Things are breaking very fast in climate science, particularly with regard to the contribution of sun and stars to earth's climate. Ever since the global warming scare arose, the assumption has been almost universal among those who embrace the manmade catastrophic climate change hypothesis that most global average temperature change is attributable to greenhouse gases, particularly to CO2, and that very little to changes in solar radiation. As former IPCC chairman John Houghton in his Global Warming: The Complete Briefing (3d ed., 2004), which is nearly the bible of the catastrophists, said of solar variability, "its influence is much less than that of the increase in greenhouse gases" (p. 52). That assertion, made in the face of considerable data demonstrating stronger correlation between solar variability and temperature variability than between CO2 concentration and temperature variability, is based largely on the lack of a theoretical explanation of how solar variability, which is comparatively small, might account for comparatively large temperature changes. To put it simply, although the strong correlation was obvious, lack of identification of a causal mechanism led many to discount it as coincidental. In recent months, however, a rising crescendo of research publication provides the theoretical explanation, and the result is to reverse the priority of solar variability and greenhouse gases as causes of temperature variation. Recent issues of this newsletter have featured references to several such studies. Today's contains three more stories on this very important development, including reference to some researchers who assert that, far from having influence "much less than that of the increase in greenhouse gases," solar variability, indirectly by its effect on the influx of cosmic rays into the earth's atmosphere, could account for 75 percent of global average temperature change. If that is so, the manmade catastrophic greenhouse warming theory is dead.

Before we get to those items, two others. First, not earthshaking regarding climate science but of some interest to yours truly, Bill Moyers's documentary "Is God Green?" (Click here: WGBH Programs) airs on PBS Wednesday evening, October 11 (check local listings). When Moyers interviewed me for the documentary last spring, he very candidly told me that he is a liberal Democrat and intended for the documentary to influence the November elections to bring control of Congress back to the Democrats. Don't expect good science, economics, or ethics--or even journalistic balance.

Second, another development in the controversy over the British Royal Society's attempt to stifle private funding of contrarian scientific research and publishing, courtesy of Benny Peiser's CCNet newsletter for 10/5/06:

**Climate Scientists Rebuke Royal Society for "Bullying" in Scientific Controversy**

September 26, 2006

The Royal Society
6-9 Carlton House Terrace
London SW1Y 5AG

Dear Sirs:

We write today in order to express our grave concern regarding the Royal Society’s recent attempt to politicize the private funding of science and to censor scientific debate. We feel this unprecedented action is wildly inappropriate and in contradiction with the esteemed history and principles of the Society as an objective and neutral body dedicated to the free exchange of ideas.

It is essential that we remind you that the Society’s Latin motto “Nullis in Verba” translated informs us that scientific inquiry relies “on the words of no one.” Accordingly, the Society has been known for its commitment to gaining knowledge through experimentation rather than citation of authority. But now, in this its 346th year of existence, the Society seems to have made an extraordinary shift that it should be the one tyrannical authority which trumps experimentation.

It’s important to remember that the Society has its roots in controversy. Many respected members were at one time considered on the fringes of science; even Sir Isaac Newton was a practicing alchemist. The Society’s heritage lies with intellectual rebels, but today it seems to only have room for those who agree with its leadership.

Karl Popper, who is among the most influential philosophers of science in the 20th century and was a member of the Royal Society, advises us that scientific inquiry is unique because it requires falsifiability. We can only advance our understanding of the natural world by questioning our conclusions. The beauty of science is that no issue is ever “settled”, that no question is beyond being more fully understood, that no conclusion is immune to further experimentation.

And yet for the first time in history, the Royal Society is shamelessly using the media to say emphatically: “case closed” on all issues related to climate change. With all due respect, how can this be?

Think of the far-reaching implications of your actions. To begin with, this letter takes the Society down a slippery slope of engaging third parties for public reprimand. This could have a chilling effect in the future investment of all private funding, without which much of the knowledge we have gained today would not have been possible.

