# ARGUMENTS SHOWING THAT THE UNIVERSE/SOLAR SYSTEM DID NOT EVOLVE

# Dr. Walt Brown – www.creationscience.com

#### 43. Strange Planets

Many undisputed observations contradict current theories on how the solar system evolved.<sup>a</sup> One theory says planets formed when a star, passing near our Sun, tore matter from the Sun. More popular theories hold that the solar system formed from a cloud of swirling gas, dust, or larger particles. If the planets and their 156 known moons evolved from the same material, they should have many similarities. After several decades of planetary exploration, this expectation is now recognized as false.<sup>b</sup>

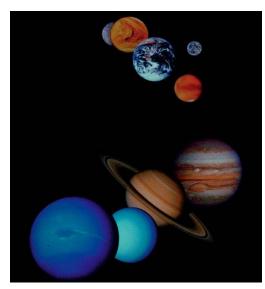


Figure 21: Unique Planets. This is a composite photograph (not-to-scale) of all planets in the solar system, except Pluto. They are, from top to bottom: Mercury, Venus, Earth (with the Moon to the right), Mars, Jupiter, Saturn, Uranus, and Neptune. The photos were taken by Mariner 10 (Mercury), Pioneer Venus Orbiter (Venus), Apollo 17 astronauts (Earth), Earth-based telescopes (Moon and Mars), and the two Voyager spacecraft (the four giant planets).

Each planet is unique. Similarities expected if the planets evolved from the

same swirling dust cloud are seldom found. Yet most planetary studies begin by assuming that the planets evolved and are therefore similar. Typical arguments are as follows: "By studying the magnetic field (or any other feature) of Planet X, we will better understand how Earth's magnetic field evolved." Actually, each magnetic field is surprisingly different. "By studying Earth's sister planet, Venus, we will see how plate tectonics shaped its surface and better understand how plate tectonics works on Earth." It is now recognized that plate tectonics does not occur on Venus. (Part II of this book will explain why plate tectonics also does not occur on Earth.)

According to these evolutionary theories:

Backward-Spinning Planets. All planets should spin in the same direction, but Venus, Uranus, and Pluto rotate backwards.<sup>c</sup>

Backward Orbits. All 156 moons in the solar system should orbit their planets in the same sense, but more than 30 have backward orbits.<sup>d</sup> Furthermore, Jupiter, Saturn, Uranus, and Neptune have moons orbiting in both directions.

Tipped Orbits. The orbit of each of these 156 moons should lie in the equatorial plane of the planet it orbits, but many, including the Earth's moon, are in highly inclined orbits.<sup>e</sup>

Angular Momentum. The Sun should have about 700 times more angular momentum than all the planets combined. Instead, the planets have 50 times

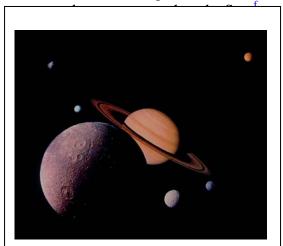


Figure 22: Saturn and Six of Its Moons. Saturn has 33 known moons. One of them, named Phoebe, has an orbit almost perpendicular to Saturn's equator. This is difficult for evolutionists to explain.

# 44. Earth: The Water Planet

The amount of water on Earth greatly exceeds that known on or within any other planet in the solar system. Liquid water, which is essential for life and has unique and amazing properties, covers 70% of Earth's surface. Where did all Earth's water come from?

If the Earth and solar system evolved from a swirling cloud of dust and gas, practically no water would reside near Earth's present orbit. Any water (liquid or ice) that close to the Sun would vaporize and be blown by solar wind to the outer reaches of the solar system,<sup>a</sup> as we see happening with water vapor in the tails of comets.

Did comets or meteorites deliver Earth's water? Comets, which are about 38% water (by mass), could not have brought much water to Earth, because comets contain too much heavy hydrogen, relatively rare in Earth's oceans. Comets also contain too much argon. If comets were the source of only 1% of Earth's water, then, using evolutionists' assumptions, our atmosphere would contain 400 times more argon than it does.<sup>b</sup> The few types of meteorites that contain considerable water also have too much heavy hydrogen.<sup>c</sup> [Pages 208–256 explain why comets and some types of meteorites contain so much water and heavy hydrogen. Heavy hydrogen is described on page 216.]

