

PANORAMA

Stabilizing Earth

One of the lesser geocentric evidences we've pointed to from time is the "homage" the "inner planets" pay to the earth. In *Geocentricity* we noted the resonances (that the planets show the same face to the earth when they are at their closest) of Mercury and Venus, and the near-resonance of Mars. We also noted the stabilizing role of the earth. The earth keeps the planets going nicely around the sun.

The most recent contribution comes from Kimmo Innanen and Seppo Mikkola who ran a computer simulation of what the solar system would look like if the earth were removed. They found that the orbits of Mercury and Venus would wildly elongate and broaden (vary in eccentricity) with the eventual ejection out of the solar system of Mercury by Venus. This is due to a resonance, previously unknown, between Jupiter and Venus. But the earth, they report in the October 1998 issue of the *Astronomical Journal*, damps out the resonance and so keeps the inner planets in line.

Once Upon a Blue Moon?

To hear tell, a blue moon is when there are two full moons in the same month. That happened in January and in March of this year. Now the popular astronomy magazine *Sky and Telescope* has confessed that an error on their part led to that misconception.

In their issue of March, 1946, there appeared an article entitled "Once in a Blue Moon." It was written by the late James Pruett, an Oregon amateur astronomer. In that article he referred to the Blue Moon mentioned in the 1937 *Maine Farmers' Almanac* and then wrote "But seven times in 19 years there were — and still are — 13 full moons in a year. This gives 11 months with one full moon each and one with two. This second in a month, so I interpret it, was called Blue Moon." Various radio commentators and editors, including *Sky and Telescopes's* editor in 1950, picked up the notion without checking it with original sources.

Now in 40 surviving issues published between 1819 and 1962, the Maine almanac refers to a Blue Moon more than a dozen times. None of them falls on the second full moon of the month. The reason is now ap-

parent and is described in detail in the May 1999 issue of *Sky and Telescope*.¹

The Maine almanac uses a tropical year, which is the length of time elapsed from the first day of winter in successive years. Most tropical years have 12 full moons, three in each of the four seasons. These are given names (such as the Wolf Moon, or the Harvest Moon). Occasionally, however, there are 13 full moons in the tropical year. Now the seasonal names start their cycle not in winter, but with the first full moon near the spring (vernal) equinox which is defined to start on March 21. The first moon of the naming, called the Egg Moon, is determined according to the calendrical rules set down for the computation of Easter. On such occasions as there are four full moons in a season, the third full moon is called the Blue Moon. The third is selected instead of the fourth so as not to confuse the naming sequence of several of the other moons. For example, the last full moon in Fall is called the Moon Before Yule while the next full moon, the first one in winter, is called the Moon After Yule.

According to the Maine almanac there are no blue moons in 1999. The next blue moon will occur on February 19, 2000. In other words, there are four full moons coming next winter.

Al Gore's Faith In God, Despite Geocentricity²

In his run for the presidency of the United States, Marxist Vice President Al Gore threw a sop at the "Christians" of the United States the other day when he told a group of seven reporters at the White House on 16 July that the "purpose of life is to glorify God." "Faith is the center of my life. I don't wear it on my sleeve. I think the purpose of life is to glorify God. I turn to my faith as the bedrock of my approach to any important question in my life."

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1. Olson, D. W., R. T. Fienberg, R. W. Sinnott, 1999. "What's a Blue Moon?" *Sky and Telescope*, **97**:(5), 36-38.
 2. This report originates from Sara Fritz, working for the *St. Petersburg Times*, who was at the Friday, July 16, 1999 Whitehouse session. The story appeared in the 20 July issue of *WorldNet Daily*, (www.worldnetdaily.com).

"It's true that some people are still uncomfortable with a faith-based vocabulary," Gore told the reporters. Gore noted that in recent years many scientists and theologians have been trying to bridge the gap between the two disciplines.

