

AMERICAN PHYSICAL SOCIETY

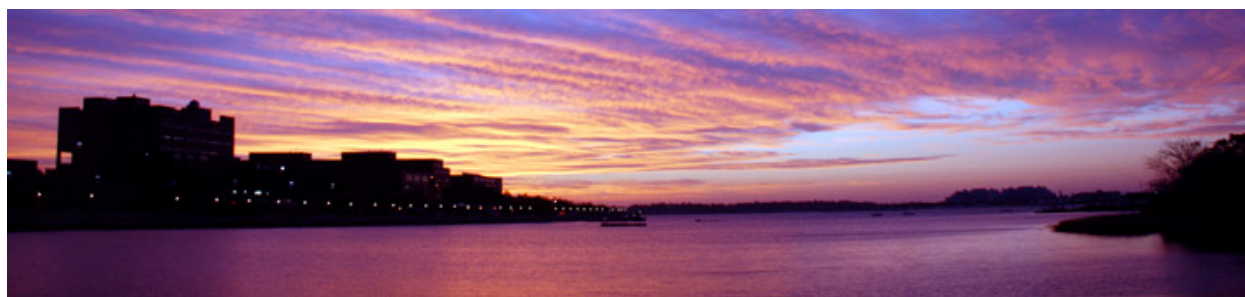
New England Section Newsletter

Volume 14 Number 2 Fall 2008

Paul H. Carr & Laurence I. Gould, Co-Editors

**Fall 2008 Joint Meeting of the APS and AAPT New England Sections
University of Massachusetts in Boston**

“Out of Equilibrium.”



The annual Fall joint meeting of the New England sections of APS and AAPT will be held on Friday the 10th and Saturday the 11th of October at the University of Massachusetts Boston (100 Morrissey Blvd., Boston, MA).

Invited Speakers will include:

Bulbul Chakraborty of Brandeis University

Daniel Needleman of Harvard University

Pedro Reis of the Massachusetts Institute of Technology

Gene Stanley of Boston University

Dan Steck of the University of Oregon

Jeff Urbach of Georgetown University

AAPT will offer workshops.

Update information, including links for registration and abstract submission will be available at

www.physics.umb.edu/APS_AAPT_Meeting

**The Spring Joint Meeting
of the APS and AAPT New England Sections**

April 4 - 5, 2008

The United States Coast Guard Academy

<http://www.cga.edu/conference.aspx?id=8829>

Spring 2008 Joint Meeting of the APS and AAPT New England Sections

— presented by the U.S. Coast Guard Academy



Richard Paolino, Conference Coordinator



Schedule and Program

Friday April 4, 2008

US Coast Guard Academy Dimick Hall

- Noon – 6 PM Registration, Exhibitors , Posters – Lobby of Dimick Hall
- 1:00 PM Welcoming Remarks from RADM J. Scott Burhoe, Superintendent of the U.S. Coast Guard Academy - Dimick Auditorium
- 1:15 PM **Plenary Talk I** – Dimick Auditorium
Dr. Daniel McKinsey, Yale University
“Gamma Ray Detection”
- 2:15 PM Refreshment Break- Lobby of Dimick Hall
- 2:30 PM **Plenary Talk II** - Dimick Auditorium
Dr. Joseph Schumer, Naval Research Lab
“Pulsed Power Technology for the Active Detection of Special Nuclear Materials”
- 3:45 PM **Plenary Talk III** - Dimick Auditorium
Dr. John Lugiand, NumerEX Corporation
“Simulating Directed Energy Devices: Advancing Technology to Protect the Homeland at the Speed of Light”
- 5:00 PM **Joint APS-AAPT poster session** - Lobby of Dimick Hall
- 6:00 PM **Banquet** - Officer's Club
- 7:30 PM **Post-banquet talk:**
Dr. Harrison Schmitt, Former U.S. Senator, Apollo Astronaut
“A Trip to the Moon and Beyond”



Banquet speaker, Harrison Schmitt
(picture courtesy of Nick Nicastro, NES-AAPT)

Lunar Module Pilot —

Dr. Harrison Hagen (Jack) Schmitt, Ph.D. civilian

Jack was born July 3, 1935 in Santa Rita, New Mexico, and grew up in the nearby town of Silver City. He received a B.S. from Caltech in 1957 and then spent a year studying geology at the University of Oslo in Norway. He received a Ph.D. in Geology from Harvard University in 1964. Before joining NASA as a member of the first group of



scientist-astronauts in June 1965, he worked at the U.S. Geological Survey's Astrogeology Center at Flagstaff, developing geological field techniques that would be used by the Apollo crews. Following his selection, Schmitt played a key role in training Apollo crews to be geologic observers when they were in lunar orbit and competent geologic field workers when they were on the lunar surface. After each of the landing missions, he participated in the examination and evaluation of the returned lunar samples and helped the crews with the scientific aspects of their mission reports.

