

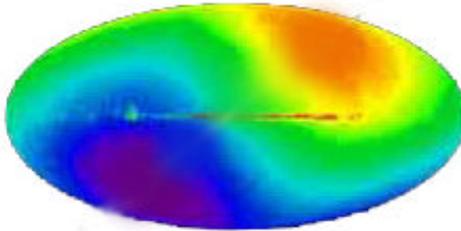
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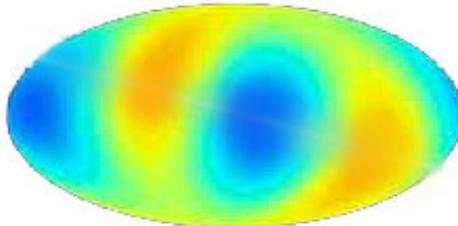
**THE  
BIBLICAL  
ASTRONOMER**

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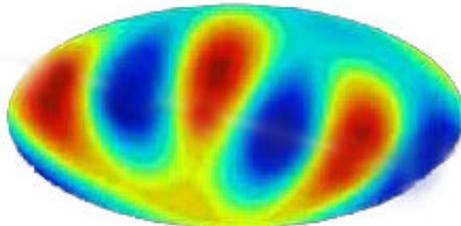
**SUMMER 2011**



DIPOLE MAP



QUADRUPOLE MAP



OCTUPOLE MAP

## PRODUCT LIST

(Continued from back cover.)

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**Front Cover:** The average temperature of the universe is 2.725 Kelvin but the temperature is not smooth. Tiny variations in temperature reveal hot and cold spots with an underlying geometry that identifies them as poles. In this issue we explore those poles and investigate their geocentric alignment that earned them the title Axis of Evil.

# THE BIBLICAL ASTRONOMER

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## EDITORIAL

This issue took a long time and a lot of work to put together. Yet the reason for that is the happy occasion that the evidence for Geocentricity increases almost daily. As more and more data are collected from the galaxies and other objects around us, more evidence for the central position of the earth appears. Indeed, the amount of new information is great enough that it cannot be covered in one issue of the *Biblical Astronomer*.

One such news item of particular interest involves a debate currently raging among cosmologists. About five years ago I wrote a series of three papers involving the concept of time sheets. The papers developed the concept that the past is like a hologram, containing a complete and detailed record of everything that was going on when a time sheet, jarred loose from the future and manifested as the present piles atop the stack of bygone sheets we call the past. At the time I presented the model as a single solution, a one-universe solution to the quantum-mechanical problem of what happens when a coin is flipped. The Copenhagen school of quantum mechanics says the universe splits in two; in one of the two universes the coin shows heads and in the other universe the coin shows tails. In the one-universe solution there exists a “decider,” even God.

Now, it seems, cosmologists have been forced to face the problem introduced by the probability solution to quantum mechanical outcomes. There are two camps: those who believe that there are innumerable universes in a space called the multiverse, and those who believe there is only one universe; a single solution. The camps are divided on theological grounds. The multiverse advocates are humanists whereas the universe advocates generally believe in God, or at least one god in some form. I gather that the debates can get quite heated.

In the previous issue I neglected to summarize Jim Hanson’s paper on the Foucault pendulum. For new readers, the Foucault pendulum is presented in museums around the world as proof of the earth’s rotation. Since the days of Foucault, however, no Foucault pendulum has ever been allowed to swing freely. Since the first of Foucault’s pendulums, there has always been some apparatus to confine the pendulum’s swing in a plane. Back in the mid-seventies when I considered taking on heliocentrism, I did a careful, but certainly not exhaustive analysis and discovered that the pendulum’s motion eventually decays into a circle. No wonder the museums have to fudge its motion.

Jim has long complained that no one has ever done a detailed analysis of the pendulum’s behavior: particularly the forces imposed on the pivot, chord, and ball. In last issue’s article Jim summarized all the

errors he could think of and gave a rough, order-of-magnitude estimation for the magnitude of each error. Jim hopes that he may eventually have time to do a truly exhaustive analysis of the pendulum's motion.

Finally, your editor was sent a short tongue-in-cheek poem about Geocentricity. Its author asks that I assign the authorship of the poem not to him, but to that most prolific of writers, Anonymous.

## A Geocentricity Poem

Geocentricity  
 Tycho's simplicity  
 Kepler's duplicity  
 Newton's complicity

The critics' ferocity  
 Hides evidence paucity,  
 Their theory's porosity,  
 And Earth's null velocity.

Bible cosmology  
 No more apology  
 Einstein tautology?  
 Science says "Golly gee!"

Joshua's Day, extra long  
 Courses in Deborah's Song  
 Sun's circuit races strong  
 God's Word is never wrong!

Holy Writ the one true lamp  
 Earth fixed by God's Own stamp  
 Critics wet, not just damp  
 Thanks, Walter van der Kamp!

# THE AXIS OF EVIL

**Gerardus D. Bouw, Ph.D.**

## **Introduction**

In 1948, cosmologist George Gamow predicted that the heat of the big bang should be detectable at microwave wavelengths as a uniform glow in the sky. No one could predict its temperature, but early researchers who looked to determine the correctness of his prediction found a glow in the sky that implied a temperature that ranged from a low of 5 K (read “five Kelvin” or “five K”) to a high of 28 K. The glow is variously called: “the cosmic background radiation,” the “3K background radiation,” or the “3-degree black-body radiation.” Most commonly now it is called the “cosmic microwave background” (CMB).

In 1965, Arno Penzias and Robert Wilson, then working at Bell Telephone Labs, built a thermometer sensitive to microwave wavelengths which they intended to convert into a radio telescope. When they calibrated it, they discovered an excess temperature of 3.5 K for which they had no explanation. It didn’t take long before they received a call from Crawford Hill of Princeton University informing them that the excess temperature could be Gamow’s predicted leftover heat from the big bang. The best temperature measurement now stands at 2.725 K (−454.76 °F or −270.42 °C). In 1978 Penzias and Wilson received the Nobel Prize in Physics for their discovery.

Over the intervening years, astronomers have taken ever closer looks at the CMB. Today, temperatures measurements are made accurate to a few millionths of a degree.<sup>1</sup> This has led to some interesting findings. Among those the most perplexing to cosmologists is the temperature poles of heaven. Within four ten-thousandths of a degree either side of the average CMB temperature, there are temperature features that have been detected. Some of these are on a cosmic scale. The most important of these are exhibited as coupled poles.

## **All about Poles**

Although the cosmic three-degree background radiation is presented as proof for the big bang, the smoothness of that background radiation is inconsistent with the big bang theory.<sup>2</sup> According to the big bang, there should be hot and cold areas in the CMB radiation field;

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<sup>1</sup> Some will claim such accuracy is bogus, that it is a conspiracy to fit the humanist view of the universe. This is a foolish charge. The observed poles are antagonistic to the humanist view; such a conspiracy would not yield geocentric results.

<sup>2</sup> Bouw, G. D., 1991. “Of iron whiskers and particles that increase mass with age!” *B.A.* 1(57):21.

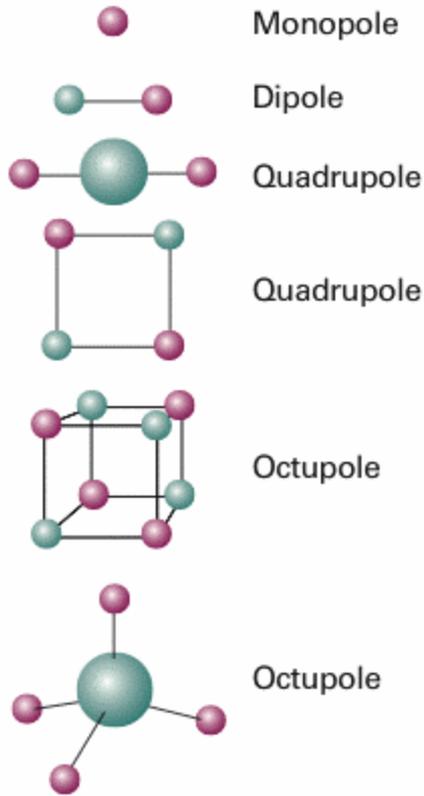
and, indeed, there are, but the temperature differences range two ten-thousandths of a degree above and below the CMB. This temperature range is much smaller than humanists expected. The observed temperature range implies that the expansion of the universe, even in its inflationary stage, was very smooth (laminar), lacking the turbulence necessary to form stars, galaxies and clusters of galaxies. Add to that evidence against the evolutionary view the observed alignment of coupled temperature poles, and the evidence against the Big Bang looks overwhelming.

