

# Phactum

The Newsletter of the Philadelphia Association for Critical Thinking

www.phact.org

August 2006

**PhACT** will soon begin another year of interesting lectures and we hope that you will be an active participant in the audience and as a contributor to this newsletter.

The first PhACT event of the 2006/2007 year will be a discussion led by William Wong, a Princeton University physics PH.D. candidate, on the subject of the Black Light Power Company and the controversial theory of “hydrinos”. This event will be at **2 PM, Saturday, September 16, 2006 at Philadelphia Community College, 17th and Spring Garden Streets, West Building Room W2-48.**

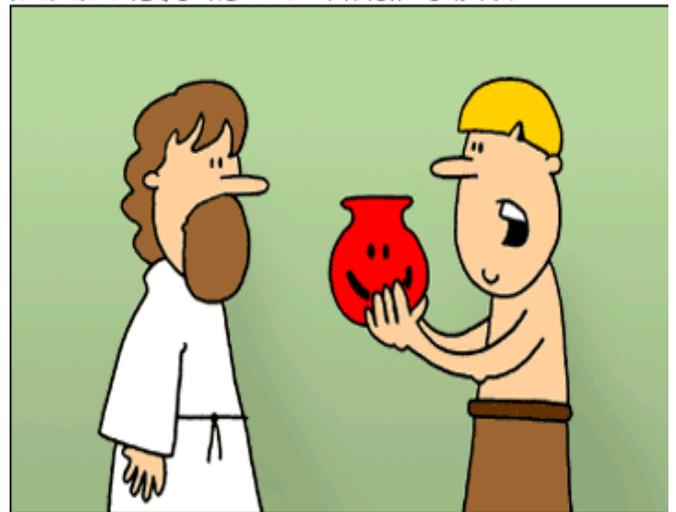
PhACT President, Eric Krieg, an expert on novel plans for free or cheap energy, has a few thoughts on the matter:

### *Hydinos For All*

*In 1991, visionary Dr. Randall Mills started a dream to provide near free energy based on his radical new proposed model of atomic innards. His theory of shrunken atoms releasing enormous amount*

*(Continued on page 3)*

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(See John 2:1-11)

08-14-2003

TURNING THE WATER TO WINE WAS REALLY COOL, MISTER, BUT IT SURE DID A NUMBER ON MY KOOL-AID

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*Phactum* is, in theory, printed 6 times a year and is the main propaganda organ for the Philadelphia Association for Critical Thinking.

If you are not a subscriber we invite you to become one by sending a \$15 membership to PhACT, \$10 for students.

Send letters, ideas, and short essays or opinion pieces to Ray Haupt at [phactpublicity@aol.com](mailto:phactpublicity@aol.com)

# PHACT CALENDAR

**Saturday, September 16, 2006** - The Physics Department of Community College of Philadelphia will host a meeting of **PhACT** – at 2:00 PM, Community College of Philadelphia, 17th and Spring Garden Streets, West Building Room W2-48.

## **Black Light Power and Hydrinos"** - William Wong of Princeton

University will discuss Black Light Power Corporation and the Hydrino atomic theory. If this company is correct, we could have an incredibly powerful easily available source of energy and new materials never envisioned before. If wrong, the company is engaging in a high level of folly.

This meeting is free and open to the public. Bring a friend. Executive meetings are held prior to each lecture at 1:00 PM. Any member may attend. Light refreshments will be served.

**Saturday, September 9, 2006** - Institute for Creation Research (ICR) presents **"Thousands ... not Billions"**, a day of lectures and discussions presenting the Young Earth Creationist view of life and origins. At Calvary Church, 1051 Landis Valley Road Lancaster, PA 17601. \$20.00 Individual \$15.00 Student (15 or older) & Senior Citizens (55 & above). Early Bird Discount 20% if purchased by August 11, 2006. Call for ticket availability after August 25, 2006. For more information you may contact the ICR. Connie Perna Phone: 800-743-6374 Email: cperna@icr.org

**Tuesday, September 26, 2006, 7:00 - 9:00 PM** - **"Science of the Strange"** - Dave Leiter will make a presentation about the **Society for Scientific Exploration (SSE)**. Admission is free, and no reservations are required. Seating is limited, so early arrival is recommended. At the Upper Moreland Free Public Library Community Room. 109 Park Ave., Willow Grove, PA 19090-3277 (right beside The Upper Moreland Township Bldg., across Park Avenue from the "Willow Grove Shopping Center's" parking lot, NOT The Willow Grove Mall)

