

Response to “A Climatology Conspiracy?”

B.D. Santer

Program for Climate Model Diagnosis and Intercomparison

Lawrence Livermore National Lab

Livermore, CA 94550

Summary

A paper by D.H. Douglass, J.R. Christy, B.D. Pearson, and S.F. Singer, published online in the *International Journal of Climatology (IJoC)* in December 2007, contained a serious error in a statistical test.¹ This error led Douglass *et al.* to make the incorrect claim that modeled and observed tropical temperature trends “disagree to a statistically significant extent”. These incorrect conclusions received considerable publicity.

The nature of the statistical error is clearly explained in a paper my colleagues and I published in the online edition of the *IJoC* in October 2008.² The statistical flaw is also explained in readily-understandable terms in the attached “fact sheet” (see Appendix A below).

Douglass and Christy have now focused on the selective interpretation of emails stolen from the U.K.’s Climatic Research Unit (CRU). Their suggestively-

¹Douglass, D.H., J.R. Christy, B.D. Pearson, and S.F. Singer, 2007: A comparison of tropical temperature trends with model predictions. *International Journal of Climatology*, **27**: doi:10.1002/joc.1651.

²Santer, B.D., P.W. Thorne, L. Haimberger, K.E. Taylor, T.M.L. Wigley, J.R. Lanzante, S. Solomon, M. Free, P.J. Gleckler, P.D. Jones, T.R. Karl, S.A. Klein, C. Mears, D. Nychka, G.A. Schmidt, S.C. Sherwood, and F.J. Wentz, 2008: Consistency of modelled and observed temperature trends in the tropical troposphere. *International Journal of Climatology*, **28**, 1703-1722. DOI: 10.1002/joc.1756.

titled article, “A *Climatology Conspiracy?*”, was recently published online in “*American Thinker*”.³

In “A *Climatology Conspiracy?*”, Douglass and Christy make a number of allegations against the primary authors of the 2008 Santer *et al. IJoC* paper and against the editor of the *IJoC*. The focus here is on addressing two of the most serious allegations. The first allegation is that there was a conspiracy to deny Douglass *et al.* the opportunity to respond to the Santer *et al. IJoC* paper. The second allegation is that there was collusion between the editor of the *IJoC* and some of the authors of the Santer *et al. IJoC* paper. Douglass and Christy suggest that the aim of this collusion was to subvert the normal, rigorous, peer-review process.

With regard to the first allegation, the authors of the 2008 Santer *et al. IJoC* paper performed a substantial amount of new and original scientific research. It was therefore entirely appropriate for the editor of the *IJoC* to treat the Santer *et al. IJoC* paper as an independent scientific contribution, and to publish Santer *et al.* as a ‘stand alone’ paper rather than simply as a comment on the 2007 Douglass *et al. IJoC* paper. This editorial decision did not – as Douglass and Christy incorrectly allege – deny Douglass *et al.* the opportunity to respond to the scientific issues raised by the Santer *et al. IJoC* paper.

Douglass and Christy have had every opportunity to respond to scientific criticism of their 2007 *IJoC* paper, both in the pages of the *IJoC* and elsewhere. For example, they could have contributed a new scientific article to the *IJoC*, or submitted a comment on the Santer *et al. IJoC* paper. They have not done so. Nor has the Douglass and Christy “*American Thinker*” article adequately addressed concerns regarding the use of a seriously flawed statistical test in the Douglass *et al. IJoC* paper.

³“A *Climatology Conspiracy?*”, by David Douglass and John Christy, was published online in “*American Thinker*” on December 20, 2009. See http://www.americanthinker.com/2009/12/a_climatology_conspiracy.html

The second major allegation (collusion between the *IJoC* editor and the authors of the Santer *et al.* *IJoC* paper) is also baseless. The Santer *et al.* *IJoC* paper underwent a normal review process, involving two rounds of peer review by two highly-knowledgeable reviewers. The authors of the Santer *et al.* paper provided over 30 pages of detailed responses to the review comments. These responses clearly document the rigorous nature of the review process, and provide the strongest defense against unfounded “collusion” allegations. To date, however, I have not been able to obtain permission from the publishers of the *International Journal of Climatology* to publicly release the responses to the peer review comments on the Santer *et al.* *IJoC* paper. I am hopeful that this permission will be forthcoming in the near future.

