READERS' FORUM

From a Concerned Citizen

Dear Sir, I really think you need to go back and read the bible, because you do not have a full understanding of who GOD really is . He is the alpha and omega,

He is no just some science thing you are trying to disprove.You are believing in a dangerous cult adopted science theory,along with astrology which is from satan himself, I will pray for you that GOD gives you an understanding of how wrong you are in your thinking and understanding of how this earth was formed and continues to rotate on its axis, just by the grace of GOD.

Thank You Bill N,

[All above *sic* except for spurious carriage returns that have been removed to save space—*Ed.*]

Response:

You did not read the material, did you? I hate astrology and have shown from historical evidence that the model advocated by astrologers is not the geocentric model but the heliocentric one you learned in school and now defend. What evidence do I have? Simply that all mosaic floors of synagogues in the Mid-east have the zodiacal constellations surrounding the sun god Apollo, not the earth. Ditto all occult representations of the sky; the sun is always in the center, not the earth.

From the Bad Astronomer Web Site

The following note is by Martin Selbrede, posted on the Bad Astronomer Forum (under a pseudonym) rebutting Phil Plait the atheistic moderator, founder, and owner of the "Bad Astronomer" website. Martin's response is brilliant and extremely well written. Martin G. Selbrede wrote:

The Forum Moderator writes: "As always, besides all the obfuscation, this boils down to the same thing Prince has posted many times before. I have also posted a rebuttal many times, but have never heard back from Prince, Dunash or any other geocentrists on how I am wrong. So, for the nth time, I will post it here: Geocentrism, as advocated by creationists or other religiously fundamental people, is cer-

tainly wrong. How, you may ask? What is going on is that you can do a change of reference frame to a geocentric one, and by relativity the math must still work out. I readily admit that. I do not understand all the math involved, but I will take it for granted that it works out, and that physically, geocentrism is just as valid as, say, heliocentrism.

"But note the words 'just as valid.' Also, by relativity, it cannot be any more valid; geocentrism is just another change of frame (although to a non-inertial one). What geocentrists are saying is that geocentrism is the one, true frame. Creationists must say that because that is what is says in the bible (sic). Now pay attention here, because this is the important bit: to say geocentrism isn't wrong, you have to accept the premise that any frame of reference is just as valid as any other. But to claim that geocentrism is correct, you have to ignore that very same premise. Geocentrism as the One True Way is therefore self-contradictory (sic). It doesn't work."

Figure 1: the Bad Astronomer, Phil Plait. (Courtesy, Ensceptico, Wikimedia Project.)

The Moderator correctly notes that within the relativity paradigm, geocentricity and heliocentricity are both physically valid models. I've been using plenty of qualifications lately (phrases such as "albeit non-exclusively") to denote this fact of relativity. The general covariance of the field equations requires that all attacks on geocentricity from a physical point of view be regarded as specious. But the ire raised is selectively applied—Occam's Razor has NO bearing on those covariant tensors, and if it did, they wouldn't be covariant anymore. The barycentric argument has no bearing on covariance for the same reason. The superluminal velocity objection to geocentricity is slain on Einstein's field equations. Yet most of this heliocentrically-driven attack on geocentricity is passed over, and anyone asserting that the Earth unequivocally revolves around the Sun is left uncorrected. Their provincialism is acceptable, despite its conflict with relativity theory. A geocentrist dares to point out that these kinds of criticisms have no physical meaning, citing Einstein (correctly!) to that effect, and he's ostracized.

Let it be noted for the nth time on the part of geocentrists that our citation of relativity is specific and narrowly focused onto this one axiom: no refutation of the geocentric model, on any physical grounds, can be mounted once one accepts relativity as accurately depicting the physical state of affairs in the universe. Geocentrists do NOT deny that the same could be true of a heliocentric model, or a lunocentric, or jovocentric model. Equal physical validity under relativity accords geocentricity a place at the table, and every critic of it who mounts attacks upon it from a physics perspective is intrinsically crippled in his efforts, unless he elects to jettison Einstein. Then, perhaps, he can attempt to make a case against geocentricity.

