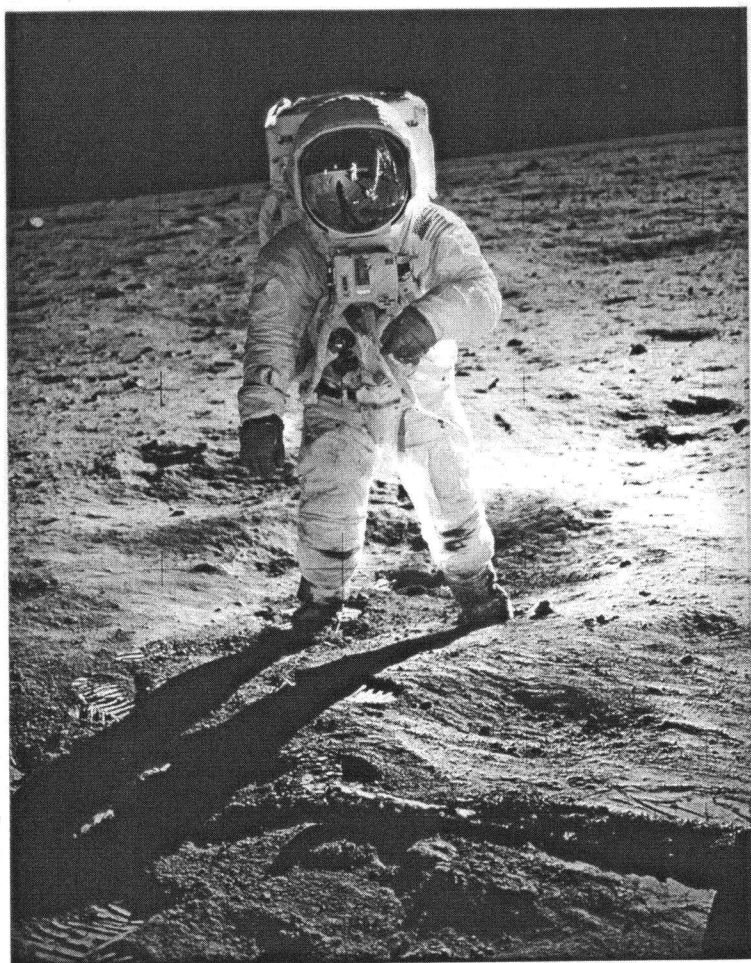


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Cover: "Man on the Moon," a photo of Buz Aldrin on the moon. Supposedly, according to some, the photo was taken in a studio on earth. For more, see "Did We Go To the Moon?" on page 10.

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EDITORIAL

After a delay of about a month and a half, this issue finally goes to press. In it we have a new writer contributing directly to the *Biblical Astronomer* for the first time. Mr. David Lifschultz is by no means new to the geocentric scene. He's been a dedicated worker not only on the geocentric and creationist front but also on Bible-based economics, government, national and personal righteousness just to name a few. His article which graces this issue under the title of "Spatial Measurement and Modern Science" reopens the debate on the size of the universe. Several years ago that debate blistered the pages of this journal and I imposed a one-year moratorium on any further debate to allow cooler heads to prevail. This is the first occasion anyone has offered at it since the year ended.

Mr. Lifschultz's article came about as the result of an exchange of letters with a prominent creationist, who has asked to remain anonymous. The initial issue was geocentricity but in the course of the exchange the size of the universe came up, with the creationist arguing that the universe was infinite. Mr. Lifschultz immediately saw the flaws in that and ..., well you can read the rest of it for yourselves.

Additional articles by others are forthcoming. I will not put my two-cents worth in this issue other than to say I still disagree with the arguments that the universe *has* to be small. I am reminded of the logical consequence of Fourier's mathematical conclusion that all functions can be contrived as the sum of a series of periodic functions, which consequence is that given enough cyclical arguments, one can always fit any theory. In forthcoming articles we shall look at the Biblical as well as logical structure of the arguments.

If anyone is looking for the continuation of the article on entropy and economics, he will have to wait at least another issue. Although the equations and graphs have been ready for more than 20 years, the words describing them are not and will take some time to reconstruct. Nevertheless, the conclusion stands that a totally controlled world system such as F. D. Roosevelt's, Clinton's, Kennedy's, and the George Bushes' "new secular order" (see the pyramid on the back of a United States one dollar bill) will collapse under its own weight destroying about a third of each subsystem in the process. The results show these leaders to adhere to nothing but dangerous, occult, superstitious dogma, as per Acts 17:22.

I have finally put together an article which was envisioned several years ago. From the first days of the space program, there have been men who claimed that the whole thing was a hoax. Lately several have made quite a bit of money, not to mention made a name for themselves by publishing colorful books with alleged proofs. The so-called proofs are examined here with a critical eye and found to be wanting. Want to see why? Read the article.

Finally, for most readers it is time to renew. Remember, you will receive no renewal notices. So do it now.

And yet, the lowly fruit fly, which has been a mainstay of genetic experiments for more than sever decades and — despite mutations — has undergone some 2,500 generations in that time, has not shown the slightest inclination to display itself as a new species.

— F. B. Jueneman, "The Origin of Intelligence"
Research and Development Magazine,
Feb. 1992, p. 43

SPATIAL MEASUREMENT AND MODERN SCIENCE

David Lifschultz

The recent movie entitled *Matrix* presents to its audience the rather ancient view that reality cannot be grasped. In a literary sense, this can be traced to Plato's *Republic* and his cave allegory where the people in the cave could only see the shadows of reality but not the real thing. The confusion begins with the interpretation of those unclear shadows, and hence we have those long and boring Socratic dialectics. In ancient times this notion was combated in a secular way by Aristotle's observational science, and in a theological way by the Bible.

Modern science has similarly taken leave of its senses, and launched into the Platonic world of thought experiments in which the thought, however counter-intuitive, becomes the reality. We see this rather easily in the thoughts of Sigmund Freud who uses the Platonic shadows of the unconscious, which by definition cannot be available to sensory perception, to base the idea that out of the unconscious comes the Oedipal complex, which postulates the unconscious desire of a son to kill his father and marry his mother. As revoltingly counter-intuitive as this is, aside from the fact it constitutes two mortal sins and capital crimes, namely murder and incest, it was foisted on the unsuspecting masses by constant propaganda. Karl Marx's counter-intuitive madness is that wages should be equal despite unequal effort and ability in a counter-intuitive effort to judge everything by money and to create a mathematical ideal that equal division of that wealth will solve societies' problems. While the Bible encourages equal opportunity by dividing the land equally, it does not mandate equality of result which is destructive of initiative. Another modern thought experiment is Darwin's view, or really Anaximander's idea, that mankind descended from animals without any visible evidence.

It is easy for us, whose reason is uncorrupted, to see such major errors as these. But it is harder for most to spend the intellectual effort to fathom modern astronomy. While we see the sun rise and set, and it appears to move just as the Bible tells us, the modern scientist tells us it does not move by using the unprovable idea of relative motion to save the

appearances of the ancient thought experiment of Aristarchus that the earth rotates. The contribution this short paper seeks to make is to demonstrate that the evidence of one of the supporting legs of evolutionary doctrine, the humongous universe, is also unprovable, and can be just as easily a small universe with the stars being simply smaller than the sun, and therefore very nearby.