**Ongoing:** **Freethought Society of Greater Philadelphia (FSGP)** and the **Humanist Association of Greater Philadelphia (HAGP)** co-sponsor a monthly book discussion club. The book club meets on the third Saturday of each month at 7:00 PM at Willow Grove Barnes & Noble, 102 Park Avenue, Willow Grove, Pennsylvania 19090. If you have any questions, please contact the book club moderator, Ian Thomas. Email: ian.thomas101@gmail.com Phone: (610) 368-5915 Cell: (610) 565-4530. Call the Willow Grove Barnes & Noble for directions. The number is: (215) 659-1001.

The PhACT Calendar is open to members, and non-members too, who wish to announce meetings and events of other groups of which they are interested or affiliated. These events should be of some general interest to the Skeptical or Scientific community and should be within a reasonable radius of Philadelphia. Send submissions to the editor at [phactpublicity@aol.com](mailto:phactpublicity@aol.com). Keep the announcements brief. Space is limited and insertions will be made on a first come-first served basis after the needs of PhACT are accomplished.

(Continued from page 1)

of energy has been said to be on the verge of undeniable proof for many years.

I have been following free energy claims for years - it is generally a pathetic 100+ year history of fringe self-taughts and con men making ridiculous unscientific claims. Right now there are around 50 different people or groups promising proof of free energy very soon.

Randall Mills is well into the fringe, but what fascinates me is that he is "high end" compared to some of the generic "I'm going to follow God's orders to save the world" types out there. Mills is intelligent, an accomplished MD, he has real scientists working for him, agrees with the scientific method and has complete disdain for all the other free energy claimants. Mills has published his own theory that appears at least 90% correct (but in math and physics, one mistake can render a whole tome useless). If Mills is right, then his shrunken hydrogen atoms, called hydrinos could not only be part of an exciting new class of materials, but the energy yielded by the reaction would give us near unlimited power.

Although I have a very good grasp of physics and math, I quickly have to recuse myself when attempting to evaluate Mills theory. Mills self published book, "The Grand Unified Theory of Classical Quantum Mechanics" has gone through extensive rewrites and weighs in at 1000+ pages. It simply involves areas of atomic physics I simply do not understand and also requires advanced math I have never mastered. I consider it an important part of being a critical thinker to "know what you don't know" - I simply don't know the high end science and math to evaluate the theory and I also am not really familiar with some of the instruments Mills uses in experiments that he says vindicates his theory. I merely recuse myself from many areas of the debate -

till perhaps a hydrino powered water heater could be found in Home Depot.

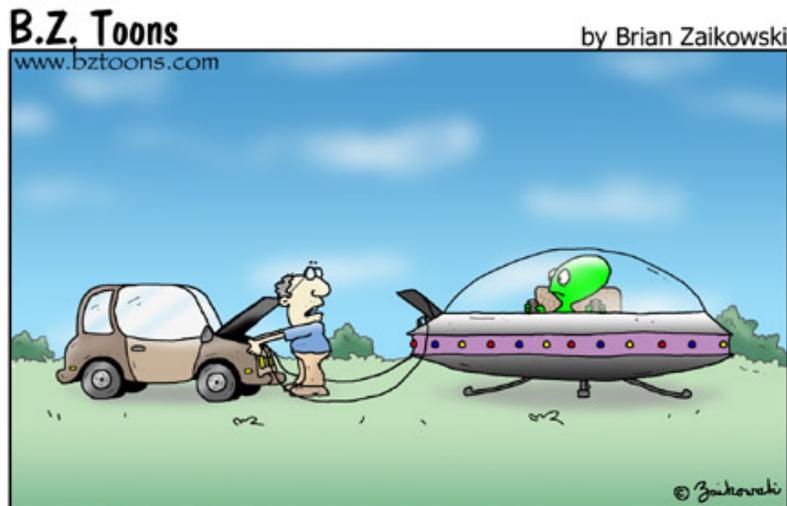
A past PhACT speaker, Dr. Robert Park, president of the American Physical Society, says that Mills is just plain wrong - so do a number of properly trained skeptics. These people point out what they feel are numerous math mistakes and inconsistent reasoning in Mills theory and procedures. However, Mills has a few scientists not on his payroll who think he may be on to something.