"This is not any great blinding insight from moi," Gore said. "People have known for years that you can have the Earth circle around the sun and still believe in God."

Note that Gore recognizes that the moving earth is unscriptural. His message seems to be that you can believe in God without believing God. There is, after all, a difference between *believing in God*, and *believing God* (James 2:19).³

Now the question arises, which God? In Al Gore's case it is clear from his book, *Earth In the Balance*, that his is not the Judeo-Christian God encountered in the *Holy Bible*, but the chief of the pagan gods and goddesses of the New Age, Lucifer. How many Laodicean Christians will be fooled by this press release into thinking Al Gore is truly religious? I shudder to think!

Who Invented the Telescope?⁴

The Assyrians, and not Galileo, invented the telescope, and used it to observe the stars and develop astrology, a book by an Italian academic claims.

Giovanni Pettinato, Professor of Assyriology at La Sapienza University, in Rome, said his theory was based on artifacts kept in the British Museum. They include a lens made of rock crystal found by the British archaeologist A. H. Layard in 1850 in Nineveh, capital of the Assyrian empire, now in Iraq.

Prof. Pettinato said the lens acquired a whole new meaning if considered in the context of Assyrian cuneiform tablets which originated in

3. James 2:19 "Thou believest that there is one God; thou doest well: the devils also believe, and tremble."

4. Johnston, Bruce, 1999. "Astrologers of Nineveh 'Invented Telescope,'" *Electronic Telegraph*, issue 1467, 1 June, www.telegraph.co.uk.

the royal archives in Nineveh and are not in the British Museum. Their translation was published in 1992.

Dating from about 750 B.C., they listed goods that had passed through various offices of the Assyrian court, including "lenses" and "tubes of gold." Other documents said the lenses were used by the court astronomers and had the purpose of "enlarging the eye."

In his new book, *La Scrittura Celeste* ("The Heavenly Scripture"), Prof. Pettinato dedicates a chapter to his theory that the Assyrians used the telescope. The observations by ancient astronomers could not have been made with the naked eye, he says. "The first true compendium of astronomy is Babylonian, and certainly dates back beyond 1000 B.C.," prof. Pettinato was quoted as telling Milan's *Corriere della Sera*. "In his work 72 stars and constellations are listed, including planets."

He adds that more than 4,000 cuneiform texts on astronomy have been found. "Among these documents, which list the names of no fewer than 4,000 stars, there are to be found texts showing how to calculate the movement of the sun, the moon, and the five planets then known [Mercury, Venus, Mars, Jupiter, and Saturn]."

To this I might add that the name of Saturn, in Babylonian, describes it as a rayed arch. When the rings are seen fully extended, the Babylonian description is quite accurate. Clearly these ancients knew that Saturn was more than a point of light, and that it was not spherical. This could have been due to having a telescope, as Pettinato suggests, or it could have been ascertained by sharp-eyed individuals.

By the way, most of you have probably never heard of Layard, the archaeologist mentioned in the article. Layard was the greatest archaeologist of the nineteenth century, if not of all time. He is denied his due respect, however, because he used the Bible to find his archaeological sites. In so doing, he kept embarrassing his atheistic contemporaries who dismissed the Bible's description of Nineveh as exaggerated myth. Layard kept proving them wrong. Today's archaeologists are even more vehemently against using the Bible for archaeological exploration. Thus few have ever heard of Layard.

Universe: Rotate or Expand

There are two rotations which the universe can experience. One is the geocentric rotation in which the universe has to rotate once a day in order

for atomic matter to exist in the firmament, the sea of Planck particles also variously called maximons, or vacuum state fluctuations, or virtual particles. Regardless, the rotation is necessary though one has to take it on faith that the earth is on the axis of rotation. In this first rotation, the universe turn as if it were a solid body.

The second rotation is much slower. In it the universe rotates about some unknown point once every 13 to 15 billion years. Although the former rotation is taboo among astronomers, the latter, not needing to have the earth at its center, is more acceptable. From time to time we report on new proposals for this second kind of universal rotation.