When we use the word theory in astronomy, we are using an unprovable explanation of the observed phenomena that will translate itself, at least in modern astronomy, into Plato's cave shadows.

It is important to understand that, according to Sir Arthur Stanley Eddington in his *The Nature of the Physical World*, that when dealing with astronomy you are dealing completely with theory, and if we do not accept the theories, you cannot understand anything about astronomy. Strange how the masses abandoned the Bible over unproven theories. Theories are developed by making measurable scientific observations on the earth and applying them to outer space. For example, the speed of light in a vacuum is 186,000 miles per second, but less in other media. Yet, when we calculate the speed of light from Alpha Centauri and Proxima Centauri, the stars nearest to our solar system (using heliocentric terminology), the distance is measured as 4.3 light-years. A light-year is about six million million miles. We are using this 186,000 miles per second measurement because it works on earth, and it is assumed that space is a vacuum. We cannot prove those speeds in outer space because no one is there.

We are also using measurement systems that can be checked on earth by triangulation (trigonometry) but cannot be checked in space because we cannot travel the distance between the earth and Alpha Centauri by aircraft or spaceship using a measurable speed of flight between the two points. The use of triangulation requires us to know two angles and a base line to calculate the distance. So let's say we have a distance between two points far away from each other on earth, and then we have to determine the angle at each end pointing to the star. The problem here is the margin of error even with our best instruments can destroy the calculation's accuracy in every case.

There is another method of measurement of distances, based on the Hertzsprung-Russell diagram, used to measure distances too far to triangulate, although we have already pointed out that such measurements are inaccurate. The measurement of the H-R diagram is done by determining the absolute magnitude of the nearest stars' luminosity in relation to its

apparent magnitude, the latter determined through telescopic observation. The absolute magnitude is found by determining the surface temperature of the star's surface, again through telescopic observation. Although triangulation is inaccurate, and probably without meaning, it is used to measure the distances to the nearest stars, and these distances create a relationship between absolute and apparent luminosity that is extrapolated to measure the distance to stars that are too far to triangulate. In a sense the H-R methodology indulges in circular logic as the originating trigonometry or triangulation methodology creates an erroneous working premise distance — as we find is used in determining a star's age since a star's age is not a directly observable characteristic but must be inferred from the very evolutionary theory that the atheistical scientist is trying to validate.

Therefore, the size of the stars may not be bigger than the sun if they are very close, but they could easily be smaller than what the Bible describes as the "greater light," the sun. Those stars which are brighter could be larger, and those dimmer could be smaller. And the universe could be very small. The problem of stellar parallax in relation to distance can be explained by stars moving differently in relation to the earth rather than in fixed unison.

This takes us to the question of the red shift, the Big Bang and the expanding universe. But first, some history. Under the ancients such as Aristotle and Ptolemy, the universe was considered finite, and the stars, sun, planets, and moon revolved around the earth in a static system. When Sir Isaac Newton developed his system, he could not deal with the fallacy that the gravitational force of the larger mass would attract all other heavenly bodies to it, and implode the universe. So, he used a pagan notion of materialistic infinity to balance it by saying that it balanced because the heavenly bodies were an infinite distance from each other. This is rather illogical as I will show.

Now I don't know if Sir Isaac was reading Benedictus de Spinoza's *Opera Posthuma*, but to say the universe is infinite in size is to ascribe a characteristic of God, infinity, to a material universe. Spinoza insanely said the universe and all that it contains was God in his *Opera Posthuma* and thereby forces anyone to conclude that an evil man's actions are an extension of God, which is demented. By the way, Albert Einstein said he believed in Spinoza's god.

Sir Isaac's system, by using infinity, escapes logical scrutiny. Also, by saying distances between heavenly bodies are infinite, you are saying

the earth must rotate, for Aristotle established in his *Physics* that an object at an infinite distance to the earth could not travel an infinite distance around it at an infinite speed, for that was impossible. While Sir Isaac never said the heliocentricity of the universe was true, his absurd scientific system of gravity required it, and as foolish as it was, became the rage merely because it provided relatively accurate measurements of the motions of heavenly bodies.

When Albert Einstein came along, he found all physics had collapsed because Michelson and Morley had demonstrated that earth's motion through space was unprovable. Although either the earth's rotation, or aether's rotation (the Sagnac effect), has been demonstrated by the interferometer, geocentrists believe that the aether rotates. While to geocentrists the Michelson-Morley experiments pointed to the truth that the earth was not moving, this observation was unthinkable to atheists.

Einstein created many assumptions that are difficult to understand, such as there is no aether (that space is the empty of emptiness) or that light that traveling at 186,000 miles per second is the fastest phenomenon, and that all motion is relative. We do not know why he got rid of the aether unless he found the Lorentz transformation untenable, but what could be more untenable than space which has nothing in it, or really doesn't exist? We are interested in his theory that light is the fastest phenomenon because that undermines Newton's action-at-a-distance at infinite speed for gravitation, between objects of infinite distance. Einstein substituted curvatures of space, through which the heavenly bodies fall describes their orbits. Gravity is relegated to superstition, and this device avoids using infinity in balancing the universe. We could say curvatures of space are an improvement although the term really means nothing, and we are left with the holy observation that God made it that way.

And last, but not least, we come to the Big Bang. This evolutionary idea could have said everything expanded from this explosion and stopped, then went into perfect balance, and then we could have our old static celestial system, but there was observed through a spectroscope a redshift phenomenon whereby objects moving away from the observer are revealed by telescopic observation to have spectral lines shifted toward the red, or longer wavelength end of the visible spectrum.

However, the work of Halton Arp showing discordant red shifts undermines the expanding universe hypothesis. If this could have been proven, it would not have gotten around Newton's use of infinity because

either space would have had to expand from infinity to continually absorb the expansion, which is logically absurd, or the expansion must stop when it reaches the end, either crashing into the end of the universe, or reversing its course before this, based on gravitational pull; or rebounding off the backboard of the end of the universe and going back in the direction it came from. These are the thought games atheists play.

Therefore, we have shown that thought experiments, theory, or in other words Plato's shadows of reality, are no substitute for observable reality and Einstein's, Newton's, or Galileo's thought experiments are not reality; but what we see is reality. When a modern court jester like Einstein comes along and tries to pull the wool over our eyes by saying the heavenly bodies travel in relative motion to each other, and we cannot be sure that the earth rotates or not, and thinks he has thus saved appearances for heliocentricity, we can reply that he has proved nothing, and our scientific Bible stands in its geocentricity without a scintilla of proof against it. We can say the same about spatial distance. The idea that the sun is smaller than the stars because the stars are so far away does not have a shred of observable truth behind it, and the Bible's greater light, the sun, still stands as the largest light in the universe as the Bible tells us it is. And no one can prove it otherwise now or forever!

DID WE GO TO THE MOON?