These observations have caused some to conclude that water was transported from the outer solar system to Earth by objects that no longer exist.<sup>d</sup> If so, many of these "water tankers" should have collided with the other inner planets (Mercury, Venus, and Mars), producing water characteristics similar to those of Earth. In fact, their water characteristics are not like those on Earth.<sup>e</sup> Instead of imagining "water tankers" that all disappeared, perhaps we should ask if the Earth was created with its water already present.

#### 45. Molten Earth?

For decades, textbooks have taught that the early Earth was molten, because it formed by meteoritic bombardment. If so, the heat released by the impacts would have melted the entire Earth for hundreds of millions of years.<sup>a</sup> Had Earth ever been molten, dense, nonreactive chemical elements such as gold would have sunk to Earth's core. Gold is 70% denser than lead, yet is found at the Earth's surface.<sup>b</sup> Therefore, the entire Earth was never molten and did not form by meteoritic bombardment.

Radioactive dating of certain zircon minerals also contradicts a molten Earth. Trace elements within those zircons show that the zircons formed on a cold Earth (less than 212°F).<sup>c</sup> However, according to radioactive dating, those zircons formed on an extremely young Earth, when, according to evolutionists, it should have been molten (exceeding 1,800°F)—an obvious contradiction. Either the molten Earth idea or the radioactive dating method is wrong; perhaps both ideas are wrong.

Meteorites contain much more of the element xenon than Earth's surface rocks, relative to other noble (inert) gases such as helium, neon, and argon. Had Earth formed by meteoritic bombardment, Earth's surface rocks would have a different composition, and our atmosphere would contain up to ten times more xenon than it has.<sup>d</sup> If Earth did not evolve by meteoritic

bombardment, it may have begun as one large body. [See "Melting the Inner Earth" on pages 356-358.]

### 46. Evolving Planets?

Contrary to popular opinion, planets should not form from just the mutual gravitational attraction of particles orbiting the Sun.<sup>a</sup> Orbiting particles are much more likely to be scattered or expelled by their gravitational attraction than they are to be permanently pulled together. Experiments have shown that colliding particles almost always fragment rather than stick together.<sup>b</sup> (Similar difficulties exist in trying to form a moon from particles orbiting a planet.)

Despite these problems, let us assume that pebble-size to moon-size particles somehow evolved. "Growing a planet" by many small collisions will produce an almost nonspinning planet, because spins imparted by impacts will be largely self-canceling.<sup>c</sup>

The growth of a large, gaseous planet (such as Jupiter, Saturn, Uranus, or Neptune) far from the central star is especially difficult for evolutionists to explain for several reasons.<sup>d</sup>

a. Gases dissipate rapidly in the vacuum of outer space, especially the lightest two gases—hydrogen and helium, which comprise most of the mass of the giant planets.

b. Because gas molecules orbiting a star do not gravitationally pull in (or merge with) other gas molecules in the orbiting ring, a rocky planet, about ten times larger than Earth, must first form to attract all the gas gravitationally. This must happen very quickly, before the gas dissipates.<sup>e</sup> (Jupiter's hydrogen and helium is 300 times more massive than the entire Earth.)

c. Stars like our Sun—even those which evolutionists say are young—do not have enough orbiting hydrogen or helium to form one Jupiter.<sup> $\underline{f}$ </sup>

Computer simulations show that Uranus and Neptune could not evolve anywhere near their present locations.<sup>g</sup> The planets that are found outside our solar system also contradict the theories for how planets supposedly evolve. [See <u>"Have Planets Been Discovered Outside the Solar System?" on</u> page 290.]

Based on demonstrable science, gaseous planets and the rest of the solar system did not evolve.

#### 47. Planetary Rings

Planetary rings have long been associated with claims that planets evolved. Supposedly, after planets formed from a swirling dust cloud, rings remained, as seen around Saturn, Uranus, Jupiter, and Neptune.<sup>a</sup> [See Figure 23.] Therefore, some believe that because we see rings, planets must have evolved.<sup>b</sup>

Actually, rings have nothing to do with a planet's origin. When comets and meteorites hit a tiny moon orbiting a planet, they kick up debris. Some debris (including, in a few cases, volcanic debris<sup>e</sup>) escapes the moon because of its weak gravity and the giant planet's gigantic gravity. The debris then orbits the planet as a ring.<sup>d</sup> If these rings were not periodically replenished, they would be dispersed in less than 10,000 years.<sup>e</sup> Because a planet's gravity pulls escaped particles away from its moons, particles orbiting a planet could never form moons—as evolutionists assert.