Because Schmitt was the only geologist in the astronaut corps and, as well, had spent considerable time becoming proficient in the CSM and LM systems, it came as no surprise when, in March 1970, he became the first of the scientist-astronauts to receive a crew assignment. He joined Richard Gordon (Commander) and Vance Brand (Command Module Pilot) on the backup crew for Apollo 15 and was clearly in line to fly as Lunar Module Pilot on Apollo 18. After the cancellation of Apollo 18 in September 1970, many people expected that he would be assigned to fly on Apollo 17, the last lunar mission. That assignment was announced in August 1971. After

the completion of Apollo 17, Schmitt played an active role in documenting the Apollo geologic results and also took on the task of organizing NASA's Energy Program Office. In August 1975, Schmitt resigned from NASA to seek election as a United States Senator representing New Mexico. He served one term and, notably, was the ranking Republican member of the Science, Technology, and Space Subcommittee. He was defeated in a re-election bid in 1982 and, since then, has kept very busy as a consultant in business, geology, space, and public policy. In 1994, he was appointed as an Adjunct Professor of Engineering at the University of Wisconsin and Chairman and President of the Annapolis Center for Environmental Quality.

NASA photo S71-52260 is Jack's Official Mission Portrait

- from <http://history.nasa.gov/alsj/a17/a17.crew.html>
 - “Extract from the Apollo Lunar Surface Journal used with permission from Eric M. Jones”
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Saturday April 5, 2008

Smith and Dimick Halls

- 7:00 AM – 8:00 AM **AAPT Executive Committee** meeting (Smith Hall Room 201)
- 7:30 AM **Continental Breakfast** - Lobby of Dimick Auditorium
- 8:00 AM – Noon **Registration** - Lobby of Dimick Auditorium
- 8:00 AM – 2PM **Exhibitors**
- 8:00 AM **Parallel APS and AAPT contributed talks**
- 9:45 AM **Refreshment break** - Lobby of Dimick Hall
- 10:00 AM **Plenary Talk IV** - Dimick Auditorium
Dr. Tim Dasey - Associate Leader of the Biodefense Systems Group at M.I.T “Tactical Systems and Homeland Protection”
- 11:00 AM **Plenary Talk V** - Dimick Auditorium
Ms. Leah Beaulieu, Joppatowne H.S. Joppatowne, MD
“Homeland Security and Emergency Preparedness studies at the high school level- an interdisciplinary approach”
- 12:00 PM **Lunch** (Box Lunches can be picked up in the Lobby of Dimick)
Tables on patio of Dimick/Smith Hall or use Smith Rms 119, 126, 129 or bring on bus for EAGLE tour)
- 12:00 PM – 1:00 PM **APS Executive Committee** lunch meeting (Smith Hall Room 201)
- 1:30 PM – 2:30 PM **AAPT Workshop**
(Smith Hall Room 219, Moderator, Dr. Lorraine Allen)
“Teaching about Robotics with Lego NXT”

Randy Brown – U32 High School

- 1:30 PM – 2:30 PM **AAPT Workshop**
(Smith Hall Room 223, Moderator, LCDR Bill Richardson)
“Using Interactive Simulation-based Virtual Laboratories for Teaching
Physics and Technology”
Yakov Cherner – Atel, LLC
- 2:45 PM – 3:45 PM **AAPT Workshop**
(Smith Hall Room 219, Moderator, Dr. Lorraine Allen)
“Using the digital GLX datalogger in lab and lecture”
Lara Sharp- Pasco Corp.
- 2:45 PM – 3:45 PM **AAPT Workshop**
(Smith Hall Room 223, Moderator, LCDR Bill Richardson)
“Determining the Temperature of an Incandescent Light Bulb”
Michael Schaab, Maine Maritime Academy

**Future Joint Meetings
of the APS and AAPT New England Sections**

Spring 2009 — Northeastern University

Fall 2009 — University of New Hampshire

Spring 2010 — Southern Connecticut State University

EDITORIALS and LETTERS TO THE EDITORS

Please Note: These remarks express each writer's considered opinion and should not be construed as representing any official position of the Executive Board of the New England Section of the American Physical Society.