There is an email forum that I have been on for many years which discusses Mills theory and "evidence" to support it. The volume of discussion has been in the many thousands of messages. Among the skeptics who post on the list is one young member, Willie Wong who is currently going for a PhD at Princeton. Willie will try to teach us a little about real atomic physics while explaining his view of Mills' hydrino theory. Some Princeton Physics professors have already weighed in on the skeptical side of the argument.

Mills has succeeded in getting many millions of dollars of financing

from reputable sources and has some big names on his board of directors. Unlike typical raving free energy nuts, Mills does not claim things like: a big conspiracy to stop him, direct orders from some deity or alien, or a need to only take money from elderly uneducated people.

I have several times tried to contact Mill's company and ask if I could witness any evidence that would be truly significant - like a small device putting out way more heat than one could explain with conventional chemistry. I never got a response. I must admit that if Mill's ideas are viable, I'd think he would have had some undisputable proof in his 15 years of having real resources available.



Hey, I'm really sorry. It doesn't look like we are going to get you're car started. Do you have a roadside assistance plan?

## Letters

Letters to the editor are welcome, but this month no one wrote. It gets lonely. Even a scathing letter of disagreement would be welcome. Send to: [phactpublicity@aol.com](mailto:phactpublicity@aol.com) and let us know what is on your mind.

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## Political Science Department

*This little item was found on the internet. It was part of a discussion of politics by some astrologers. The editor is at a loss for words and is only presenting the text as it was found.*

I got countless dreams about America. today may 7th is the 20th birthday of my first Vision awake...in may 1986.

the vision was a Silver Eagle Wings Spangled. and the word i could read was "Straight..." i wasnt allowed to read the second.

I Am Truly Convinced, as Symbols are my Deepest Nature of Understanding that this 7° Gemini Ascendant is the Right One.

Uranus in Gemini is the most Logic and Powerful Witness of how the Acuaris Middle of the Sky is Ruling USA Destiny/Fate of Speed, Imagination, Adaptability, Intuition, High Technology, Visionary Impulses even at Collective Unconscious Levels.

uranus in Libra in Ascendant in England's (or UK?) Chart I read as Official, is just as powerful and logic.

Those 2 countries are the 2 sole Nations with the most extraordinary War Leaders who Freed the World. (or conquered the world for the British Empire) But in the End Uranus is Always Linked to Freedom. Revolution in Art is just Obvious for UK

Uranus in Gemini just how Electricity is the Stamp of USA life. Pluton and Moon in the Middle of the Sky, the Laboratory of the World as a Pre Image

being sooner or later Copied by the world. For the Best or the Worst.

Despite my admiration for D.R. I think he is too much applying mathematics to a very Spiritual Birth.

Furthermore I got my Ascendant at 14° Acuaris and Believe Me, America is My Inner Stamp. I could check how my Life was superposing to this Gemini Chart. I cant see another middle of the Sky but an Acuaris one for USA. Universal Destiny. Brotherhood and Freedom of the World's Old Patterns. Virgo in the 5th house is just as Logic in the Ways Movies or Music use Technic for Transcending Art.

Pluto in Acuaris Middle of the Sky is so Obvious of the Power and dangers involved in the USA's Sacred Mission....

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## And speaking of Astrologers

The Monday, July 10, 2006 edition of the Philadelphia Daily News featured a story about a Philadelphia astrologer named Valerie Morrison. Not only was there a story on page 3 and 4, but her picture was on most of the front page. Was nothing else going on in Philadelphia or the world that day more worthy of front page treatment? Apparently not as far as the Daily News staff is concerned. Here is the website address for that article:

<http://www.philly.com/mld/dailynews/15003846.htm>

Morrison claims some success in the matter of solving crimes. We skeptics might question such claims but a lot of people do not. That is no surprise given the popularity of astrology, and in fact both of Philadelphia's major newspapers have daily astrology charts and predictions. On Page 3 of that Daily News edition there is a list of four television series centered around the "psychic-detective" theme. That in addition to programs such as Larry King Live and other "news/opinion" programs that frequently present these people as if they are credible. The media plays up this stuff up big time with little question and no embarrassment and many folks are, unfortunately, like sheep led to slaughter, or are at least to a fleecing.

Count me in as a skeptical Libra.