Gerardus D. Bouw, Ph.D.

There is a belief, officially taught to Cuban school children and held by some New Agers, the Hare Krishnas, orthodox Moslems, the Flat Earth Society, and now increasingly circulating among Christians, that the United States faked the Apollo moon landings. Many are the claims made by the promoters of the belief, and some of them seem quite convincing. Although space will not permit a detailed account of the claims and counterclaims, we can categorize most of them into several categories and look at a handful of particulars. Most arguments are photographic in nature. After careful examination of photos and NASA videos of all the moon landings, we conclude that there is no evidence that the moon photos and videos were faked.

Introduction

In order to analyze the claims made by the doubters, I examined, with remote control in hand, all of NASA's video tapes about the Apollo missions. The comments below are not made from inexperience. From 1959 through 1976 I developed and printed my own photos and slides. For black and white prints I used of Ansel Adams' zone system photography, where one exposes for the shadows and develops for the highlights. I learned color printing in 1965 when I worked all summer for Dr. Larry Helfer of the University of Rochester. We were looking to enhance subtle color differences in the lunar mare (lava) beds by taking color photos of the moon and printing them to enhance the color contrasts of the moon. The whole summer was spent taking and printing telescopic photos of the moon at all phases. I continued color printing, when I could afford it, for several more years. Also, I worked six months in the processing lab of a portrait studio, where, among other skills, I learned toning. In more recent years I've enhanced photos by computer. For samples of that, see the eclipse photos posted on the Biblical Astronomer web site and photos which appeared in past issues of the *Biblical Astronomer* which dealt with the face and pyramids of Mars.

In the course of all that, I learned photographic techniques such as *dodging*, which keeps shady or dark areas of a photo from getting too

dark; *burning in*, which brings out details in over-exposed areas, keeping them from looking washed-out; *retouching*, staining a negative to remove dark spots and blemishes from prints; and *enhancing* and *reducing*, techniques to rescue underexposed and overexposed negatives or prints. About the only thing I didn't do was *airbrushing*, the opposite of retouching, but I've done that with computer prints. Lately I've been working with the computer color correcting and restoring faded color photos from the 1950s. In short, I do know a little bit about what can and cannot be done with photos in the lab and by computer.

No sooner had the first lunar module landed on the surface of the moon than a chorus of voices, most of them communists, pronounced the whole Apollo program a fake. Certainly given the poor quality live video presented on world television at the time, there is no way to tell the difference. They used slow-fading photoreceptors which made it look like background objects shone through the astronauts' bodies, at least until the memory of the receptors faded. But NASA did not stop with that original video. NASA released still photos and video tapes of each of the lunar landings. Based on these released photos, two men in particular have made a living from the negative view. They are Bill Bryan of Oregon who, in 1982, wrote a book called *Moongate*, and Ralph René who wrote two books in the mid-nineties: *Was It Only A Paper Moon?* and *Did NASA Moon America?*. Are they right or wrong in their claims? Let's see what we can garner from the videos, still photos, and technology.

No evidence of air

If the landing and lunar surface activities were done on earth, there should be evidence of the presence of air. After all, to create a near-perfect vacuum for a stage set covering the scope of the lunar landing area is incredibly difficult, not to mention expensive. The videos were examined for evidence of air circulation.

The Apollo 11 video is not much help there, but Apollo 12 shows the dust blowing out from under the rocket engine as the lunar module (LM) landed. The dust moved in straight, radial lines away from the touchdown point. There is no evidence of swirling as would be the case if there were air. That is, it didn't behave like the cloud of dust and flame raised by a rocket launch from earth. True, the scale is smaller here, but the principle is the same. Except for hitting certain rocks, the dust blows

straight out. When the engine turned off, the dust dissipated immediately instead of slowly circulating and settling to the surface.

The lunar rover video was also examined for evidence of air circulation in the dust kicked up by the wheels. The dust kicked up in rooster tail fashion which traced out the expected parabolic shape. On earth dust swirls and stays up for a long time such as one may have seen behind a vehicle driving down a dusty road.

Apollo 15 turned the video camera of the lunar excursion module (LEM) towards the lunar module to film the takeoff. When the return craft took off, there was no billowing exhaust as would be expected if filmed in air, nor was there any evidence of condensation or steam. The flag did twist but stayed up.

In connection with the takeoff film, some hoax advocates point to the lack of such as evidence that it was faked. According to them there should have been a huge flame which would destroy the LM platform and flag. This they base on an artist's conception of what the takeoff should look like. Now if Hollywood had filmed it, it would've looked as the artist pictured it, not as the relatively featureless exhaust filmed by Apollo 15. Doesn't that rather show that the landing was real and not a Hollywood special? Besides, to keep from damaging man and machine, the thrust builds up slowly so that most of the thrust and thus the exhaust blast takes place too high above the surface to disrupt the dust.

And that brings us to another argument raised by the doubters. Why is there no great blast crater under the lander? The contention is that thousands of pounds of thrust should have produced a sizable crater. Again, most of the deceleration occurs well before landing. For the landing to be gentle enough for survival, a minimum amount of thrust is needed toward the end, near the surface. (I seem to recall that it took one pound of fuel per second to keep the lander falling at constant rate, which is to say, to be able to hover over the surface.)

No dark shadows

There is a fable common to modern man which claims that all shadows in a vacuum are pitch black. For some reason these folk assume that without any air there would be no light to brightening the shadows. Thus they presume that the fact that we can see details of the astronauts and the lander in the shade means that the photos must have been taken in the presence of an atmosphere.

Now it is true that if we have an object alone in space, such as an asteroid, for example, the night side is as dark can be. But shadows on the sunlit side need not be so dark. The same is even truer for a large object such as the moon. On its surface, small rocks which receive little light from the surrounding surface will have dark shadows and show little if any detail on a typical photo. A taller object, such as an astronaut or lunar module, will catch light from more of the surrounding surface and will not be absolutely dark. Consider how bright the full moon appears at night. In actuality it is as bright as a granite rock at noon. Now just the small amount of moonlight we see from a full moon provides enough light to be able to read by. Imagine now that brightness multiplied tens of times over and you have a realistic picture of what the dark side of the lander or astronaut would look like. Indeed, since there is no air to scatter the light on the moon, the shadows would be slightly brighter on the moon than on earth. Since the light would emanate from all around the horizon, there would be no shadows cast by the light from the lunar landscape.

Then, too, there's earth shine. The earth as seen from the moon is much, much brighter than the moon as seen from the earth. The light from the earth would also contribute to brightening the shadows on the moon, but not nearly as much as the light from the lunar landscape. So we conclude that the absence of an atmosphere does not make the shadows on the moon so dark that one can't see features in them.

Perspective

Some critics of NASA's lunar landings maintain that the shadows on the surface of the moon are not aligned and show evidence of multiple light sources. They claim that all shadows should be parallel since the light arrives in a near-flat plane. But such a claim does not hold in practice. I checked the shadows of a tree-lined lane and found that they are not parallel. All the shadows point towards the sun. True, in a narrow field of view (through a telephoto lens or binoculars, for example), the shadows will look parallel, but in reality they point to the sun. This phenomenon is called *perspective*, (Figure 1) and artists and architects know all about it. Evidently the NASA critics don't; or they choose to ignore it.