Furthermore, such bullying by the world’s leading scientific body will intimidate young students from thinking outside the mainstream. Innovation will be crushed before it has even been conceived. The leaking of your letter to a media outlet compromises your integrity and creates a new model where science is not communicated through academic literature. The very nature of scientific inquiry is based on questioning and debate, yet the perpetuation of this practice will increasingly discourage these exchanges among colleagues.

Lastly, many of us find Mr. Ward’s comments particularly mean-spirited and unbecoming of the Society and the scientific community. It is personally and professionally insulting to imply as Mr. Ward clearly does that those of us that have worked on projects funded by private or corporate means have falsified, omitted, or manipulated research data and evidence in order to satisfy our patrons. Good people can arrive at different conclusions, Mr. Ward. Is there even a single member within the Royal Society that at one time during their careers has not accepted a scholarship, grant or other source of funding to advance their own intellectual pursuits? Are we to assume that they have altered their findings to meet the whims of their funders?

Dissent makes science stronger; diversity of viewpoint is essentially to learning. Even if our hypotheses are ultimately proven wrong, our scrutiny of these issues is a service to the body of science and will contribute, even by counterexample, to our understanding of nature. Colleagues who have devoted their lives to science deserve your respect even if you cannot give your
endorsement. We ask the Royal Society for a public apology regarding this regrettable episode.

Sincerely,
Dr. William Gray
Director, Tropical Meteorology Project
Professor Emeritus of Atmospheric Science
Colorado State University

Dr. Tim Ball
Professor of Climatology
University of Winnipeg

Dr. Gary Sharp
Scientific Director
Center for Climate/Ocean Resources Study

Dr. Ian Clark
Department of Earth Sciences
University of Ottawa

Dr. Patrick J. Michaels
Professor of Environmental Sciences
University of Virginia
Past-President, American Association of State Climatologists

Dr. Anthony Lupo
Associate Professor of Atmospheric Science
Department of Soil, Environmental, and Atmospheric Sciences
University of Missouri

Dr. Robert Balling
Former Director, Office of Climatology
Arizona State University

Dr. James J. O'Brien
Florida State Climatologist Emeritus
Director Emeritus, Center for Ocean and Atmospheric Prediction Studies
Robert O. Lawton Distinguished Professor, Meteorology & Oceanography
Florida State University

Joseph D'Aleo
Certified Consultant Meteorologist

Dr. Madhav Khandekar
Retired Meteorologist
Formerly with Environment Canada

Dr. Tim Patterson
Professor of Geology
Department of Earth Sciences
Carleton University in Ottawa

EDITOR'S [Peiser's] NOTE: Readers who wish to support this open letter should contact Professor Tim Ball at timothyball@shaw.ca
A team at the Danish National Space Center has discovered how cosmic rays from exploding stars can help to make clouds in the atmosphere. The results support the theory that cosmic rays influence Earth’s climate.

An essential role for remote stars in everyday weather on Earth has been revealed by an experiment at the Danish National Space Center in Copenhagen. It is already well-established that when cosmic rays, which are high-speed atomic particles originating in exploded stars far away in the Milky Way, penetrate Earth’s atmosphere they produce substantial amounts of ions and release free electrons. Now, results from the Danish experiment show that the released electrons significantly promote the formation of building blocks for cloud condensation nuclei on which water vapour condenses to make clouds. Hence, a causal mechanism by which cosmic rays can facilitate the production of clouds in Earth’s atmosphere has been experimentally identified for the first time.

The Danish team officially announce their discovery on Wednesday in Proceedings of the Royal Society A, published by the Royal Society, the British national academy of science.

The experiment

The experiment called SKY (Danish for ‘cloud’) took place in a large reaction chamber which contained a mixture of gases at realistic concentrations to imitate the chemistry of the lower atmosphere. Ultraviolet lamps mimicked the action of the Sun’s rays. During experimental runs, instruments traced the chemical action of the penetrating cosmic rays in the reaction chamber.