I firmly believe that the Moderator makes a gratuitous leap in his concluding syllogism, primarily by incorporating a suppressed premise in his logic. The suppressed premise is that geocentrists are all proponents of relativity theory. And the gratuitous leap is affirming that geocentricity is only salvaged by recourse to relativity, which therefore makes it a non-unique, non-exclusive, albeit legitimate physical description of the physical situation. What, precisely, would the Moderator believe are the implications if relativity is incorrect? Since when is geocentricity harmed by relativity being in error? It appears to geocentrists that relativity being overthrown would lead, not to the outright rejection of geocentricity and re-enthronement of heliocentricity, but quite the opposite.

For example, the Michelson-Morley experiment is explained by relativity by urging that the velocity of the Earth through aether (if one existed) is masked by isotropic light speeds. If relativity is decommissioned as a viable explanation, the prima facie explanation for this experimental result, which is even now a plausible option, becomes nearly compelling: namely, that the M-M apparatus correctly measured the velocity of the earth around the sun, which velocity is zero. (This is why geocentrists have strongly criticized aether entrainment theories that attempt to salvage heliocentricity in non-relativistic thinking. Entrainment is taught because the Earth's motion is presupposed, but each entrainment model is fatally flawed by internal inconsistencies, starting with the disproportion between the allegedly undetectable annual motion and the readily detectible diurnal rotation. Yes, you can say that relativity explains this, but this paragraph is all about what would happen if relativity is debilitated as an explanation.)

I'm aware of no geocentrist who, in the context of relativity theory, derides the equal validity of heliocentricity and geocentricity. But I've read a lot of posts here from geocentricity's critics who are quite clear that they are NOT equal, and that heliocentricity is true while

geocentricity is false. They are, rarely, corrected by anyone from their own camp.

In formal debate, one of the most telling strategies is to mount an internal critique of the opposing system. In so doing, you adopt, *ex hypothesi*, your opponent's position and plumb its implications. This, and only this, is what geocentrists do when pointing out that relativity theory bars geocentricity's critics from mounting any attack upon it from the field of physics. We do not urge that relativity teaches geocentricity to be right and heliocentricity to be wrong. We do not misrepresent relativity and its implications. We understand what relativity teaches and its bearing upon the question in hand. We believe Sir Fred Hoyle struck the correct balance on the matter when he said the trial of Galileo, if held today, would have to be ruled as a draw. Geocentrists make no more of this, as far as relativity is concerned, than is justifiable.

But neither do we leave the matter there. As Franco Selleri's 1998 journal title suggests, there are "Open Questions in Relativistic Physics." And so much of the discussion (the Moderator perceives it as "obfuscation") is centered, not on relativistic explanations, but beyond that paradigm. If geocentricity is to be evaluated, it should be evaluated on its own grounds, not on alien grounds foisted upon it to create straw men opponents. If geocentrists believe geocentricity is what the Moderator calls "The One True Way," this would obviously not follow from relativity, but from a classical reconstruction of physics. Because this fact goes unappreciated, most of the points geocentrists make (about the impedance of free space, the Planck Density, aether entrainment) are routinely transplanted into a relativistic context by critics. And then we get slammed as if we were using relativity improperly to defend geocentricity as the only legitimate cosmology.

Therefore, the debate has always been prosecuted using a double-edged sword: the internal critique of the opposing system (using the prevailing relativistic paradigm) to disarm all challenges to the geocentric model's validity on physical grounds, and then a positive exposition of geocentricity without reference to relativity, which can be conducted to a compelling conclusion. The former strategy only gets geocentrists so far, but it's a lot farther than most critics are willing to admit (physical equality!). The latter strategy takes geocentricity the rest of the way. This would be easier for many to see if they could be more open-minded on the issue of relativity's actual validity. Yes, there are websites that regard all questioning of Einstein to be forms of psychosis, and some dissident physicists have enunciated positions that later came back to haunt them. What does it say, however, when we choose to psychoanalyze another for his viewpoint, rather than evaluate his