If there are still doubters among our readers, consider another related phenomenon called which occurs when the sun shines through a hole in a

distant cloud. The resulting sun rays are anything but parallel. They each trace back to the sun.

What about the shadows of the rocks? The rocks are irregular in shape, and so is the surface. Rocks lying on the rims of small depressions will cast longer shadows over the depression than they would be on a flat surface. Rocks lying next to a rise will have short shadows. Irregular peaks and vales on the rocks and surface will cause one to misjudge the lengths and directions of shadows. It is very difficult to judge the parallelism of shadows on an uneven, cratered surface. Based on that alone I found no evidence for multiple light sources. Indeed, multiple light sources would cast multiple shadows and no one claims multiple shadows to be found. More anon.

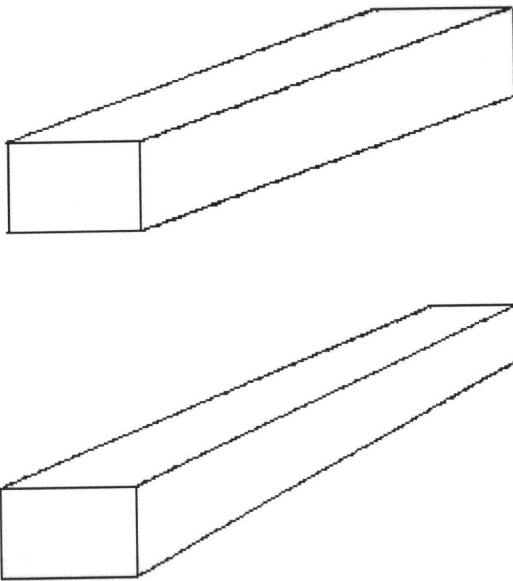


Figure 1: Do shadows fall in parallel lines? Our own senses tell us that shadows, which point to the sun, not to infinity, converge. Consider the two long boxes above. The upper one has all its sides parallel, as the hoax advocates insist it must be; the lower has all lines converge to a point. Which looks realistic?

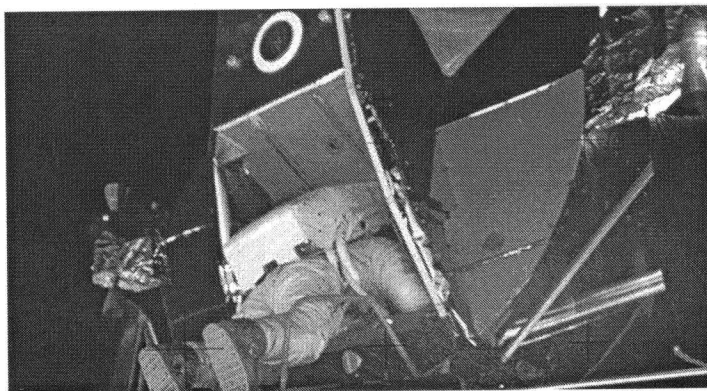


Figure 2: Buz Aldrin starts his descent to the lunar surface. Note how bright his backpack appears. The hoax advocates say it's due to backlighting, but where's the shadow from the alleged light? Neither the backpack or the hose cast a shadow consistent with the fill light theory.

Backlighting

There is a series of photos which shows astronaut Buzz Aldrin climbing down the Apollo 11 lunar lander's steps (Figure 2). He is descending in the shadow of the lander, yet one can see details of the lander and his suit seems bright as if it's in direct sunlight. One hoax advocate claimed that it would take a three hour exposure to make the photo so bright. The claim is that the area had to be illuminated by stage lights.

Actually, the higher up one goes off the surface of the moon, the more of the moon's surface comes into view and the more of its reflected light hits from the surrounding moonscape. It is not surprising then that Aldrin's oxygen pack (which looks like a white backpack) which is pointing skyward, is darker than its underside which catches the light from the lunar surface. Now it could be argued that that's consistent with the flood-light speculation, too; but in that case we should see the shadow cast by the flood light. In none of the photos is there any evidence of a shadow cast by the hypothetical fill-light.

If the lunar landing photos were shot in a studio with flood lights and fill lights, there should be multiple shadows in many of the photos. As it is, there is no evidence of such multiple shadows. Besides, why is the

lunar landscape, also supposedly lit by floodlights, overexposed in that photo? Studio lighting would make the landscape and the lander the same brightness.

A related phenomenon is the one seen in the cover photo. The lunar landscape seems to be bright near the center of the photo and then seems to fade in brightness as one gets to the edges of the photo. One only finds this in photos where the astronauts are prominent. Their white suits outshine the lunar surface and so one sees a differential reflection from the dust on the moon. The dust reflects light that hits it directly more than it reflects light which hits at an angle. Think of it this way. As the light hits a dust particle in a deep dusty surface obliquely, the reflected light is absorbed or scattered in different directions by neighboring dust particles. This is why in short exposures such as ones in which the white astronauts are prominent, the darkening is prominent. In photos where the astronauts are less prominent, the fading is barely noticeable.

Of course, a professional photo printer will "burn in" the image by letting the enlarger light shine through a small, coin-size hole in cardboard while constantly moving the card, lengthening the time that the enlarger light falls on the shaded area, thus making it look brighter on the print. It is evident that such techniques have been used on some of these prints.

Flatness of the lunar surface

This claim is not directly made by the conspiratorial advocates, but it is indirectly made insofar that they claim flat surfaces are evenly lit. Flat surfaces are not evenly lit if they are lit by spotlights, only if they are lit by sunlight. The latter is their claim, and we are to conclude that the unevenly lit surface of the moon photos must be due to multiple lights mounted around the perimeter of the set.

We've mentioned above that in such cases we should see multiple shadows, which we do not see, but more to the point here is the observation that the surface in the photos is anything but flat. In some photos we see an astronaut standing inside a crater and the camera view looking down on him (see cover). Now this shows a hypocrisy of the NASA critics, when such a shot does not show the astronaut's feet, then they do not allow that the subject is standing on a crater or the cameraman is standing on a hillock, but the hoaxers claim that the photographer is standing on a ladder above the "flat" surface.

Beyond that, we see long and short shadows in accord with the

shadows falling on hills and vales. All in all, there is no evidence here which even favors, let alone proves, the hoaxers' argument that uneven surface lighting and uneven shadow lengths are due to multiple lights.

Missing stars

"Why are there no stars in the lunar sky?" ask the hoaxers. After all, if there's no air on the moon then one can see stars in daylight. Certainly the statement is true, but that doesn't mean that you should expect to see any stars in the photos. To demonstrate the truth of this to yourself, take one of these three photos on a starry moonless night.

1. Take a picture of the starry dark night sky with the flash on. The photography shop won't print the blank negative, so you'll have to look at the negative to see that there are no stars there.
2. Again on a starry night, take a photo of someone under a street light. You'll see no stars in the sky.
3. If you don't have an automatic camera, set your exposure time for 1/125 second at f/8 and take a photo of the stars. This is the exposure time which roughly corresponds to the settings used on the moon.