The data revealed that electrons released by cosmic rays act as catalysts, which significantly accelerate the formation of stable, ultra-small clusters of sulphuric acid and water molecules which are building blocks for the cloud condensation nuclei. A vast number of such microscopic droplets appeared, floating in the air in the reaction chamber.

‘We were amazed by the speed and efficiency with which the electrons do their work of creating the building blocks for the cloud condensation nuclei,’ says team leader Henrik Svensmark, who is Director of the Center for Sun-Climate Research within the Danish National Space Center. ‘This is a completely new result within climate science.’

A missing link in climate theory

The experimental results lend strong empirical support to the theory proposed a decade ago by Henrik Svensmark and Eigil Friis-Christensen that cosmic rays influence Earth’s climate through their effect on cloud formation. The original theory relied on data showing a strong correlation between variation in the intensity of cosmic radiation penetrating the atmosphere and the amount of low-altitude clouds. Cloud cover increases when the intensity of cosmic rays grows and decreases when the intensity declines.

It is known that low-altitude clouds have an overall cooling effect on the Earth’s surface. Hence,
variations in cloud cover caused by cosmic rays can change the surface temperature. The existence of such a cosmic connection to Earth’s climate might thus help to explain past and present variations in Earth’s climate.

Interestingly, during the 20th Century, the Sun’s magnetic field which shields Earth from cosmic rays more than doubled, thereby reducing the average influx of cosmic rays. The resulting reduction in cloudiness, especially of low-altitude clouds, may be a significant factor in the global warming Earth has undergone during the last century. However, until now, there has been no experimental evidence of how the causal mechanism linking cosmic rays and cloud formation may work.

‘Many climate scientists have considered the linkages from cosmic rays to clouds to climate as unproven,’ comments Eigil Friis-Christensen, who is now Director of the Danish National Space Center. ‘Some said there was no conceivable way in which cosmic rays could influence cloud cover. The SKY experiment now shows how they do so, and should help to put the cosmic-ray connection firmly onto the agenda of international climate research.’

Publication data

Published online in “Proceedings of the Royal Society A”, October 3rd

Title: ‘Experimental Evidence for the role of Ions in Particle Nucleation under Atmospheric Conditions’.

Authors: Henrik Svensmark, Jens Olaf Pepke Pedersen, Nigel Marsh, Martin Enghoff and Ulrik Uggerhøj.

For more information and supporting material: www.spacecenter.dk/media
Requests for interview and original article: press-requests@spacecenter.dk

EDITOR'S NOTE [Benny Peiser]: Here is the now redundant IPCC "consensus" on cosmic rays and climate change (from the 2001 TAR): "At present there is insufficient evidence to confirm that cloud cover responds to solar variability." (http://www.grida.no/climate/ipcc_tar/wg1/246.htm)

The gist of the story, by ECB: The stronger the solar wind is, the more cosmic rays it blocks from entering earth’s atmosphere, and consequently the fewer low clouds form, and consequently, because low clouds have a net cooling effect on the earth's atmosphere by reflecting solar heat back into space before it reaches the surface, the warmer the atmosphere becomes; the weaker the solar wind is, the fewer cosmic rays it blocks from entering earth's atmosphere, and consequently the more low clouds form, and the more heat gets reflected back into space, and the cooler the atmosphere becomes. For much more on this, see S. Fred Singer and Dennis Avery, Unstopable Global Warming, Every 1,500 Years! (Rowman & Littlefield, due for release October 28, 2006).

Two related stories (both courtesy of CCNet's 10/9 issue):

1. THE FIRST TINY RUMBLINGS OF A PARADIGM SHIFT IN CLIMATE-CHANGE SCIENCE?

Philip Stott, 5 October 2006

"The greenhouse effect must play some role. But those who are absolutely certain that the rise in temperatures is due solely to carbon dioxide have no scientific justification. It's pure guesswork." [Henrik Svensmark, Director of the Centre for Sun-Climate Research, Danish National Space
Yesterday, some extremely important new research on climate change was quietly released. Few newspapers picked it up, The Daily Telegraph (October 4) and the Copenhagen Post (October 4) being but slight exceptions, both carrying only brief reports.