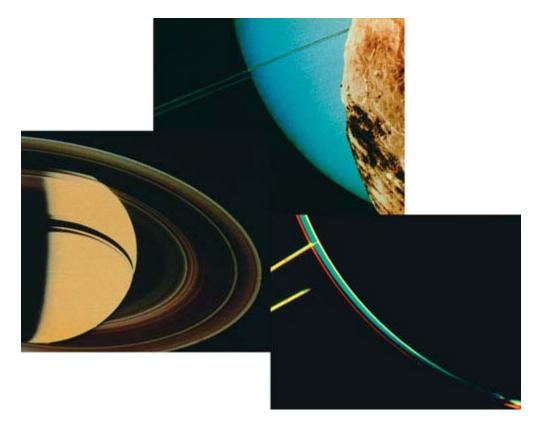


Figure 23: Planetary Rings. The rings of Saturn, Uranus, and Jupiter (left to right) are rapidly breaking up, showing that the rings formed recently.

#### 48. Origin of the Moon

Evolutionary theories for the origin of the Moon are highly speculative and completely inadequate.<sup>a</sup> The Moon could not have spun off from Earth, nor could it have formed from the same material as Earth, because its orbital plane is too highly inclined. Furthermore, the relative abundances of its

elements are too dissimilar from those of Earth.<sup>b</sup> The Moon's nearly circular orbit is also strong evidence that it was never torn from nor captured by Earth.<sup>c</sup>

Some claim that the Moon formed from debris splashed from Earth by a Mars-size impactor. If so, many small moons should have formed.<sup>d</sup> Even if only one moon formed, the impactor's glancing-blow would either be too slight to form our large Moon, or the impact would be so violent that Earth would end up spinning too fast.<sup>e</sup> If the Moon formed from particles orbiting Earth, other particles should be easily visible inside the Moon's orbit; none are. These explanations have many other problems. Understanding them caused one expert to joke, "The best explanation [for the Moon] was observational error—the Moon does not exist."<sup>f</sup> Similar difficulties exist for evolutionary explanations of the other 155 moons in the solar system.

But the Moon does exist. If it was not pulled or splashed from Earth, was not built up from smaller particles near its present orbit, and was not captured from outside its present orbit, only one hypothesis remains: the Moon was created in its present orbit. [See <u>"Evolving Planets?" on page 25</u>, and "Moon Recession," "Moon Dust and Debris," and "Hot Moon" beginning on page <u>35</u>.]

#### 49. Evolution of the Solar System?

Evolutionists claim the solar system condensed out of a vast cloud of swirling dust about 4,600,000,000 years ago. If so, many particles that were not swept up as part of a planet should now be spiraling in toward the Sun. Colliding asteroids also would create dust particles that, over millions of years, would spiral in toward the Sun. (To understand why, see the <u>"Poynting-Robertson Effect"</u> on page <u>36</u>.) Particles should still be falling into the Sun's upper atmosphere, burning up, and giving off an easily measured, infrared glow. Measurements taken during the solar eclipse of 11 July 1991 showed no such glow.<sup>a</sup> So the assumed "millions of years" and this explanation for the solar system's origin are probably wrong.

Disks of gas and dust sometimes surround stars. That does not mean planets are forming in those disks. Some disks formed from matter suddenly expelled from the star.<sup>b</sup> Other disks formed (via gravity and the laws of physics) from impact debris or other matter near the star. Early astronomers called the disks planetary nebula, because they mistakenly thought they contained evolving planets.

#### 50. Faint Young Sun

If, as evolutionists teach, the solar system evolved from a spinning dust and gas cloud 4.5 billion years ago, the slowly condensing Sun would have

radiated 25–30% less heat during the next 600 million years than it radiates today.<sup>a</sup> (A drop in the Sun's radiation of only a few percent would freeze all our oceans.) Had this happened anytime in the past, let alone for 600 million years, the ice's mirrorlike surfaces would have reflected more of the Sun's radiation into outer space, cooling Earth even more in a permanent, runaway deep-freeze. If so, all agree that life could not have evolved.