From the letters and editorials below, the reader may surmise that the issue of anthropogenic global warming (AGW) is not settled. This can also be seen from contributions to the debate existing in recent publications of this Newsletter. (Fall 2007 and Spring 2008 issues can be obtained from the NES APS website <http://www.physics.ccsu.edu/aps-nes/News.htm>.) What is surprising to us is that, given the apparent importance of the topic, there are so few people who have sent us letters (positive or negative) about the issues.

Paul Carr and Larry Gould, Co-Editors
NES APS Newsletter

Email LETTER to the Editors by Professor Frank S. Levin

(received 26 June 2008) —

Items referenced: **1.** Editorial — GLOBAL WARMING from a CRITICAL PERSPECTIVE; Fall 2007 issue of the New England Section Newsletter **2.** AN OPEN LETTER TO MEMBERS OF THE NEW ENGLAND SECTION OF THE AMERICAN PHYSICAL SOCIETY — Anthropogenic Global Warming Alarmism: A Corruption of Science; Spring 2008 issue of the New England Section Newsletter. Each item can be found at the NES APS website <http://www.physics.ccsu.edu/aps-nes/News.htm>

A RESPONSE TO LAURENCE GOULD'S EDITORIAL AND OPEN LETTER

Frank S. Levin, Professor Emeritus of Physics, Brown University (Frank_Levin@brown.edu)

For many years, skeptics/deniers have inveighed against aspects of global warming, in particular rejecting one or more of the following: that global warming is occurring, that it is caused by human activities, and that its likely consequences are potentially harmful. Overall, however, the arguments underlying their rejections are untenable: unlike the atmosphere, they generally do not hold water.

Laurence Gould's recent Editorial (E) and Open Letter (O), in the Fall 2007 and Spring 2008 Newsletters, recycled a number of the deniers' specious arguments. Because the maximum space allotted to me for this response is limited, I can address only some of these arguments. What I present here is based on material gathered for an adult education course on earth's climate and global warming that I taught in Fall 2007.

1. As an example of the methods often used by deniers—falsification and distortion through omission (cherry-picking)—I'll first consider Gould's complaint (E, p 4) that Hanson gives no references to "treading close to 'scientific fraud' ". Here's what happened. James Hanson, a noted climatologist, testified to the US Senate in 1988 about possible global warming outcomes, presenting a graph with three curves, A, B, C. He stated that B was the most likely outcome. Patrick Michaels, also a climate scientist, in his 1998 testimony to the US Senate,

having *deleted* curves B and C from Hanson's 1988 graph, claimed that just A represented Hanson's prediction, that it was obviously wrong compared to data, and thus AGW wasn't occurring. In fact, Hanson's omitted result B (the most likely) *was* correct. For Hanson's and Michaels' curves, reference to Michaels' testimony, and graphs showing the successes of models (theory) in fitting climate data, type the URL www.logicscience.com/skeptic-arguments/models-don't-work.html into Google. Hanson recounted Michaels' action in a 1999 post on the NASA GISS website, while in a New York Times op-ed column of May 29, 2006, Paul Krugman described Michaels' action as "it isn't treading close, it's fraud, pure and simple" (to my knowledge, Krugman has not been sued over this statement). Patrick Michaels' calumny was later recycled by Michael Crichton in the "EN ROUTE , FRIDAY, OCTOBER 8" chapter of his book *State of Fear*. (See also Mark Bowen's book *Censoring Science*). 2. Re "The Great Global Warming Swindle" (E, p 7): Gould failed to note that the denier claims in the cited DVD are *invalid*, as recounted in the 9 March 2007 entry of the website www.realclimate.org (RC). RC is run by researchers in climate science who refer to actual calculations (theirs and others) and to peer-reviewed papers, and who tell you when denier science articles have not gone through peer review (though peer review is not a guarantee that a paper is correct). See the 20 January 2005 post on RC for comments on peer review and citations of denier articles that didn't go through it. 3. Only McIntyre & McKittrick are cited re the "hockey stick" chart (O, p 12), and that's cherry-picking, for what's omitted are references to papers that show that the *original* hockey stick analysis was *correct* and that Mc&Mc are *wrong*: see, e.g, the 2nd RC post on peer review —27 January 2005—plus references cited therein for a detailed analysis of the errors in Mc&Mc. The invalid claim that Mc&Mc are correct and the "hockey stick" graph is wrong has been repeated by various deniers.