The coupled poles behave similar to magnetic poles although they can also be gravitational or electric in nature. An electric pole is either positive or negative. An electron is negatively charged and is attracted by a positively charged proton,

but the electron is repelled by any negatively charged particle such as another electron. Since neither an electron nor proton have both positive and negative charges in them, each constitutes a monopole (see top of Figure 1). We are not concerned with monopoles in this article.

For most of us, when it comes to picturing a dipole it is easiest to consider a magnet. A magnet has two poles: one is called the north pole and the other is called the south pole. Like poles repel and unlike poles attract. Magnetism does not exist as a monopole.

If two magnets are placed end to end with like poles together in the middle, they form a quadrupole. (Placing them with unlike poles together just makes the configuration a larger dipole.) There is another way to form a quadrupole and that is to lay the magnets side by side with opposite poles up. Usually this is pictured as a square. In effect, it forms four magnets: two horizontal ones and two vertical ones.



**Figure 1:** Polar configurations.

Just as there are two ways to make a quadrupole, so there are two ways to make an octupole. The first one pictured in Figure 1 is to stand four magnets on end with alternate poles up, forming a cube, which has eight poles and forms twelve magnets, one for each edge. If, however, we put all the like poles of the four magnets together at the center than we have the second way to construct an octupole as shown at the bottom of Figure 1.

Gravitation, like electric charge exists as a monopole, but unlike electric charges, there is only one gravitational pole and that is attraction. Electric configurations are maintained by motion; so, also, is gravitational attraction. In order to build a gravitational dipole you have two objects orbiting each other. Higher-order poles involve gravitational waves which I shall not bother with, at least not at this time since this paper will tax you enough, dear reader.

### **The Axis of Evil Is Discovered**

The Axis of Evil was discovered and named in 2005 by Kate Land and João Magueijo of Imperial College, London. At the time, I reported their discovery as a geocentric phenomenon that had recently been detected in the cosmic background radiation.<sup>3</sup> Now, six years and two major confirmations later, the geocentric phenomenon is still a “problem” for atheistic and humanistic cosmologists. After all, Copernicus supposedly proved once and for all that the earth is not in a special place in the universe and that the Bible is obviously wrong because it places the earth in a special place. The ultimate evil to a humanist is that the Holy Bible is right and he is wrong; thus the term, Axis of Evil.

Figure 2 introduces us to the Axis of Evil. It shows the distribution of temperatures relative to the CMB. These are gravitational poles; in other words, they reflect slightly hotter, more energetic regions as red and cooler, less energetic regions as blue. The map plots both the quadrupoles and octupoles.

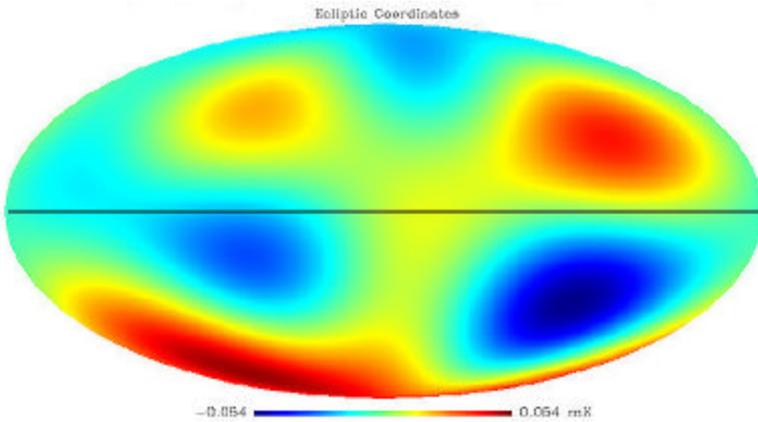
Now some readers may wonder why there are only six poles (three red and three blue) in Figure 2. Why not twelve poles: four from the quadrupole and eight from the octupole? The reason why is because the quadrupole and the octupole are aligned with each other. To see this, examine the picture on the front cover. The octupole is much weaker than the quadrupole and is only detectable if the quadrupole’s temperature is subtracted from the observed temperature values.

The elliptical shape of the map represents the sphere of heaven. In this projection, the left half forms one hemisphere of the heavenly sphere and the right half forms the other hemisphere. Thus the thin red

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<sup>3</sup> Bouw, G. D., 2005. “Cosmic radiation has a newly-discovered geocentric component,” *B. A.* **15**(114):131.

edge at the bottom right is actually the continuation of the bottom of the large red area on the left.



**Figure 2:** The ecliptic is the equator of this figure. It also serves as the equator for the hot (red) and cold (blue) regions of the universe.

Note the temperature scale underneath the map. The hottest temperature is represented by the deep red color at right and is 0.054 mK (54 millionths of a degree Kelvin) above the average 2.725 K background temperature. The coldest area, represented at the left end of the bar by dark blue, is 54 millionths of a degree colder than the 2.725 K background temperature average which shows up as greenish on the map.

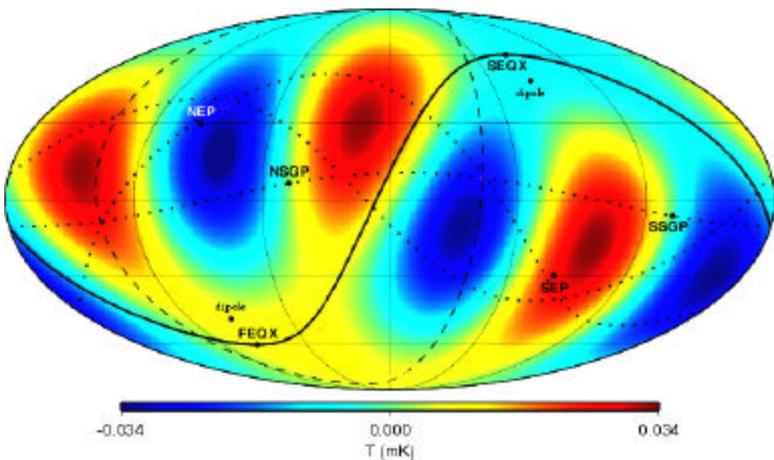
Each concentration of color (red or blue) forms a “pole.” The hot poles are in red and the cold poles in blue. Furthermore, in the figure you can see that the red poles are connected by a yellow Y (centered on the constellation of Leo). Not so obvious is that the blue poles are similarly connected by a light-blue Y that runs along the top of the temperature map. Each hot (red) pole has a corresponding cold (blue) pole.

The solid line that forms the equator of the map is the *ecliptic*. The ecliptic, is the path that the sun traces out each year against the starry background. The constellations that fall on the ecliptic and through which the sun passes each year form the Zodiac, which constellations are the signs astrologers (not astronomers) swear by. The problem for humanist astronomers is that the alignment pictured in Figure 2 runs contrary to the Copernican principle’s first commandment which says, “Thou shalt deny or belittle all evidence that confirms the earth’s pivotal place in creation.” Figure 2 is geocentric; it not only shows the earth in a special place, but it also shows that the universe is

“aware” of the existence of the circuit of the sun of Psalm 19:6<sup>4</sup> (Figure 5). The equator of Figure 2 is the ecliptic; that is the line referred to by astronomers as “The Axis of Evil.”

Figure 2 is difficult to find on the Internet these days. Figure 2 is just too obviously geocentric. Indeed, I reproduced it from my 2005 article. The one copy of Figure 2 that I did find on the Internet was too small to be useful. The “preferred” picture is to have the Milky Way’s “equator” serve as the equator of the map, as in Figure 3.

In Figure 3, the Axis of Evil is shown as the solid black curve that starts on our galaxy’s “equator” at left, curves down, then up and crosses the equator to the “north” in the center of the ellipse and then curves up and then down to the equator on the right side of the map. This does not provide nearly as impressive a support for Geocentricity as does Figure 2. Also, the temperature range is lower than that of Figure 2. Still, in this figure it is easy to see the Ys I mentioned earlier that connect the poles, namely the yellow and light blue regions which now spring from the top and bottom of the map (except in this projection they look like an M and a W).