As an additional response to the “collusion” charge, I note that our 2008 *IJoC* paper was the first and only paper I have ever submitted to the *International Journal of Climatology*. I have never met the editor of the *IJoC* (Professor Glenn McGregor), and did not have any correspondence or professional interaction with Professor McGregor prior to 2008.

As is clearly shown in the more detailed discussion given below, the “conspiracy” and “collusion” allegations – and a number of other claims made in “*A Climatology Conspiracy?*” – are simply false.

It is troubling that Professors Douglass and Christy persist in ignoring the serious statistical error in their 2007 *IJoC* paper. I would welcome an independent review by the U.K. Royal Meteorological Society⁴ of the scientific issues raised by the Douglass *et al.* and Santer *et al.* *IJoC* papers. Such a review would be timely and appropriate.

⁴The *International Journal of Climatology* is published on behalf of the Royal Meteorological Society by Wiley InterScience.

1. Introduction

In a recently-published commentary entitled “A *Climatology Conspiracy?*”, Professors D.H. Douglass and J.R. Christy have accused me and several of my colleagues of serious professional misconduct.⁵ The allegations by Douglass and Christy were made on the basis of emails stolen from the University of East Anglia’s Climatic Research Unit (CRU). I am writing this open letter to address these allegations. They are baseless and false.

The claims of professional misconduct relate to a paper published by myself and 16 co-authors in the *International Journal of Climatology (IJoC)*, a journal of the U.K. Royal Meteorological Society. This paper appeared in the online edition of the *IJoC* on October 10, 2008.⁶ I will refer to it below as “S08”.

Many of the stolen CRU emails analyzed by Douglass and Christy were written by me. These emails discuss both the S08 *IJoC* paper and a previously-published 2007 *IJoC* paper by Douglass, Christy, and two of their colleagues.⁷

Here is a brief history of the genesis of the S08 paper.

2. The Karl *et al.* CCSP report

Between 2004 and 2006, I acted as Convening Lead Author for one particular chapter of “*Synthesis and Assessment Product 1.1*” of the U.S. Climate Change Science Program (CCSP). This was the first in a series of 21 reports commissioned by Congress. The aim of the CCSP reports was to provide “*current evaluations of climate change science to inform public debate, policy, and operational decisions*”.⁸ Thomas Karl (the Director of the U.S. National Climatic Data Center in Asheville,

⁵See footnote 3.

⁶See footnote 2.

⁷See footnote 1.

⁸Karl, T.R., S.J. Hassol, C.D. Miller, and W.L. Murray (eds.), 2006: *Temperature Trends in the Lower Atmosphere: Steps for Understanding and Reconciling Differences*. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research. National Oceanic and Atmospheric Administration, National Climatic Data Center, Asheville, NC, USA, 164 pp (the quote is from the unnumbered page immediately before the Table of Contents).

North Carolina) had the overall responsibility for this CCSP report, which was entitled “*Temperature Trends in the Lower Atmosphere: Steps for Understanding and Reconciling Differences*”. The report was published in April 2006. Professor Christy was the Convening Lead Author of Chapter 2 of this report.

The Karl *et al.* CCSP report reached the following conclusion regarding global-scale changes in surface and atmospheric temperature:

“Previously reported discrepancies between the amount of warming near the surface and higher in the atmosphere have been used to challenge the reliability of climate models and the reality of human-induced global warming. Specifically, surface data showed substantial global-average warming, while early versions of satellite and radiosonde data showed little or no warming above the surface. This significant discrepancy no longer exists because errors in the satellite and radiosonde data have been identified and corrected. New data sets have also been developed that do not show such discrepancies”.⁹

In the tropics, however, the Karl *et al.* CCSP report found that “*most observational datasets show more warming at the surface than in the troposphere, while most model runs have larger warming aloft than at the surface*”.¹⁰ Although the CCSP report did not reach a definitive conclusion about the cause or causes of these tropical discrepancies between models and observations, it noted that uncertainties in the observations were very large. Residual errors in the weather balloon and satellite data were judged to be the most likely explanation for the “*discrepancies in the tropics*”.

3. The 2006 Douglass *et al.* GRL paper

Roughly six months after publication of the CCSP report, I received an email from Dr. Chris Reason, an editor for the scientific journal *Geophysical Research Letters*.¹¹

⁹Ibid, abstract, page iii.

¹⁰Ibid, page 90.

