## Day Four: The Sun, the Moon, and All of the Stars

[14] And God said, Let there be lights in the firmament of the heaven to divide the day from the night; and let them be for signs, and for seasons, and for days, and years:
[15] And let them be for lights in the firmament of the heaven to give light upon the earth: and it was so.

The Bible states that this one planet, Earth, was created three days before our own sun and before every other planet, star, solar system, and galaxy in the universe. Conversely, scientists believe that nebula and stars are the original building blocks of all planets and virtually everything else in the universe. When stars die (burn out or blow up in supernovae), all of their residual elements slowly begin to cling to other elements from other residual stars and, because of gravity, eventually coalesce into planets that then begin to rotate around existing stars (which become their suns) and slowly begin to form solar systems. It therefore seems entirely backward that a planet would be created before any stars.

But with God, all things are possible, so even if all planets are made up of residual stardust elements, it is possible that God simply made an exception in the case of the earth, and created it first, before creating all of the stars that eventually formed all of the other planets in the universe. If the universe was created only 6,000 years ago, however, all of the other planets in the universe have to have been formed within that 6,000-year period. That is obviously too short a time for stars to be created, live out their lives, then supernova and begin to coalesce with other elements from other residual supernova stars to eventually form planets—a process thought to take millions and millions of years in total, unless God made instant planets and stars, because even impossible things are possible with God, and how can one argue with that? Genesis makes no mention of other planets, however, because the writer did not apparently know that other planets existed, or even that Earth itself is just one of several planets revolving around our sun in a solar system, that all light comes from stars, and that our sun is a star inside of a huge galaxy of billions of stars.

Even assuming the earth was created first and then all of the stars were later created to form lights for those on Earth, however, these lights in the sky—the sun, moon, and stars—are *not* the things that divide the day from the night. The only thing that divides the day from the night is the spherical shape of the earth as it rotates on its axis approximately every twenty-four hours so that at any one specific time, half of the earth has direct sunlight and the other half does not. The writer appears to believe that these lights just appear and then disappear every day and every

## POST-CREATION EARLY HUMAN HISTORY

night—as though they come on stage, do their twelve hours of service, and then move off stage for twelve hours of downtime. If one does not know how our solar system works and just looks up at the sky, it appears as though the sun rises and sets every day while we on Earth stand still. This is what the ancient world thought, because people did not realize that the sun and the stars are always there and that the earth spinning on its axis causes the day and night—but again, God would have known that, even though it appears that Moses did not.

These verses also tell us that the stars change position as signs of the year and the seasons and that they even change their positions during the night. Wrong again. It is not the movement of the stars that cause these nightly, seasonal, and yearly shifts; rather, the movement of the earth around the sun creates only the illusion that the stars are moving during our four seasons. And stars seem to move during the night only because the earth is spinning on its axis, producing another illusion of movement of stars. Although stars do move in the very general sense that the universe is expanding, they do not move to signal seasons; instead, the earth spins on its axis every day and night and revolves around the sun once a year so that our perspective of the night sky changes during the night and over the year as we revolve around the sun.

Moses was obviously completely unaware of these astronomical facts, given the way in which he wrote these particular verses in Genesis. The sun, moon, and stars do not divide the day from the night. The stars are also there in the day but are overpowered by the brightness of the sun—they are always there, but the earth spins on its axis, giving us day and night, and revolves around the sun, giving us seasons based on the twenty-three—degree tilt of the earth that causes our northern and southern hemispheres to be either closer or farther away from the sun at different points during the year. This, in turn, makes it colder or warmer in the northern or southern hemispheres of the earth, causing our seasons as well as the illusion of changing star positions in the night sky at various points during the year and during the night.