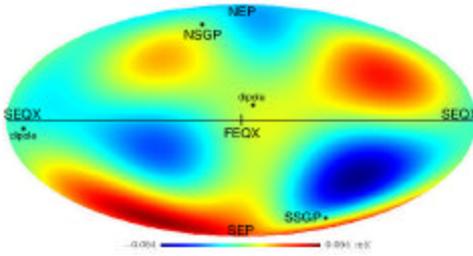


**Figure 3:** The same map as shown in Figure 2 but now redrawn so that the plane of the Milky Way is the map’s equator. The ecliptic is now shown as a solid line that curves under the red, blue, and red poles at left and then curves over the blue, red, and blue poles at right. The alignment is still there; it is just harder to perceive on this map.

Note the FEQX at the bottom of the curve at left and the SEQX at the top right. The FEQX is located dead center of Figure 2 (see Figure

<sup>4</sup> [The sun’s] going forth *is* from the end of the heaven, and his circuit unto the ends of it: and there is nothing hid from the heat thereof.

4) and the SEQX is located at both the left and right ends of the equator of Figure 2 (they are the same point in the sky since the equator represents the circumference of a circle). Those are the equinoxes, the time when the sun crosses earth's equator. SEQX refers to the first day of spring when the sun crosses from south of the equator to north of the equator, and SEQX refers to the first day of fall when the sun moves back south of equator.



**Figure 4:** Same as Figure 2 but with the points in Figure 3 plotted on it.

In the blue area at central-left, the NEP refers to the north ecliptic pole which is the blue area at the top of Figure 2. In the lower red area at right you will see SEP which stands for south ecliptic pole (see Figure 4). Next, the NSGP and SSGP refer to the north and south poles of our supercluster of galaxies.

A supercluster is a cluster consisting of smaller clusters of galaxies, of which the Milky Way is a member.

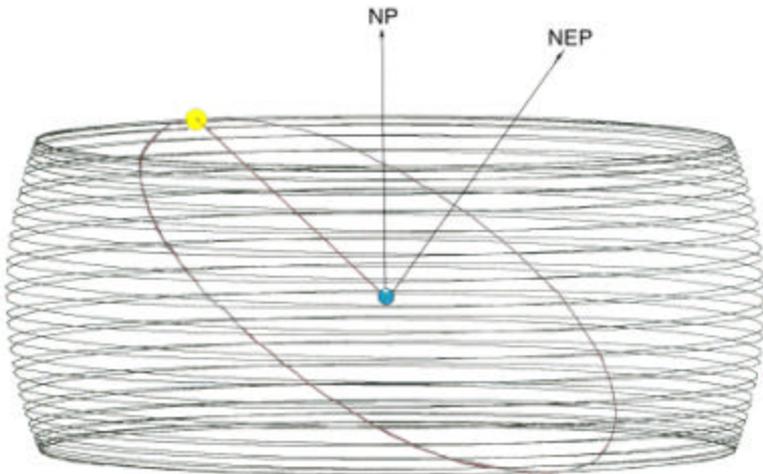
The reason for adding all the positions of the ecliptic, galactic, and supergalactic north and south poles was to see if the Axis of Evil might turn out to better correlate with the equators of those axes. In Figure 3, the long dashed line passing through the leftmost red region marks the equator of the supercluster. The solid curve is the ecliptic, which passes through the equinoxes. Clearly, no better correlation exists than the geocentric correlation to the ecliptic shown in Figure 2.

Finally, there are two points, one near each of the two equinoxes, each labeled “dipole.” The classic explanation for the dipole is that it is due to the motion of universe relative to the earth; we see this as the stars drifting by us. The dipole in the yellow (lower) region of the map is then due to space approaching us from a direction that lies near the constellation of Aquarius. The other point labeled “dipole” is near SEQX and marks the point to which space is receding from us. That dipole lies in the head of Leo. (Do not confuse the dipole motion with the cosmic redshift of the expanding universe theory; they are not the same).

### The Circuit of the Sun

In Figure 5, the helix (the barrel-shaped spiral) represents the path the sun traces out during the course of a year. Each turn represents one day and the rotation is clockwise as seen from above. The sun is here shown in the position it occupies on the first day of summer. The earth

is the blue dot at the center. From it the arrow labeled NP points to the North Star. The other arrow is perpendicular to the plane of the ellipse and is labeled NEP meaning that it points to the north ecliptic pole. It is also so marked in Figure 3 and is the very top of Figures 2 and 4. It takes the sun, moving counter-clockwise as seen from above on the axis NEP, one year to trace out the ellipse drawn on the surface of the barrel-shaped heliacal path. The sun's path also rotates daily as the sun traces its yearly path through the sky. If, in Figure 5, the barrel is rotated so the sun is placed at the top left of the barrel, the ecliptic would appear as a diagonal line extending to the bottom right of the barrel. That edge-on view of the ecliptic is the Axis of Evil. The existence of the Axis of Evil implies that the entire universe participates in the yearly motion of the sun about the earth or that the universe is at least aware of the sun's yearly path about the earth. Is it any wonder that atheists refer to it as the Axis of Evil?



**Figure 5:** The barrel-shaped circuit of the sun with the ecliptic.

### The Sun's Circuit as a Wave<sup>5</sup>

What we consider next is difficult to imagine, but not impossible. Fill a cup half-full of water. Now move the cup back and forth until you get a wave where one side is high in the cup while the opposite side is low. The wave sloshes back and forth and so does anything floating on the water. This corresponds to the ellipse in Figure 5.

Now here's the hard part, which you cannot actually do in a cup because it is too small, but you could do it in something like a rain barrel. This time, mount a camera over the center of the barrel (a cylinder

<sup>5</sup> Also see "Quantum Behavior of Silicon Oil" elsewhere in this issue.

also works and is easier to build) and affix it to the barrel's side so that the camera rotates with the barrel. Also, about halfway between the surface of the water and the bottom of the barrel affix a disk that can be bobbed up and down. If the barrel is not rotating, the bobbing disk will create the same kind of wave we generated in the cup in the previous paragraph.

Start rotating the barrel at about 2 turns per second and wait for all the water therein to rotate with the barrel (it may take hours). Then start the bobber and wait for the wave to develop (this, too, will take a long time). When the system stabilizes, the wave will no longer oscillate back and forth but will now rotate with the barrel but at a different rate. It is now called a "traveling wave" because its crest (top left at sun's location in Figure 5) travels counter-clockwise along the barrel's wall in the course of a year.

Sprinkle some powder or confetti on the surface of the water. Each piece of confetti will move up and down with the wave's crest and trough but now the Coriolis force (the outward force you feel when you whirl a stone tied to a string over your head) also carries each confetti piece in a circle when seen from above by the camera. Each piece of confetti traces out an identical circle in phase (i.e., if one piece of confetti is at the rightmost edge of its circle, then so is every other piece of confetti). Not only will the confetti move in a circle but its up and down motion caused by the wave will force it to trace out a heliacal path like the sun's yearly path in Figure 5 when viewed from the outside of the barrel.

The confetti represents the sun, planets and stars or even individual atoms and photons in the universe. Furthermore, the water represents the inertial or gravitational field of the firmament (described elsewhere in this issue). The surface of the water represents a 2-dimensional slice of the universe just as the ellipse in Figure 5 represents a 2-dimensional slice that happens to include the path or orbit of the sun. We then see that all objects in the universe not directly or gravitationally tied to the earth's local gravity field will follow identical circles at the same speed and in the same relative position.

This model also accounts for aberration and the annual Doppler shift of stars. It does so because the light rays from the stars also participate in the yearly solar motion, sweeping them past the earth during the course of the year.

In the barrel illustration, the water represents the gravitational, also called the inertial field of the firmament. In the real world, the confetti is not just restricted to the surface but is sprinkled throughout the volume of space. Every atom in the universe follows the same path as the sun with the same period. The only difference is that it can have its own intrinsic motion, too. So two stars orbiting each other will both trace out the same 186-million-mile-diameter circle and so will their

orbit trace out the same 186-million-mile circle. The motion is induced as a Coriolis force by the gravitational field of the firmament. Moreover, because the firmament is some  $10^{123}$  times as massive as the universe, the universe follows the firmament-induced Coriolis and Centrifugal forces' dictates. (The traveling wave is maintained by the centrifugal force of the firmament.)

