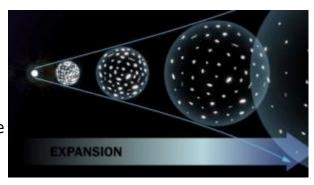
In the last 100 years, science has discovered that the universe is expanding. However, the men who wrote the Bible spoke of this concept when it was written about 2,500–3,500 years ago. But many people believe the Bible and science contradict one another, primarily because of the unscriptural assertions of "Young-Earth Creationism" (the earth and the universe were created in six 24-hour days about 6,000). Is this really so? Let's examine some basic scientific concepts about the universe, and see how they compare to what the Bible says.



If the universe is expanding, it had a beginning. The Bible tells us what happened in the beginning, and why.

## First Law of Thermodynamics - $E = MC^2$

The first law of thermodynamics states that energy can be transformed from one form to another, but can be neither created nor destroyed. Matter and energy are interchangeable  $(E=mc^2)$ .

Now, keeping these things in mind, let's consider a few verses from the Bible:

"Lift up your eyes and look to the heavens: Who created all these? He who brings out the starry host one by one and calls forth each of them by name. Because of his great power and mighty strength, not one of them is missing." (Isaiah 40:26 NIV)

"Our Lord and God, You are worthy to receive glory and honor and power, because You have created all things, and because of Your will they exist and were created." (Revelation 4:11 CSB)

"By faith we understand that the universe was created by God's command, so that what is seen has been made from things that are not visible." (Hebrews 11:3 CSB)

This is exactly what God did when he transferred some of his energy into the matter making up the universe. It is also proves that Genesis 1:1, "In the beginning God created the heavens and the earth". Both science and the Bible now agree that the universe had a beginning.

## **Second Law of Thermodynamics**

The second law of thermodynamics states that the total entropy for an isolated system can never decrease over time. "Entropy" is a measure of unusable energy within a closed or isolated system (the universe for example). As usable energy decreases and unusable energy increases, "entropy" increases. Entropy is also a gauge of randomness or chaos within a closed system. As usable energy is irretrievably lost, disorganization, randomness and chaos increase. This means that anything left to itself, including the universe, will become less organized or disorganized over time.

- Fact 1: The universe began in a highly ordered state.
- Fact 2: The universe remains highly ordered/organized.
- Thus, we can infer that God both created, and maintains, the universe.

The universe would have become somewhat less organized over time, had God not created it from the beginning and maintained it through its estimated 12 to 15 billion year existence. In contradiction to "Young Earth Creationism", which asserts that the universe is only 6,000 to 10,000 years old, the Bible is in complete agreement with science that the universe is billions of years old. The following scriptures give Biblical testimony to the fact that God not only created the universe in the beginning, but he also continues to maintain it in a highly ordered state.

"Through him [Jesus] God created everything in the heavenly realms and on earth. He made the things we can see and the things we can't see—such as thrones, kingdoms, rulers, and authorities in the unseen world. Everything was created through him and for him. He existed before anything else, and he holds all creation together." (Colossians 1:16-17 NLT)

"The heavens proclaim the glory of God. The skies display his craftsmanship. Day after day they continue to speak; night after night they make him known. They speak without a sound or word; their voice is never heard. Yet their message has gone throughout the earth, and their words to all the world. God has made a home in the heavens for the sun." (Psalm 19:1-4 NLT)

"For ever since the world was created, people have seen the earth and sky. Through everything God made, they can clearly see his invisible qualities—his eternal power and divine nature. So they have no excuse for not knowing God." (Romans 1:20 NLT)

"Who has measured the waters in the hollow of his hand, or with the breadth of his hand marked off the heavens? Who has held the dust of the earth in a basket, or weighed the mountains on the scales and the hills in a balance? Who can fathom the Spirit of the Lord, or instruct the Lord as his counselor? Whom did the Lord consult to enlighten him, and who taught him the right way? Who was it that taught him knowledge, or showed him the path of understanding? Surely the nations are like a drop in a bucket; they are regarded as dust on the scales; he weighs the islands as though they were fine dust.... Before him all the nations are as nothing; they are regarded by him as worthless and less than nothing. With whom, then, will you compare God? To what image will you liken him? ... He sits enthroned above the circle of the earth, and its people are like grasshoppers. He stretches out the heavens like a canopy, and spreads them out like a tent to live in.... 'To whom will you compare me? Or who is my equal?' says the Holy One.... Do you not know? Have you not heard? The Lord is the everlasting God, the Creator of the ends of the earth. He will not grow tired or weary, and his understanding no one can fathom." (Isaiah 40:12-15, 17-18, 22, 25, 28 NIV)