The latest model is spawned by astronomers' attempts to avoid the "singularity" of the big bang. A *singularity* is a point or time in which properties such as density attain infinite values, something which is physically impossible. Thus the big bang had to start as a point of zero size and infinite density. Well, such a point would never expand, but evolutionists "know" that the universe expands, so they avoid the singularity by supposing that the universe started at about the size of an atom and not at time zero, but at a fraction of a second (10^{-44} second) after time zero. Furthermore, we are not to ask what existed before that.

Although scientists appeal to as-yet-undiscovered laws of quantum gravity and other bizarre ways around the singularity, all attribute the event into the unknown, that is, they take it on faith that someday we'll find the answer. I've seen this kind of intellectual stupidity before, when a learned professor, when confronted by the world-wide distribution of Joshua's long day and night (with even a long sunset), countered with the statement "Well, the science of phenomenology is just a new science." In other words, rather than accept the inescapable reality of Joshua's long day, he would rather believe that "some day" the "science" of phenomenology would show him how all the people over the entire globe could hallucinate a long day, night, or sunset, in unison for an entire day, all geographically correct and indistinguishable from reality. Sure, and how do we know we're not all still hallucinating 3500 years later?

Saulo Carneiro of the Federal University of Bahai in Brazil, used a rotating model of the universe, derived from Einstein's general theory of relativity, to escape the big bang singularity by having the universe rotate for an indefinitely long period. According to the physicist, the rotation could have suddenly become an expansion thanks to a "vacuum phase transition" involving the release of energy generated by quantum fluctuations. Translation? The firmament did it.

Carneiro's calculations have the firmament-bound universe rotating once every 13 billion years. It stopped rotating and expanded 11 billion years ago. The law of the conservation of angular momentum means that there should be evidence of that today. Carneiro points to the a relationship observed in the fifties and sixties and formalized in the seventies which related the angular momentum (spin energy) of an object such as a star, star cluster, galaxy, cluster of galaxies, universe(?) and its mass.⁵ He computes that each celestial object should have an angular momentum proportional to its mass raised to the 1.7 power. This is close to the observed value which ranges from 1.3 to 1.7 depending on how matter (density) is distributed within the object. Indeed, it was this relationship which Carneiro purports to derive, which led me in reverse to the recognition of the firmament and the necessity of the universe to rotate once a day in order to exist.

Carneiro submitted his paper for publication to *Classical and Quantum Gravity*. Of course, according to the Bible the heaven and the earth came before the firmament and, indeed, light was created before the firmament. Presently I'm convinced that the firmament is itself derived from the properties of light. Carneiro is, of course, not looking to God but trying to avoid God. He says "The most important aspect of the paper is just that it calls attention to the possibility of alternative scenarios for the evolution of the universe."⁶ So does he solve the singularity? Not really, he simply pushes it back into the indefinitely long period before the spinning stopped and the expansion began. You still have a singularity when it comes to the origin of the firmament, for as it is finite in both extent and physical properties, theories about its origin are just as subject to singularities as are theories of the big bang. Besides, how did

5. L. M. Ozernoy, 1967. *Astron. Tsirk.* Nos. 405 and 407.

L. Carrasco, M. Roth and A. Serrano, 1982. "Density Scaling of the Angular Momentum Versus Mass Universal Relationship," *Astron. & Astrophys.* **106**:89-93.

Also see J.A. Wheeler and C.M. Patton, 1977. "Is Physics Legislated by Cosmogony?" in R. Duncan and M. Weston-Smith, eds., *The Encyclopedia of Ignorance*. (Elmsford: Pergamon Press), pp. 19-35.

6. Matthews, R. 1998. "Cosmic Carousel," *New Scientist*, 19/26 December 1998 - 2 January 1999, p. 19.

the spinning universe precipitate from the firmament in the first place? And about what axis did it spin? And with respect to what did it spin? ...