Since the earth is located at the gravitational center of the firmament and on its axis of rotation, it will not feel the gravitational wave. The earth will see the sun go through its daily and yearly path as depicted in Figure 5 and, insofar as the sun is concerned, it perceives the earth as if it were in orbit around the sun once a year. Furthermore, all experiments designed to measure the speed of the earth through space will register a speed of zero, exactly as observed.<sup>6</sup>

There is one other phenomenon predicted by this model. If the earth is at the gravitational center of the firmament, earth's gravitational field, as opposed to any other body's gravitational field, coincides with the firmament's. As such, any force applied to either move the earth out of its central position or to change the length of the day will be opposed by the firmament which will perceive said imposed force as an attempt to change its position or rotation rate. By Newton's first law—for every action there is an equal and opposite reaction—the responding force, coming from an immovable object, will transfer the action of the force onto the universe. Since the maximum speed allowed by the universe is the speed of light, that's the speed at which the change is communicated to the material of the universe. The universe does the moving in the opposite direction of what the earth would have moved had it not been at the core of the firmament's gravitational field. Remember, the firmament is at least  $10^{123}$  times as massive as the universe.

### **Putting It All Together**

So far, we have examined two observed phenomena in some detail. The first was the Axis of Evil, the deprecatory name given to an alignment of three universal temperature irregularities, *viz.* the dipole, quadrupole, and octupole, in the cosmic background radiation with the earth's ecliptic. The second phenomenon is how the sun and every other particle in the universe not gravitationally tied to earth traces out an identical path in the sky, even the path the sun traces out in the course of the year which path we call the "ecliptic." It is, therefore, small wonder that the three poles should line up with the ecliptic. The Axis of Evil may be dismissed as an unfortunate coincidence and the quadrupole and octupole may be regarded as "local" (although no real-

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<sup>6</sup> The experiments referred to are of three kinds: Arago's experiments with starlight and terrestrial light, Airy's experiments with aberration, and the Michelson-Morley family of experiments searching for the earth's motion through the ether (firmament).

istic explanation has yet surfaced), but the fact remains that these follow logically from all experimentally-based, geocentric results.

The evidence suggests that the cosmic phenomena that reveal the Axis of Evil are a consequence of the yearly Coriolis force exerted by the effective daily rotation of the firmament. We examined the effect of that rotation on the sun from a geocentric perspective—that the entire universe will follow the solar motion as long as the center of gravity of the earth exactly coincides with the center of gravity of the firmament.

Now I know the critics and they will say, “Do you have a geocentric explanation the CMB?” The answer is, “Yes, several.” The latest is that the CMB is caused by a resonance between shock waves in the firmament capable of transferring heat to the universe at microwave frequencies which, depending on the assumed size of the universe, has a temperature around 3K. But we will leave the details, which are technical, until the next issue of the *Biblical Astronomer*, D.V.

**(To be continued.)**

### QUOTABLE QUOTES

One way to think about science, after all, is as the process for sorting out the possible from the impossible.

—Tom Siegfried.<sup>7</sup>

Hypocrisy is the homage vice pays to virtue.

Voltaire once wrote a severe and scholarly criticism of the Bible that later was discovered to have been written by a Dominican Priest; word for word. The Priest had written on Bible problems and had given their solutions. Voltaire left out the scholarly solutions.

—David K. Lifschults

### EVER WONDER...

Why you never see the headline, “Psychic Wins Lottery”?

Why is it that doctors call what they do “practice”?

Why do they sterilize the needle for lethal injections?

Why isn’t there mouse-flavored cat food?

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<sup>7</sup> Tom Siegfried, 2011. “Warnings of Phony Science Need Occasional Revisiting,” *Science News*, 179(5):2. Tom is the editor of *S. N.*

## QUANTUM BEHAVIOR IN SILICON OIL<sup>1</sup>

In the first decades of the 20th century, physicists hotly debated how to make sense of the strange phenomena of quantum mechanics, such as the tendency of subatomic particles to behave like both particles and waves. One early theory, called pilot-wave theory, proposed that moving particles are borne along on some type of quantum wave, like driftwood on the tide. But this theory ultimately gave way to the so-called Copenhagen interpretation, which gets rid of the carrier wave and with it the intuitive notion that a moving particle follows a definite path through space, and replaced that physical theory with the abstract concept of probability.

Recently, Yves Couder, a physicist at Université Paris Diderot, conducted a series of experiments in which millimeter-scale fluid droplets, bouncing up and down on a vibrated fluid bath, are guided by the very waves that they themselves produce. In many respects, the droplets behave like quantum particles. In a recent commentary in the *Proceedings of the National Academy of Sciences* (PNAS), John Bush, an applied mathematician who specializes in fluid dynamics at the Massachusetts Institute of Technology, suggests that experiments like Couder's may ultimately shed light on some of the peculiarities of quantum mechanics.

The wave-particle duality is best illustrated by an experiment in quantum mechanics that's generally referred to as the two-slit experiment. Suppose you have a tray of water, and across the middle of the tray is a barrier with two openings in it. (See Figure 1.) At one end of the tray is a vibrating rod, and at the other is a pressure sensor. The rod's vibration sends waves across the surface of the water, and when they pass through the openings in the barrier, two new waves form on the opposite side.

On their way to the pressure sensor, these waves run into each other. Where a wave crest meets another crest, they combine to produce a bigger crest. But where a crest and a trough meet, they cancel each other. The pressure sensor thus registers an "interference pattern"—stripes of various height that mark crests and troughs where waves built each up and cancel each other out respectively.

So, what happens when you shoot *light* at a detector through a barrier with two holes in it? Again, you get an interference pattern, a pattern of bright and dark bands as seen in Figure 1. Light appears to behave like a wave. But light also comes as streams of particles, or

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<sup>1</sup> To see a video of the silicon oil droplets' behavior see <http://www.youtube.com/watch?v=GHHaDWEWtQE>.

photons, which can be fired at the detector one at a time. What happens then?



**Figure 1:** Interference patterns

As the first few photons strike the detector, they leave a seemingly random scattering of dots, like the bullet holes left in a target by a mediocre marksman. But over time, the dots form a pattern—the same interference pattern produced by a beam of light. How is that possible, given that the photons were fired one at a time?

Pilot-wave theory proposes that the photons ride on the crests of some type of mystery waves—which likely are waves in the firmament—and which interact with each other no matter the number of photons

that pass through the holes. That interaction is what guides the photons to the detector. When the Austrian physicist Erwin Schrödinger proposed his famous wave equation, which remains the fundamental equation of quantum physics, he was actually describing the guiding wave.

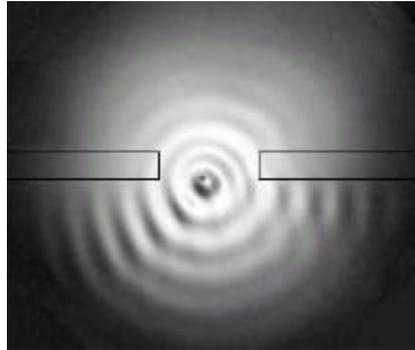
Since the Copenhagen interpretation dispenses with the guiding wave, it has to interpret Schrödinger's equation as describing the *probability* that the photon will be found at a given location. Moreover, until the photon strikes the detector, it's in a sort of metaphysical limbo with no definite location. As the photon passes through the holes, it can thus interfere *with itself*, which explains the interference pattern at the detector. Clearly, the Copenhagen interpretation is not physical but metaphysical. I favor the physical approach.

In formulating his wave equation, Schrödinger was inspired by the theories of Louis de Broglie, who originated pilot-wave theory and whose work on wave-particle duality earned him the 1929 Nobel Prize in Physics. Pilot-wave theory was revived in the 1950s by the physicist David Bohm and still has some proponents, yours truly included, but for the most part, it has faded from view.

In Couder's system, a fluid-filled tray is placed on a vibrating surface. The intensity of the vibrations is held just below the threshold at which it would cause waves—so-called Faraday waves—on the surface of the fluid. When a droplet of the same fluid is placed on the surface, a cushion of air between the drop and the bath prevents the drop from coalescing. The droplet can thus bounce on the surface as surface and droplet repel each other.

You can see a similar repelling phenomenon with port wine. The surface tension of the port is so high that the liquid flows up to the brim of the wine glass. There it builds up bulk until it reaches a point where it drops back to the surface of the wine. But the drop is not absorbed by the wine; instead, it is repelled by it and held up some distance above the surface. Tilt the cup towards the wine, and the drop recedes up the cup's wall as if repelled by the approaching surface of wine.

In this case, however, the drop is suspended above the surface of the fluid. If it drops into the fluid, it pops back out and will oscillate in and out of the fluid. The droplet's bouncing causes waves, and those waves, in turn, propel the droplet along the surface. Couder and his co-authors call these moving droplets "walkers"



**Figure 2:** Pilot wave and particle passing through a slit.

(see Figure 2), the slits are strips lying on the bottom of the tray, underneath the liquid, thus the outline of where the slit is located. The wave pattern is therefore reflected from the change in distance to the bottom of the tray.