If you think that the atmosphere dims starlight a lot here on earth — which it doesn't if the stars are any distance above the horizon — go ahead and set your f-stop all the way open, place your camera on a tripod, and shoot for a quarter of a second. You'll still not see any stars. Even if you exposed the film for several seconds you won't notice the stars unless you happen to have one of the very brightest or a planet in the viewfinder. You'll have to expose the film for fifteen to sixty seconds to record any more than a few stars. So we see that the lack of stars in the photos argument is bogus.

Cross hair problems

For calibration purposes, the specially-designed Hasselblad 500 EL/70 camera (which held 100 exposure two-and-a-quarter inch square negative film) placed dark cross hairs on the negative. These cross hairs provide two opportunities to fuel the critics claims. The first and least significant involves the series in which Aldrin descends the LM's steps. The photo where he is at the very bottom has the alignment of the cross-

hairs at an angle to the horizon, yet the photo is printed with the horizon horizontal instead of being aligned with the cross hairs. Some of the critics claim that the cross hairs were added later and that in this case the sheet was improperly aligned. This is claimed after making a big deal about how difficult it is to hold the camera level while wearing a space suit. Does it not occur to them that it would be easier to leave the cross-hairs off in the first place than to add them later, especially if the whole thing is a hoax? And why is it that all of a sudden the camera is always held perfectly level when earlier it was claimed that such is impossible? The picture is cropped and leveled, pure and simple. Evidence? The negative is square, but this photo is always printed as a rectangle.



Figure 3: Part of the lunar excursion module or rover appears in front of the cross hair on the left. Was this the printer's way of telling the world that the landing was a hoax or is it an artefact of computer enhancement?

The second objection involves one or two cases where the cross hairs fall *behind* an object (Figure 3). Invariably the object is overexposed on the photo. Most photographers know that overexposure will overwhelm subtle details in a photo. In particular, the light in the overexposed negative will bounce off the back of the negative and on its way back to the surface expose the cross hairs. That is why images of bright stars will look larger than fainter stars. Indeed, the star's light may be so abundant that we can see more than one bounce from the back to the front surface of the negative then back to the rear surface and off the rear surface back to the front. Such stars have a ring around them as a result (Figure 4).

Besides overexposure there is a second reason why cross hairs might

disappear. If the photos are processed by computer, the image editing software, which takes the average of the pixels (picture elements or dots) surrounding a given pixel may erase the cross hair through a bright region simply because the presence of the cross hair looks inconsistent with the photographic region in which it is found, which, indeed, it is.



Figure 4:

responsible for most aurorae.

Some critics of the moon landings claim that the astronauts could not have survived passing through the van Allen belts; they would have died instantly of radiation poisoning. One claims that six feet of lead shielding would need to have surrounded the space craft in order for them to survive.

Now the six feet of shielding rings a bell. Back in the sixties I recall reading a book, then recently published, about the unlikelihood of space travel. The book mentioned that for a trip to the nearest star, Alpha Centauri, it would take some 200,000 years, and that *six feet of lead shielding would be needed to protect the generations of travelers from the harmful effects of cosmic rays over their respective lifetimes*. Since the van Allen belts don't even reach to the moon, let alone the nearest star, the reference falls short of supporting the hoaxers' claim. At the turn of the twentieth century people used to spend hours before fluoroscopes before they discovered the dangers of radiation damage. These people absorbed much more radiation than the astronauts experienced from the equatorial regions of the van Allen belts. It took years for the effects to manifest themselves. So there is neither evidence nor authority behind the hoaxers' claim that six feet of lead shielding is needed to survive a pass through the van Allen belts.

The mysterious van Allen belts

The van Allen belts are clouds of charged particles held temporarily captive by the earth's magnetic field. These particles are concentrated more towards the poles and less at the equator. The particles from the van Allen belts are

Why unexpected results?

Now consider some evidence which belies the Hollywood production theory. Hollywood's concept of the moon's surface can be seen in films of the time of the landings, films ranging from early renditions of Jules Vern's journey to the moon through *Destination Moon*. Figure 5 shows a scientist's idea of what the surface of the moon looked like in 1963. The reader will note that these don't look like the moon photos. Scientist viewed the moon as made up of large lava fields. If the entire space program was staged, then we would expect a scene showing overlapping lava flows such as seen in figure 5, or some combination of Hollywood moon and New Mexican lava beds, but that's not what we see in the photos. It seems that something must have gone to the moon or we'd see what was expected.

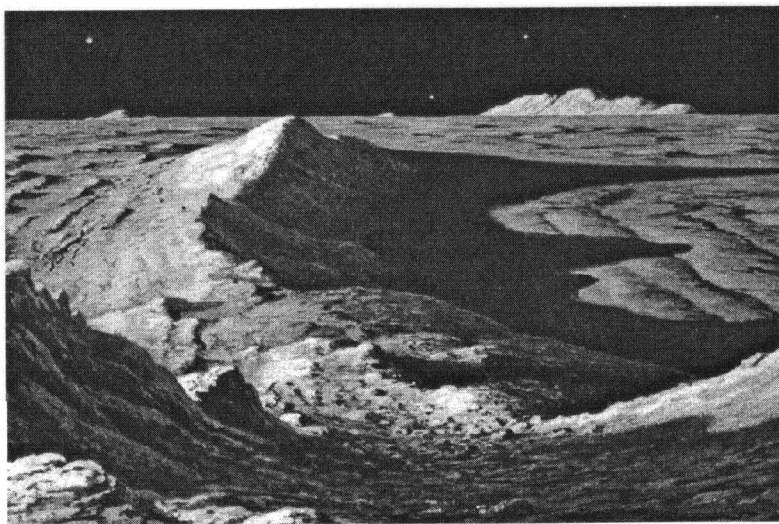


Figure 5: The typical lunar surface as envisioned by scientists in 1962. Note the lava flow "waves" at right.¹

1. Rudeaux, Lucien and G. de Vaucouleurs, 1962. *Larousse Encyclopedia of Astronomy*, second ed., pg. 153.

Of course, it could be that some vehicles did go to the moon and changed the Hollywood artists' view. The United States sent Ranger craft crashing onto the surface of the moon taking photos as they went down. These were followed by the landers, both Soviet and American, which gave close-up views of the lunar surface. One could argue that these taught NASA how to stage the various Apollo landings, but then we are left with the moon rocks and dust. The texture and stickiness of the lunar dust was unexpected. One hoax advocate claims that the soil the supposed astronauts walked on was wet or damp all of the time to give the impression of deep dust prints (Figure 6). Evolutionists expected deep pools of dust in the low-lying areas, but no such pools were found. The amount of dust is consistent with a 6,000-year old surface, not with the billions of years old surface which the science of the time expected.