Evolutionists first tried to solve this "faint young Sun" problem by assuming Earth's atmosphere once had up to a thousand times more heat-trapping carbon dioxide than today. No evidence supports this and much opposes it.<sup>b</sup> Actually, large amounts of carbon dioxide on a cool Earth would have produced "carbon dioxide ice clouds high in the atmosphere, reflecting the Sun's radiation into outer space and locking Earth into a permanent ice age."<sup>c</sup>

A second approach assumes Earth's atmosphere had a thousand times more ammonia and methane, other heat-trapping gases. Unfortunately, sunlight quickly destroys both gases. Besides, ammonia would readily dissolve in water, making oceans toxic.<sup>d</sup>

A third approach assumes Earth had no continents, had much more carbon dioxide in its atmosphere, and rotated once every 14 hours, so most clouds were concentrated at the equator. With liquid water covering the entire Earth, more of the Sun's radiation would be absorbed, raising Earth's temperature slightly. All three assumptions are questionable.

Evolutionists have never explained in any of these approaches how such drastic changes could occur in almost perfect step with the slow increase in the Sun's radiation. Until some evidence supports such "special pleadings," it does not appear the Sun evolved.<sup>e</sup>

If the Sun, a typical and well-studied star, did not evolve, then why presume that all other stars did?

#### 51. Mountains of Venus

Venus must have a strong crust to support its extremely high, dense<sup>a</sup> mountains. One mountain, Maat Mons, rises higher than Earth's Mount Everest does above sea level. Because Venus is relatively near the Sun, its atmosphere is 860°F—so hot its surface rocks must be weak or "tarlike." (Lead melts at 622°F and zinc at 787°F.) Only if Venus' subsurface rocks are cold and strong can its mountains defy gravity. This allows us to draw two conclusions, both of which contradict major evolutionary assumptions.

First, evolutionists assume planets grew (evolved) by the gradual accumulation of rocky debris falling in from outer space, a process called gravitational accretion. Heat generated by a planet's worth of impacts would have left the rocky planets molten. However, Venus was never molten. Had it been, its hot atmosphere would have prevented its subsurface rocks from cooling enough to support its mountains. So Venus did not evolve by gravitational accretion.

Secondly, evolutionists believe the entire solar system is billions of years old. If Venus were billions of years old, its atmospheric heat would have "soaked" deeply enough into the planet to weaken its subsurface rocks. If so, not only could Venus' crust not support mountains, the hot mountains themselves could not maintain their steep slopes. Venus must be relatively young.



Figure 24: Maat Mons on Venus. If Venus' mountains were composed of lighter material, they would "float" in the denser rock below, similar to an iceberg floating in denser liquid water. (Mountains on Earth are buoyed up, because they have a density of about 2.7 gm/cm<sup>3</sup> and "float" in rock that is about 3.3 gm/cm<sup>3</sup>.) Data from the Magellan spacecraft that orbited and mapped Venus for several years showed that Venus' mountains are composed of rock that is too dense to "float." So what supports them? It must be Venus' strong crust—despite Venus' extremely hot atmosphere. This implies Venus is not old and did not evolve.

#### 52. Space, Time, and Matter

No scientific theory exists to explain the origin of space, time, or matter. Because each is intimately related to or even defined in terms of the others, a satisfactory explanation for the origin of one must also explain the origin of the others.<sup>a</sup> Naturalistic explanations have completely failed.

#### 53. A Beginning

Heat always flows from a hot body to a cold body. If the universe were infinitely old, everything should have the same temperature. Because temperatures vary, the universe is not infinitely old. Therefore, the universe had a beginning. (A beginning suggests a Creator.)<sup>a</sup>

#### 54. First Law of Thermodynamics

The first law of thermodynamics states that the total energy in the universe, or in any isolated part of it, remains constant. In other words, energy (or its mass equivalent) is not now being created or destroyed; it simply changes form. Countless experiments have verified this. A corollary of the first law is that natural processes cannot create energy. Consequently, energy must have been created in the past by some agency or power outside and independent of the natural universe. Furthermore, if natural processes cannot produce mass and energy—the relatively simple inorganic portion of the universe—then it is even less likely that natural processes can produce the much more complex organic (or living) portion of the universe.