*"Why YES! Yes I WOULD like to talk with you about the end of the world!"*

## Errata

In the June 2006 Phactum we predicted that the world would end on June 6, 2006. It didn't. Nonetheless we are undeterred and are back at the drawing boards to refine our projection. Meanwhile, before the Rapture, new and renewed subscriptions to Phactum are good investments to obtain ACCURATE readings on this serious **Matter of Eternity**.

We are not the only ones pondering the End of the World. A group of Biblical Scholars has released the following statement and a list of incorrectly predicted World End dates.

*"On April 29th we started predicting dates for a terrorist Nuclear Bomb at the UN in midtown. After making several mistakes we realized that 1 Kings 18 declared we would get it right at the 8th attempt (Since Elijah asked his attendant to go and look for a man made mushroom cloud 7 times after the first no show, making 8 attempts in all). The trouble is that we have found it hard to decide just what a valid attempt is. Here are all the incorrect*

*dates we have so far proposed.*

*2006Iyyar21 (May 19/20)*

*2006Iyyar28 (May 26/27)*

*2006Iyyar11 (June 8/9)*

*2006Sivan12 (June 9/10)*

*2006Tammuz3 (June30/July1)*

*2006Tammuz2-6 (June 29 - July 4)*

*2006Tammuz28/29 (July 25 - 27)*

*2006Ab3/4 (July 30 - August 1)"*

## My Skeptical Roots

### By Tom Napier

My credentials as a skeptic (at least with a lower case "s") go back quite a way. My first major published article was a review that appeared in my university's student newspaper. Someone had mailed a booklet entitled "The Temperate Sun" to all the physics students and I felt he deserved a reasoned response.

The author of this booklet, one Rev. Francis, alleged that the sun is a cold body on which we might someday land a manned spacecraft. Comparing himself to Copernicus, he explained that the heat we feel from the sun is obviously generated in the atmosphere. As everyone knows, he wrote, space is a vacuum. If heat can travel through a vacuum, how do vacuum flasks keep warm?

Rev. Francis deserves credit for his persistence if not for his scientific literacy, his booklet had first been published in 1917. Sadly, I lent my copy and never got it back. It would otherwise have a prized place in my skeptic's library. A copy of my review does survive so one quotation from this remarkable booklet is available as a sample.

"The popular notion that the sun is on fire is rubbish and merely a hoary superstition, on a par with a belief in a flat earth . . ."

My response had been, "Here I submit that he is distinctly uncharitable to the Flat-Earthers who are, after all, in the same boat as himself." I then explained why the sun is not "on fire."

To earn pocket-money I did laboring jobs during university vacations. The summer I was 18, my boss and I drove a truck around small towns in north-east Scotland, erecting rented tents for highland shows. These tents ranged from the ten-foot square ones that served as booths for small exhibitors to one 40 feet by 280 feet that became the show's

Saturday-night dance-hall. Imagine seven barn-raising side by side and you'll have some idea of what it was like to erect that monster.

During the first half of each week we stripped down and packed up the tents from the last show. In the second half we re-erected them at the next town in preparation for its show the following Saturday. I spent a long, dry summer swinging 40 lb bags of canvas onto a truck and pounding into the ground with a 7-pound sledge the iron bars to which the main guy-ropes were tied. I've never been as fit since.

The Saturday of a show was a working day; I was on call in case of emergencies. Barring such eventualities, I was free to explore the exhibits. I got to chatting with a couple who were selling a potion they called "Exultation of Flowers." This had a number of remarkable properties. A drop or two in a flower-pot worked as an excellent fertilizer. Adding it to the water in which potatoes were boiled improved their flavor so greatly that you no longer needed to put salt on them. I don't remember if it made you look younger but gaudy flowers and slices of boiled potato were on hand to convince doubters.

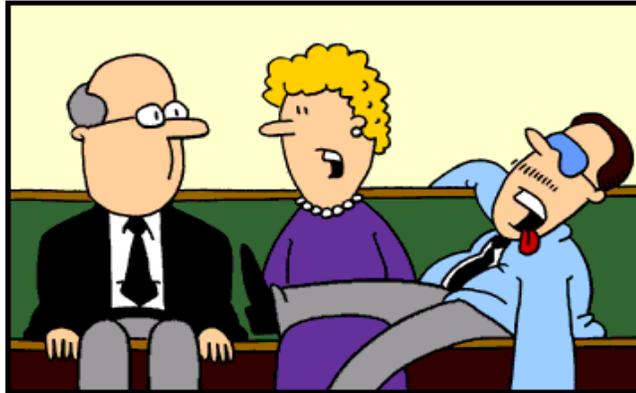
Even at 18 I was somewhat skeptical, not to mention being a physics major. The couple assured me that

the secret ingredient in Exultation of Flowers did indeed have amazing powers. I was unconvinced but, being prepared to concede the possibility, continued our friendly chat.