4. Gould (O, p 11) refers to the Solanki et al article (Nature, 2005) claiming that the last 50 years have been one of the most active solar periods. What Gould left out is that in previous Nature articles (2004), both Solanki et al and Mueschler et al (who don't agree with Solanki et al's claim about the last 11,000 years) state that "solar activity reconstructions tell us that only a minor fraction of the recent global warming can be explained by the variable sun." This quote is in the article "Global Warming Controversy" from the online encyclopedia Wikipedia (to get to it, type *wikipedia* into your browser and then *global warming controversy* into its search engine). The latter article has much info on the GW Controversy. In case you distrust Wikipedia, similar conclusions about solar activity and GW are reached in the RC post of 19 May 2005, where, following the main article, you can find additional material under the heading Addendum "Celestial Driver" Part 2, Solar Cycle Length. 5. The lag of CO₂ *behind* temperature in paleoclimates (O, p11) has been a favorite of deniers who use it to "prove" that the recent increases in atmospheric greenhouse gases do not lead to global warming. Omitted by them and Gould is any reference as to why such a "proof" is *false*. One such reference is the RC post of 27 April 2007, especially the letter by Jeff Severinghaus following the main text. 6. Gould (O, p 13) and other deniers have cited the alleged "errors" in Al Gore's film that were found by a British judge, but this, too, is cherry-picking, for two items that Gould omits are (i) the judge's statement that "Al Gore's presentation of the causes and likely effects of climate change in the film was broadly accurate," a statement that re-affirms the film as a documentary and not "propaganda" as Gould claimed, and (ii) the post of RC, 15 October 2007 (plus others referred to there), which analyzes the so-called "errors" in detail, and points out why they are not really errors.

7. Al Gore's *An Inconvenient Truth* (AIT) has been pilloried by deniers, as in O, pp 12 and 13, but the claim that it has multiple scientific errors is false. Gould cites the work of Monckton, whose statements/inferences about the hockey stick chart and solar activity don't hold up, as I've already noted in 3&4 above. Here are a few more misrepresentations (among others). Gore did *not* insist on a link between increased frequency of hurricanes and GW: he stated, AIT, p 81, that there is less agreement among scientists on this point, but that

there is an emerging consensus that GW and increasing hurricane intensity are linked. The IPCC notes that this linkage is likely: p 864 of their report *Climate Change 2007 - The Physical Science Basis*. Re the sea level rise of 20 feet by 2100: what Gore actually said (AIT, p 197) is that if Greenland melted or broke up, or half of it and half of Antarctica melted or broke up, sea levels would rise by 18 to 20 feet. Monckton *falsified* by removing the conditional clause (“if...broke up”). Re Kilimanjaro’s glacier: its loss of ice/snow began in the late 19th century and GW did not initiate it, but what Monckton omits is recent work—RC, post of 23 May 2005—noting that there is data providing powerful support that East African glaciers, including Kilimanjaro’s, have been subject to the influence of warming. Al Gore was thus not wrong to have *implied* that GW is now involved (“implied” because the book never states this directly about Kilimanjaro).

8. Gould claims (O, p 11) that there has been no warming trend since 2000. But there is a trend—one that has leveled off. Look at the graphs in the HadCrut3 website. But also remember that climatology deals with *weather averages* over space (large regions) and time (30 years or more), and so lack of an increase—even a decrease—in the global temperature for any one year—or two or three—is not evidence against GW, just as the presence of a drought or higher temperatures in some region is not evidence for it. 9. In O, p 16, Gould repeats a denier myth, viz, that “science is about facts ... not consensus”. This myth has been presented to the general public by deniers as part of the scientific-method paradigm. But science *is* partly about achieving consensus, e.g., that a theory is valid in some domain of applicability—as exemplified by Newtonian mechanics, quantum mechanics, special and general relativity, electrodynamics, etc, etc.

10. The RC post of 9 October 2006 deconstructs the misinformation of *Claude Allegre* (O, p 15). 11. For analyses of *Alexander Cockburn’s* invalid claims/comments (O, p 15), see the RC posts of 4 May 2007 and 7 June 2007, where you can click on the link to ZNet (3 articles and responses), which then links to Cockburn’s articles and responses to them by George Monbiot. 12. For more on *Christopher Monckton’s* spuriousities (O, pp 12, 14, 20), go to the web site www.monbiot.com and type *Monckton* into Monbiot’s search engine. See also RC, 7 February 2007, for their comments on *Monckton*. 13. For some of the activities of *Frederick Seitz* (O, p 18) and *S. Fred Singer* (O, p17), plus information on the *JunkScience* web site (E, p 7), see Chapter 2 of George Monbiot’s book “HEAT—How to Stop the Planet from Burning.”