This key research, long in gestation, and embargoed until October 4, appears in the Proceedings of the Royal Society A (October 3). Here is the press release:

"Do electrons help to make the clouds?"

Using a box of air in a Copenhagen lab, physicists trace the growth of clusters of molecules of the kind that build cloud condensation nuclei. These are specks of sulphuric acid on which cloud droplets form. High-energy particles driven through the laboratory ceiling by exploded stars far away in the Galaxy - the cosmic rays - liberate electrons in the air, which help the molecular clusters to form much faster than atmospheric scientists have predicted. That may explain the link proposed by members of the Danish team, between cosmic rays, cloudiness and climate change."

And here is the link to the report from the Danish National Space Center: 'Getting closer to the cosmic connection to climate' (October 4).

One especially eminent science writer has already declared: "The implications for climate physics, solar-terrestrial physics and terrestrial-galactic physics are pretty gob-smacking....."

I say, watch this space. Slowly, but surely, this revelation could well open a can of wormholes in climate-change science.

The reason is simple. The experiment ties in beautifully with the brilliant work of geochemist, Professor Ján Veizer of the Ruhr University at Bochum, Germany, and the University of Ottawa in Canada, and Dr. Nir Shaviv, an astrophysicist at the Racah Institute of Physics in the Hebrew University of Jerusalem, who for some time have been implicating cosmic rays and water vapour, rather than carbon dioxide, as the main drivers of climate change. Indeed, they have put down 75% of climate change to these drivers.

Cosmic rays are known to boost cloud formation - and, in turn, reduce temperatures on Earth - by creating ions that cause water droplets to condense. Ján Veizer and Nir Shaviv calculated temperature changes at the Earth's surface by studying oxygen isotopes trapped in rocks formed by ancient marine fossils. They then compared these with variations in cosmic-ray activity, determined by looking at how cosmic rays have affected iron isotopes in meteorites.

Their results suggest that temperature fluctuations over the past 550 million years are more likely to relate to cosmic-ray activity than to CO2. By contrast, they found no correlation between temperature variation and the changing patterns of CO2 in the atmosphere.

But the mechanism remained far from understood.....until now. For it seems that the Danish team may well have discovered that mechanism.

Do I detect the first deep and quiet rumblings of a long-term paradigm-shifting piece of work?

Indeed, I sense the first minute bounce in a new Kuhnian curve. Of course, for the moment, the work will be drowned out by the clamour of the Great Grand Global Warming Narrative. After all, it is the last thing the committed - and politicians like Cameron, Campbell, and Gore - want to hear.
May I thus encourage all readers of EnviroSpin to work especially hard to bring the significance of this vital research to as many journalists and politicians as possible?

Thank you. It is time to begin to change the paradigm.

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**2. THE CHILLING STARS: A NEW THEORY OF CLIMATE CHANGE**

**ICON BOOKS, 4 October 2006**

Icon announce the acquisition of possibly the most important science book since James Lovelock’s Gaia, on a radical new theory which will revolutionise scientific thinking on global warming.

To be published in March 2007, Henrik Svensmark & Nigel Calder’s *The Chilling Stars: A New Theory of Climate Change* is based on a new theory which turns on its head the notion that global warming is due solely to carbon dioxide emissions.

The theory says that sub-atomic particles from exploded stars play a key role in the formation of clouds, which subsequently affect the temperature of the Earth. The activity of the Sun determines how many of these particles reach us – the fewer particles there are, the fewer clouds are formed, and the warmer the Earth becomes. It has been possible to look back in time and correlate the Earth’s constantly fluctuating temperature with the amount of particles reaching the planet.

As Icon Publishing Director Simon Flynn says:

*The theory is able to account for most or all of the rise in global temperatures over the last century, and for many much bigger temperature changes before then. This is not a politically-motivated book – there remain many reasons why it’s critical our consumption of fossil fuels must decrease. The book is based on legitimate, and impartial, science – it is in no way a polluter’s manifesto*”

“It’s a book with incredibly wide-ranging implications involving cutting-edge science, and it’s written in a fantastically engaging way. We’re proud to be involved with the book and are looking forward to adding significantly to the climate change debate on publication next year”.