Anthropic Principle: the Sun was Created for Man⁷

About every five years our sun spits a giant blob of ionized gasses in the earth's direction. These "coronal mass ejections" or flares, interfere with terrestrial communications and knock out power grids. But we are lucky it isn't worse.

Studies of stars in our galaxy similar to the sun find that they emit *super*-flares about once every century. If our sun sent such a super-flare our way, the atmosphere would glow like a neon tube, our fleet of satellites would be fried, and half the protective ozone layer would disappear in a flash. Earth life would survive — at least for a while.

Our sun, it seems, is favored with anomalous stability, but no one knows why. We are simply lucky!⁸

Corliss finishes with this comment: "We also live in a 'lucky' galaxy. The universe is anthropic (i.e., favoring humans) at all levels!"

Anthropic Principle: the Milky Way was Created for Man

In the same issue as referenced in the previous quote, but on page 4 under the title "Now We Know Why!" Corliss files the following report and comment:

Circa 1950, physicist Enrico Fermi observed that our galaxy measures about 100,000 light years across, and that a space-faring race could cross it in only 100 million years, even if their starships poked along at only 1/1000 the speed of light. Since our galaxy is about 10 billion years old,

7. The section is quoted from, I presume since his name no longer appears on the publication, William Corliss, 1999. "Our Lucky Star," *Science Frontiers*, (Sourcebook Project, Box 107, Glen Arm, MD 21057) no. 122, Mar-Apr, p. 1.

8. Seife, Chas., 1999. "Thank Our Lucky Star," *New Scientist*, p. 15, Jan. 9.

the very reasonable question is: If other intelligences (ETs) exist in our galaxy, why haven't they found us by now? Actually, many ETs from many different cultures should be stopping by frequently.

J. Annis, an astrophysicist at Fermi-lab, believes he can explain the apparent dearth of ETs. The problem is gamma-ray bursts (GRBs). They are so powerful that they sterilize those galaxies in which they occur. Presently, GRBs occur in each galaxy about once every 100 million years, but theory suggests that they were much more frequent in the past.

As a consequence, by the time intelligent life evolves anywhere and figures out how to build spaceships, they are zapped by a GRB. Perhaps some do begin exploration of their galaxy, but they don't get very far.⁹

Corliss comments: Any reader of science fiction can come up with other explanations: (1) ETs have been here but find nothing of interest and leave; (2) ETs were here and helped build Atlantis, the Great Pyramid, the Face on Mars, etc.; (3) ETs are here now but avoid human contact; and (4) ETs are here now but look so much like us that we cannot tell the difference! You are free to make up your own explanations!

Yes, we live in a favored galaxy, because life on earth has not been GRB-sterilized for at least three billion years — thirty times the average period between GRBs. Are we simply lucky?

Bouw comments: Of course, since there is a God, and he created the universe only 6,000 years ago, there's no problem insofar as the lack of GRBs is concerned in the Milky Way, but there'd still be a problem for the solar flares. That goes without saying, at least as far as Bible believing scientists are concerned.

So what's the big deal about the above evolutionary scenarios? Simply this, that even given our godless "scientific" models for the creation and evolution of the universe and its parts, agnostic and atheistic "scientists" cannot avoid the evidence that there is something special about the earth, and in particular, its inhabitants. This is the anthropic principle. The best staunch atheists can do to debunk it is to label its adherents silly or stupid. Names are for calling when there's nothing left to say.

9. Nattewsm R., 1999. "Sorry, We'll Be Late," *New Scientist*, p. 16, Jan. 23.

Apollo 11 Remembered

Thirty years ago man first landed on the moon. Before the team returned to earth they left a reflector on the moon which has been used for the past thirty years to measure the distance between the earth to the moon.

Called the Lunar Laser Ranging Experiment, the reflector is designed to reflect pulses of laser light fired from observatories on the earth. This way we can determine the round-trip travel time of a laser pulse from the earth to the moon and back again.