14. Finally, for general info on, plus other responses to, denier claims, go to: www.metoffice.gov.uk, and search on *climate change myths*; www.pik-potsdam.de/~stefan and then click on *climate change fact sheet* and *the climate skeptics*; or the RC index entry *Responses to common contrarian arguments*. For FAQs and answers from the IPCC, type *ipccFAQS* into your browser. See Chapter 2 of *HEAT* for some denier tactics.

REPLY to Frank Levin by Larry Gould —

I would like to start with a comment about the term “denier(s),” which has been much used by supporters of AGW. Professor Levin’s letter in effect applies that term to me 14 times. But what could the term mean?

It might mean that someone knows the facts and is evading them. Or it might mean that someone considers that the facts do not support the claims being made. Since I have argued at length (particularly in the Fall 2007 and Spring 2008 issues of the Newsletter, <http://www.physics.ccsu.edu/aps-nes/News.htm>) that there is insufficient evidence for, as well as much contradictory evidence to, the anthropogenic global warming alarmist (AGWA) claims, I clearly am in the second category. Thus applied, I do not consider the term “denier” to be pejorative even though it appears intended to be so when used by the AGWAs.

At the beginning of his letter, Professor Levin might also be using the term “skeptic” pejoratively. However, as my Open Letter explains (heading **11. Rhetorical ploys to deflect attention from the science**, item 4, quoting Robert M. Carter):

[a]ll good scientists are skeptics: that is their professional job. To not be a skeptic of the hypothesis that you are testing is the rudest of scientific errors, for it means that you are committed to a particular outcome: that’s faith, not science.

I will only make some brief comments about the substance of Professor Levin’s letter because Viscount Monckton has — coincidentally — pretty much answered that letter with his own that follows.

In Professor Levin’s letter, his point **1** takes issue with my critique of Hansen (which stands). But my critique did not just focus on Hansen but on the *APS NEWS* for not printing replies (or properly justifying why there weren’t any) by Michael Crichton and Pat Michaels — the people Hansen attacked. So although Prof. Levin gives his own explanation of what happened, we still do not have an explanation by Crichton and by Michaels.

His point **2** argues that claims made in the video “The Great Global Warming Swindle” are invalid. Readers may judge for themselves whether Prof. Levin’s statements are accurate by comparing the scientific arguments given in his references with those which lend support to the video (including the 100 minutes of supplementary interviews I mentioned). An excellent resource for seeing a critical analysis of the “global warming/climate change” issue is the book *Taken by Storm* (TS) — which has many references and is described in my following brief Editorial — by Christopher Essex and Ross McKittrick. In that book is also an extensive discussion of the “hockey stick” model (referred to in Professor Levin’s point **3**), including an explanation of why its methodology is flawed (also see Monckton’s letter).

About his point **4**, I will again refer to TS as well as to Monckton’s letter. Point **5** attributes to me a “proof” which (as the reader can check) I never claimed or implied — I was using the lag of CO₂ with respect to temperature to criticize Gore’s claim (in the context of the film/book *An Inconvenient Truth*) that CO₂ drives temperature and to point up a non-scientific error being propagated by a children’s book (one of the authors also being one of the producers of the film). Points **6** and **7** refer to Gore’s film; I have already explained what are some of the problems, as does Monckton’s letter. But the most comprehensive critique (including references) is given in Marlo Lewis’ 154-page free on-line document *A Skeptic’s Guide to an Inconvenient Truth* (referenced in my Open Letter; an updated and wider selection associated with the Lewis document is at <http://cei.org/gencon/030%2C05821.cfm>). In addition, given Mr. Gore’s pervasive elementary error in logic — as I have explained in my Open Letter — I remain baffled as to why so many people still support his film/book.

Point **8** says that a leveling off of the warming since 2000 “is a trend”; and the rest of that point just indicates that there is no clear statement about what constitutes GW and hence there does not appear to be a scientific statement that can be falsified. For point **9** the full quote (by Robert M. Carter) is that “science is about facts, experiments and testing hypotheses, not consensus” (see my Open Letter, heading **11. Rhetorical ploys to deflect attention from the science**, item 1). What I believe is meant by “consensus” here has to do with the number of *people* who agree, not (as Professor Levin indicates) whether there are overlapping domains of applicability of *theories*.

I will not comment on points **10 – 14** except to remark that I have looked at George Monbiot’s website <http://www.monbiot.com/archives/2007/05/31/alexander-cockburn-and-the-corruption-of-science/> and found that, when commenting on Frederick Seitz (Past President of the American Physical Society, Past President of the National Academy of Sciences), he commits error 2, (*He is paid by...*), under the Rhetorical ploys ... heading just mentioned.