¹¹The email from Dr. Reason was dated September 10, 2006.

I was asked to review a paper by D. H. Douglass, R. Knox, B.D. Pearson, and S.F. Singer entitled “*Tropical temperature trends during the satellite era: Do model predictions agree with observations?*” I will refer to this paper below as “D06”.

I agreed to review the D06 paper, which performed comparisons between observed tropical temperature trends (obtained from satellites and weather balloons) and climate model results. D06 used the same model and observational data we had employed in both the Karl *et al.* CCSP report and in an earlier paper my colleagues and I had published in 2005 in *Science* magazine.¹²

The bottom-line finding of D06 was that models “*fail to reproduce observed trends*”, and that “*these conclusions are in strong contrast with those of recent publications based on the same data and models*”. It was my professional opinion that the D06 paper had serious scientific flaws, particularly with regard to the statistical test used to compare modeled and observed temperature trends. In my review of the paper, I recommended rejection. I signed my review, and transmitted it to Dr. Reason on September 25, 2006. The D06 paper was not published in *Geophysical Research Letters*.

4. The 2007 Douglass *et al.* *IJoC* paper

The next chapter in this story begins on November 30, 2007. On that date, I received an email from Mr. Andy Revkin, who until recently worked as a reporter on climate-related issues at the *New York Times*.¹³ The email was also sent to Dr. Tony Broccoli and Dr. Carl Mears. Mr. Revkin asked us to comment on a paper by Douglass, Christy, Pearson and Singer. The paper was entitled “*A comparison of*

¹²Santer, B.D., T.M.L. Wigley, C. Mears, F.J. Wentz, S.A. Klein, D.J. Seidel, K.E. Taylor, P.W. Thorne, M.F. Wehner, P.J. Gleckler, J.S. Boyle, W.D. Collins, K.W. Dixon, C. Doutriaux, M. Free, Q. Fu, J.E. Hansen, G.S. Jones, R. Ruedy, T.R. Karl, J.R. Lanzante, G.A. Meehl, V. Ramaswamy, G. Russell, and G.A. Schmidt, 2005: Amplification of surface temperature trends and variability in the tropical atmosphere. *Science*, **309**, 1551-1556.

¹³In “*A Climatology Conspiracy?*”, Douglass and Christy imply that Mr. Revkin and I had engaged in some “*prior correspondence*” regarding the Douglass *et al.* *IJoC* paper. This is untrue. No such “*prior correspondence*” had occurred. Douglass and Christy also incorrectly claim that Mr. Revkin sent his email of November 30, 2007, to “*three team members*” (*i.e.*, to three of the authors of the S08 *IJoC* paper). This, too, is incorrect. Dr. Tony Broccoli never was a co-author of the S08 paper.

tropical temperature trends with model predictions". As an attachment to his email of November 30, 2007, Mr. Revkin appended the page proofs of the Douglass *et al.* paper, which was scheduled to appear shortly in the *International Journal of Climatology*.

As noted by Douglass and Christy in "A *Climatology Conspiracy?*", the Douglass *et al.* *IJoC* paper was published online on December 5, 2007.¹⁴ I'll refer to this version of the paper below as "D07-online". The paper quickly received significant publicity. Its finding that "*models and observations disagree to a statistically significant extent*" was highlighted by Fox News. The D07-online paper was the centerpiece of a press conference held by one of its co-authors (S.F. Singer) at the U.S. National Press Club. A press release from this conference claimed that the Douglass *et al.* findings represented "*an inconvenient truth*", and proved that "*Nature rules the climate: Human-produced greenhouse gases are not responsible for global warming*".¹⁵ The Douglass *et al.* results were also featured prominently in a report issued by the Heartland Institute in March 2008.¹⁶

After reading D07-online, it immediately became obvious that the paper contained a serious statistical error. The nature of this error is explained in detail below in Appendix A.¹⁷ I use the word "error" advisedly. This was not simply a difference of opinion between two groups of scientists. Douglass *et al.* had devised and applied what they described as a "*robust statistical test*" to reach their finding of a statistically significant discrepancy between modeled and observed tropical temperature trends. The test they devised is inappropriate for comparing models and observations. It cannot be used for determining whether or not the data sets considered in D07-online (observed and model temperature trends) show significant differences.