#### 55. Second Law of Thermodynamics

If the entire universe is an isolated system, then, according to the second law of thermodynamics, the energy in the universe available for useful work has always been decreasing. However, as one goes back in time, the energy available for useful work would eventually exceed the total energy in the universe, which, according to the first law of thermodynamics, remains constant. This is an impossible condition, implying the universe had a beginning.<sup>a</sup>

A further consequence of the second law is that when the universe began, it was more organized and complex than it is today—not in a highly disorganized and random state as assumed by evolutionists and proponents of the big bang theory.<sup>b</sup>

# 56. Big Bang?

The big bang theory, now known to be seriously flawed,<sup>a</sup> was based on three observations: the redshift of light from distant stars, the cosmic microwave background (CMB) radiation, and the amount of helium in the universe. All three have been poorly understood.

Redshift. The redshift of starlight is usually interpreted as a Doppler effect;<sup>b</sup> that is, stars and galaxies are moving away from Earth, stretching out (or reddening) the wavelengths of light they emit. Space itself supposedly expands—so the total potential energy of stars, galaxies, and other matter increases today with no corresponding loss of energy elsewhere.<sup>c</sup> Thus, the big bang violates the law of conservation of energy, probably the most important of all scientific laws.

Conservation of energy is violated in another important way. If there was a big bang, distant galaxies should not just be receding from us, they should be decelerating. Measurements show the opposite; they are accelerating from us. [See sidebar titled "Dark Thoughts."]

Many objects with high redshifts seem connected, or associated, with other objects of low redshifts. They could not be traveling at such different velocities and remain connected for long. [See <u>"Connected Galaxies"</u> and <u>"Galaxy Clusters"</u> on page 37.] For example, many quasars have very high redshifts, and yet they statistically cluster with galaxies having low redshifts.<sup>d</sup> Sometimes, quasars seem to be connected to galaxies by threads of gas.<sup>e</sup> Many quasar redshifts are so great that the massive quasars would need to have formed too soon after the big bang—a contradiction of the theory.<sup>f</sup>

Finally, redshifted light from galaxies has some strange features inconsistent with the Doppler effect. If redshifts are from objects moving away from Earth, one would expect redshifts to have continuous values. Instead, redshifts tend to cluster at specific, evenly-spaced values.<sup>g</sup> Much remains to be learned about redshifts.

CMB. All matter radiates heat, regardless of its temperature. Astronomers can detect an extremely uniform radiation, called cosmic microwave background (CMB) radiation, coming from all directions. It appears to come from perfectly radiating matter whose temperature is 2.73 K—nearly absolute zero. Many incorrectly believe that the big bang theory predicted this radiation.<sup>h</sup>

Matter in the universe is highly concentrated into galaxies, galaxy clusters, and superclusters—as far as the most powerful telescopes can see.<sup>i</sup> Because the CMB is so uniform, many thought it came from evenly spread matter soon after a big bang. But such uniformly distributed matter would hardly gravitate in any direction; even after tens of billions of years, galaxies and much larger structures would not evolve. In other words, the big bang did not generate the CMB.<sup>i</sup> [See pages 274-276.]

Helium. Contrary to what is commonly taught, the big bang theory does not explain the amount of helium in the universe; the theory was adjusted to fit the amount of helium.<sup>n</sup> Ironically, the lack of helium in certain types of stars (B type stars)<sup>o</sup> and the presence of boron and beryllium in "older" stars<sup>p</sup> contradicts the big bang theory.

A big bang, for all practical purposes, would produce only hydrogen and helium, so the first generation of stars to somehow form after a big bang should consist of only hydrogen and helium. Some of these stars should still exist, but despite extensive searches, none has been found.<sup>4</sup>

Other Problems. If the big bang occurred, we should not see massive galaxies at such great distances, but such galaxies are seen. [See "**Distant Galaxies**" on page <u>271</u>.] A big bang should not produce highly concentrated<sup>r</sup> or rotating bodies.<sup>§</sup> Galaxies are examples of both. Nor should a big bang produce galaxies with the spacings among them that are actually observed.<sup>†</sup>

Also, a large volume of the universe should not be—but evidently is—moving sideways, almost perpendicular to the direction of apparent expansion.<sup>u</sup>

If a big bang occurred, equal amounts of matter and antimatter should have been made. For every charged particle in the universe, the big bang should have produced an identical particle but with the opposite electrical charge.<sup>v</sup> (For example, the negatively charged electron's antiparticle is the positively charged positron.) Only trivial amounts of antimatter have ever been detected, even in other galaxies.<sup>w</sup>

## Dark Thoughts

For decades, big bang theorists said that the amount of mass in a rapidly expanding universe must be enough to prevent all matter from flying apart; otherwise, matter could not come together to form stars and galaxies. Estimates of the universe's actual mass always fell far short of that minimum amount. This "missing mass" is often called "dark matter," because no one could see it or even detect it. Actually, "missing mass" had to be "created" to preserve the big bang theory. [See <u>"Missing Mass"</u> on page <u>28</u>.] The media's frequent reference to "dark matter" enshrined it in the public's consciousness, much like the supposed "missing link" between apes and man.