Email LETTER to the Editors by Viscount Christopher Monckton of Brenchley (received 14 July 2008) —

Item referenced: A RESPONSE TO LAURENCE GOULD’S EDITORIAL AND OPEN LETTER (above; current, Fall 2008 issue of the New England Section Newsletter). Christopher Monckton was invited to respond to Dr. Levin’s charges. Due to the length constraints on Letters to the Editors, detailed references could not be included with Monckton’s letter. However, one of the Editors (LIG) has put them (which are included in Monckton’s longer letter containing two graphs) on his website <http://uhaweb.hartford.edu/lgould/> — click there on the item listed as MONCKTON_LongerLetterToEditors_NESAPS Newsletter Fall 2008

To the Editors – Prof. Levin (July) offensively brands me a “denier”. He implies I baselessly reject the notions that “global warming” is occurring, is caused by us, and is harmful. He says I am wrong to cite only McIntyre & McKittrick (2005) in repudiating the “hockey-stick” graph by which Mann *et al.* (1998, 1999, *corrigendum* 2004) had purported to eradicate the medieval warm period; wrong to cite Solanki *et al.* (2005) to the effect that during the solar Grand Maximum of the past 70 years the Sun was more active, for longer, than at almost any time in 11,400 years; and wrong to say Al Gore had stated that “global warming” caused more frequent hurricanes, will cause sea level imminently to rise by 20 ft, and is melting Kilimanjaro.

The only “authorities” Levin cites against me are a notoriously unreliable online encyclopedia “that anyone can edit”; a zoologist with little knowledge of climate math or physics; and a propaganda website created by two authors of the flawed “hockey-stick”. Levin does not cite a single peer-reviewed paper in support of his unprovoked, *ad hominem* assault on me. I hope that you will let me reply briefly, *seriatim*, *ad rem*, and with references. [All figures and references are at www.scienceandpublicpolicy.org (“Monckton papers”), with the full text of the present letter; and see MONCKTON OF BRENCHLEY, C.W. 2008. Climate Sensitivity Reconsidered. *Physics and Society*: <http://www.aps.org/units/fps/newsletters/200807/monckton.cfm>].

Is “global warming” occurring? “Global warming” occurred naturally at a near-linear ~ 0.5 °C/century for 300 years after the Maunder Minimum. During all but the last 35 years, our influence was tiny (Akasofu, 2008). From 1975-1998, there was a small uptick of ~ 0.2 °C in the warming trend, but that has been canceled following a phase-transition in the surface temperature trend late in 2001, since when all datasets show the Earth has been cooling: not for the two or three years Levin mentions, but for seven (Figure 1). None of the models relied upon by the IPCC had predicted so long and strong a cooling. Global temperature in June 2008 was actually lower than 20 years ago, when Hansen (1988) showed his now-disproved graphs to Congress (Figure 2, curves A-C). Contrary to Levin’s assertion, Hansen’s curve B has not proven to be a skilful prediction: compare it with the actual trend F, corrected for urbanization by McKittrick (2007) at H.

Is “global warming” caused by us? A little. The issue is not *whether* we are warming the Earth: our direct output of heat, including waste heat, may have increased global temperature by 0.1-0.2 °C in 50 years.

Might we cause dangerous “global warming”? The key question is *how much* warming we have indirectly induced by causing CO₂ to occupy one-ten-thousandth more of the atmosphere than in 1750, and *how much*

further warming we may yet cause. I conclude (Monckton, 2008, *op. cit.*) that, at CO₂ doubling, global temperature may have risen just 0.58 °C. As temperature fails to rise as the models had predicted, the IPCC too posits lower climate sensitivity: 3.8 °C in its 1996 assessment; 3.5 °C in 2001; 3.26 °C in 2007. None of these estimates (still far too high) is properly explained; none is justified by theory or observation. Low climate sensitivity now is the rule in the literature: see Chylek (2008); Lindzen (2007); Spencer (2007); Wentz *et al.* (2007); etc. The probability that “global warming” will prove dangerous is vanishingly small.