The reflector consists of a checkerboard of 100 fused silica half-cubes, called corner cubes, mounted in an 18-inch (46 cm) square aluminum panel. Corner cubes reflect a beam of light directly back to the source, which is what makes them useful in lunar ranging.

Two observatories, McDonald Observatory in Texas, and the Observatoire de la Cote d'Azur, near Grasse, France, regularly send a laser beam through a telescope and try to hit one of the reflectors. Even when the beam is correctly aligned in the telescope, actually hitting a lunar reflector is quite challenging. Even though at the Moon's surface the beam is about a mile wide, astronomers compare the task of hitting the reflector to using a rifle to hit a moving dime two miles away. When the beam hits the reflector, the observatories need sensitive filtering and amplification equipment to detect any kind of return signal. The reflected beam is too weak to be seen with by eye, but under good conditions, one photon will be received every few seconds.

Improvements in lasers and electronics over the years have lead to measurements that are accurate to less than an inch (two cm). We now know the average distance between the earth and the moon to better than one part in 10 billion. This is equivalent to determining the distance between Los Angeles and New York to one-hundredth of an inch.

During the course of the last 30 years the experiment has yielded information on several features of the earth and moon. It has shown that:

- Ocean tides raised on earth by the moon directly influence the moon's orbit. Because of the tides, the moon is receding from earth at about 1.5 inches (3.8 cm) per year.
- Lunar ranging, along with laser ranging to orbiting earth satellites, revealed a small but constant change in the shape of the earth. The

land masses are gradually changing after being compressed by the great weight of the glaciers in the last ice age.

- Small-scale variations in the moon's rotation have been measured. They result from irregularities in the lunar gravity field, from changes in the moon's shape due to tides raised in the moon's solid body by the earth, and from the effects of a fluid lunar core.

- The combined mass of the earth and moon has been determined to one part in 200 million.

- Lunar ranging has yielded an enormous improvement in our knowledge of the Moon's orbit, enough to permit accurate analyses of solar eclipses as far back as 1400 B.C. [Unfortunately, human observations of eclipses don't go back nearly that far,—*Ed.*]

- The atmosphere, tides and the core of the earth cause changes in the length of the day of about one thousandth of a second per year.

New, Fast-Spinning Asteroid

A lumpy, water-rich asteroid discovered in June of last year, and designated as 1998 KY26 is about the size of a baseball diamond (100 ft. or 30 m). Recent observations show its day (rotation period) is only 10.7 minutes long.

KY26 passed 500,000 miles (800,000 km) from earth shortly after its discovery. Dr. Steven J. Ostro of Jet Propulsion Laboratory, Pasadena, CA, and a team of astronomers used radar and optical telescopes around the world to generate an image the 30-meter (100-foot), water-rich ball as it twirled through space. Ironically, the asteroid is smaller than the radar instruments used to observe it.

What of the water richness of the asteroid? Ostro reported that the minerals in 1998 KY26 probably contain about a million gallons of water, enough to fill two or three olympic-sized swimming pools. That's a lot of water for an asteroid.

Ostro speculates: "This asteroid is quite literally an oasis for future space explorers," he said. "Its optical and radar properties suggest a composition like carbonaceous chondrite meteorites, which contain complex organic compounds that have been shown to have nutrient value. These could be used as soil to grow food for future human outposts. And among the 25,000 or so asteroids with very reliably known orbits, 1998 KY26 is in an orbit that makes it the most accessible to a spacecraft."

Since this asteroid is one of the earth-grazing asteroids, the question arises about the danger this asteroid might pose to earth. It turns out that KY26's size makes it comparatively harmless if it were to collide with earth. The asteroid would most likely explode in the upper atmosphere and its fragments would fall to earth with minimum damage. Moreover, 1998 KY26 is in an orbit whose shape and low inclination with respect to the ecliptic plane make it unusually easy to intercept.