The big bang has struck again. The big bang theory also predicts that the universe's expansion must be slowing, just as a ball thrown up must slow as it moves away from the Earth. For decades, cosmologists tried to measure this deceleration. The shocking result is now in—and the answer has been rechecked in many ways. The universe's expansion is not decelerating; it is accelerating!<sup>k</sup> To preserve the theory, something must again be invented. Some energy source that overcomes gravity must continuously accelerate stars and galaxies away from each other. This energy, naturally enough, is called "dark energy."

Neither "dark matter" (created to hold the universe together) nor "dark energy" (created to push the universe apart) can be seen, measured, or tested.<sup>1</sup> We are told that "most of the universe is composed of invisible dark matter and dark energy."<sup>m</sup> Few realize that both mystical concepts were devised to preserve the big bang theory.

Rather than cluttering textbooks and the public's imagination with statements about things for which no objective evidence exists, wouldn't it be better to admit that the big bang is faulty? Of course. But big bang theorists want to preserve their reputations, careers, and world view. If the big bang is discarded, only one credible explanation remains for the origin of the universe and everything in it. That thought sends shudders down the spines of many evolutionists. (Pages 274-276 give an explanation for the expansion, or

# "stretching out," of the universe.)

If a big bang occurred, what caused the bang? Stars with enough mass become black holes, so not even light can escape their enormous gravity. How then could anything escape trillions upon trillions of times greater gravity caused by concentrating all the universe's mass in a "cosmic egg" that existed before a big bang?<sup> $\underline{x}$ </sup>

If the big bang theory is correct, one can calculate the age of the universe. This age turns out to be younger than objects in the universe whose ages were based on other evolutionary theories. Because this is logically impossible, one or both sets of theories must be incorrect.<sup>Y</sup> All these observations make it doubtful that a big bang occurred.<sup>Z</sup>

## 57. Missing Mass

Imagine seeing several rocks in outer space, moving radially away from Earth. If the rocks were simultaneously blasted away from Earth, their masses, changing velocities, and distances from Earth would have a very precise mathematical relationship with each other. When a similar relationship is checked for billions of observable galaxies, an obvious conclusion is that these galaxies did not explode from a common point in a huge "big bang."<sup>a</sup> It is even more obvious that if such an explosion occurred, it must have been much, much less than billions of years ago.

Evolutionists try to fix this problem in two ways. They assume the universe is filled with at least ten times as much matter as can be seen. This is maintained even though three decades of searching for this "missing mass" have turned up nothing other than the conclusion that it does not exist.<sup>b</sup>

• A second "fix attempt" assumes that the rocks (or, in the real problem, all particles in the universe) were briefly, almost magically, accelerated away from some point. This process, called "inflation," supposedly reached speeds billions of trillions of times faster than the speed of light. An instant later, and for no apparent reason, inflation stopped. All this happened by an unknown, untestable phenomenon—not by a blast. Then this matter became controlled by gravity after it reached just the right speed to give the universe an age (based on one set of assumptions) of about 13.7 billion years.<sup>c</sup> Such flights of imagination and speculation are common in the field of cosmology.

#### 58. Heavy Elements

Evolutionists historically have had difficulty explaining the origin of heavy elements. (A big bang would produce only hydrogen, helium, and lithium.) The other 100<sup>+</sup> elements supposedly formed deep inside stars and during

stellar explosions. This theory is hard to verify, because stellar interiors and explosions cannot be carefully analyzed. However, a vast region of gas containing the mass of 300,000,000,000 suns has been found that is quite rich in iron and other heavy elements. The number of nearby visible stars is a thousand times too small to account for the heavy elements in that huge region.<sup>a</sup> Heavy elements are even abundant in nearly empty regions of space that are farthest from stars and galaxies.<sup>b</sup>

Most hydrogen atoms weigh one atomic mass unit, but some, called heavy hydrogen, weigh two units. If everything in the universe came from a big bang or a swirling gas cloud, heavy hydrogen should be uniformly mixed with normal hydrogen. It is not.<sup>c</sup> Comets have twice the concentration of heavy hydrogen as oceans. Oceans have 10–50 times the concentration as the solar system and interstellar matter. [See "Heavy Hydrogen" on page 216.]