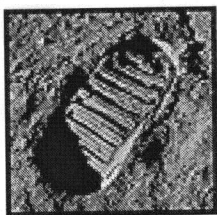


Figure 6: footprint on the moon

Then there are the moon rocks. Some of these were radiometrically dated at only a few to a hundred million years old. Laboratory produced rocks, prescribed by the current science would not have produced such enigmatic and young rocks as were returned by the landers.

Oscar-winning special effects specialist Dennis Muren did the special effects for such films as *Jurassic Park*, *The Abyss*, *Star Wars*, and *Terminator 2*. He expressed his opinion about the moon films this way:

I've always been acutely aware of what's fake and what's real, and the moon landings were definitely real. Look at *2001* or *Destination Moon* or *Capricorn One* or any other space movie: everybody was wrong. That wasn't the way the moon looked at all. There was a very unusual sheen to the images from the moon, in the way that the light reflected in the camera, that is literally out of this world. Nobody could have faked that. And it's got very little to do with advanced technology or computing power.²

Conclusion

In this article we have looked only at the major claims made by those

who think that NASA faked the moon landings. Only a few of the lesser claims were examined and some, like the angle of the flag and the burned-in image of the American flag on the lander, I've ignored altogether. These are too easy to counter.

In general we found that hoax advocates are ignorant of photographic printing techniques, photo enhancement techniques, and computer photo enhancement techniques. They also lack a basic understanding of modern astronomy and selenology (study of the moon's surface and rocks), no, not enough to properly state what astronomy and selenology have to say about the moon, and thus certainly not enough to offer intelligent critique. My most pessimistic appraisal of the moon hoax phenomenon is that it is designed to capitalize on the current dissatisfaction among the general American public with its cowardly, government leadership, cowed by a handful of satanic men in high places (Ephesians 6:12). Increasingly American Christians are being taken in by this hoax, and they get quite belligerent if you disagree. On the whole, American Christianity spends its money and acclaim on things and people who make merchandise of them by telling them what they want to hear, and by selling them worldly goods in "christian" wrapping paper. Lord, have mercy on us.

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2. Bakel, Rogier van, 1997. "Did NASA Moon the World?" *Fortean Times*, No. 97, p. 24.

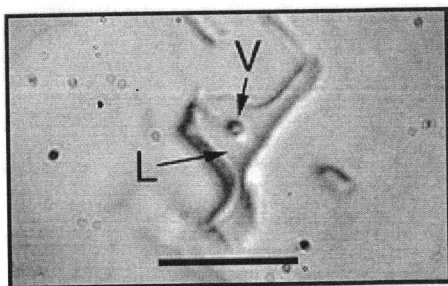
PANORAMA

Water found in meteorite

According to Genesis chapter one, water played a key role in the creation events. It is thus not surprising that water be found, at least in trace amounts, in the celestial bodies. Now from the Johnson Space Center in Houston, Texas, comes the first announcement of water found in a meteorite. Oh,

there have been prior announcements, but those have all been dismissed as contaminated by terrestrial water. The water in this meteorite, which fell in Monahans, western Texas on 22 March, 1998, was locked inside a crystal of halite (table salt).

In the figure at right, L points to the water and V is a vapor bubble. The matrix in which the water is embedded is the salt, which has turned blue from exposure to cosmic radiation. The inclusion measures about 15 micrometers or a bit over one hundredth of a millimeter long (0.0006 inch or 1/1700th inch).



The water presence suggests far greater water presence than currently believed. On earth salt is deposited by evaporating water. If the salt in the meteorite has a similar origin, then there was much more water present at the formation of the meteorite than is evidenced by the microscopic amount pictured above. Planetary geologists also know that asteroids had water running through them, suggesting that water was involved in their creation. Of course, the asteroids could once have been a planet with water on it, which planet exploded.¹

The scientists who opened the meteorite would have missed the discovery had they used traditional methods to open it. Had they used the rock saw and water they would have destroyed the blue salt crystals and

1. See Unruh, J. T., 1995. "Phaeton," *Biblical Astronomer*, 5(74):18.

the water inclusions. Instead they used a hammer and chisel. "We just knocked a little piece off the side and there was this beautiful blue mineral," said Micael Zolensky of NASA's Johnson Space Center. The largest of the blue salt crystals is about the size of the nail on a little finger. In the microscope, Zolensky said, "what you see are these little rounded or square things just floating in the halite, ... and inside some of these you see these little vapor bubbles just dancing around."

A meteorite dealer who had a specimen that fell in Morocco last year had also found blue grains. Using the more careful preparation methods scientists confirmed that it's halite, in a different meteorite.

No beaches on Mars

In the 1970s, the Viking missions to Mars showed some features which some researchers took to be remnants of ancient coastlines. The photos taken by Mars Global Surveyor in 1998 have a resolution ten times better than those of the Viking craft. The new pictures show no coastal features in the areas identified as such by the Viking team.

"While the suggestion that Mars at one time had oceans cannot be ruled out, the foundation for the 'ocean hypothesis' developed in the 1980s on the basis of suspected shorelines appears now to have been incorrect," Dr. Michael Malin concluded. "However, it should be understood that there is significant other evidence of water on Mars in the past, both from Mars Global Surveyor and from previous missions. Today, the Mars Orbiter Camera continues to acquire new high-resolution pictures, each one helping to search for clues to the very important question of the role of water in the evolution of Mars."²

No water ice on the moon?

On July 31 the Lunar Prospector spacecraft was deliberately crashed into a crater near the south pole of the moon. Scientists had hoped that the spacecraft's crash would release a detectable amount of water vapor. Earlier in its mission, Prospector had detected an abundance of hydrogen near

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2. Isbell, Douglas, Mary Hardin, Michael Ravine, 1999. "New Mars Images: No Evidence of Ancient Ocean Shorelines," NASA Press release 99-114, Oct. 1.

the poles which led scientists to think that there was frozen water on or near the surface of the moon.

The chance of a positive detection was deemed at less than one chance in ten, but world-wide observation of the crash was done with sensitive spectrometers tuned to look for the ultraviolet emission lines expected from the hydroxyl (OH) molecules expected to be kicked up by the impact. There are several reasons why there were no observed results. These are:

- the spacecraft might have missed the target area;
- the spacecraft might have hit a rock or dry soil at the target site;
- water molecules may have been firmly bound in rocks as hydrated mineral as opposed to existing as free ice crystals, and the crash lacked enough energy to separate water from hydrated minerals;
- no water exists in the crater and the hydrogen detected by the Lunar Prospector spacecraft earlier is simply pure hydrogen;
- studies of the impact's physical outcome were inadequate;
- the parameters used to model the plume that resulted from the impact were inappropriate;
- the telescopes used to observe the crash, which have a very small field of view, may not have been pointed correctly;
- water and other materials may not have risen above the crater wall or otherwise were directed away from the telescopes' view.

Although the craft failed to prove the existence of water on the moon, its failure to do so does not disprove the existence of water on the moon. After all, it did have only a 10% chance of success.

The universe may be younger than previously thought³

Dr. Eyal Maoz of NASA Ames Research Center, Moffett Field, CA, and astrophysicists from a variety of U.S. and Canadian institutions have found evidence suggesting that the universe may be younger than scientists had previously thought, and that it is expanding faster than expected. Their findings are reported in the Sept. 23 issue of *Nature* magazine.