"One of Couder's first experiments involved sending walkers towards a slit," Bush says. "As they pass through the slit, they appear to be randomly deflected, but if you do it many times, diffraction patterns emerge." Actually, the deflection is not entirely random but is determined by the carrier or pilot wave. The droplets strike the far wall of the tray in patterns that reproduce the interference patterns of waves. "Their system is a macroscopic version of the classic single-photon diffraction experiments," Bush says.

Wave-borne fluid droplets mimic other quantum phenomena as well, Bush says. One of these is quantum tunneling, referring to subatomic particles' apparent ability to pass through impassible barriers. A walking droplet approaching a barrier across the tray will usually

bounce off it, like a hockey puck off the wall. But occasionally, the droplet will take enough energy from the wave that it hops right over the barrier.

In the early 1800s, the English scientist Thomas Young conducted experiments with ripple tanks to convince the scientific community that light was a wave. “With Couder’s system, one can now explore aspects of wave-particle duality in a fluid system,” Bush says. “How might the development of quantum mechanics have differed had Couder’s system been known to its founding fathers?”

In a paper published in the same issue of *PNAS*, which is the subject of Bush’s commentary, Couder’s group reports its most startling discovery. If the vibrating fluid bath is also rotating, a walking droplet will lock into an *orbit* determined by the troughs of its wave. The notion that a subatomic particle has only a few allowed orbital states is called “quantization,” the very phenomenon that gives quantum mechanics its name. That orbit does not have another centrally-located droplet about which it moves. This is analogous to the Coriolis force that determines weather patterns as well as the yearly motion that the stars describe through the firmament. (These motions are commonly called aberration and parallax.)

Now, imagine that the oil is the firmament, which is also called “spacetime foam,” and that the droplets are fundamental particles such as electrons, protons, or, as is the case for light, photons. The rotation of the firmament causes every particle to describe an **identical orbit**, including the sun and planets. Lastly, imagine the earth to be located on the axis of rotation of the firmament, the fluid. That would place it at the center of the sun’s yearly orbit induced by the rotation of the firmament. Being on the axis of rotation, the earth is not subject to the Coriolis force.

Couder’s results thus reinforce the geocentric model of the universe.

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### CHILDREN ARE QUICK

Teacher: Donald, what is the chemical formula for water?

Donald: H I J K L M N O.

Teacher: What are you talking about?

Donald: Yesterday you said it’s H to O.

# LIQUID SPACE

Paul Davies, Ph.D.<sup>1</sup>

There's so much going on in a vacuum that it's beginning to look like a substance in its own right. Paul Davies offers you a guided tour of the quantum ether.

## Space History

Is space just space? Or is it filled with some sort of mysterious, intangible substance? The ancient Greeks believed so, and so did scientists in the 19th century. Yet by the early part of the 20th century, the idea had been discredited and seemed to have gone for good. Now, however, quantum physics is casting new light on this murky subject. Some of the ideas that fell from favor are creeping back into modern thought, giving rise to the notion of a quantum ether.

This surprising revival is affording new insights into the nature of motion through space, the deep interconnectedness of the Universe, and the possibility of time travel. Ingenious new experiments may even allow us to detect the quantum ether in the lab, or harness it for technological purposes. If so, we'll have answered a question that has troubled philosophers and scientists for millennia.

In the 5th century BC, Leucippus and Democritus concluded that the physical universe was made of tiny particles—atoms—moving in a void. Impossible, countered the followers of Parmenides. A void implies nothingness, and if two atoms were separated by nothing, then they would not be separated at all, they would be touching. So space cannot exist unless it is filled with something, a substance they called the plenum.

If the plenum exists, it must be quite unlike normal matter. For example, Isaac Newton's laws of motion state that a body moving through empty space with no forces acting on it will go on moving in the same way. So the plenum cannot exert a frictional drag—indeed, if it did, the earth would slow down in its orbit and spiral in towards the Sun. Nevertheless, Newton himself was convinced that space was some kind of substance. He noted that any body rotating in a vacuum—a planet spinning in space, for example—experiences a centrifugal force. The earth bulges slightly at the equator as a result. But truly empty space has no landmarks against which to gauge rotation. So,

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<sup>1</sup> Paul Davies is a physicist, cosmologist, astrobiologist, and writer. Currently he is a professor at Arizona State University. He is director of the Beyond Center for Fundamental Concepts in Science and co-director of the Cosmology Initiative, both at Arizona State University. This paper first appeared in 3 November 2001, *New Scientist*, 172(2315):30.

thought Newton, there must be something invisible lurking there to provide a frame of reference. This something, reacting back on the rotating body, creates the centrifugal force.

The 17th century German philosopher Gottfried Leibniz disagreed. He believed that all motion is relative, so rotation can only be gauged by reference to distant matter in the universe. We know the earth is spinning because we see the stars go round. Take away the rest of the Universe, Leibniz said, and there would be no way to tell if the earth was rotating, and hence no centrifugal force.

The belief that space is filled with some strange, tenuous stuff was bolstered in the 19th century. Michael Faraday and James Clerk Maxwell considered electric and magnetic fields to be stresses in some invisible material medium, which became known as the luminiferous ether. Maxwell believed electromagnetic waves such as light to be vibrations in the ether. And the idea that we are surrounded and interpenetrated by a sort of ghostly jelly appealed to the spiritualists of the day, who concocted the notion that we each have an etheric body as well as a material one.<sup>2</sup>

### **Michelson-Morley Experiment and Relativity**

But when Albert Michelson and Edward Morley tried to measure how fast the earth is moving through the ether, by comparing the speed of light signals going in different directions, the answer they got was zero. An explanation came from Albert Einstein: the ether simply doesn't exist, and Earth's motion can be considered only relative to other material bodies, not to space itself. In fact, no experiment can determine a body's speed through space, since uniform motion is purely relative, he said.

Sounds OK so far, but there was one complication: acceleration. If you are in an airplane flying steadily, you can't tell that you're moving relative to the ground unless you look out of the window, just as Einstein asserted. You can pour a drink and sip it as comfortably as if you were at rest in your living room. But if the plane surges ahead or slows suddenly, you notice at once because your drink slops about. So although uniform motion is relative, acceleration appears to be absolute: you can detect it without reference to other bodies.

Einstein wanted to explain this inertial effect—what we might commonly call *g*-forces—using the ideas of the Austrian philosopher Ernst Mach. Like Leibniz, Mach believed that all motion is relative, including acceleration. According to Mach, the slopping of your drink in the lurching airplane is attributable to the influence of all the matter

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<sup>2</sup> Today's occult call this a person's *aura*.

in the Universe—an idea that became known as Mach’s principle. Einstein warmed to the idea that the gravitational field of the rest of the universe might explain centrifugal and other inertial forces resulting from acceleration.

### Virtual Particles

However, when in 1915 Einstein finished formulating his general theory of relativity—a theory of space, time and gravitation—he was disappointed to find that it did not incorporate Mach’s principle. Indeed, mathematician Kurt Gödel showed in 1948 that *one solution to Einstein’s equations describes a universe in a state of absolute rotation—something that is impossible if rotation can only be relative to distant matter.*<sup>3</sup> So if acceleration is not defined as relative to distant matter, what is it relative to? Some new version of the ether?

In 1976 I began investigating what quantum mechanics might have to say. According to quantum field theory, the vacuum has some strange properties. Heisenberg’s uncertainty principle implies that even in empty space, subatomic particles such as electrons and photons are constantly popping into being from nowhere, then fading away again almost immediately. This means that the quantum vacuum is a seething frolic of evanescent “virtual particles.”

Although these particles lack the permanence of normal matter, they can still have a physical influence. For example, a pair of mirrors arranged facing one another extremely close together will feel a tiny force of attraction, even in a perfect vacuum, because of the way the set-up affects the behavior of the virtual photons. This has been confirmed in many experiments.

So clearly the quantum vacuum resembles the ether, in the sense that there’s more there than just nothing. But what exactly is the new version of the ether like? You might think that a real particle such as an electron moving in this sea of virtual particles would have to batter its way through, losing energy and slowing down as it goes. Not so. Like the ether of old, the quantum vacuum exerts no frictional drag on a particle with constant velocity.