#### 59. Interstellar Gas

Detailed analyses have long indicated that neither stars nor planets could form from interstellar gas clouds.<sup>a</sup> To do so, either by first forming dust particles<sup>b</sup> or by direct gravitational collapse of the gas,<sup>c</sup> would require vastly more time than the alleged age of the universe. An obvious alternative is that stars and planets were created.

## 60. Fast Binaries

In our galaxy, about 60% of all stars are grouped in closely spaced pairs called "binaries." Fortunately, our Sun does not have a binary partner. If it did, temperatures on Earth would vary too much to support life. The mutual gravitational attraction between stars in a binary pair causes them to orbit each other, just as the Moon orbits Earth. The closer paired stars are to each other, the faster they orbit. Their orbits do not change appreciably, even over long periods of time.

Two particular stars are so close that they orbit each other every 11 minutes! This implies their centers are about 80,000 miles apart.<sup>a</sup> By way of comparison, our Sun, a typical star, is more than 800,000 miles in diameter. Other close binaries are also known.<sup>b</sup>

The theory of stellar evolution was developed by arranging (on paper) different types of stars in a sequence according to brightness and color. Stellar evolutionists believe stars slowly change from one type to another. However, scientists have never observed such changes, and many stars do not fit this pattern. According to stellar evolution, a star's volume, late in its lifetime, expands to about a million times that of our Sun and finally collapses to become a small star about the size of Earth (a white dwarf) or even smaller (a neutron star).

Only such tiny stars could have their centers 80,000 miles apart and still orbit each other. Obviously, these fast binary stars did not evolve from larger stars, because larger stars orbiting so closely would collide. If two stars cannot evolve into a condition that has them orbiting each other every 11 minutes, one wonders whether stars evolve at all.

#### 61. Star Births? Stellar Evolution?

Evolutionists claim that stars form from swirling clouds of dust and gas. For this to happen, vast amounts of energy, angular momentum, and residual magnetism must be removed from each cloud. This is not observed today, and astronomers and physicists have been unable to explain, in an experimentally verifiable way, how it could happen.<sup>a</sup>

The most luminous stars in our galaxy (so-called "O" stars) are "burning fuel" hundreds of thousands of times more rapidly than our Sun. This is so rapid that they must be quite young on an evolutionary time scale. If these stars evolved, they should show easily measurable characteristics such as extremely high rates of rotation and enormous magnetic fields. Because these characteristics are not observed, it seems quite likely these stars did not evolve.

If stars evolve, star births should about equal star deaths. Within our Milky Way Galaxy alone, about one star dies each year and becomes an expanding cloud of gas and dust.<sup>b</sup> Deaths of more massive stars are much brighter, more violent explosions called "supernovas." Star births, on the other hand, would be accompanied by the appearance of new starlight not present on the many photographic plates made decades earlier. Instruments which could detect dust falling into and forming supposedly new stars have not done so.<sup>c</sup> Actually, stars that some astronomers believe are very new are expelling matter. We have seen hundreds of stars die, but we have never seen a star born.<sup>d</sup>

Also, stars are found where astronomers agree they could not evolve, near the center of our galaxy. These short-lived stars orbit a massive black hole, where gravity is so strong that gas and dust clouds could never evolve into a star. Instead, the black hole's massive gravity would pull such clouds (supposedly evolving stars) apart.<sup>e</sup>

Nor could stars have evolved in globular clusters, where up to a million stars occupy a relatively small volume of space. [See Figure <u>143</u> on page <u>277</u>.] Wind and radiation pressure from the first star in the cluster to evolve would have blown away most of the gas needed to form subsequent stars in the cluster.<sup>f</sup> In other words, if stars evolved, we should not see globular clusters, yet our galaxy has about 200 globular clusters. For so many stars to be packed so tightly together requires that they all came into existence at about

the same time.