3. Burton, Kathleen, Sept. 24, 1999. "NASA Researcher finds Evidence that the Universe May be Younger than Previously Thought," NOTE TO EDITORS: 99-58.

Current estimates put the age of the universe at about 15 billion years. Maoz' research indicates the universe may be as young as 12 billion years, nearly the same age as its oldest stars. This implied relatively low age of the universe revives an old paradox in the field of astrophysics that the universe seems to be younger than some of the stars in it. The finding suggests that a revision of the cosmological model may be required.

Maoz and his team used the Hubble Space Telescope to observe the pulsing of giant stars called 'Cepheid variables' in the galaxy NGC4258. Researchers used a standard "Cepheid measurement" technique that allowed them to measure the distance from Earth to the galaxy. However, this measurement was different from another independent, highly accurate distance determination to that galaxy made using masers (the microwave equivalent of lasers), which are located at the galaxy center and orbiting a supermassive black hole.

A revision of the standard Cepheid measurement method would mean that estimates for the age of the Universe would have to be revised downwards by 10-15%, experts say.

Measuring galactic distances using Cepheid variables has been a standard since 1929. They are useful because their rate of pulsation is closely linked to their brightness. This means that a galaxy's apparent brightness can be used to gauge its distance from Earth.

Maoz and his colleagues used the Cepheid method to estimate the distance from Earth to the benchmark NGC4258 galaxy as 8.1 megaparsecs (Mpc), significantly farther than the geometric estimates derived by recent estimates. (One Mpc is equivalent to approximately three million light years.)

"We discovered a considerable discrepancy between the maser-based and Cepheid-based distance," Maoz said. "The bottom line is that it seems that galaxy distances may have been consistently overestimated by about 12%. This would imply that the universe is expanding faster than expected, and the age of the universe is lower by a similar factor."

Giauque-Debye effect and the woolly mammoths

Throughout the Arctic, regions of Alaska and Siberia are scattered with the remains of temperate zoned animals. Many still have their flesh and undigested food in their stomachs or even their mouths. Shattered bones are mixed at times with broken trees and shrubs, all from temperate to sub-tropical climates. Indeed, 82% of the animals were adapted only to tem-

perate zone climate. Something happened to these creatures that literally blast-froze them instantly. Of the 60-odd hypotheses which have been put forth to explain the phenomenon, none has received universal acceptance.

Most Creationists favor the idea that the quick freeze happened at the start of the flood, but there seems to be a problem with that in that the creatures seem to be in post-flood sediment or soils. This leaves the possibility that the event was possibly related to the division of the land masses during Peleg's day, or some other phenomenon such as an icy comet fall or collapse of the earth's magnetic field. Presumably this marked the start of the ice ages.

In a previous issue of the *Biblical Astronomer*⁴ we took a brief look at the possibility that the earth's magnetic field could temporarily collapse (there in the context of the High-frequency Active Auroral Research Project or HAARP) and freeze the region of the poles. Now visionary Frederick Jueneman has made another interesting proposal about the Giauque-Debye effect.⁵ This effect is the rapid cooling of a body immersed in liquid helium when a powerful magnetic field around the object collapses. In short, the rapid collapse of a magnetic field will cool a body. The argument is that a catastrophic electrical discharge could have caused the ice age to form and the mammoths to be frozen instantly.⁶ Jueneman proposes that the discharge may have been triggered by an icy comet which had accumulated enough electrostatic charge to discharge itself into the earth's magnetic field.

"A cryogenic cooling of a moisture-saturated atmosphere by a cometary discharge and infall could cause a deluge-like situation, considering two concomitant constitions. First a transient heating of the atmosphere by the cometary impact with a subsequential thermal expansion of our air-mass envelope. Much of this atmosphere would be lost to space by the energetic thermal expansion. Then, with this expansion, there would also be an adiabatic cooling of the atmospheric gasses and desorption of the

4. 1996. "Harping on HAARP," *Biblical Astronomer*, 6(78):4.

5. Jueneman, F. 1999. "Mammoths in the Myst," *Research and Development*, April, p. 11.

6. By *instantly* is meant a sudden drop of temperature to more than 90 below zero within a minute or two.

entrained water vapor dissolved in the airmass, with the ensuing rain and snowfall adding to the continuing cooling and resulting in a deluge and of course an instant ice age.

"Combined with this would be the massive electric discharge that could collapse Earth's magnetic field and contribute to the catabatic cooling—not to mention that any loosely distributed ice within the comet would be itself crygenically cold from its earlier excursion in the outer reaches of the solar system."

Dr. Jueneman goes on to note that there is evidence of massive electrical discharges around large craters such as Chicxulub on the Yucatan peninsula. There are several large craters in northern Canada, including James Bay, Ungava Bay, and possibly even Hudson Bay.

Given this scenario, we find several appealing factors to creationists. First of all, it provides a ready explanation for the ice age which, according to leading creationists in the field, lasted at most 400 years, starting some 100 to 200 years after the flood. The radiometric carbon "ages" of the mammoths corresponds roughly to about 100 to 200 years after the flood when corrected for the observed decay of the earth's mean magnetic field.⁷ Second, it explains the frozen mammoths and their ilk. Third, the time corresponds to the division of the earth in Peleg's day. The division of the continents would have been triggered by the temperature changes and crashing magnetic field, with the fractured continental plates floating on superheated steam from the retreated flood waters. Lastly, it also explains the magnetic "reversals" associated with the continental splits since the field would "bounce" for a while after its collapse.

Tara

Many of our readers have heard of Stonehenge in the Salisbury plain. Basically Stonehenge is a circular configuration of 50-ton pillars which have been arranged in such a way as to provide a calendar, that is to say, a computer which computes a calendar. The henge (ditch with embank-

7. As corrected according to the C14 program available for free from the software library on the <http://www.biblicalastronomer.org> web site. It may also be purchased from the home office for \$5 postpaid in the USA. PC format only, DOS and Windows.

ment) at Stonehenge is about 100 yards (meters) in diameter. Now, according to a report in NEARA Transit,⁸ a much larger calendar computer has been found surrounding the hill of Tara in Ireland. Its diameter is more than half a mile (1 km).

Modern man makes several arbitrary assumptions about his environment and his history. One such assumption is that we are getting smarter and better all the time. This is at the heart of evolution, and though all evidence runs contrary to it and runs exactly in accord with the Bible's statement that "the heart of man is desperately wicked" (Jeremiah 17:9), yet man persists in his delusion. So it is with these monuments, but in a curiously backward way. The date of the Tara site has now been move *backwards* in time! Whereas it was once dated from the "iron age," it has now been pushed back into the stone age, to 2500 B.C. All this because the henge is larger than formerly assumed. One would think that if evolution is true, the smaller ring would be older and larger rings would evolve on the scene as men became technologically smarter. Not so when it comes to the occult. Here older is better. Why? Well, if the site can be made out to be very ancient, then the occult religion (today variously known as *Humanism* or *New Ageism*) can be given precedence over not only Christianity, but Judaism and Babylonialism (catholicism) as well. After all, it is widely assumed that the Druids, the new-agers of 2000 years ago, conducted human sacrifices at these sites. Evolutionism, Darwinism, Communism, Fascism, Naziism, Humanism, and "new versionism" in Christianity all have their roots in the occult. Each of these is founded on a lie, and except for humanism, all are founded on the fruits of heliocentrism, that the sun is central, ruling god of the universe.