Apparently I wasn't the only doubter. Some months later I read newspaper reports of a case in which this couple were charged with fraud. The chief witness for the prosecution was an employee whose job it was to fill bottles with tap water. As far as I remember, the defendants got off. No one could prove the bottles didn't contain a drop or two of some magical essence.

They were a personable couple but they knew they were selling worthless snake-oil. One suspects

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THE PASTOR WAS UPSET BECAUSE TOM ONLY  
PRETENDED TO LISTEN TO THE SERMONS ...  
SO NOW TOM DOESN'T PRETEND ANYMORE

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that thirty years later they'd have sold crystals with equal fervor. I hadn't been tempted to buy their elixir and I still think that many things, not just potatoes, can benefit from a pinch of salt.

[For coincidence buffs: Hunting out the student newspaper that carried my review, I picked up an old notebook. A folded blue paper fell out. It was a copy of my time-sheet for the summer I'd erected tents, something I was not even aware existed.]

*Tom Napier is a physicist working primarily in the electronics industry.*

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## It's A Miracle!!

### By William A. Wisdom

During a sultry summer in the mid-1970s I had two main projects on my mind. I was teaching an undergraduate course in formal logic at Temple University every weekday morning. And I was trying to master the long and enormously complicated proof of Kurt Gödel's famous "Incompleteness Theorem". What the Theorem says, and how he proved it, are irrelevant here. Suffice it to say that it was a groundbreaking achievement in the foundations of mathematics--comparable in its field, some say, to Einstein's Theory of Relativity and Heisenberg's Uncertainty Principle in physics.

Then I read in the newspaper that the Reverend S\_\_ was bringing his evangelical tent meeting to Philadelphia for a week. Two good friends of mine--also faculty members at the University (in Anthropology and American Studies)--agreed that it would be interesting for us to go on Thursday night to what was being billed as "Special Miracles Night". I had been to revival meetings before, but neither of my colleagues had.

Our Anthropologist gave us a quick course in what it meant to be a "participant-observer" in an alien culture. The point is to avoid calling attention to ourselves or seeming to be "outsiders"; we should behave as much as possible like the natives. Thus prepared, we set out for Special Miracles Night.

Sitting in the back of the huge tent, at my somewhat timid colleagues' insistence, we watched several hours of preaching, gospel singing,

testimonials, and offering after "free-will" offering. (I quickly decided that participant-observation called for hymn-singing, hand-waving, and "Hallelujah"-shouting, but not money-giving.)

Finally, after about two hours--when, I suppose, the Rev. S\_\_ figured that he'd squeezed the last possible penny from his enormous but for the most part poor audience--we got to the feature attraction. He invited everyone with a need for a Special Miracle to join him on stage. I leaped from my seat, expecting my fellow participant-observers to follow. They wouldn't come. But I was determined to be right there on the spot if someone abandoned a wheelchair or had a withered arm restored or a conspicuous tumor removed. So I went down without them, along with perhaps two or three hundred others.

Seeing that the needy far exceeded his expectations, the Reverend S\_\_ said that he'd not be able to lay hands on each of us individually---which was fine with me--but that he would deal with whole classes of need while we massed at the foot of the stage. "Which of you needs a healing miracle in your body?" he asked. A number of hands went up around me, and I began to panic. I realized that I'd have to pick a miracle from his laundry list of needs. I felt no



special need for a healing miracle in my body, so my hand stayed at my side as I hoped that I could identify with some other need. "Which of you has a legal problem that requires divine intervention?" That wasn't me. "Which of you needs God's help with a domestic problem...a problem in the home." Nope.

"Who among you needs a financial miracle." Figuring that that might be as close as he'd get to my situation--though it wasn't very close--I was about to raise my hand when the little old man beside me slowly raised his. I glanced at him. His clothing was dirty, tattered, and nearly worn out. His weathered

hands and lined face revealed a long and difficult life of toil. I couldn't bring myself to claim a financial need while I stood next to him. Still, I feared that I was running out of choices.