Almighty God, the Creator, who has existed **"from eternity" (Psalm 90:2 NAB)**, and exists outside, and independent of, the universe. He transformed some of his "great power," or energy (Isaiah 40:26 NIV), into matter, when he suddenly brought the universe into existence, in what has been called by science the "Big Bang".

"Do you know how the clouds hang poised, those wonders of him who has perfect knowledge? ... The Almighty is beyond our reach and exalted in power." (Job 37:16, 23 NIV) Only someone "who has perfect knowledge" could create the universe and all that is in it.

"Do you know the laws of the universe? Can you use them to regulate the earth?" (Job 38:33 NLT). "Laws" do not just happen. They are made by lawmakers. "The LORD [Yahweh] is our lawmaker" (Isaiah 33:22 NIV).

## The Universe had a Beginning

"In the beginning God created the heavens and the earth." (Genesis 1:1 CSB) The Big Bang is the description of how the universe began. Science agrees with the Bible that the universe had a beginning.

## The Universe is Expanding

Early in the twentieth century, astronomer Edwin Hubble found that galaxies are moving away from each other. This discovery led him to believe that the universe is expanding. Hubble's discovery was upsetting to many scientists of his time, because if the universe is expanding, then – at some time in the distant past – the universe had a beginning. And if the universe had a beginning, it would confirm what the Bible had said all along. Albert Einstein said the whole idea "irritated" him, although later in life he accepted the idea that the universe had a beginning. Arthur Eddington, a British mathematician and astronomer, said that he hoped a "loophole" could be found to avoid the implication that the universe had a Creator.

But the writers of the Bible knew that God had "stretched out the heavens" long before the expanding universe theory was proposed by Hubble and other scientists in the last 100 years, and has been confirmed by scientific evidence. The prophets of the Bible had already

revealed this in the Scriptures:

"He alone stretches out the heavens." (Job 9:8 NIV)

"He stretches out the heavens like a tent." (Psalm 104:2 NIV)

"He stretches out the heavens like a canopy, and spreads them out like a tent to live in." (Isaiah 40:22 NIV)

"The Creator of the heavens, who stretches them out." (Isaiah 42:5 NIV)

"I am the Lord, the Maker of all things, who stretches out the heavens." (Isaiah 44:24 NIV)

"It is I who made the earth and created mankind on it. My own hands stretched out the heavens; I marshaled their starry hosts." (Isaiah 45:12 NIV)

"My own hand laid the foundations of the earth, and my right hand spread out the heavens; when I summon them, they all stand up together." (Isaiah 48:13 NIV)

"You forget the Lord your Maker, who stretches out the heavens and who lays the foundations of the earth, that you live in constant terror every day because of the wrath of the oppressor, who is bent on destruction? For where is the wrath of the oppressor?" (Isaiah 51:13 NIV)

"But God made the earth by his power; he founded the world by his wisdom and stretched out the heavens by his understanding." (Jeremiah 10:12 NIV)

"He made the earth by his power; he founded the world by his wisdom and stretched out the heavens by his understanding." (Jeremiah 51:15 NIV)

"The Lord, who stretches out the heavens, who lays the foundation of the earth, and who

forms the human spirit within a person." (Zechariah 12:1 NIV)

As we can see, the Bible has said all along what science has just recently [in the last 100 years] discovered, that is, that the universe is "stretched out", or expanding. Astronomers, in the last 25 years, have discovered that the universe is expanding at exactly the critical rate, the perfect balance between expansion and contraction, so that the universe will go expanding forever. This is what we would expect from someone whose "work is perfect" (Deuteronomy 32:4 NJB).

How could something as vast and complex as the entire universe be expanding at exactly the perfect rate if it were not created and maintained by "one who has perfect knowledge" (Job 36:4 NIV) and has "Almighty" "power" (Revelation 4:8,11; Isaiah 40:26)?