By the way, although claims abound for a great age for Stonehenge, too, the alignment of the stones suggests that the site is no older than 500 B.C. and no younger than A.D. 250. I have no details on the Tara alignments to be able to decipher those.

8. Anonymous, 1999. *NEARA Transit*, 11:14.

A new cosmology⁹

In the April 1999 issue of *Physics Today* ... we find a long, technically deep article outlining a new cosmology that jettisons the Big Bang and even redshifts as infallible measures of cosmological distances. It should come as no surprise that the authors are G. Burbidge, F. Hoyle, and J. V. Narlikar. They propose a quasi-steady-state universe to replace the hot Big Bang.

It is easy to itemize narrow, specific problems bedeviling the Big Bang, but the three "boat-rockers" listed above also have an important philosophical bone to pick with modern astronomers and cosmologists.

The theory departs increasingly from known physics, until ultimately the energy source of the universe is put in as an initial condition, the energy supposedly coming from somewhere else. Because that "somewhere else" can have any properties that suit the theoretician, supporters of Big Bang cosmology gain for themselves a large bag of free parameters that can subsequently be tuned as the occasion may require.

We do not think that science should be done in that way. In science as we understand it, one works from an initial situation, known from observation or experiment, to a later situation that is also known. That is the way physical laws are tested. In the currently popular form of cosmology, by contrast, the physical laws are regarded as already known and an explanation of the later situation is sought by guessing at parameters appropriate to the initial state. We think this approach does not merit the high esteem that cosmologists commonly accord it.¹⁰

We have neither the space [... nor time] to lay out before you the details of the new Burbidge-Hoyle-Narlikar cosmology. Suffice that it involves black holes residing in galactic centers, thereby replacing the one-time Big Bang creation event.

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9. Quoted from *Science Frontiers*, No. 124:1-2, Jul-Aug. 1999. Sourcebook Project, Box 107, Glen Arm, MD 21057.
 10. Burbidge, Geoffry, et al. 1999. "A Different Approach to Cosmology," *Physics Today*, 52:38, April.

The aspect of the new theory that amazes the most is the acceptance of the Arp heresy: that some quasars possess intrinsic red shifts *not* associated with the expanding universe. They write:

Nonetheless, observations over many years have accumulated good statistical evidence that many high-redshift quasars are physically associated with galaxies with very much smaller redshifts.

So, at least some prominent scientists accept Arp's conclusions.

S.F. editor's comment. "Minicreation events"? Creation is creation, whether the events are big or small!

Magnetic stripes on Mars¹¹

As the Mars Global Surveyor swooped down to altitudes between 100 and 200 kilometers [60 to 120 miles] above the Martian surface during its aerobraking orbits, magnetometers detected broad, parallel stripes with alternating magnetic polarity. These stripes across the planet's southern highlands are a great surprise to planetologists because they superficially¹² resemble the magnetic stripes that parallel the rifts along the floors of the earth's oceans where new crust is forming. The obvious implication is that Mars once possessed drifting continents and a geomagnetic dynamo that occasionally reversed its polarity — just as has supposedly happened and is still happening on earth. Prior to this discovery, Mars was deemed too small to have possessed a heat-driven geodynamo, and there is no obvious surface evidence of drifting continents.¹³

11. Quoted from *Science Frontiers*, No. 124:2, Jul-Aug. 1999. Sourcebook Project, Box 107, Glen Arm, MD 21057.

12. "Superficially" because these bands are seen 100 miles above the surface whereas one has to be within 100-or-so yards of the ocean's floor to see the ones on earth.

13. On earth, for example, we have ridges of mountains where the spreading of the sea floor takes place. There are no such ridges on Mars.



These terrestrial magnetic stripes off the northwestern coast of North America are much narrower, much shorter, and considerably weaker than the 2,000-kilometer-long magnetic stripes on Mars.

Easy as it is to conclude that Martian continents once sailed ponderously cross the planet's surface, the scientific jury is still out. First of all, the Martian magnetic stripes are substantially different from earth's in shape, pattern, strength, and, above all, size. The Martian stripes are about 200 kilometers [120 miles] wide and 2,000 [1200] long—much larger than earth's. Their magnetic field strength is more than ten times that of the terrestrial stripes.

Whatever magnetic phenomena occurred on Mars ... must have been quite different from what happened on earth Yet no other reasonable explanation has been found for the Martian magnetic stripes.

The amount of energy needed to flip the earth's magnetic field is stupendous, and no quantitatively satisfactory model has ever been found. Perhaps the phenomenon is thermo-electric and does not involve the earth's magnetic field but in small measure if at all. In the case of Mars, the surface has never been reworked (unlike the earth's which was reworked by the great flood) and the thermonuclear effects described in "The Creation of the Universe"¹⁴ may have something to say about it. [—Ed.]

I predict future happiness for Americans if they can prevent the government from wasting the labors of the people under the pretense of taking care of them.

— Thomas Jefferson

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14. Bouw, Gerardus D., 1997. "The Creation of the Universe," *Biblical Astronomer*, 7(79):10-19, Winter.

CREDO

The Biblical Astronomer was founded in 1971 as the Tychonian Society. It is based on the premise that the only absolutely trustworthy information about the origin and purpose of all that exists and happens is given by God, our Creator and Redeemer, in his infallible, preserved word, the Holy Bible commonly called the King James Bible. All scientific endeavor which does not accept this revelation from on high without any reservations, literary, philosophical or whatever, we reject as already condemned in its unfounded first assumptions.

We believe that the creation was completed in six twenty-four hour days and that the world is not older than about six thousand years. We maintain that the Bible teaches us of an earth that neither rotates daily nor revolves yearly about the sun; that it is at rest with respect to the throne of him who called it into existence; and that hence it is absolutely at rest in the universe.

We affirm that no man is righteous and so all are in need of salvation, which is the free gift of God, given by the grace of God, and not to be obtained through any merit or works of our own. We affirm that salvation is available only through faith in the shed blood and finished work of our risen LORD and saviour, Jesus Christ.

Lastly, the reason why we deem a return to a geocentric astronomy a first apologetic necessity is that its rejection at the beginning of our Modern Age constitutes one very important, if not the most important, cause of the historical development of Bible criticism, now resulting in an increasingly anti-Christian world in which atheistic existentialism is preaching a life that is really meaningless.

If you agree with the above, please consider becoming a member. Membership dues are \$20 per year. Members receive a 20% discount on all items offered for sale by the Biblical Astronomer.

To the law and to the testimony: if they speak not according to this word, it is because there is no light in them.

— Isaiah 8:20

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