The research has been led by Svensmark’s team in Denmark and a key paper on the discoveries will be published in the Proceedings of the Royal Society on October 4th.

As co-author Nigel Calder says:

“Because of the secrecy about the contents of this forthcoming paper, which provides the very hinge of the book, we were not able to approach Icon Books until 8th September, and even then only in the strictest confidence. Icon is justifiably proud of itself as a fast mover, and has demonstrated it in this case, with everything agreed in a fortnight. Both of us are looking forward to working closely with Icon to make the book the success we think it should be – it’s a crucially important as well as fascinating theory that people will want to be aware of.”

About the authors:

Henrik Svensmark is Director of Sun-Climate Research at the Danish National Space Center. He
has published more than 40 scientific papers on theoretical and experimental physics, including six landmark papers on climate physics.

Nigel Calder has spent a lifetime spotting and explaining the big discoveries in all branches of science. He served his apprenticeship as a science writer on the original staff of the magazine New Scientist, and became its editor, 1962-66. Since then he has worked as an independent author and TV scriptwriter. He won the UNESCO Kalinga Prize for the Popularization of Science for his work for the BBC in a long succession of ‘science specials’, with accompanying books. His most recent book is Magic Universe (OUP, 2003), a comprehensive guide to modern science, which was shortlisted for the Aventis Prize for Science Books.

Notes to editors:

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For more information please contact Andrew Furlow, Marketing and Publicity Manager, Icon Books: andrew.furlow@iconbooks.co.uk, 01763 207158

Now for other stories of interest:

Click here: Friends of Science
Here you can view online, or write for information about ordering on DVD, an outstanding scientific video, "Climate Catastrophe Cancelled: What You're Not Being Told About the Science of Climate Change," produced by the non-profit group Friends of Science, in Canada. The Interfaith Stewardship Alliance strongly recommends it for showing in churches and other groups, particularly as a counterbalance to Al Gore's "An Inconvenient Truth," HBO's "Too Hot Not to Handle," and the film "The Great Warming," all of which are being promoted by the Evangelical Climate Initiative in churches around the country now.

Click here: Townhall.com::The economics of CSR::By Wayne Winegarden
Corporate Social Responsibility is a concept promoted widely be environmentalist groups. Just how it is defined and how it works are tough questions, and how well it meshes with sound economic understanding is an even tougher one.

Click here: Cooling Down The Climate Scare: Financial News - Yahoo! Finance
Senator James Inhofe (R-OK) lashes media for biased reporting on global warming. For further, see http://www.newscientist.com/channel/earth/mg19125691.100-global-warming-will-the-sun-come-to-our-rescue.html (must subscribe for full access).

Click here: Luboš Motl's reference frame: Southern hemisphere ignores global warming
1. Southern hemisphere shows no warming over past thirty-seven years, according to satellite data collected by ISA advisory board member and "Call to Truth" co-author Roy Spencer and his research partner John Christy at the University of Alabama. I.e., global warming isn't global.
2. James Hansen's claim that current temperatures are the highest in 12,000, or 1,000,000, years comes in for strong criticism. See also [Click here: Climate Audit » Warmest in a Millll-yun Years](http://www.businessandmedia.org/articles/2006/20060926174644.aspx) and especially [Click here: Climate Audit » Warmest in a Millll-yun #2](http://www.newyorker.com/printables/fact/060724fa_fact) for lots more critique of the Hansen paper.

NASA's James Hansen is a climate modeler. He is also very politically active. See how, and keep it in mind whenever you see him quoted in the media as an authoritative source on global warming.


Sometimes a single scientist, standing against consensus, can overturn that consensus by the sheer weight of the evidence—as did Ananth Karumanchi on preeclampsia—despite strong opposition from the "mainstream." Remember that the next time you hear that critics of global warming alarmism must be wrong because they stand against "consensus."

In Christ,

Calvin