view fully on the merits (as a precondition to rejecting or accepting it)? The dissident (crackpot?) is apparently too open-minded, while his opponent may well be too close-minded. This mindset is evidenced by JS Princeton's earlier comments that there is "no motivation" to perform any experiment that might possibly support the geocentric position. This is, and always has been, a serious informal logical fallacy known as "cavalier dismissal." Yes, you stand the risk of standing toe-to-toe with an actual crackpot in unproductive, endless debate. Maybe that's reason enough to perform the experiment—to put a matter to rest. Since geocentrists propose experiments to falsify their view (which stands in the best tradition of the scientific enterprise), I think they're being constructive about this debate.

I find the charge of "obfuscation" curious. There was a high-level discussion in progress, on some relatively obscure (in my view, under-reported) facets of physics that have a major bearing on matters physical. Such discussions are necessarily laden with the appropriate terminology (jargon: the short-hand vocabulary used by specialists in a field). What, specifically, was being cloaked by me in these discussions? Surely not an illicit use of relativity, since much of my discussion involved aspects of a classical reconstruction of physics. Frankly, my opponents' appeals to Occam's Razor was far more an obfuscation (and rejection of their own relativistic paradigm) than anything I said. And, for the record, most people misquote Occam's Razor anyway. The edict not to multiply hypotheses is often thought to mean, "The simplest explanation is the best." In actual fact, it's "The simplest explanation that accounts for all the facts is the best." I'm simply bringing to bear additional facts not accounted for by geocentricity's opponents. Occam's Razor is thereby vitiated in its application, but geocentricity's opponents don't readjust their bearings before using it. This facile use of a misapplied principle is far more disingenuous than any assertion I've recently made in these discussions.

I trust this sets the record straight. But I've been surprised here before.

Skeptical Questions

Below are a series of questions by a skeptic named Bill and answers by your editor.

Bill: Do you believe that humans have accurately sent spacecraft to investigate the planets and other objects within our solar system?
BA: Yes.

Bill: If so, are there mathematical calculations that assume geocentricity which can more precisely direct our spacecraft to rendezvous with other planets, moons, asteroids and comets within our solar system?
BA: No, but see below for why. To track these craft from earth, it is easiest to use the geocentric coordinate system. To change the trajectory of a spacecraft in the gravitational field of the sun, it is easiest to use the heliocentric coordinate system.
Bill: If you claim that, even though such mathematical calculations have not yet been worked out, this still does not rule out the possibility that such calculations may be possible, my response is that it does not seem rational to believe in something simply because it has not been ruled out. Rational beliefs are those that have been ruled in by the evidence, regardless of whether alternative beliefs have been ruled out. Even if a geocentric universe cannot fully be ruled out, it is not rational to believe in such a universe unless there is sufficient evidence to rule it in.
BA: True, assuming your premise that the geocentric "calculations have not yet been worked out." However, your assumption is false. The equations derived from a geocentric universe have been worked out and they are identical to those derived from an acentric universe. Thus I can then reverse your argument and say that since the geocentric model has been around longer than the heliocentric, which, in turn, has been around longer than the modern acentric model, we should return to it. I can claim more: that it was the disproof of the heliocentric model that led to the modern acentric model which, in turn, postulates that every point in the universe looks as if it is located at the center of the universe. After all, the evidence that allegedly overturned the geocentric model has itself now been overturned.

I agree that a rival model should show itself superior to a current one before being accepted, but that has often been violated in the history of science. To men, theories are like women. Men prefer beauty but in reality, beauty is often deceptive and vain. Being beautiful does not make a woman true. Likewise, the most beautiful of several rival theories does not make it true. Thus heliocentrism and relativity won their respective days because they were deemed "beautiful," but they are not true in any absolute sense. So, though your argument is valid, it lacks soundness.
Bill: If heliocentric orbital mechanics works well to get spacecraft to their destination, then it seems reasonable to believe, at least tentatively, that the heliocentric model is correct. Until a geocentric orbital mechanics works better for accurate space travel, should we not accept the model with the most explanatory value?