But finally: "Who here needs a miracle in your mind?" I suppose that he was thinking of anxiety, depression, anger, and the like. But I reasoned that my most pressing need fit into this category. I raised my hand. If I could wake up tomorrow morning with a complete and accurate understanding of every detail of Gödel's Proof, that would be an undeniable miracle--far more spectacular and convincing from my point of view than mere water-walking or sight-restoration. I had my miracle picked out.

The rest of Special Miracles Night was a letdown. After identifying a few more classes of potential need, the Reverend S\_\_ prayed mightily for each and every one of us before him. Nothing dramatic or even interesting happened...at least nothing observable. No crutches thrown away; no cries of "I can see!"; no missing limbs restored. So we all went home, my timid colleagues and I rather disappointed. But, needless to say, that is not the end of the story.

The next morning I went to teach my logic class and, as usual, stopped at the vending machine in the hall. I put in my quarter for some coffee (remember: this was in the 1970's), and down dropped a paper cup which slowly filled. At the same time a quarter fell into the coin return slot...and another quarter...and then a third! I was puzzled for only a moment, and quickly realized that this was my miracle, a financial miracle! But how could this be? I must have gotten by mistake the miracle intended for the poor fellow who pressed next to me in the crowd last night.

I was delighted, but only for a moment. A cloud of shame came over me as I realized that somewhere in the Philadelphia area was a poor old man, possibly illiterate, who had a perfect understanding of Gödel's Proof, but no more money today than yesterday.

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*William Wisdom is an avid banjo picker and Philosophy Professor Emeritus at Temple University.*

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## Young Earth Creationism at Sandia National Labs

### Special Report by Dave Thomas

On Monday, February 13th, 2006, "creation physicist" Russell Humphreys gave a talk at Sandia National Labs. Here's a report from a Sandian who attended.

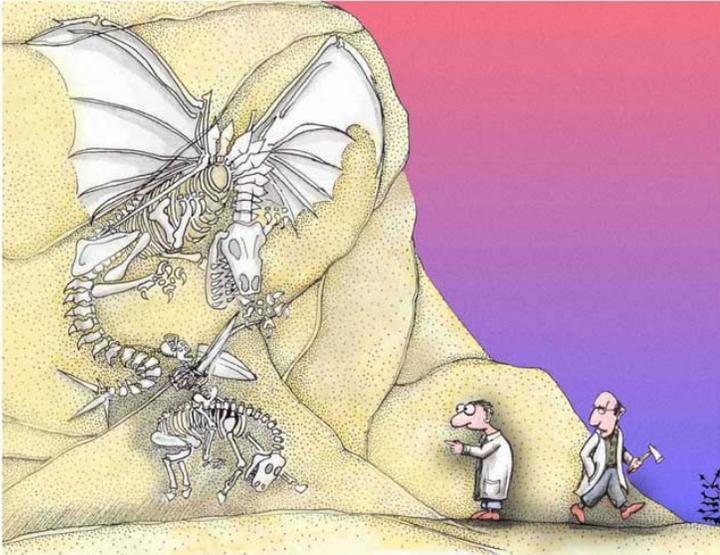
*I attended an event today in the Steve Schiff Auditorium that should not have taken place. The event was titled "Evidence for a Young Earth" and was sponsored by a group here at Sandia called "Christians in the Workplace Networking Group." The presenter's name is Russell Humphreys, an avowed creationist and apparently a retired Sandian.*

*Mr. Humphreys spent the first ten minutes of his presentation describing why the Bible is the word of God and should therefore be the source of scientific conclusions regarding the creation and age of the earth and universe. There were also various pamphlets, books, and videotapes for sale in the lobby. I purchased a book titled, "The Answers" for \$13.00. The lobby of the Steve Schiff Auditorium is not an appropriate place for the merchandising of this man's publications. This should stop.*

*The content of his presentation, while scurrilous in its rebuttal of mainstream science, is not the point of my objection. As recent judicial commentary has said, biblical creationism, and its cohorts Intelligent Design and Young Earthism, is based on a religious philosophy. It goes against Sandia's charter and policies to facilitate the presentation of a specific religious point of view. These presentations should be held off campus, not in tax payer funded facilities. This group is planning future events of this nature, specifically March 13. I hope Sandia will take action to cancel these events and encourage the sponsors to find an appropriate venue elsewhere.*