¹⁴Douglass, D.H., J.R. Christy, B.D. Pearson, and S.F. Singer, 2007: A comparison of tropical temperature trends with model predictions. *International Journal of Climatology*, **27**: doi:10.1002/joc.1651.

¹⁵Press release from conference held at U.S. National Press Club, January 2008.

¹⁶S. Fred Singer, ed., March 2008: *Nature, Not Human Activity, Rules the Climate: Summary for Policymakers of the Report of the Nongovernmental International Panel on Climate Change*, Chicago, IL: The Heartland Institute, 50 pp.

¹⁷Appendix A consists of a "fact sheet" which was distributed at the time of online publication of the S08 *IJoC* paper.

This can be demonstrated unequivocally by applying the Douglass *et al.* test in a situation where the answer is known *a priori*. Such “stochastic simulation” methods rely on randomly generated data with known statistical characteristics. With the aid of stochastic simulation, it can be shown quite easily that the Douglass *et al.* “robust statistical test” fails to give correct results. In fact, it fails in a very obvious way. In cases where there is no significant difference between two data sets, the test frequently yields the incorrect answer that there is a significant difference.¹⁸

D07-online relied on “*essentially the same data*”¹⁹ used in Chapter 5 of the 2006 Karl *et al.* CCSP report²⁰ and in the 2005 Santer *et al.* *Science* paper, yet reached very different conclusions from either of those previous publications. In my opinion, it was incumbent on the authors of D07-online to ask why they had reached radically different findings from previous work, and to investigate whether their statistical test was appropriate. They did not attempt to explain why their results differed from those previously published, nor did they attempt to show that the test they used was suitable for their task.

5. The 2008 Santer *et al.* *IJoC* paper

Given the serious nature of the statistical flaw in D07-online, the incorrect claims being made on the basis of the paper, and the widespread publicity that it had received, I decided that it was necessary to conduct an independent scientific assessment of the methods and results in D07-online. This decision was taken after discussions with a number of my colleagues at LLNL and at scientific institutions

¹⁸These tests with randomly-generated data were performed in Section 6 of the S08 *IJoC* paper.

¹⁹This quote is from the abstract of D07-online.

²⁰Santer, B.D., J.E. Penner, P.W. Thorne, W.D. Collins, K.W. Dixon, T.L. Delworth, C. Doutriaux, C.K. Folland, C.E. Forest, J.R. Lanzante, G.A. Meehl, V. Ramaswamy, D.J. Seidel, M.F. Wehner, and T.M.L. Wigley, 2006: How well can the observed vertical temperature changes be reconciled with our understanding of the causes of these changes? *In: Temperature Trends in the Lower Atmosphere: Steps for Understanding and Reconciling Differences*. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research [Karl, T.R., S.J. Hassol, C.D. Miller, and W.L. Murray (eds.)]. National Oceanic and Atmospheric Administration, National Climatic Data Center, Asheville, NC, USA, pp. 89-108.

around the world. I sought the advice and guidance of experts in climate modeling, statistical analysis, and the development of observational temperature datasets.

My colleagues and I quickly reached the conclusion that we needed to do more than simply write a short note identifying the statistical flaw in the D07-online paper. Although the error in the paper could be easily demonstrated, the issue of statistical significance testing was too complex to cover in a short comment on D07-online. Furthermore, we decided that it would be much more illuminating to do the significance testing²¹ properly, with several different statistical tests, and with some discussion of how these tests performed under controlled conditions.²² We also concluded that if we were going to invest substantial effort in a “do over” of the Douglass *et al.* significance testing strategy, we should use a wide range of observational temperature datasets. Many of the datasets we eventually used in the S08 *IJoC* paper were new, and had not been available to us at the time of our work on the 2006 Karl *et al.* CCSP report.

The bottom line is that the authors of the S08 *IJoC* paper performed a substantial amount of new and original research. S08 was not simply a brief comment on the statistical error in the D07-online paper – it was much more than this. This distinction should be obvious to anyone who has read S08. When substantial new research is performed, and a paper based on that research is submitted to a peer-reviewed scientific journal, it is customary for the journal to treat the new research as a ‘stand-alone’ paper – not to classify it as a ‘comment’. It was therefore entirely appropriate for the editor of the *IJoC* to regard our paper as an independent contribution to the *IJoC*, and not to treat it as a comment on D07-online.

