec of cosmic dust on the fringes of the universe, God's love is so great, so sure, that He was not content to let even this one little world remain in the hands of Satan. In Luke 15:4-7, Jesus told the parable of the lost sheep. When he brought them into the fold and counted them, it was discovered that there was one missing. Instead of settling back in ease and rejoicing over the ninety-nine that were safe, the shepherd, through his love of the sheep, went out into the stormy night to find the lost one. He searched in the midst of danger and hardship until he found the lost sheep, and then came home to rejoice greatly. Jesus said, "I say unto you, that likewise joy shall be in heaven over one sinner that repenteth, more than over ninety and nine just persons, which need no repentance."

God had a great, full universe that was obedient, but He longed to save this one lost sheep, this one lost world. "God is love." 1 John 4:8. "God so loved the world, that he gave his only begotten Son, that whosoever believeth in him should not perish, but have everlasting life." John 3:16.

Two thousand years ago, Jesus, Son of God, met Satan on the battlefields of this world and defeated him. In John 12:31, 32 Jesus said, "Now is the judgment of this world: now shall the

prince of this world be cast out. And I, if I be lifted up from the earth, will draw all men unto me."

There at the cross Jesus bought this world back from evil and from Satan with the price of his own precious blood. He died to pay the penalty of sin in behalf of the human race and restore to them the dominion over this world that they lost through sin.

Only one act still remains in the great drama of the ages. When Jesus comes again and all evil is fully punished and blotted out, the earth will once again take its place in a re-created state (2 Peter 3:10-13) as an obedient subject and sister world in God's great, harmonious universe. What a day it will be when Jesus bursts the blue of the heavens with all of His glory and His mighty host of angels. Caught upward into that radiant glory-clout will be all the righteous of all the ages, ready to enter upon life eternal. In the eternal joys of heaven, great and thrilling experiences are in store for them.

"Unfettered by mortality, they wing their tireless flight to worlds afar, worlds that thrilled with sorrow at the spectacle of human woe and rang with songs of gladness at the tidings of a ransomed soul. With unutterable delight, the children of earth enter into the joy and wisdom of the unfallen beings. They share the treasures of knowledge and understanding gained through ages upon ages in contemplation of God's handiwork. With undimmed vision, they gaze upon the glory of the creation, suns and stars and systems, all in their appointed order, circling the throne of Deity." The Great Controversy, p. 677.

I want to be there, don't you?