But it’s a different story with acceleration. The quantum vacuum does affect accelerating particles. For example, an electron circling an atom is jostled by virtual photons from the vacuum, leading to a slight but measurable shift in its energy. And according to my 1976 calculations, an observer accelerating through empty space should see themselves surrounded by electromagnetic radiation, like that from a hot object. The stronger the acceleration, the hotter the radiation.

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<sup>3</sup> Emphasis added.

Later that year, William Unruh at the University of British Columbia reached a similar conclusion by considering how the quantum vacuum might affect an accelerating particle detector. Unruh's method was readily adaptable to rotational acceleration, and calculations revealed that a rotating detector in a vacuum would also see radiation. Could this heat radiation be the ether glowing? To find out for sure, we would have to actually observe the radiation.

However, the effect is tiny: to register a temperature of just 1 kelvin requires an acceleration of about  $10^{21}$  g. Accelerating a physicist so severely is hardly a practical proposition. But maybe we could subject a subatomic particle to such violence. In October 2001, Daniel Vanzella and George Matsas of the State University in São Paulo, caused a stir by pointing out that if the radiation effect exists, it could cause a proton to do something that would never happen otherwise. A rapidly accelerated proton would absorb energy from the surrounding radiation and turn into a neutron, creating a positron neutrino in the process. But achieving such enormous accelerations is extremely difficult, even with a proton.

### Mirror Magic

So is there a gentler way? In the 1970s, Stephen Fulling and I, then working at King's College London, investigated how the quantum vacuum would be disturbed by a moving mirror. We found that, as with a moving particle, there was no effect if the mirror moves at a constant velocity. Somewhat to our puzzlement, the same turned out to be true for a uniformly accelerating mirror. *However, a mirror that changes its acceleration—by wiggling back and forth, say—excites the quantum vacuum and creates real photons.*<sup>4</sup> It might be possible to amplify this moving-mirror radiation by using a resonant cavity with vibrating walls. Marc-Thierry Jaekel, Astrid Lambrecht and Serge Reynaud of the University of Paris, Jussieu, described such an experiment earlier this year [2001—*ed.*]. They showed that the resonant oscillations not only amplify the radiation, they mean that it is emitted in sharply peaked bursts, helping to make it distinctive. The unsolved problem is how to shake the cavity violently enough while keeping it very cold, so that heat radiation doesn't swamp the still faint signal.

There could be a way to feel the ether more directly. Theory predicts that the quantum vacuum behaves in some ways like a viscous fluid. According to general relativity, a gravitational field is just a distortion of the geometry of space-time. And it turns out that bending space puts a strain on the quantum ether. If this strain changes with

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<sup>4</sup> Emphasis added.

time, you get friction. Leonard Parker discovered in the late 1960s that an expanding or contracting Universe would create particles out of a pure vacuum. In effect, the stretching of space jiggles up some of the virtual particles and turns them into real particles.

At about the same time, Unruh and Alexei Starobinskii of Moscow University predicted a similar effect near black holes. They showed that if a black hole (which is actually just highly warped empty space) rotates, it emits quantum particles and glows. The quantum ether provides a neat way to explain this. As the hole rotates, it drags the ether around with it. The dragging effect is fiercer closer to the hole, so the ether is sheared, which heats it and makes it glow. Unfortunately the glow is so faint that no readily foreseeable telescope will be able to capture it.

Luckily, you don't need a black hole to observe ether friction. In 1997, John Pendry of Imperial College, London, showed that a mirror sliding sideways parallel to another mirror facing it should experience friction even in a vacuum, because the virtual photons sandwiched between the parallel plates would heat up the mirror surfaces. This heat energy can come only from the kinetic energy of the plates, which would therefore be slowed down.

The same would apply to a single atom moving near a metal surface. So in theory, an atom dropped down the exact center of a vertical metal pipe should reach a terminal velocity as it ploughs through the viscous quantum vacuum, just like a ball bearing dropped into oil. With advances in cold-atom optics, such an experiment might be feasible in the near future.

Yet even if we could detect the quantum ether as dramatically as this, all the effects I have described so far are weak. None of them has a powerful influence on the universe, so you might think the quantum ether is just a minor curiosity. But some physicists think the very opposite is true.

### **The Firmament and Inertia**

Bernard Haisch of the California Institute for Physics and Astrophysics in Palo Alto and his colleagues have calculated the effect of the quantum vacuum on an accelerating charged particle, and claim that it mimics the effect of mass (*New Scientist*, 3 February 2001, p 22). This, says Haisch, is the true origin of inertia, and solves the old conundrum about acceleration and relative motion. Put bluntly, your drink slops when an aircraft lurches because the quantum vacuum pushes against the accelerating atoms. Although few scientists have so far accepted this claim, the possibility is tantalizing.

And there is a curious pointer to something deeper. Quantum physics is famed for its “non-locality”: the fact that it is not possible to characterize the physical situation at a point in space without reference to the state of the system in the wider surroundings. The quantum vacuum is no exception, since its state is defined across all of space. This enables it to “feel” the structure of the entire Universe, and thereby to link the global and the local in precisely the manner that Mach had in mind.<sup>5</sup> This nonlocality hints at a possible connection between local physics and distant matter in the Universe—a connection that could be mediated by the quantum ether. Among other things, it could explain why we share an absolute frame of acceleration with the distant stars.

This is not the ether of Maxwell. Rather than being the medium that transmits light, it is made of light—virtual photons—and other virtual particles. Nor is it the plenum. The Greek philosophers’ original argument against the void has lost much of its force, because physicists today have little difficulty imagining the concept of empty space. But now they question whether space itself is truly fundamental. Perhaps space as we know it is a special configuration of a deeper quantum entity, the properties of which we can only guess at. Far from abhorring a vacuum, nature may have worked very hard to create one.

### **Time machines and endless energy**

Could we tap the quantum ether as a power source? The first consideration is how much energy it contains. Calculating it using quantum field theory, you get an enormous energy density—about  $10^{110}$  joules per cubic centimeter. That may sound like a wealth of free energy waiting to be mined, but unfortunately it can’t be true. Vacuum energy has an antigravitational effect—it pushes space apart—and that much antigravity would be catastrophic. Astronomers do believe that some kind of dark energy is slowly speeding up the Universe’s expansion. If the quantum vacuum is responsible, then it would have to have an energy density of no more than a few joules per cubic kilometer—a pretty poor energy source. What’s more, to get at this energy you need a sink region of even lower energy into which the energy can flow. So unless you can reduce the vacuum energy in a region of space, you can’t extract what is there. [On the contrary. Dark energy is postulated by astronomers to keep the earth out of the center of the universe and firmament. *If the earth is at the center of the universe*, dark energy doesn’t exist; if the firmament and universe are geocentric then there is no need to postulate dark energy. —*Ed.*]

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<sup>5</sup> This requires an absolute space and the only candidate for that is the firmament. —*Ed.*

But we could yet find a more exotic use for the vacuum. Gravitational fields modify the energy of the ether, and can sometimes make it negative. Some astrophysicists have speculated about using negative-energy ether to build a wormhole in space. Wormholes are hypothetical short cuts through space-time between two widely separated points, and they have become famous as potential time machines. According to general relativity, by traversing a wormhole and returning through normal space at high speed, an astronaut could get home before he or she left.

Calculations by Kip Thorne and his colleagues at the California Institute of Technology showed that a wormhole would soon collapse under its own gravity unless shored up by some exotic material with substantial negative energy—such as suitably modified ether. However, visiting the past in this manner paves the way for all sorts of troubling paradoxes, such as killing your own grandfather before he had any children, thereby negating your own existence. Many physicists are deeply unhappy about such paradoxes, and believe that nature will forbid travel backwards in time. Stephen Hawking proposed a “chronology protection hypothesis” which says that if you try to make a time machine, something will stop you.

But what might that something be? The answer could be the quantum ether itself. All those virtual particles swarming in the vacuum would get caught up in the time vortex around a wormhole. This would severely modify the structure of the quantum ether, enormously boosting its energy near the wormhole. It remains unclear whether the intense gravity associated with this seething energy would wreck the wormhole and prevent time travel. Maybe a clever enough cosmic engineer could harness negative ether energy to stabilize the wormhole’s interior, while preventing the ether energy swirling around the wormhole from escalating out of control.

### **Comments by your Editor**

I reproduced this paper as written (with trivial changes) to allow you, dear reader, to see that there is little new in what I’ve discovered. The only thing new is the perspective that the virtual reality of the virtual space vacuum is not virtual at all but real and that, furthermore, the vacuum state is the firmament that God created on the second day. I believe that the firmament was created from the light of the first day. I was not aware of Davies’ 2001 paper until September 2010 by which time I had reached similar conclusions. I favored the plenum ether as early as 1976, saw that plenum was a property of God, and by 1980 concluded that the “vacuum” is “a substance in its own right.” Shortly thereafter, I understood that the firmament is a created plenum.