6. The ‘preventing a response’ allegation

In “A *Climatology Conspiracy?*”, Douglass and Christy (based on their analysis of the stolen CRU emails) assert that I tried to prevent them “*from providing what is*

²¹Of differences between modeled and observed temperature trends.

²²With randomly-generated data having known statistical characteristics.

considered normal in the peer-reviewed literature: an opportunity to respond to... critique.” This is untrue. Douglass and Christy have had every opportunity to comment on S08, to defend their own “*robust statistical test*”, and to criticize the statistical tests we applied to compare modeled and observed temperature trends. In particular, they have had every opportunity to try to explain why their test fails to perform correctly when applied to randomly-generated data, or why it fails when applied to climate model data only.²³ To date, such explanations have not been forthcoming. They are certainly not available in the “*scientific discussion*” provided by Douglass and Christy in “*A Climatology Conspiracy?*”.²⁴

No one has prevented Douglass and Christy from submitting a comment on S08 to the *IJoC*. Nor has anyone prevented Douglass and Christy from performing substantive new research, and submitting a ‘stand-alone’ paper to the *IJoC*. In fact, in one of the stolen email excerpts that Douglass and Christy reproduced, I explicitly stated that “*Douglass et al. should have the opportunity to respond to our contribution, and we should be given the chance to reply. Any response and reply should be published side-by-side, in the same issue of the IJC*”. These are clearly not the words of someone intent on advancing a sinister conspiracy to suppress scientific debate. Nor do these words sound like the words of someone who would “*fear a response*” from Douglass *et al.*²⁵

7. The “*strategy of delaying*” allegation

The S08 paper was published in the online edition of the *IJoC* on October 10, 2008 – ten months after the online publication of the Douglass *et al.* paper on December 5, 2007. As noted above, the D07-online paper garnered considerable attention in the 10 months following its publication. Extraordinary – and incorrect – claims were

²³To illustrate how the use of the Douglass *et al.* statistical test could lead to incorrect inferences, S08 applied the test to climate model data only. The temperature trend in each of the 19 models used by S08 was tested in turn against the average trend calculated from the remaining 18 models. The Douglass *et al.* statistical test provided the bizarre result that more than half of the 19 models were inconsistent with the average model trend! A test which rejects more than half of the population of samples on which it is based is clearly flawed.

²⁴This is “*Climate Conspiracy Appendix A*” in the Douglass and Christy “*American Thinker*” article.

²⁵The “*fear a response*” quote is from Douglass and Christy, “*A Climatology Conspiracy?*”

made on the basis of D07-online (see section 4 above). The paper received high-level attention within the U.S. Department of Energy and the National Oceanic and Atmospheric Administration.

Douglass and Christy claim that there was a “*strategy of delaying*” publication of Douglass *et al.* They make this claim because the print version of their paper was published on November 15, 2008 – some 11 months after its first online publication. The print version of the S08 paper was also published on November 15, 2008 (36 days after its online publication).

The decision to publish the print versions of the Douglass *et al.* and Santer *et al. IJoC* papers on the same date was an editorial decision. It was not my decision. In view of the serious statistical flaw in Douglass *et al.*, I believe that the editor’s decision to publish the Douglass *et al.* and Santer *et al.* papers side-by-side (in the “hardcopy” version of the journal) was entirely appropriate.

The “*strategy of delaying*” allegation is baseless. In the scientific world, most journals now publish papers online before they appear in hardcopy form. The online publication is generally considered to be the publication of record, and attracts the majority of the scientific and media attention – as was the case with D07-online. The relevant point here is that the online version of the Douglass *et al. IJoC* paper was released 10 months prior to the appearance of S08-online. Any (imagined or imaginary) conspiracy to delay publication of Douglass *et al.* would therefore have to be judged remarkably unsuccessful.

8. The ‘*bias in review process*’ allegation

Douglass and Christy imply that the review process for the S08 *IJoC* paper was irregular, and that unusual favors were extended to Santer *et al.* by the editor of the *International Journal of Climatology*. This allegation is baseless. Let me briefly review the facts relevant to this allegation.

First, the time from submission to online publication of the S08 paper was just under 4 months. For the Douglass *et al.* paper, the submission to online publication time was very similar (just over 4 months). The Santer *et al.* paper did not, therefore, receive an unusually ‘*quick turn-around*’ in the review process.