To this day, Humphreys has not corrected egregious errors in his claims that have been made known to him for a decade! Humphreys has been handing out a small tract titled "Evidence for a Young World" since 1995 at least. His tract was the subject of an article in the very first NMSR Reports, in February 1995. Over the years the tract has incorporated glossy photographs and a few new arguments, but it's mostly the same old schlock. What Humphreys said 11 years ago at Hoffmantown Baptist Church was wrong. What

Humphreys said this February at Sandia Labs was still wrong. But it's not just that his physics is abysmal and incorrect - his continued physical abuses of science are *just plain wrong*. If he was only confident enough in the Bible to say he believes the Earth is young because the Good Book says so, and leave it at that, I wouldn't have any quarrel with the man. But the Bible *isn't* enough, and Humphreys is compelled to twist good science into an unrecognizable monster in order to



"Ignore it, Henderson. It's unscientific."

claim justification of his views. It's bad enough that he misinforms the public about science at church meetings and creation seminars - now, he's peddling his snake oil at Sandia National Labs, under the mantle of the group "Christians Networking in the Workplace."

Here's an example of the weird science of D. Russell Humphreys, Ph.D. On Feb. 13th, 2006, at Sandia National Labs, Russ Humphreys passed out and discussed the following claim, regarding comets and the age of the solar system, with almost exactly the same wording as he handed out at Hoffmantown Baptist on February 14th, 1995:

*Comets disintegrate too quickly. According to evolutionary theory, comets are supposed to be the same age as the solar system, about five billion years. Yet each time a comet orbits close to the sun, it loses so much of its material that it could not survive much longer than about 100,000 years. Many comets have typical ages of less than 10,000 years.*

*Evolutionists explain this discrepancy by assuming that (a) comets come from an unobserved spherical "Oort cloud" well beyond the orbit of Pluto, (b) improbable gravitational interactions with infrequently passing stars often knock comets into the*

*solar system, and (c) other improbable interactions with planets slow down the incoming comets often enough to account for the hundreds of comets observed.<sup>5</sup> So far, none of these assumptions has been substantiated either by observations or realistic calculations. Lately, there has been much talk of the "Kuiper Belt," a disc of supposed comet sources lying in the plane of the solar system just outside the orbit of Pluto. Some asteroid-sized bodies of ice exist in that location, but they do not solve the evolutionists' problem, since according to evolutionary theory, the Kuiper Belt would quickly become exhausted if there were no Oort cloud to supply it.*

What is the problem with this argument? Here's what I (Dave Thomas) wrote over a decade ago, and have had published on the Internet since January 16, 1998:

*Comets disintegrate too quickly (maximum age: 100,000 years). Humphreys notes that comets lose some mass with every trip around the sun, claims that there is no source of new comets in the solar system, and then concludes that comet lifetimes (10 to 100 thousand years) provide an upper limit to the age of the solar system. But Humphreys' comet theory fell apart recently because a source for new comets, the Kuiper Belt (predicted by astronomer Gerard Kuiper in 1951), has been actually photographed and confirmed by several teams of astronomers. Humphreys responds to these discoveries by saying that the supposed "Kuyper Belt" [sic] doesn't help scientists because it must be supplied by the unproven Oort Cloud; and that even if what he calls the "Kuyper Belt" existed, it would exhaust itself of comets in a short time (say, a million years). But he has his astronomy backwards - the Kuiper Belt contains the remains of the "volatile" (icy) planetesimals that were left over from the formation of the solar system - numbering in the hundreds of millions. If anything, it is the Kuiper Belt that supplies the more remote Oort Cloud, as some icy chunks are occasionally flung far away by interactions with large planets. There is a source for new comets, and the fact that we still see comets does not prove the solar system is young.*

In the eight years since, Humphreys has learned that "Kuyper" is really spelled "Kuiper." That is all he has learned - his astronomy knowledge is still abysmal. The Kuiper Belt is no longer a "supposed" source of comets, it is a documented source, with over 800 Kuiper Belt Objects discovered since 1992 (Wikipedia).