BA: The geocentric explanation gives the same formulae as the acentric ones but it has a better explanation. For instance, the centrifugal and Coriolis "effects" are considered fictitious forces in modern theory. In the geocentric theory they are caused by real, gravitational forces. The geocentric model explains the Euler effect, and even some quantum mechanical effects are derived from the geocentric assumption, a connection that the acentric model has yet to find.

The acentric model cannot explain why the Creator of the universe would tell us that the sun moves around the earth if the reverse is true. This latter may not be acceptable to you but surveys show that even in the USA some 35-45% of the population still believes that the sun goes around the earth. I am a geocentrist because that is what my God, Jesus, teaches. Since he is the way, the truth, and the life, it is incumbent upon me to conform my view of nature to his truth, which is his written word. It is my pleasure to be able to do that in the realm of astrophysics in particular. I am not held responsible for whether or not anyone believes me, but I am responsible for what I do with the Truth (Christ), that is, whether I teach, suppress, or crucify him anew.

Humphreys' White Hole Cosmology

Hello Dr. Bouw, I was wondering what you thought about Humphreys' White Hole Cosmology. I was wondering what creationist model you subscribe to explain distant starlight, thank you.

In Christ, R. T.

Dear R. T., Dr. Humphreys' model is a halfway house between the modern relativistic belief and geocentricity.

Here's the problem with it. True, according to relativity the gravitational tension about the earth would allow billions of years to pass on the outskirts of the universe while 6,000 years would pass on earth, but about five years before Dr. Humphreys published his theory, an Israeli physicist noted the opposite; that according to relativity, the outskirts of the universe would only experience 6,000 years while the earth experienced billions of years.

Thus, according to relativity, both Humphreys' white hole model and the Israeli's black hole model are correct. So you see the problem: according to the black hole model, billions of years have passed on earth while in the third heaven's (God's) view only 6,000 years have passed. According to Humphreys' white hole model, 6,000 years have passed on earth while billions of years have passed in God's view.

This gives us four options:

1. 6,000 years elapsed in earth, 12 billion years for God.
2. 12 billion years elapsed in earth, 6,000 for God.
3. 12 billion years elapsed in earth, 12 billion years for God.
4. 6,000 years elapsed in earth, 6,000 years for God.

Humphreys has chosen option 1; the Israeli physicist chose option 2; modern physics chooses option 3; and geocentrists opt for number 4. We are dealing with absolute space when we speak of the firmament, the heaven where the sun, moon, stars and the earth are located. Relativity does not apply to absolute space, which eliminates options one and two. So, the only sound options are three and four.

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Alexander von Humboldt on Geocentricity

The visitor was friendly received by Alexander von Humboldt[1] [1769-1859], and when he laid before him his doubts about the Copernican System, got for answer the memorable words: "I have known, too, for a long time, that we have no arguments for the Copernican system, but I shall never dare to be the first to attack it. Don't rush into the wasps' nest. You will but bring yourself to scorn of the thoughtless multitude. If once a famous astronomer arises against the present conception, I will communicate, too, my observations; but to come forth as the first against opinions which the world has grown fond of—I don't feel the courage."

Cause for Concern!

A Washington, DC airport ticket agent offers some examples of why our country is in trouble!

1. I had a New Hampshire Congresswoman ask for an aisle seat so that her hair wouldn't get messed up by being near the window.

2. I got a call from a candidate's staffer, who wanted to go to Capetown. I started to explain the length of the flight and the passport information, then she interrupted me with, "I'm not trying to make you look stupid, but Capetown is in Massachusetts." Without trying to make her look stupid, I calmly explained, "Cape Cod is in Massachusetts, Capetown is in Africa." Her response, … click.

[1] Von Humboldt was a German naturalist and writer. His expedition to South America, Cuba, and Mexico (1799-1804) advanced the science of ecology.