Poor logic is involved in arguing for stellar evolution, which is assumed in estimating the age of stars. These ages are then used to establish a framework for stellar evolution. That is circular reasoning.<sup>g</sup>

In summary, there is no evidence that stars evolve, there is much evidence that stars did not evolve, and there are no experimentally verifiable explanations for how they could evolve and seemingly defy the laws of physics.<sup>h</sup>

# Stellar Nursery, or Is the Emperor Naked?

The popular media frequently claim that stars are actually seen evolving and that pictures of these stellar nurseries prove it. Impressive pictures of the Eagle Nebula (Figure 25) are usually shown. Many people accept the claim without asking themselves, "Do the pictures contain anything that shows stars evolving?" Of course not. If stars were evolving, other physical measurements could confirm it. Where are those measurements? Silence.

This willingness to accept what others tell us reminds one of the tale in which citizens told their naked emperor he was nicely dressed. Rather than believing or reporting what their eyes clearly told them, people preferred to accept what others said—or at least not object. Better not disagree or even ask questions; it could be embarrassing.

Why do some astronomers say stars are evolving? Until recently, the atmosphere prevented astronomers from seeing infrared radiations from space. Then in the late 1960s, satellites outside the atmosphere made infrared sky surveys that showed some surprisingly warm clouds of dust and gas in our galaxy. Several things could cause this heating. Perhaps a dim star (a brown dwarf) is behind the cloud, or maybe something nearby exploded. Those who struggled to understand how stars evolved had a different interpretation: "Gravity is collapsing the cloud, raising its temperature. In thousands of years, it will become a star." Still other interpretations are possible.

NASA's claim in 1995 that these pictures (Figure 25) showed hundreds to thousands of stars forming was based on the speculative "EGG-star formation theory." It has recently been tested independently with two infrared detectors that can see inside the dusty pillars. Few stars were there, and 85% of the pillars had too little dust and gas to support star formation. "The new findings also highlight how much astronomers still have to learn about star formation." [Ron Cowen, "Rethinking an Astronomical Icon: The Eagle's EGG, Not So Fertile," Science News, Vol. 161, 16 March 2002, pp. 171–172.]

What prevents stellar evolution? Just as the Sun's gravity does not pull planets into the Sun, gravity does not automatically pull gas and dust into a tight ball that then ignites as a star. Each cloud of dust and gas in space has a specific amount of kinetic and potential energy, angular momentum, and magnetic energy that must be removed for even a slight collapse. Evidence of that removal is missing. Furthermore, any collapse would only increase the cloud's temperature and pressure, which, in turn, would expand the cloud. For more details on these processes, see "Interstellar Gas," "Star Births?, Stellar Evolution" beginning on page 29, and especially all related endnotes starting on page 86.

If someone tells you that the emperor is well dressed, ask questions and insist on seeing real evidence.

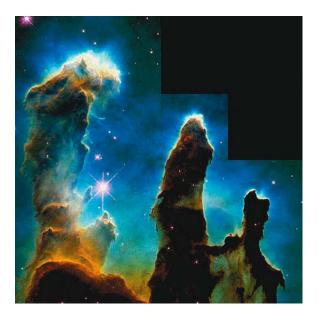




Figure 25: Gas and Dust Clouds in the Eagle Nebula.

## 62. Galaxies

Evolutionists now admit that galaxies cannot evolve from one type to another.<sup>a</sup> There are also good reasons natural processes cannot form galaxies.<sup>b</sup> Furthermore, if spiral galaxies were billions of years old, their arms or bars would be severely twisted.<sup>c</sup> [See Figure 141 on page 266.] Because they have maintained their shape, either galaxies are young, or unknown physical phenomena are occurring within galaxies.<sup>d</sup> Even structures composed of galaxies are now known to be so amazingly large, and yet relatively thin, they could not have formed by slow gravitational attraction.<sup>e</sup> If slow, natural processes cannot form such huge galactic structures, then rapid, supernatural processes may have.

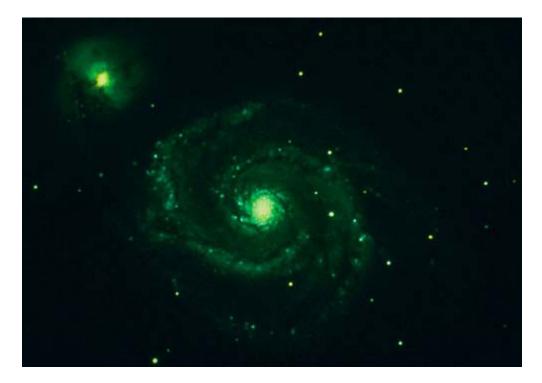


Figure 26: Spiral Galaxies.