The “hockey stick” graph, according to an NAS report (North *et al.*, 2006) has “a validation skill not significantly different from zero,” concurring with Wegman *et al.* (2005), who also demonstrate that many of the numerical analyses supporting the “hockey stick” that appeared after McIntyre & McKittrick (2005) had demonstrated its falsity were by previous co-authors of the “hockey stick’s” creators. Levin is wrong to say I cite only one paper. I have cited the following, because each has a graph in which the mediaeval warm period is visible, providing empirical (not mere numerical) evidence for the global fact of the MWP: Wilson *et al.*, 1979; Kitagawa & Matsumoto, 1995; Dahl-Jensen, 1998; Tyson *et al.*, 2000; Chu *et al.*, 2002; Khim *et al.*, 2002; Seppa & Birks, 2002; Hallett *et al.*, 2003; Noon *et al.*, 2003; Esper & Schweingruber, 2004; Williams *et al.*, 2004; Rein *et al.*, 2004, 2005; Mangini *et al.*, 2005; Qiang *et al.*, 2005; Gupta *et al.*, 2005; Pla & Catalan, 2005; Holzhauser *et al.*, 2005; Bjorck *et al.*, 2006; Grinsted *et al.*, 2006; etc.

The Sun’s role in warming cannot have been as insignificant as the IPCC suggests: otherwise, absent any other causative agent, global temperature could not have recovered as it has in the 300 years since the end of the Maunder Minimum. Sami Solanki thinks that perhaps one-third of the warming of the past 50 years is solar. The International Astronomical Union (IAU, 2004), goes further, concluding that the Sun is chiefly responsible for late 20th-century warming. Svensmark *et al.* (2006) posit a reinforcement of solar forcing by cosmic rays. Also, the IPCC’s models do not take due account of the fact that a given quantum of solar forcing raises temperature more than a like quantum of terrestrial forcing because almost half the *incoming* solar irradiance is already in the near-infrared when it reaches the top of the atmosphere. Also, warming coincident with that on Earth is seen on Mars, Jupiter, Neptune’s largest moon, and even on distant Pluto.

Al Gore’s “errors”: I was an expert witness in the London court case in which the judge (Burton, J, 2007) identified nine “errors” sufficiently serious to require correction before schoolchildren saw Al Gore’s sci-fi comedy horror movie. It contains at least 36 scientific errors: all tend to invent a danger where none exists, or otherwise to exaggerate the imagined danger, sometimes by one or two orders of magnitude. The three errors that Levin says are not errors were in the list we submitted to the judge. He upheld us on all three:

Hurricanes: The judge said: “Hurricane Katrina and the consequent devastation in New Orleans is ascribed to global warming. It is common ground that there is insufficient evidence to show that.” Contrary to Levin’s assertions, Gore’s movie says hurricane intensity is increasing and implies frequency is also increasing, because of “global warming”, yet the trend in the literature is moving away from the view of Webster *et al.* (2005) and Emanuel (2005) that either the frequency or the intensity of hurricanes is increasing. See, e.g., Klotzbach (2006), who finds the data “do not support the argument that global tropical-cyclone frequency, intensity and longevity have undergone increases in recent years”. Also, Webster’s conclusions are instantly falsified if one chooses 1900 rather than 1950 as the start-date; and Emanuel has recently somewhat qualified his 2005 opinion.

Kilimanjaro: The judge said: “Mr. Gore asserts that the disappearance of snow on Mt. Kilimanjaro is expressly attributable to global warming. ... It is common ground, however, that there is no evidence that the disappearance of snow on Mt. Kilimanjaro is attributable to global warming.” The region around

Kilimanjaro has been cooling for 50 years; for 30 years the summit temperature has averaged -7°C and has never exceeded -1.6°C (Molg *et al.*, 2003); and the ablation of the summit ice began in 1880, long before our influence could have been significant. Much of the Fürtwängler glacier at the summit had gone well before Hemingway wrote *The Snows of Kilimanjaro* in 1936.

Sea level rise of 20 ft: The judge said: “This is distinctly alarmist and part of Mr. Gore’s ‘wake-up call’. It is common ground that if Greenland melted it would release this amount of water, but only after, and over, millennia, so that the Armageddon scenario he depicts is not based on any scientific view.” The IPCC has cut its high-end sea-level projection to 2100 by one-third, from 88 cm in its 2001 assessment to 59 cm in 2007. Niklas Mörner, who has been studying sea level for 30 years, tells me there is no reason to think sea level will rise faster in the 21st century than it did in the 20th (i.e. <8 in, not 20 ft: and see Mörner, 2004). Also, I had to require the IPCC to correct a table that it had inserted into the final draft of its 2007 assessment after the scientists’ draft had been finalized, to remove a tenfold exaggeration in the contribution of melting ice-sheets and glaciers to sea-level rise.

It would surely be more constructive if, in future, the debate about the climate were conducted courteously, in accordance with the scientific method, and with at least some reference to the peer-reviewed literature.