Second, the S08 paper was thoroughly and comprehensively examined by two reviewers. The review process consisted of two separate rounds. Our response to the first set of review comments was finalized on June 3, 2008. The response is 27 pages long. Our 7-page response to the second set of review comments was completed on July 16, 2008. These responses clearly document that the Santer *et al. IJoC* paper was rigorously reviewed. It was not given a free pass. The responses also document how thoroughly and professionally we addressed the comments of the two reviewers.

In my opinion, public release of the detailed responses to the review comments on the S08 paper would provide the strongest refutation of the “*bias in review process*” allegations made by Douglass and Christy. To date, however, I have not been able to obtain permission from the publishers of the *International Journal of Climatology* to publicly release these responses. Should this permission be forthcoming in the future, I am very willing to provide (upon request) our responses to the anonymous reviews of the Santer *et al. IJoC* paper.

9. Response to allegations regarding neglect of weather balloon datasets

Douglass and Christy make the serious allegation that I intentionally withheld weather balloon data “*that does not support his view.*”²⁶ This allegation is false. The S08 paper analyzed 7 different weather balloon datasets. It showed weather balloon results from both the Hadley Centre and IUK datasets – datasets Douglass and Christy accuse me of intentionally ignoring.

²⁶In other words, “*my view*”.

Douglass and Christy also state that I “*cut off*” observational datasets in 1999. Again, the implication is that I am guilty of intentionally withholding inconvenient data. This allegation is false.

All of the comparisons between climate model and observational data in S08 are made over the 21-year period from 1979 to 1999. This is because most of the climate model experiments examined by both S08 and Douglass *et al.* end in 1999. The model experiments are attempts to simulate 20th century climate changes. In these simulations, many of the models incorporated estimates of historical changes in both human-caused climate “forcings” (like changes in atmospheric levels of greenhouse gases) and in natural “forcings” (like changes in the Sun’s energy output, or the amount of volcanic dust in the atmosphere). Such changes in human and natural forcings influence surface and atmospheric temperature. To facilitate meaningful comparisons between models and observations, it is important to compare the two over the same period of time – which is exactly what we did in S08.²⁷

10. Response to allegations regarding the 2008 Thorne *Nature* paper

In May 2008, Dr. Peter Thorne (one of the co-authors of the S08 *IJoC* paper), published a “*News and Views*” piece in the journal “*Nature Geosciences*”.²⁸ A *News and Views* piece is not a scientific paper, although Douglass and Christy refer to it as a “paper”. As the “*News and Views*” title suggests, Dr. Thorne’s contribution was actually a commentary on a scientific paper published by Dr. R.J. Allen and Dr. S.C. Sherwood in the same issue of *Nature Geosciences*.²⁹

²⁷Note, however, that in the Supporting Material for the S08 paper (which was available online from *IJoC*), my colleagues and I did “*extend*” observational datasets beyond 1999, making the necessary assumption that the model temperature trends and trend uncertainties were the same over a longer period of time (such as 1979 to 2006) as they were over the shorter period 1979 to 1999. This sensitivity test enabled us to look at the issue of whether tests of modeled and observed temperature trends were sensitive to the length of the observational record. Douglass and Christy fail to mention that we performed such tests.

²⁸Thorne, P.W., 2008: The answer is blowing in the wind. *Nature Geosciences*, **1**, 347-348.

²⁹Allen, R.J. and S.C. Sherwood, 2008: Warming maximum in the tropical upper troposphere deduced from thermal winds. *Nature Geosciences*, **1**, 399-403.

The 2008 Thorne contribution (referred to below as “T08”) briefly referenced the S08 *IJoC* paper. T08 did not reference any papers by Professor Douglass. As described in “*A Climatology Conspiracy?*”, Douglass wrote to me on May 27, 2008 (two days after publication of T08), requesting a copy of our *IJoC* paper, which at that point had not yet been accepted for publication by *IJoC*.³⁰ I declined. I was hesitant to release a version of the paper that was still undergoing revision³¹ and had not yet been accepted for publication.³²

11. Concluding remarks

I have addressed above the major allegations made by Professors Douglass and Christy in “*A Climatology Conspiracy?*” There was no “conspiracy”, and no attempt to interfere with the ability of Douglass and Christy to explain and defend why they applied a flawed statistical test in the 2007 Douglass *et al.* *IJoC* paper. Nor was there a “conspiracy” to subvert the normal peer review process for the 2008 Santer *et al.* *IJoC* paper which identified this statistical flaw.