## THE BIBLICAL FIRMAMENT: Part 2

**Gerardus D. Bouw, Ph.D.**

In the first installment of this paper, I logically derived the properties of God from the non-properties of nothing. I focused exclusively on the commonly acknowledged properties of God, that is, his omnipotence, omnipresence, existence, and omniscience. I could equally have derived infinite grace, infinite love, and many other properties from the same starting point. At the time I was mulling over these ideas, my goal was to see where starting with the properties of God would lead me in my quest for a consistent geocentric model of the universe. The conclusion I was led to is obvious, in hindsight, namely that God is a plenum, given that he is uncreated, eternal, and omnipotent. The conclusion that God is a plenum is a bold one, not to mention fraught with danger, since some may consider it heretical. The problem is that it is perfectly reasonable, and the Lord does appeal to reason in Isaiah 1:14 when he says to Israel, “Come now, and let us reason together.” So, how did I reach the conclusion that claiming God is a plenum is not necessarily heretical? That is the subject of this installment of the Biblical Firmament.

### **Scriptural Definition of Heresy**

First, we must define the word, heresy. Usually Scripture defines a word near or by its first use, and the first time the word heresy appears in the English Scripture is in Acts 24:14. Paul is defending himself from the Jewish Pharisees and Sadducees before the governor, Felix. Paul confesses to Felix:

But this I confess unto thee, that after the way which they call heresy, so worship I the God of my fathers, believing all things which are written in the law and in the prophets.<sup>1</sup>

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<sup>1</sup> Modern versions change heresy to sect. The Greek word is the same for both, so I consulted the Latin, using it as a commentary to meet the shortage in vocabulary of the Greek language. The Latin texts use the word *haeresis* here, which is the root word of our word, heresy. The Latin can distinguish between sect and heresy, the word *secta* meaning sect. The word heresy is thereby authenticated and the new versions' sect is shown to be a dodge; an attempt to avoid the charge that they do not believe as Paul confesses.

From the principle of first usage it follows that the accusing Jews' definition of heresy is to believe all things which are written in the law and in the prophets; in short, to believe all things written in Scripture. Even today, the Jews consider belief of all things in the Bible as heresy, for the vast majority esteem the Talmud—layers upon layers of speculations and commentary—more authoritative than the Tenach (Old Testament). From the context of the verse we see that scripturally, heresy hinges on faith in the written words of God. Furthermore, remember that Paul was, as he put it, “a Pharisee, the son of a Pharisee” (Acts 23:6).

But heresy lies in the eye of the beholder. The Church of Rome, for instance, declares anyone a heretic who rejects the declarations of the Magisterium, which is the teaching authority of the Catholic Church which, in turn, is said to be embodied in the current bishops of the Catholic Church in union with the Pope. He is branded a heretic whether he was ever a member of the Catholic Church or not. In kind, the Jews, too, were seeking the life of Paul before Felix. Most sects think heresy worthy of death.

We see, then, that what the world deems heretical is to believe all of Scripture. But that is not the Scripture's definition of heresy. The definition of heresy in the Bible is someone who knows correct Bible doctrine and knowingly rejects it by contradicting it. That means that what Bible believers consider heresy is for a believer to knowingly teach things contrary to Scripture. Under that definition, an atheist cannot be called a heretic for he makes no profession of believing Scripture, let alone faith in God unless he once espoused Bible doctrines. Furthermore, someone who unwittingly teaches something contrary to Scripture cannot be condemned as a heretic until formally confronted with his heretical belief two or three times (Titus 3:10-11).<sup>2</sup> Note that even so, *ostracism* is the only penalty; there is no capital punishment to be imposed by man for heresy in the New Testament, not even for those who pervert the words of God (Revelation 22:19);<sup>3</sup> which is a form of the sin unto death (I John 5:16).<sup>4</sup>

In short, a heretic is someone who knowingly teaches as Scripture something contrary to Scripture. Such people are usually enamored with an idea or discipline which they consider to have a superior (meaning clearer, more understandable, or more authoritative) revelation than that given in Scripture.

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<sup>2</sup> Titus 3:10-11—A man that is an heretic after the first and second admonition reject; <sup>11</sup> Knowing that he that is such is subverted, and sinneth, being condemned of himself.

<sup>3</sup> Revelation 22:19—And if any man shall take away from the words of the book of this prophecy, God shall take away his part out of the book of life, and out of the holy city, and *from* the things which are written in this book.

<sup>4</sup> I John 5:16b—There is a sin unto death: I do not say that he shall pray for it.

## The Physical Attributes of God

For several years I pondered the spiritual and physical nature of God. It was the mention of the power of God throughout Scripture and most particularly in Romans 1:20<sup>5</sup> that led me to serious contemplation that God not only has a body but also that the physical presence may be manifested in a variety of physical forms. The context of Romans 1:20 is that the eternal power and Godhead may be invisible, but they are made manifest in the creation.

When God created Adam he created Adam in the image of himself (Genesis 1:26-27).<sup>6</sup> That image includes the triune nature of soul, body, and spirit, corresponding to the Father, the Word, and the Holy Ghost. As the Scripture says Jesus—in the flesh—is the express image of God (Hebrews 1:3).<sup>7</sup> How can it be heresy to take these things literally?

There are two reasons why people believe that God has no body or form. The first is derived from Gnosticism and the second is based on a misunderstanding of the nature of spirit. Neither is sound.

Gnosticism is the belief that the flesh in particular and matter in general is innately evil. This is based on Plato's philosophy that the idea of something is good but the physical form is not. For instance, the idea of a table, in the mind of its inventor or builder, is good, immortal even in a sense; but the ideal, when converted to its physical presence, is subject to corruption and is thus evil. This rationale for Gnosticism appeals to a certain type of intellectual who then carries said rationale further and concludes that since matter is vile, God would never have manifested himself in vile flesh because if he did he would have corrupted himself and could no longer be God.

Today, this type of individual is at home with liberalism; and I might add that modern liberalism dates back at least as far as the time of Hezekiah (Isaiah 32:5).<sup>8</sup> Indeed, religious liberals believe that Gnos-

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<sup>5</sup> Romans 1:20—For the invisible things of him from the creation of the world are clearly seen, being understood by the things that are made, *even* his eternal power and Godhead;

<sup>6</sup> Genesis 1:26-27—And God said, Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth. So God created man in his *own* image, in the image of God created he him; male and female created he them.

<sup>7</sup> Hebrews 1:3—...being the brightness of *his* glory, and the express image of his person, and upholding all things by the word of his power....

<sup>8</sup> Isaiah 32:5a—The vile person shall be no more called liberal. The vile person shall be no more called liberal, nor the churl said to be bountiful. <sup>6</sup> For the vile person will speak villany, and his heart will work iniquity, to practice hypocrisy, and to utter error against

ticism was the original Christianity and that the New Testament was written a couple centuries after the “historic” Jesus. They believe this because I, II, III John and Jude were written against Gnosticism. But if the New Testament was written in the first century, then Gnosticism could not be the original Christianity but was the first Christian heresy. There is, of course, no proof that the New Testament was written after the first century, especially since fragments of the New Testament were found in the Qumran caves sealed circa A.D. 70.<sup>9</sup>

We now undertake the second reason why people discount the body of God. One of the most commonly misunderstood properties of God involves that he is a Spirit (John 4:24).<sup>10</sup> Most people see a spirit as a disembodied, amorphous thing that has no form or physical representation. However, that is not what Scripture teaches. Scripture teaches that the spirit of man comes from God and returns to him at death (Ecclesiastes 12:7).<sup>11</sup> The spirit is given us by God in order that we may have a conscience. The soul, however, is in charge. Thus sin is attributed to the soul. Man’s body dies because of Adam’s sin; the soul dies for rejecting God’s atonement for sin. Man’s spirit, which is a portion of God’s spirit, should be in charge. Indeed, to be born of the spirit, of which Jesus speaks in John 3, means to allow the spirit the leadership; thus, any man who wants to worship God must worship him in spirit and in truth (John 4:24). The ultimate Spirit is the Holy Ghost, the third person of the Trinity. The spirit is immortal, not the soul, and obviously, not the body. People thoughtlessly talk about “your immortal soul,” but the Bible knows nothing of that. Scripture teaches that, “The soul that sinneth, it shall die” (Ezekiel 18:4, 20).