Don't take my word for it - why not check out Humphreys' own reference on this claim, which he handed out at Sandia on February 13, 2006: "The mass

*disruption of Oort Cloud comets,”* Harold F. Levison, Alessandro Morbidelli, Luke Dones, Robert Jedicke, Paul A. Wiegert, William F. Bottke Jr., *Science* 296:2212–2215 (21 June 2002).: “... *Most Oort cloud comets are believed to have formed in the region of the giant planets, whereas JFCs [Jupiter Family Comets] are thought to have formed in the Kuiper belt beyond the giant planets. However, recent simulations of Oort cloud formation suggest that ~30% of the present-day Oort cloud originated in the Kuiper belt (although most of these objects left the Kuiper belt a long time ago).*”

Recap: Humphreys says that if the solar system were really billions of years old, there wouldn't be any comets left around. He dismisses one possible source of new comets, the Oort cloud, as "unobserved," and dismisses another source, the Kuiper Belt, as having to be supplied by the unobserved Oort cloud, and therefore "unobserved" itself. For a decade, Humphreys has ignored numerous sightings of actual Kuiper Belt objects, and has also disregarded evidence that the Kuiper Belt supplies the Oort Cloud, not the other way around (as Humphreys claims), even when that evidence is cited in his own handouts!

This is terrible science. If Humphreys submitted his work as a high school Science Fair project, suffice it to say he wouldn't be going on to the Regionals, much less the State Science Fair.

Humphreys also discussed work on dating zircons by their helium retention. His tract said “... *helium produced in zircon crystals in deep, hot preCambrian granitic rock has not had time to escape. Though the rocks contain 1.5 billion years worth of nuclear decay products, newly-measured rates of helium loss from zircon show that the helium has been leaking for only 6,000 ( $\pm 2000$ ) years. This is not only evidence for the youth of the earth, but also for episodes of greatly accelerated decay rates of long half-life nuclei within thousands of years ago, compressing radioisotope timescales enormously. ...*”

This argument is shredded marvelously in the article “Young-Earth Creationist Helium Diffusion ‘Dates’ Fallacies Based on Bad Assumptions and

Questionable Data.” by Kevin R. Henke, Ph.D., November 24, 2005 (see nmsr.org's Humphreys page for the link.) Humphreys has “responded” in a way, in an article called “Helium Evidence for A Young World Overcomes Pressure,” January 5, 2006. However, in this 4- page article, Humphreys addresses only one claim of Henke's, and completely disregards most of the 47 pages (and 19 appendix pages) of Henke's detailed rebuttals and criticisms. For creationists, you don't have to be right, you only need to have made the most recent response. Even on the one item Humphreys criticized, he's still wrong. And that was the basis of the question I asked Humphreys at Sandia, one of only two brief questions allowed during the entire presentation: “*Re helium diffusion, your helium diffusion experiments were performed in vacuum, not the 200 to 1200 bars [e.g. over 1000 times more pressure than the normal atmospheric pressure of 14.7 pounds per square inch] actually found below the surface of Fenton Hill [where Humphreys' zircons were gathered]. Why are you impressed that your helium diffusion “age” is orders of magnitude smaller than the real age of the earth, when the physical pressures are also orders of magnitude different? Did you know that even blood boils in outer space?*”



## FIRST CONTACT

Humphreys also discussed how he and his fellow creation scientists have been finding radiocarbon in diamonds, supposedly far too old (billions of years) to have any amount of fast- decaying radiocarbon left in them. In this regard, I had contacted Dr. R. E. Taylor, of the Department of Anthropology at University of California, Riverside, and the Keck Laboratory for Accelerator Mass Spectrometry at University of California, Irvine. Taylor is a serious radiometrics scientist. Like Humphreys, he also looks for radiocarbon in diamonds, but Taylor does so as a way to monitor instrument background and noise. Diamonds are so old, they shouldn't have any residual radiocarbon (C14 decays with a half-life of under 6,000 years), and indeed, they don't. So diamonds are as close to a carbon-containing C14 "blank" as scientifically possible.

The abstract that got me talking to Taylor is



## **Rutherfordium**

*By Harry Rutherford*

The very best element's called Rutherfordium;  
I wanted some ingots but couldn't affordium.

## **Reply to Mr. Rutherford**

*By Alexandra Atkin*

I, also, applaud rutherfordium,  
But haven't been able to hoardium.  
It's not because I can't affordium,  
The question is, how are they storedium?

But if they should be my rewardium,  
I'll never take pistol or swordium.  
I promise they won't be ignoredium,  
They're short-lived, so I won't get boredium.

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## **PHACT**

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