Monckton of Brenchley

Carie, Rannoch, PH17 2QJ, Scotland. 2008 July 14

EDITORIAL by Larry Gould —

The “global warming” or “climate change” alarmist claims have been proclaimed by major print media, in the movies, on TV, by many politicians, by a numbers of scientists, and through the IPCC’s Summary for Policy Makers. The alarmist claims have also begun to gain a hold on our educational system.

However, if one looks into the scientific research literature (and I have), besides papers which can be used to support the alarmist claims, there are also well-argued papers which present evidence that contradicts the alarmist claims. The problem is that the evidence from those latter papers is hardly mentioned by most sources. As a result, evidence contrary to the alarmist position is, for the most part, either unknown, ignored, or suppressed. [Indeed, even the following important IPCC Third Assessment Report statement is one of which few seem to be aware: “The climate system is a coupled non-linear chaotic system, and therefore the long-term prediction of future exact climate states is not possible.” (1)] This state of affairs cannot give scientists and the public the information they need to make intelligent decisions about matters that could severely affect their lives.

As a way of rectifying the situation by putting forth more knowledge about the so-called “skeptics” side of the arguments, I highly recommend the following sources:

Video: *Carbon Dioxide and the "Climate Crisis" - Reality or Illusion?* This introductory DVD is broken down by topics (including Climate Models, Ice Sheet Disintegration, Sea Level Trends, and Atmospheric Methane), well illustrated with graphs, and with commentary by researchers in climate science. <http://co2science.org/index.php>

Book: *Taken by Storm: The Troubled Science, Policy, and Politics of Global Warming* by Christopher Essex and Ross McKittrick, Revised Edition (Key Porter Books, 2007). Both authors have been doing research in climate science for many years. The book is a treasure of information, unveiling some of the methodological and scientific problems behind AGWA claims. Some of the scientific topics include: an analysis of climate models and the physical meaning of a mean global temperature.

Website: The Science & Public Policy Institute (SPPI) has a large number of scientific papers devoted to a critical examination of AGWA claims: <http://scienceandpublicpolicy.org/>

Website/Blog: CCNet is a scholarly electronic network edited by Benny Peiser. To subscribe, send an e-mail to listserv@livjm.ac.uk ("subscribe cambridge-conference"). To unsubscribe send an e-mail to listserv@livjm.ac.uk ("unsubscribe cambridge-conference"). Information circulated on this network is for scholarly and educational use only.

(1) http://www.ipcc.ch/ipccreports/tar/wg1/pdf/WG1_TAR-FRONT.PDF (p. 88). (Note the difference in wording to the IPCC Third Assessment Report; 2001, Section 142.2.2, page 774.) I should mention that although a “probability distribution” approach for obtaining “future climate states” is introduced (in a statement which follows the one I quoted), the value of such a

distribution is dubious considering the problems with the “models” (see, e.g., the book by Essex and McKittrick, *op cit*)

EDITORIAL by Paul H. Carr, www.MirrorOfNature.org

FREE ENERGY FOREVER

“All good things are wild and free” (Thoreau).

In the above controversy over the causes of global warming, one should not overlook the growing consensus among conservatives and liberals. The \$700 billion per year we spend to import oil from countries, often hostile and politically unstable, puts our national security and economy at risk. This money could create renewable-energy jobs in our own country. Wind and solar energy is FREE, after the up-front cost is paid off, and will last until the sun burns out. The US, with 5 per cent of the world's population, is guzzling 20% of its oil production. This and a renewed appreciation of the intrinsic beauty of nature can motivate its conservation (1). We must balance economics with ecology.

Global climate change, driven largely by the combustion of fossil fuels and by deforestation, is a growing threat to human well-being (2). Significant harm from climate change is already occurring, and further damages are a certainty. The challenge now is to keep climate change from becoming a catastrophe. We need to manage the unavoidable and avoid the unmanageable.

The solution to climate change and national security is the same: wind, solar, biomass, and nuclear energy. Wind power is rapidly becoming cost-competitive with fossil fuels. The First Solar Inc. proprietary technique of making solar cells, by depositing CdTe/CdS films on large sheets of glass, promises to be competitive with coal within five years (3).

(1) Carr, Paul H. 2006. Chapter 9, "The Beauty of Nature versus Its Utility" of *Beauty in Science and Spirit* (<http://www.BeechRiverBooks.com/id08> Center Ossipee, NH).

(2) Executive summary, Sigma Xi Scientific Expert Group Report, "American Scientist," May-June 2007. <http://www.sigmaxi.org/programs/unseg/index.shtml>

(3) Stevenson, Richard. "First Solar: Quest for the \$1 Watt." *IEEE Spectrum*, pg 27, August 2008.

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