The basis for this idea that the spirit has no body or form comes from Luke 24:37-43 where Jesus tells his disciples, who were frightened by his sudden appearance among them, not to be afraid:

<sup>37</sup> But they were terrified and affrighted, and supposed that they had seen a spirit. <sup>38</sup> And he said unto them, Why are ye troubled? and why do thoughts arise in your hearts? <sup>39</sup> Behold my hands

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the LORD, to make empty the soul of the hungry, and he will cause the drink of the thirsty to fail.

<sup>9</sup> Estrada, David, and William White Jr., 1978. *The First New Testament*, (Nashville: Thos. Nelson).

<sup>10</sup> John 4:24—God is a Spirit: and they that worship him must worship him in spirit and in truth. Modern bibles greatly err when they drop the “a” from “a Spirit.” By doing so they imply that all spirits are part and parcel of God; even lying spirits and the spirits of devils. These may have been created by God, but they are not the essence of God; neither are they part of the seven spirits of God.

<sup>11</sup> Ecclesiastes 12:7—Then [upon death] shall the dust return to the earth as it was: and the spirit shall return unto God who gave it.

and my feet, that it is I myself: handle me, and see; for a spirit hath not flesh and bones, as ye see me have. <sup>40</sup> And when he had thus spoken, he showed them his hands and his feet. <sup>41</sup> And while they yet believed not for joy, and wondered, he said unto them, Have ye here any meat? <sup>42</sup> And they gave him a piece of a broiled fish, and of an honeycomb. <sup>43</sup> And he took it, and did eat before them.

Jesus does not say here that a spirit has no body or form; he says that a spirit's body is different from the resurrected body he has. We learn here that whereas a spirit has a visible form, it cannot be handled physically.

Indeed, Zechariah 12:1 tells us that a spirit does have a form and that God forms it inside each of us.<sup>12</sup> Of course, Zechariah's reference to a form is general; it does not specify the exact shape. Angels are called ministering spirits and there is no doubt in Scripture that they have bodies (Hebrews 1:13-14),<sup>13</sup> but the Holy Ghost is seen in the bodily shape of a dove at the baptism of Jesus (Luke 3:22).<sup>14</sup> In Matthew 14:26<sup>15</sup> the disciples mistook Jesus, who was walking on the water, for a spirit. Jesus did not correct them to say that spirits are invisible or that they don't exist, and so the implication is clear; spirits do have a form and corporeal presence.

But that a spirit does have a form is not all; it also has a corporal presence. Scripture tells us of God's form and body by the many mentions of God's face, his hands, and even his wings. Moses saw God's back parts, albeit not his face for that would have killed Moses (Exodus 33:20-23). Clearly, if God has back parts that can be seen, he must have some form, even a physical presence.

Now it can be countered that God is invisible as stated in I Timothy 1:17 and Hebrews 11:27. However, invisibility does not mean that the invisible thing has no form or matter. It seems reasonable that God should be invisible so that no one could accidentally look upon his face. After all, there are things invisible. The wind has certain invisibility,

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<sup>12</sup> Zechariah 12:1—The burden of the word of the LORD for Israel, saith the LORD, which stretcheth forth the heavens, and layeth the foundation of the earth, and formeth the spirit of man within him.

<sup>13</sup> Hebrews 1:13-14—But to which of the angels said he at any time, Sit on my right hand, until I make thine enemies thy footstool? <sup>14</sup> Are they not all ministering spirits, sent forth to minister for them who shall be heirs of salvation?

<sup>14</sup> Luke 3:22—And the Holy Ghost descended in a bodily shape like a dove upon him, and a voice came from heaven, which said, Thou art my beloved Son; in thee I am well pleased.

<sup>15</sup> Matthew 14:26—And when the disciples saw him walking on the sea, they were troubled, saying, It is a spirit; and they cried out for fear.

but it is physical. Likewise, the firmament is invisible, but it certainly has substance. Visibility is a human requirement. Jesus said he had seen the Father, the Godhead, (John 6:46);<sup>16</sup> and lest you think he saw through some mystical spiritual eyes, consider John 14:9 where Jesus says to Philip, “he that hath seen me hath seen the Father.” At the time, the disciples were blind when it came to spiritual eyes. Clearly God has a body in the person of the Lord Jesus Christ who came in the flesh (I John 4:2-3<sup>17</sup>). Paul calls this a mystery in I Timothy 3:16 where he writes:

And without controversy great is the mystery of godliness: God was manifest in the flesh, justified in the Spirit, seen of angels, preached unto the Gentiles, believed on in the world, received up into glory.

Consider the Trinity. The Father corresponds to the soul, the Word is the body, and the Holy Ghost is the Spirit. The Holy Ghost bears witness of the Word, and the Word bears witness of the Father. The Word came physically in written form in the Old Testament, then physically in the flesh in the person of Jesus, the Christ, and then physically in writing again in the form of the New Testament. His final revelation will come when God’s wrath is full, at which time Jesus will inherit the kingdom of heaven, that is, the restoration of Israel. This all implies God has a physical presence, a body, in other words.

Finally, I Corinthians 15:44 explicitly states that a spirit has a body,

There is a natural body, and there is a spiritual body.

A man greatly errs when he claims that a spirit has no form or body. So there is no reason why God cannot be a plenum, for there is no violation of his word, and so no heresy associated with God’s omnipotence as expressed in a plenum.

It was not until I understood the fundamental principles underlying these matters that I felt safe in allowing that God is a plenum. However, I knew from the start that Harold Aspden’s impersonal plenum I mentioned on page 53 of the previous issue couldn’t be the true

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<sup>16</sup> John 6:46—Not that any man hath seen the Father, save he which is of God, he hath seen the Father.

<sup>17</sup> I John 4:2-3—Hereby know ye the Spirit of God: Every spirit that confesseth that Jesus Christ is come in the flesh is of God: <sup>3</sup>And every spirit that confesseth not that Jesus Christ is come in the flesh is not of God: and this is that spirit of antichrist, whereof ye have heard that it should come; and even now already is it in the world.

plenum because a plenum is more than physical; it must embrace all, including the metaphysical or spiritual realms. In other words, for you technical readers, the mathematics describing the plenum must be complex. (For those of you who survived two years of high school algebra, complex means it must involve imaginary numbers as well as real numbers.)

(To be continued.)

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### DISTRIBUTE THE WEALTH: A Parable

A young woman was about to finish her first year of college. Like so many others her age, she considered herself very liberal, and among other liberal ideals, was very much in favor of higher taxes to support more government programs, in other words redistribution of wealth.

She was deeply ashamed that her father was a rather staunch conservative, a feeling she openly expressed. Based on the lectures that she had participated in, and the occasional chat with a professor, she felt that her father had for years harbored an evil, selfish desire to keep what he thought should be his.

One day she was challenging her father on his opposition to higher taxes on the rich and the need for more government programs.

The self-professed objectivity proclaimed by her professors had to be the truth and she indicated so to her father. He responded by asking how she was doing in school.

Taken aback, she answered rather haughtily that she had a 4.0 GPA, and let him know that it was tough to maintain, insisting that she was taking a very difficult course load and was constantly studying, which left her no time to go out and party like other people she knew. She didn't even have time for a boyfriend, and didn't really have many college friends because she spent all her time studying.

Her father listened and then asked, "How is your friend Audrey doing?"

She replied, "Audrey is barely getting by. All she takes are easy classes, she never studies and she barely has a 2.0 GPA. She is so popular on campus; college for her is a blast. She's always invited to all the parties and lots of times she doesn't even show up for classes because she's too hung over."

Her wise father asked his daughter, "Why don't you go to the Dean's office and ask him to deduct 1.0 off your GPA and give it to your friend who only has a 2.0. That way you will both have a 3.0 GPA and certainly that would be a fair and equal distribution of GPA."

The daughter, visibly shocked by her father's suggestion, angrily fired back, "That's a crazy idea, how would that be fair! I've worked really hard for my grades! I've invested a lot of time, and a lot of hard work! Audrey has done next to nothing toward her degree. She played while I worked my tail off!"

Her father slowly smiled, winked and said gently, "Welcome to the conservative side of the fence."

## 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. Any 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 preaches a life that is really meaningless.

**If you agree with the above, please consider becoming a member. Membership dues are \$30 per year. Members receive free shipping 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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(Product list continued on the inside front cover.)