It is of concern that Douglass and Christy have (to date) failed to acknowledge the existence of any error in the “*robust statistical test*” they used to compare modeled and observed temperature trends, despite the fact that their test was clearly incorrect. Because of this concern, and in view of the extraordinary nature of the claims made on the basis of the 2007 Douglass *et al.* *IJoC* paper (one

³⁰The S08 *IJoC* paper was not formally accepted for publication until July 20, 2008.

³¹As noted above in Section 9, our responses to the first set of review comments on S08 were not finalized until June 3, 2008. Our responses to the second set of review comments on S08 were not completed until July 16, 2008.

³²Douglass and Christy also imply that Professor Douglass voluntarily provided me with a pre-publication copy of D07-online, and that – as a kind of scientific *quid pro quo* – I should have voluntarily provided them with a pre-publication copy of our S08 *IJoC* paper. In fact, Douglass never gave me a pre-publication copy of D07-online. I received a preprint of the D07-online paper from Andy Revkin of the *New York Times* – not from Professor Douglass. I received this preprint only five days before the paper’s online publication in the *IJoC*. Additionally, Douglass and Christy attempt to argue that I already had an advance copy of their D07-online paper, since I had been a reviewer of the D06 *GRL* paper. They maintain that that the version of the paper they finally published online in *IJoC* in December 2007 was “*only slightly changed*” relative to the D06 version. This claim is also incorrect. The two papers are noticeably different. Even the cast of authors is different. R. Knox (an author on D06) is not an author on D07-online. Professor Christy (who is not an author on D06) is an author on D07-online.

of its coauthors asserted that the paper “*clearly falsifies the hypothesis of anthropogenic greenhouse warming*”),³³ I believe it would be timely and appropriate for the U.K. Royal Meteorological Society (on whose behalf the *International Journal of Climatology* is published) to investigate the scientific issues raised by the 2007 Douglass *et al.* and 2008 Santer *et al.* *IJoC* papers.

In summary, the emails stolen from the University of East Anglia’s Climatic Research Unit have been used by Douglass, Christy, and others to claim that there is a conspiracy to suppress scientific views critical of a “*discernible human influence*” on global climate. Yet the fact remains that the 2007 Douglass *et al.* *IJoC* paper was not suppressed. It was published, despite the authors’ use of an incorrect statistical test. The energy Douglass and Christy have now expended in searching for a non-existent conspiracy could have been more productively directed towards understanding and correcting errors in their *IJoC* paper.

³³S. F. Singer, *op cit.* 16.

Timeline of key events related to the publication of the Douglass *et al.*
and Santer *et al.* *International Journal of Climatology* papers

November 30, 2007	I receive a preprint of the Douglass <i>et al.</i> <i>International Journal of Climatology</i> paper from Andy Revkin, a <i>New York Times</i> reporter.
December 5, 2007	Douglass <i>et al.</i> <i>International Journal of Climatology</i> paper is published online. The paper claims that “ <i>models and observations disagree to a statistically significant extent</i> ”.
January 2008	S. Fred Singer holds a press conference at the U.S. National Press Club. A press release from this conference claims that the Douglass <i>et al.</i> paper proves that “ <i>Nature rules the climate: Human-produced greenhouse gases are not responsible for global warming</i> ”.
March 2008	Heartland Institute Report (“ <i>Nature, not human activity, rules the climate: Summary for Policymakers of the Report of the Nongovernmental International Panel on Climate Change</i> ”) is published. The Douglass <i>et al.</i> paper is featured prominently in this Report.
October 10, 2008	Santer <i>et al.</i> <i>International Journal of Climatology</i> paper is published online. It identifies a serious statistical error in the Douglass <i>et al.</i> paper.
November 15, 2008	Douglass <i>et al.</i> and Santer <i>et al.</i> papers are published in the print version of the <i>International Journal of Climatology</i> .
November 2009	Over 1,000 personal emails are stolen from the Climatic Research Unit of the U.K.’s University of East Anglia. The stolen emails are publicly disseminated via the internet.
December 20, 2009	Based primarily on their analysis of these emails, David Douglass and John Christy publish “ <i>A Climatology Conspiracy?</i> ” in “ <i>American Thinker</i> ”, and falsely allege that I am guilty of serious professional misconduct.