What purpose are stars used for when Moses writes that stars are to be used "for signs?" Astrologers use the stars as signs to determine what it might mean to us when the stars are in certain positions relative to the earth's rotation around the sun during the year. Astrologers use these star positions to predict events on Earth and even to give general personal advice to people born during certain times of the year, as though the positioning of the stars determines, or at least affects, one's personality during life (e.g., Cancers are moody). Astrologers, looking for some logical scientific support for their bold assertions, claim that the faint gravitational pull of celestial bodies on humans at different points in the year apparently creates certain identifiable personality traits on fetuses in the act of passing through the birth canal on certain arbitrary days grouped generally into the twelve months of the year. Creationist literalists, however, rightly scoff at these pseudoscientific explanations of how astrology can possibly affect a person's personality, but in the very same breath, creationist literalists also often resist scientific, astronomy-based challenges to their particular literal pseudoscientific biblical explanations about the universe. As these creationist literalists criticize astrology for its scientific implausibility, however, perhaps they would be wise to remember that people who live in glass

## DAY FOUR: THE SUN, THE MOON, AND ALL OF THE STARS

houses should not throw stones. Often, their pseudoscientific supporting arguments for their bold biblical assertions are just as suspect as the arguments of astrologers.

[16] And God made two great lights; the greater light to rule the day, and the lesser light to rule the night: he made the stars also.

[17] And God set them in the firmament of the heaven to give light upon the earth,

[18] And to rule over the day and over the night, and to divide the light from the darkness: and God saw that it was good.

[19] And the evening and the morning were the fourth day.

From the point of view of a nonscientist writing a book thousands of years ago, this description seems plausible to account for the "two great lights" in the sky, one that rules the day, the sun, and one that rules the night, the moon, and "the stars also." This also shows that the sun and the stars definitely were not created on the first day when God supposedly was letting there be light. This is a rather profound contradiction in the Bible.

The sun, of course, actually emits light itself, but the moon does not, so there is yet another error here. The moon is not a light-producing object like the sun and other stars are; instead, the moon simply reflects the light coming from the sun and does so only when the moon is positioned at certain points during the month with respect to the earth such that the moon's reflection can be seen from Earth.

Why is there no explanation of any of this in Genesis? Why wouldn't God inform Moses when Moses transcribed Genesis that the moon was created to *reflect* sunlight during the night (or sometimes at dusk or dawn, and only then, sometimes, depending on the moon's monthly revolution around the earth, creating a full, half, crescent, or new moon)? Obviously, Moses thought that the moon *produced* light, not just *reflected* it, when in reality, the moon, at times, just partially reflects sunlight in its monthly stages.

Moses also seems to think that the moon and stars are simple little lights in the night sky. Recall that the Bible states in Genesis 1:3 that there are waters *above* the firmament and that is apparently how we get rain. Moses did not know any better and thought the universe was just like a big domed planetarium with some lights up on that dome. In fairness to a nonscientist writer thousands of years ago, it certainly does appear that way to the naked eye when one looks up at the sky, and that is exactly how he wrote it. So, the waters in the firmament are apparently behind all of the stars? Moses obviously had no idea how vast the universe is or how incredibly far away the stars actually are such that a big body of water could not possibly exist behind, or above, the stars (the domed planetarium). Because Moses saw the sky as a dome with lights on it, he also did not realize that some of those lights ("stars") were actually close planets, such as Venus and Mars, reflecting light while other lights were stars hundreds, millions, and even billions of light-years away.

## POST-CREATION EARLY HUMAN HISTORY

Finally, when Moses noted that God "made the stars also," it seems as though the sextillions of stars that actually make up our universe were a mere afterthought at the end of a very busy day spent mostly on creating just the sun and the moon. It is as though Moses tacked on "oh yeah, God made the stars also," which seems logical if all God created was a few hundred star "nightlights" that we can see with the naked eye. This suggests that Moses was profoundly unaware that the universe contains sextillions of stars, because from his perspective, the stars seemed to be just a bunch of little twinkling lights on a dome and were there only during the night. We certainly cannot fault the ancients for failing to make these scientific discoveries about our solar system and universe thousands of years ago, when it has taken that long for astronomers to make these discoveries using powerful telescopes. If God really wrote the Bible, however, why would He write it, or allow it to be written, with such monumentally misinformed, basic mistakes in the literal description of the cosmos, celestial bodies, and the nature of the universe?